To: Glodich, Jeffrey (J.M.)[jglodich@ford.com]; 'ball.joel@epa.gov'['ball.joel@epa.gov']; Beierschmitt, Thomas (T.A.)[tbeiers1@ford.com]; 'Berg, Olle ()'[olle.berg@volvocars.com]; "Beth Perry <eperry@sae.org>" <BethPerry[eperry@sae.org]; 'Bob Maxwell'[remaxwell@comcast.net]; brian.mace@horiba.com[brian.mace@horiba.com]; 'Buller, Patrick'[patrick.buller@volvocars.com]; Paulina, Carl[paulina.carl@epa.gov]; Chris Nevers[CNevers@autoalliance.org]; Christopher J Twarog [christopher.twarog@gm.com]; 'david.woods@chrysler.com'[david.woods@chrysler.com]; 'Dennis Pawlak'[Dennis.Pawlak@na.mitsubishi-motors.com]; 'Douglas Reid'[Douglas.Reid@na.mitsubishi-motors.com]; Dr. Robert Otto Rasmussen, PE [Robotto@TheTranstecGroup.com]; guanghui.cai@gm.com[guanghui.cai@gm.com]; 'Jeff Foor'[jdf14@chrysler.com]; 'Jenny.Sigelko@vw.com'[Jenny.Sigelko@vw.com]; 'JNIKEUS@volvocars.com'[JNIKEUS@volvocars.com]; 'Keith Thompson'[Keith.Thompson@bepco.com]; kyle.bedsole@gm.com[kyle.bedsole@gm.com]; 'Mahmoud Yassine'[mky@chrysler.com]; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>[michel.mahrous@fcagroup.com]; 'Marc Belzile'[marc.a.belzile@tc.gc.ca]; 'mark paxton'[mpaxton@ganassi.com]; Mccarthy, Chris (C.)[CMCCAR61@ford.com]; 'Meyer, Norm'[norm.meyer@tc.gc.ca]; mike.timmerman@horiba.com[mike.timmerman@horiba.com]; Okawa, Naoyasu (N.)[okawa.n@mazda.co.jp]; Peabody, Jason (J.A.)[jpeabod6@ford.com]; 'Peter Z. Janosi'[peter.janosi@roush.com]; 'RMiller@hatci.com'['RMiller@hatci.com']; 'Roxanne Loeffler'[rloeffler@sae.org]; 'Schlueter, Hannah (EASZ/1)'[hannah.schlueter@volkswagen.de]; sconrad@hatci.com [sconrad@hatci.com]; 'snyder.jim@epa.gov'['snyder.jim@epa.gov']; Steve Karamihas[stevemk@umich.edu]; steve.baldus@gm.com[steve.baldus@gm.com]; 'Suanne.Thomas@vw.com'[Suanne.Thomas@vw.com]; 'tom.beierschmitt@tema.toyota.com'['tom.beierschmitt@tema.toyota.com']; 'tommy_chang@ahm.honda.com'['tommy_chang@ahm.honda.com']; 'Vineet Mehta'[vineet@teslamotors.com]; Beggs, William S.[william.beggs@gm.com]; Ott, William[ott.william@epa.gov]; william.meschievitz@tema.toyota.com[william.meschievitz@tema.toyota.com]; Wright, DavidA[Wright.DavidA@epa.gov]; yosuke_sato@ahm.honda.com[yosuke_sato@ahm.honda.com]; Yuhase, Nicole (L.)[nyuhase@ford.com]; Zhu, Jennifer (J.)[jzhu38@ford.com]
Cc: Nikeus, Jill (J.N.)[jill.nikeus@volvocars.com]; Frank Bohanan[fbohanan@mazdausa.com]; Tommy_Chang@ahm.honda.com[Tommy_Chang@ahm.honda.com]
From: Duoba, Michael J.
Sent: Thur 9/17/2015 4:25:37 PM
Subject: RE: SAE J1634 LDVP Committee Meeting
Duoba-A More Accurate RAF-17SEP2015.pptx

Hi all,

Does anybody think this idea has merit?

I have not run it through our test data yet, but it is something that I thought about very recently.

Thanks

- Mike Duoba

Argonne National Lab

From: Glodich, Jeffrey (J.M.) [mailto:jglodich@ford.com]
Sent: Wednesday, September 16, 2015 7:46 AM
To: 'ball.joel@epa.gov'; Beierschmitt, Thomas (T.A.) <tbeiers1@ford.com>; 'Berg, Olle ()' <olle.berg@volvocars.com>; "Beth Perry <eperry@sae.org>" <BethPerry <eperry@sae.org>; 'Bob Maxwell' <remaxwell@comcast.net>; brian.mace@horiba.com; 'Buller, Patrick' <patrick.buller@volvocars.com>; 'Carl Paulina' <Paulina.Carl@epamail.epa.gov>; Chris Nevers <CNevers@autoalliance.org>; Christopher J Twarog <christopher.twarog@gm.com>; 'david.woods@chrysler.com' <david.woods@chrysler.com>; 'Dennis Pawlak' <Dennis.Pawlak@na.mitsubishi-motors.com>; 'Douglas Reid' <Douglas.Reid@na.mitsubishi-motors.com>; Dr. Robert Otto Rasmussen, PE <Robotto@TheTranstecGroup.com>; Duoba, Michael J. <mduoba@anl.gov>; guanghui.cai@gm.com; 'Jeff Foor' <jdf14@chrysler.com>; 'Jenny.Sigelko@vw.com' <Jenny.Sigelko@vw.com>; 'JNIKEUS@volvocars.com' <JNIKEUS@volvocars.com>; 'Keith Thompson' <Keith.Thompson@bepco.com>; kyle.bedsole@gm.com; 'Mahmoud Yassine' <mky@chrysler.com>; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com> <michel.mahrous@fcagroup.com>; 'Marc Belzile' <marc.a.belzile@tc.gc.ca>; 'mark paxton' <mpaxton@ganassi.com>; Mccarthy, Chris (C.) <CMCCAR61@ford.com>; 'Meyer, Norm' <norm.meyer@tc.gc.ca>; mike.timmerman@horiba.com; Okawa, Naoyasu (N.) <okawa.n@mazda.co.jp>; Peabody, Jason (J.A.) <jpeabod6@ford.com>; 'Peter Z. Janosi' <peter.janosi@roush.com>; 'RMiller@hatci.com'; 'Roxanne Loeffler' <rloeffler@sae.org>; 'Schlueter, Hannah (EASZ/1)' <hannah.schlueter@volkswagen.de>; sconrad@hatci.com <sconrad@hatci.com>; 'snyder.jim@epa.gov'; Steve Karamihas <stevemk@umich.edu>; steve.baldus@gm.com; 'Suanne.Thomas@vw.com' <Suanne.Thomas@vw.com>; 'tom.beierschmitt@tema.toyota.com'; 'tommy_chang@ahm.honda.com'; 'Vineet Mehta' <vineet@teslamotors.com>; Beggs, William S. <william.beggs@gm.com>; 'William Ott' <Ott.William@epamail.epa.gov>; william.meschievitz@tema.toyota.com; Wright, DavidA <Wright.DavidA@epa.gov>; yosuke_sato@ahm.honda.com; Yuhase, Nicole (L.) <nyuhase@ford.com>; Zhu, Jennifer (J.) <jzhu38@ford.com>
Cc: Nikeus, Jill (J.N.) <jill.nikeus@volvocars.com>; Frank Bohanan <fbohanan@mazdausa.com>; Tommy_Chang@ahm.honda.com
Subject: RE: SAE J1634 LDVP Committee Meeting

All,

Just a reminder that this is the last meeting before we bring J1634 to ballot, so please be prepared to discuss any comments/concerns.

Thanks,

Jeff

-----Original Appointment-----

From: Glodich, Jeffrey (J.M.)
Sent: Monday, August 31, 2015 8:41 AM
To: Glodich, Jeffrey (J.M.); 'ball.joel@epa.gov'; Beierschmitt, Thomas (T.A.); 'Berg, Olle ()'; Beth Perry <eperry@sae.org>; 'Bob Maxwell'; brian.mace@horiba.com; 'Buller, Patrick'; 'Carl Paulina'; Chris Nevers; Christopher J Twarog ; 'david.woods@chrysler.com'; 'Dennis Pawlak'; 'Douglas Reid'; Dr. Robert Otto Rasmussen, PE ; 'Duoba, Mike'; guanghui.cai@gm.com; 'Jeff Foor'; 'Jenny.Sigelko@vw.com'; 'JNIKEUS@volvocars.com'; 'Keith Thompson'; kyle.bedsole@gm.com; 'Mahmoud Yassine'; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>; 'Marc Belzile'; 'mark paxton'; Mccarthy, Chris (C.); 'Meyer, Norm'; mike.timmerman@horiba.com; Okawa, Naoyasu (N.); Peabody, Jason (J.A.); 'Peter Z. Janosi'; 'RMiller@hatci.com'; 'Roxanne Loeffler'; 'Schlueter, Hannah (EASZ/1)'; sconrad@hatci.com ; 'snyder.jim@epa.gov'; Steve Karamihas; steve.baldus@gm.com; 'Suanne.Thomas@vw.com'; 'tom.beierschmitt@tema.toyota.com'; 'tommy_chang@ahm.honda.com'; 'Vineet Mehta'; William Beggs <william.beggs@gm.com>; 'William Ott'; william.meschievitz@tema.toyota.com; Wright, DavidA; yosuke_sato@ahm.honda.com; Yuhase, Nicole (L.); Zhu, Jennifer (J.)
Cc: Nikeus, Jill (J.N.); Frank Bohanan; Tommy_Chang@ahm.honda.com
Subject: SAE J1634 LDVP Committee Meeting
When: Thursday, September 17, 2015 1:00 PM-3:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Toyota, Ann Arbor

Purpose: Agree on final updates before 1st level balloting.

SAE Light-Duty Vehicle Performance and Economy Measures Committee Meeting 1-3:30 PM, Toyota Technical Center, Ann Arbor.

Call in number 888-270-9936

Access code 8382416

Web Address https://www.connectmeeting.att.com <https://www.connectmeeting.att.com/>

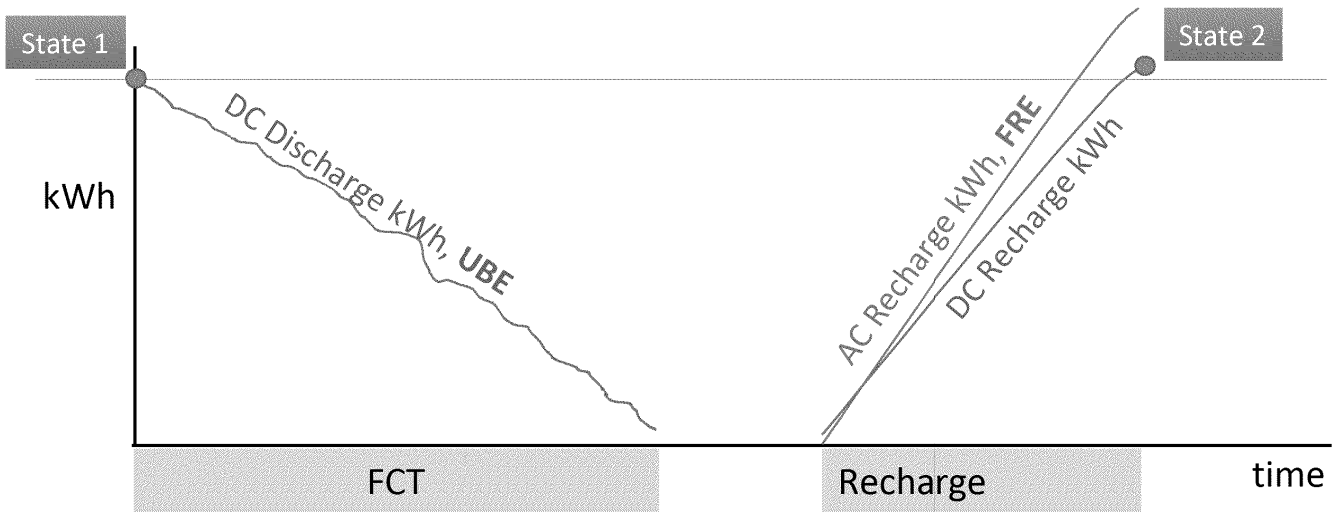
meeting id 888-270-9936

access code 8382416

A More Accurate RAF

M. Duoba

RAF = FRE / UBE → *RAF = FRE*(1/CR) / UBE*



- RAF is used when assigning AC Wh consumption to individual cycles based upon discharged DC Wh
- RAF is accurate only if State 1 is equal to State 2
- CR = C_C / C_D >= 0.97 tells us if the two state are close, but can we be more precise in the calculation of RAF?
- Can a "SOC Correction" be applied to the FRE based upon the ratio of battery Ah out and Ah in?
- **RAF = FRE*(1/CR) / UBE**
- For example, a CR of 0.97 means that State 2 fell short of State 1, FRE must be increased before the RAF is calculated

From: Snyder, Jim
Required Attendees: Wehrly, Linc; Wright, DavidA; Ball, Joel; Dalton, Joel; Pidgeon, Bill; Kata, Leonard (EEO)
Location: AA-Room-Office-C126-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: VW SIL light shift schedule survey and test drive.
Start Date/Time: Wed 5/13/2015 1:00:00 PM
End Date/Time: Wed 5/13/2015 2:00:00 PM

VW will present results of SIL survey on their new 1.4L manual along with a vehicle to test drive the SIL.

From: Snyder, Jim
Required Attendees: Wehrly, Linc; French, Roberts; Wright, DavidA; Kata, Leonard (EEO); Giles, Michael (EEO); Tamborra, Nick (EEO); Dalton, Joel; Ball, Joel; Ott, William
Location: AA-Room-Office-N95-ConfRoom-AAOTAQ-Office
Importance: Normal
Subject: VW MTG: Off Cycle and A/C Credits
Start Date/Time: Thur 2/5/2015 6:00:00 PM
End Date/Time: Thur 2/5/2015 7:30:00 PM

To: 'ball.joel@epa.gov'['ball.joel@epa.gov']; Beierschmitt, Thomas (T.A.)[tbeiers1@ford.com]; 'Berg, Olle ()'[olle.berg@volvocars.com]; "Beth Perry <eperry@sae.org>" <BethPerry[eperry@sae.org]; 'Bob Maxwell'[remaxwell@comcast.net]; brian.mace@horiba.com[brian.mace@horiba.com]; 'Buller, Patrick'[patrick.buller@volvocars.com]; Paulina, Carl[paulina.carl@epa.gov]; Chris Nevers[CNevers@autoalliance.org]; Christopher J Twarog [christopher.twarog@gm.com]; 'david.woods@chrysler.com'[david.woods@chrysler.com]; 'Dennis Pawlak'[Dennis.Pawlak@na.mitsubishi-motors.com]; 'Douglas Reid'[Douglas.Reid@na.mitsubishi-motors.com]; Dr. Robert Otto Rasmussen, PE [Robotto@TheTranstecGroup.com]; 'Duoba, Mike'[mduoba@anl.gov]; guanghui.cai@gm.com[guanghui.cai@gm.com]; 'Jeff Foor'[jdf14@chrysler.com]; 'Jenny.Sigelko@vw.com'[Jenny.Sigelko@vw.com]; 'JNIKEUS@volvocars.com'[JNIKEUS@volvocars.com]; 'Keith Thompson'[Keith.Thompson@bepco.com]; kyle.bedsole@gm.com[kyle.bedsole@gm.com]; 'Mahmoud Yassine'[mky@chrysler.com]; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>[michel.mahrous@fcagroup.com]; 'Marc Belzile'[marc.a.belzile@tc.gc.ca]; 'mark paxton'[mpaxton@ganassi.com]; Mccarthy, Chris (C.)[CMCCAR61@ford.com]; 'Meyer, Norm'[norm.meyer@tc.gc.ca]; mike.timmerman@horiba.com[mike.timmerman@horiba.com]; Okawa, Naoyasu (N.)[okawa.n@mazda.co.jp]; Peabody, Jason (J.A.)[jpeabod6@ford.com]; 'Peter Z. Janosi'[peter.janosi@roush.com]; 'RMiller@hatci.com'['RMiller@hatci.com']; 'Roxanne Loeffler'[rloeffler@sae.org]; 'Schlueter, Hannah (EASZ/1)'[hannah.schlueter@volkswagen.de]; sconrad@hatci.com [sconrad@hatci.com]; 'snyder.jim@epa.gov'['snyder.jim@epa.gov']; Steve Karamihas[stevemk@umich.edu]; steve.baldus@gm.com[steve.baldus@gm.com]; 'Suanne.Thomas@vw.com'[Suanne.Thomas@vw.com]; 'tom.beierschmitt@tema.toyota.com'['tom.beierschmitt@tema.toyota.com']; 'tommy_chang@ahm.honda.com'['tommy_chang@ahm.honda.com']; 'Vineet Mehta'[vineet@teslamotors.com]; William Beggs <william.beggs@gm.com>[william.beggs@gm.com]; Ott, William[ott.william@epa.gov]; william.meschievitz@tema.toyota.com[william.meschievitz@tema.toyota.com]; Wright, DavidA[Wright.DavidA@epa.gov]; yosuke_sato@ahm.honda.com[yosuke_sato@ahm.honda.com]; Yuhase, Nicole (L.)[nyuhase@ford.com]; Zhu, Jennifer (J.)[jzhu38@ford.com]
Cc: Nikeus, Jill (J.N.)[jill.nikeus@volvocars.com]; Frank Bohanan[fbohanan@mazdausa.com]; Tommy_Chang@ahm.honda.com[Tommy_Chang@ahm.honda.com]
From: Glodich, Jeffrey (J.M.)
Sent: Wed 9/16/2015 12:46:23 PM
Subject: RE: SAE J1634 LDVP Committee Meeting

All,

Just a reminder that this is the last meeting before we bring J1634 to ballot, so please be prepared to discuss any comments/concerns.

Thanks,
Jeff

-----Original Appointment-----
From: Glodich, Jeffrey (J.M.)
Sent: Monday, August 31, 2015 8:41 AM
To: Glodich, Jeffrey (J.M.); 'ball.joel@epa.gov'; Beierschmitt, Thomas (T.A.); 'Berg, Olle ()'; Beth Perry <eperry@sae.org>; 'Bob Maxwell'; brian.mace@horiba.com; 'Buller, Patrick'; 'Carl Paulina'; Chris Nevers; Christopher J Twarog ; 'david.woods@chrysler.com'; 'Dennis Pawlak'; 'Douglas Reid'; Dr. Robert Otto Rasmussen, PE ; 'Duoba, Mike'; guanghui.cai@gm.com; 'Jeff Foor'; 'Jenny.Sigelko@vw.com'; 'JNIKEUS@volvocars.com'; 'Keith Thompson'; kyle.bedsole@gm.com; 'Mahmoud Yassine'; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>; 'Marc Belzile'; 'mark paxton'; Mccarthy, Chris (C.); 'Meyer, Norm'; mike.timmerman@horiba.com; Okawa, Naoyasu (N.); Peabody, Jason (J.A.); 'Peter Z.

Janosi'; 'RMiller@hatci.com'; 'Roxanne Loeffler'; 'Schlueter, Hannah (EASZ/1)'; sconrad@hatci.com ; 'snyder.jim@epa.gov'; Steve Karamihas; steve.baldus@gm.com; 'Suanne.Thomas@vw.com'; 'tom.beierschmitt@tema.toyota.com'; 'tommy_chang@ahm.honda.com'; 'Vineet Mehta'; William Beggs <william.beggs@gm.com>; 'William Ott'; william.meschievitz@tema.toyota.com; Wright, DavidA; yosuke_sato@ahm.honda.com; Yuhase, Nicole (L.); Zhu, Jennifer (J.)
Cc: Nikeus, Jill (J.N.); Frank Bohanan; Tommy_Chang@ahm.honda.com
Subject: SAE J1634 LDVP Committee Meeting
When: Thursday, September 17, 2015 1:00 PM-3:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Toyota, Ann Arbor

Purpose: Agree on final updates before 1st level balloting.

SAE Light-Duty Vehicle Performance and Economy Measures Committee Meeting 1-3:30 PM, Toyota Technical Center, Ann Arbor.

Non-Responsive

Web Address https://www.connectmeeting.att.com <https://www.connectmeeting.att.com/>

Non-Responsive

To: Glodich, Jeffrey (J.M.)[jglodich@ford.com]; 'ball.joel@epa.gov'['ball.joel@epa.gov']; Beierschmitt, Thomas (T.A.)[tbeiers1@ford.com]; 'Berg, Olle ()'[olle.berg@volvocars.com]; "Beth Perry <eperry@sae.org>" <BethPerry[eperry@sae.org]; 'Bob Maxwell'[remaxwell@comcast.net]; brian.mace@horiba.com[brian.mace@horiba.com]; Buller, Patrick[patrick.buller@volvocars.com]; Paulina, Carl[paulina.carl@epa.gov]; Chris Nevers[CNevers@autoalliance.org]; Christopher J Twarog [christopher.twarog@gm.com]; david.woods@chrysler.com[david.woods@chrysler.com]; 'Dennis Pawlak'[Dennis.Pawlak@na.mitsubishi-motors.com]; 'Douglas Reid'[Douglas.Reid@na.mitsubishi-motors.com]; Dr. Robert Otto Rasmussen, PE [Robotto@TheTranstecGroup.com]; 'Duoba, Mike'[mduoba@anl.gov]; guanghui.cai@gm.com[guanghui.cai@gm.com]; 'Jeff Foor'[jdf14@chrysler.com]; Jenny.Sigelko@vw.com[Jenny.Sigelko@vw.com]; JNIKEUS@volvocars.com[JNIKEUS@volvocars.com]; 'Keith Thompson'[Keith.Thompson@bepco.com]; kyle.bedsole@gm.com[kyle.bedsole@gm.com]; 'Mahmoud Yassine'[mky@chrysler.com]; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>[michel.mahrous@fcagroup.com]; 'Marc Belzile'[marc.a.belzile@tc.gc.ca]; 'mark paxton'[mpaxton@ganassi.com]; Mccarthy, Chris (C.)[CMCCAR61@ford.com]; 'Meyer, Norm'[norm.meyer@tc.gc.ca]; mike.timmerman@horiba.com[mike.timmerman@horiba.com]; Okawa, Naoyasu (N.)[okawa.n@mazda.co.jp]; Peabody, Jason (J.A.)[jpeabod6@ford.com]; 'Peter Z. Janosi'[peter.janosi@roush.com]; 'RMiller@hatci.com'['RMiller@hatci.com']; 'Roxanne Loeffler'[rloeffler@sae.org]; 'Schlueter, Hannah (EASZ/1)'[hannah.schlueter@volkswagen.de]; sconrad@hatci.com [sconrad@hatci.com]; 'snyder.jim@epa.gov'['snyder.jim@epa.gov']; Steve Karamihas[stevemk@umich.edu]; steve.baldus@gm.com[steve.baldus@gm.com]; Suanne.Thomas@vw.com[Suanne.Thomas@vw.com]; 'tom.beierschmitt@tema.toyota.com'['tom.beierschmitt@tema.toyota.com']; 'tommy_chang@ahm.honda.com'['tommy_chang@ahm.honda.com']; Vineet Mehta[vineet@teslamotors.com]; William Beggs <william.beggs@gm.com>[william.beggs@gm.com]; Ott, William[ott.william@epa.gov]; Will Meschievitz (TEMA TTC)[william.meschievitz@tema.toyota.com]; Wright, DavidA[Wright.DavidA@epa.gov]; yosuke_sato@ahm.honda.com[yosuke_sato@ahm.honda.com]; Yuhase, Nicole (L.)[nyuhase@ford.com]
From: Tom Beierschmitt (TEMA TTC)
Sent: Wed 8/26/2015 4:40:23 PM
Subject: RE: Upcoming SAE LDVP Committee Meetings

●● PROTECTED 関係者外秘

OK with me

Tom Beierschmitt Sr.

From: Glodich, Jeffrey (J.M.) [mailto:jglodich@ford.com]
Sent: Wednesday, August 26, 2015 12:31 PM
To: 'ball.joel@epa.gov'; Beierschmitt, Thomas (T.A.); 'Berg, Olle ()'; "Beth Perry <eperry@sae.org>" <BethPerry; 'Bob Maxwell'; brian.mace@horiba.com; Buller, Patrick; 'Carl Paulina'; Chris Nevers; Christopher J Twarog ; david.woods@chrysler.com; 'Dennis Pawlak'; 'Douglas Reid'; Dr. Robert Otto Rasmussen, PE ; 'Duoba, Mike'; Glodich, Jeffrey (J.M.); guanghui.cai@gm.com; 'Jeff Foor'; Jenny.Sigelko@vw.com; JNIKEUS@volvocars.com; 'Keith Thompson'; kyle.bedsole@gm.com; 'Mahmoud Yassine'; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>; 'Marc Belzile'; 'mark paxton'; Mccarthy, Chris (C.); 'Meyer, Norm'; mike.timmerman@horiba.com; Okawa, Naoyasu (N.); Peabody, Jason (J.A.); 'Peter Z. Janosi'; 'RMiller@hatci.com'; 'Roxanne Loeffler'; 'Schlueter, Hannah (EASZ/1)'; sconrad@hatci.com ; 'snyder.jim@epa.gov'; Steve Karamihas; steve.baldus@gm.com;

Suanne.Thomas@vw.com; 'tom.beierschmitt@tema.toyota.com'; 'tommy_chang@ahm.honda.com'; Vineet Mehta; William Beggs <william.beggs@gm.com>; 'William Ott'; Will Meschievitz (TEMA TTC); Wright, DavidA; yosuke_sato@ahm.honda.com; Yuhase, Nicole (L.)
Subject: Upcoming SAE LDVP Committee Meetings

All,

Please send me your input on the following proposed dates for the next J1634 and J2263 meetings:

SAE J1634 Sept 17th

SAE J2263 Sept 24th

Thanks,

Jeff

Jeff Glodich
Ford Motor Company
Vehicle Environmental Regulatory Strategy and Planning
217-E4 WHQ
(313) 845-1579

To: 'ball.joel@epa.gov'['ball.joel@epa.gov']; Beierschmitt, Thomas (T.A.)[tbeiers1@ford.com]; 'Berg, Olle ()'[olle.berg@volvocars.com]; "Beth Perry <eperry@sae.org>" <BethPerry[eperry@sae.org]; 'Bob Maxwell'[remaxwell@comcast.net]; brian.mace@horiba.com[brian.mace@horiba.com]; Buller, Patrick[patrick.buller@volvocars.com]; Paulina, Carl[paulina.carl@epa.gov]; Chris Nevers[CNevers@autoalliance.org]; Christopher J Twarog [christopher.twarog@gm.com]; david.woods@chrysler.com[david.woods@chrysler.com]; 'Dennis Pawlak'[Dennis.Pawlak@na.mitsubishi-motors.com]; 'Douglas Reid'[Douglas.Reid@na.mitsubishi-motors.com]; Dr. Robert Otto Rasmussen, PE [Robotto@TheTranstecGroup.com]; 'Duoba, Mike'[mduoba@anl.gov]; Glodich, Jeffrey (J.M.)[jglodich@ford.com]; guanghui.cai@gm.com[guanghui.cai@gm.com]; 'Jeff Foor'[jdf14@chrysler.com]; Jenny.Sigelko@vw.com[Jenny.Sigelko@vw.com]; JNIKEUS@volvocars.com[JNIKEUS@volvocars.com]; 'Keith Thompson'[Keith.Thompson@bepco.com]; kyle.bedsole@gm.com[kyle.bedsole@gm.com]; 'Mahmoud Yassine'[mky@chrysler.com]; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>[michel.mahrous@fcagroup.com]; 'Marc Belzile'[marc.a.belzile@tc.gc.ca]; 'mark paxton'[mpaxton@ganassi.com]; Mccarthy, Chris (C.)[CMCCAR61@ford.com]; 'Meyer, Norm'[norm.meyer@tc.gc.ca]; mike.timmerman@horiba.com[mike.timmerman@horiba.com]; Okawa, Naoyasu (N.)[okawa.n@mazda.co.jp]; Peabody, Jason (J.A.)[jpeabod6@ford.com]; 'Peter Z. Janosi'[peter.janosi@roush.com]; 'RMiller@hatci.com'['RMiller@hatci.com']; 'Roxanne Loeffler'[rloeffler@sae.org]; 'Schlueter, Hannah (EASZ/1)'[hannah.schlueter@volkswagen.de]; sconrad@hatci.com [sconrad@hatci.com]; 'snyder.jim@epa.gov'['snyder.jim@epa.gov']; Steve Karamihas[stevemk@umich.edu]; steve.baldus@gm.com[steve.baldus@gm.com]; Suanne.Thomas@vw.com[Suanne.Thomas@vw.com]; 'tom.beierschmitt@tema.toyota.com'['tom.beierschmitt@tema.toyota.com']; 'tommy_chang@ahm.honda.com'['tommy_chang@ahm.honda.com']; Vineet Mehta[vineet@teslamotors.com]; William Beggs <william.beggs@gm.com>[william.beggs@gm.com]; Ott, William[ott.william@epa.gov]; william.meschievitz@tema.toyota.com[william.meschievitz@tema.toyota.com]; Wright, DavidA[Wright.DavidA@epa.gov]; yosuke_sato@ahm.honda.com[yosuke_sato@ahm.honda.com]; Yuhase, Nicole (L.)[nyuhase@ford.com]
From: Glodich, Jeffrey (J.M.)
Sent: Wed 8/26/2015 4:30:46 PM
Subject: Upcoming SAE LDVP Committee Meetings

All,

Please send me your input on the following proposed dates for the next J1634 and J2263 meetings:

SAE J1634 Sept 17th

SAE J2263 Sept 24th

Thanks,
Jeff

Jeff Glodich
Ford Motor Company
Vehicle Environmental Regulatory Strategy and Planning
217-E4 WHQ
(313) 845-1579

To: Snyder, Jim[Snyder.Jim@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]; Ball, Joel[ball.joel@epa.gov]; Dalton, Joel[Dalton.Joel@epa.gov]; Pidgeon, Bill[pidgeon.bill@epa.gov]
Cc: Stendel, Detlef (EASZ/1)[detlef.stendel@volkswagen.de]; Schlueter, Hannah (EASZ/1)[hannah.schlueter@volkswagen.de]; Horton, Garett (VWGoA Imp)[garett.horton@volkswagen.de]; Glas, Tobias[Tobias.Glas@vw.com]; Peter, Juergen (EASZ/1)[juergen.peter@volkswagen.de]; Thomas, Richard (EEO)[Richard.Thomas@vw.com]; Rohr, Katharina (A-GDFA-LK)[KATHARINA.ROHR@ZFM-AUTOVISION.COM]
From: Kata, Leonard (EEO)
Sent: Thur 5/28/2015 1:05:53 PM
Subject: RE: VW SIL light shift schedule survey and test drive.
Customer Shift Survey.2_2015.05.22.pdf

To all:

Attached is an updated slide that addresses a follow-up question from EPA regarding analysis of the data from the SIL survey per A/C 72A. Please let me know if you have any further questions. We would be able to have a short telephone conference if further explanation is required.

Best regards,

Len

Leonard W. Kata
Senior Manager
Emission Regulations and Certification
Engineering and Environmental Office
Volkswagen Group of America, Inc.

Phone: (248) 754-4204
Cell: (248) 797-3886
Fax: (248) 754-4207
E-Mail: leonard.kata@vw.com

From: Kata, Leonard (EEO)
Sent: Wednesday, May 13, 2015 3:59 PM
To: 'Snyder, Jim'; Wehrly, Linc; Wright, DavidA; Ball, Joel; Dalton, Joel; Pidgeon, Bill
Cc: Stendel, Detlef (EASZ/1); Schlueter, Hannah (EASZ/1); Horton, Garett (VWGoA Imp); Glas, Tobias; Peter, Juergen (EASZ/1); Thomas, Richard (EEO); Rohr, Katharina (A-GDFA-LK)
Subject: RE: VW SIL light shift schedule survey and test drive.

To all:

Thank you for the opportunity to present the Volkswagen Shift Indicator Light (SIL) topic today. I hope that you found having a vehicle available to experience the system first hand was beneficial. I have

attached a copy of the final presentation for reference. We understand that EPA now wishes to consider the information presented. Due to a short amount of lead-time and the need to finalize the design and implementation of the SIL system, anything that could be done to expedite a decision would be appreciated. Please let me know if any additional information is required.

Best regards,

Len

Leonard W. Kata
Senior Manager
Emission Regulations and Certification
Engineering and Environmental Office
Volkswagen Group of America, Inc.

Phone: (248) 754-4204
Cell: (248) 797-3886
Fax: (248) 754-4207
E-Mail: leonard.kata@vw.com

<< File: Customer Shift Survey.pdf >>

-----Original Appointment-----
From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Monday, May 11, 2015 5:13 PM
To: Snyder, Jim; Wehrly, Linc; Wright, DavidA; Ball, Joel; Dalton, Joel; Pidgeon, Bill; Kata, Leonard (EEO); Schlueter, Hannah (EASZ/1); Horton, Garett (VWGoA Imp); Glas, Tobias; Peter, Juergen (EASZ/1); Thomas, Richard (EEO); Stendel, Detlef (EASZ/1) (detlef.stendel@volkswagen.de); Rohr, Katharina (A-GDFA-LK)
Subject: VW SIL light shift schedule survey and test drive.
When: Wednesday, May 13, 2015 9:00 AM-10:00 AM (UTC-05:00) Eastern Time (US & Canada).
Where: AA-Room-Office-C126-ConfRoom/AA-OTAQ-OFFICE

When: Wednesday, May 13, 2015 9:00 AM-10:00 AM (GMT-05:00) Eastern Time (US & Canada).
Where: AA-Room-Office-C126-ConfRoom/AA-OTAQ-OFFICE

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

VW will present results of SIL survey on their new 1.4L manual along with a vehicle to test drive the SIL.

To: 'ball.joel@epa.gov'['ball.joel@epa.gov']; Beierschmitt, Thomas (T.A.)[tbeiers1@ford.com]; 'Berg, Olle ()'[olle.berg@volvocars.com]; 'Bob Maxwell'[remaxwell@comcast.net]; 'Buller, Patrick'[patrick.buller@volvocars.com]; Paulina, Carl[paulina.carl@epa.gov]; Chris Nevers[CNevers@autoalliance.org]; Christopher J Twarog [christopher.twarog@gm.com]; 'david.woods@chrysler.com'[david.woods@chrysler.com]; 'Dennis Pawlak'[Dennis.Pawlak@na.mitsubishi-motors.com]; 'Douglas Reid'[Douglas.Reid@na.mitsubishi-motors.com]; Dr. Robert Otto Rasmussen, PE [Robotto@TheTranstecGroup.com]; 'Duoba, Mike'[mduoba@anl.gov]; guanghui.cai@gm.com[guanghui.cai@gm.com]; 'Jeff Foor'[jdf14@chrysler.com]; 'Jenny.Sigelko@vw.com'[Jenny.Sigelko@vw.com]; 'JNIKEUS@volvocars.com'[JNIKEUS@volvocars.com]; 'Keith Thompson'[Keith.Thompson@bepco.com]; kyle.bedsole@gm.com[kyle.bedsole@gm.com]; 'Mahmoud Yassine'[mky@chrysler.com]; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>[michel.mahrous@fcagroup.com]; 'Marc Belzile'[marc.a.belzile@tc.gc.ca]; 'mark paxton'[mpaxton@ganassi.com]; Mccarthy, Chris (C.)[CMCCAR61@ford.com]; 'Meyer, Norm'[norm.meyer@tc.gc.ca]; mike.timmerman@horiba.com[mike.timmerman@horiba.com]; Okawa, Naoyasu (N.)[okawa.n@mazda.co.jp]; Peabody, Jason (J.A.)[jpeabod6@ford.com]; 'Peter Z. Janosi'[peter.janosi@roush.com]; 'RMiller@hatci.com'['RMiller@hatci.com']; 'Roxanne Loeffler'[rloeffler@sae.org]; 'Schlueter, Hannah (EASZ/1)'[hannah.schlueter@volkswagen.de]; sconrad@hatci.com [sconrad@hatci.com]; 'snyder.jim@epa.gov'['snyder.jim@epa.gov']; Steve Karamihas[stevemk@umich.edu]; steve.baldus@gm.com[steve.baldus@gm.com]; 'Suanne.Thomas@vw.com'[Suanne.Thomas@vw.com]; 'tom.beierschmitt@tema.toyota.com']['tom.beierschmitt@tema.toyota.com']; 'tommy_chang@ahm.honda.com']['tommy_chang@ahm.honda.com']; 'Vineet Mehta'[vineet@teslamotors.com]; William Beggs <william.beggs@gm.com>[william.beggs@gm.com]; Ott, William[ott.william@epa.gov]; william.meschievitz@tema.toyota.com[william.meschievitz@tema.toyota.com]; Wright, DavidA[Wright.DavidA@epa.gov]; yosuke_sato@ahm.honda.com[yosuke_sato@ahm.honda.com]; Yuhase, Nicole (L.)[nyuhase@ford.com]; Chen, Elaine (E.Y.)[echen8@ford.com]; Jacobson, Mark (M.F.)[mjacobso@ford.com]
Cc: 'Nikeus, Jill (J.N.)'[jill.nikeus@volvocars.com]; Tommy_Chang@ahm.honda.com[Tommy_Chang@ahm.honda.com]
From: Glodich, Jeffrey (J.M.)
Sent: Mon 6/1/2015 5:42:16 PM
Subject: SAE Light-Duty Vehicle Performance and Economy Measures Committee Meeting

FYI, both J1634 appendix documents have been posted to the website.

Jeff

To: Brooks, Phillip[Brooks.Phillip@epa.gov]
From: Ex. 7 (EEO)
Sent: Thur 9/17/2015 6:41:34 PM
Subject: RE: Providing conference line information

Hello Phil,

Thank you for the follow-up email. I've contacted David Geanacopoulos and he will check his schedule and get back to me today.

Talk to you tomorrow,

Ex. 7

Ex. 7

Engineering and Environmental Office

Volkswagen Group of America

Ex. 7

From: Brooks, Phillip [mailto:Brooks.Phillip@epa.gov]
Sent: Thursday, September 17, 2015 2:34 PM
To: Ex. 7 (EEO)
Subject: Providing conference line information

Just to be sure I gave you the correct information: the call tomorrow at 9:00am will be on a conference line at Non-Responsive The Conference Code is Non-Responsive

If you have questions, or need assistance, please call.

Philip A Brooks

Director, Air Enforcement Division

OCE/OECA

U.S. Environmental Protection Agency

(202) 564-0652

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Wehrly, Linc[wehrly.linc@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]; Ball, Joel[ball.joel@epa.gov]; Dalton, Joel[Dalton.Joel@epa.gov]; Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Kata, Leonard (EEO)
Sent: Tue 5/12/2015 8:19:51 PM
Subject: USEPA Meeting with Volkswagen - Shift Indicator Light

Hello Jim:

I assume that the VW meeting to discuss the SIL topic is still on for tomorrow morning. Mr. Tobias Glas and I will be there in person. I have set up a conference call number since the presentation will be provided by a colleague in Germany. I would appreciate it if a speaker phone is available in the conference room.

Also, it may be beneficial to drive the car prior to the meeting and start the discussion a bit later; however, this can be done at your option.

Non-Responsive

Best regards,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

Fax: (248) 754-4207

E-Mail: leonard.kata@vw.com

To: Snyder, Jim[Snyder.Jim@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; French, Roberts[french.roberts@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]; Dalton, Joel[Dalton.Joel@epa.gov]; Ball, Joel[ball.joel@epa.gov]; Ott, William[ott.william@epa.gov]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Tamborra, Nick (EEO)[Nick.Tamborra@vw.com]; Lucht, Joseph (EEO)[Joseph.Lucht@vw.com]
From: Kata, Leonard (EEO)
Sent: Thur 2/5/2015 2:52:39 PM
Subject: RE: VW MTG: Off Cycle and A/C Credits
VWGoA_EPA_Meeting_2015-02-05_Off-Cycle.pdf

To all:

I have attached an advance copy of the Off-Cycle GHG Credit SIIdes for discussion this afternoon.

Best regards,

Len

Leonard W. Kata
Senior Manager
Emission Regulations and Certification
Engineering and Environmental Office
Volkswagen Group of America, Inc.

Phone: (248) 754-4204
Cell: (248) 797-3886
Fax: (248) 754-4207
E-Mail: leonard.kata@vw.com

From: Kata, Leonard (EEO)
Sent: Wednesday, February 04, 2015 5:36 PM
To: 'Snyder, Jim'; Wehrly, Linc; French, Roberts; Wright, DavidA; Dalton, Joel; Ball, Joel; Ott, William
Cc: Giles, Michael (EEO); Tamborra, Nick (EEO); Lucht, Joseph (EEO)
Subject: RE: VW MTG: Off Cycle and A/C Credits

To all:

We look forward to meeeting with you tomorrow. There will be a total of four people representing VW (Nick Tamborra, Mike Giles, Joe Lucht, and me).

As mentioned, we have two main topics that we wish to discuss.

1. Off-Cycle Technologies – GHG Credit Review
2. Air Conditioning GHG Credits – AC17 Test Planning

Attached is the presentation for the Air Conditioning topic. We are completing the Off-Cycle Technology Credit presentation and will provide this tomorrow morning.

Best regards,

Len

Leonard W. Kata
Senior Manager
Emission Regulations and Certification
Engineering and Environmental Office
Volkswagen Group of America, Inc.

Phone: (248) 754-4204
Cell: (248) 797-3886
Fax: (248) 754-4207
E-Mail: leonard.kata@vw.com

<< File: EEO VWGoA AC17 TestVehiclesList_Feb2015.pdf >>

-----Original Appointment-----
From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Tuesday, February 03, 2015 1:22 PM
To: Snyder, Jim; Wehrly, Linc; French, Roberts; Wright, DavidA; Kata, Leonard (EEO); Giles, Michael (EEO); Tamborra, Nick (EEO); Dalton, Joel; Ball, Joel; Ott, William
Subject: VW MTG: Off Cycle and A/C Credits
When: Thursday, February 05, 2015 1:00 PM-2:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: AA-Room-Office-N95-ConfRoom-AAOTAQ-Office

When: Thursday, February 05, 2015 1:00 PM-2:30 PM (GMT-05:00) Eastern Time (US & Canada).
Where: AA-Room-Office-N95-ConfRoom-AAOTAQ-Office

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

From: Snyder, Jim
Required Attendees: Wehrly, Linc; French, Roberts; Wright, DavidA; Kata, Leonard (EEO); Giles, Michael (EEO); Tamborra, Nick (EEO); Dalton, Joel; Ball, Joel; Ott, William
Location: AA-Room-Office-N95-ConfRoom-AAOTAQ-Office
Importance: Normal
Subject: VW MTG: Off Cycle and A/C Credits
Start Date/Time: Thur 2/5/2015 6:00:00 PM
End Date/Time: Thur 2/5/2015 7:30:00 PM

To: 'Nikolaus.Steininger@ec.europa.eu'[Nikolaus.Steininger@ec.europa.eu]; 'Annette.Feucht@AUDI.DE'[Annette.Feucht@AUDI.DE]; 'Pedro.Casals@bmw.de'[Pedro.Casals@bmw.de]; 'wouter.vandermeulen@daimler.com'[wouter.vandermeulen@daimler.com]; 'Toshihisa_Yamaguchi@hm.honda.co.jp'[Toshihisa_Yamaguchi@hm.honda.co.jp]; 'winfried.hartung@de.gm.com'[winfried.hartung@de.gm.com]; 'Takashi_Fujiwara@n.t.rd.honda.co.jp'[Takashi_Fujiwara@n.t.rd.honda.co.jp]; 'christian.hartmann@maha.de'[christian.hartmann@maha.de]; 'laura.bigi@mpsa.com'[laura.bigi@mpsa.com]; 'Heinz.Steven@t-online.de'[Heinz.Steven@t-online.de]; 'thomas.b.wagner@daimler.com'[thomas.b.wagner@daimler.com]; 'Andreas.EA.Eder@bmw.de'[Andreas.EA.Eder@bmw.de]; 'thomas.vogel@de.opel.com'[thomas.vogel@de.opel.com]; 'raymond.petrovan@gm.com'[raymond.petrovan@gm.com]; 'stefan.klimek@daimler.com'[stefan.klimek@daimler.com]; 'marcel.hassler@daimler.com']['marcel.hassler@daimler.com']; 'klaus.land@daimler.com'[klaus.land@daimler.com]; 'ARijnders@rdw.nl'[ARijnders@rdw.nl]; 'hschmidt@tuev-nord.de'[hschmidt@tuev-nord.de]; Krueger, Lothar (L.)[lkruege1@ford.com]; 'beatrice.lopez@utac.com']['beatrice.lopez@utac.com']; 'anoop.bhat@maruti.co.in'[anoop.bhat@maruti.co.in]; Crisp, Darren (D.)[dcrisp4@ford.com]; 'Gerhard.Wickern@AUDI.DE'[Gerhard.Wickern@AUDI.DE]; 'pg@acea.be'[pg@acea.be]; 'nakhawa.ecl@araiindia.com']['nakhawa.ecl@araiindia.com']; Guenther, Mark (M.T.)[mguenthe@ford.com]; 'bertrand.mercier@mpsa.com'[bertrand.mercier@mpsa.com]; Smith, Anthony (A.C.)[asmit685@ford.com]; 'kai.behlau@volkswagen.de'[kai.behlau@volkswagen.de]; 'Christoph.Lueginger@bmw.de'[Christoph.Lueginger@bmw.de]; 'bob.latu@renault.com'[bob.latu@renault.com]; 'celine.vallaude@utaceram.com'[celine.vallaude@utaceram.com]; 'iddo@sidekickprojects.nl'[iddo@sidekickprojects.nl]; 'Thomas.ST.Schuetz@bmw.de'[Thomas.ST.Schuetz@bmw.de]; 'Markus.Bergmann@AUDI.DE'[Markus.Bergmann@AUDI.DE]; 'folko.rohde@volkswagen.de'[folko.rohde@volkswagen.de]; 'william.coleman@volkswagen.de'[william.coleman@volkswagen.de]; Dirk Bosteels (Dirk.Bosteels@aecc.eu)[Dirk.Bosteels@aecc.eu]; Ligterink, N.E. (Norbert)[norbert.ligterink@tno.nl]; Hosier, Caro (C.S.)[chosier@ford.com]; Cecile Favre (Cecile.Favre@aecc.eu)[Cecile.Favre@aecc.eu]
Cc: 'noriyuki_ichikawa@mail.toyota.co.jp'[noriyuki_ichikawa@mail.toyota.co.jp]; 'ka-koba@shinsa.ntsel.go.jp'[ka-koba@shinsa.ntsel.go.jp]; 'stephan.redmann@bmvi.bund.de'[stephan.redmann@bmvi.bund.de]; 'Konrad.Kolesa@AUDI.DE'[Konrad.Kolesa@AUDI.DE]; 'Adriana POP'[amp@acea.be]
From: Cuelenaere, R.F.A. (Rob)
Sent: Mon 1/19/2015 9:58:17 AM
Subject: Agenda WLTP Annex 4: face-to-face progress meeting - 3 February 2015
Task Force WLTP Annex 4.docx

Dear all,
Please find attached a proposal for the agenda of the Annex 4 progress meeting, 3 February 2015, Brussels.
Kind regards,
Rob Cuelenaere
Co-ordinator WLTP Annex 4 Open Issues

Drs. R.F.A. (Rob) Cuelenaere
Senior consultant
T +31 (0)88 866 63 23
M +31 (0)6 528 03764
Location
Disclaimer

Sustainable Transport and Logistics E rob.cuelenaere@tno.nl

-----Original Appointment-----
From: Cuelenaere, R.F.A. (Rob)
Sent: 10 December 2014 10:26
To: Cuelenaere, R.F.A. (Rob); 'Nikolaus.Steininger@ec.europa.eu'; 'Annette.Feucht@AUDI.DE'; 'Pedro.Casals@bmw.de'; 'wouter.vandermeulen@daimler.com'; 'Toshihisa_Yamaguchi@hm.honda.co.jp'; 'winfried.hartung@de.gm.com'; 'Takashi_Fujiwara@n.t.rd.honda.co.jp'; 'christian.hartmann@maha.de'; 'laura.bigi@mpsa.com'; 'Heinz.Steven@t-online.de'; 'thomas.b.wagner@daimler.com'; 'Andreas.EA.Eder@bmw.de'; 'thomas.vogel@de.opel.com'; 'raymond.petrovan@gm.com'; 'stefan.klimek@daimler.com'; 'marcel.hassler@daimler.com'; 'klaus.land@daimler.com'; 'ARijnders@rdw.nl'; 'hschmidt@tuev-nord.de'; 'lkruege1@ford.com'; 'beatrice.lopez@utac.com'; 'anoop.bhat@maruti.co.in'; 'Dcrisp4@ford.com'; 'Gerhard.Wickern@AUDI.DE'; 'pg@acea.be'; 'nakhawa.ecl@araiindia.com'; 'Guenther, Mark (M.T.)'; 'bertrand.mercier@mpsa.com'; 'Smith, Anthony (A.C.)'; 'kai.behlau@volkswagen.de'; 'Christoph.Lueginger@bmw.de'; 'bob.latu@renault.com'; 'celine.vallaude@utaceram.com'; 'iddo@sidekickprojects.nl'; 'Thomas.ST.Schuetz@bmw.de'; 'Markus.Bergmann@AUDI.DE'; 'folko.rohde@volkswagen.de'; 'william.coleman@volkswagen.de'; Ligterink, N.E. (Norbert); 'chosier@ford.com'
Cc: 'noriyuki_ichikawa@mail.toyota.co.jp'; 'ka-koba@shinsa.ntsel.go.jp'; 'stephan.redmann@bmvi.bund.de'; 'Konrad.Kolesa@AUDI.DE'; 'Adriana POP'
Subject: WLTP Annex 4: face-to-face progress meeting
When: 03 February 2015 10:00-17:30 (UTC+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna.
Where: ACEA, Brussels

Telco/web access will be available

Address : Avenue des Nerviens 85 | B-1040 Brussels | www.acea.be

Agenda and documents will be made available only after WLTP IWG #9 in Geneva (14 Jan 2015)

This message may contain information that is not intended for you. If you are not the addressee or if this message was sent to you by mistake, you are requested to inform the sender and delete the message. TNO accepts no liability for the content of this e-mail, for the manner in which you use it and for damage of any kind resulting from the risks inherent to the electronic transmission of messages.

MANUFACTURER LETTERHEAD

Chief
Emissions Compliance, Automotive Regulations and Science Division
California Air Resources Board
9528 Telstar Avenue, Suite 4
El Monte, California 91731

Re: Request for Conditional Executive Order for Test Group GVGAV02.0VAL

Volkswagen Group of America Inc.'s (VW) application to ARB for certification for 2016 model year test group GVGAV02.0VAL is incomplete with regard to the following: (1) durability demonstration, including the deterioration factors; (2) adjustment factors for regeneration of the diesel particulate filter; (3) selective catalytic reduction (SCR) system and driver inducement strategies; (4) SCR software and calibrations; and (5) On-Board Diagnostic system performance for the SCR system and exhaust gas recirculation system monitors. VW understands that it must submit more information to ARB with regard to the aforementioned five topics. As a result, until ARB deems VW's application information complete, VW requests that the California Air Resources Board (ARB) issue a conditional Executive Order for the 2016 model year test group GVGAV02.0VAL.

VW acknowledges and understands that it has made written representations to ARB in its model year 2016 certification application for said test group, and certifies that it expects its vehicles to comply with those written representations and all applicable legal requirements.

VW understands and agrees to the risks associated with such conditional Executive Order, along with the potential chance that the conditional Executive Order may be revoked, penalties may be levied against VW, and corrective action may be required if VW does not provide information as to the aforementioned five topics by December 10, 2015; if the test data does not demonstrate compliance with applicable 2016 model year emission standard; or if any of the engines conditionally certified for sale under the conditional Executive Order do not meet applicable legal requirements or the requirements of the conditional Executive Order. VW understands and agrees that in the event of VW's failure to provide the information, the test data does not demonstrate compliance with applicable 2016 model year emission standards, or if any of the vehicles conditionally certified for sale under the conditional Executive Order do not meet applicable legal requirements or the requirements of the conditional Executive Order, the conditional Executive Order may be revoked, any vehicles sold will be deemed retroactively noncertified, penalties may be levied, and VW may be required to take remedial action, at its own expense.

Sincerely,

Manufacturer Representative

To: Ex. 7 @vw.com]
Cc: Bunker, Byron[bunker.byron@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Wehrly, Linc
Sent: Fri 9/11/2015 2:33:18 PM
Subject: Re: Meeting at 1:00

Stuart,

That would be fine. See you then.

Linc

Sent from my iPhone

On Sep 11, 2015, at 9:21 AM, Ex. 7 @vw.com> wrote:

Hello Guys,

I am planning to come out to your office this afternoon for the meeting today.

If that doesn't work for you, please let me know.

Thanks,

Ex. 7

To: Wehrly, Linc[wehrly.linc@epa.gov]; Bunker, Byron[bunker.byron@epa.gov]
Cc: Ex. 7 @vw.com]
From: Ex. 7 (EEO)
Sent: Wed 9/2/2015 6:51:15 PM
Subject: Conf Call for VW-CARB Meeting

Hello Linc, Byron,

I had a note from Ex. 7 that CARB has already set up a conf call number for tomorrow's meeting. Sorry for the confusion. Please use their number instead of the one I sent earlier for tomorrow's call. If you have any questions please let me know.

Thanks

Ex. 7

Ex. 7

Engineering and Environmental Office

Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326
Phon
Cell:
FAX:
E-Ma

Ex. 7

From: Glodich, Jeffrey (J.M.)
Location: Toyota, Ann Arbor
Importance: Normal
Subject: SAE J2263 LDVP Committee Meeting
Start Date/Time: Thur 9/24/2015 5:00:00 PM
End Date/Time: Thur 9/24/2015 7:30:00 PM

;;;
Purpose: Focused on J2263 next steps. Agenda TBD.
SAE Light-Duty Vehicle Performance and Economy Measures Committee Meeting 1-3:30 PM, Toyota Technical Center, Ann Arbor.
Call in number Non-Responsive
Access code Non-Responsive
Web Address https://www.connectmeeting.att.com <https://www.connectmeeting.att.com/>
meeting id
access code Non-Responsive

From: Glodich, Jeffrey (J.M.)
Location: Toyota, Ann Arbor
Importance: Normal
Subject: SAE J1634 LDVP Committee Meeting
Start Date/Time: Thur 9/17/2015 5:00:00 PM
End Date/Time: Thur 9/17/2015 7:30:00 PM

;;;
Purpose: Agree on final updates before 1st level balloting.
SAE Light-Duty Vehicle Performance and Economy Measures Committee Meeting 1-3:30 PM, Toyota Technical Center, Ann Arbor.
Call in number Non-Responsive
Access code Non-Responsive
Web Address https://www.connectmeeting.att.com <https://www.connectmeeting.att.com/>
meeting id Non-Responsive
access code

From: Snyder, Jim
Required Attendees: Wehrly, Linc; Wright, DavidA; Ball, Joel; Dalton, Joel; Pidgeon, Bill; Kata, Leonard (EEO)
Location: AA-Room-Office-C126-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: VW SIL light shift schedule survey and test drive.
Start Date/Time: Wed 5/13/2015 1:00:00 PM
End Date/Time: Wed 5/13/2015 2:00:00 PM

VW will present results of SIL survey on their new 1.4L manual along with a vehicle to test drive the SIL.

From: Snyder, Jim
Required Attendees: Wehrly, Linc; French, Roberts; Wright, DavidA; Kata, Leonard (EEO); Giles, Michael (EEO); Tamborra, Nick (EEO); Dalton, Joel; Ball, Joel; Ott, William
Location: AA-Room-Office-N95-ConfRoom-AAOTAQ-Office
Importance: Normal
Subject: VW MTG: Off Cycle and A/C Credits
Start Date/Time: Thur 2/5/2015 6:00:00 PM
End Date/Time: Thur 2/5/2015 7:30:00 PM

To: Ex. 7 @vw.com]
From: Brooks, Phillip
Sent: Thur 9/17/2015 6:44:15 PM
Subject: RE: Providing conference line information

Thank you. Please note that this is a call that Mr. Geanacopolus would probably want to make a priority.

From: Ex. 7 @vw.com]
Sent: Thursday, September 17, 2015 2:42 PM
To: Brooks, Phillip
Subject: RE: Providing conference line information

Hello Phil,

Thank you for the follow-up email. I've contacted David Geanacopoulos and he will check his schedule and get back to me today.

Talk to you tomorrow,

Ex. 7

Ex. 7

From: Brooks, Phillip [mailto:Brooks.Phillip@epa.gov]
Sent: Thursday, September 17, 2015 2:34 PM
To: Ex. 7
Subject: Providing conference line information

Just to be sure I gave you the correct information: the call tomorrow at 9:00am will be on a conference line at Non-Responsive

If you have questions, or need assistance, please call.

Philip A Brooks

Director, Air Enforcement Division

OCE/OECA

U.S. Environmental Protection Agency

(202) 564-0652

To: Ex. 7 @vw.com]
From: Brooks, Phillip
Sent: Thur 9/17/2015 6:33:33 PM
Subject: Providing conference line information

Just to be sure I gave you the correct information: the call tomorrow at 9:00am will be on a conference line at Non-Responsive

If you have questions, or need assistance, please call.

Philip A Brooks

Director, Air Enforcement Division

OCE/OECA

U.S. Environmental Protection Agency

(202) 564-0652

To: Good, David[good.david@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Mon 9/14/2015 5:06:46 PM
Subject: FW: 2016 Audi S8

Ex. 4 - CBI

Hi Dave;

To summarize our phone discussion I have the following. Ex. 4 - CBI

Ex. 4 - CBI

If you have any questions or I did not capture the discussion correctly please let me know.

Best regards,

Richard

From: Thomas, Richard (EEO)
Sent: Monday, September 14, 2015 11:59 AM
To: 'Good.David@epamail.epa.gov' <Good.David@epamail.epa.gov>
Cc: Jim Snyder (snyder.jim@epa.gov) <snyder.jim@epa.gov>; Kata, Leonard (EEO) <Leonard.Kata@vw.com>
Subject: 2016 Audi S8

Hi Dave;

I guess you are in the office today (Monday). As a reminder, I have attached an email I wrote to you before your vacation week. For your information I heard from the Audi of America marketing department and they would prefer to use the newly calculated lower city and highway values this model year. This higher horse power engine will be the only engine for 2017 and they would prefer to use the lower values now rather than next model year. Ex. 4 - CBI

Ex. 4 - CBI

Best regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Tue 9/1/2015 1:52:34 PM
Subject: Ex. 4 - CBI Audi S8

Hi Dave;

A reminder to look into this issue when you have time on Thursday, maybe. First allow me to

Ex. 4 - CBI

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Mon 9/14/2015 3:59:12 PM
Subject: 2016 Audi S8

Ex. 4 - CBI

Hi Dave;

I guess you are in the office today (Monday). As a reminder, I have attached an email I wrote to you before your vacation week. Ex. 4 - CBI

Ex. 4 - CBI

Best regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Hopson, Janet L.[hopsonjl@ornl.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Mon 9/14/2015 3:41:32 PM
Subject: RE: Fuel Economy Guide Website - 2016 Model Types - Questions about the website

Thank you Dave.

From: Good, David [mailto:good.david@epa.gov]
Sent: Monday, September 14, 2015 11:38 AM
To: Thomas, Richard (EEO) <Richard.Thomas@vw.com>
Cc: Hopson, Janet L. <hopsonjl@ornl.gov>; Kata, Leonard (EEO) <Leonard.Kata@vw.com>
Subject: RE: Fuel Economy Guide Website - 2016 Model Types - Questions about the website

Richard,

DOE hasn't begun using the 2016 average mpg, electricity costs, etc. yet----because all previous model year vehicles are compared to this value, etc. They will change over to the 2016 fuel costs, etc in the late fall or early in 2016 calendar year.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Thursday, September 10, 2015 7:42 AM
To: Good, David
Cc: Hopson, Janet L.; Kata, Leonard (EEO)
Subject: Fuel Economy Guide Website - 2016 Model Types

Hi Dave;

I know you are on vacation this week but thought I would send this out before I forget. I was examining the fuel economy guide website when I noticed that the **2016** Volkswagen model year

vehicles still list the text in the "You save or spend*" section that reads: "Note: The average 2015 vehicle gets 24 MPG". For 2016 model year vehicles this should now be 25 MPG.

I have copied Janet with this mail and perhaps she may change that so the 2016 average will read 25 MPG on the website for the 2016 model year products. It was also the same for other manufacturers' 2016 models.

I also noticed that the 2016 Volkswagen e-Golf when selected reads $0.88 to drive 25 miles, the same as the last model year's model. This was based upon the $0.12 per kW-hr of electricity. The official value for electricity is now $0.13 per kW-hr. That would of course, affect the value that is shown in the "Cost to drive 25 miles". Shouldn't the unit price first be shown with the official model year label 2016 unit prices (regular gasoline $3.00, premium gasoline $3.30, Diesel $3.35, electric $0.13) of fuel and then the customer could personalize the unit price to get an updated savings, spending or cost to drive 25 miles value?

Best regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Thur 9/3/2015 2:02:29 PM
Subject: RE: 2016 FE Guide - Data in Verify as of 9/2/2015 10AM

Okay great, thank you. I get forgetful when I don't see that additional tab with EVs, but I didn't think there was an issue.

From: Good, David [mailto:good.david@epa.gov]
Sent: Thursday, September 03, 2015 9:54 AM
To: Thomas, Richard (EEO) <Richard.Thomas@vw.com>
Subject: RE: 2016 FE Guide - Data in Verify as of 9/2/2015 10AM

Richard,

The 2016 e-Golf is posted on the web---it didn't have any errors. I sent you the data on 8/20/2015 for your review for the 2016 Printed Guide---copy attached. It's in a different tab from the conventional vehicles.

Dave

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Thursday, September 03, 2015 7:35 AM
To: Good, David
Subject: RE: 2016 FE Guide - Data in Verify as of 9/2/2015 10AM

Hi Dave;

I noticed that I have not seen the BEV Volkswagen e-Golf on your spreadsheet listing since the end of July. You told me to ignore the e-Golf errors in your mail of July 29th. I assume everything is okay with this label #086, correct? It was a carried over from 2015, with only a change to the electricity unit price to $0.13 per kW-hr from $0.12. And, as I told you we made the 240V charge time a bit more definitive at 3.7 hours instead of 4 hours.

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, September 02, 2015 5:28 PM
To: Thomas, Richard (EEO) <Richard.Thomas@vw.com>
Subject: 2016 FE Guide - Data in Verify as of 9/2/2015 10AM

Richard,

Per your voicemail. Thanks for fixing the error.

Dave

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Tue 9/1/2015 2:57:41 PM
Subject: 5250 ETW cut point Standard SUVS

Hi Dave;

I thought I better not bother you with a phone call, but I was wondering if you can provide the new cut point for a 5250 lbs ETW, for a Standard Sport Utility Vehicle that is in your draft list and yet to be issued. Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI You said that we may see the official notice with new cut pints this week.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Tue 9/1/2015 1:52:34 PM
Subject: Running Change Fuel Economy 2016 Audi S8

Hi Dave;

A reminder to look into this issue when you have time on Thursday, maybe. First allow me to

Ex. 4 - CBI

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Thomas, Richard (EEO)
Sent: Fri 8/28/2015 10:13:13 AM
Subject: RE: 2016 FE Guide - Errors in Verify as of 4PM on August 27, 2015

Thanks Dave;

Ex. 4 - CBI

From: Good, David [mailto:good.david@epa.gov]
Sent: Thursday, August 27, 2015 6:17 PM
To: Thomas, Richard (EEO) <Richard.Thomas@vw.com>
Cc: Snyder, Jim <Snyder.Jim@epa.gov>
Subject: Re: 2016 FE Guide - Errors in Verify as of 4PM on August 27, 2015

Richard,

Re: 2016 FE Guide - Errors in Verify as of 4PM on August 27, 2015

I did another query of the data in Verify as of 4PM today---to help manufacturers correct errors on any new entries.

Attached are the data in Verify as of 6AM on August 27, 2015. Labels with pea green fill in the first few columns have errors but which need to be corrected in Verify before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred.

The next normal posting of 2015 & 2016 FE Label data will be on September 2, 2015 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later). This is the same day which I will send the data in Verify to DOE for the 2016 Printed Guide.

Please make any needed corrections to Verify when you get a chance.

Using the 2017 Derived 5-Cycle Equation for 2016MY Vehicles: If you are voluntarily using the 2017 derived 5-cycle equations for any 2016 model year vehicles, please send me the 2016 Index number(s) of the affected vehicles so I can build them into the macro.

Placeholders for the 2016 Printed Guide are due to EPA on Aug 20, 2015: If you haven't already done so, please send me an Excel spreadsheet with any fuel cell vehicles, EVs, HEVs, PHEVs, FFVs and any other alternative fuel vehicles which won't be labeled in Verify by September 1, 2015. [Please don't include placeholder information for vehicles which are already in EPA's Verify database (or will be in Verify by September 1, 2015.] See Enclosure 2, Section 3 of EPA Guidance letter CD-15-16 for additional information.

Thanks

Dave

To: Good, David[good.david@epa.gov]
Cc: Ex. 7 @vw.com]; Snyder, Jim[Snyder.Jim@epa.gov]; Ex. 7 Ex. 7 @vw.com]
From: Ex. 7 (EEO)
Sent: Thur 8/27/2015 5:27:04 PM
Subject: RE: 2016 Printed FE Guide - Data in EPA's database as of Aug 20, 2015 6AM is attached for your review; On Sept 2, 2015 I will send error free Verify data to DOE for the 2016 Printed Guide

Hi Dave;

Ex. 4 - CBI

Thanks,

Ex. 7

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, August 26, 2015 2:49 PM
To: Ex. 7 @vw.com>
Cc Ex. 7 @vw.com>; Snyder, Jim <Snyder.Jim@epa.gov>; Ex. 7 @vw.com>
Subject: RE: 2016 Printed FE Guide - Data in EPA's database as of Aug 20, 2015 6AM is attached for your review; On Sept 2, 2015 I will send error free Verify data to DOE for the 2016 Printed Guide

Ex. 7

Attached are the 2016 FE Guide data (where Index 100 uses the 2017 derived 5-cycle equation) and my edits to your 2016 placeholder file (FYI).

Ex. 4 - CBI

Let me know if you see any problems with my edits to your Placeholders.

Dave

From: [Ex. 7 @vw.com]
Sent: Wednesday, August 26, 2015 7:11 AM
To: Good, David
Cc: [Ex. 7]
Subject: RE: 2016 Printed FE Guide - Data in EPA's database as of Aug 20, 2015 6AM is attached for your review; On Sept 2, 2015 I will send error free Verify data to DOE for the 2016 Printed Guide

Hi Dave;

Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI

I have a place holder for the 2016 Audi A3 e-tron and A3 e-tron Ultra. Ex. 4 - CBI Ex. 4 - CBI I have attached the Excel spreadsheet with that place holder information. Please let me know if this spreadsheet will work for your purpose.

If you have any questions, please let me know.

Best regards,

Ex. 7

Ex. 7

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: Ex. 7

Fax:

mailto:

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, August 21, 2015 10:47 AM
To: Ex. 7 @vw.com>
Cc: Ex. 7 @vw.com>; Snyder, Jim <Snyder.Jim@epa.gov>
Subject: re: 2016 Printed FE Guide - Data in EPA's database as of Aug 20, 2015 6AM is attached for your review; On Sept 2, 2015 I will send error free Verify data to DOE for the 2016 Printed Guide

Ex. 7

re: 2016 Printed FE Guide - Data in EPA's database as of Aug 20, 2015 6AM is attached for your review; On Sept 2, 2015 I will send error free Verify data to DOE for the 2016 Printed Guide

Attached are the data in Verify as of August 20, 2015 6AM. Labels with pea green fill in the first few columns have errors which need to be corrected before I can have the data posted on www.fueleconomy.gov or included in the 2016 Printed Guide. Note that there are separate tabs for EV, PHEV, and fuel cell vehicles (if applicable). Please make any needed corrections to Verify when you get a chance. Please enter new data in Verify for any missing labels.

-

Printed Guide – For the 2016 Printed Guide, I will send all error-free data in Verify to DOE on September 2, 2015, regardless of release date. The data will not be released outside of EPA & DOE offices until the week of November 16, 2015, when 2016 Printed Guides are scheduled to be mailed to dealerships, libraries and credit unions, ref. EPA guidance letter CD-15-16, July 20, 2015. Please email me if there are data in Verify which you do not want included in the 2016 Printed Guide.

Next Web Update - The next normal posting of 2015 & 2016 FE Label data will be on August 25, 2015

(on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later). Again on September 2, 2015, I'll send the error-free data in Verify (which is releasable) to DOE to update www.fueleconomy.gov, business-as-usual.

Using the 2017 Derived 5-Cycle Equation for 2016MY Vehicles: If you are voluntarily using the 2017 derived 5-cycle equations for any 2016 model year vehicles, please send me the 2016 Index number(s) of the affected vehicles so I can build them into the macro. See EPA Guidance Letter CD-15-15, June 22, 2015 for additional information about the revised derived 5-cycle equation.

Placeholders for the 2016 Printed Guide are due to EPA on Aug 20, 2015: If you haven't already done so, please send me an Excel spreadsheet with any fuel cell vehicles, EVs, HEVs, PHEVs, FFVs and any other alternative fuel vehicles which won't be labeled in Verify by September 1, 2015. [Please don't include placeholder information for vehicles which are already in EPA's Verify database (or will be in Verify by September 1, 2015).] See Enclosure 2, Section 3 of EPA Guidance letter CD-15-16 for additional information about placeholders.

Reminders:

- Please double check the attached data in Verify for accuracy, missing labels, etc.
- September 1, 2015 is the last day to make changes for the 2016 Printed Guide.
- If you enter new label data into Verify before September 2, 2015, please double check it carefully for accuracy.

Please send me a short email when your 2016 FE Label data in Verify are "good to go."

Please send me your placeholder spreadsheet as soon as possible.

Thanks

Ex. 7

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Wed 8/12/2015 10:07:19 AM
Subject: voice message for Lamborghini

Thanks for the voice message Dave, Ex. 4 - CBI
Ex. 4 - CBI

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Wed 7/29/2015 6:34:37 PM
Subject: Confirmatory Test Thresholds/Cut Points

Hi Dave;

I thought that recently you told me that you were assigned the job of creating new threshold values for confirmatory testing. Are you making any progress toward establishing new cut points to replace these very old criteria?

Just wondering when we can expect new cut points. It seems now a days everything that is not confirmed by EPA must get manufacture's confirmatory tests, and we have test capacity problems so that some of our US confirmatory testing gets pushed aside by the factory labs to test vehicles for other countries.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
Cc: Good, David[good.david@epa.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]; Verify Help Desk[verifyhelp@csc.com]
From: Ex. 6
Sent: Wed 7/29/2015 1:14:37 PM
Subject: RE: Richard Thomas - Fw: Reactivation of 2016 Volkswagen Label Index #073 (HLP-6478)

Hello Mr. Thomas,

Thank you for the confirmation.

Ex. 6

Verify Help Desk
Staffed by Computer Sciences Corporation,
Contractor to the Environmental Protection Agency

This is a PRIVATE message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery. NOTE: Regardless of content, this e-mail shall not operate to bind CSC to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

"Thomas, Richard (EEO)"
<Richard.Thomas@vw.com>

07/29/2015 07:52 AM

To Verify Help Desk@CSC

cc "'Good.David@epamail.epa.gov'" <Good.David@epamail.epa.gov>, "Kata, Leonard (EEO)" <Leonard.Kata@vw.com>

Subject RE: Richard Thomas - Fw: Reactivation of 2016 Volkswagen Label Index #073 (HLP-6478)

Hi Ex. 6

I submitted this VGA index #073 again as new this morning with a release date of July 30th. It was accepted.

Thank you and best regards,
Richard

Richard E. Thomas
Senior Emission Certification Specialist
Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.
3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213
Fax: 248 754 4207
mailto: Richard.Thomas@VW.com

From: Ex. 6 **On Behalf Of** Verify Help Desk
Sent: Tuesday, July 28, 2015 7:06 PM
To: Thomas, Richard (EEO)
Cc: 'Good.David@epamail.epa.gov'; Kata, Leonard (EEO)
Subject: RE: Richard Thomas - Fw: Reactivation of 2016 Volkswagen Label Index #073 (HLP-6478)

Hello Mr. Thomas,

We have consulted with our EPA manager and would like you to submit this Model Type Index again as 'New'. Please let us know if you have any further question or issues. Ex. 6

Ex. 6

Verify Help Desk
Staffed by Computer Sciences Corporation,
Contractor to the Environmental Protection Agency

This is a PRIVATE message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery. NOTE: Regardless of content, this e-mail shall not operate to bind CSC to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

To Verify Help Desk@CSC

cc "'Good.David@epamail.epa.gov'" <Good.David@epamail.epa.gov>, "Kata, Leonard (EEO)" <Leonard.Kata@vw.com>

"Thomas, Richard (EEO)" <Richard.Thomas@vw.com>

Subject RE: Richard Thomas - Fw: Reactivation of 2016 Volkswagen Label Index #073 (HLP-6478)

07/28/2015 02:39 PM

Great, thank you Ex. 6

From: Ex. 6 **On Behalf Of** Verify Help Desk
Sent: Tuesday, July 28, 2015 2:37 PM
To: Thomas, Richard (EEO)
Cc: 'Good.David@epamail.epa.gov'; Kata, Leonard (EEO)
Subject: Re: Richard Thomas - Fw: Reactivation of 2016 Volkswagen Label Index #073 (HLP-6478)

Hello Mr. Thomas,

Verify help desk ticket HLP-6478 was opened for your inquiry. We will request EPA authorization to include this update in our next database updates release this Thursday, July 30.

Ex. 6

Verify Help Desk
Staffed by Computer Sciences Corporation,
Contractor to the Environmental Protection Agency

This is a PRIVATE message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery. NOTE: Regardless of content, this e-mail shall not operate to bind CSC to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

To verifyhelp@csc.com

cc

Subject Richard Thomas - Fw: Reactivation of 2016 Volkswagen Label Index #073

Ex. 6 **USA/CSC**

07/28/2015 02:31 PM

---- Forwarded by Vincent E Coleman/USA/CSC on 07/28/2015 02:30 PM -----

From: "Thomas, Richard (EEO)" <Richard.Thomas@vw.com>
To: Ex. 6 /USA/CSC@CSC

Cc: "'Good.David@epamail.epa.gov'" <Good.David@epamail.epa.gov>, "Kata, Leonard (EEO)" <Leonard.Kata@vw.com>
Date: 07/28/2015 02:11 PM
Subject: Reactivation of 2016 Volkswagen Label Index #073

Hello Ex. 6

I'm sorry to have to do this but one of the labels indexes we asked to make inactive will have to become active again. I talked to Dave Good who told me to contact the help desk to make that happen. It was VGA label index # 073 for the Jetta 1.8L manual 5-speed transmission. There was some miscommunication between our certification group and the marketing types in our corporate headquarters in Herndon Virginia.

Please make VGA index #073 active again, it can be immediately released for the guide. If you need me to do anything in the Verify labeling program please let me know.

Best regards,
Richard

Richard E. Thomas
Senior Emission Certification Specialist
Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Phone: 248 754 4213
Fax: 248 754 4207
mailto: Richard.Thomas@VW.com

To: Peavyhouse, Robert[Peavyhouse.Robert@epa.gov]
Cc: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Wed 7/29/2015 11:14:45 AM
Subject: New 5-cycle Calculator

Hello Bob,

We have had time to work with your new 5-cycle calculator and it seems to be in good order at least we found no discrepancies. We have a couple of suggestions with regard to the logging of data. Would it be possible to have a field included along with the test numbers to identify the vehicle (vehicle ID) and maybe the configuration number which would then be transferred to the data log? And, a long text field next to the vehicle ID to place manufacturer notes. The sheet is locked so that prevents us from wrapping text along several cells.

I think it would also be helpful to also log the calculated combined fuel economy values.

Our factory colleagues also liked the format from the original EPA 5-cycle calculator that showed all the values and approach (i.e.: D5C, V5C Std 3-Bag, M5C Std 3-Bag) calculated values on one screen before the values are logged on the second tab. That may be a bit more difficult to do at this point but I said I would ask.

Best regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Wed 7/22/2015 6:52:29 PM
Subject: RE: 2016 Passat 3.6L still on website [It's been pulled.] NNTO

Thank you very much Dave.

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, July 22, 2015 2:34 PM
To: Thomas, Richard (EEO)
Subject: RE: 2016 Passat 3.6L still on website [It's been pulled.] NNTO

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Wednesday, July 22, 2015 11:12 AM
To: Good, David
Subject: 2016 Passat 3.6L still on website

Hi Dave;

I just wanted to let you know that I check the fuel economy guide website and that 2016 Passat 3.6L (label index VGA #067) is still up. If you have time today, could you please follow up with the contractor to take it down until September.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Mon 7/20/2015 5:20:17 PM
Subject: Release Date Change question

Hi Dave;

I was just informed by our marketing department that our face lifted Passat for 2016 will not be offered until later this year. I had already labeled the 2016 Passat equipped with the 3.6L VR6 gasoline engine. Which at that time had a release date of July 13th. So the model now appears on the guide website. Is it possible to change the release date now to September 23rd and not send the label VGA index #067 to the contractor on the next update? The marketing types would rather not have the Passat listed on the fuel economy guide website until it's market introduction. Let me know your thoughts. Perhaps you can give me a call on Tuesday.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
Cc: Good, David[good.david@epa.gov]
From: Ex. 6
Sent: Fri 7/17/2015 2:04:54 PM
Subject: RE: 2016 Inactive Fuel Economy Labels Volkswagen (HLP-6426)

Hello Mr. Thomas,

The database update has been completed. These 4 2016 fuel economy label model type indexes (010, 024, 073, 075) have been made inactive.

Ex. 6

Verify Help Desk
Staffed by Computer Sciences Corporation,
Contractor to the Environmental Protection Agency

This is a PRIVATE message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery. NOTE: Regardless of content, this e-mail shall not operate to bind CSC to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

To verifyhelp@csc.com

cc

Ex. 6 USA/CSC

Subject RE: 2016 Inactive Fuel Economy Labels Volkswagen Link

07/16/2015 12:28 PM

From: "Good, David" <good.david@epa.gov>
To: Ex. 6 USA/CSC@CSC
Cc: "Thomas, Richard (EEO)" <Richard.Thomas@vw.com>, "Danzeisen, Karen" <Danzeisen.Karen@epa.gov>
Date: 07/16/2015 09:12 AM
Subject: RE: 2016 Inactive Fuel Economy Labels Volkswagen

Ex. 6

I agree with Richard's request for two more labels----you have my approval to make those indexes inactive when you get a chance. That will make a total of 4 indexes to make inactive.

Thanks

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Thursday, July 16, 2015 8:56 AM
To: Ex. 6 @csc.com)
Cc: Good, David
Subject: 2016 Inactive Fuel Economy Labels Volkswagen

Hi Ex. 6

I have two more 2016 labels that need to change to inactive status in Verify. Volkswagen cancelled the manual 5-speed transmission for the 1.8L Jetta and 1.8L Passat, VGA label indexes #073 and #075 respectively. Please make these two 2016 label indexes inactive.

Best regards,
Richard

Richard E. Thomas
Senior Emission Certification Specialist
Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Phone: 248 754 4213
Fax: 248 754 4207
mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Thur 7/16/2015 11:13:17 AM
Subject: RE: 2016 FE Guide - Errors in Verify as of July 15, 2015; please have the Verify help desk delete (make inactive) 2016 Indexes 10 and 24

Hi Dave;

I have made the CO2 correction to index #076, and have requested of the Verify help desk, that the two Audi labels #010 and #024 be made inactive.

I also sent you an email about two Volkswagen models that were labeled but have now been cancelled. They are manual 5-speed transmission configurations of the 1.8L Jetta and 1.8L Passat, indexes #073 and #075 respectively. They however, have never been released for the guide. Let me know if I should also write to Verify help and have them made inactive also.

Best regards,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, July 15, 2015 5:56 PM
To: Thomas, Richard (EEO)
Cc: Snyder, Jim
Subject: Re: 2016 FE Guide - Errors in Verify as of July 15, 2015; please have the Verify help desk delete (make inactive) 2016 Indexes 10 and 24

Richard,

Re: 2016 FE Guide - Errors in Verify as of July 15, 2015

Attached are the data in Verify as of July 15, 2015. Labels with pea green fill in the first few columns have errors but which need to be corrected in Verify before I can have the data posted on

www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred.

The next normal posting of 2015 & 2016 FE Label data will be on July 23, 2015 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Also, when you get a chance, please email the Verify help desk, and ask them to delete (make inactive) 2016 Indexes 10 and 24. Please cc me as I have to approve it.

Thanks

Dave

To: Ex. 6 @csc.com]
Cc: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Thur 7/16/2015 10:59:21 AM
Subject: 2016 Inactive Fuel Economy Labels Audi

Hello Ex. 6;

Please make the 2016 Volkswagen Group of America, Inc. (VGA) fuel economy labels for the normal wheel base 2016 Audi A8 indexes # 010 and #024 inactive, as these models will no longer be offered for 2016. EPA has already suppressed them from the fuel economy guide.

If you have any questions, please let me know.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Mon 7/13/2015 11:36:58 AM
Subject: RE: 2016 FE Guide - Errors in Verify as of July 10, 2015...two Volkswagen Labels to be Suppressed

Hi Dave;

Thanks for this review. I made these minor corrections.

I have to suppress two more label indexes from the Guide, this time for Volkswagen models that I labeled only last week. I just learned they will not offer the manual 5-speed transmission in the 1.8L Passat and Jetta models for model year 2016. I have a very late release date in Verify for these two models but I think we should suppress these two models in Verify if you see a need for that. They are VGA Jetta index #073 and Passat #075.

Please let me know what you decide.

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, July 10, 2015 5:16 PM
To: Thomas, Richard (EEO)
Cc: Snyder, Jim
Subject: Re: 2016 FE Guide - Errors in Verify as of July 10, 2015

Richard,

Re: 2016 FE Guide - Errors in Verify as of July 10, 2015

Attached are the data in Verify as of July 10, 2015. Labels with pea green fill in the first few columns have errors but which need to be corrected in Verify before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred.

The next normal posting of 2015 & 2016 FE Label data will be on July 15, 2015 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Fri 7/10/2015 10:18:03 AM
Subject: RE: 2016 Audi Labels to be Suppressed from Fuel Economy Guide

That will work for me, thanks.

From: Good, David [mailto:good.david@epa.gov]
Sent: Thursday, July 09, 2015 6:36 PM
To: Thomas, Richard (EEO)
Cc: Kata, Leonard (EEO)
Subject: RE: 2016 Audi Labels to be Suppressed from Fuel Economy Guide

Richard,

I didn't have time to run the FE Guide query. Will send you the data on Friday.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Thursday, July 09, 2015 1:39 PM
To: Good, David
Cc: Kata, Leonard (EEO)
Subject: 2016 Audi Labels to be Suppressed from Fuel Economy Guide

Hi Dave;

Earlier this year we certified and labeling the normal wheel base (NWB) 2016 Audi A8 with both the 3.0L V6 and 4.0 V8 gasoline concepts. Audi of America has decided to only make the long wheel base Audi A8L available for ordering. Please suppress these two 2016 labels from the fuel economy guide, VGA indexes #010 and #024. If there is some action I must take in Verify please let me know.

Best regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Wed 6/24/2015 10:29:38 AM
Subject: RE: 2016 FE Guide - Errors in Verify as of June 23, 2015

Hi Dave;

I corrected index #040 GTI 2.0L. I had also noticed that the maximum ethanol usage rate of 15% was not listed on this audit for the Bentley 6.0L Continental models indexes: 028, 029, and 030 which I had made yesterday early morning. Your summary still has the 10% maximum value. I'm sure it will read correctly on the next audit.

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Tuesday, June 23, 2015 6:11 PM
To: Thomas, Richard (EEO)
Cc: Snyder, Jim
Subject: Re: 2016 FE Guide - Errors in Verify as of June 23, 2015

Richard,

Re: 2016 FE Guide - Errors in Verify as of June 23, 2015

Attached are the data in Verify as of June 23, 2015. Labels with pea green fill in the first few columns have errors but which need to be corrected in Verify before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred.

The next normal posting of 2015 & 2016 FE Label data will be on July 1, 2015 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on

that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

From: Ex. 7 (EEO)
Location: Conf Call
Importance: Normal
Subject: CARB-EPA-VW Diesel Conf Call
Start Date/Time: Thur 9/17/2015 5:00:00 PM
End Date/Time: Thur 9/17/2015 7:00:00 PM

;;;;;;
;;;;;;

Good Morning,
Please see below for dial-in information. Conf ID is at the bottom.
Thanks

Ex. 7

EPA:
Byron Bunker
Linc Wehrly
Jim Snyder
CARB:

Ex. 7

Join Skype Meeting

This is an online meeting for Skype for Business, the professional meetings and communications app

formerly known as Lync.

Join by phone

+1 (248) 754-6400 (Auburn Hills) English (United States)
+1 (855) 858-8080 (Auburn Hills) English (United States)
+1 (248) 630-0170 (Auburn Hills) English (United States)
+1 (248) 754-5055 (Auburn Hills) English (United States)

Find a local number

Conference ID: Ex. 6

Forgot your dial-in PIN? | Help

From: Ex. 7 (EEO)
Location: Skype Meeting
Importance: Normal
Subject: Diesel Discussion
Start Date/Time: Fri 9/11/2015 5:00:00 PM
End Date/Time: Fri 9/11/2015 6:30:00 PM

;;;;;;
;;;;;;

Join Skype Meeting

This is an online meeting for Skype for Business, the professional meetings and communications app formerly known as Lync.

Join by phone

+1 (248) 754-6400 (Auburn Hills) English (United States)
+1 (855) 858-8080 (Auburn Hills) English (United States)
+1 (248) 630-0170 (Auburn Hills) English (United States)
+1 (248) 754-5055 (Auburn Hills) English (United States)

Find a local number

Conference ID: Non-Responsive

Forgot your dial-in PIN? | Help

From: Ex. 7
Location: Conf Call (El Monte) - RM. N-120 AA
Importance: Normal
Subject: VW CARB Conf Call (Pacific Time)
Start Date/Time: Thur 9/3/2015 7:00:00 PM
End Date/Time: Thur 9/3/2015 10:00:00 PM

;;;;;;;
;;;;;;;
--Please Note Pacific Time—
Ex. 7 asked for a conference line to be provided for the VW-CARB meeting scheduled for 3-Sept in El Monte 12-3pm Pacific time. Please call Ex. 6 if there are any difficulties with the line.
Thank you,
Ex. 7

Join Skype Meeting

This is an online meeting for Skype for Business, the professional meetings and communications app formerly known as Lync.

Join by phone

+1 (248) 754-6400 (Auburn Hills) English (United States)
+1 (855) 858-8080 (Auburn Hills) English (United States)
+1 (248) 630-0170 (Auburn Hills) English (United States)
+1 (248) 754-5055 (Auburn Hills) English (United States)
Find a local number
Conference ID: Non-Responsive
Forgot your dial-in PIN? | Help

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Thur 6/11/2015 1:18:53 PM
Subject: RE: 2016 FE Guide - data as of 6/9/2015 10 AM attached

Thank you Dave, great.

From: Good, David [mailto:good.david@epa.gov]
Sent: Thursday, June 11, 2015 9:07 AM
To: Thomas, Richard (EEO)
Subject: RE: 2016 FE Guide - data as of 6/9/2015 10 AM attached

Richard,

Here you go. The macro didn't pick up any errors.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Thursday, June 11, 2015 7:38 AM
To: Good, David
Subject: RE: 2016 FE Guide - data as of 6/9/2015 10 AM attached

Thanks Dave;

This all looks good. I labeled about 16 more model types (including two Volkswagen models) after you ran this latest report. I don't think I will be doing anymore today. So, if you could run your fuel economy audit again for the 2016 VWGoA labeling program I can be sure there are no errors to be fixed.

I will be out this afternoon, tomorrow and Monday but will have my job PC and able to work from home if need be.

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, June 10, 2015 1:48 PM
To: Thomas, Richard (EEO)
Subject: 2016 FE Guide - data as of 6/9/2015 10 AM attached

Richard,

Here you go.

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Tue 6/9/2015 11:57:41 AM
Subject: Received Certificates

Hi Jim;

We received certificates for two Audi Test Groups last night enabling me to label nine 2016 Audi models in the Verify fuel economy labeling program.

We are approaching the 2016 Audi model launch and this was very helpful, thanks for your attention. We have a few more pressing test groups and Bill will send you a priority list for your consideration.

Best regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Fri 6/5/2015 9:48:16 AM
Subject: RE: Voluntary use the 3-Cycle Label method;

Thanks Dave.

From: Good, David [mailto:good.david@epa.gov]
Sent: Thursday, June 04, 2015 2:51 PM
To: Thomas, Richard (EEO)
Cc: Johnson, Stuart (EEO); Snyder, Jim; French, Roberts
Subject: Voluntary use the 3-Cycle Label method;

Richard,

As we discussed last week, EPA fuel economy regulations (and EPA policy) don't allow manufacturers to voluntarily use the 3-cycle method to calculate FE Labels when data from the test group passed the Litmus test. [The provisions of 40 CFR 600.210-12(a) and EPA guidance letter CISD-10-04 allow manufacturers to voluntarily use the vehicle specific 5-cycle method, but are silent with regard to voluntarily using the 3-cycle method.]

VW:

Test Group: FVGAV01.4VPA (Jetta Hybrid), Highway Litmus = +11.55%

FE Tests (tests used for EDV as well): DVWX10023353 (57.5 unadjusted mpg for FTP), DVWX91001606 (65.5 unadjusted mpg for HWY), DVWX10023355 (43.5 unadjusted mpg for US06)

The 2015 Jetta Hybrid Label calculated using the 3-cycle method is 42/48/45 mpg.

The 2015 Jetta Hybrid Label calculated using the 2-cycle method would have been 42/46/44 mpg (according to my calculations).

As we discussed on 5/22/2015, using the 3-cycle method is OK for the 2015MY Jetta Hybrid.

However for 2016MY, if the fuel economy data and the litmus test data are carried over to 2016MY, please don't use the 3-cycle method for the FE Label calculations for the 2016MY Jetta Hybrid.

Similarly, in the future, please don't voluntarily use the 3-cycle method for other vehicles with passing Litmus test results.

Thanks

To: Good, David[good.david@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Thomas, Richard (EEO)
Sent: Thur 6/4/2015 10:37:04 AM
Subject: RE: 2016 FE Guide - Errors in Verify as of June 3, 2015

Thanks Dave, I made the correction to index # 027 and the fuel economy rating. For your information I added three 2016 6.0L Bentley Continental models yesterday afternoon.

I have a whole host of 1.8L, 2.0L and 3.0L Audi fuel economy labels waiting upon the issuance of the certificates in six test groups.

Best regards,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, June 03, 2015 2:32 PM
To: Thomas, Richard (EEO)
Cc: Snyder, Jim
Subject: Re: 2016 FE Guide - Errors in Verify as of June 3, 2015

Richard,

Re: 2016 FE Guide - Errors in Verify as of June 3, 2015

Attached are the data in Verify as of June 3, 2015. Labels with pea green fill in the first few columns have errors but which need to be corrected in Verify before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred.

The next normal posting of 2015 & 2016 FE Label data will be on June 9, 2015 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

To: Good, David[good.david@epa.gov]
Cc: Anderson, Tom[Anderson.Tom@epa.gov]
From: Kata, Leonard (EEO)
Sent: Thur 5/28/2015 9:15:44 PM
Subject: RE: USEAP/Volkswagen Meeting - Tier 3 Implementation

Hi Dave:

As noted below, I re-sent the draft report and revised presentation slides to EPA for review and comment with my August 18, 2014 e-mail. I do not believe that I received an EPA response to the open points or requests for confirmation after this date, so the report remains as distributed last August.

Best regards,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

Fax: (248) 754-4207

E-Mail: leonard.kata@vw.com

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, May 22, 2015 2:04 PM
To: Kata, Leonard (EEO)
Cc: Anderson, Tom
Subject: FW: USEAP/Volkswagen Meeting - Tier 3 Implementation
Importance: High

Len,

Tom Anderson & I are putting together a Tier 3 Q& A document that EPA will share with the Industry.

Do you have a final version of the minutes to VW's Tier 3 meetings with EPA staff last summer---- that I can glean some Q&A's for the EPA Tier 3 guidance document?

I won't use and of the Q&A's that are specific to VW's certification & carryover plans, etc.

Thanks

Dave

From: Kata, Leonard (EEO) [mailto:Leonard.Kata@vw.com]
Sent: Monday, August 18, 2014 3:17 PM
To: Olechiw, Michael; Passavant, Glenn; Fernandez, Antonio; Wysor, Tad; Stout, Alan; Good, David; Snyder, Jim; Wright, DavidA; Laroo, Chris
Subject: RE: USEAP/Volkswagen Meeting - Tier 3 Implementation
Importance: High

To all:

Please see the e-mail from July 18, 2014 below. It distributed a draft meeting report from the July 16, 2014 USEPA/VW Group meeting on Tier 3 implementation.

Your reaction to our summary of the meeting would be appreciated. There were also a few open points that EPA was going to check. For the most part, the open points are contained in Agenda item 8 covering LEV III Certification and Carryover to Tier 3. Please see the bold-print items in the "Follow-Up Action" column of the report. I have attached copies of the report and the revised version of the carryover slides, distributed with my earlier e-mail, for your convenience.

We would appreciate your input so that we are able to close the open points.

Best regards,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

E-Mail: leonard.kata@vw.com

From: Kata, Leonard (EEO)
Sent: Friday, July 18, 2014 11:26 AM
To: Michael Olechiw (Olechiw.Michael@epamail.epa.gov); Glenn Passavant/AA/USEPA/US (Passavant.Glenn@epamail.epa.gov); Antonio Fernandez/AA/USEPA/US (Fernandez.Antonio@epamail.epa.gov); wysor.tad@epa.gov; Alan Stout/AA/USEPA/US (Stout.Alan@epamail.epa.gov); David Good (Good.David@epamail.epa.gov); Snyder.jim@Epa.gov; Wright, DavidA (Wright.DavidA@epa.gov); 'Laroo.chris@Epa.gov'
Cc: Schmidt, Oliver (EEO); Johnson, Stuart; Sigelko, Jenny (EEO); Rech, Lothar (I/EA-523) (Lothar.Rech@AUDI.DE); Stang, Carsten (N/EA-521); Schlueter, Hannah (EASZ/1); Kuntze, Aron (EXTERN: IAV GmbH); Horton, Garett (VWGoA Imp); Rodgers, William; Giles, Michael (EEO); Allen, Gregory (EEO); Peter, Juergen (EASZ/1) (juergen.peter@volkswagen.de); Tamborra, Nick (Nick.Tamborra@vw.com)
Subject: USEAP/Volkswagen Meeting - Tier 3 Implementation

To all:

On July 16, 2014, representatives from the Volkswagen Group met with EPA staff to discuss topics related to the implementation of the Tier 3 requirements. Copies of the presentation materials were distributed by e-mail on July 15, 2014. Subsequent to the meeting, Volkswagen prepared a meeting report. It presents a brief discussion and conclusions drawn for each of the agenda topics. It also points out areas where further action is required and/or EPA confirmation is requested (specified in bold typeface).

We would particularly like to direct EPA's attention to Agenda Item 8, LEV III Certification and Carryover to Tier 3. A revised version of the slides for this item is attached. The revisions are shown in red. Slide 7 from the original deck addressed the topic of Tier 3 Evap. This is not included in the new deck since we agreed on the information presented and do not believe that further discussion is required. Slides 6 and 7 of the new deck address the topic of applicable test procedures and carryover implications. The new Slide 7 presents Volkswagen's understanding of the EPA explanation from the meeting regarding the test procedures that apply to various vehicle concepts, assuming that the concepts are "carried over" through their lifespan. The test procedures referred to as Part 1066 Stage 1 and Stage 2, are as described on the new Slide 6. Slides 8 and 9 are included for reference.

Volkswagen appreciates the opportunity to meet with you, and looks forward to your comments on the report.

Best regards,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

E-Mail: leonard.kata@vw.com

To: Good, David[good.david@epa.gov]
From: Kata, Leonard (EEO)
Sent: Fri 5/22/2015 6:05:29 PM
Subject: Automatic reply: USEAP/Volkswagen Meeting - Tier 3 Implementation

I am currently away until Tuesday, May 26, 2015.

Leonard W. Kata, Senior Manager

Emission Regulations and Certification

To: Good, David[good.david@epa.gov]; Peavyhouse, Robert[Peavyhouse.Robert@epa.gov]
Cc: richard.thomas@vw.com[richard.thomas@vw.com]
From: French, Roberts
Sent: Fri 5/8/2015 3:33:35 PM
Subject: RE: New 5-Cycle Calculator

Richard,

If you look at the tabs labeled "City Regression" and "Highway Regression" in my spreadsheet that should have been sent to you, you will see current and new litmus threshold values. In general if you passed before, you will pass with the new values, because the new thresholds are generally below the current ones. It is unlikely that the new curves will result in more litmus failures.

It would be easy to add a vehicle-specific litmus determination to my spreadsheet (I have it in my own version). Let me know if that would help.

Rob

Roberts W. French, Jr.

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory

2000 Traverwood Drive

Ann Arbor, Michigan 48105

(734) 214-4380

From: Good, David
Sent: Friday, May 08, 2015 11:06 AM
To: Peavyhouse, Robert; French, Roberts
Cc: richard.thomas@vw.com

Subject: FW: New 5-Cycle Calculator

Bob,

I talked to Richard this morning and he is wondering if you have a new comprehensive 5-cycle calculator (2-cycle, 3-cycle 5-cycle litmus calcs, etc) using the revised derived 5-cycle equation---- similar to the attached calculator.

Richard has the spreadsheet that Rob sent to the Alliance, but needs to figure out if his vehicles still pass the litmus test with the new derived 5-cycle equation.

Richard----please add anything that I may have missed.

Thanks

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Friday, May 08, 2015 8:58 AM
To: Good, David
Subject: New 5-Cycle Calculator

Hi Dave;

As we discussed on the phone I would like to obtain a copy of the new EPA 5-cycle calculator that we use to calculated configuration data for our labeling program. I understand that you might have a draft copy of the EPA calculator before the manufacturer guidance letter is issued. It would speed up our evaluation of the affects upon our model labels. In particular the Litmus test and that may well have a greater affect upon our testing burden.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Fri 5/8/2015 12:57:33 PM
Subject: New 5-Cycle Calculator

Hi Dave;

As we discussed on the phone I would like to obtain a copy of the new EPA 5-cycle calculator that we use to calculated configuration data for our labeling program. I understand that you might have a draft copy of the EPA calculator before the manufacturer guidance letter is issued. It would speed up our evaluation of the affects upon our model labels. In particular the Litmus test and that may well have a greater affect upon our testing burden.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Wed 4/22/2015 10:43:46 AM
Subject: RE: 2016 FE Guide - Errors in Verify as of April 21, 2015

Thanks Dave.

From: Good, David [mailto:good.david@epa.gov]
Sent: Tuesday, April 21, 2015 6:27 PM
To: Thomas, Richard (EEO)
Cc: Snyder, Jim
Subject: Re: 2016 FE Guide - Errors in Verify as of April 21, 2015

Richard,

Re: 2016 FE Guide - Errors in Verify as of April 21, 2015

Our macro didn't catch any errors. Sorry---I got busy and couldn't send it earlier.

Attached are the data in Verify as of April 21, 2015. Labels with pea green fill in the first few columns have errors but which need to be corrected in Verify before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred.

The next normal posting of 2015 & 2016 FE Label data will be on May 1, 2015 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance

Thanks

Dave

To: Good, David[good.david@epa.gov]
Cc: Wehrly, Linc[wehrly.linc@epa.gov]; Mark R. Rosekind Ph. D. (nhtsa.administrator@dot.gov)[nhtsa.administrator@dot.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Tue 3/31/2015 10:44:07 AM
Subject: 2014 VWGoA Passenger Car CAFE/CREE Reports
Final PC 2014 CAFE & CREE to EPA .pdf

Hello Dave;

Please find a copy of the 2014 Volkswagen Group Final Import and Domestic Passenger Car CAFE reports and Passenger Car CREE reports. The Verify final status was set to yes. All Verify entered data was processed under the manufacturer code VWX for 2014 model year. I have downloaded the file to Verify. If you have any questions please let me know.

Best regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

VOLKSWAGEN

GROUP OF AMERICA

Ms. Gina McCarthy, Administrator
U.S. Environmental Protection Agency HQ
William Jefferson Clinton Building
1200 Pennsylvania Ave, N.W.
Mail Code 1101A
Washington, D.C. 20460

Mr. Matthias Barke Name
General Manager Title
EEO Department
248 754 4201 Phone
248 754 4207 Fax
Matthias.Barke@vw.com E-Mail

March 30, 2015 Date

VOLKSWAGEN GROUP OF AMERICA, INC.
3800 HAMLIN ROAD
AUBURN HILLS, MI 48326
PHONE +1 248 754 5000

Subject: Volkswagen Group 2014 Final Passenger Car CAFE/CREE Reports

Dear Ms. McCarthy;

Enclosed are the 2014 Final Passenger Car CAFE and CREE reports in accordance with the regulations contained in 40 CFR 600.512-12. These reports have been processed and successfully submitted into the EPA Verify system.

Following is the manufacturer's calculation for the 2014 final fuel economy average. This calculation is provided for the Volkswagen Group of America, Inc. (VWGoA) Import and Domestic Passenger Car categories. The final CAFE values are based upon approved EPA fuel economy data and final production volumes for the 2014 model year vehicles. The VWGoA brands for the 2014 Passenger Car CAFE reports include the brands of Volkswagen, Audi, Bentley, Lamborghini, Bugatti and Porsche.

The Import Passenger Car category Baseline (Non-AMFA) CAFE adjusted value is 33.7 MPG. The adjusted CAFE with AMFA Credits included is **35.3** MPG. This value does exceed the maximum cap and increase for 2014 of 1.2 MPG as specified in paragraph (h) of 40 CFR 600.510-12. The capped value is then: **34.9** MPG

The calculated reformed CAFE Import category standard is **34.9** MPG, as specified in paragraph (c) of 49 CFR 531.5.

The Domestic Passenger Car category final adjusted CAFE value is **37.9** MPG.

The calculated reformed CAFE Domestic category standard is **33.6** MPG, as specified in paragraph (c) of 49 CFR 531.5.

The footprint based reformulated CAFE standards are derived using measurement methods which comply with Department of Transportation and EPA requirements.

The domestic content calculation as requested in the EPA certification mail-out CD-92-06 is summarized below. The specific calculations and monetary result materials are available upon request. The Volkswagen procedure for this calculation follows the procedure outlined in 40 CFR 600.511-08. Our procedure is described as follows:

For vehicles produced outside of the NAFTA territory, the "declared value" of foreign components is basically, the ex-factory value of each of the models which we have imported. The freight and insurance is added to this value and is labeled as "adjusted import value'. The value of U.S. components has not been excluded because this value is included in the declared value upon importation of the vehicles. The "cost of production" as defined in the regulations equates to our wholesale price to the dealer.

The following Imported Volkswagen vehicle brands and carlines produced outside the NAFTA territory do not exceed the 75% criteria for the domestic category classification.

Volkswagen	Audi	Bentley	Lamborghini	Bugatti
Golf	A4 / A4 quattro	Mulsanne	Gallardo Coupe	Veyron
GTI	A5 Cabriolet	Flying Spur	Gallardo Spyder	
CC	A5 Cabriolet quattro	Continental GT	Aventador Coupe	
CC 4Motion	A6 / A6 quattro	Continental GTC	Aventador Spyder	
Tiguan / Tiguan 4Motion	S5 / S5 Cabriolet / S4 / S5 / S6 / S7 / S8 / RS7 / RS5	Continental GT Speed Convertible		
Touareg	allroad quattro			
Eos	A7 quattro / S7			
	R8 / R8 Spyder			
	A8 / A8L / S8			
	TT Coupe quattro			
	TT Roadster quattro			
	RS5 Cabriolet			
	Audi Q7 / Q5 / SQ5			

Porsche
911 Carrera / 911 Carrera 4 / 911 Carrera 4 Cabriolet / 911 Carrera 4S / 911 GT3
911 Carrera 4S Cabriolet / 911 Carrera Cabriolet / 911 Carrera S / 911 Carrera S Cabriolet
911 Targa 4 / 911 Targa 4S / 911 Turbo / 911 Turbo Cabriolet / 911 Turbo S
911 Turbo S Cabriolet / Boxer / Boxer S / Caymen / Caymen S / Panamera / Panamera 4
Panamera 4S Executive / Panamera GTS / Panamera S / Panamera S Hybrid PHEV
Panamera Turbo / Panamera Turbo Executive / Panamera Turbo S / Panamera 4S
Panamera Turbo S Executive

For vehicles produced within the NAFTA territory (Mexico), we followed the procedure established according to NAFTA Appendix 300-A.3, where Paragraph 1 states:

"For purposes of the Energy Policy and Conservation Act of 1975, 42 U.S.C. 6201...the United States shall consider an automobile to be domestically manufactured in any model year if at least 75 percent of the cost to the manufacturer of such automobile is attributable to value added in Canada, Mexico or the United States...Paragraph 1 shall apply beginning with the next model year after January 1, 2004, where the enterprise subject to the fuel economy requirements for those automobiles under the CAFE Act, has not made an election under subparagraph a)."

For purposes of paragraph 1, and according to 40 CFR 600.511-08, the ratio obtained in the domestic production determination was obtained from dividing the sum of the declared value (as defined in §600.502) of all of the imported components installed or included on automobiles produced within such a car line within a given model year plus the cost of transportation and insuring such components to the United States Port of entry, by the cost of production (as defined in §600.502) of all automobiles within such a car line.

The calculated results for each of the Volkswagen carlines: Jetta, Jetta Hybrid, Jetta SportWagen Beetle and Beetle Convertible are greater than the 0.25 ratio and therefore all Volkswagen Group carlines, with the exception of the Passat, are determined to be Import within the Import category Passenger Car report.

The Volkswagen Passat models, assembled in the Chattanooga, Tennessee USA manufacturing facility, are in the Domestic category Passenger Car report.

Additionally, we herewith submit the 2014 VWGoA model year Passenger Car CREE Final Report. This 2014 model year submission includes Volkswagen, Audi, Bentley, Lamborghini, Bugatti and Porsche brand passenger cars. Enclosed is the manufacturer's calculated fleet average and documents providing the necessary information to establish the fleet average. The calculated fleet average is determined in accordance with 40 CFR 600.510-12 (j)(2)(iv). This final value is then capped at **256** g/mi CREE after application of the maximum decrease in average CREE determined in accordance with 40 CFR 600.510-12(i).

The footprint based CO2 standard of **250** g/mi is determined in accordance with 40 CFR 86.1818-12.

Enclosed is the list of vehicle models and test parameters and in-use CREE standards in accordance with 600.512-12(c)(11).

If there are any questions concerning this report, please contact Leonard Kata or Richard Thomas of my staff at (248) 754-4204 or (248) 754-4213, respectively.

Sincerely,
Volkswagen Group of America, Inc.

Mr. Matthias Barke
General Manager
Engineering and Environmental Office

Attachments

cc: Mark R. Rosekind, Ph.D., Administrator
U.S. DOT, National Highway Traffic Safety Administration

Byron Bunker, Director
U.S. EPA, Compliance Division

Appendix

Pursuant to 40 CFR 600.512-01(c)(7), I, Anna Schneider on behalf of Volkswagen Group of America, Inc. do attest to the authenticity and accuracy of the production data in this 2014 Model Year Report for Volkswagen Group of America, Inc.

This attestation constitutes a representation by Volkswagen Group of America, Inc. that it has established reasonable, prudent procedures to ascertain and provide production data that are accurate and authentic in all material respects and that these procedures have been followed by employees of Volkswagen Group of America, Inc. in the reporting process.

Anna Schneider

Anna Schneider
Vice President Industry & Government Relations
Volkswagen Group of America, Inc.

March 30th, 2015

2014 Import PC Baseline CAFE

INDEX #	Brand	Carline	DISP L/CID	Trans	CITY	HWY	Combined	COMB Rounded	Model Type Sales	Weighted Sales/MPG
067	Audi	A4	2.0 / 121	CVT	30.1621	44.4731	35.2693	35.3	7,971	225.8074
071	Audi	A4 quattro	2.0 / 121	M6	27.6012	43.8777	33.1318	33.1	2,195	66.3142
068	Audi	A5 Cabriolet	2.0 / 121	CVT	30.1621	44.4731	35.2693	35.3	712	20.1700
072	Audi	A5 quattro	2.0 / 121	M6	27.6012	43.8777	33.1318	33.1	759	22.9305
069	Audi	A6	2.0 / 121	CVT	31.4000	46.9000	36.8857	36.9	1,731	46.9106
070	Audi	A6 quattro	2.0 / 121	S8	24.8000	40.5000	30.0404	30.0	8,203	273.4333
054	Audi	A6 quattro	3.0 / 183	S8	23.1369	38.1000	28.1036	28.1	9,057	322.3132
015	Audi	A6 quattro [TDI]	3.0 / 181	S8	30.6987	52.5000	37.7537	37.8	3,629	96.0053
053	Audi	A7 quattro	3.0 / 183	S8	22.5160	37.3549	27.4170	27.4	5,949	217.1168
016	Audi	A7 quattro [TDI]	3.0 / 181	S8	30.6987	52.5000	37.7537	37.8	1,097	29.0212
051	Audi	A8	3.0 / 254	S8	22.5160	37.3549	27.4170	27.4	461	16.8248
018	Audi	A8	4.0 / 244	S8	21.7885	38.4000	27.0552	27.1	236	8.7085
052	Audi	A8L	3.0 / 254	S8	22.5160	37.3549	27.4170	27.4	1,555	56.7518
017	Audi	A8L	4.0 / 244	S8	19.8586	38.4000	25.3713	25.4	1,357	53.4252
061	Audi	A8L	6.3 / 384	S8	15.9000	25.7000	19.1935	19.2	29	1.5104
001	Audi	A8L [TDI]	3.0 / 254	S8	29.9399	51.4000	36.8664	36.9	1,192	32.3035
005	Audi	R8	4.2 / 254	AMS7	16.4487	29.7118	20.5834	20.6	192	9.3204
009	Audi	R8	4.2 / 254	M6	13.6694	24.5541	17.0757	17.1	73	4.2690
003	Audi	R8	5.2 / 303	AMS7	15.4627	28.9120	19.5565	19.6	375	19.1327
007	Audi	R8	5.2 / 303	M6	13.7000	23.4824	16.8608	16.9	71	4.2012
006	Audi	R8 Spyder	5.2 / 303	M6	13.7000	23.4824	16.8608	16.9	36	2.1302
002	Audi	R8 Spyder	5.2 / 303	S6	15.4627	28.9120	19.5565	19.6	222	11.3265
004	Audi	R8 Spyder	4.2 / 254	AMS7	16.4487	29.7118	20.5834	20.6	114	5.5340
008	Audi	R8 Spyder	4.2 / 254	M6	13.6694	24.5541	17.0757	17.1	32	1.8713
029	Audi	RS5 Cabriolet	4.2 / 244	AMS7	19.2000	28.9000	22.6159	22.6	464	20.5310
028	Audi	RS5	4.2 / 244	AMS7	19.1000	30.0000	22.8332	22.8	1,239	54.3421
022	Audi	RS7	4.0 / 244	S8	19.1000	35.3000	24.0710	24.1	1,029	42.6971
055	Audi	S4	3.0 / 183	AMS7	22.4000	35.8000	26.9372	26.9	4,547	169.0335
058	Audi	S4	3.0 / 183	M6	20.0000	33.4000	24.4063	24.4	1,435	58.8115
056	Audi	S5	3.0 / 254	AMS7	22.4000	35.8000	26.9372	26.9	2,704	100.5204
059	Audi	S5	3.0 / 254	M6	20.0000	33.4000	24.4063	24.4	616	25.2459
057	Audi	S5 Cabriolet	3.0 / 183	AMS7	22.1000	34.7000	26.4165	26.4	1,568	59.3939
021	Audi	S6	4.0 / 244	AMS7	20.5989	34.2138	25.0922	25.1	1,309	52.1514
020	Audi	S7	4.0 / 244	AMS7	20.5989	34.2138	25.0922	25.1	1,281	51.0359
019	Audi	S8	4.0 / 244	S8	19.0000	33.3000	23.5511	23.6	744	31.5254
038	Audi	TT Coupe quattro	2.0 / 121	AMS6	28.0148	41.5005	32.8130	32.8	1,027	31.3110
039	Audi	TT Roadster quattro	2.0 / 121	AMS6	28.0148	41.5005	32.8130	32.8	194	5.9146
064	Audi	A4 quattro	2.0 / 121	S8	25.7958	40.5577	30.8484	30.8	21,149	686.6558
066	Audi	A5 Cabriolet quattro	2.0 / 121	S8	25.7958	40.5577	30.8484	30.8	4,188	135.9740
065	Audi	A5 quattro	2.0 / 121	S8	25.7958	40.5577	30.8484	30.8	6,895	223.8636
063	Audi	allroad quattro	2.0 / 121	S8	25.2000	37.3000	29.5075	29.5	4,960	168.1356
026	Bentley	Continental GT	4.0 / 244	S8	19.0550	33.5551	23.6426	23.6	281	11.9068
025	Bentley	Continental GTC	4.0 / 244	S8	17.4000	30.8000	21.6358	21.6	381	17.6389
110	Bentley	Continental GT Convertible	4.0 / 244	S8	17.3000	31.8000	21.7662	21.8	218	10.0000
013	Bentley	Continental GT	6.0 / 366	S8	15.4000	28.3000	19.3741	19.4	246	12.6804
012	Bentley	Continental GT Speed Convertible	6.0 / 366	S8	14.4000	26.7000	18.1658	18.2	457	25.1099
011	Bentley	Continental GTC	6.0 / 366	S8	14.4000	26.7000	18.1658	18.2	151	8.2967
010	Bentley	Flying Spur	6.0 / 366	S8	14.4000	26.7000	18.1658	18.2	1,329	73.0220
109	Bentley	Mulsanne	6.8 / 412	S8	12.9000	21.8000	15.8033	15.8	151	9.5570
027	Bugatti	Veyron	8.0 / 488	AMS7	10.0000	17.9000	12.4782	12.5	7	0.5600
092	Lamborghini	Aventador Coupe	6.5 / 396	AMS7	12.6000	25.2000	16.2581	16.3	103	6.3190
093	Lamborghini	Aventador Roadster	6.5 / 396	AMS7	11.5000	21.2000	14.4817	14.5	212	14.6207
094	Lamborghini	Aventador Roadster (Veneno)	6.5 / 396	AMS7	12.5000	22.7000	15.6681	15.7	2	0.1274
032	Lamborghini	Gallardo Coupe	5.2 / 303	AMS6	16.1000	25.4000	19.2760	19.3	63	3.2642
034	Lamborghini	Gallardo Coupe	5.2 / 303	M6	14.0000	24.0000	17.2308	17.2	20	1.1628
033	Lamborghini	Gallardo Spyder	5.2 / 303	AMS6	16.0000	25.4000	19.1970	19.2	54	2.8125
035	Lamborghini	Gallardo Spyder	5.2 / 303	M6	13.0000	22.6000	16.0722	16.1	22	1.3665
101	Porsche	911 Carrera	3.4	M7	24.1897	38.2997	28.9841	29.0	381	13.1379

EPA FOIA Production 2016-07-19 2015-011105_000113

102	Porsche	911 Carrera	3.4	A7	25.6476	39.2484	30.3860	30.4	1,260	41.4474
103	Porsche	911 Carrera Cabriolet	3.4	M7	24.0491	37.9499	28.7955	28.8	105	3.6458
104	Porsche	911 Carrera Cabriolet	3.4	A7	25.9904	39.4499	30.7045	30.7	582	18.9577
105	Porsche	911 Carrera S	3.8	M7	23.8449	37.9484	28.6337	28.6	488	17.0629
106	Porsche	911 Carrera S	3.8	A7	24.9451	37.8997	29.4795	29.5	1,491	50.5424
107	Porsche	911 Carrera S Cabriolet	3.8	M7	23.6474	37.0494	28.2451	28.2	142	5.0355
108	Porsche	911 Carrera S Cabriolet	3.8	A7	24.2934	37.6976	28.9210	28.9	837	28.9619
109	Porsche	911 Carrera 4	3.4	M7	24.0491	37.8468	28.7688	28.8	39	1.3542
110	Porsche	911 Carrera 4	3.4	A7	25.4965	38.6494	30.1071	30.1	108	3.5880
111	Porsche	911 Carrera 4 Cabriolet	3.4	M7	23.5983	36.5997	28.0884	28.1	16	0.5694
112	Porsche	911 Carrera 4 Cabriolet	3.4	A7	24.9475	37.5494	29.3854	29.4	152	5.1701
113	Porsche	911 Carrera 4S	3.8	M7	23.3473	36.7494	27.9311	27.9	182	6.5233
114	Porsche	911 Carrera 4S	3.8	A7	24.3491	36.8989	28.7492	28.7	753	26.2369
115	Porsche	911 Carrera 4S Cabriolet	3.8	M7	22.9996	35.8989	27.4358	27.4	104	3.7956
116	Porsche	911 Carrera 4S Cabriolet	3.8	A7	23.6448	36.2483	28.0306	28.0	743	26.5357
541	Porsche	911 Targa 4	3.4	M7	23.0000	36.5000	27.5924	27.6	1	0.0362
542	Porsche	911 Targa 4	3.4	A7	24.1000	36.9000	28.5578	28.6	2	0.0699
543	Porsche	911 Targa 4S	3.8	M7	22.5000	35.6000	26.9652	27.0	13	0.4815
544	Porsche	911 Targa 4S	3.8	A7	23.1000	35.4000	27.3812	27.4	226	8.2482
521	Porsche	911 Turbo	3.8	A7	21.4702	34.0997	25.7642	25.8	448	17.3643
522	Porsche	911 Turbo Cabriolet	3.8	A7	21.4702	34.0997	25.7642	25.8	140	5.4264
523	Porsche	911 Turbo S	3.8	A7	21.4702	34.0997	25.7642	25.8	1,403	54.3798
524	Porsche	911 Turbo S Cabriolet	3.8	A7	21.4702	34.0997	25.7642	25.8	411	15.9302
531	Porsche	911 GT3	3.8	A7	18.2000	28.3000	21.6822	21.7	548	25.2535
601	Porsche	Panamera	3.6	A7	22.9368	39.0000	28.1552	28.2	1,671	59.2553
602	Porsche	Panamera 4	3.6	A7	22.5783	37.5997	27.5271	27.5	1,503	54.6545
611	Porsche	Panamera S	3	A7	21.8836	37.2997	26.8836	26.9	693	25.7621
616	Porsche	Panamera 4S	3	A7	21.8836	37.2997	26.8836	26.9	591	21.9703
617	Porsche	Panamera 4S Executive	3	A7	21.4772	36.9989	26.4753	26.5	371	14.0000
621	Porsche	Panamera GTS	4.8	A7	19.3871	33.7000	23.9679	24.0	532	22.1667
631	Porsche	Panamera Turbo	4.8	A7	19.1667	33.7481	23.7927	23.8	382	16.0504
632	Porsche	Panamera Turbo Executive	4.8	A7	18.9742	33.3000	23.5293	23.5	251	10.6809
636	Porsche	Panamera Turbo S	4.8	A7	19.1667	33.7481	23.7927	23.8	74	3.1092
637	Porsche	Panamera Turbo S Executive	4.8	A7	18.9742	33.3000	23.5293	23.5	72	3.0638
641	Porsche	Panamera S e-Hybrid	3	A7	41.3088	47.3768	43.8353	43.8	755	17.2374
201	Porsche	Boxster	2.7	M6	25.9000	41.5000	31.1731	31.2	604	19.3590
202	Porsche	Boxster	2.7	A7	27.9000	44.9000	33.6298	33.6	1,767	52.5893
221	Porsche	Boxster S	3.4	M6	24.8000	38.5000	29.5284	29.5	494	16.7458
222	Porsche	Boxster S	3.4	A7	26.3000	41.9000	31.6000	31.6	1,451	45.9177
211	Porsche	Cayman	2.7	M6	25.9000	41.5000	31.1731	31.2	776	24.8718
212	Porsche	Cayman	2.7	A7	27.9000	44.9000	33.6298	33.6	1,974	58.7500
231	Porsche	Cayman S	3.4	M6	24.8000	38.5000	29.5284	29.5	885	30.0000
232	Porsche	Cayman S	3.4	A7	26.3000	41.9000	31.6000	31.6	2,279	72.1203
111	Volkswagen	Beetle	1.8 / 121	M6	30.3313	46.1372	35.8595	35.9	415	11.5599
112	Volkswagen	Beetle	1.8 / 121	S6	31.6459	46.2535	36.8884	36.9	5,627	152.4932
076	Volkswagen	Beetle	2.0 / 121	AMS6	29.1295	41.8041	33.7317	33.7	2,623	77.8338
082	Volkswagen	Beetle	2.0 / 121	M6	27.8665	43.9702	33.3654	33.4	507	15.1796
102	Volkswagen	Beetle	2.5 / 151	M5	26.3718	42.7145	31.8566	31.9	388	12.1630
099	Volkswagen	Beetle	2.5 / 151	S6	27.1757	38.8571	31.4272	31.4	5,979	190.4140
113	Volkswagen	Beetle Convertible	1.8 / 121	S6	30.4480	45.6738	35.8217	35.8	3,383	94.4972
077	Volkswagen	Beetle Convertible	2.0 / 121	AMS6	28.7093	40.8000	33.1269	33.1	1,539	46.4955
083	Volkswagen	Beetle Convertible	2.0 / 121	M6	27.8665	43.9702	33.3654	33.4	284	8.5030
100	Volkswagen	Beetle Convertible	2.5 / 151	S6	26.3776	37.8476	30.5429	30.5	2,809	92.0984
047	Volkswagen	Beetle Convertible [TDI]	2.0 / 120	AMS6	36.4000	51.9000	42.0514	42.1	1,680	39.9050
049	Volkswagen	Beetle Convertible [TDI]	2.0 / 120	M6	36.0625	57.9874	43.4563	43.5	214	4.9195
046	Volkswagen	Beetle [TDI]	2.0 / 120	AMS6	37.3000	55.3000	43.7011	43.7	1,904	43.5698
048	Volkswagen	Beetle [TDI]	2.0 / 120	M6	36.0625	57.9874	43.4563	43.5	358	8.2299
075	Volkswagen	CC	2.0 / 121	M6	25.7978	44.3752	31.7859	31.8	737	23.1761
074	Volkswagen	CC	2.0 / 121	S6	27.0406	42.9078	32.4387	32.4	9,564	295.1852
031	Volkswagen	CC 4Motion	3.6 / 219	S6	20.5000	33.5000	24.8373	24.8	592	23.8710
078	Volkswagen	Eos	2.0 / 121	AMS6	27.5000	41.5000	32.4219	32.4	3,409	105.2160

EPA FOIA Production 2016-07-19 2015-011105_000114

2014 Import PC Baseline CAFE

098	Volkswagen	Golf	2.5 / 151	S6	26.9869	41.0222	31.8980	31.9	3,685	115.5172
042	Volkswagen	Golf [TDI]	2.0 / 120	AMS6	39.0000	59.2007	46.0748	46.1	2,350	50.9761
045	Volkswagen	Golf [TDI]	2.0 / 120	M6	38.7146	59.5386	45.9461	45.9	879	19.1503
107	Volkswagen	GTI	2.0 / 121	AMS6	29.6000	42.9000	34.3990	34.4	3,315	96.3663
108	Volkswagen	GTI	2.0 / 121	M6	25.7000	40.9000	30.8611	30.9	1,767	57.1845
086	Volkswagen	Jetta	1.8 / 109	M6	32.4274	49.5910	38.4095	38.4	5,437	141.5885
088	Volkswagen	Jetta	1.8 / 109	S6	31.2589	49.0333	37.3519	37.4	74,463	1,990.9893
104	Volkswagen	Jetta	2.0 / 121	M5	28.8000	46.2000	34.6771	34.7	7,114	205.0144
103	Volkswagen	Jetta	2.0 / 121	S6	28.1000	41.4990	32.8768	32.9	35,846	1,089.5441
090	Volkswagen	Jetta [GLI]	2.0 / 121	AMS6	29.6590	44.5594	34.9125	34.9	6,604	189.2264
091	Volkswagen	Jetta [GLI]	2.0 / 121	M6	28.3278	45.2555	34.0610	34.1	2,745	80.4985
105	Volkswagen	Jetta Hybrid	1.4 / 85	S6	57.5000	65.3000	60.7663	60.8	1,896	31.1842
101	Volkswagen	Jetta SportWagen	2.5 / 151	M5	25.9252	42.9016	31.5418	31.5	350	11.1111
097	Volkswagen	Jetta SportWagen	2.5 / 151	S6	26.9869	41.0222	31.8980	31.9	4,549	142.6019
043	Volkswagen	Jetta SportWagen [TDI]	2.0 / 120	M6	38.7146	59.5386	45.9461	45.9	4,656	101.4379
040	Volkswagen	Jetta SportWagen [TDI]	2.0 / 120	S6	37.6000	56.2000	44.1798	44.2	15,462	349.8190
041	Volkswagen	Jetta [TDI]	2.0 / 120	AMS6	39.0000	59.2007	46.0748	46.1	18,369	398.4599
044	Volkswagen	Jetta [TDI]	2.0 / 120	M6	38.7146	59.5386	45.9461	45.9	5,405	117.7560
080	Volkswagen	Tiguan	2.0 / 121	AMS6	25.8635	35.6138	29.4976	29.5	13,777	467.0169
081	Volkswagen	Tiguan	2.0 / 121	M6	21.7000	35.8000	26.3745	26.4	296	11.2121
								VOLKSWAGEN GROUP Total Units	**384,971**	**11,522.9435**
								Baseline unadj unrounded (MPG)	**33.4091**	
								Baseline unadj rounded (MPG	**33.4**	
								Baseline adjusted unrounded (MPG)	**33.6736**	
								Baseline adjusted rounded (MPG)	**33.7**	

EPA FOIA Production 2016-07-19 2015-011105_000115

2014 Import PC AMFA CAFE

INDEX #	Brand	Carline	DISP L/CID	Trans	CITY	HWY	Combined	COMB Rounded	Model Type Sales	Weighted Sales/MPG
067	Audi	A4	2.0 / 121	CVT	30.1621	44.4731	35.2693	35.3	7,971	225.8074
071	Audi	A4 quattro	2.0 / 121	M6	27.6012	43.8777	33.1318	33.1	2,195	66.3142
068	Audi	A5 Cabriolet	2.0 / 121	CVT	30.1621	44.4731	35.2693	35.3	712	20.1700
072	Audi	A5 quattro	2.0 / 121	M6	27.6012	43.8777	33.1318	33.1	759	22.9305
069	Audi	A6	2.0 / 121	CVT	31.4000	46.9000	36.8857	36.9	1,731	46.9106
070	Audi	A6 quattro	2.0 / 121	S8	24.8000	40.5000	30.0404	30.0	8,203	273.4333
054	Audi	A6 quattro	3.0 / 183	S8	23.1369	38.1000	28.1036	28.1	9,057	322.3132
015	Audi	A6 quattro [TDI]	3.0 / 181	S8	30.6987	52.4000	37.7304	37.7	3,629	96.2599
053	Audi	A7 quattro	3.0 / 183	S8	22.5160	37.3549	27.4170	27.4	5,949	217.1168
016	Audi	A7 quattro [TDI]	3.0 / 181	S8	30.6987	52.4000	37.7304	37.7	1,097	29.0981
051	Audi	A8	3.0 / 254	S8	22.5160	37.3549	27.4170	27.4	461	16.8248
018	Audi	A8	4.0 / 244	S8	21.7885	38.4000	27.0552	27.1	236	8.7085
052	Audi	A8L	3.0 / 254	S8	22.5160	37.3549	27.4170	27.4	1,555	56.7518
017	Audi	A8L	4.0 / 244	S8	19.8586	38.4000	25.3713	25.4	1,357	53.4252
061	Audi	A8L	6.3 / 384	S8	15.9000	25.7000	19.1935	19.2	29	1.5104
001	Audi	A8L [TDI]	3.0 / 254	S8	29.9399	51.4000	36.8664	36.9	1,192	32.3035
005	Audi	R8	4.2 / 254	AMS7	16.4487	29.7118	20.5834	20.6	192	9.3204
009	Audi	R8	4.2 / 254	M6	13.6694	24.5541	17.0757	17.1	73	4.2690
003	Audi	R8	5.2 / 303	AMS7	15.4627	28.9120	19.5565	19.6	375	19.1327
007	Audi	R8	5.2 / 303	M6	13.7000	23.4824	16.8608	16.9	71	4.2012
006	Audi	R8 Spyder	5.2 / 303	M6	13.7000	23.4824	16.8608	16.9	36	2.1302
002	Audi	R8 Spyder	5.2 / 303	S6	15.4627	28.9120	19.5565	19.6	222	11.3265
004	Audi	R8 Spyder	4.2 / 254	AMS7	16.4487	29.7118	20.5834	20.6	114	5.5340
008	Audi	R8 Spyder	4.2 / 254	M6	13.6694	24.5541	17.0757	17.1	32	1.8713
029	Audi	RS5 Cabriolet	4.2 / 244	AMS7	19.2000	28.9000	22.6159	22.6	464	20.5310
028	Audi	RS5	4.2 / 244	AMS7	19.1000	30.0000	22.8332	22.8	1,239	54.3421
022	Audi	RS7	4.0 / 244	S8	19.1000	35.3000	24.0710	24.1	1,029	42.6971
055	Audi	S4	3.0 / 183	AMS7	22.4000	35.8000	26.9372	26.9	4,547	169.0335
058	Audi	S4	3.0 / 183	M6	20.0000	33.4000	24.4063	24.4	1,435	58.8115
056	Audi	S5	3.0 / 254	AMS7	22.4000	35.8000	26.9372	26.9	2,704	100.5204
059	Audi	S5	3.0 / 254	M6	20.0000	33.4000	24.4063	24.4	616	25.2459
057	Audi	S5 Cabriolet	3.0 / 183	AMS7	22.1000	34.7000	26.4165	26.4	1,568	59.3939
021	Audi	S6	4.0 / 244	AMS7	20.5989	34.2138	25.0922	25.1	1,309	52.1514
020	Audi	S7	4.0 / 244	AMS7	20.5989	34.2138	25.0922	25.1	1,281	51.0359
019	Audi	S8	4.0 / 244	S8	19.0000	33.3000	23.5511	23.6	744	31.5254
038	Audi	TT Coupe quattro	2.0 / 121	AMS6	28.0148	41.5005	32.8130	32.8	1,027	31.3110
039	Audi	TT Roadster quattro	2.0 / 121	AMS6	28.0148	41.5005	32.8130	32.8	194	5.9146
064	Audi	A4 quattro [FFV]	2.0 / 121	S8	42.3934	66.9312	50.7690	50.8	21,149	416.3189
066	Audi	A5 Cabriolet quattro [FFV]	2.0 / 121	S8	42.3934	66.9312	50.7690	50.8	4,188	82.4409
065	Audi	A5 quattro [FFV]	2.0 / 121	S8	42.3934	66.9312	50.7690	50.8	6,895	135.7283
063	Audi	allroad quattro [FFV]	2.0 / 121	S8	41.2759	61.2201	48.3664	48.4	4,960	102.4793
026	Bentley	Continental GT	4.0 / 244	S8	19.0550	33.5551	23.6426	23.6	281	11.9068
025	Bentley	Continental GTC	4.0 / 244	S8	17.4000	30.8000	21.6358	21.6	381	17.6389
110	Bentley	Continental GT Convertible	4.0 / 244	S8	17.3000	31.8000	21.7662	21.8	218	10.0000
013	Bentley	Continental GT	6.0 / 366	S8	25.2459	47.0066	31.8889	31.9	246	7.7116
012	Bentley	Continental GT Speed Convertible	6.0 / 366	S8	23.8863	44.6725	30.2123	30.2	457	15.1325
011	Bentley	Continental GTC	6.0 / 366	S8	23.8863	44.6725	30.2123	30.2	151	5.0000
010	Bentley	Flying Spur	6.0 / 366	S8	23.8863	44.6725	30.2123	30.2	1,329	44.0066
109	Bentley	Mulsanne	6.8 / 412	S8	12.9000	21.8000	15.8033	15.8	151	9.5570
027	Bugatti	Veyron	8.0 / 488	AMS7	10.0000	17.9000	12.4782	12.5	7	0.5600
092	Lamborghini	Aventador Coupe	6.5 / 396	AMS7	12.6000	25.2000	16.2581	16.3	103	6.3190
093	Lamborghini	Aventador Roadster	6.5 / 396	AMS7	11.5000	21.2000	14.4817	14.5	212	14.6207
094	Lamborghini	Aventador Roadster (Veneno)	6.5 / 396	AMS7	12.5000	22.7000	15.6681	15.7	2	0.1274
032	Lamborghini	Gallardo Coupe	5.2 / 303	AMS6	16.1000	25.4000	19.2760	19.3	63	3.2642
034	Lamborghini	Gallardo Coupe	5.2 / 303	M6	14.0000	24.0000	17.2308	17.2	20	1.1628
033	Lamborghini	Gallardo Spyder	5.2 / 303	AMS6	16.0000	25.4000	19.1970	19.2	54	2.8125
035	Lamborghini	Gallardo Spyder	5.2 / 303	M6	13.0000	22.6000	16.0722	16.1	22	1.3665
101	Porsche	911 Carrera	3.4	M7	24.1897	38.2997	28.9841	29.0	381	13.1379
102	Porsche	911 Carrera	3.4	A7	25.6476	39.2484	30.3860	30.4	1,260	41.4474

EPA FOIA Production 2016-07-19 2015-011105_000116

103	Porsche	911 Carrera Cabriolet	3.4	M7	24.0491	37.9499	28.7955	28.8	105	3.6458
104	Porsche	911 Carrera Cabriolet	3.4	A7	25.9904	39.4499	30.7045	30.7	582	18.9577
105	Porsche	911 Carrera S	3.8	M7	23.8449	37.9484	28.6337	28.6	488	17.0629
106	Porsche	911 Carrera S	3.8	A7	24.9451	37.8997	29.4795	29.5	1,491	50.5424
107	Porsche	911 Carrera S Cabriolet	3.8	M7	23.6474	37.0494	28.2451	28.2	142	5.0355
108	Porsche	911 Carrera S Cabriolet	3.8	A7	24.2934	37.6976	28.9210	28.9	837	28.9619
109	Porsche	911 Carrera 4	3.4	M7	24.0491	37.8468	28.7688	28.8	39	1.3542
110	Porsche	911 Carrera 4	3.4	A7	25.4965	38.6494	30.1071	30.1	108	3.5880
111	Porsche	911 Carrera 4 Cabriolet	3.4	M7	23.5983	36.5997	28.0884	28.1	16	0.5694
112	Porsche	911 Carrera 4 Cabriolet	3.4	A7	24.9475	37.5494	29.3854	29.4	152	5.1701
113	Porsche	911 Carrera 4S	3.8	M7	23.3473	36.7494	27.9311	27.9	182	6.5233
114	Porsche	911 Carrera 4S	3.8	A7	24.3491	36.8989	28.7492	28.7	753	26.2369
115	Porsche	911 Carrera 4S Cabriolet	3.8	M7	22.9996	35.8989	27.4358	27.4	104	3.7956
116	Porsche	911 Carrera 4S Cabriolet	3.8	A7	23.6448	36.2483	28.0306	28.0	743	26.5357
541	Porsche	911 Targa 4	3.4	M7	23.0000	36.5000	27.5924	27.6	1	0.0362
542	Porsche	911 Targa 4	3.4	A7	24.1000	36.9000	28.5578	28.6	2	0.0699
543	Porsche	911 Targa 4S	3.8	M7	22.5000	35.6000	26.9652	27.0	13	0.4815
544	Porsche	911 Targa 4S	3.8	A7	23.1000	35.4000	27.3812	27.4	226	8.2482
521	Porsche	911 Turbo	3.8	A7	21.4702	34.0997	25.7642	25.8	448	17.3643
522	Porsche	911 Turbo Cabriolet	3.8	A7	21.4702	34.0997	25.7642	25.8	140	5.4264
523	Porsche	911 Turbo S	3.8	A7	21.4702	34.0997	25.7642	25.8	1,403	54.3798
524	Porsche	911 Turbo S Cabriolet	3.8	A7	21.4702	34.0997	25.7642	25.8	411	15.9302
531	Porsche	911 GT3	3.8	A7	18.2000	28.3000	21.6822	21.7	548	25.2535
601	Porsche	Panamera	3.6	A7	22.9368	39.0000	28.1552	28.2	1,671	59.2553
602	Porsche	Panamera 4	3.6	A7	22.5783	37.5997	27.5271	27.5	1,503	54.6545
611	Porsche	Panamera S	3	A7	21.8836	37.2997	26.8836	26.9	693	25.7621
616	Porsche	Panamera 4S	3	A7	21.8836	37.2997	26.8836	26.9	591	21.9703
617	Porsche	Panamera 4S Executive	3	A7	21.4772	36.9989	26.4753	26.5	371	14.0000
621	Porsche	Panamera GTS	4.8	A7	19.3871	33.7000	23.9679	24.0	532	22.1667
631	Porsche	Panamera Turbo	4.8	A7	19.1667	33.7481	23.7927	23.8	382	16.0504
632	Porsche	Panamera Turbo Executive	4.8	A7	18.9742	33.3000	23.5293	23.5	251	10.6809
636	Porsche	Panamera Turbo S	4.8	A7	19.1667	33.7481	23.7927	23.8	74	3.1092
637	Porsche	Panamera Turbo S Executive	4.8	A7	18.9742	33.3000	23.5293	23.5	72	3.0638
641	Porsche	Panamera S e-Hybrid	3	A7	41.3088	47.3768	43.8353	43.8	755	17.2374
201	Porsche	Boxster	2.7	M6	25.9000	41.5000	31.1731	31.2	604	19.3590
202	Porsche	Boxster	2.7	A7	27.9000	44.9000	33.6298	33.6	1,767	52.5893
221	Porsche	Boxster S	3.4	M6	24.8000	38.5000	29.5284	29.5	494	16.7458
222	Porsche	Boxster S	3.4	A7	26.3000	41.9000	31.6000	31.6	1,451	45.9177
211	Porsche	Cayman	2.7	M6	25.9000	41.5000	31.1731	31.2	776	24.8718
212	Porsche	Cayman	2.7	A7	27.9000	44.9000	33.6298	33.6	1,974	58.7500
231	Porsche	Cayman S	3.4	M6	24.8000	38.5000	29.5284	29.5	885	30.0000
232	Porsche	Cayman S	3.4	A7	26.3000	41.9000	31.6000	31.6	2,279	72.1203
111	Volkswagen	Beetle	1.8 / 121	M6	30.3313	46.1372	35.8595	35.9	415	11.5599
112	Volkswagen	Beetle	1.8 / 121	S6	31.6459	46.2535	36.8884	36.9	5,627	152.4932
076	Volkswagen	Beetle	2.0 / 121	AMS6	29.1295	41.8041	33.7317	33.7	2,623	77.8338
082	Volkswagen	Beetle	2.0 / 121	M6	27.8665	43.9702	33.3654	33.4	507	15.1796
102	Volkswagen	Beetle	2.5 / 151	M5	26.3718	42.7145	31.8566	31.9	388	12.1630
099	Volkswagen	Beetle	2.5 / 151	S6	27.1757	38.8571	31.4272	31.4	5,979	190.4140
113	Volkswagen	Beetle Convertible	1.8 / 121	S6	30.4480	45.6738	35.8217	35.8	3,383	94.4972
077	Volkswagen	Beetle Convertible	2.0 / 121	AMS6	28.7093	40.8000	33.1269	33.1	1,539	46.4955
083	Volkswagen	Beetle Convertible	2.0 / 121	M6	27.8665	43.9702	33.3654	33.4	284	8.5030
100	Volkswagen	Beetle Convertible	2.5 / 151	S6	26.3776	37.8476	30.5429	30.5	2,809	92.0984
047	Volkswagen	Beetle Convertible [TDI]	2.0 / 120	AMS6	36.4000	51.9000	42.0514	42.1	1,680	39.9050
049	Volkswagen	Beetle Convertible [TDI]	2.0 / 120	M6	36.0625	57.9874	43.4563	43.5	214	4.9195
046	Volkswagen	Beetle [TDI]	2.0 / 120	AMS6	37.3000	55.3000	43.7011	43.7	1,904	43.5698
048	Volkswagen	Beetle [TDI]	2.0 / 120	M6	36.0625	57.9874	43.4563	43.5	358	8.2299
075	Volkswagen	CC	2.0 / 121	M6	25.7978	44.3752	31.7859	31.8	737	23.1761
074	Volkswagen	CC	2.0 / 121	S6	27.0406	42.9078	32.4387	32.4	9,564	295.1852
031	Volkswagen	CC 4Motion	3.6 / 219	S6	20.5000	33.5000	24.8373	24.8	592	23.8710
078	Volkswagen	Eos	2.0 / 121	AMS6	27.5000	41.5000	32.4219	32.4	3,409	105.2160
098	Volkswagen	Golf	2.5 / 151	S6	26.9869	41.0222	31.8980	31.9	3,685	115.5172

EPA FOIA Production 2016-07-19 2015-011105_000117

2014 Import PC AMFA CAFE

042	Volkswagen	Golf [TDI]	2.0 / 120	AMS6	39.0000	59.2007	46.0748	46.1	2,350	50.9761
045	Volkswagen	Golf [TDI]	2.0 / 120	M6	38.7146	59.5386	45.9461	45.9	879	19.1503
107	Volkswagen	GTI	2.0 / 121	AMS6	29.6000	42.9000	34.3990	34.4	3,315	96.3663
108	Volkswagen	GTI	2.0 / 121	M6	25.7000	40.9000	30.8611	30.9	1,767	57.1845
086	Volkswagen	Jetta	1.8 / 109	M6	32.4274	49.5910	38.4095	38.4	5,437	141.5885
088	Volkswagen	Jetta	1.8 / 109	S6	31.2589	49.0333	37.3519	37.4	74,463	1,990.9893
104	Volkswagen	Jetta	2.0 / 121	M5	28.8000	46.2000	34.6771	34.7	7,114	205.0144
103	Volkswagen	Jetta	2.0 / 121	S6	28.1000	41.4990	32.8768	32.9	35,846	1,089.5441
090	Volkswagen	Jetta [GLI]	2.0 / 121	AMS6	29.6590	44.5594	34.9125	34.9	6,604	189.2264
091	Volkswagen	Jetta [GLI]	2.0 / 121	M6	28.3278	45.2555	34.0610	34.1	2,745	80.4985
105	Volkswagen	Jetta Hybrid	1.4 / 85	S6	57.5000	65.3000	60.7663	60.8	1,896	31.1842
101	Volkswagen	Jetta SportWagen	2.5 / 151	M5	25.9252	42.9016	31.5418	31.5	350	11.1111
097	Volkswagen	Jetta SportWagen	2.5 / 151	S6	26.9869	41.0222	31.8980	31.9	4,549	142.6019
043	Volkswagen	Jetta SportWagen [TDI]	2.0 / 120	M6	38.7146	59.5386	45.9461	45.9	4,656	101.4379
040	Volkswagen	Jetta SportWagen [TDI]	2.0 / 120	S6	37.6000	56.2000	44.1798	44.2	15,462	349.8190
041	Volkswagen	Jetta [TDI]	2.0 / 120	AMS6	39.0000	59.2007	46.0748	46.1	18,369	398.4599
044	Volkswagen	Jetta [TDI]	2.0 / 120	M6	38.7146	59.5386	45.9461	45.9	5,405	117.7560
080	Volkswagen	Tiguan	2.0 / 121	AMS6	25.8635	35.6138	29.4976	29.5	13,777	467.0169
081	Volkswagen	Tiguan	2.0 / 121	M6	21.7000	35.8000	26.3745	26.4	296	11.2121
								VOLKSWAGEN GROUP Total Units	**384,971**	**10,998.3552**
								AMFA unadj unrounded (MPG)	**35.0026**	
								AMFA unadj rounded (MPG	**35.0**	
								AMFA adjusted unrounded (MPG)	**35.2774**	
								AMFA adjusted rounded (MPG)	**35.3**	

EPA FOIA Production 2016-07-19 2015-011105_000118

2014 Final Model Year CAFE Report - Domestic PC

Label Index	Brand	Carline	DISP	Transmission	CITY	HWY	COMB	COMB Rounded	Model Type Sales	Weighted Sales/MPG
087	Volkswagen	Passat	1.8 / 109	M5	30.2571	48.1128	36.3233	36.3	626	17.2452
089	Volkswagen	Passat	1.8 / 109	S6	29.9886	48.0361	36.0903	36.1	53,806	1,490.4709
084	Volkswagen	Passat [TDI]	2.0 / 120	AMS6	37.9000	56.8000	44.5744	44.6	30,623	686.6143
085	Volkswagen	Passat [TDI]	2.0 / 120	M6	38.2000	62.8000	46.3746	46.4	2,562	55.2155
096	Volkswagen	Passat	R5 / 151	M5	26.2141	43.2931	31.8722	31.9	486	15.2351
095	Volkswagen	Passat	R5 / 151	S6	26.8914	40.5597	31.6984	31.7	12,908	407.1924
030	Volkswagen	Passat	3.6 / 219	AMS6	23.9000	37.3000	28.5088	28.5	1,104	38.7368

Volkswgen Group Total Projected Units	102,115	2,710.7102
Unrounded Fleet Average (MPG)	37.6709	
Rounded Fleet Average (MPG)	37.7	
Adjusted unrounded Fleet Average (MPG)	37.9379	
Adjusted Rounded Fleet Average (MPG)	37.9	

2014 VWGoA Domestic Reformulated CAFE Standard

Brand	Carline Name	Carline#	FOOTPRINT INDEX	FOOTPRINT	2014 MPG Target	2014 CO2 Target	Model Type Sales	Weighted Target
Volkswagen	Passat	280	3	46.9	33.76	298.90	1,104	32.7000
Volkswagen	Passat	280	1	47.2	33.58	300.10	67,826	2,019.7742
Volkswagen	Passat (TDI)	280	2	47.2	33.58	300.10	33,185	988.2082

Total Units	**102,115**	**3,040.6823**
Unrounded CAFE Fleet Standard	**33.5829**	
Volkswagen Group CAFE Standard	**33.6**	

EPA FOIA Production 2016-07-19 2015-011105_000120

2014 VWGoA Import PC CAFE / PC GHG Reformulated Standards

Brand	Carline	Carline Code	FootPrint Index	FOOTPRINT	2014 MPG Target	2014 CO2 Target	Model Type Sales	CAFE Weighted Target	GHG Weighted Target
Audi	A4	10		46.5	34.01	254.3	7,971	234.3722	2,027,025.30
Audi	A4 quattro	20		46.5	34.01	254.3	2,195	64.5398	558,188.50
Audi	A4 quattro [FFV]	20		46.6	34.01	254.3	21,149	621.8465	5,378,190.70
Audi	A5 Cabriolet	51		46.8	33.82	255.7	712	21.0526	182,058.40
Audi	A5 Cabriolet quattro [FFV]	53		46.8	33.76	258.1	4,188	124.0521	1,080,922.80
Audi	A5 quattro	40		46.8	33.82	255.7	7,654	226.3158	1,957,127.80
Audi	A6	80		50.7	31.61	274.1	1,731	54.7612	474,467.10
Audi	A6 quattro	75	2	50.7	31.61	274.1	8,203	259.5065	2,248,442.30
Audi	A6 quattro	75	1	50.7	31.61	274.1	9,057	286.5233	2,482,523.70
Audi	A6 quattro [TDI]	75	1	50.7	31.61	274.1	3,629	114.8054	994,708.90
Audi	A7 quattro	70		51.3	31.29	276.9	5,949	190.1246	1,647,278.10
Audi	A7 quattro [TDI]	70		51.3	31.29	276.9	1,097	35.0591	303,759.30
Audi	A8	95		52.6	30.63	283.1	461	15.0506	130,509.10
Audi	A8	95		52.6	30.63	283.1	236	7.7049	66,811.60
Audi	A8L	96	1	54.9	29.53	293.9	2,912	98.6116	855,836.80
Audi	A8L	96	2	55.2	29.39	295.3	29	0.9867	8,563.70
Audi	A8L [TDI]	96	3	54.9	29.53	293.9	1,192	40.3657	350,328.80
Audi	allroad quattro	26		47.8	33.23	260.4	4,960	149.2627	1,291,584.00
Audi	R8 (4.2L)	90	1	46.5	34.01	254.3	265	7.7918	67,389.50
Audi	R8 (5.2L)	90	2	46.5	34.01	254.3	446	13.1138	113,417.80
Audi	R8 Spyder (4.2L)	92	1	46.5	34.01	254.3	146	4.2929	37,127.80
Audi	R8 Spyder (5.2L)	92	2	46.5	34.01	254.3	258	7.5860	65,609.40
Audi	RS5	43		47.3	33.52	258.1	1,239	36.9630	319,785.90
Audi	RS5 Cabriolet	52		47.3	33.52	258.1	464	13.8425	119,758.40
Audi	RS7	73		51.1	31.40	276.0	1,029	32.7707	284,004.00
Audi	S4	30		46.7	33.88	255.2	5,982	176.5643	1,526,606.40
Audi	S5	42		46.9	33.76	256.2	3,320	98.3412	850,584.00
Audi	S5 Cabriolet	56		46.9	33.76	256.2	1,568	46.4455	401,721.60
Audi	S6	76		50.3	31.82	272.2	1,309	41.1376	356,309.80
Audi	S7	72		50.9	31.50	275.0	1,281	40.6667	352,275.00
Audi	S8	97		52.6	30.63	283.1	744	24.2899	210,626.40
Audi	TT Coupe quattro	37	1	41.1	37.68	228.8	753	19.9841	172,286.40
Audi	TT(S) Coupe quattro	37	2	41.1	37.68	228.8	274	7.2722	62,691.20
Audi	TT Roadster quattro	38	1	41.1	37.68	228.8	140	3.7155	32,032.00
Audi	TT(S) Roadster quattro	38	2	41.1	37.68	228.8	54	1.4332	12,355.20
Bentley	Continental GTC	45		49.2	32.43	267.0	750	23.1267	200,250.00
Bentley	Continental GT	35		49.2	32.43	267.0	527	16.2504	140,709.00
Bentley	Continental GT Speed Convertible	60		49.2	32.43	267.0	457	14.0919	122,019.00
Bentley	Mulsanne	15		56.9	29.03	299.0	151	5.2015	45,149.00
Bentley	Flying Spur FFV	40		54.1	29.90	290.2	1,329	44.4482	385,675.80
Bugatti	Veyron	500		48.8	32.65	265.1	7	0.2144	1,855.70
Lamborghini	Aventador Coupe	475		49.7	32.15	269.4	105	3.2659	28,287.00
Lamborghini	Aventador Roadster	476		49.7	32.15	269.4	212	6.5941	57,112.80
Lamborghini	Gallardo Coupe	406		44.5	35.28	244.8	83	2.3526	20,318.40
Lamborghini	Gallardo Spyder	426		44.5	35.28	244.8	76	2.1542	18,604.80
Porsche	911 Carrera	501		40.2	37.75	228.0	381	10.0927	86,868.00
Porsche	911 Carrera	501		40.2	37.75	228.0	1,260	33.3775	287,280.00
Porsche	911 Carrera 4	505		40.7	37.75	228.0	39	1.0331	8,892.00
Porsche	911 Carrera 4	505		40.7	37.75	228.0	108	2.8609	24,624.00
Porsche	911 Carrera 4 Cabriolet	506		40.7	37.75	228.0	152	4.0265	34,656.00
Porsche	911 Carrera 4 Cabriolet	506		40.7	37.75	228.0	16	0.4238	3,648.00
Porsche	911 Carrera 4S	507		40.7	37.75	228.0	753	19.9470	171,684.00
Porsche	911 Carrera 4S	507		40.7	37.75	228.0	182	4.8212	41,496.00
Porsche	911 Carrera 4S Cabriolet	508		40.7	37.75	228.0	104	2.7550	23,712.00
Porsche	911 Carrera 4S Cabriolet	508		40.7	37.75	228.0	743	19.6821	169,404.00

EPA FOIA Production 2016-07-19 2015-011105_000121

2014 VWGoA Import PC CAFE / PC GHG Reformulated Standards

Porsche	911 Carrera Cabriolet	502		40.2	37.75	228.0	582	15.4172	132,696.00
Porsche	911 Carrera Cabriolet	502		40.2	37.75	228.0	105	2.7815	23,940.00
Porsche	911 Carrera S	503		40.2	37.75	228.0	1,491	39.4967	339,948.00
Porsche	911 Carrera S	503		40.2	37.75	228.0	488	12.9272	111,264.00
Porsche	911 Carrera S Cabriolet	504		40.2	37.75	228.0	837	22.1722	190,836.00
Porsche	911 Carrera S Cabriolet	504		40.2	37.75	228.0	142	3.7616	32,376.00
Porsche	911 GT3	531		41.1	37.68	228.8	548	14.5435	125,382.40
Porsche	911 Targa 4	509		38.4	37.75	228.0	1	0.0265	228.00
Porsche	911 Targa 4	509		38.4	37.75	228.0	2	0.0530	456.00
Porsche	911 Targa 4S	510		38.4	37.75	228.0	226	5.9868	51,528.00
Porsche	911 Targa 4S	510		38.4	37.75	228.0	13	0.3444	2,964.00
Porsche	911 Turbo	521		38.4	37.75	228.0	448	11.8675	102,144.00
Porsche	911 Turbo Cabriolet	522		38.4	37.75	228.0	140	3.7086	31,920.00
Porsche	911 Turbo S	523		38.4	37.75	228.0	1,403	37.1656	319,884.00
Porsche	911 Turbo S Cabriolet	524		38.4	37.75	228.0	411	10.8874	93,708.00
Porsche	Boxster	860		40.9	37.75	228.0	1,767	46.8079	402,876.00
Porsche	Boxster	860		40.9	37.75	228.0	604	16.0000	137,712.00
Porsche	Boxster S	861		40.9	37.75	228.0	1,451	38.4371	330,828.00
Porsche	Boxster S	861		40.9	37.75	228.0	494	13.0861	112,632.00
Porsche	Cayman	870		40.9	37.75	228.0	776	20.5563	176,928.00
Porsche	Cayman	870		40.9	37.75	228.0	1,974	52.2914	450,072.00
Porsche	Cayman S	871		40.9	37.75	228.0	885	23.4437	201,780.00
Porsche	Cayman S	871		40.9	37.75	228.0	2,279	60.3709	519,612.00
Porsche	Panamera	601		51.6	31.14	278.4	1,671	53.6609	465,206.40
Porsche	Panamera 4	606		51.6	31.14	278.4	1,503	48.2659	418,435.20
Porsche	Panamera 4S	616		51.6	31.14	278.4	591	18.9788	164,534.40
Porsche	Panamera 4S Executive	617		54.2	29.86	290.6	371	12.4246	107,812.60
Porsche	Panamera GTS	621		51.7	31.09	278.8	532	17.1116	148,321.60
Porsche	Panamera S	611		51.6	31.14	278.4	693	22.2543	192,931.20
Porsche	Panamera S Hybrid PHEV	641		51.8	31.04	279.3	755	24.3235	210,871.50
Porsche	Panamera Turbo	631		51.6	31.14	278.4	382	12.2672	106,348.80
Porsche	Panamera Turbo Executive	632		54.2	29.86	290.6	251	8.4059	72,940.60
Porsche	Panamera Turbo S	636		51.6	31.14	278.4	74	2.3764	20,601.60
Porsche	Panamera Turbo S Executive	637		54.2	29.86	290.6	72	2.4113	20,923.20
Volkswagen	Beetle	230	1	42.8	36.44	236.8	14,671	402.6070	3,474,092.80
Volkswagen	Beetle	230	2	42.6	36.58	235.9	3,130	85.5659	738,367.00
Volkswagen	Beetle Convertible	235	1	42.8	36.44	236.8	8,086	221.8990	1,914,764.80
Volkswagen	Beetle Convertible	235	2	42.6	36.58	235.9	1,823	49.8360	430,045.70
Volkswagen	CC	293		45.3	34.76	248.6	10,301	296.3464	2,560,828.60
Volkswagen	CC 4Motion	298		45.3	34.76	248.6	592	17.0311	147,171.20
Volkswagen	Eos	216		42.9	36.37	237.3	3,409	93.7311	808,955.70
Volkswagen	Golf	206	1	42.6	36.58	235.9	3,685	100.7381	869,291.50
Volkswagen	Golf [TDI]	206	2	42.0	37.01	233.0	3,229	87.2467	752,357.00
Volkswagen	GTI	211		42.3	36.79	234.5	5,082	138.1354	1,191,729.00
Volkswagen	Jetta (Slow)	221	1	44.2	35.48	243.4	42,960	1,210.8230	10,456,464.00
Volkswagen	Jetta	221	2	44.1	35.55	243.0	79,900	2,247.5387	19,415,700.00
Volkswagen	Jetta [TDI]	221	2	44.1	35.55	243.0	23,774	668.7482	5,777,082.00
Volkswagen	Jetta [GLI]	221	3	43.6	35.88	240.6	9,349	260.5630	2,249,369.40
Volkswagen	Jetta Hybrid	222		44.1	35.55	243.0	1,896	53.3333	460,728.00
Volkswagen	Jetta SportWagen	225		43.2	36.16	238.7	4,899	135.4812	1,169,391.30
Volkswagen	Jetta SportWagen [TDI]	225		43.2	36.16	238.7	20,118	556.3606	4,802,166.60
Volkswagen	Tiguan	160	1	44.0	35.61	242.5	8,393	235.6922	2,035,302.50
Volkswagen	Tiguan (LLR)	160	2	43.6	35.88	240.6	5,680	158.3055	1,366,608.00
Volkswagen	Passat	280	3	46.9	33.76	298.9	1,104		329,985.60
Volkswagen	Passat	280	1	47.2	33.58	257.6	67,826		17,471,977.60
Volkswagen	Passat (TDI)	280	2	47.2	33.58	257.6	33,185		8,548,456.00

EPA FOIA Production 2016-07-19 2015-011105_000122

2014 VWGoA Import PC CAFE / PC GHG Reformulated Standards

PC GHG Total Units				487,086
Import PC CAFE Total Units	384,971	11,032.4678		121,686,629.00
Unrounded CAFE Fleet Standard	34.8944			249.83
Volkswagen Group CAFE Standard	34.9		GHG =	250

EPA FOIA Production 2016-07-19 2015-011105_000123

2014 Final GHG Fleet Average - PC

Model Year	Brand	Carline	Engine	Trans	Model Type Sales	CREE	CREE FFV	FOOTPRINT	CO2 Target	WGT CREE	WGT CREE FFV	WGT CO2 Target
2014	Audi	A4	2.0T I-4 FSI	CVT	7,971	252	252	46.50	254.3	2,008,692.0	2,008,692.0	2,027,025.3
2014	Audi	A4 quattro	2.0T I-4 FSI	M6	2,195	268	268	46.50	254.3	588,260.0	588,260.0	558,188.5
2014	Audi	A4 quattro	2.0T I-4 FSI	S8	21,149	289	166	46.60	254.8	6,112,061.0	3,510,734.0	5,388,765.2
2014	Audi	A5 Cabriolet	2.0T I-4 FSI	CVT	712	252	252	46.80	255.7	179,424.0	179,424.0	182,058.4
2014	Audi	A5 Cabriolet quattro	2.0T I-4 FSI	S8	4,188	289	166	46.80	255.7	1,210,332.0	695,208.0	1,070,871.6
2014	Audi	A5 quattro	2.0T I-4 FSI	M6	759	268	268	46.80	255.7	203,412.0	203,412.0	194,076.3
2014	Audi	A5 quattro	2.0T I-4 FSI	S8	6,895	289	166	46.80	255.7	1,992,655.0	1,144,570.0	1,763,051.5
2014	Audi	A6	2.0T I-4 FSI	CVT	1,731	241	241	50.70	274.1	417,171.0	417,171.0	474,467.1
2014	Audi	A6 quattro	2.0T I-4 FSI	S8	8,203	296	296	50.70	274.1	2,428,088.0	2,428,088.0	2,248,442.3
2014	Audi	A6 quattro	3.0T V6 FSI	S8	9,057	318	318	50.70	274.1	2,880,126.0	2,880,126.0	2,482,523.7
2014	Audi	A6 quattro [TDI]	3.0 V6 TDI	S8	3,629	269	269	50.70	274.1	976,201.0	976,201.0	994,708.9
2014	Audi	A7 quattro	3.0T V6	S8	5,949	327	327	51.30	276.9	1,945,323.0	1,945,323.0	1,647,278.1
2014	Audi	A7 quattro [TDI]	3.0 V6 TDI	S8	1,097	269	269	51.30	276.9	295,093.0	295,093.0	303,759.3
2014	Audi	A8	3.0T V6 FSI	S8	461	327	327	52.60	283.1	150,747.0	150,747.0	130,509.1
2014	Audi	A8	4.0T V8 FSI	S8	236	331	331	52.60	283.1	78,116.0	78,116.0	66,811.6
2014	Audi	A8L	3.0T V6 FSI	S8	1,555	327	327	54.90	293.9	508,485.0	508,485.0	457,014.5
2014	Audi	A8L	4.0T V8 FSI	S8	1,357	366	366	54.90	293.9	496,662.0	496,662.0	398,822.3
2014	Audi	A8L	6.3 W12 FSI	S8	29	464	464	55.20	295.3	13,456.0	13,456.0	8,563.7
2014	Audi	A8L [TDI]	3.0 V6 TDI	S8	1,192	276	276	54.90	293.9	328,992.0	328,992.0	350,328.8
2014	Audi	allroad quattro	2.0T I-4 FSI	S8	4,960	302	174	47.80	260.4	1,497,920.0	863,040.0	1,291,584.0
2014	Audi	R8	4.2 V8 FSI	M6	73	523	523	46.50	254.3	38,179.0	38,179.0	18,563.9
2014	Audi	R8	4.2 V8 FSI	S7	194	435	435	46.50	254.3	84,390.0	84,390.0	49,334.2
2014	Audi	R8	5.2 V10 FSI	M6	71	528	528	46.50	254.3	37,488.0	37,488.0	18,055.3
2014	Audi	R8	5.2 V10 FSI	S7	373	458	458	46.50	254.3	170,834.0	170,834.0	94,853.9
2014	Audi	R8 Spyder	4.2 V8 FSI	M6	32	523	523	46.50	254.3	16,736.0	16,736.0	8,137.6
2014	Audi	R8 Spyder	4.2 V8 FSI	S7	114	435	435	46.50	254.3	49,590.0	49,590.0	28,990.2
2014	Audi	R8 Spyder	5.2L V10	M6	36	528	528	46.50	254.3	19,008.0	19,008.0	9,154.8
2014	Audi	R8 Spyder	5.2L V10	S6	222	458	458	46.50	254.3	101,676.0	101,676.0	56,454.6
2014	Audi	RS5	4.2 V8 FSI	S7	1,239	390	390	47.30	258.1	483,210.0	483,210.0	319,785.9
2014	Audi	RS5 Cabriolet	4.2 V8 FSI	S7	464	394	394	47.30	258.1	182,816.0	182,816.0	119,758.4
2014	Audi	RS7	4.0T V8 FSI	S8	1,029	372	372	51.10	276	382,788.0	382,788.0	284,004.0
2014	Audi	S4	3.0T V6 FSI	M6	1,435	366	366	46.70	255.2	525,210.0	525,210.0	366,212.0
2014	Audi	S4	3.0T V6 FSI	S7	4,547	332	332	46.70	255.2	1,509,604.0	1,509,604.0	1,160,394.4
2014	Audi	S5	3.0T V6 FSI	M6	616	366	366	46.90	256.2	225,456.0	225,456.0	157,819.2
2014	Audi	S5	3.0T V6 FSI	S7	2,704	332	332	46.90	256.2	897,728.0	897,728.0	692,764.8
2014	Audi	S5 Cabriolet	3.0T V6 FSI	S7	1,568	338	338	46.90	256.2	529,984.0	529,984.0	401,721.6
2014	Audi	S6	4.0T V8 FSI	S7	1,309	355	355	50.30	272.2	464,695.0	464,695.0	356,309.8
2014	Audi	S7	4.0T V8 FSI	S7	1,281	355	355	50.90	275	454,755.0	454,755.0	352,275.0
2014	Audi	S8	4.0T V8 FSI	S8	744	379	379	52.60	283.1	281,976.0	281,976.0	210,626.4
2014	Audi	TT Coupe quattro	2.0T I-4 FSI	S6	1,027	271	271	41.10	228.8	278,317.0	278,317.0	234,977.6
2014	Audi	TT Roadster quattro	2.0T I-4 FSI	S6	194	271	271	41.20	229.3	52,574.0	52,574.0	44,484.2
2014	Bentley	Continental GT	4.0T V8 FSI	S8	281	376	376	49.20	267	105,656.0	105,656.0	75,027.0
2014	Bentley	Continental GT	6.0T W12	S8	246	459	264	49.20	267	112,914.0	64,944.0	65,682.0
2014	Bentley	Continental GT Speed Conv	6.0T W12	S8	457	490	280	49.20	267	223,930.0	127,960.0	122,019.0
2014	Bentley	Continental GTC	4.0T V8 FSI	S8	599	412	412	49.20	267	246,788.0	246,788.0	159,933.0
2014	Bentley	Continental GTC	6.0T W12	S8	151	490	280	49.20	267	73,990.0	42,280.0	40,317.0
2014	Bentley	Flying Spur	6.0T W12	S8	1,329	490	280	54.10	290.2	651,210.0	372,120.0	385,675.8
2014	Bentley	Mulsanne	6.8T V8 MPI	S8	151	564	564	56.90	299	85,164.0	85,164.0	45,149.0
2014	Bugatti	Veyron	8.0T W16 MPI	S7	7	710	710	48.80	265.1	4,970.0	4,970.0	1,855.7
2014	Lamborghini	Aventador Coupe	6.5 V12 MPI	S7	103	547	547	49.70	269.4	56,341.0	56,341.0	27,748.2
2014	Lamborghini	Aventador Roadster	6.5 V12 MPI	S7	212	614	614	49.70	269.4	130,168.0	130,168.0	57,112.8
2014	Lamborghini	Aventador Veneno	6.5 V12 MPI	S7	2	567	567	49.70	269.4	1,134.0	1,134.0	538.8
2014	Lamborghini	Gallardo Coupe	5.2 V10 FSI	M6	20	518	518	44.50	244.8	10,360.0	10,360.0	4,896.0
2014	Lamborghini	Gallardo Coupe	5.2 V10 FSI	S6	63	463	463	44.50	244.8	29,169.0	29,169.0	15,422.4
2014	Lamborghini	Gallardo Spyder	5.2 V10 FSI	M6	22	553	553	44.50	244.8	12,166.0	12,166.0	5,385.6
2014	Lamborghini	Gallardo Spyder	5.2 V10 FSI	S6	54	464	464	44.50	244.8	25,056.0	25,056.0	13,219.2
2014	Porsche	911 Carrera	3.4L	A7	1,260	292	292	40.20	228	367,920.0	367,920.0	287,280.0
2014	Porsche	911 Carrera	3.4L	M7	381	307	307	40.20	228	116,967.0	116,967.0	86,868.0
2014	Porsche	911 Carrera 4	3.4L	A7	108	295	295	40.70	228	31,860.0	31,860.0	24,624.0
2014	Porsche	911 Carrera 4	3.4L	M7	39	309	309	40.70	228	12,051.0	12,051.0	8,892.0
2014	Porsche	911 Carrera 4 Cabriolet	3.4L	A7	152	302	302	40.70	228	45,904.0	45,904.0	34,656.0
2014	Porsche	911 Carrera 4 Cabriolet	3.4L	M7	16	316	316	40.70	228	5,056.0	5,056.0	3,648.0
2014	Porsche	911 Carrera 4S	3.8L	A7	753	309	309	40.70	228	232,677.0	232,677.0	171,684.0
2014	Porsche	911 Carrera 4S	3.8L	M7	182	318	318	40.70	228	57,876.0	57,876.0	41,496.0
2014	Porsche	911 Carrera 4S Cabriolet	3.8L	A7	743	318	318	40.70	228	236,274.0	236,274.0	169,404.0

2014	Porsche	911 Carrera 4S Cabriolet	3.8L	M7	104	324	324	40.70	228	33,696.0	33,696.0	23,712.0
2014	Porsche	911 Carrera Cabriolet	3.4L	A7	582	290	290	40.20	228	168,780.0	168,780.0	132,696.0
2014	Porsche	911 Carrera Cabriolet	3.4L	M7	105	309	309	40.20	228	32,445.0	32,445.0	23,940.0
2014	Porsche	911 Carrera S	3.8L	A7	1,491	301	301	40.20	228	448,791.0	448,791.0	339,948.0
2014	Porsche	911 Carrera S	3.8L	M7	488	310	310	40.20	228	151,280.0	151,280.0	111,264.0
2014	Porsche	911 Carrera S Cabriolet	3.8L	A7	837	308	308	40.20	228	257,796.0	257,796.0	190,836.0
2014	Porsche	911 Carrera S Cabriolet	3.8L	M7	142	314	314	40.20	228	44,588.0	44,588.0	32,376.0
2014	Porsche	911 GT3	3.8L	A7	548	410	410	41.10	228.8	224,680.0	224,680.0	125,382.4
2014	Porsche	911 Targa 4	3.8L	A7	2	311	311	38.40	228	622.0	622.0	456.0
2014	Porsche	911 Targa 4	3.8L	M7	1	322	322	38.40	228	322.0	322.0	228.0
2014	Porsche	911 Targa 4S	3.8L	A7	226	321	321	38.40	228	72,546.0	72,546.0	51,528.0
2014	Porsche	911 Targa 4S	3.8L	M7	13	330	330	38.40	228	4,290.0	4,290.0	2,964.0
2014	Porsche	911 Turbo	3.8L	A7	448	346	346	38.40	228	155,008.0	155,008.0	102,144.0
2014	Porsche	911 Turbo Cabriolet	3.8L	A7	140	346	346	38.40	228	48,440.0	48,440.0	31,920.0
2014	Porsche	911 Turbo S	3.8L	A7	1,403	346	346	38.40	228	485,438.0	485,438.0	319,884.0
2014	Porsche	911 Turbo S Cabriolet	3.8L	A7	411	346	346	38.40	228	142,206.0	142,206.0	93,708.0
2014	Porsche	Boxster	2.7L	A7	1,767	265	265	40.90	228	468,255.0	468,255.0	402,876.0
2014	Porsche	Boxster	2.7L	M6	604	285	285	40.90	228	172,140.0	172,140.0	137,712.0
2014	Porsche	Boxster S	3.4L	A7	1,451	281	281	40.90	228	407,731.0	407,731.0	330,828.0
2014	Porsche	Boxster S	3.4L	M6	494	301	301	40.90	228	148,694.0	148,694.0	112,632.0
2014	Porsche	Cayman	2.7L	A7	1,974	265	265	40.90	228	523,110.0	523,110.0	450,072.0
2014	Porsche	Cayman	2.7L	M6	776	285	285	40.90	228	221,160.0	221,160.0	176,928.0
2014	Porsche	Cayman S	3.4L	A7	2,279	281	281	40.90	228	640,399.0	640,399.0	519,612.0
2014	Porsche	Cayman S	3.4L	M6	885	301	301	40.90	228	266,385.0	266,385.0	201,780.0
2014	Porsche	Panamera	3.6L	A7	1,671	316	316	51.60	278.4	528,036.0	528,036.0	465,206.4
2014	Porsche	Panamera 4	3.6L	A7	1,503	323	323	51.60	278.4	485,469.0	485,469.0	418,435.2
2014	Porsche	Panamera 4S	3.0L	A7	591	331	331	51.60	278.4	195,621.0	195,621.0	164,534.4
2014	Porsche	Panamera 4S Executive	3.0L	A7	371	336	336	54.20	290.6	124,656.0	124,656.0	107,812.6
2014	Porsche	Panamera GTS	4.8L	A7	532	372	372	51.70	278.8	197,904.0	197,904.0	148,321.6
2014	Porsche	Panamera S	3.0L	A7	693	331	331	51.60	278.4	229,383.0	229,383.0	192,931.2
2014	Porsche	Panamera S Hybrid PHEV	3.0L	A8	755	267	267	51.80	279.3	201,585.0	201,585.0	210,871.5
2014	Porsche	Panamera Turbo	4.8L	A7	382	374	374	51.60	278.4	142,868.0	142,868.0	106,348.8
2014	Porsche	Panamera Turbo Executive	4.8L	A7	251	378	378	54.20	290.6	94,878.0	94,878.0	72,940.6
2014	Porsche	Panamera Turbo S	4.8L	A7	74	374	374	40.30	228	27,676.0	27,676.0	16,872.0
2014	Porsche	Panamera Turbo S Executive	4.8L	A7	72	378	378	40.30	228	27,216.0	27,216.0	16,416.0
2014	Volkswagen	Beetle	1.8T I-4 FSI	M6	415	246	246	42.60	235.9	102,090.0	102,090.0	97,898.5
2014	Volkswagen	Beetle	1.8T I-4 FSI	S6	5,627	240	240	42.60	235.9	1,350,480.0	1,350,480.0	1,327,409.3
2014	Volkswagen	Beetle	2.0T I-4 FSI	M6	507	268	268	42.60	235.9	135,876.0	135,876.0	119,601.3
2014	Volkswagen	Beetle	2.0T I-4 FSI	S6	2,623	265	265	42.60	235.9	695,095.0	695,095.0	618,765.7
2014	Volkswagen	Beetle	2.5 I-5 MPI	M5	388	278	278	42.80	236.8	107,864.0	107,864.0	91,878.4
2014	Volkswagen	Beetle	2.5 I-5 MPI	S6	5,979	283	283	42.80	236.8	1,692,057.0	1,692,057.0	1,415,827.2
2014	Volkswagen	Beetle [TDI]	2.0 I-4 TDI	M6	358	235	235	42.80	236.8	84,130.0	84,130.0	84,774.4
2014	Volkswagen	Beetle [TDI]	2.0 I-4 TDI	S6	1,904	234	234	42.80	236.8	445,536.0	445,536.0	450,867.2
2014	Volkswagen	Beetle Convertible	1.8T I-4 FSI	S6	3,383	246	246	42.80	236.8	832,218.0	832,218.0	801,094.4
2014	Volkswagen	Beetle Convertible	2.0T I-4 FSI	M6	284	268	268	42.60	235.9	76,112.0	76,112.0	66,995.6
2014	Volkswagen	Beetle Convertible	2.0T I-4 FSI	S6	1,539	270	270	42.60	235.9	415,530.0	415,530.0	363,050.1
2014	Volkswagen	Beetle Convertible	2.5 I-5 MPI	S6	2,809	291	291	42.80	236.8	817,419.0	817,419.0	665,171.2
2014	Volkswagen	Beetle Convertible [TDI]	2.0 I-4 TDI	M6	214	235	235	42.80	236.8	50,290.0	50,290.0	50,675.2
2014	Volkswagen	Beetle Convertible [TDI]	2.0 I-4 TDI	S6	1,680	243	243	42.80	236.8	408,240.0	408,240.0	397,824.0
2014	Volkswagen	CC	2.0T I-4 FSI	M6	737	280	280	45.30	248.6	206,360.0	206,360.0	183,218.2
2014	Volkswagen	CC	2.0T I-4 FSI	S6	9,564	272	272	45.30	248.6	2,601,408.0	2,601,408.0	2,377,610.4
2014	Volkswagen	CC 4Motion	3.6 VR6 FSI	S6	592	358	358	45.30	248.6	211,936.0	211,936.0	147,171.2
2014	Volkswagen	Eos	2.0T I-4 FSI	S6	3,409	272	272	42.90	237.3	927,248.0	927,248.0	808,955.7
2014	Volkswagen	Golf	2.5 I-5 MPI	S6	3,685	278	278	42.60	235.9	1,024,430.0	1,024,430.0	869,291.5
2014	Volkswagen	Golf [TDI]	2.0 I-4 TDI	M6	879	222	222	42.00	233	195,138.0	195,138.0	204,807.0
2014	Volkswagen	Golf [TDI]	2.0 I-4 TDI	S6	2,350	222	222	42.00	233	521,700.0	521,700.0	547,550.0
2014	Volkswagen	GTI	2.0T I-4 FSI	M6	1,767	288	288	42.30	234.5	508,896.0	508,896.0	414,361.5
2014	Volkswagen	GTI	2.0T I-4 FSI	S6	3,315	257	257	42.30	234.5	851,955.0	851,955.0	777,367.5
2014	Volkswagen	Jetta	1.8T I-4 FSI	M6	5,437	233	233	44.10	243	1,266,821.0	1,266,821.0	1,321,191.0
2014	Volkswagen	Jetta	1.8T I-4 FSI	S6	74,463	240	240	44.10	243	17,871,120.0	17,871,120.0	18,094,509.0
2014	Volkswagen	Jetta	2.0 I-4 MPI	M5	7,114	256	256	44.20	243.4	1,821,184.0	1,821,184.0	1,731,547.6
2014	Volkswagen	Jetta	2.0 I-4 MPI	S6	35,846	270	270	44.20	243.4	9,678,420.0	9,678,420.0	8,724,916.4
2014	Volkswagen	Jetta [GLI]	2.0T I-4 FSI	M6	2,745	263	263	43.60	240.6	721,935.0	721,935.0	660,447.0
2014	Volkswagen	Jetta [GLI]	2.0T I-4 FSI	S6	6,604	256	256	43.60	240.6	1,690,624.0	1,690,624.0	1,588,922.4
2014	Volkswagen	Jetta [TDI]	2.0 I-4 TDI	M6	5,405	222	222	44.10	243	1,199,910.0	1,199,910.0	1,313,415.0
2014	Volkswagen	Jetta [TDI]	2.0 I-4 TDI	S6	18,369	222	222	44.10	243	4,077,918.0	4,077,918.0	4,463,667.0

2014 Final GHG Fleet Average - PC

2014	Volkswagen	Jetta Hybrid	1.4T I-4 FSI	S6	1,896	146	146	44.10	243	276,816.0	276,816.0	460,728.0
2014	Volkswagen	Jetta SportWagen	R5 2.5L SRE	M5	350	281	281	43.20	238.7	98,350.0	98,350.0	83,545.0
2014	Volkswagen	Jetta SportWagen	R5 2.5L SRE	S6	4,549	278	278	43.20	238.7	1,264,622.0	1,264,622.0	1,085,846.3
2014	Volkswagen	Jetta Sportwagen [TDI]	2.0L TDI	M6	4,656	222	222	43.20	238.7	1,033,632.0	1,033,632.0	1,111,387.2
2014	Volkswagen	Jetta Sportwagen [TDI]	2.0L TDI	S6	15,462	231	231	43.20	238.7	3,571,722.0	3,571,722.0	3,690,779.4
2014	Volkswagen	Passat	1.8T I-4 FSI	M6	626	246	246	47.20	257.6	153,996.0	153,996.0	161,257.6
2014	Volkswagen	Passat	1.8T I-4 FSI	S6	53,806	247	247	47.20	257.6	13,290,082.0	13,290,082.0	13,860,425.6
2014	Volkswagen	Passat	3.6 VR6 FSI	S6	1,104	312	312	46.90	256.2	344,448.0	344,448.0	282,844.8
2014	Volkswagen	Passat	R5 2.5L SRE	M5	486	279	279	47.20	257.6	135,594.0	135,594.0	125,193.6
2014	Volkswagen	Passat	R5 2.5L SRE	S6	12,908	280	280	47.20	257.6	3,614,240.0	3,614,240.0	3,325,100.8
2014	Volkswagen	Passat [TDI]	2.0 I-4 TDI	M6	2,562	219	219	47.20	257.6	561,078.0	561,078.0	659,971.2
2014	Volkswagen	Passat [TDI]	2.0 I-4 TDI	S6	30,623	228	228	47.20	257.6	6,982,044.0	6,982,044.0	7,888,484.8
2014	Volkswagen	Tiguan	2.0T I-4 FSI	M6	296	336	336	44.00	242.5	99,456.0	99,456.0	71,780.0
2014	Volkswagen	Tiguan	2.0T I-4 FSI	S6	13,777	301	301	44.00	242.5	4,146,877.0	4,146,877.0	3,340,922.5
					487,086					129,510,822.0	124,456,666.0	121,637,225.9

2014 Final Fleet Average Standard-PC (g/mi)	250
2014 Final Fleet Average-PC (g/mi)	266
2014 Final Fleet Average w/FFV-LDT (g/mi)	256
Max Decrease for FFV's	10
2014 Final Fleet Average LDT (g/mi)	256

MY 2014 Sub-Configuration / In-Use -PC

Brand	Carline	ETW	TRLHP	AXLE RATIO	ENG CODE	Trans	Trans Config	Basic Eng	CREE	In-Use CREE	Final Sales	TargetCoefficientAValue	TargetCoefficientBValue	TargetCoefficientCValue	SetCoefficientAValue	SetCoefficientBValue	SetCoefficientCValue
Audi	A4	3875	23.7	4.61	CAEB	CVT	6	E3UB	252	277.2	7,971	37	0.24	0.0173	7	0.22	0.0168
Audi	A4 quattro	4000	23.7	3.69	CAEB	M6	3	E3UB	268	294.8	2,195	36	0.33	0.0176	14	-0.21	0.0212
Audi	A4 quattro	4250	23.7	2.85	CAEB	S8	1	EFUB	289	317.9	21,149	38	0.459	0.0205	-2	0.539	0.0193
Audi	A5 Cabriolet	4250	23.4	2.51	CAEB	CVT	6	E3UB	252	277.2	712	40	0.235	0.01851	11	0.228	0.0183
Audi	A5 Cabriolet quattro	4250	23.4	2.85	CPMA	S8	1	EFUB	289	317.9	4,188	38	0.459	0.0205	-2	0.539	0.0193
Audi	A5 quattro	3875	23.4	3.69	CAEB	M6	3	E3UB	268	294.8	759	36	0.33	0.0176	16	-0.17	0.0205
Audi	A5 quattro	4000	23.4	2.85	CPMA	S8	1	EFUB	289	317.9	6,895	37	0.445	0.0174	-6	0.6	0.0159
Audi	A6	4000	24.3	3.09	CAEB	CVT	6	E4UG	241	265.1	1,731	36.194	0.15554	0.016704	2.338	0.28214	0.014783
Audi	A6 quattro	4000	24.3	4.92	CAEB	S8	1	E3UB	296	325.6	8,203	36.194	0.15554	0.016704	2.338	0.28214	0.014783
Audi	A6 quattro	4250	24.3	3.204	CTUA	S8	1	E3UF	318	349.8	9,057	35.745	0.43044	0.01746	9.464	0.37112	0.01682
Audi	A6 quattro [TDI]	4250	24.3	3.204	CTUA	S8	1	E4UG	269	295.9	3,629	35.745	0.43044	0.01746	9.464	0.37112	0.01682
Audi	A7 quattro	4500	24.6	2.85	CTUA	S8	1	E3UF	327	359.7	5,949	35.745	0.43044	0.01746	12.275	0.38704	0.016587
Audi	A7 quattro [TDI]	4500	24.6	2.85	CTUA	S8	1	E4UG	269	295.9	1,097	35.745	0.43044	0.01746	12.275	0.38704	0.016587
Audi	A8	4750	25.9	3.2	CTUB	S8	1	E3UF	327	359.7	461	39.342	0.39789	0.01519	-0.135	0.47964	0.012571
Audi	A8	5000	14.3	2.62	CEUA	S8	1	E3UJ	331	364.1	236	46.76	0.39789	0.015831	-2.023	0.25613	0.014317
Audi	A8L	4750	25.9	3.2	CTUB	S8	1	E3UF	327	359.7	1,555	39.342	0.39789	0.01519	-0.135	0.47964	0.012571
Audi	A8L	5000	14.3	2.62	CEUA	S8	1	E3UJ	366	402.6	1,357	48.109	0.39789	0.015831	-1.371	0.21696	0.014608
Audi	A8L	5250	25.9	3.09	CEJA	S8	1	EUA8	464	510.4	29	50.132	0.39789	0.017926	15.714	0.40281	0.016511
Audi	A8L [TDI]	4750	25.9	3.2	CTUB	S8	1	E4UG	276	303.6	1,192	39.342	0.39789	0.01519	-0.135	0.47964	0.012571
Audi	allroad quattro	4250	14.9	3.08	CPMA	S8	1	EFUB	302	332.2	4,960	39.117	0.46662	0.019788	2.54	0.46336	0.019206
Audi	R8	4000	21.4	4.57	CND	M6	3	E375	523	575.3	73	43.613	0.32555	0.013502	-2.136	-0.196	0.016704
Audi	R8	4000	21.4	4.06	BUJ	M6	3	ELR8	528	580.8	71	45.86	0.326	0.01624	17.94	-0.0094	0.01804
Audi	R8	4000	21.4	4.57	CND	S7	2	E375	435	478.5	194	43.613	0.32555	0.013502	-12.882	0.02749	0.013386
Audi	R8	4000	21.4	4.06	BUJ	S7	2	ELR8	458	503.8	373	45.86	0.326	0.01624	15.98	0.123	0.01676
Audi	R8 Spyder	4250	21.4	4.6	CND	M6	3	E375	523	575.3	32	46.985	0.32555	0.017635	1.079	-0.1483	0.020137
Audi	R8 Spyder	4250	21.4	4.06	BUJ	M6	3	ELR8	528	580.8	36	48	0.326	0.0182	21	0.001	0.0199
Audi	R8 Spyder	4250	21.4	4.06	BUJ	S6	2	ELR8	458	503.8	222	48	0.33	0.0182	12	0	0.0207
Audi	R8 Spyder	4250	21.4	4.6	CND	S7	2	E375	435	478.5	114	46.985	0.32555	0.017635	-10.251	0.00796	0.017926
Audi	RS5	4750	15.4	4.38	CFS	S7	2	E3UL	390	429	1,239	47.21	0.34725	0.020487	-15.489	0.27686	0.018566
Audi	RS5 Cabriolet	4250	14.3	4.38	CFS	S7	2	E3UL	394	433.4	464	46.086	0.34725	0.017402	-13.758	0.19786	0.016762
Audi	RS7	4750	15.4	4.38	CFS	S8	1	E3UJ	372	409.2	1,029	47.21	0.34725	0.020487	-15.489	0.27686	0.018566
Audi	S4	4250	23.7	3.68	CGXC	M6	3	E3UF	366	402.6	1,435	41	0.315	0.017	14	0.09	0.0171
Audi	S4	4250	23.7	3.88	CGXC	S7	2	E3UF	332	365.2	4,547	42	0.347	0.0168	-5	0.246	0.0179
Audi	S5	4250	23.4	3.62	CGXC	M6	3	E3UF	366	402.6	616	39	0.32	0.0177	6	0.09	0.0179
Audi	S5	4250	23.4	3.87	CGXC	S7	2	E3UF	332	365.2	2,704	46.09	0.47	0.01775	23.07	0.2481	0.0181
Audi	S5 Cabriolet	4750	23.5	3.88	CGXC	S7	2	E3UF	338	371.8	1,568	46	0.344	0.0187	3	-0.217	0.0232
Audi	S6	4750	14.1	4.09	CEUC	S7	2	E3UJ	355	390.5	1,309	43.163	0.36172	0.017809	-15.782	0.28648	0.015423
Audi	S7	4750	14.5	4.09	CEUC	S7	2	E3UJ	355	390.5	1,281	44.962	0.36895	0.018217	-9.442	-0.434	0.021825
Audi	S8	5000	14.4	3.2	CGTA	S8	1	E3UJ	379	416.9	744	47.435	0.39789	0.016413	-7.104	0.30305	0.014259
Audi	TT Coupe quattro	3500	22.5	3.444	CETA	S6	4	E3UA	271	298.1	1,027	36	0.354	0.0167	1	0.083	0.0169
Audi	TT Roadster quattro	3625	22.5	3.444	CETA	S6	4	E3UA	271	298.1	194	37	0.354	0.0176	3	0.109	0.0178
Bentley	Continental GT Convertible	5500	27.6	3.53	CKH-D	S8	1	E4UC	376	413.6	281	49.7	0.2604	0.0202	10.1	-0.072	0.02136
Bentley	Continental GT	6000	15	2.85	CMMA	S8	1	E3UJ	459	504.9	246	54.853	0.04883	0.022116	-6.205	-0.0803	0.019323

Bentley	Continental GT Speed Convertib	5500	27.6	3.53	CKH-D	S8	1	E4UC	490	539	457	49.7	0.2604	0.0202	10.1	-0.072	0.02136
Bentley	Continental GTC	5500	27.6	2.85	CMMA	S8	1	E3UJ	412	453.2	599	52.156	0.04883	0.02136	-9.689	-0.0575	0.01845
Bentley	Continental GTC	6000	27.6	3.53	CKH-B	S8	1	E4UC	490	539	151	54.853	0.04883	0.022116	7.614	-0.0083	0.020935
Bentley	Flying Spur FFV	6000	27.6	3.53	CKH-D	S8	1	E4UC	490	539	1,329	49.7	0.2604	0.0202	10.1	-0.072	0.02136
Bentley	Mulsanne	6500	27.9	2.92	CBK	S8	9	E4LA	564	620.4	151	74	0.13	0.0217	25	0.22	0.0207
Bugatti	Veyron	4750	21	2.59	CBLA (1200HP	S7	8	EV16	710	781	7	60	0.59	0.0185	16	0.022	0.0204
Lamborghini	Aventador Coupe	4000	21.5	2.87	L539	S7	2	EL83	547	601.7	103	33.721	0.01736	0.022116	6.362	-0.4485	0.024037
Lamborghini	Aventador Roadster	4250	21.5	2.87	L539	S7	8	EL83	614	675.4	212	40.915	0.01809	0.023338	10.836	-0.5606	0.026074
Lamborghini	Aventador Veneno	4000	21.5	2.87	L539	S7	2	EL83	567	623.7	2	33.721	0.01736	0.022116	6.362	-0.4485	0.024037
Lamborghini	Gallardo Coupe	3750	23.9	4.06	CEH	M6	3	ELR8	518	569.8	20	41.81	0.315	0.01688	11.17	-0.1085	0.01944
Lamborghini	Gallardo Coupe	3625	22.9	4.06	CEH	S6	4	ELR8	463	509.3	63	41.81	0.315	0.01688	15.67	0.0029	0.01833
Lamborghini	Gallardo Spyder	3875	23.9	4.06	CEH	M6	12	ELR8	553	608.3	22	43.84	0.318	0.01752	16.66	-0.0998	0.02031
Lamborghini	Gallardo Spyder	3875	23.9	4.06	CEH	S6	10	ELR8	464	510.4	54	43.84	0.318	0.01752	8.61	-0.0633	0.01973
Porsche	911 Carrera	3500	11.5	3.44	MA104	A7	A7-RWD	EC91	292	321.2	1,260	35.43	0.08889	0.01846	14.478	-0.30499	0.021019
Porsche	911 Carrera	3500	10.8	3.44	MA104	M7	M7-RWD	EC91	307	337.7	381	31.473	0.10999	0.01764	10.274	-0.22757	0.019797
Porsche	911 Carrera 4	3625	11.5	3.44	MA104	A7	A7-RWD	EC91	295	324.5	582	35.43	0.08889	0.01846	14.478	-0.30499	0.021019
Porsche	911 Carrera 4	3625	11.4	3.44	MA104	M7	M7-RWD	EC91	309	339.9	105	34.396	0.13748	0.01782	13.129	-0.20224	0.019971
Porsche	911 Carrera 4 Cabriolet	3750	11.8	3.44	MA103	A7	A7-RWD	EC91S	302	332.2	1,491	37.543	0.10094	0.0184	19.064	-0.21997	0.0198
Porsche	911 Carrera 4 Cabriolet	3500	10.8	3.44	MA103	M7	M7-RWD	EC91S	316	347.6	488	31.473	0.10999	0.01764	10.566	-0.2323	0.019738
Porsche	911 Carrera 4S	3750	11.5	3.44	MA103	A7	A7-RWD	EC91S	309	339.9	837	35.43	0.08889	0.01846	14.523	-0.32417	0.021019
Porsche	911 Carrera 4S	3625	11.4	3.44	MA103	M7	M7-RWD	EC91S	318	349.8	142	34.396	0.13748	0.01782	13.489	-0.21889	0.02003
Porsche	911 Carrera 4S Cabriolet	3625	11.8	3.44	MA104	A7	A7-4WD	EC91	318	349.8	108	37.543	0.10094	0.0184	17.018	-0.31223	0.021078
Porsche	911 Carrera 4S Cabriolet	3625	11.6	3.44	MA104	M7	M7-4WD	EC91	324	356.4	39	36.194	0.10094	0.0184	14.77	-0.23661	0.020554
Porsche	911 Carrera Cabriolet	3750	12.4	3.44	MA104	A7	A7-4WD	EC91	290	319	152	40.466	0.10094	0.01898	19.941	-0.31223	0.02166
Porsche	911 Carrera Cabriolet	3750	12.2	3.44	MA104	M7	M7-4WD	EC91	309	339.9	16	39.117	0.10094	0.01898	17.85	-0.23879	0.021136
Porsche	911 Carrera S	3750	11.8	3.44	MA103	A7	A7-4WD	EC91S	301	331.1	753	37.543	0.10094	0.0184	17.67	-0.21997	0.0198
Porsche	911 Carrera S	3625	11.6	3.44	MA103	M7	M7-4WD	EC91S	310	341	182	36.194	0.10094	0.0184	15.287	-0.25543	0.020612
Porsche	911 Carrera S Cabriolet	3750	12.4	3.44	MA103	A7	A7-4WD	EC91S	308	338.8	743	40.466	0.10094	0.01898	19.558	-0.31223	0.020961
Porsche	911 Carrera S Cabriolet	3750	12.2	3.44	MA103	M7	M7-4WD	EC91S	314	345.4	104	39.117	0.10094	0.01898	18.21	-0.25543	0.018108
Porsche	911 GT3	3875	10.8	3.44	MA104	M7	M7-4WD	EC91	410	451	1	31.473	0.10999	0.01764	18.637	-0.24276	0.021194
Porsche	911 Targa 4	3875	11.5	3.44	MA104	A7	A7-4WD	EC91	311	342.1	2	35.43	0.08889	0.01846	20.458	-0.30536	0.02149
Porsche	911 Targa 4	3875	10.8	3.44	MA103	M7	M7-4WD	EC91S	322	354.2	13	31.473	0.10999	0.01764	18.704	-0.25145	0.021136
Porsche	911 Targa 4S	3875	11.5	3.44	MA103	A7	A7-4WD	EC91S	321	353.1	226	35.43	0.08889	0.01846	23.92	-0.322	0.021835
Porsche	911 Targa 4S	4000	13	3.44	MA171	A7	A7-4WD	EC91T	330	363	448	37.094	0.32562	0.0177	11.488	-0.06404	0.02038
Porsche	911 Turbo	4000	13	3.44	MA171	A7	A7-4WD	EC91T	346	380.6	140	37.094	0.32562	0.0177	11.488	-0.06404	0.02038
Porsche	911 Turbo Cabriolet	4000	13	3.44	MA171S	A7	A7-4WD	EC91T	346	380.6	1,403	37.094	0.32562	0.0177	11.488	-0.06404	0.02038
Porsche	911 Turbo S	4000	13	3.44	MA171S	A7	A7-4WD	EC91T	346	380.6	411	37.094	0.32562	0.0177	11.488	-0.06404	0.02038
Porsche	911 Turbo S Cabriolet	3625	12.7	3.97	MA175	A7	A7-RWD	EC91GT	346	380.6	548	38.218	0.1809	0.01934	20.413	-0.23626	0.022533
Porsche	Boxster	4250	11.7	3.7	CWA	A7	A7-RWD	EPBD	265	291.5	1,767	28.776	0.36179	0.01627	8.588	-0.04197	0.02009
Porsche	Boxster	4500	11.7	3.9	CWA	M6	A7-AWD	EPBD	285	313.5	604	28.776	0.36179	0.01627	4.159	0.02243	0.01968
Porsche	Boxster S	4500	11.7	3.55	CWD	A7	A7-RWD	EPTD	281	309.1	1,451	28.776	0.36179	0.01627	9.105	-0.02677	0.02003
Porsche	Boxster S	4500	11.7	3.55	CWD	M6	A7-AWD	EPTD	301	331.1	494	28.776	0.36179	0.01627	9.105	-0.02677	0.02003
Porsche	Cayman	3375	10.2	3.25	MA122	A7	A7-RWD	EB81	265	291.5	1,974	29.9	0.13748	0.01601	9.285	-0.16389	0.017817
Porsche	Cayman	3375	9.8	3.88	MA123	M6	M6-RWD	EB81S	285	313.5	776	28.101	0.13748	0.01526	11.488	-0.28148	0.018574
Porsche	Cayman S	3375	10.2	3.25	MA123	A7	A7-RWD	EB81S	281	309.1	2,279	29.9	0.13748	0.01601	9.037	-0.18705	0.018166
Porsche	Cayman S	3375	9.8	3.88	MA122	M6	M6-RWD	EB81	301	331.1	885	28.101	0.13748	0.01526	11.802	-0.27388	0.0184

EPA FOIA Production 2016-07-19

2015-011105_000128

Porsche	Panamera	3375	10.2	3.25	MA122	A7	A7-RWD	EB81	316	347.6	1,671	29.9	0.13748	0.01601	9.285	-0.16389	0.017817
Porsche	Panamera 4	3375	9.8	3.88	MA123	M6	M6-RWD	EB81S	323	355.3	1,503	28.101	0.13748	0.01526	11.488	-0.28148	0.018574
Porsche	Panamera 4S	3375	10.2	3.25	MA123	A7	A7-RWD	EB81S	331	364.1	591	29.9	0.13748	0.01601	9.037	-0.18705	0.018166
Porsche	Panamera 4S Executive	5000	15.7	3.7	M5502	M6	A8-AWD	ECBD	336	369.6	371	44.287	0.06874	0.02795	28.663	-0.16824	0.02923
Porsche	Panamera GTS	5000	15.9	3.7	M5502	A8	A8-AWD	ECBD	372	409.2	532	43.388	0.12301	0.02795	26.617	-0.2008	0.02981
Porsche	Panamera S	5000	15.9	3.1	M4802	A8	A8-AWD	ECSD	331	364.1	693	43.388	0.12301	0.02795	30.686	-0.41715	0.035815
Porsche	Panamera S Hybrid PHEV	5250	15.9	3.7	M4852	A8	A8-AWD	ECSD-G	267	293.7	755	43.388	0.12301	0.02795	23.155	-0.29667	0.03051
Porsche	Panamera Turbo	5500	15.9	3.27	CGF	A8	A8-AWD	ECHD	374	411.4	382	43.388	0.12298	0.027936	-7.868	-0.16639	0.027111
Porsche	Panamera Turbo Executive	5250	17.2	2.92	M4852	A8	A8-AWD	ECTD	378	415.8	251	52.83	0.12301	0.02795	23.605	-0.15449	0.032315
Porsche	Panamera Turbo S	5500	17.2	2.92	M4852T	A8	A8-AWD	ECTD-S	374	411.4	74	52.83	0.12301	0.02795	23.605	-0.15449	0.032315
Porsche	Panamera Turbo S Executive	5250	15.9	3.7	CNR	A8	A8-AWD	ECDD	378	415.8	72	43.388	0.12298	0.027936	-5.733	-0.20618	0.0284
Volkswagen	Beetle	3375	11.8	3.64	CBTA-M	M5	3	EU3M	278	305.8	140	28.101	0.13384	0.021592	10.116	0.02532	0.021592
Volkswagen	Beetle	3375	11.8	3.64	CBTA-M	M5	7	EM59	278	305.8	248	28.101	0.13384	0.021592	12.414	0.04167	0.02108
Volkswagen	Beetle	3375	12.4	3.087	CCTA	M6	3	E3PA	246	270.6	285	31.698	0.13384	0.021825	19.963	-0.1052	0.022698
Volkswagen	Beetle	3375	12.4	3.087	CCTA	M6	3	EB5F	268	294.8	130	31.698	0.13384	0.021825	19.963	-0.1052	0.022698
Volkswagen	Beetle	3500	13.1	3.136	CPLA	M6	3	EB5F	268	294.8	121	32.148	0.28937	0.020603	6.969	0.21667	0.020719
Volkswagen	Beetle	3500	13.1	3.136	CPPA	M6	3	E3PA	246	270.6	386	32.148	0.28937	0.020603	6.969	0.21667	0.020719
Volkswagen	Beetle	3500	13.1	3.136	CCTA	S6	4	E3PA	240	264	4,760	32.148	0.28937	0.020603	6.969	0.21667	0.020719
Volkswagen	Beetle	3500	13.1	3.136	CCTA	S6	4	EB5F	265	291.5	867	32.148	0.28937	0.020603	6.969	0.21667	0.020719
Volkswagen	Beetle	3375	12.4	3.087	CPLA	S6	4	EB5F	265	291.5	775	31.698	0.13384	0.021825	19.963	-0.1052	0.022698
Volkswagen	Beetle	3375	12.4	3.087	CPPA	S6	4	E3PA	240	264	1,848	31.698	0.13384	0.021825	19.963	-0.1052	0.022698
Volkswagen	Beetle	3375	12.7	3.5	CBTA-M	S6	4	EU3A	283	311.3	1,145	28.101	0.29299	0.020952	1.798	0.46662	0.017984
Volkswagen	Beetle	3375	12.7	3.5	CBTA-M	S6	4	EA59	283	311.3	4,834	28.101	0.29299	0.020952	1.798	0.46662	0.017984
Volkswagen	Beetle [TDI]	3375	12.2	2.917	CJAA	M6	4	EU5N	235	258.5	358	28.551	0.14469	0.022174	7.237	0.00756	0.022698
Volkswagen	Beetle [TDI]	3375	12.2	3.04	CJAA	S6	4	EU5N	234	257.4	1,904	28.551	0.14469	0.022174	7.237	0.00756	0.022698
Volkswagen	Beetle Convertible	3625	12.8	3.09	CPLA	M6	3	EB5F	268	294.8	76	33.047	0.13384	0.022582	12.364	-0.1917	0.02431
Volkswagen	Beetle Convertible	3625	12.8	3.09	CPPA	M6	3	E3PA	268	294.8	208	33.047	0.13384	0.022582	12.364	-0.1917	0.02431
Volkswagen	Beetle Convertible	3375	12.4	3.087	CCTA	S6	4	EB5F	270	297	847	31.698	0.13384	0.021825	19.963	-0.1052	0.022698
Volkswagen	Beetle Convertible	3375	12.4	3.087	CCTA	S6	4	E3PA	270	297	2,536	31.698	0.13384	0.021825	19.963	-0.1052	0.022698
Volkswagen	Beetle Convertible	3625	13.5	3.14	CPLA	S6	11	EB5F	270	297	544	33.272	0.28937	0.02136	9.892	0.17362	0.022116
Volkswagen	Beetle Convertible	3625	13.5	3.14	CPPA	S6	4	E3PA	270	297	995	33.272	0.28937	0.02136	9.892	0.17362	0.022116
Volkswagen	Beetle Convertible	3500	13.1	3.5	CBTA-M	S6	4	EU3A	291	320.1	733	30.124	0.29299	0.021243	1.124	0.2315	0.022
Volkswagen	Beetle Convertible	3500	13.1	3.5	CBTA-M	S6	4	EA59	291	320.1	2,076	30.124	0.29299	0.021243	-8.565	0.06945	0.022233
Volkswagen	Beetle Convertible [TDI]	3625	12.4	2.92	CJAA	M6	3	EU5N	235	258.5	214	29	0.14469	0.022756	7.522	-0.0057	0.023257
Volkswagen	Beetle Convertible [TDI]	3625	12.4	3.04	CJAA	S6	4	EU5N	243	267.3	1,680	29	0.14469	0.022756	7.522	-0.0057	0.023257
Volkswagen	CC	3625	24.1	2.087	CCTA	M6	7	E3PA	280	308	488	34	0.13	0.0179	6	-0.13	0.0195
Volkswagen	CC	3625	24.1	2.087	CCTA	M6	7	E3UA	280	308	249	34	0.13	0.0179	6	-0.13	0.0195
Volkswagen	CC	3625	24.1	3.14	CCTA	S6	4	E3PA	272	299.2	6,740	36	0.29	0.0165	21	0.123	0.0185
Volkswagen	CC	3625	24.1	3.14	CCTA	S6	4	E3UA	272	299.2	2,824	36	0.29	0.0165	21	0.123	0.0185
Volkswagen	CC 4Motion	4250	24.1	3.81	BLV	S6	5	EU46	358	393.8	592	42	0.47	0.017	0	0.38	0.017
Volkswagen	Eos	3875	23.1	3.136	CBFA	S6	4	E3SA	272	299.2	3,409	39	0.29	0.0171	18	0.1	0.0178
Volkswagen	Golf	3375	23.9	3.5	CBTA-M	S6	36	EA59	278	305.8	3,685	33	0.293	0.0171	-2	0.203	0.0176
Volkswagen	Golf [TDI]	3375	23.9	2.76	CJAA	M6	11	EU5N	222	244.2	879	30	0.13	0.0181	14	-0.206	0.0199
Volkswagen	Golf [TDI]	3375	23.9	3.04	CJAA	S6	12	EU5N	222	244.2	2,350	29	0.21	0.0168	13	-0.019	0.0178
Volkswagen	GTI	3375	22.9	3.136	CCTA	M6	33	E3PA	288	316.8	1,767	29	0.205	0.0168	8	0.047	0.0171
Volkswagen	GTI	3375	22.9	3.087	CCTA	S6	34	E3PA	257	282.7	3,315	30	0.2	0.0186	12	0.04	0.0186

EPA FOIA Production 2016-07-19

2015-011105_000129

Volkswagen	Jetta	3250	23.9	3.93	CBPA	M5	7	EU36	256	281.6	7,114	27	0.134	0.0168	-1	0.061	0.0168
Volkswagen	Jetta	3250	23.9	3.93	CPKA	M6	3	EB5F	233	256.3	1,967	27	0.134	0.0168	-1	0.061	0.0168
Volkswagen	Jetta	3250	23.9	3.93	CPRA	M6	3	E3PA	233	256.3	3,470	27	0.134	0.0168	-1	0.061	0.0168
Volkswagen	Jetta	3250	23.9	3.68	CPKA	S6	4	EB5F	240	264	19,999	28	0.506	0.0131	5	0.421	0.0132
Volkswagen	Jetta	3250	23.9	3.68	CPRA	S6	4	E3PA	240	264	54,464	28	0.506	0.0131	5	0.421	0.0132
Volkswagen	Jetta	3250	23.9	3.68	CBPA	S6	4	EU36	270	297	35,846	28	0.506	0.0131	5	0.421	0.0132
Volkswagen	Jetta [GLI]	3500	23.9	2.92	CPLA	M6	3	EB5F	263	289.3	986	30.124	0.19533	0.018566	14.77	-0.052	0.019264
Volkswagen	Jetta [GLI]	3500	23.9	2.92	CPPA	M6	3	E3PA	263	289.3	1,759	30.124	0.19533	0.018566	14.77	-0.052	0.019264
Volkswagen	Jetta [GLI]	3500	23.9	3.13	CPLA	S6	4	EB5F	256	281.6	2,308	28.551	0.20546	0.016762	2.585	0.05968	0.016878
Volkswagen	Jetta [GLI]	3500	23.9	3.13	CPPA	S6	4	E3PA	256	281.6	4,296	28.551	0.20546	0.016762	2.585	0.05968	0.016878
Volkswagen	Jetta [TDI]	3500	23.9	2.76	CJAA	M6	3	EU5N	222	244.2	5,405	31.473	0.13384	0.017809	12.882	-0.02087	0.018159
Volkswagen	Jetta [TDI]	3500	23.9	3.04	CJAA	S6	4	EU5N	222	244.2	18,369	33.047	0.28937	0.016587	14.837	0.17362	0.016471
Volkswagen	Jetta Hybrid	3625	9.5	3.23	CNLA	S6	4	EHEV	146	160.6	1,896	27.876	0.05426	0.01618	12.695	0.07983	0.014544
Volkswagen	Jetta SportWagen	3500	23.9	3.39	CBTA-M	M5	7	EU3M	281	309.1	15	31	0.134	0.0178	10	0.365	0.0149
Volkswagen	Jetta SportWagen	3625	23.9	3.39	CBUA-M	M5	3	EM59	281	309.1	335	31	0.134	0.0178	6	0.098	0.0172
Volkswagen	Jetta SportWagen	3625	23.9	3.5	CBTA-M	S6	4	EU3A	278	305.8	240	33	0.293	0.0171	-2	0.203	0.0176
Volkswagen	Jetta SportWagen	3625	23.9	3.5	CBUA-M	S6	4	EA59	278	305.8	4,309	33	0.293	0.0171	-2	0.203	0.0176
Volkswagen	Jetta Sportwagen [TDI]	3625	23.9	2.76	CJAA	M6	3	EU5N	222	244.2	4,656	30	0.2	0.0186	17	-0.03	0.0197
Volkswagen	Jetta Sportwagen [TDI]	3750	23.9	3.04	CJAA	S6	4	EU5N	231	254.1	15,462	35	0.18	0.0193	14	0.09	0.0191
Volkswagen	Passat	3625	10.6	3.65	CBTA-M	M5	7	EU3M	279	306.9	138	29.9	0.13384	0.017169	6.07	0.13745	0.016063
Volkswagen	Passat	3625	10.6	3.65	CBTA-M	M5	3	EM59	279	306.9	348	29.9	0.13384	0.017169	17.085	-0.1085	0.0181
Volkswagen	Passat	3750	11.5	3.043	CPLA	M6	3	EB5F	246	270.6	268	30.124	0.26044	0.016878	13.363	0.12638	0.016738
Volkswagen	Passat	3750	11.5	3.043	CPPA	M6	3	E3PA	246	270.6	358	30.124	0.26044	0.016878	13.363	0.12638	0.016738
Volkswagen	Passat	3750	11.5	2.917	CPKA	S6	7	EB5F	247	271.7	17,149	33.272	0.27491	0.017111	11.645	0.23258	0.016645
Volkswagen	Passat	3750	11.5	2.917	CPRA	S6	4	E3PA	247	271.7	36,657	33.272	0.27491	0.017111	10.476	0.26731	0.016296
Volkswagen	Passat	3625	11.9	3.5	CBTA-M	S6	4	EU3A	280	308	2,984	30.574	0.5064	0.013328	5.845	0.43768	0.012746
Volkswagen	Passat	3625	11.9	3.5	CBTA-M	S6	4	EA59	280	308	9,924	30.574	0.5064	0.013328	4.271	0.41236	0.013561
Volkswagen	Passat	3750	12.4	3.44	CDVB	S6	4	EU41	312	343.2	1,104	33.721	0.28937	0.017868	20.606	0.10001	0.017914
Volkswagen	Passat [TDI]	3750	11.5	3.043	CKRA	M6	3	EU4S	219	240.9	2,562	31.024	0.13384	0.01746	16.287	-0.1186	0.018583
Volkswagen	Passat [TDI]	3750	11.5	2.917	CKRA	S6	4	EU4S	228	250.8	30,623	31.473	0.28937	0.016005	13.779	0.11864	0.016447
Volkswagen	Tiguan	3875	14.1	3.3	CCTA	M6	3	E3UA	336	369.6	296	37	0.134	0.0247	24	-0.217	0.0251
Volkswagen	Tiguan	3875	14.6	3.54	CCTA	S6	4	E3UA	301	331.1	13,777	33.721	0.38342	0.022582	15.512	0.28576	0.022756

Note: Engine Codes are provided above for each sub-configuration and may be verified with the application for certification for the applicable test group. The test group for each vehicle is also identified on the Vehicle Emission Control Information Label.

EPA FOIA Production 2016-07-19

2015-011105_000130

To: Good, David[good.david@epa.gov]
Cc: Wehrly, Linc[wehrly.linc@epa.gov]; Mark R. Rosekind Ph. D. (nhtsa.administrator@dot.gov)[nhtsa.administrator@dot.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Tue 3/31/2015 10:41:40 AM
Subject: 2014 VWGoA Light-Duty Truck Final CAFE/GHG Reports
Final CAFE & CREE 2014 LDT to EPA.pdf

Hello Dave;

Please find a copy of the 2014 Volkswagen Group Final Light-Duty Truck CAFE and CREE reports. The Verify final status was set to yes. All Verify entered data was processed under the manufacturer code VWX for 2014 model year. I have downloaded the file to Verify. If you have any questions please let me know.

Best regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

VOLKSWAGEN

GROUP OF AMERICA

Ms. Gina McCarthy, Administrator
U.S. Environmental Protection Agency HQ
William Jefferson Clinton Building
1200 Pennsylvania Ave, N.W.
Mail Code 1101A
Washington, D.C. 20460

Mr. Matthias Barke Name
General Manager Title
EEO Department
248 754 4201 Phone
248 754 4207 Fax
Matthias.Barke@vw.com E-Mail

March 30, 2015 Date

VOLKSWAGEN GROUP OF AMERICA, INC.
3800 HAMLIN ROAD
AUBURN HILLS, MI 48326
PHONE +1 248 754 5000

Subject: Volkswagen Group 2014 Final LDT CAFE/CREE Reports

Dear Ms. McCarthy;

Enclosed are the 2014 Volkswagen Group of America, Inc. (VWGoA) Final Light-Duty Truck CAFE and CREE reports in accordance with the regulations contained on 40 CFR 600.512-12. These reports have been processed and successfully submitted into the EPA Verify system.

The 2014 final fuel economy average is provided for the VWGoA Truck category and in accordance with the regulations contained in 40 CFR 600.512-12. The final CAFE value is based upon approved EPA fuel economy data and final production volumes for the 2014 model year. This CAFE submission includes the VWGoA group brands of Volkswagen, Audi and Porsche.

The VWGoA Light-Duty Truck Baseline (non-AMFA) CAFE value is 27.2 MPG. The adjusted CAFE with AMFA credits included is 29.8 MPG. This AMFA CAFE value exceeds the 1.2 MPG capped value contained in 40 CFR 600.510-12 and therefore the capped final CAFE is **28.4** MPG.

The footprint based reformulated CAFE standard is derived using measurement methods which comply with Department of Transportation and EPA requirements. The VWGoA reformed Light-Duty Truck (LDT) CAFE standard is **27.8** MPG for the 2014 model year in accordance with 49 CFR 533.5 (i).

Additionally, we herewith submit the 2014 VWGoA model year Light-Duty Truck CREE Final Report. This 2014 model year submission includes Volkswagen, Audi and Porsche brands. Enclosed is the manufacturer's calculated CREE fleet average and documents providing the necessary information to establish the fleet average. The calculated fleet average is determined in accordance with 40 CFR 600.510-12 (j). This final value is then capped at **320** g/mi CREE after application of the maximum decrease in average CREE determined in accordance with 40 CFR 600.510-12(i).

The footprint based CO2 standard of **311** g/mi is determined in accordance with 40 CFR 86.1818-12.

Enclosed is the list of vehicle models and test parameters and in-use CREE standards in accordance with 600.512-12(c)(11).

If there are any questions concerning this report, please contact Leonard Kata or Richard Thomas of my staff at (248) 754-4204 or (248) 754-4213, respectively.

Sincerely,
Volkswagen Group of America, Inc.

Mr. Matthias Barke
Engineering and Environmental Office

Attachments

cc: Mark R. Rosekind, Ph.D., Administrator
U.S. DOT, National Highway Traffic Safety Administration

Byron Bunker, Director
U.S. EPA, Compliance Division

Appendix

Pursuant to 40 CFR 600.512-01(c)(7), I, Anna Schneider on behalf of Volkswagen Group of America, Inc. do attest to the authenticity and accuracy of the production data in this 2014 Model Year Report for Volkswagen Group of America, Inc.

This attestation constitutes a representation by Volkswagen Group of America, Inc. that it has established reasonable, prudent procedures to ascertain and provide production data that are accurate and authentic in all material respects and that these procedures have been followed by employees of Volkswagen Group of America, Inc. in the reporting process.

Anna Schneider

Anna Schneider
Vice President Industry & Government Relations
Volkswagen Group of America, Inc.

March 30th, 2015

2014 Final LDT BASELINE CAFE

Index	Brand	Carline	DISP	Trans	CITY	HWY	COMB	RND COMB	Sales	Weighted Sales/MPG
060	Audi	Q5	3.0 / 121	S8	22.8446	35.5000	27.2096	27.2	5,920	217.6471
062	Audi	Q5	2.0 / 121	S8	24.8000	38.6000	29.5548	29.6	25,666	867.0946
050	Audi	Q5 Hybrid	2.0 / 121	S8	30.4000	39.9000	34.0480	34.0	372	10.9412
014	Audi	Q5 [TDI]	3.0 / 181	S8	29.1832	44.0000	34.3953	34.4	6,652	193.3721
036	Audi	Q7	3.0 / 183	S8	19.4000	30.0000	23.0678	23.1	12,996	562.5974
024	Audi	Q7 [TDI]	3.0 / 181	S8	22.8000	39.1000	28.0649	28.1	4,885	173.8434
106	Audi	SQ5	3.0 / 121	S8	19.7468	32.4000	23.9570	24.0	3,395	141.4583
001	Porsche	Cayenne	3.6 / 220	A8	20.9298	32.5972	24.9481	24.9	10,651	427.7510
002	Porsche	Cayenne	3.6 / 220	M6	18.5000	29.8000	22.3063	22.3	78	3.4978
005	Porsche	Cayenne Diesel	3.0 / 183	A8	24.1000	41.0000	29.5883	29.6	4,696	158.6486
004	Porsche	Cayenne GTS	4.8 / 293	A8	18.4000	28.9000	21.9963	22.0	2,291	104.1364
009	Porsche	Cayenne Hybrid	3.0 / 183	A8	25.1000	33.1000	28.1631	28.2	952	33.7589
003	Porsche	Cayenne S	4.8 / 293	A8	19.5000	31.6000	23.5595	23.6	1,875	79.4492
007	Porsche	Cayenne Turbo	4.8 / 293	A8	18.3000	29.9000	22.1706	22.2	552	24.8649
008	Porsche	Cayenne Turbo S	4.8 / 293	A8	16.7379	27.6986	20.3642	20.4	871	42.6961
079	Volkswagen	Tiguan 4Motion	2.0 / 121	AMS6	25.5700	35.5482	29.2668	29.3	11,957	408.0887
073	Volkswagen	Touareg	3.6 / 195	S8	21.3000	31.6000	24.9612	25.0	4,894	195.7600
037	Volkswagen	Touareg Hybrid	3.0 / 183	S8	25.1000	33.1000	28.1631	28.2	30	1.0638
023	Volkswagen	Touareg [TDI]	3.0 / 181	S8	24.1000	41.0000	29.5883	29.6	4,791	161.8581

Volkswgen Group Total Units	**103,524**	**3,808.5276**
Unrounded Fleet Average (MPG)	**27.1822**	
Rounded Fleet Average (MPG)	**27.2**	

2014 Final LDT AMFA CAFE

Index	Brand	Carline	DISP	Trans	CITY	HWY	COMB	RND COMB	Sales	Weighted Sales/MPG
060	Audi	Q5	3.0 / 121	S8	22.8446	35.5000	27.2096	27.2	5,920	217.6471
062	Audi	Q5 [FFV]	2.0 / 121	S8	40.8636	63.6096	48.7002	48.7	25,666	527.0226
050	Audi	Q5 Hybrid	2.0 / 121	S8	30.4000	39.9000	34.0480	34.0	372	10.9412
014	Audi	Q5 [TDI]	3.0 / 181	S8	29.1832	44.0000	34.3953	34.4	6,652	193.3721
036	Audi	Q7	3.0 / 183	S8	19.4000	30.0000	23.0678	23.1	12,996	562.5974
024	Audi	Q7 [TDI]	3.0 / 181	S8	22.8000	39.1000	28.0649	28.1	4,885	173.8434
106	Audi	SQ5	3.0 / 121	S8	19.7468	32.4000	23.9570	24.0	3,395	141.4583
001	Porsche	Cayenne	3.6 / 220	A8	20.9298	32.5972	24.9481	24.9	10,651	427.7510
002	Porsche	Cayenne	3.6 / 220	M6	18.5000	29.8000	22.3063	22.3	78	3.4978
005	Porsche	Cayenne Diesel	3.0 / 183	A8	24.1000	41.0000	29.5883	29.6	4,696	158.6486
004	Porsche	Cayenne GTS	4.8 / 293	A8	18.4000	28.9000	21.9963	22.0	2,291	104.1364
009	Porsche	Cayenne Hybrid	3.0 / 183	A8	25.1000	33.1000	28.1631	28.2	952	33.7589
003	Porsche	Cayenne S	4.8 / 293	A8	19.5000	31.6000	23.5595	23.6	1,875	79.4492
007	Porsche	Cayenne Turbo	4.8 / 293	A8	18.3000	29.9000	22.1706	22.2	552	24.8649
008	Porsche	Cayenne Turbo S	4.8 / 293	A8	16.7379	27.6986	20.3642	20.4	871	42.6961
079	Volkswagen	Tiguan 4Motion	2.0 / 121	AMS6	25.5700	35.5482	29.2668	29.3	11,957	408.0887
073	Volkswagen	Touareg	3.6 / 195	S8	21.3000	31.6000	24.9612	25.0	4,894	195.7600
037	Volkswagen	Touareg Hybrid	3.0 / 183	S8	25.1000	33.1000	28.1631	28.2	30	1.0638
023	Volkswagen	Touareg [TDI]	3.0 / 181	S8	24.1000	41.0000	29.5883	29.6	4,791	161.8581

Volkswgen Group Total Units	**103,524**	**3,468.4556**
Unrounded Fleet Average (MPG)	**29.8473**	
Rrounded Fleet Average (MPG)	**29.8**	

2014 VWGoA GHG Final Fleet Average - LDT

Model Year	Brand	Carline	Engine	Trans	Model Type Sales	CREE	CREE FFV	FOOTPRINT	CO2 Target	WGT CREE	WGT CREE FFV	WGT CO2 Target
2014	Audi	Q5	3.0T V6 FSI	S8	5,920	330	330	48.90	307	1,955,968.0	1,955,968.0	1817440.0
2014	Audi	Q5 [FFV]	2.0T I-4 FSI	S8	25,666	302	173	48.80	306.6	7,751,132.0	4,440,218.0	7869195.6
2014	Audi	Q5 [TDI]	3.0 V6 TDI	S8	6,652	296	296	48.90	307	1,968,326.8	1,968,326.8	2042164.0
2014	Audi	Q5 Hybrid	2.0T I-4 FSI	S8	372	264	264	48.80	306.6	98,022.0	98,022.0	114055.2
2014	Audi	Q7	3.0T V6 FSI	S8	12,996	386	386	53.70	326.3	5,017,755.6	5,017,755.6	4240594.8
2014	Audi	Q7 [TDI]	3.0 V6 TDI	S8	4,885	362	362	53.50	325.5	1,769,835.5	1,769,835.5	1590067.5
2014	Audi	SQ5	3.0T V6 FSI	S8	3,395	375	375	49.60	309.8	1,271,767.0	1,271,767.0	1051771.0
2014	Porsche	Cayenne	3.6L	A8	10,651	356	356	51.80	318.7	3,789,625.8	3,789,625.8	3394473.7
2014	Porsche	Cayenne	3.6L	M6	78	399	399	51.80	318.7	31,090.8	31,090.8	24858.6
2014	Porsche	Cayenne Diesel	3.0L	A8	4,696	344	344	51.80	318.7	1,614,015.2	1,614,015.2	1496615.2
2014	Porsche	Cayenne GTS	4.8L	A8	2,291	404	404	51.60	317.9	926,022.2	926,022.2	728308.9
2014	Porsche	Cayenne Hybrid	3.0L	A8	952	315	315	51.80	318.7	300,165.6	300,165.6	303402.4
2014	Porsche	Cayenne S	4.8L	A8	1,875	378	378	51.60	317.9	708,375.0	708,375.0	596062.5
2014	Porsche	Cayenne Turbo	4.8L	A8	552	401	401	51.50	317.5	221,352.0	221,352.0	175260.0
2014	Porsche	Cayenne Turbo S	4.8L	A8	871	436	436	51.50	317.5	379,756.0	379,756.0	276542.5
2014	Volkswagen	Tiguan 4Motion	2.0T I-4 FSI	S6	11,957	303	303	43.40	284.7	3,626,558.1	3,626,558.1	3404157.9
2014	Volkswagen	Touareg	3.6 VR6 FSI	S8	4,894	356	356	51.50	317.5	1,741,285.2	1,741,285.2	1553845.0
2014	Volkswagen	Touareg [TDI]	3.0 V6 TDI	S8	4,791	344	344	51.50	317.5	1,646,666.7	1,646,666.7	1521142.5
2014	Volkswagen	Touareg Hybrid	3.0T V6 FSI	S8	30	315	315	51.30	316.7	9,459.0	9,459.0	9501.0
					103,524					34,827,178.5	31,516,264.5	32,209,458.3

MY2014 Final Fleet Average Standard-LDT (g/mi)	311
MY2014 Final Fleet Average w/o FFV-LDT (g/mi)	336
MY2014 Final Fleet Average w/FFV-LDT (g/mi)	304
Max Decrease for FFV's	16
MY2014 Final Fleet Average LDT (g/mi)	320

EPA FOIA Production 2016-07-19 2015-011105_000138

2014 VWGoA LDT CAFE/GHG Standards

Brand	Carline	Carline Code	FootPrint Index	FOOTPRINT	2014 MPG Target	2014 CO2 Target	Model Type Sales	CAFE Weighted Target	GHG Weighted Sales/Target
Audi	Q5	330	1	48.9	28.20	307.0	12,572	445.7395	3,859,604.00
Audi	Q5	330	2	48.8	28.24	306.6	25,666	908.8197	7,869,195.60
Audi	Q5 Hybrid	340		48.8	28.24	306.6	372	13.1723	114,055.20
Audi	Q7	320	1	53.7	26.57	326.3	12,996	489.1307	4,240,594.80
Audi	Q7 [TDI]	320	2	53.5	26.63	325.5	4,885	183.4127	1,590,067.50
Audi	SQ5	335		49.6	27.95	309.8	3,395	121.4669	1,051,771.00
Porsche	Cayenne	760		51.8	27.19	318.7	10,729	394.5405	3,419,332.30
Porsche	Cayenne Diesel	766		51.8	27.19	318.7	4,696	172.7106	1,496,615.20
Porsche	Cayenne GTS	762		51.6	27.26	317.9	2,291	84.0426	728,308.90
Porsche	Cayenne Hybrid	763		51.8	27.19	318.7	952	35.0082	303,402.40
Porsche	Cayenne S	761		51.6	27.26	317.9	1,875	68.7821	596,062.50
Porsche	Cayenne Turbo	764		51.5	27.29	317.5	552	20.2272	175,260.00
Porsche	Cayenne Turbo S	765		51.5	27.29	317.5	871	31.9165	276,542.50
Volkswagen	Tiguan 4Motion	165	3	44.0	30.10	287.2	5,886	195.5482	1,690,459.20
Volkswagen	Tiguan 4Motion (LRR)	165	2	43.4	30.34	284.7	6,071	200.0676	1,728,413.70
Volkswagen	Touareg	140		51.5	27.29	317.5	9,685	354.8284	3,074,987.50
Volkswagen	Touareg Hybrid	145		51.3	27.36	316.7	30	1.0964	9,501.00

Total Units	**103,524**	**3,720.5099**	**32,224,173.30**
Unrounded CAFE & GHG Fleet Standard		**27.8252**	**311.27**
Volkswagen Group CAFE & GHG Standard		**27.8**	**311**

3/25/2015

VWGoA

EPA FOIA Production 2016-07-19

MY 2014 Sub-Configuration / In-Use -LDT

Brand	Carline	ETW	TRLHP	AXLE RATIO	ENG CODE	Trans	Trans Config	Basic Eng	CREE	In-Use CREE	Final Sales	TargetCoefficientAValue	TargetCoefficientBValue	TargetCoefficientCValue	SetCoefficientAValue	SetCoefficientBValue	SetCoefficientCValue
Audi	Q5	4500	14.8	3.76	CAEB	S8	1	E3UF	330	363.0	5920	37	0.445	0.0174	-6	0.6	0.0159
Audi	Q5 [FFV]	4500	14.8	3.76	CAEB	S8	1	EFUB	302	332.2	25666	37	0.445	0.0174	-6	0.6	0.0159
Audi	Q5 [TDI]	4500	14.8	3.76	CAEB	S8	1	E4UG	296	325.6	6652	37	0.445	0.0174	-6	0.6	0.0159
Audi	Q5 Hybrid	4750	14.8	3.76	CHJA	S8	1	EHUB	264	290.4	372	47.21	-0.217	0.027063	-2.473	-0.2242	0.025143
Audi	Q7	6000	18	3.7	CJWB	S8	1	ETLF	386	424.6	12996	44	0.434	0.0272	-8	0.159	0.0269
Audi	Q7 [TDI]	6000	18.1	3.27	CNRB	S8	1	E3UG	362	398.2	4885	46	0.43	0.0272	0	-0.15	0.0299
Audi	SQ5	4500	14.8	3.76	CAEB	S8	1	E3UF	375	412.5	3395	37	0.445	0.0174	-6	0.6	0.0159
Porsche	Cayenne	3750	11.8	3.55	CWD	A7	A7-AWD	EPTD	356	391.6	371	28.776	0.36179	0.01627	9.105	-0.02677	0.02003
Porsche	Cayenne	4750	11.6	3.55	CXP	A7	A7-AWD	EPSD	399	438.9	532	28.776	0.36179	0.01627	6.789	-0.18886	0.02201
Porsche	Cayenne Diesel	4750	11.7	3.55	CWB	A7	A7-AWD	EPTD	344	378.4	382	28.776	0.36179	0.01627	7.801	-0.04124	0.0205
Porsche	Cayenne GTS	5000	11.5	3.55	CWB	A7	A7-AWD	EPTD	404	444.4	251	28.776	0.36179	0.01627	7.801	-0.04124	0.0205
Porsche	Cayenne Hybrid	4750	11.7	3.55	CWB	A7	A7-AWD	EPTD	315	346.5	74	28.776	0.36179	0.01627	7.801	-0.04124	0.0205
Porsche	Cayenne S	5000	11.5	3.55	CWB	A7	A7-AWD	EPTD	378	415.8	72	28.776	0.36179	0.01627	7.801	-0.04124	0.0205
Porsche	Cayenne Turbo	5000	12.1	3.55	CGE	A8	A8-RWD	EPHD	401	441.1	755	33.789	0.28654	0.018108	16.254	-0.21672	0.021951
Porsche	Cayenne Turbo S	3375	9.8	3.88	MA122	M6	M6-RWD	EB81	436	479.6	604	28.101	0.13748	0.01526	11.802	-0.27388	0.0184
Volkswagen	Tiguan 4Motion	4000	16.7	3.54	CCTA	S6	4	E3UA	303	333.3	11957	35.52	0.34725	0.024502	14.163	0.15948	0.025835
Volkswagen	Touareg	5250	15.9	3.7	CGRA	S8	1	EU76	356	391.6	4894	28.101	0.13384	0.021592	12.414	0.04167	0.02108
Volkswagen	Touareg [TDI]	5250	15.9	3.27	CNRB	S8	1	E2UG	344	378.4	4791	43	0.12	0.028	-2	-0.44	0.0303
Volkswagen	Touareg Hybrid	5500	15.9	3.27	CGFA	S8	1	EHEV	315	346.5	30	43	0.123	0.0279	-8	-0.166	0.0281

Note: Engine Codes are provided above for each sub-configuration and may be verified with the application for certification for the applicable test group. The test group for each vehicle is also identified on the Vehicle Emission Control Information Label.

2015-011105_000140

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Thur 3/26/2015 1:21:35 PM
Subject: RE: 2016 FE Guide - Errors in Verify as of March 24, 2015

Hi Dave;

I incorrectly corrected an unrounded adjusted city CO2 value from the report you gave me on 3-16-2015 but it was correct from the beginning. I need to have my eyes checked again. Let's see if I still have some differences when you run the audit again, I corrected both indexes # 014 and # 015.

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, March 25, 2015 2:19 PM
To: Thomas, Richard (EEO)
Subject: Re: 2016 FE Guide - Errors in Verify as of March 24, 2015

Richard,

Re: 2016 FE Guide - Errors in Verify as of March 24, 2015

Attached are the data in Verify as of March 24, 2015. Labels with pea green fill in the first few columns have errors but which need to be corrected in Verify before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred.

The next normal posting of 2015 & 2016 FE Label data will be on April 1, 2015 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
Cc: Ross Gatzke[Ross.Gatzke@porsche.us]; Good, David[good.david@epa.gov]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Peavyhouse, Robert
Sent: Tue 3/24/2015 1:31:11 PM
Subject: RE: 2014 VWGoA and Porsche index 641 problem

Richard,

Everything calculates fine for PRX641 now. Go ahead and resubmit.

It should do all of the calculations now.

Robert Peavyhouse
Compliance Division
U.S. EPA - OTAQ
Phone: (734) 214-4814

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Tuesday, March 24, 2015 8:52 AM
To: Peavyhouse, Robert
Cc: Ross Gatzke; Good, David; Giles, Michael (EEO)
Subject: RE: 2014 VWGoA and Porsche index 641 problem

Okay, thanks Bob.

From: Peavyhouse, Robert [mailto:Peavyhouse.Robert@epa.gov]
Sent: Tuesday, March 24, 2015 8:51 AM
To: Thomas, Richard (EEO)
Cc: Ross Gatzke; Good, David; Giles, Michael (EEO)
Subject: RE: 2014 VWGoA and Porsche index 641 problem

Richard,

I haven't entered the values yet. I have to do this in the development database to make sure the changes I make are correct.

As soon as I get them in and can make sure this model type and the CAFE submission is calculating with it correctly, I will let you know.

Robert Peavyhouse
Compliance Division
U.S. EPA - OTAQ
Phone: (734) 214-4814

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Monday, March 23, 2015 2:34 PM
To: Peavyhouse, Robert
Cc: Ross Gatzke; Good, David; Giles, Michael (EEO)
Subject: 2014 VWGoA and Porsche index 641 problem
Importance: High

Hi Bob;

I guess you entered the PHEV data that Ross calculated with version 17 of the PHEV fuel economy calculator. We now have a new problem with the same Porsche PHEV (Index #641). Can you get in touch with either myself or Ross and let us know, if anything, we can do to make the 2014 VWGoA data display the Verify fleet averages.

Thanks,
Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Peavyhouse, Robert[Peavyhouse.Robert@epa.gov]
Cc: Ross Gatzke[Ross.Gatzke@porsche.us]; Good, David[good.david@epa.gov]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Thomas, Richard (EEO)
Sent: Tue 3/24/2015 12:52:19 PM
Subject: RE: 2014 VWGoA and Porsche index 641 problem

Okay, thanks Bob.

From: Peavyhouse, Robert [mailto:Peavyhouse.Robert@epa.gov]
Sent: Tuesday, March 24, 2015 8:51 AM
To: Thomas, Richard (EEO)
Cc: Ross Gatzke; Good, David; Giles, Michael (EEO)
Subject: RE: 2014 VWGoA and Porsche index 641 problem

Richard,

I haven't entered the values yet. I have to do this in the development database to make sure the changes I make are correct.

As soon as I get them in and can make sure this model type and the CAFE submission is calculating with it correctly, I will let you know.

Robert Peavyhouse
Compliance Division
U.S. EPA - OTAQ
Phone: (734) 214-4814

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Monday, March 23, 2015 2:34 PM
To: Peavyhouse, Robert
Cc: Ross Gatzke; Good, David; Giles, Michael (EEO)
Subject: 2014 VWGoA and Porsche index 641 problem
Importance: High

Hi Bob;

I guess you entered the PHEV data that Ross calculated with version 17 of the PHEV fuel economy calculator. We now have a new problem with the same Porsche PHEV (Index #641). Can you get in touch with either myself or Ross and let us know, if anything, we can do to make the 2014 VWGoA data display the Verify fleet averages.

Thanks,
Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
Cc: Ross Gatzke[Ross.Gatzke@porsche.us]; Good, David[good.david@epa.gov]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Peavyhouse, Robert
Sent: Tue 3/24/2015 12:51:10 PM
Subject: RE: 2014 VWGoA and Porsche index 641 problem

Richard,

I haven't entered the values yet. I have to do this in the development database to make sure the changes I make are correct.

As soon as I get them in and can make sure this model type and the CAFE submission is calculating with it correctly, I will let you know.

Robert Peavyhouse
Compliance Division
U.S. EPA - OTAQ
Phone: (734) 214-4814

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Monday, March 23, 2015 2:34 PM
To: Peavyhouse, Robert
Cc: Ross Gatzke; Good, David; Giles, Michael (EEO)
Subject: 2014 VWGoA and Porsche index 641 problem
Importance: High

Hi Bob;

I guess you entered the PHEV data that Ross calculated with version 17 of the PHEV fuel economy calculator. We now have a new problem with the same Porsche PHEV (Index #641). Can you get in touch with either myself or Ross and let us know, if anything, we can do to make the 2014 VWGoA data display the Verify fleet averages.

Thanks,
Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Peavyhouse, Robert[Peavyhouse.Robert@epa.gov]
Cc: Ross Gatzke[Ross.Gatzke@porsche.us]; Good, David[good.david@epa.gov]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Thomas, Richard (EEO)
Sent: Mon 3/23/2015 6:34:15 PM
Subject: 2014 VWGoA and Porsche index 641 problem
CAFE_GHG_Calculation_Error_Report_2014_PV.pdf

Hi Bob;

I guess you entered the PHEV data that Ross calculated with version 17 of the PHEV fuel economy calculator. We now have a new problem with the same Porsche PHEV (Index #641). Can you get in touch with either myself or Ross and let us know, if anything, we can do to make the 2014 VWGoA data display the Verify fleet averages.

Thanks,
Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: French, Roberts[french.roberts@epa.gov]
Cc: Good, David[good.david@epa.gov]; Ross Gatzke[Ross.Gatzke@porsche.us]; Peavyhouse, Robert[Peavyhouse.Robert@epa.gov]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Thomas, Richard (EEO)
Sent: Mon 3/23/2015 1:06:50 PM
Subject: RE: 2014 VW Group CAFE/GHG - Porsche Panamera PHEV calcs

Good morning Rob;

Could you please ask Bob Peavyhouse to manually input these Porsche model type values and Porsche index #641 into Verify so we can try and run the Volkswagen CAFE/CREE again with the newly calculated averages again? We believe that this error has not allowing the Verify program to calculated the Verify averages on the report cover page. Once we have values to look at we can work on fixing errors.

Best regards,

Richard

From: French, Roberts [mailto:french.roberts@epa.gov]
Sent: Monday, March 23, 2015 8:33 AM
To: Ross Gatzke; Peavyhouse, Robert
Cc: Good, David; Thomas, Richard (EEO)
Subject: RE: 2014 VW Group CAFE/GHG - Porsche Panamera PHEV calcs

Ross,

I only got part of your voicemail the other day, as your phone was breaking up considerably. Was this what your question was? In any case, I do believe you have interpreted the CAFE incentives correctly and that the values you provide are indeed correct.

I believe it would be more appropriate to use a measure of equivalent all-electric range to determine whether a vehicle is a dual fuel vehicle, but at this point in time NHTSA does not

believe that the statute permits such a reading.

Rob

Roberts W. French, Jr.

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory

2000 Traverwood Drive

Ann Arbor, Michigan 48105

(734) 214-4380

From: Ross Gatzke [mailto:Ross.Gatzke@porsche.us]
Sent: Saturday, March 21, 2015 5:30 AM
To: Peavyhouse, Robert
Cc: French, Roberts; Good, David; richard.thomas@vw.com
Subject: Re: 2014 VW Group CAFE/GHG - Porsche Panamera PHEV calcs

Hi, Bob

Attached is our Panamera PHEV calculation using Rob's v17 calculator. In my reading of CAFE incentives, this vehicle does not qualify as a dual fuel vehicle because it operates in Blended mode (and therefore cannot complete a UDDS on electricity only). So are these the composite values you think are appropriate?

FE (cells E27-G27)

City 41.3088
Hwy 47.3768
Comb 43.8353

CREE (cells E29-G29)

City 160

Hwy 163
Comb 161

Ross Gatzke
Senior Engineer, Regulatory Affairs
Porsche Cars North America
Ross.Gatzke@porsche.us
Tel: 770-290-3516
Fax: 678-225-6580

From: "Good, David" <good.david@epa.gov>

To: "richard.thomas@vw.com" <richard.thomas@vw.com>

Cc: "ross.gatzke@porsche.us" <ross.gatzke@porsche.us>, "Peavyhouse, Robert" <Peavyhouse.Robert@epa.gov>, "French, Roberts" <french.roberts@epa.gov>

Date: 03/20/2015 11:15 AM

Subject: 2014 VW Group CAFE/GHG - Porsche Panamera PHEV calcs

---

Richard,

For PHEVs, mfrs just need to provide Bob Peavyhouse with the unrounded mpg and CREE values for each PHEV subconfiguration contained in their 2014 CAFE/GHG. Please send Bob the composite (CD/CS) unrounded city, hwy and combined mpg and CREE values. Bob will then enter these values directly into Verify for each applicable PHEV subconfiguration (and Rob or I will double check your PHEV CAFE/GHG calculations by hand).

Please use the attached V17 version of Rob's PHEV calculator. I'll also attach a copy of the 2014 Panamera data which we used for the 2014 FE Labels (V13).

Ross, as Richard & I were discussing on the phone today, it's probably better if you would send these values to Bob (and cc Richard) since Porsche staff understand the PHEV calculations quite well, etc.

It's my understanding that for 2014 model year Porsche will be aggregated with VW Group for both CAFE & GHG calculations.

Bob, please let us know if you need anything else.

Thanks

Dave[attachment "PHEV Calculator v13 (2014) - Panamera and 918-from Ross-7-7-2014.xlsm" deleted by Ross Gatzke/PCNA_AMERICAS/Porsche_AG/DE] [attachment "PHEV Calculator v17 with sample data-from Rob-8-13-2014.xlsm" deleted by Ross Gatzke/PCNA_AMERICAS/Porsche_AG/DE]

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Tue 3/17/2015 1:13:33 PM
Subject: RE: 2016 FE Guide - Errors in Verify as of March 16, 2015

Thanks Dave;

I have corrected indexes # 014 and #015, so if you get a chance to run it again please send me a copy of the 2016 Audi labels.

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Monday, March 16, 2015 4:42 PM
To: Thomas, Richard (EEO)
Subject: Re: 2016 FE Guide - Errors in Verify as of March 16, 2015

Richard,

Re: 2016 FE Guide - Errors in Verify as of March 16, 2015

Attached are the data in Verify as of March 16, 2015. Labels with pea green fill in the first few columns have errors but which need to be corrected in Verify before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred.

The next normal posting of 2015 & 2016 FE Label data will be on March 24, 2015 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Thur 3/12/2015 10:40:06 AM
Subject: RE: 2016 FE Guide - Errors

Thanks Dave; for index #014 I've corrected the unadjusted unrounded highway CO2 value so the combined unrounded adjusted value should be okay now. This was a typo into Verify. If you have a chance to run it again I would appreciate a copy.

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, March 11, 2015 6:40 PM
To: Thomas, Richard (EEO)
Subject: 2016 FE Guide - Errors

Richard,

Here's the data as of 6AM today.

Dave

To: richard.thomas@vw.com[richard.thomas@vw.com]
Cc: Good, David[good.david@epa.gov]
From: Yang, Ching-Shih
Sent: Mon 3/9/2015 2:46:51 PM
Subject: RE: ASTM rounding formula used in the FE Guide macro - please send our formula to VW

Hi,

Sorry for the late response, but I was out all last week.

Here's the astm rounding code that is being used by our macro:

```
Public Function ASTMround(number As Double, _
        Optional num_digits As Integer = 0) As Double
 ' round exactly 5 to even per ASTM standard
 ' requires Excel 2000 or later
   Dim x
   If num_digits < 0 Then
    ' VBA round does not accept num_digits < 0
      ASTMround = Round(number / 10 ^ -num_digits) * 10 ^ -num_digits
   Else
    ' buffer against binary approximations by rounding to an integer
    ' CDbl(CStr()) ensures that we get the primary binary _
        representation the decimal display
      ASTMround = Round(CDbl(CStr(number * 10 ^ num_digits))) _
              / 10 ^ num_digits
```

```
    End If

End Function
```

Regards, Ching-shih Yang

From: Good, David
Sent: Wednesday, March 04, 2015 12:47 PM
To: Yang, Ching-Shih
Cc: richard.thomas@vw.com
Subject: ASTM rounding formula used in the FE Guide macro - please send our formula to VW

Ching-shih,

When you get a chance, please send Richard Thomas of VW, the astm rounding formula in the FE Guide Macro (and cc me).

They are having trouble with Excel astm rounding, and would like to use our formula.

Thanks

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Mon 3/9/2015 11:25:50 AM
Subject: RE: Data in Verify attached as of Mar 5, 2015

Thanks Dave. I have corrected the unadjusted and unrounded combined CO2 value for both index #003 and #004.

From: Good, David [mailto:good.david@epa.gov]
Sent: Thursday, March 05, 2015 4:08 PM
To: Thomas, Richard (EEO)
Subject: RE: Data in Verify attached as of Mar 5, 2015

Richard,

Here you go.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Thursday, March 05, 2015 9:47 AM
To: Good, David
Subject: RE: Data in Verify attached as of Mar 2, 2015

Okay that's fine, thank you.

From: Good, David [mailto:good.david@epa.gov]
Sent: Thursday, March 05, 2015 9:38 AM
To: Thomas, Richard (EEO)
Subject: RE: Data in Verify attached as of Mar 2, 2015

Richard,

I'll run the query today----but I have a 10AM meeting.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Thursday, March 05, 2015 6:50 AM
To: Good, David
Subject: RE: Data in Verify attached as of Mar 2, 2015

Hi Dave;

Did you run this 2016 audit new as of yesterday, because these are the original values and not the accepted correction I did for both indexes #003 and #004 on March 2nd? I was reviewing the Monroney labels for our marketing folk yesterday and today, and see that Index #004 is not on the website but index #003 does appear. Index #003 was the one you were going ask DOE (Janet) to pull off the site, but it was the same day you sent them to her. I couldn't find an email, so I guess I should have followed up with and email to you, I think we only discussed it on the phone on or about February 27th.

Could you please ask DOE to remove index #003 from the site. If you could run another 2016 query again to include these two indexes, I might see the corrected values. Both have a late March release date now of March 30th. The 2016 Audi A6 quattro TDI and A7 quattro TDI models have still not been released from the ports.

If you have any questions, I am here today.

Thanks,

Richard

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, March 04, 2015 2:43 PM
To: Thomas, Richard (EEO)
Subject: Data in Verify attached as of Mar 2, 2015

Richard,

Here's the data as of Monday. I think you made your changes last week. [I was mistaken, I didn't sent Index #4 (Audi A7 Quattro Diesel) to DOE for posting yet.]

Let me know if I need to do another (more-up-to-date) query.

Dave

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Thur 3/5/2015 2:47:20 PM
Subject: RE: Data in Verify attached as of Mar 2, 2015

Okay that's fine, thank you.

From: Good, David [mailto:good.david@epa.gov]
Sent: Thursday, March 05, 2015 9:38 AM
To: Thomas, Richard (EEO)
Subject: RE: Data in Verify attached as of Mar 2, 2015

Richard,

I'll run the query today----but I have a 10AM meeting.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Thursday, March 05, 2015 6:50 AM
To: Good, David
Subject: RE: Data in Verify attached as of Mar 2, 2015

Hi Dave;

Did you run this 2016 audit new as of yesterday, because these are the original values and not the accepted correction I did for both indexes #003 and #004 on March 2nd? I was reviewing the Monroney labels for our marketing folk yesterday and today, and see that Index #004 is not on the website but index #003 does appear. Index #003 was the one you were going ask DOE (Janet) to pull off the site, but it was the same day you sent them to her. I couldn't find an email, so I guess I should have followed up with and email to you, I think we only discussed it on the phone on or about February 27th.

Could you please ask DOE to remove index #003 from the site. If you could run another 2016 query again to include these two indexes, I might see the corrected values. Both have a late March release date now of March 30th. The 2016 Audi A6 quattro TDI and A7 quattro TDI models have still not been released from the ports.

If you have any questions, I am here today.

Thanks,

Richard

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

From: Good, David [mailto:good.david@epa.gov]
Sent: Wednesday, March 04, 2015 2:43 PM
To: Thomas, Richard (EEO)
Subject: Data in Verify attached as of Mar 2, 2015

Richard,

Here's the data as of Monday. I think you made your changes last week. [I was mistaken, I didn't sent Index #4 (Audi A7 Quattro Diesel) to DOE for posting yet.]

Let me know if I need to do another (more-up-to-date) query.

Dave

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Mon 3/2/2015 2:25:10 PM
Subject: 2016 Audi Fuel Economy Labels

Hi Dave;

I have corrected both 2016 Audi label indexes #003 and #004 to include both configurations into the same base level and both models. We still have not released the Audi A6 quattro and A7 quattro TDI models from the ports to dealers yet. When do you do the next audit of 2016 labels, is that this week or next week? The Verify release date is now March 30th, I don't know at this point when they plan to release these models into commerce.

If you have any questions, please give me a call.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Thur 2/26/2015 7:32:30 PM
Subject: pull 2016 Audi Label Index #004

Hi Dave;

If you could pull 2016 Audi label index #004 for the 3.0L TDI Audi A7 quattro, I will get a decision from AoA regarding label values.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]
From: Thomas, Richard (EEO)
Sent: Thur 2/26/2015 6:43:02 PM
Subject: RE: 2015-2016 FE Guide - Errors in Verify as of Feb 24, 2015

Hi Dave;

Thanks for the updated file. I have corrected Audi index #011. It seems the spreadsheet I use for my label calculation has a macro for ASTM rounding that doesn't always work with the combined whole fuel economy numbers, in this case "20 MPG". My colleague worked on improving this ASTM rounding macro but we decided that we should ask for a copy of your Excel Spreadsheet macro. Then, if I use it for future labels we would eliminate any of these types of discrepancies. Is it possible for you to send us the ASTM rounding procedure macro you use in your excel spreadsheets? I looked in the 5-cycle calculator file for the ASTM rounding macro but access requires a password.

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Thursday, February 26, 2015 10:10 AM
To: Thomas, Richard (EEO)
Subject: Re: 2015-2016 FE Guide - Errors in Verify as of Feb 24, 2015

Richard,

Re: 2015-2016 FE Guide - Errors in Verify as of Feb 24, 2015

Attached are the data in Verify as of February 24, 2015. Labels with pea green fill in the first few columns have errors but which need to be corrected in Verify before I can have the data posted on www.fueleconomy.gov. The errors are also highlighted in yellow fill in the column where the error occurred.

The next normal posting of 2015 & 2016 FE Label data will be on March, 2015 (on a monthly schedule where I run the query on the 1st, 9th,15th and 23rd of the month) and send the data to DOE for posting on that day (or a day later).

Please make any needed corrections to Verify when you get a chance.

Thanks

Dave

To: Peavyhouse, Robert[Peavyhouse.Robert@epa.gov]
Cc: Good, David[good.david@epa.gov]; Ross Gatzke[Ross.Gatzke@porsche.us]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Mon 2/9/2015 12:28:29 PM
Subject: 2014 Volkswagen Group Final CAFE Verify Starter

Hi Bob;

Could you please provide me with a 2014 label index starter XML CAFE file as you have done in the past to begin our Verify work for the final 2014 Final CAFE. The Volkswagen Group consists of the following brands: Volkswagen (VWX), Audi (ADX), Bentley (BEX), Lamborghini (NLX), Bugatti (BGT) and Porsche (PRX). If you need permission for the 2014 Porsche label index files, please let me know and I will ask Ross Gatzke to request it or grant permission. Both the CAFE and the GHG reports will include Porsche for 2014.

Once again, I think we will have to file the 2014 report under the Volkswagen VWX manufacture code, unless you see it differently. For 2015 we have the new group manufacture code of VGA for Volkswagen Group of America and all the brands with the exception of Porsche.

Best regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Tue 1/27/2015 12:04:48 PM
Subject: RE: Audi A7 quattro TDI voluntary lower label ..... Index #004

Hi Dave;

I don' t have any mail earlier than 2013 calendar year and I didn't find anything in 2013 calendar year that addresses this issue. I only remember our phone discussion and you telling me that when we pass the litmus test we have the option to use any of the three calculation methods in the calculator. At the time there was no issue so I don't remember any written correspondence between Volkswagen and EPA. I always use the EPA issued calculator. That's the way I remember our discussion, that's not to say it's correct. Perhaps you can review the references below when you have the time and it will help you recall some thoughts.

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, January 23, 2015 11:52 AM
To: Thomas, Richard (EEO)
Cc: Kata, Leonard (EEO)
Subject: RE: Audi A7 quattro TDI voluntary lower label ..... Index #004

Richard,

Both Rob French & I think that the regulations and the guidance letter indicate that the Vehicle specific method is optional (any time), but not the 3-cycle.

I'll try to dig thru my files and see if that is consistent with the same answer we gave a manufacturer a couple years ago. Please double check my emails to you over the past 3-4 years, if possible, and let me know what you find (if anything).

Thanks

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Friday, January 23, 2015 11:09 AM
To: Good, David
Cc: Kata, Leonard (EEO)
Subject: RE: Audi A7 quattro TDI voluntary lower label ..... Index #004

Hi Dave;

My question was only hypothetical we don't wish to use a modified 5-cycle method for any new labels thus far, but wanted to confirm my understand in the case where we might benefit from this method for future labels. In general, I almost never see any improvement using the modified 5-cycle method and the whole MPG label numbers.

It is still my understanding that we can use either of the three label calculation methods if we pass both city and highway litmus test contained in 600.115-11. The paragraph I wish to point out is contained in 600-210-12 (d)(1), where by it says if the criteria 600.115-11(a) (city litmus) is met then we must use the same method for city, highway and CO2 values. If the criteria in 600.115-11(b) (highway litmus) is met then the city and CO2 values may use the same method but the highway must use specific 5-cycle method and in brackets it says "or modified 5-cycle method as allowed under 600-114-12(b)(2)", which refers to 600.115-08(b)(2)(iii)(B) which has been redesignated as paragraph 600.115-11(b)(2)(iii)(B).

When you have time, let me know if you agree with my understanding.

Have a nice weekend.

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Tuesday, January 13, 2015 4:51 PM
To: Thomas, Richard (EEO)
Subject: RE: Audi A7 quattro TDI voluntary lower label ..... Index #004

Richard,

The attached guidance letter and the FE regulations clearly state that mfrs can voluntarily use the vehicle specific labels, but I'm not sure about the modified 5-cycle. I think the FE regulations are silent on that one. Also, I don't think that case has come up in previously---or at least in quite a while. I need to run that by a few others here at EPA.

If you want to use voluntarily use the modified 5-cycle, you'd better send us an official letter---- and find a paragraph in the regulations that would allow it.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Tuesday, January 13, 2015 11:52 AM
To: Good, David
Subject: Audi A7 quattro TDI voluntary lower label ..... Index #004

Thanks Dave, that tip worked perfectly and I calculated the raised combined CO2 value according to CD-14-15 guidance.

I have one more question unrelated to this label. I am sure we discussed this years ago but just to confirm my understanding; if the worse case for a test group passes both the city and highway litmus test, then a manufacturer may use any of the three fuel economy label calculation methods for the label (either Derived 5-cycle, full 5-cycle or modified 5-cycle). Is this correct? When you have time, not an issue.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Tue 1/20/2015 7:15:01 PM
Subject: RE: 2016 FE Guide data attached

Thanks Dave.

From: Good, David [mailto:good.david@epa.gov]
Sent: Tuesday, January 20, 2015 1:31 PM
To: Thomas, Richard (EEO)
Subject: 2016 FE Guide data attached

Richard,

Here you go. The macro didn't pick up any errors, so you must have calculated the combined CO2 value correctly. It doesn't check the voluntarily increased hwy CO2 value for accuracy.

Dave

To: Good, David[good.david@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Thur 1/15/2015 1:34:45 PM
Subject: RE: 2015 SAE Automotive Engineering Article - electric assist turbochargers (e-boosters)

Hi Dave;

I was informed by Audi Neckarsulm yesterday that the e-boost turbocharger is not yet in production. We will keep an eye open for its introduction.

Thanks,
Richard

-----Original Message-----
From: Good, David [mailto:good.david@epa.gov]
Sent: Tuesday, January 13, 2015 4:36 PM
To: Thomas, Richard (EEO)
Cc: Snyder, Jim; Kata, Leonard (EEO)
Subject: FW: 2015 SAE Automotive Engineering Article - electric assist turbochargers (e-boosters)

Richard,

Here's the article in SAE Automotive Engineering magazine I was talking about this morning.

Please let me know if any of the 2015 3.0L Diesels (Audi, Touareg, etc) are equipped.

I'd like to add this control system to Verify in the future.

Dave

-----Original Message-----
From: Fearnside, Judy
Sent: Tuesday, January 13, 2015 1:25 PM
To: Good, David
Subject: 2015 SAE Automotive Engineering Article

Judy Fearnside
Technical Support Specialist/Fees Team
A Senior Service America SEE
USEPA Compliance Division
(734) 214-4002

Life is what happens to you while you're busy making other plans.

To: Good, David[good.david@epa.gov]
From: Thomas, Richard (EEO)
Sent: Tue 1/13/2015 4:52:21 PM
Subject: Audi A7 quattro TDI voluntary lower label ..... Index #004

Thanks Dave, that tip worked perfectly and I calculated the raised combined CO2 value according to CD-14-15 guidance.

I have one more question unrelated to this label. I am sure we discussed this years ago but just to confirm my understanding; if the worse case for a test group passes both the city and highway litmus test, then a manufacturer may use any of the three fuel economy label calculation methods for the label (either Derived 5-cycle, full 5-cycle or modified 5-cycle). Is this correct? When you have time, not an issue.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Peavyhouse, Robert[Peavyhouse.Robert@epa.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]; Verify Help Desk (verifyhelp@csc.com)[verifyhelp@csc.com]
From: Thomas, Richard (EEO)
Sent: Fri 1/9/2015 9:36:42 PM
Subject: 2016 Audi A7 quattro TDI

Hi Dave;

Thanks for calling me back. The following is the way I described the correction to label index #004 to Vince of the Verify help desk and his response was to have me contact you.

"I have made changes to remove a sub-configuration from this label index 004 and that resulted in better fuel economy rounded whole label values. We are voluntarily lowering the values to the original numbers of 25/38/29 MPG (city/hwy/combined). The new calculation gives us 25/39/30 so we would voluntarily lower both the highway and combined values by one MPG. The Verify system is not allowing me to proceed because I did not lower the city value, but left it unchanged. Is this a glitch in the system, is there a method to override the transaction message? Transaction Identifier: _4a835f46-fbc1-4eeb-885c-1a185b351bef"

The business rule is as follows: Transaction Status Details

Transaction Status Identifier : REJECTED
Transaction Message Text : LD-FE-GL-BR110 - If Manufacturer Voluntary Lower FE or Higher Energy Consumption City Label Value (GL-100) is present and Fuel Economy Value Unit (GL-90) is equal to 'MPG' (miles per gallon) or 'MPK' (miles per kilometer), then Manufacturer Voluntary Lower FE or Higher Energy Consumption City Label Value (GL-100) must be lower than Mfr Calculated Rounded Adjusted Model Type City FE Value (GL-97).
Transaction Message Text : LD-FE-GL-BR188 - If Model Year (GL-3) is greater than or equal to '2013', and if Manufacturer Voluntary Lower FE or Higher Energy Consumption Combined Label Value (GL-102) is present, then Manufacturer Voluntary Higher CO2 Combined Label Value (GL-276) is required, otherwise it is optional. (Fuel Usage = DU)

Regarding this second BR188 message I entered all of the unrounded adjusted calculated 5-cycle CO2 values for city, highway and combined and entered only the voluntary higher CO2 value for only the combined value in the rounded adjusted g/mi field. I'm not sure if this is the way it should be done.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]; Ken.Katz@dot.gov[Ken.Katz@dot.gov]; Maurice.Hicks@dot.gov[Maurice.Hicks@dot.gov]; t.letkiewicz.ctr@dot.gov[t.letkiewicz.ctr@dot.gov]
Cc: james.tamm@dot.gov[james.tamm@dot.gov]
From: Henrietta.Dandy@dot.gov
Sent: Tue 1/6/2015 11:56:17 AM
Subject: FW: URGENT RESPONSE NEEDED FOR NHTSA - FW: Reminder: Second Requisition-- MY 2013 Light Duty Trucks Production Volumes (Split Volumes)

FW: URGENT RESPONSE NEEDED FOR NHTSA - FW: Reminder: Second Requisition-- MY 2013 Light Duty Trucks Production Volumes (Split Volumes)

Hi All,

Regarding MY 2013 Volkswagen's Light Trucks, Audi Q5 vehicles were erroneously reported as Q7. (See the attached document.)

Best regards,

Henrietta L. Dandy

U.S. Department of Transportation

National Highway Traffic Safety Administration

W43-456

1200 New Jersey Ave., SE

Washington, DC 20590

Henrietta.Dandy@dot.gov

Office: (202) 366-4802

To: Geanacopoulos.David@vw.com[Geanacopoulos.David@vw.com];
Ex. 7 @vw.com]
Cc: Brooks, Phillip[Brooks.Phillip@epa.gov]; Werner, Jacqueline[Werner.Jacqueline@epa.gov]; Belser, Evan[Belser.Evan@epa.gov]; stuart.drake@kirkland.com[stuart.drake@kirkland.com]
From: Kaul, Meetu
Sent: Fri 9/18/2015 2:16:39 PM
Subject: Notice of Violation
VW NOV Final Executed 09-18-15.pdf

Mr. Geanacopoulous and Ex. 7

Per your conversation this morning with Mr. Brooks and others, attached please find EPA's Notice of Violation issued today.

Please contact me with any questions.

Regards,

Meetu Kaul

Ms.Meetu Kaul, Attorney-Advisor

National Marine Enforcement Coordinator
United States Environmental Protection Agency
Office of Civil Enforcement - Air Enforcement Division
WJC South, Room 1117B
1200 Pennsylvania Ave., N.W. (MC 2242A)
Washington D.C. 20460 (Courier 20004)
Direct: 202-564-5472
Fax: 202-564-0069
Email: kaul.meetu@epa.gov

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 1 8 2015

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Volkswagen AG
Audi AG
Volkswagen Group of America, Inc.
Thru:

David Geanacopoulos
Executive Vice President Public Affairs and General Counsel
Volkswagen Group of America, Inc.
2200 Ferdinand Porsche Drive
Herndon, VA 20171

Stuart Johnson
General Manager
Engineering and Environmental Office
Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Re: Notice of Violation

Dear Mr. Geanacopoulos and Mr. Johnson:

The United States Environmental Protection Agency (EPA) has investigated and continues to investigate Volkswagen AG, Audi AG, and Volkswagen Group of America (collectively, VW) for compliance with the Clean Air Act (CAA), 42 U.S.C. §§ 7401–7671q, and its implementing regulations. As detailed in this Notice of Violation (NOV), the EPA has determined that VW manufactured and installed defeat devices in certain model year 2009 through 2015 diesel light-duty vehicles equipped with 2.0 liter engines. These defeat devices bypass, defeat, or render inoperative elements of the vehicles' emission control system that exist to comply with CAA emission standards. Therefore, VW violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B). Additionally, the EPA has determined that, due to the existence of the defeat

EPA FOIA Production 2016-07-19 2015-011105_000185

devices in these vehicles, these vehicles do not conform in all material respects to the vehicle specifications described in the applications for the certificates of conformity that purportedly cover them. Therefore, VW also violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), by selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing these vehicles, or for causing any of the foregoing acts.

Law Governing Alleged Violations

This NOV arises under Part A of Title II of the CAA, 42 U.S.C. §§ 7521–7554, and the regulations promulgated thereunder. In creating the CAA, Congress found, in part, that "the increasing use of motor vehicles . . . has resulted in mounting dangers to the public health and welfare." CAA § 101(a)(2), 42 U.S.C. § 7401(a)(2). Congress' purpose in creating the CAA, in part, was "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population," and "to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution." CAA § 101(b)(1)–(2), 42 U.S.C. § 7401(b)(1)–(2). The CAA and the regulations promulgated thereunder aim to protect human health and the environment by reducing emissions of nitrogen oxides (NOx) and other pollutants from mobile sources of air pollution. Nitrogen oxides are a family of highly reactive gases that play a major role in the atmospheric reactions with volatile organic compounds (VOCs) that produce ozone (smog) on hot summer days. Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. Breathing ozone can also worsen bronchitis, emphysema, and asthma. Children are at greatest risk of experiencing negative health impacts from exposure to ozone.

The EPA's allegations here concern light-duty motor vehicles for which 40 C.F.R. Part 86 sets emission standards and test procedures and section 203 of the CAA, 42 U.S.C. § 7522, sets compliance provisions. Light-duty vehicles must satisfy emission standards for certain air pollutants, including NOx. 40 C.F.R. § 86.1811-04. The EPA administers a certification program to ensure that every vehicle introduced into United States commerce satisfies applicable emission standards. Under this program, the EPA issues certificates of conformity (COCs), and thereby approves the introduction of vehicles into United States commerce.

To obtain a COC, a light-duty vehicle manufacturer must submit a COC application to the EPA for each test group of vehicles that it intends to enter into United States commerce. 40 C.F.R. § 86.1843-01. The COC application must include, among other things, a list of all auxiliary emission control devices (AECDs) installed on the vehicles. 40 C.F.R. § 86.1844-01(d)(11). An AECD is "any element of design which senses temperature, vehicle speed, engine RPM, transmission gear, manifold vacuum, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system." 40 C.F.R. § 86.1803-01. The COC application must also include "a justification for each AECD, the parameters they sense and control, a detailed justification of each AECD that results in a reduction in effectiveness of the emission control system, and [a] rationale for why it is not a defeat device." 40 C.F.R. § 86.1844-01(d)(11).

A defeat device is an AECD "that reduces the effectiveness of the emission control system under conditions which may reasonably be expected to be encountered in normal vehicle operation and

EPA FOIA Production 2016-07-19 2015-011105_000186

use, unless: (1) Such conditions are substantially included in the Federal emission test procedure; (2) The need for the AECD is justified in terms of protecting the vehicle against damage or accident; (3) The AECD does not go beyond the requirements of engine starting; or (4) The AECD applies only for emergency vehicles . . . ." 40 C.F.R. § 86.1803-01.

Motor vehicles equipped with defeat devices, such as those at issue here, cannot be certified. EPA, *Advisory Circular Number 24: Prohibition on use of Emission Control Defeat Device* (Dec. 11, 1972); *see also* 40 C.F.R. §§ 86-1809-01, 86-1809-10, 86-1809-12. Electronic control systems which may receive inputs from multiple sensors and control multiple actuators that affect the emission control system's performance are AECDs. EPA, *Advisory Circular Number 24-2: Prohibition of Emission Control Defeat Devices – Optional Objective Criteria* (Dec. 6, 1978). "Such elements of design could be control system logic (i.e., computer software), and/or calibrations, and/or hardware items." *Id.*

"Vehicles are covered by a certificate of conformity only if they are in all material respects as described in the manufacturer's application for certification . . . ." 40 C.F.R. § 86.1848-10(c)(6). Similarly, a COC issued by EPA, including those issued to VW, state expressly, "[t]his certificate covers only those new motor vehicles or vehicle engines which conform, in all material respects, to the design specifications" described in the application for that COC. *See also* 40 C.F.R. §§ 86.1844-01 (listing required content for COC applications), 86.1848-01(b) (authorizing the EPA to issue COCs on any terms that are necessary or appropriate to assure that new motor vehicles satisfy the requirements of the CAA and its regulations).

The CAA makes it a violation "for any person to manufacture or sell, or offer to sell, or install, any part or component intended for use with, or as part of, any motor vehicle or motor vehicle engine, where a principal effect of the part or component is to bypass, defeat, or render inoperative any device or element of design installed on or in a motor vehicle or motor vehicle engine in compliance with regulations under this subchapter, and where the person knows or should know that such part or component is being offered for sale or installed for such use or put to such use." CAA § 203(a)(3)(B), 42 U.S.C. § 7522(a)(3)(B); 40 C.F.R. § 86.1854-12(a)(3)(ii). Additionally, manufacturers are prohibited from selling, offering for sale, introducing into commerce, delivering for introduction into commerce, or importing, any new motor vehicle unless that vehicle is covered by an EPA-issued COC. CAA § 203(a)(1), 42 U.S.C. § 7522(a)(1); 40 C.F.R. § 86.1854-12(a)(1). It is also a violation to cause any of the foregoing acts. CAA § 203(a), 42 U.S.C. § 7522(a); 40 C.F.R. § 86-1854-12(a).

Alleged Violations

Each VW vehicle identified by the table below has AECDs that were not described in the application for the COC that purportedly covers the vehicle. Specifically, VW manufactured and installed software in the electronic control module (ECM) of these vehicles that sensed when the vehicle was being tested for compliance with EPA emission standards. For ease of reference, the EPA is calling this the "switch." The "switch" senses whether the vehicle is being tested or not based on various inputs including the position of the steering wheel, vehicle speed, the duration of the engine's operation, and barometric pressure. These inputs precisely track the parameters of the federal test procedure used for emission testing for EPA certification purposes. During EPA

EPA FOIA Production 2016-07-19 2015-011105_000187

emission testing, the vehicles' ECM ran software which produced compliant emission results under an ECM calibration that VW referred to as the "dyno calibration" (referring to the equipment used in emissions testing, called a dynamometer). At all other times during normal vehicle operation, the "switch" was activated and the vehicle ECM software ran a separate "road calibration" which reduced the effectiveness of the emission control system (specifically the selective catalytic reduction or the lean NOx trap). As a result, emissions of NOx increased by a factor of 10 to 40 times above the EPA compliant levels, depending on the type of drive cycle (e.g., city, highway).

The California Air Resources Board (CARB) and the EPA were alerted to emissions problems with these vehicles in May 2014 when the West Virginia University's (WVU) Center for Alternative Fuels, Engines & Emissions published results of a study commissioned by the International Council on Clean Transportation that found significantly higher in-use emissions from two light duty diesel vehicles (a 2012 Jetta and a 2013 Passat). Over the course of the year following the publication of the WVU study, VW continued to assert to CARB and the EPA that the increased emissions from these vehicles could be attributed to various technical issues and unexpected in-use conditions. VW issued a voluntary recall in December 2014 to address the issue. CARB, in coordination with the EPA, conducted follow up testing of these vehicles both in the laboratory and during normal road operation to confirm the efficacy of the recall. When the testing showed only a limited benefit to the recall, CARB broadened the testing to pinpoint the exact technical nature of the vehicles' poor performance, and to investigate why the vehicles' onboard diagnostic system was not detecting the increased emissions. None of the potential technical issues suggested by VW explained the higher test results consistently confirmed during CARB's testing. It became clear that CARB and the EPA would not approve certificates of conformity for VW's 2016 model year diesel vehicles until VW could adequately explain the anomalous emissions and ensure the agencies that the 2016 model year vehicles would not have similar issues. Only then did VW admit it had designed and installed a defeat device in these vehicles in the form of a sophisticated software algorithm that detected when a vehicle was undergoing emissions testing.

VW knew or should have known that its "road calibration" and "switch" together bypass, defeat, or render inoperative elements of the vehicle design related to compliance with the CAA emission standards. This is apparent given the design of these defeat devices. As described above, the software was designed to track the parameters of the federal test procedure and cause emission control systems to underperform when the software determined that the vehicle was not undergoing the federal test procedure.

VW's "road calibration" and "switch" are AECDs[1] that were neither described nor justified in the applicable COC applications, and are illegal defeat devices. Therefore each vehicle identified by the table below does not conform in a material respect to the vehicle specifications described in the COC application. As such, VW violated section 203(a)(1) of the CAA, 42 U.S.C. § 7522(a)(1), each time it sold, offered for sale, introduced into commerce, delivered for introduction into commerce, or imported (or caused any of the foregoing with respect to) one of the hundreds of thousands of new motor vehicles within these test groups. Additionally, VW

[1] There may be numerous engine maps associated with VW's "road calibration" that are AECDs, and that may also be defeat devices. For ease of description, the EPA is referring to these maps collectively as the "road calibration."

EPA FOIA Production 2016-07-19 2015-011105_000188

violated section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), each time it manufactured and installed into these vehicles an ECM equipped with the "switch" and "road calibration."

The vehicles are identified by the table below. All vehicles are equipped with 2.0 liter diesel engines.

Model Year	EPA Test Group	Make and Model(s)
2009	9VWXV02.035N	VW Jetta, VW Jetta Sportwagen
2009	9VWXV02.0U5N	VW Jetta, VW Jetta Sportwagen
2010	AVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2011	BVWXV02.0U5N	VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2012	CVWXV02.0U4S	VW Passat
2013	DVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2013	DVWXV02.0U4S	VW Passat
2014	EVWXV02.0U5N	VW Beetle, VW Beetle Convertible, VW Golf, VW Jetta, VW Jetta Sportwagen, Audi A3
2014	EVWXV02.0U4S	VW Passat
2015	FVGAV02.0VAL	VW Beetle, VW Beetle Convertible, VW Golf, VW Golf Sportwagen, VW Jetta, VW Passat, Audi A3

Enforcement

The EPA's investigation into this matter is continuing. The above table represents specific violations that the EPA believes, at this point, are sufficiently supported by evidence to warrant the allegations in this NOV. The EPA may find additional violations as the investigation continues.

The EPA is authorized to refer this matter to the United States Department of Justice for initiation of appropriate enforcement action. Among other things, persons who violate section 203(a)(3)(B) of the CAA, 42 U.S.C. § 7522(a)(3)(B), are subject to a civil penalty of up to $3,750 for each violation that occurred on or after January 13, 2009;[1] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. In addition, any manufacturer who, on or after January 13, 2009, sold, offered for sale, introduced into commerce, delivered for introduction into commerce, imported, or caused any of the foregoing acts with respect to any new motor vehicle that was not covered by an EPA-issued COC is subject, among other things, to a civil penalty of up to $37,500 for each violation.[2] CAA § 205(a), 42 U.S.C. § 7524(a); 40 C.F.R. § 19.4. The EPA may seek, and district courts may order, equitable remedies to further address these alleged violations. CAA § 204(a), 42 U.S.C. § 7523(a).

[1] $2,750 for violations occurring prior to January 13, 2009.
[2] $32,500 for violations occurring prior to January 13, 2009.

EPA FOIA Production 2016-07-19 2015-011105_000189

The EPA is available to discuss this matter with you. Please contact Meetu Kaul, the EPA attorney assigned to this matter, to discuss this NOV. Ms. Kaul can be reached as follows:

Meetu Kaul
U.S. EPA, Air Enforcement Division
1200 Pennsylvania Avenue, NW
William Jefferson Clinton Federal Building
Washington, DC 20460
(202) 564-5472
kaul.meetu@epa.gov

Sincerely,

Phillip A. Brooks
Director
Air Enforcement Division
Office of Civil Enforcement

Copy:
Todd Sax, California Air Resources Board
Walter Benjamin Fisherow, United States Department of Justice
Stuart Drake, Kirkland & Ellis LLP

EPA FOIA Production 2016-07-19 2015-011105_000190

To: Bunker, Byron[bunker.byron@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]; Ex. 7 @ARB Ex. 7 @arb.ca.gov]; Ex. 7 Ex. 7 @ARB Ex. 7 @arb.ca.gov]; Ex. 7 @ARB Ex. 7 @arb.ca.gov]
Cc: Ex. 7 @vw.com]
From: Ex. 7 (EEO)
Sent: Wed 9/23/2015 6:32:35 PM
Subject: 2016 MY Update

Hello,

Just an update that the testing of the 4K vehicle with the updated software has been completed. We expect to receive the test information tomorrow and we will immediately start to enter information into the respective verify and e-cert systems.

I will be on vacation September 24 – 28. Please communicate with Ex. 7 and his team regarding any questions on the 2016 MY certification. I've cc'ed Ex. 7 on this email. I am available by phone September 24th and September 28th but will not be available September 25 – 27.

Thank you all,

Ex. 7

Ex. 7

Engineering and Environmental Office

Volkswagen Group of America

Ex. 7 office

cell

To: Bunker, Byron[bunker.byron@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]
From: Ex. 7 (EEO)
Sent: Wed 9/23/2015 2:47:24 PM
Subject: RE: 2015 My Inventory Update

Hello Byron and Linc,

I want to stress here that there is no intentional action to deceive you on these 2015 MY volumes. These vehicles are in the hands of dealers, so from the company perspective they are sold – they have been wholesaled to the dealer network. Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI

Once again I apologize. I don't always have every number and sales inventory volumes available to me. Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI I think you know this is the nature of a large business with way too many people involved in an issue.

The numbers below are accurate. The vehicles are not in ports but with dealers. Ex. 4 - CBI

Ex. 4 - CBI

I take my personal integrity and my reputation very seriously and hope you know I am giving you honest answers with the information that is available to me.

Hope this helps. Byron, I know you are traveling but when you have time please give me a call.

Thank you,

Ex. 7

From: Ex. 7 (EEO)
Sent: Tuesday, September 22, 2015 4:46 PM
To: bunker.byron@epa.gov; wehrly.linc@epa.gov
Subject: 2015 My Inventory

Hello Byron and Linc,

I requested actual 2015 MY numbers after our conversation:

Volkswagen:

Ex. 4 - CBI

Audi:

Ex. 4 - CBI

Ex. 4 - CBI

My apologies. I sent your message about credibility back to my management.

Ex. 7

To: Bunker, Byron[bunker.byron@epa.gov]
From: Ex. 7 (EEO)
Sent: Fri 9/18/2015 8:09:31 PM
Subject: Press Information

Hello Byron,

If you do revise or try to clarify any messages to the public can you also forward to me?

Thanks,

Ex. 7

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
Cc: Hopson, Janet L.[hopsonjl@ornl.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Good, David
Sent: Mon 9/14/2015 3:38:10 PM
Subject: RE: Fuel Economy Guide Website - 2016 Model Types - Questions about the website

Richard,

DOE hasn't begun using the 2016 average mpg, electricity costs, etc. yet----because all previous model year vehicles are compared to this value, etc. They will change over to the 2016 fuel costs, etc in the late fall or early in 2016 calendar year.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Thursday, September 10, 2015 7:42 AM
To: Good, David
Cc: Hopson, Janet L.; Kata, Leonard (EEO)
Subject: Fuel Economy Guide Website - 2016 Model Types

Hi Dave;

I know you are on vacation this week but thought I would send this out before I forget. I was

Ex. 4 - CBI

Ex. 4 - CBI

Best regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Good, David
Sent: Tue 9/1/2015 3:22:17 PM
Subject: RE: 5250 ETW cut point Standard SUVS

Richard,

5250 ETW truck cut points = 21.7 mpg city, 32.2 mpg hwy.

Standard SUV non-hybrid vehicle, non-diesel class leader cut points = 26.0 city, 38.8 hwy.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Tuesday, September 01, 2015 10:58 AM
To: Good, David
Subject: 5250 ETW cut point Standard SUVS

Hi Dave;

I thought I better not bother you with a phone call, but I was wondering if you can provide the new cut point for a 5250 lbs ETW, for a Standard Sport Utility Vehicle that is in your draft list and yet to be issued. Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI You said that we may see the official notice with new cut pints this week.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Bunker, Byron[bunker.byron@epa.gov]
From: Ex. 7 (EEO)
Sent: Wed 9/16/2015 12:48:29 PM
Subject: Test Status

Hello Byron,

Got you voice mail. Still waiting for a response from Germany. I pinged them again this morning for a status. I'll let you know as soon as I hear…

Company Letterhead

September 15, 2015

Annette Hebert
Division Chief
Emissions Compliance, Automotive Regulations and Science Division
California Air Resources Board
9528 Telstar Avenue, Suite 4
El Monte, California 91731

Re: Request for Conditional Executive Order for Test Group GVGAV02.0VAL

Dear Ms. Hebert

Volkswagen Group of America Inc. (VW) has been informed that VW application to ARB for certification for 2016 model year test group GVGAV02.0VAL is incomplete with regard to the following: (1) additional durability information and durability demonstration, including the deterioration factors; (2) adjustment factors for regeneration of the diesel particulate filter; (3) selective catalytic reduction (SCR) system and driver inducement strategies; (4) SCR software and calibrations; and (5) On-Board Diagnostic system performance for monitors correlated to emission thresholds. VW understands that it must submit more information to ARB with regard to the aforementioned five topics. As a result, until ARB deems VW's application information complete, VW requests that the California Air Resources Board (ARB) issue a conditional Executive Order for the 2016 model year test group GVGAV02.0VAL.

VW acknowledges and understands that it has made written representations to ARB in its model year 2016 certification application for said test group, and certifies that it expects its vehicles to comply with those written representations and all applicable legal requirements.

VW understands and agrees to the risks associated with such conditional Executive Order, along with the potential chance that the conditional Executive Order may be revoked, then pursuant to applicable law penalties may be levied against VW, and corrective action may be required if VW does not provide information as to the aforementioned five topics by December 10, 2015; if the test data does not demonstrate compliance with applicable 2016 model year emission standard; or if any of the engines conditionally certified for sale under the conditional Executive Order do not meet applicable legal requirements or the requirements of the conditional Executive Order. One exception to the requirements listed above is a full useful life durability demonstration, including deteriorationfactors, cited in the first of the aforementioned five

topics, which VW commits to completing and submitting to ARB by December 31, 2016. VW understands and agrees that in the event of VW's failure to provide the information, the test data does not demonstrate compliance with applicable 2016 model year emission standards, or if any of the vehicles conditionally certified for sale under the conditional Executive Order do not meet applicable legal requirements or the requirements of the conditional Executive Order, then as permitted by applicable law the conditional Executive Order may be revoked, any vehicles sold will be deemed retroactively noncertified, penalties may be levied, and VW may be required to take remedial action, at its own expense.

Sincerely,

Stuart I Johnson
General Manager
Engineering and Environmental Office
Volkswagen Group of America
3800 Hamlin Road
Auburn Hills, MI 48326
Phone: 248-754-4208

To: Bunker, Byron[bunker.byron@epa.gov]
From: Veldten, Burkhard (EAEF/4)
Sent: Fri 9/11/2015 5:17:41 PM
Subject: Automatic reply: New call in number

Ich bin bis zum 25.09. nicht im Haus.Ich bin auf meinem Handy unter Ex. 6
erreichbar. Es vertritt mich Holger Loof Tel.4 Ex. 6
MfG Burkhard Veldten

To: Bunker, Byron[bunker.byron@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Ex. 7 (EEO)
Sent: Fri 9/11/2015 1:21:35 PM
Subject: Meeting at 1:00

Hello Guys,

I am planning to come out to your office this afternoon for the meeting today.

If that doesn't work for you, please let me know.

Thanks,

Ex. 7

To: Bunker, Byron[bunker.byron@epa.gov]
From: Ex. 7 (EEO)
Sent: Wed 9/9/2015 8:04:24 PM
Subject: Gen 1

Hello Byron,

Still working on a Gen 1 discussion. If you want to talk more at the end of the day call my cell.
Ex. 6

To: Bunker, Byron[bunker.byron@epa.gov]
Cc: Wehrly, Linc[wehrly.linc@epa.gov]
From: Ex. 7 (EEO)
Sent: Mon 8/24/2015 4:45:35 PM
Subject: RE: Emailing: 20150817_QA_CARB_Special Cycle_GenIII_Zusammmenfassung_Kuz_V04_Thorsten_1.pptx

Hello Byron,

My schedule is pretty open this week so let me know. Next week will work as well.

Talk to you soon,

Ex. 7

From: Bunker, Byron [mailto:bunker.byron@epa.gov]
Sent: Monday, August 24, 2015 12:43 PM
To: Ex. 7 (EEO)
Cc: Wehrly, Linc
Subject: Re: Emailing: 20150817_QA_CARB_Special Cycle_GenIII_Zusammmenfassung_Kuz_V04_Thorsten_1.pptx

Thanks Ex. 7 Ex. 6 I am going to need to come into the office some but I don't know yet when. Linc or I will follow up later if it makes sense to get together this week. I might prefer to wait until next week.

Thanks,

Byron

Byron Bunker

US EPA

NVFEL Office Phone (734) 214-4155

DC Office Phone (202) 343-9283

Cell Phone (734) 353-9623

Sent from my cell phone.

On Aug 24, 2015, at 11:38 AM, Ex. 7 @vw.com> wrote:

Hello Byron and Linc,

Ex. 4 - CBI

If you would like me to come in and explain further I am willing to do that.

Let me know what you would like to do,

Ex. 7

Ex. 4 - CBI

To: Bunker, Byron[bunker.byron@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]
From: Ex. 7 (EEO)
Sent: Mon 8/24/2015 3:38:33 PM
Subject: FW: Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI

Hello Byron and Linc,

Here are the slides we used for the meeting with CARB last week. Ex. 4 - CBI

Ex. 4 - CBI

If you would like me to come in and explain further I am willing to do that.

Let me know what you would like to do,

Ex. 7

To: richard.thomas@vw.com[richard.thomas@vw.com]
From: Good, David
Sent: Fri 3/13/2015 3:41:24 PM
Subject: Tier 3 Litmus test
Tier 3 Tech Ammt-80 FR 9078-Feb-19-2015.pdf
Tier 3 Verify Changes-mfr kick-off mtg presentation-7-25-2014.pdf

Richard,

Glenn Passavant discussed the litmus test in several meetings with Industry during the tier 3 rulemaking.

Christi & I discussed it in the Tier 3 Verify kickoff meeting (see page 24 of the attachment).

It is also discussed on page 9082 in the preamble to the Tier 3 tech amendments DFR (attached)---which references pages 23531-23533 of the Tier 3 final rule.

Dave

AUTHENTICATED U.S. GOVERNMENT INFORMATION GPO

FEDERAL REGISTER

Vol. 80 Thursday,
No. 33 February 19, 2015

Part III

Environmental Protection Agency

40 CFR Parts 59, 80, 85, et al.
Amendments Related to: Tier 3 Motor Vehicle Emission and Fuel Standards, Nonroad Engine and Equipment Programs, and MARPOL Annex VI Implementation; Direct Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 59, 80, 85, 86, 600, 1037, 1043, 1051, 1054, 1060, 1065, and 1066

[EPA–HQ–OAR–2011–0135; FRL–9922–31–OAR]

RIN 2060–AS36

Amendments Related to: Tier 3 Motor Vehicle Emission and Fuel Standards, Nonroad Engine and Equipment Programs, and MARPOL Annex VI Implementation

AGENCY: Environmental Protection Agency.

ACTION: Direct final rule.

SUMMARY: The Environmental Protection Agency (EPA) is taking direct final action on several amendments involving technical clarifications for different mobile source regulations. First, we are making a variety of corrections to the Tier 3 motor vehicle emission and fuel standards. These changes generally correct or clarify various provisions from the Tier 3 rule without expanding the Tier 3 program or otherwise making substantive changes. Second, we are revising the test procedures and compliance provisions for nonroad spark-ignition engines at or below 19 kW (and for the corresponding nonroad equipment) to conform to current practices. The changes to evaporative emission test procedures also apply to some degree to other types of nonroad equipment powered by volatile liquid fuels. Third, we are addressing an ambiguity regarding permissible design approaches for portable fuel containers meeting evaporative emission standards. Fourth, we are revising the regulations to more carefully align with current requirements that apply to marine vessels with diesel engines as specified under MARPOL Annex VI. Fifth, we are correcting typographical errors in regulatory changes finalized in the Voluntary Quality Assurance Program rulemaking.

This rulemaking action is not expected to result in any significant changes in regulatory burdens or costs.

DATES: This final rule is effective on May 5, 2015, without further notice, unless EPA receives adverse comment by April 6, 2015. If EPA receives adverse comment on any provisions of the rule, we will publish a timely withdrawal in the **Federal Register** informing the public that those specific provisions will not take effect. The incorporation by reference of certain publications listed in this regulation is approved by the Director of the Federal Register as of May 5, 2015.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–HQ–OAR–2011–0135, by one of the following methods:

- *www.regulations.gov:* Follow the on-line instructions for submitting comments.
- *Email: A-and-R-Docket@epamail.epa.gov.*
- *Fax:* (202) 566–9744
- *Mail:* Air and Radiation Docket and Information Center, Environmental Protection Agency, Mailcode: 28221T, 1200 Pennsylvania Ave. NW., Washington, DC 20460.
- *Hand Delivery:* EPA Docket Center, EPA WJC West Building, Room 3334, 1301 Constitution Ave. NW., Washington, DC 20460. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA–HQ–OAR–2011–0135. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *www.regulations.gov* or email. The *www.regulations.gov* Web site is an ''anonymous access'' system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to EPA without going through *www.regulations.gov* your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket visit the EPA Docket Center homepage at *http://www.epa.gov/epahome/dockets.htm.*

Docket: All documents in the docket are listed in the *www.regulations.gov* index. Although listed in the index, some information is not publicly available, *e.g.,* CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in *www.regulations.gov* or in hard copy at the Air and Radiation Docket and Information Center, EPA/DC, EPA WJC West, Room 3334, 1301 Constitution Ave. NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1742.

FOR FURTHER INFORMATION CONTACT: Alan Stout, Office of Transportation and Air Quality, Assessment and Standards Division (ASD), Environmental Protection Agency, 2000 Traverwood Drive, Ann Arbor MI 48105; Telephone number: (734) 214–4805; *stout.alan@epa.gov.*

SUPPLEMENTARY INFORMATION:

Why is EPA using a Direct Final Rule?

EPA is publishing this rule without a prior proposed rule because we view this as a noncontroversial action and anticipate no adverse comment. This is also intended to expedite the regulatory process to allow the modifications to take effect as soon as possible. However, in the ''Proposed Rules'' section of today's **Federal Register**, we are publishing a separate document that will serve as the proposed rule to adopt these same amendments if adverse comments are received on this direct final rule. We will not institute a second comment period on this action. Any parties interested in commenting must do so at this time. For further information about commenting on this rule, see the **ADDRESSES** section of this document.

If EPA receives adverse comment on a distinct provision of this rulemaking, we will publish a timely withdrawal in the **Federal Register** indicating which provisions we are withdrawing. The provisions that are not withdrawn will become effective on the date set out above, notwithstanding adverse comment on any other provision. We would address all public comments in any subsequent final rule based on the proposed rule.

EPA is publishing this direct final rule to expedite corrections to the regulatory text and clarifications and adjustments that generally reduce the burden and/or confusion related to

compliance with regulatory requirements. If you comment on this rule, we request that you identify any portions of the action with which you agree and support as written, in addition to any comments regarding suggestions for improvement or provisions with which you disagree. In the case of a comment that is otherwise not clearly adverse, EPA would interpret relevant comments calling for more flexibility or less restrictions as supportive of the direct final action. In this way, EPA will be able to adopt those elements of this action that are supported and most needed without delay, while considering and addressing any constructive or adverse comments received on the proposed rule in the course of developing the final rule.

Does this action apply to me?

Entities potentially affected by this rule include gasoline refiners and importers, ethanol producers, ethanol denaturant producers, butane and pentane producers, gasoline additive manufacturers, transmix processors, terminals and fuel distributors, light-duty vehicle manufacturers, manufacturers of nonroad engines and equipment, manufacturers of marine compression-ignition engines, and owners and operators of ocean-going vessels and other commercial ships, and manufacturers of portable fuel containers.

Potentially regulated categories include:

Category	NAICS [a] Code	Examples of potentially affected entities
Industry	324110	Petroleum refineries (including importers).
Industry	325110	Butane and pentane manufacturers.
Industry	325193	Ethyl alcohol manufacturing.
Industry	324110, 211112	Ethanol denaturant manufacturers.
Industry	211112	Natural gas liquids extraction and fractionation.
Industry	325199	Other basic organic chemical manufacturing.
Industry	486910	Natural gas liquids pipelines, refined petroleum products pipelines.
Industry	424690	Chemical and allied products merchant wholesalers.
Industry	325199	Manufacturers of gasoline additives.
Industry	424710	Petroleum bulk stations and terminals.
Industry	493190	Other warehousing and storage-bulk petroleum storage.
Industry	336111, 336112	Light-duty vehicle and light-duty truck manufacturers.
Industry	335312, 336312, 336322, 336399, 811198.	Alternative fuel converters.
Industry	333618, 336120, 336211, 336312.	On-highway heavy-duty engine & vehicle (>8,500 lbs GVWR) manufacturers.
Industry	336611	Manufacturers of marine vessels.
Industry	336612	Manufacturers of marine vessels.
Industry	811310	Engine repair and maintenance.
Industry	483	Water transportation, freight and passenger.
Industry	424710, 424720	Petroleum Bulk Stations and Terminals; Petroleum and Petroleum Products Wholesalers.
Industry	483113	Coastal and Great Lakes Freight Transportation.
Industry	483114	Coastal and Great Lakes Passenger Transportation.
Industry	333618	Manufacturers of new engines.
Industry	333112	Manufacturers of lawn and garden tractors (home).
Industry	811112, 811198	Commercial importers of vehicles and vehicle components.
Industry	326199, 332431	Portable fuel container manufacturers.

[a] North American Industry Classification System (NAICS).

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your activities are regulated by this action, you should carefully examine the applicability criteria in the referenced regulations. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

What should I consider as I prepare my comments for EPA?

A. *Submitting CBI.* Do not submit this information to EPA through *www.regulations.gov* or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD ROM that you mail to EPA, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

B. *Tips for Preparing Your Comments.* When submitting comments, remember to:

- Identify the rulemaking by docket number and other identifying information (subject heading, **Federal Register** date and page number).
- Follow directions—The agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.
- Explain why you agree or disagree, suggest alternatives, and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns, and suggest alternatives.
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- Make sure to submit your comments by the comment period deadline identified.

Table of Contents

I. Introduction
II. Tier 3 Motor Vehicle Emission Standards
III. 40 CFR part 80 Fuel Standards
IV. Small SI Test Fuel and Bonding Provisions
V. Evaporative Test Procedures for Nonroad Equipment
VI. Portable Fuel Containers
VII. MARPOL Annex VI Implementation
VIII. Statutory and Executive Order Reviews
IX. Statutory Provisions and Legal Authority

I. Introduction

In this action we are adopting several amendments that will make technical clarifications to different mobile source regulations. This section provides an overview of the organization of this preamble. Section II describes amendments to the Tier 3 motor vehicle emission standards. Section III describes amendments to the 40 CFR part 80 fuel standards: including the Tier 3 gasoline sulfur standards, other part 80 fuels regulations that were amended in the Tier 3 final rule, and amendments made in the Quality Assurance Program rulemaking. Section IV describes the changes to the testing and compliance provisions for nonroad spark-ignition engines, and Section V describes how we are changing the evaporative test procedures for nonroad equipment. Section VI describes amendments to the requirements that apply for portable fuel containers. Section VII summarizes the amendments related to our implementation of requirements for marine diesel engines and vessels under MARPOL Annex VI.

II. Tier 3 Motor Vehicle Emission Standards

On April 28, 2014, we published a final rule adopting new emission standards and fuel requirements for motor vehicles and for motor vehicle fuels (79 FR 23414). The final rule included Tier 3 emission standards to reduce exhaust and evaporative emissions from light-duty vehicles, light-duty trucks, and heavy-duty vehicles up to 14,000 pounds GVWR. In addition, the final rule specified corresponding changes to in-use fuel requirements.

The Tier 3 motor vehicle program included extensive changes to emission standards and the regulatory requirements related to certification. This included several provisions to harmonize requirements with a similar set of standards adopted by the California Air Resources Board (California ARB). It also included a wide range of alternative measures intended to facilitate each manufacturer's efforts to make an orderly transition to meeting the Tier 3 standards nationwide. The resulting Tier 3 regulations accordingly included several variations, alternatives, and ancillary provisions. We have learned since concluding the Tier 3 rulemaking that there are several instances where the regulatory text implementing the Tier 3 program requires correction or clarification to achieve the intended result. None of the amendments are intended to expand the Tier 3 program or otherwise make substantive changes. We are therefore making the following amendments to the Tier 3 vehicle program regulations:

Regulatory citation	Description
§85.2108	Remove section to reflect a recent change to Clean Air Act section 207.
§86.101, §1066.301, and §1066.305.	Adjust the procedures for determining road-load parameters to more carefully align with current practice, including the option for manufacturers to use alternate methodologies that are consistent with the reference procedure, subject to good engineering judgment and EPA confirmatory testing. We are also restoring provisions describing how to develop road-load parameters for cold testing; the provisions from §86.229 were inadvertently replaced with a default instruction to use the same values for both FTP testing and cold testing. We are also changing terminology from "coastdown" to "road-load determination" for consistency.
§§86.095–35 and 1037.135.	Revise the labeling requirement for incomplete heavy-duty vehicles to require designation of maximum fuel tank capacity only in cases where the certifying manufacturer relies on a downstream manufacturer to design and install the vehicle's fuel tanks. If the certifying manufacturer designs or installs the fuel tank, there is no need for the emission control information label to identify the appropriate fuel tank capacity.
§§86.101 and 86.1844–01.	Clarify that reporting drive-cycle metrics to confirm driver accuracy continue to be optional until vehicles are subject to Tier 3 emission standards, and revise terminology for consistency with 40 CFR 1066.425.
§86.101	Clarify that manufacturers may continue to certify in 2022 and later model years based on carryover of emission data generated using the procedures from 40 CFR part 86, subpart B, even though we require new testing in that time frame to use the procedures in 40 CFR part 1066.
§86.113	Revise the format of the volatility specification to rely primarily on psi units and secondarily on kPa units. The kPa figures for non-evaporative testing also need to be corrected to align with the specified psi units. These changes align with the test fuel specifications that were in place before the Tier 3 rule. We are also revising the table format for octane specifications to clarify that the both ASTM D2699 and ASTM D2700 apply for determining octane values and octane sensitivity values.
§86.201	Clarify how the migration to testing under 40 CFR part 1066 works for cold temperature testing. This is analogous to the migration provisions for general testing in §86.101.
§86.213	Revise the specified tolerance for olefin concentration in the test fuel from ±0.5 percent to ±5.0 percent. This reverses an inadvertent change made in the Tier 3 final rule. We are also revising the table format for octane specifications to clarify that both ASTM D2699 and ASTM D2700 apply for determining octane values and octane sensitivity values.
§86.513	Correct a typographical error for the 90% point in the distillation curve for gasoline test fuel. This was erroneously published as part of the Tier 3 rule with an extra "1" before the specified temperature of 148.9 °C. This change restores the temperature specification to what applied before we adopted the Tier 3 rule.
§86.513–2004	Remove obsolete section. Fuel specifications for motorcycles are now addressed in §86.513 (with no model year designation), so the 2004 section is removed to avoid confusion.
§86.1801–12	Clarify how the requirements of subpart S relate to the engine and vehicle provisions in 40 CFR part 1036 and part 1037.
§86.1803–01	Revise the definition of "averaging set" to apply to all vehicles, not only heavy-duty vehicles.
§§86.1805–17 and 86.1811–17.	Address provisions for LDV above 6,000 pounds GVWR. A new paragraph describes how these vehicles are subject to the same transitional provisions that apply for LDV at or below 6,000 pounds GVWR. We are also clarifying useful life provisions for LDV above 6,000 pounds GVWR. We described the useful life provisions based on a simple cutpoint of 6,000 pounds GVWR, which doesn't address a small number of LDV models that have higher GVWR values. Instead of changing the useful life values adopted for cold temperature emission standards, we are using the terms LDV and LLDT to characterize the vehicles that are subject to a useful life of 10 years or 120,000 miles. We are also clarifying that MDPVs are the only HDVs subject to standards under §86.1818.

Regulatory citation	Description
§86.1806–17	Correct the citation to California ARB's OBD regulations to refer to the entire range of relevant OBD standards.
§86.1810–01	Clarify that the provisions for determining NMOG from measured NMHC values also apply for Tier 2 vehicles, as specified in §1066.635, except that manufacturers may continue to use a fixed adjustment factor of 1.04.
§86.1810–17	Clarify that the provisions for testing flexible fuel vehicles on more than just gasoline or diesel fuel do not apply for greenhouse gas standards.
§86.1811–17(b)(8)	Clarify how to calculate and use credits for manufacturers that certify some vehicles to a useful life of 120,000 miles and other vehicles to a useful life of 150,000 miles. The main point of clarification is that vehicles certified to the shorter useful life on an interim basis may exchange emission credits with vehicles certified to either useful life, but the fleet-average standard for a given set of vehicles must correspond to the averaging set. We are also listing the emission standards that correspond to a 120,000 mile useful life rather than describing how to calculate those standards.
§86.1811–17(b)(8)	Add a provision that Interim Tier 3 vehicles must continue to meet the 4000-mile SFTP standards for NMHC+NO_X and CO from Tier 2. This requirement was included in the preamble text for the proposed rule and the final rule, but was inadvertently omitted from the regulatory text.
§86.1811–17(b)(10)	Clarify provisions related to early credits: (1) Early credits may be used interchangeably (without adjustment) for vehicles certified to a useful life of either 120,000 miles or 150,000 miles. (2) Accumulated early credits should be used for demonstrating compliance with model year 2017 standards before doing the calculations to address proportionality relative to California emission credits. (3) Negative credits are subtracted from credit totals during the three-year period for calculating credit caps (rather than ignoring them). (4) The calculation for applying the cap/threshold relative to California credits must be corrected to use the proper baseline quantity.
§86.1811–17(b)(11)	Clarify provisions related to early certification to Tier 3 standards: (1) Bin 70 and cleaner vehicles are considered Tier 3 vehicles on a voluntary basis and are therefore subject to the 150,000 mile useful life. (2) The transitional aspects of the Tier 3 program apply equally to vehicles certified early to the Tier 3 standards.
§86.1811–17(g)	Revise the cold temperature testing specifications to clarify that CO and NMHC standards apply equally for certification and in-use testing, for low and high altitude, and for testing gasoline-only configurations of flexible-fuel vehicles.
§86.1813–17	Clarify that no separate fleet-average calculation is required for demonstrating compliance with high-altitude evaporative emission standards. These standards are determined as bin values relative to the standard that applies for testing at low-altitude conditions.
§86.1829–15	Adjust the refueling test waiver to state that it applies only for incomplete heavy-duty vehicles above 10,000 pounds GVWR, and for complete heavy-duty vehicles above 10,000 pounds GVWR with fuel tanks greater than 35 gallons, consistent with the preamble discussion in the final rule. These vehicles are the only ones that are newly subject to refueling emission standards. All smaller vehicles have already been subject to testing and certification requirements.
§86.1829–15	Add a paragraph to preserve the provisions related to measurement of N_2O emissions as originally adopted at §86.1829–01(b)(2)(iii)(G).
§86.1829–15	Revise terminology to refer to "durability groups" rather than "durability data groups" for PM testing.
§86.1844–01	Specify that a manufacturer's application for certification must include a description of leak families in addition to evaporative/refueling families. Since leak families are defined broadly, many manufacturers may have only a single leak family even if they have multiple evaporative/refueling families.
§86.1845–01	Clarify that the PM measurement instructions are limited to vehicles subject to Tier 3 PM standards, as discussed in the final rule.
§86.1846–01	Adjust the exclusion of high-mileage vehicles to the terminology changes to §86.1845–05. This change aligns with the current practice of not including the results from testing the designated high-mileage vehicle at low altitude for making an IUVP determination for the test group.
§86.1861–17	Clarify that the separate averaging set corresponding to 120,000 mile useful life applies only for NMOG+NO_X emission standards.
§§600.116–12 and 1066.501.	Clarify that certain portions of SAE J1711 apply separately for charge-depleting and charge-sustaining operation for hybrid-electric vehicles.
§600.117	Adjust the description to more clearly apply the interim allowance for using Tier 2 fuel to determine whether vehicles pass the "litmus test" for using derived 5-cycle testing for fuel economy, as described further below.
§600.117	Revise the description for test fuels to clarify that cold testing may be done with the higher-volatility fuel specified in §86.213, and that the requirement for using a common test fuel related to 5-cycle testing refers to the ethanol content of the fuel, not the whole range of test fuel specifications.
§1037.103	Refer to §86.1805 for useful life values as they apply for evaporative emission standards, rather than referring more broadly to useful life values in 40 CFR part 86 for "criteria pollutants".
§1037.104	Refer to the useful life values specified in §86.1805 for model year 2014 vehicles for the HD GHG standards. This sets the useful life values for the HD GHG standards to a fixed value, rather than specifying a cross reference to a section of the regulations that describes changing useful life values.
§§1065.10 and 1066.10	Allow for a one-year lead time for upgrading to test procedure changes in 40 CFR part 86 where those changes would otherwise be required immediately with the effective date of the final rule. This is consistent with existing provisions for changes to 40 CFR part 1065 and part 1066. Note that this does not delay implementation of procedures corresponding to new emission standards.
§1065.610	Correct a sample calculation.
§1065.710	Correct the units for specifying hydrocarbon composition. These units were inadvertently changed in the Tier 3 rule from fractional to percent values. We are specifying these values in volume % to align with the associated ASTM procedure.
§1065.710	Revise the format of the volatility specification to include reference values in psi units.
§1066.125	Correct the description of calculating 1 Hz mean values.
§1066.125	Add a parenthetical reference to torque in pound-foot units corresponding to the primary value in Newtons.
§1066.420	Clarify that it is permissible to push the test vehicle onto the dynamometer to prepare for a hot-start or hot-stabilized test, as opposed to driving the vehicle onto the dynamometer.
§1066.605	Revise the sequence of calculations to determine a NO_X result. The proper sequence is to first correct for background concentration, then to correct for intake air humidity.

Regulatory citation	Description
§1066.615	Correct the equations to properly apply the NO_X humidity correction factor to account for humidity in the background measurement.
§1066.635	Clarify that the appropriate NMOG calculation for plug-in hybrid electric vehicles is based on operation over one full UDDS.
§1066.701	Correct a temperature that was inadvertently identified as 20 °C instead of 20 °F.
§1066.710	Clarify the instructions for heat settings during cold testing to more carefully differentiate between automatic systems that operate either in manual mode or in automatic mode. Automatic systems operating in manual mode should be set to a temperature of 72 °F ''or higher'' to align with current practice.
§1066.801	Correct an error in the testing flowchart so that the flowchart matches the procedure described in the regulations.
§1066.815	Reorganize the instructions for testing with and without bag 4 to improve the clarity of the test sequence.
§1066.831	Revise the description for testing heavy-duty vehicles at adjusted loaded vehicle weight to exclude MDPVs, which are tested like light-duty trucks.
§1066.835	Add a provision allowing for keeping the vehicle-cooling fan running while the vehicle is stopped if that is necessary for keeping ambient conditions within specified parameters.
§1066.845	Adjust the description of air conditioning settings during the AC17 test to describe how to account for systems with separate rear controls, and for systems that change default settings at key-off.
§1066.1005	Move the prefix ''n'' to be in the proper order.
Various	Change from ''LA–92'' to ''Hot-LA–92'' to allow us to specify that the referenced test procedure is only the first 1435 seconds of what is known as the LA–92 driving schedule. The full cycle is 1735 seconds. This change is necessary to accomplish the intended alignment with the California ARB standards.

We are also making various corrections for typographical errors and regulatory cross references. Note that one of these corrections is in the regulations for recreational vehicles at 40 CFR 1051.501 to maintain a proper cross reference to the driving schedules in Appendix I of 40 CFR part 86. We are also correcting a typographical error from §86.529–98 that was published several years ago. The specified range of loaded vehicle masses corresponding to certain road-load force coefficients and inertia weights has an entry that should be listed as applying from 656 to 665 kg; the published entry mistakenly identifies the range as 565 to 665 kg.

One additional issue relates to test fuel for fuel economy testing. In the Tier 3 final rule, EPA changed the certification test fuel for the Tier 3 exhaust emission standards from a 9 psi RVP fuel with no ethanol (E0) (commonly referred to as Tier 2 fuel) to a 9 psi RVP fuel with 10 percent ethanol (E10). As an interim provision, EPA permitted vehicles certifying at levels above Bin 70 to use E0 fuel for Tier 3 certification through model year 2019. The rule also permits early certification to Tier 3 requirements using 7 psi RVP E10 test fuel, commonly referred to as LEV III fuel since the California LEV III program phase-in begins with model year 2015. The rule also provides manufacturers the option to use EPA 9RVP E0 fuel or 9RVP E10 fuel for certification for cold temperature testing since California does not specify a test fuel for that testing.

Under the fuel economy regulations, manufacturers use the results of their exhaust emission tests as the basis for calculating litmus test evaluations (see 40 CFR 600.115–11). However, in the Tier 3 rule EPA did not change the fuel economy test fuel specifications from E0 to E10 as was done for Tier 3 exhaust emissions. The preamble to the final rule recognized that the difference in the emission and fuel economy test fuels has the potential to require extra emission testing for the fuel economy evaluations. To minimize this burden, EPA included several provisions in the regulations to minimize this potential burden (see 40 CFR 600.117) and indicated a commitment to make any appropriate adjustments to the fuel economy regulations to accommodate the change to an E10 test fuel when the needed emission data become available.

As is discussed in the final rule (79 FR 23531–23533, April 28, 2014), central to the litmus test evaluation is the requirement that data be available for all five emission test cycles and that the data be generated using the same test fuel on each cycle. Some confusion has arisen as to what cold FTP test fuel should be used in the litmus evaluations for early Tier 3 certifications using LEV III test fuel and for Tier 3 certification above Bin 70 before model year 2020. This occurs because California ARB does not specify a cold FTP test fuel and, as a transitional measure, EPA permits certification to Tier 3 Bin 125 and Bin 160 using Tier 2 fuel. This amendment clarifies that the fuel economy test fuel requirements govern for the litmus test evaluations. As indicated in the preamble to the final rule at 79 FR 23533, manufacturers may use LEV III fuel (California Phase 3) in lieu of Tier 3 fuel, but any cold FTP testing must be done using the Tier 3 cold FTP fuel. Thus, for purposes of the litmus test cold temperature testing, manufacturers must use the same test fuel (E10) as used for the other four cycles. For early Tier 3 certifications using LEV III test fuel, the cold FTP test data must be generated using Tier 3 cold FTP test fuel and in the case of the higher bins in the Tier 3 program as discussed above, the cold FTP must be based on the same fuel as used for the other four test cycles. The flexibility afforded for exhaust emission certification does not carry over to the litmus test evaluations.

III. 40 CFR Part 80 Fuel Standards

After promulgation of the Tier 3 final rulemaking (79 FR 23414, April 28, 2014), we discovered some typographical errors and other areas in the part 80 regulations that we believe would benefit from some additional clarity. The following sections discuss the amendments to remedy these concerns.

A. Performance-Based Measurement Systems (PBMS)

Section	Description
80.8(e)(1)(iii)	Amended to update IBR to most recent ASTM standard practice D5842–14 (Standard Practice for Sampling and Handling for Fuels for Volatility Measurement, approved January 15, 2014).
80.46(d)	Amended to clarify that distillation precision criterion is based on the reproducibility of Table 10 Groups 2, 3 and 4 (Automated Method) contained in ASTM D86–07—clarifying note added to state that precision estimates in ASTM D86–12 do not apply.

Section	Description
80.46(b)(1), (c)(2), (d), (e), (f)(1), and (g)(1).	Amended to clarify beginning January 1, 2016 a test method approved under 40 CFR 80.47 "must" be used, rather than "may" be used, by the regulated community for demonstrating compliance measurements to EPA fuels standards.
80.47(a)(7)	Amended to correct typographical error ("referee" to "reference").
80.47(b)(1), (c)(1), (d)(1), (e)(1), (f)(1), (g)(1), (h)(1), (i)(1), (j)(1).	Amended to correct typographical error ("emissions" to "omissions"); and to add the statement "tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days".
80.47(c)(1), (c)(2)(i), (c)(2)(ii)	Amended to correct the examples listed for precision and accuracy demonstration for sulfur in butane to be consistent with the sulfur in gasoline 10 ppm average.
80.47(h)(1)	Amended to: correct typographical errors; clarify that distillation precision criterion is based on the reproducibility of Table 10 Groups 2, 3 and 4 (Automated Method) contained in ASTM D86–07 (clarifying note added stating that precision estimates in D86–12 do not apply); and revise IBR of D86 to the 2007 version.
80.47(i)(1)	Revised benzene precision criteria to 0.15 times R, rather than 0.3 times R to be consistent with preamble discussion.
80.47(l)	Amended to revise section heading and add paragraphs (l)(1)(ii) and (l)(2)(ii) to allow for Non-Voluntary Consensus Standard Based (non-VCSB) absolute fuel parameter of sulfur in gasoline and butane. Also clarifying that either a "test facility or VCSB" must meet the requirements of §80.47(l).
80.47(m)(6)	Amended to correct reference for the use of the term "cross-method reproducibility" in ASTM D6708 from "as required" to "as recommended" and replaced the term "cross-method reproducibility" with "between methods reproducibility" to be consistent with D6708–13.
80.47(n)(2)(i), (o)(2)(i), (p)(3)(i).	Amended to correct references to D6299–13 with regards to use of a quality control material (paragraph 3.2.3 changed to 3.2.8), I Chart (section 7 changed to section 8) and MR charts (section A1.5.2 changed to A1.5.4).
80.47(n)(2)(ii), (o)(2)(ii), (p)(3)(ii).	Amended to correct references to D6299–13 with regards to use of an I Chart (changed section 7 to section 8.7).
80.47(n)(2)(iv), (o)(2)(iv), (p)(2)(iv); and (n)(1)(ii), (o)(1)(ii), (p)(1)(ii).	Amended to move the phrase "The expanded uncertainty of the accepted reference value of consensus named fuels shall have the following accuracy qualification criterion: Accuracy qualification criterion = square root [(0.75R)^2+(0.75R)^2/L], where L = the number of single results obtained from different labs used to calculate the consensus ARV." from paragraphs (n)(2)(iv), (o)(2)(iv), (p)(2)(iv) to paragraphs (n)(1)(ii), (o)(1)(ii), (p)(1)(ii), respectively.
80.47(o)(1)	Amended to clarify value of ARV when not provided in an Inter Laboratory Crosscheck Program, by adding the following: "Facilities using a VCSB alternative method defined test method must use the Accepted Reference Value of the check standard as determined in a VCSB Inter Laboratory Crosscheck Program (ILCP) or a commercially available ILCP following the guidelines of ASTM D6299. If the Accepted Reference Value is not provided in the ILCP, accuracy must be assessed based upon the respective EPA designated test method using appropriate production samples."
80.47(o)(1)	Amended to clarify that ILCPs are acceptable, by adding the following: "(Examples of ILCP: ASTM Reformulated Gasoline ILCP or ASTM motor gasoline ILCP)".
80.47(p)(1)	Amended to clarify value of ARV when not provided in ILCP, by adding the following: "Facilities using a Non-VCSB alternative method defined test method must use the Accepted Reference Value of the check standard as determined in either a VCSB Inter Laboratory Crosscheck Program (ILCP) or a commercially available ILCP following the guidelines of ASTM D6299. If the Accepted Reference Value is not provided in the ILCP, accuracy must be assessed based upon the respective EPA designated test method using appropriate production samples."
80.47(p)(1)	Amended to address concern that reproducibility is not established with Non-VCSB test methods, by adding the following: "The facility must construct "MR" and "I" charts with control lines as described in section 8.4 and appropriate Annex sections of this standard practice. In circumstances where the absolute difference between the mean of multiple back-to-back tests of the standard reference material and the accepted reference value of the standard reference material is greater than 0.75 times the published reproducibility of the fuel parameter's respective designated test method must be investigated by the facility."
80.47(r)(1)(i)	Amended to revise IBR of ASTM D86 to the 2007 version.
80.330(b)(1)(i), (b)(1)(ii), (b)(2).	Amended to update IBR to most recent ASTM standard practice D5842–14 (Standard Practice for Sampling and Handling for Fuels for Volatility Measurement, approved January 15, 2014), and for consistency with IBR language throughout subpart O.
80.584(a)(1) through (a)(3)	Amended to correct inconsistencies with PBMS in §80.47 regarding requirements for PBMS for sulfur in diesel fuel and ECA Marine Fuel at §80.584 with regards to frequency of testing for the precision demonstration and VCSB self-qualification starting January 1, 2016.
80.584(a)(1) through (a)(3)	Amended to insert phrase "(tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days)" in applicable areas for diesel and ECA marine fuel to be consistent with frequency of testing for precision demonstration at §80.47.
80.585(a)	Amended to revise diesel and ECA marine fuel sulfur qualification regulations to be consistent with PBMS (i.e., starting January 1, 2016), VCSB test methods self-qualify and need not be reported to the Agency for approval.
80.585(a), (e)(1), (e)(4), (f)	Amended to correct inconsistencies with PBMS in §80.47 regarding requirements for PBMS for sulfur in diesel fuel and ECA marine fuel at §80.584 with regards to frequency of testing for the precision demonstration and VCSB self-qualification starting January 1, 2016; and to add a new paragraph (f) for IBR.
80.585(e)(1), (e)(2), (e)(4), (f).	Amended to update IBR and reference for use on ASTM D6299–13 in applicable diesel and ECA marine fuel sulfur regulations to be consistent with reference of use of ASTM D6299–13 in PBMS regulations at §80.47, and to make minor formatting changes for IBR consistency throughout part 80.

B. Quality Assurance Program Amendments

This action also makes minor technical amendments to regulatory changes finalized in the Voluntary Quality Assurance Program Rulemaking (''QAP Rule'', 79 FR 42078, July 18, 2014). We are changing §80.1471(d)(1) to reflect a change that industry widely requested and the public supported. In the final rulemaking we agreed to extend the notification period by an auditor for potentially invalid RINs from ''within the next business day'' to ''within five business days.'' We inadvertently neglected to change this reference in §80.1471(d)(1) to the new ''within five business days'' language.

In the Notice of Proposed Rulemaking for the QAP Rule, we proposed a new section at §80.1433 that would have changed the way parties that redesignated renewable fuels for non-qualifying uses would have to retire RINs, and we proposed new product transfer document (PTD) language at §80.1453(a)(12) to help convey the requirement to separate and/or retire RINs for parties that wished to redesignate renewable fuel for a non-qualifying use. After careful consideration of the public comments received, we chose not to finalize the proposed §80.1433 requirements. This action is removing the extraneous reference to §80.1433 in §80.1453.

Additionally, we are amending the PTD requirements at §80.1453(a) to make the scope of these requirements consistent with similar requirements in other fuels programs. When we altered the scope of the PTD requirements at §80.1453 to include both neat and blended renewable fuels, we did not intend to expand the scope of these PTD requirements to convey the information at §80.1453 to the consumer of such fuels, in most cases. In the preamble to the final QAP Rule, we noted that these requirements were meant to apply to regulated parties (79 FR 42105, July 18, 2014).

Historically, EPA has required applicable information on PTDs accompanying fuels to be conveyed through to retail stations and wholesale purchaser-consumers. The EPA has, in most cases, included language that exempts parties that are transferring title or custody of fuel to the ultimate consumer (*e.g.,* the PTD requirements for detergents at §80.158 and for E15 at §80.1503) or dispensing the fuel from a retail station or wholesale purchaser-consumer's tank to a motor vehicle or nonroad engine (*e.g.,* the PTD requirements for diesel and gasoline sulfur at §§80.590 and 80.1651, respectively). Requiring PTD language to convey information all the way down to consumers fueling at a retail station or homes receiving heating oil has little benefit to the effectiveness of EPA's fuels programs and could be quite costly for retail stations and home heating oil distributors. Therefore, we are clarifying the scope of §80.1453 by adding an exemption to the PTD requirements for renewable fuels dispensed into motor vehicles and nonroad vehicles, engines, and equipment (to include jet engines and home heating units).

Section	Description
80.1426(c)(7)	Amended to correct typographical error (''§80.1451(b)(1)(ii)(T)(3)'' to ''§80.1451(b)(1)(ii)(T)(2)'').
80.1453(a) introductory text	Amended for clarity in scope of requirements.
80.1453(a)(12) introductory text.	Amended to remove extraneous reference to 80.1433.
80.1471(d)	Amended to add to ''within five business days'', consistent with the intent stated in the QAP rule preamble.

C. Tier 3 Rulemaking Provisions Minor Technical Amendments

As mentioned above, this rule corrects minor typographical errors that were discovered following the promulgation of the Tier 3 final rule (both within 40 CFR part 80, subpart O, as well as additional 40 CFR part 80 provisions that were finalized as part of our regulatory streamlining efforts in the Tier 3 rulemaking). The following table contains a list of these amendments and a description of the change:

Section	Description
80.2(cccc)	Removed new definition of natural gas, as this definition already exists at §80.2(tt).
80.75(a)(2)(xi)(G)	Amended to correct reference from ''§80.82(c) or (d)'' to ''§80.86(a)(3) or (a)(4)''.
80.82(e)(1)	Amended to clarify that the provisions of an EPA-approved State Implementation Plan (SIP) apply to butane blenders.
80.85(a)	Amended introductory text to correct typographical errors (''refinery'' to ''refiner'').
80.85(i)	Amended to correct typographical errors (''they'' to ''it'', ''comply'' to complies'').
80.86(b)(2)(iv) and (b)(3)(iii)	Amended to correct typographical errors (''complaint'' to ''compliant'').
80.86(c)	Amended to clarify that the PTD for pentane used by pentane blenders must contain the pentane producer or importer company name and facility registration number issued by EPA and the name and address of the transferor and transferee consistent with other part 80 PTD requirements.
80.315(b)(1)(iii), 80.1295(b)(1)(ii).	The Tier 3 rulemaking changed the due date for annual reports and credits from the end of February to March 31 for all 40 CFR part 80 fuels programs; these paragraphs are being amended because the February date was inadvertently left in §§80.315(b)(1)(iii) and 80.1295(b)(1)(ii).
80.330(c)(1), (d)(2)	Amended to correct year (''December 31, 20'' to ''December 31, 2015'').
80.597(d)(3)	Amended to correct reference from paragraph (d) to paragraph (d)(3).
80.1270(b)(2)	Amended to clarify that butane blenders using the provisions of §80.82 and pentane blenders using the provisions of §80.85 may not generate benzene credits.
80.1609(a)	Amended to correct typographical error and to correct a regulatory cite.
80.1611(a)(1),	Amended to improve the clarity in cases where producers of certified ethanol denaturants produce product to a lower sulfur maximum than the required 300 ppm maximum.
80.1611(c) introductory text, (c)(1), and (c)(2).	Amended for improved clarity and to correct typographical errors.
80.1611(d)	Amended to correct typographical error (''denaturant'' instead of ''oxygenate'').
80.1613(a)	Amended to correct typographical error (''less than 1.0'' replaces ''1.0 or less'').
80.1613(b)(3)	Added to clarify that it is a violation to exceed an additive manufacturer's recommended treatment level when doing so would contribute more than 3 ppm to the sulfur content of the resulting finished gasoline.

Section	Description
80.1615(d)(1), (d)(2)	Revised for clarity by moving the phrase "From January 1, 2017 through December 31, 2019" to the beginning of each paragraph.
80.1616(a)(4)	Amended to add a "Reserved" paragraph (a)(4) to fix numbering error.
80.1616(b)(2)	Amended language to clarify that credits expire on December 31 and are reported the following March 31.
80.1620(d)	Revised to correct year to 2012.
80.1620(e)(1), (e)(2), (f)(1)	Revised to correct dates to 2013.
80.1621(c), (d)	Reserved paragraph (c); added paragraph (d), which was inadvertently deleted from the regulations, but is referred to in the preamble and in §80.1622(e).
80.1640(a)(2)	Amended to correct reference from paragraph (a)(5) to paragraph (a)(1).
80.1642(c)(3)	Amended paragraph to correct typographical errors.
80.1650	Amended to remove phrase "whichever is earlier" from paragraphs specifying the dates by which reports must be submitted, as this would contradict the ability of parties to register after the initial date that parties involved in a given activity must be registered.
80.1652(c)	Amended to correct word error ("producer" instead of "refiner").
80.1667(c)(1)	Removed paragraph (c)(1) to match the intentions of §80.1615(a) that refiners—including gasoline blenders (excluding those specified in §80.1615(a)(3))—may generate Tier 3 credits beginning in 2014.

IV. Small SI Test Fuel and Bonding Provisions

On June 17, 2013, EPA modified the test procedures for measuring exhaust emissions from land-based nonroad small spark-ignition engines (small SI engines) to allow for exhaust emission certification testing with a test fuel that has 10 percent ethanol as specified by California ARB (78 FR 36370). We adopted that provision on an interim basis, through model year 2019, with the expectation that we would further evaluate the appropriate test fuel for onroad and nonroad applications. The Tier 3 motor vehicle emission standards include a new certification test fuel specification that is much like California ARB's Phase 3 test fuel in that it includes 10 percent ethanol (E10).

Small SI manufacturers have requested that we address the test fuel questions in a way that does not leave them uncertain about certification test fuel options starting in model year 2020. While the effort to adopt the new EPA nonroad test fuel specification lies ahead, we agree with the manufacturers that the new ethanol-based test fuel associated with the Tier 3 motor vehicle emission standards allows us to take the step of removing the expiration of the provision allowing for the use of the similar California ARB Phase 3 test fuel for small SI engines. In the future, we expect to go through a rulemaking to incorporate EPA's Tier 3 test fuel into the emission programs for small spark-ignition engines, including an assessment of how the changing test fuel relates to the stringency of the emission standards.

When we adopted Phase 3 exhaust emission standards for Small SI engines in 2008, we included a new set of requirements for manufacturers to post a bond as a means of ensuring compliance with regulatory requirements (73 FR 59034, October 8, 2008). Manufacturers have been complying with the bond requirements since 2010. The bond provisions are generally working as expected, but we have found several items that should be adjusted or clarified to help with ongoing implementation, as follows:

- Clarify that bonds are intended to cover any improperly funded compliance obligations relative only to engines that must comply with 40 CFR part 1054. The bond provisions are not intended to extend to engines that a manufacturer certifies under other EPA programs.
- Specify that small-volume engine manufacturers and small-volume equipment manufacturers (collectively small-volume manufacturers, as defined in 40 CFR 1054.801) are subject to an alternate minimum bond value of $25,000, rather than the $500,000 minimum that applies for other manufacturers. This arrangement has been the working policy under the broader allowance specified in §1054.635(d). Codifying these terms allows us to streamline the process and remove uncertainty for small-volume manufacturers.
- Adopt a cap on the bond value that corresponds to the applicable bond-waiver threshold. Since U.S.-based assets are roughly analogous to bond values as a measure of our ability to compel compliance (or remedy deficiencies) for the different kinds of companies, this approach provides a measure of parity or fairness between those that must post bond and those that qualify for a bond waiver based on their assets in the United States. This is consistent with the approach we took on an interim basis to specify a maximum bond value of $10 million. The new provision replaces the $10 million cap in §1054.145(o).
- Clarify how bond values may change within a given year, and in future years: (1) Bond values may be adjusted for a given year any time before the first importation or sale for that year; (2) once a bond value is fixed for a given year, that value may not be decreased during the year, even if sales volumes are less than anticipated; and (3) bond values may be reset with each new year, but these values must reflect actual sales volumes for the preceding three years. This arrangement allows a manufacturer to take a deliberate approach to resetting bond values if sales volumes change substantially over time.
- Change the protocol for adjusting thresholds and bond values for inflation. Small, annual changes create confusion and an implementation burden, with very small incremental benefit. To streamline that process and still account for the cumulative effects of inflation, we are specifying that we will adjust the thresholds and bond values in 2020, and every ten years after that, using a less precise rounding protocol. These changes will not require rulemaking to take effect, but we will likely modify the regulation to reflect these periodic adjustments.

V. Evaporative Test Procedures for Nonroad Equipment

We specify evaporative emission standards, test procedures, and certification requirements in 40 CFR part 1060. This includes measurement procedures for fuel permeation through fuel lines and fuel tanks, and for diurnal emissions from fuel tanks. We are making the following changes to these regulations:

- Clarify that boat builders and other equipment manufacturers that install uncertified components are required to certify those fuel-system components as if they were component manufacturers. The original regulatory language described a requirement for equipment manufacturers to certify as equipment manufacturers if they were installing uncertified components, but we have

found that the certification process is most straightforward if we treat them as component manufacturers.

• The test procedures originally allowed for manufacturers to use good engineering judgment to address technical concerns related to measuring emissions from narrow-diameter fuel lines. In 2013, SAE published a voluntary consensus standard (SAE J2996) specifying measurement procedures for these narrow-diameter fuel lines. We agree that the SAE standard reflects good engineering judgment in the effort to measure emissions and are therefore incorporating this standard by reference in §1060.515. This alternative SAE standard was designed for Small SI products, but it may be used in other applications as well; note, however, that U.S. Coast Guard requires measurements based on SAE J1527 in some cases. We are including the following clarifications and adjustments related to the specified SAE standards for all fuel-line permeation testing: (1) The test requires emission sampling over a 14-day period; (2) Two days of non-testing per week are allowed to accommodate weekend work schedules; (3) To remove any ambiguity from the published SAE standards, we are stating in our regulations that testing must occur at 23±2 °C; and (4) The final test result is based on a simple arithmetic average of measured emission values over the 14-day sampling period. These changes allow for internal consistency, and generally align with the procedures adopted by California ARB. To the extent that there are remaining differences, manufacturers may ask for approval to use different procedures under §1060.505(c)(2) or (c)(3).

• Correct a typographical error in the kPa pressure value for preconditioning fuel tanks for a permeation measurement. The psi value in the regulation is correct.

• Correct the sample calculation for determining an emission result from a diurnal emission test.

• Adjust the procedure to account for buoyancy effects in tank permeation measurements by replacing the requirement to use two identical tanks with a requirement to use a second tank that has a total volume that is within 5 percent of the test tank's total volume. This will allow manufacturers and test labs to rely on a smaller number of stock fuel tanks to make the necessary but minor corrections that result from fluctuating atmospheric pressure.

• Adjust and clarify diurnal test procedures: (1) Add a specification for in-tank thermocouples for tracking fuel temperature for testing marine fuel tanks; (2) Replace the hourly profile of fuel temperatures with clearer specification about tracking test fuel temperature from a specified starting point to a specified (calculated) endpoint. The vapor generation should be nearly constant between test runs as long as fuel temperature continues to increase from the low temperature to the high temperature; (3) Standardize the procedure for purging the evaporative canister to prepare for testing based on a simulation of the in-use experience; this is based on engine purge for land-based applications, and on passive (ambient) purge for marine applications. This canister preconditioning is a necessary step to establish a known starting point for designing a system that meets the diurnal emission standard; and (4) Include temperature tolerance bands for the diurnal temperature cycle. Note that we are not proposing or requesting comment on changing the test procedure for marine fuel tanks to base the temperature profile on ambient temperatures instead of fuel temperatures.

• Establish a gravimetric test method for determining mass of emissions for tanks with a diurnal emission standard of at least 2.0 grams of hydrocarbon. Emission test procedures involving an emission standard of less than 2.0 grams of hydrocarbon need the more accurate measurements available from using a flame ionization detector (FID) within a sealed enclosure.

VI. Portable Fuel Containers

On February 26, 2007, EPA adopted a set of requirements to reduce emissions from portable fuel containers (PFC) at 40 CFR part 59, subpart F (72 FR 8533). EPA review of PFC designs and discussions with PFC manufacturers suggest that the manufacturers may have read the provisions of 40 CFR part 59, subpart F, too narrowly and that their interpretations may have unnecessarily constrained some design approaches that may have otherwise allowed for improved in-use performance and consumer satisfaction. EPA did not intend to impact manufacturer design approaches beyond those deemed by the manufacturer as necessary to meet the emission control requirements as otherwise specified in 40 CFR part 59, and is including language in this rule to clarify regulatory requirements that apply to PFCs. Specifically, the revised regulation states that it is allowable for manufacturers to design PFCs with vents to relieve pressure, provided that the venting device is in place during emission testing, and provided that the venting device closes automatically when not in use.

The modifications to 40 CFR part 59, subpart F, do not change the regulatory requirements with regard to emission standards and test procedures, but better define some elements of design and clarify how various approaches would be considered in testing. Upon seeing these modifications to the regulations, PFC manufacturers may elect to pursue design approaches they deem appropriate, which they may have thought were not available to them previously.

VII. MARPOL Annex VI Implementation

The Act to Prevent Pollution from Ships (APPS) implements the provisions of the International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI for the United States (33 U.S.C. 1901–1912). EPA adopted regulations in 2010 to summarize these requirements and to describe engine certification procedures and other relevant provisions as specified in APPS (75 FR 22896, April 30, 2010). MARPOL Annex VI has been amended since issuance of that **Federal Register** notice to include designation of the North American ECA and the U.S. Caribbean Sea ECA and various other changes. We are amending 40 CFR part 1043 in this rulemaking to align the regulations with the amendments of MARPOL Annex VI to facilitate stakeholder compliance, and to correct certain technical errors.

First, the most fundamental step in updating 40 CFR part 1043 is to cite the 2013 publication of MARPOL Annex VI and the further amendments concluded at MEPC 66 in April 2014 (see 40 CFR 1043.100). Likewise, MARPOL Annex VI was recently amended to waive the fuel-sulfur requirements for certain steamships until January 1, 2020. Part 1043 already includes such a waiver for steamships operating in the Great Lakes. We are codifying the additional temporary steamship exemption in §1043.97. Note that covered steamships will be required to comply with the relevant sulfur limits when the exemption expires on January 1, 2020.

Second, we inadvertently adopted regulatory language in 40 CFR part 1043 that differs from the language of Annex VI. For example, we originally adopted the provisions in 40 CFR part 1043 with an erroneous date, stating that the 0.10% fuel-sulfur standard applies starting January 1, 2016, which should be January 1, 2015. The Annex VI specification is enforceable with or without this correction in 40 CFR part 1043, but we want to make the change to avoid any possible confusion. We also identified the NO_X standards based

on an engine's model year; this should identify the applicability of NO_X standards based on the build date of new vessels, or on the date of major modifications in other circumstances. We are correcting these errors in part 1043.

Third, we are adding clarifying language relating to public vessels. MARPOL Annex VI exempts public vessels from engine standards and fuel requirements. Public vessels are defined as ''warships, naval auxiliary vessels, and other vessels owned or operated by a sovereign country when engaged in noncommercial service.'' We want to clarify that any vessel that has a national security exemption (for engines or fuel) is automatically considered a public vessel.

Fourth, we are clarifying regulatory provisions to address whether or how emission credits apply for EPA certificates and EIAPP certificates. Engine manufacturers are interested in getting an EPA certificate under 40 CFR part 1042 and an EIAPP certificate under 40 CFR part 1043 for the same engine. This would allow them maximum flexibility in selling engines to boat builders for installation in vessels used in domestic or international service. Certification to EPA standards under 40 CFR part 1042 allows manufacturers to use emission credits to make some engines with emission levels that are above the specified standard. MARPOL Annex VI and 40 CFR part 1043 do not have such an allowance. We are modifying the regulation to clarify that an engine may not be covered by both an EPA certificate and an EIAPP certificate if its certification under 40 CFR part 1042 depends on using emission credits to allow for an emission level above the specified standard. If an engine has emission levels below the specified standard and it is used to generate emission credits under 40 CFR part 1042, this would not disqualify an engine from also getting an EIAPP certificate under 40 CFR part 1043.

Lastly, we are making clarifying edits to the fuels regulations under 40 CFR part 80 for MARPOL Annex VI implementation; the table below lists these edits. While some of these edits are purely corrections to typographical errors, we are also making edits to clarify the treatment of fuels under MARPOL Annex VI, Regulation 3 and Regulation 4. Regulation 3 authorizes trial programs that involve a permit allowing a ship operator to use fuel that exceeds the fuel-sulfur standards that would otherwise apply. Regulation 4 allows for flag states to approve the use of high-sulfur fuel for vessels that are equipped with technology that allows for an equivalent level of control. Specifically, we are amending the definition of ''ECA marine fuel'' at 40 CFR 80.2(ttt) to clarify that vessels with Regulation 3 permits or Regulation 4 equivalencies can in fact use fuel that exceeds the ECA marine fuel sulfur standard. Further, to provide producers, distributors, and marketers of fuel for use under a Regulation 3 permit or a Regulation 4 equivalency the ability to denote such fuel on their PTDs, we are amending 40 CFR 80.590 to provide these parties with express PTD statements that may be used in lieu of the statements that are currently in the regulations.

MARPOL ANNEX VI-RELATED AMENDMENTS TO 40 CFR PART 80, SUBPART I

Section	Description of change
80.2(ttt)	Amended the definition of ECA marine fuel to clarify that fuel allowed by MARPOL Annex VI Regulation 3 permits or Regulation 4 equivalencies under 40 CFR part 1043 is not required to meet the ECA marine fuel requirements.
80.510 section heading	Amending to clarify that this section applies to refiners and importers.
80.510(k) and 80.511(b)(9)	Amending to clarify that fuel allowed by Regulation 3 permits or Regulation 4 equivalencies is not required to meet the ECA marine fuel requirements.
80.574(b)	Amended to update the address for submitting ECA marine fuel alternative label requests.
80.590(b)	Amended to allow for PTD statements for use with fuel permitted for use under MARPOL Annex VI Regulation 3, Regulation 4, or both.
80.607 (a), (c), (d), (f)	Amended to remove references to ECA marine fuel, as research and development permits are separate from Regulation 3 permits under 40 CFR part 1043.
80.608(d)	Amended to correct minor typographical errors.

VIII. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *http://www2.epa.gov/laws-regulations/laws-and-executive-orders.*

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and was therefore not submitted to the Office of Management and Budget (OMB) for review.

B. Paperwork Reduction Act

This action does not impose any new information collection burden under the PRA, since it merely clarifies and corrects existing regulatory language. OMB has previously approved the information collection activities contained in the existing regulations and has assigned OMB control numbers as noted in the table below.

Regulatory citation	Item	OMB Control No.
40 CFR part 86	Light-duty vehicle standards	2060–0104
40 CFR part 86	Heavy-duty vehicle standards	2060–0287
40 CFR part 86	In-use verification program	2060–0086
40 CFR part 80	In-use fuel standards	2060–0437
40 CFR part 1043	MARPOL Annex VI	2060–0641
40 CFR part 1054	Small SI exhaust emission standards	2060–0338
40 CFR part 1060	Nonroad SI evaporative emission standards	2060–0321, 2060–0338

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, the impact of concern is any significant adverse economic impact on small entities. An agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, has no net burden or otherwise has a positive economic effect on the small entities subject to the rule. This rule merely clarifies and corrects existing regulatory language. We therefore anticipate no costs and therefore no regulatory burden associated with this rule. We have therefore concluded that this action will have no net regulatory burden for all directly regulated small entities.

D. Unfunded Mandates Reform Act

This action does not contain any unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local or tribal governments. Requirements for the private sector do not exceed $100 million in any one year.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175. This rule merely corrects and clarifies regulatory provisions. Tribal governments would be affected only to the extent they purchase and use regulated vehicles or engines. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of ''covered regulatory action'' in section 2–202 of the Executive Order. This action is not subject to Executive Order 13045 because it does not concern an environmental health risk or safety risk.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer Advancement Act

This action involves technical standards. EPA has decided to use the following voluntary consensus standards:

Organization	Standard	Available from
SAE International	SAE J2996, Small Diameter Fuel Line Permeation Test Procedure, Issued January 2013	*www.sae.org.*
ASTM International	ASTM D86–07, Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure, approved January 15, 2007.	*www.astm.org.*
ASTM International	ASTM standard practice D4057–12, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, approved December 1, 2012.	*www.astm.org.*
ASTM International	ASTM standard practice D4177–95 (Reapproved 2010), Standard Practice for Automatic Sampling of Petroleum and Petroleum Products, approved May 1, 2010.	*www.astm.org.*
ASTM International	ASTM standard practice D5842–14, Standard Practice for Sampling and Handling for Fuels for Volatility Measurement, approved January 15, 2014.	*www.astm.org.*
ASTM International	ASTM standard practice D6299–13, Standard Practice for Applying Statistical Quality Assurance and Control Charting Techniques to Evaluate Analytical Measurement System Performance, approved October 1, 2013.	*www.astm.org.*

This action also involves technical standards for marine diesel engines. There are no voluntary consensus documents that address these technical standards. EPA has therefore decided to use the following standards from the International Maritime Organization:

Organization	Standard	Available from
International Maritime Organization.	MARPOL Annex VI, Regulations for the Prevention of Pollution from Ships, Third Edition, 2013.	*www.imo.org.*
International Maritime Organization.	NO_X Technical Code 2008, 2013 Edition	*www.imo.org.*
International Maritime Organization.	Annex 12, Resolution MEPC.251(66) from the Report of the Marine Environment Protection Committee on its Sixty-Sixth Session, April 25, 2014.	*www.imo.org.*

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

This action is not expected to have any adverse human health or environmental impacts; as a result, the human health or environmental risk addressed by this action will not have potential disproportionately high and adverse human health or environmental effects on minority, low-income or indigenous populations.

K. Congressional Review Act

This action is subject to the CRA, and EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

IX. Statutory Provisions and Legal Authority

Statutory authority for this action comes from 42 U.S.C. 7401–7671q and 33 U.S.C. 1901–1912.

List of Subjects

40 CFR Part 59

Environmental protection, Air pollution control, Confidential business information, Labeling, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

40 CFR Part 80

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential Business Information, Diesel fuel, Fuel additives, Gasoline, Imports, Incorporation by reference, Labeling, Motor vehicle pollution, Penalties, Petroleum, Reporting and recordkeeping requirements.

40 CFR Part 85

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential Business Information, Imports, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements, Research, Warranties.

40 CFR Part 86

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential Business Information, Imports, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements, Warranties.

40 CFR Part 600

Environmental protection, Administrative practice and procedure, Electric power, Fuel economy, Labeling, Reporting and recordkeeping requirements.

40 CFR Part 1037

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential business information, Labeling, Motor vehicle pollution, Reporting and recordkeeping requirements, Warranties.

40 CFR Part 1043

Environmental protection, Administrative practice and procedure, Air pollution control, Imports, Incorporation by reference, Vessels, Reporting and recordkeeping requirements.

40 CFR Parts 1051 and 1054

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential business information, Imports, Labeling, Penalties, Reporting and recordkeeping requirements, Warranties.

40 CFR Part 1060

Environmental protection, Administrative practice and procedure, Air pollution control, Confidential business information, Imports, Incorporation by reference, Labeling, Penalties, Reporting and recordkeeping requirements, Warranties.

40 CFR Parts 1065 and 1066

Environmental protection, Administrative practice and procedure, Reporting and recordkeeping requirements, Research.

Dated: February 2, 2015.

Gina McCarthy,

Administrator.

For the reasons set out in the preamble, title 40, chapter I of the Code of Federal Regulations is amended as set forth below.

PART 59—NATIONAL VOLATILE ORGANIC COMPOUND EMISSION STANDARDS FOR CONSUMER AND COMMERCIAL PRODUCTS

* 1. The authority citation for part 59 continues to read as follows:

Authority: 42 U.S.C. 7414 and 7511b(e).

Subpart F—[Amended]

* 2. Section 59.611 is amended by revising paragraph (c)(1)(ii) to read as follows:

§59.611 What evaporative emission requirements apply under this subpart?

* * * * *

(c) * * *

(1) * * *

(ii) For anyone to design, manufacture, or install emission control systems with features that disable, deactivate, reduce effectiveness, or bypass the emission controls, either actively or passively. However, you may include a vent that the operator can open to bypass emission controls if that vent closes automatically (*i.e.,* without operator involvement). You may include such design features if they operate during emission tests described in subpart F of this part. For example, you may include an integrated or external manually activated device in the portable fuel container's design to temporarily relieve pressure, provided that the device is in place during emission testing and closes automatically when not in use.

* * * * *

* 3. Section 59.623 is amended by revising paragraph (a) to read as follows:

§59.623 What must I include in my application?

* * * * *

(a) Describe the emission family's specifications and other basic parameters of the emission controls. List each distinguishable configuration in the emission family. Include descriptions and part numbers for all detachable components such as spouts and caps and describe any devices designed for venting pressure, if applicable.

* * * * *

* 4. Section 59.625 is amended by adding paragraph (b)(6) to read as follows:

§59.625 How do I select emission families?

* * * * *

(b) * * *

(6) Strategy for venting pressure.

* * * * *

PART 80—REGULATION OF FUELS AND FUEL ADDITIVES

* 5. The authority citation for part 80 continues to read as follows:

Authority: 42 U.S.C. 7414, 7521, 7542, 7545, and 7601(a).

Subpart A—General Provisions

* 6. Section 80.2 is amended by:

* a. Revising paragraph (ttt).

* b. Removing and reserving paragraph (cccc).

The revisions read as follows:

§80.2 Definitions.

* * * * *

(ttt) *ECA marine fuel* is diesel, distillate, or residual fuel that meets the criteria of paragraph (ttt)(1) of this section, but not the criteria of paragraph (ttt)(2) of this section.

(1) All diesel, distillate, or residual fuel used, intended for use, or made available for use in Category 3 marine vessels while the vessels are operating within an Emission Control Area (ECA), or an ECA associated area, is ECA marine fuel, unless it meets the criteria of paragraph (ttt)(2) of this section.

(2) ECA marine fuel does not include any of the following fuel:

(i) Fuel used by exempted or excluded vessels (such as exempted steamships), or fuel used by vessels allowed by the U.S. government pursuant to MARPOL Annex VI Regulation 3 or Regulation 4

to exceed the fuel sulfur limits while operating in an ECA or an ECA associated area (see 33 U.S.C. 1903).

(ii) Fuel that conforms fully to the requirements of this part for NRLM diesel fuel (including being designated as NRLM).

(iii) Fuel used, or made available for use, in any diesel engines not installed on a Category 3 marine vessel.

* * * * *

(cccc) [Reserved]

* * * * *

* 7. Section 80.8 is amended by revising paragraph (e)(1) to read as follows:

§80.8 Sampling methods for gasoline, diesel fuel, fuel additives, and renewable fuels.

* * * * *

(e) * * *

(1) *ASTM International material.* The following standards are available from ASTM International, 100 Barr Harbor Dr., P.O. Box C700, West Conshohocken, PA 19428–2959, (877) 909–ASTM, or *http://www.astm.org:*

(i) ASTM D4057–12, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, approved December 1, 2012 (''ASTM D4057'').

(ii) ASTM D4177–95 (Reapproved 2010), Standard Practice for Automatic Sampling of Petroleum and Petroleum Products, approved May 1, 2010 (''ASTM D4177'').

(iii) ASTM D5842–14, Standard Practice for Sampling and Handling of Fuels for Volatility Measurement, approved January 15, 2014 (''ASTM D5842'').

(iv) ASTM D5854–96 (Reapproved 2010), Standard Practice for Mixing and Handling of Liquid Samples of Petroleum and Petroleum Products, approved May 1, 2010 (''ASTM D5854'').

* * * * *

Subpart D—Reformulated Gasoline

* 8. Section 80.46 is amended by:

* a. Revising paragraph (b)(1);

* b. Revising paragraph (c)(2) introductory text;

* c. Revising paragraph (d);

* d. Revising paragraph (e);

* e. Revising paragraph (f)(1);

* f. Revising paragraph (g)(1); and

* g. Revising paragraph (h)(1).

The revisions read as follows:

§80.46 Measurement of reformulated gasoline and conventional gasoline fuel parameters.

* * * * *

(b) * * *

(1) Through December 31, 2015, olefin content must be determined using ASTM D1319. Beginning January 1, 2016, the olefin content of gasoline must be determined by a test method approved under §80.47.

* * * * *

(c) * * *

(2) Beginning January 1, 2016, RVP must be determined by a test method approved under §80.47, except as provided in paragraph (c)(2)(i) of this section.

* * * * *

(d) *Distillation.* Through December 31, 2015, distillation parameters must be determined using ASTM D86. Beginning January 1, 2016, the distillation parameters must be determined by a test method approved under §80.47. (Note: The precision estimates for reproducibility in ASTM D86–12 do not apply; see §80.47(h).)

(e) *Benzene.* Through December 31, 2015, benzene content must be determined using ASTM D3606, except that instrument parameters shall be adjusted to ensure complete resolution of the benzene, ethanol and methanol peaks because ethanol and methanol may cause interference with ASTM D3606 when present. Beginning January 1, 2016, the benzene content must be determined by a test method approved under §80.47.

(f)(1) Through December 31, 2015, aromatic content must be determined using ASTM D5769, except the sample chilling requirements in section 8 of this standard method are optional. Beginning January 1, 2016, the aromatic content must be determined by a test method approved under §80.47.

* * * * *

(g) * * * (1) Through December 31, 2015, oxygen and oxygenate content must be determined using ASTM D5599. Beginning January 1, 2016, oxygen and oxygenate content must be determined by a test method approved under §80.47.

* * * * *

(h) * * *

(1) *ASTM International material.* The following standards are available from ASTM International, 100 Barr Harbor Dr., P.O. Box C700, West Conshohocken, PA 19428–2959, (877) 909–ASTM, or *http://www.astm.org:*

(i) ASTM D86–12, Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure, approved December 1, 2012 (''ASTM D86'').

(ii) ASTM D1319–13, Standard Test Method for Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Adsorption, approved May 1, 2013 (''ASTM D1319'').

(iii) ASTM D2622–10, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry, approved February 15, 2010 (''ASTM D2622'').

(iv) ASTM D3120–08, Standard Test Method for Trace Quantities of Sulfur in Light Liquid Petroleum Hydrocarbons by Oxidative Microcoulometry, approved December 15, 2008 (''ASTM D3120'').

(v) ASTM D3246–11, Standard Test Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry, approved June 1, 2011 (''ASTM D3246'').

(vi) ASTM D3606–10, Standard Test Method for Determination of Benzene and Toluene in Finished Motor and Aviation Gasoline by Gas Chromatography, approved October 1, 2010 (''ASTM D3606'').

(vii) ASTM D4468–85 (Reapproved 2011), Standard Test Method for Total Sulfur in Gaseous Fuels by Hydrogenolysis and Rateometric Colorimetry, approved November 1, 2011 (''ASTM D4468'').

(viii) ASTM D4815–13, Standard Test Method for Determination of MTBE, ETBE, TAME, DIPE, tertiary-Amyl Alcohol and C1 to C4 Alcohols in Gasoline by Gas Chromatography, approved October 1, 2013 (''ASTM D4815'').

(ix) ASTM D5191–13, Standard Test Method for Vapor Pressure of Petroleum Products (Mini Method), approved December 1, 2013 (''ASTM D5191'').

(x) ASTM D5453–12, Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Spark Ignition Engine Fuel, Diesel Engine Fuel, and Engine Oil by Ultraviolet Fluorescence, approved November 1, 2012 (''ASTM D5453'').

(xi) ASTM D5599–00 (Reapproved 2010), Standard Test Method for Determination of Oxygenates in Gasoline by Gas Chromatography and Oxygen Selective Flame Ionization Detection, approved October 1, 2010 (''ASTM D5599'').

(xii) ASTM D5769–10, Standard Test Method for Determination of Benzene, Toluene, and Total Aromatics in Finished Gasolines by Gas Chromatography/Mass Spectrometry, approved May 1, 2010 (''ASTM D5769'').

(xiii) ASTM D6550–10, Standard Test Method for Determination of Olefin Content of Gasolines by Supercritical-Fluid Chromatography, approved October 1, 2010 (''ASTM D6550'').

(xiv) ASTM D6667–10, Standard Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum

Gases by Ultraviolet Fluorescence, approved October 1, 2010 (''ASTM D6667'').

(xv) ASTM D6920–13, Standard Test Method for Total Sulfur in Naphthas, Distillates, Reformulated Gasolines, Diesels, Biodiesels, and Motor Fuels by Oxidative Combustion and Electrochemical Detection, approved September 15, 2013 (''ASTM D6920'').

(xvi) ASTM D7039–13, Standard Test Method for Sulfur in Gasoline, Diesel Fuel, Jet Fuel, Kerosine, Biodiesel, Biodiesel Blends, and Gasoline-Ethanol Blends by Monochromatic Wavelength Dispersive X-ray Fluorescence Spectrometry, approved September 15, 2013 (''ASTM D7039'').

* * * * *

* 9. Section 80.47 is amended by:

* a. Revising paragraph (a)(7);

* b. Revising paragraphs (b)(1), (b)(2)(i), and (b)(2)(ii);

* c. Revising paragraphs (c)(1), (c)(2)(i), and (c)(2)(ii);

* d. Revising paragraph (d)(1);

* e. Revising paragraph (e)(1);

* f. Revising paragraph (f)(1);

* g. Revising paragraph (g)(1);

* h. Revising paragraph (h)(1);

* i. Revising paragraph (i)(1);

* j. Revising paragraph (j)(1);

* k. Revising paragraph (l);

* l. Revising paragraph (m)(6);

* m. Revising paragraphs (n)(1), (n)(2)(i), and (n)(2)(ii), and removing and reserving paragraph (n)(2)(iv);

* n. Revising paragraphs (o)(1), (o)(2)(i), (o)(2)(ii), and removing and reserving paragraph (o)(2)(iv);

* o. Revising paragraphs (p)(1), (p)(3)(i), and (p)(3)(ii), and removing and reserving paragraph (p)(3)(iv); and

* p. Revising paragraph (r)(1).

The revisions read as follows:

§80.47 Performance-based Analytical Test Method Approach.

* * * * *

(a) * * *

(7) *Locally-named reference materials* are gasoline or diesel fuels that are usually from the regular production of the facility where they are used in laboratory quality control efforts and have been analyzed using the designated method (either by the facility's lab or by a reference lab) to obtain an estimate of their concentration.

* * * * *

(b) * * * (1) *Precision.* Beginning January 1, 2016, for motor vehicle gasoline, gasoline blendstock, and gasoline fuel additives subject to the gasoline sulfur standard at §§80.195 and 80.1603, the maximum allowable standard deviation computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples using good laboratory practices taken from a single homogeneous commercially available gasoline must be less than or equal to 1.5 times the repeatability ''r'' divided by 2.77, where ''r'' equals the ASTM repeatability of ASTM D7039 (Example: A 10ppm sulfur gasoline sample: Maximum allowable standard deviation of 20 tests≤1.5*(1.73ppm/2.77)=0.94 ppm). The 20 results must be a series of tests with a sequential record of analysis and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

(2) * * *

(i) The arithmetic average of a continuous series of at least 10 tests performed using good laboratory practices on a commercially available gravimetric sulfur standard in the range of 1–10 ppm, say 10 ppm, shall not differ from the accepted reference value (ARV) of the standard by more than 0.70 ppm sulfur;

(ii) The arithmetic average of a continuous series of at least 10 tests performed using good laboratory practices on a commercially available gravimetric sulfur standard in the range of 10–20 ppm, say 20 ppm, shall not differ from the ARV of the standard by more than 1.02 ppm sulfur; and

* * * * *

(c) * * * (1) *Precision.* Beginning January 1, 2016, for butane subject to the butane sulfur standard at §§80.82, 80.195, 80.340(b) and 80.1603, the maximum allowable standard deviation computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples using good laboratory practices taken from a single homogeneous commercially available butane must be less than or equal to 1.5 times the repeatability (r) divided by 2.77, where ''r'' equals the ASTM repeatability of ASTM D6667 (Example: A 10 ppm sulfur butane sample: Maximum allowable standard deviation of 20 tests≤1.5*(1.15ppm/2.77) = 0.62 ppm). The 20 results must be a series of tests with a sequential record of analysis and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

(2) * * *

(i) The arithmetic average of a continuous series of at least 10 tests performed using good laboratory practices on a commercially available gravimetric sulfur standard in the range of 1–10 ppm, say 10 ppm, shall not differ from the accepted reference value (ARV) of the standard by more than 0.47 ppm sulfur;

(ii) The arithmetic average of a continuous series of at least 10 tests performed using good laboratory practices on a commercially available gravimetric sulfur standard in the range of 10–20 ppm, say 20 ppm, shall not differ from the accepted reference value (ARV) of the standard by more than 0.94 ppm sulfur; and

* * * * *

(d) * * *

(1) *Precision.* Beginning January 1, 2016, for motor vehicle gasoline, gasoline blendstock, and gasoline fuel additives subject to the gasoline standards of this part, the maximum allowable standard deviation computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples using good laboratory practices taken from a single homogeneous commercially available gasoline must be less than or equal to 0.3 times the reproducibility (R), where ''R'' equals the ASTM reproducibility of ASTM D1319 (Example: A gasoline containing 9 Vol% olefins: Maximum allowable standard deviation of 20 tests ≤0.3*(3.06 Vol%) = 0.92 Vol%). The 20 results must be a series of tests with a sequential record of analysis and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

* * * * *

(e) * * *

(1) *Precision.* Beginning January 1, 2016, for motor vehicle gasoline, gasoline blendstock, and gasoline fuel additives subject to the gasoline standards of this part, the maximum allowable standard deviation computed from the results of a minimum of 20 tests made over 20 days (tests may be

arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples using good laboratory practices taken from a single homogeneous commercially available gasoline must be less than or equal to 0.3 times the reproducibility (R), where ''R'' equals the ASTM reproducibility of ASTM D1319 (Example: A gasoline containing 32Vol% aromatics: Maximum allowable standard deviation of 20 tests ≤0.3*(3.7 Vol%) = 1.11Vol%). The 20 results must be a series of tests with a sequential record of analysis and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

* * * * *

(f) * * *

(1) *Precision.* Beginning January 1, 2016, for motor vehicle gasoline, gasoline blendstock, and gasoline fuel additives subject to the gasoline standards of this part, the maximum allowable standard deviation computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples using good laboratory practices taken from a single homogeneous commercially available gasoline must be less than or equal to 0.3 times the reproducibility (R), where ''R'' equals the ASTM reproducibility of ASTM D5599 (Example: A gasoline containing 3Mass% total oxygen: Maximum allowable standard deviation of 20 tests ≤0.3*(0.32 Mass%) = 0.10 Mass%). The 20 results must be a series of tests with a sequential record of analysis and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

* * * * *

(g) * * *

(1) *Precision.* Beginning January 1, 2016, for motor vehicle gasoline, gasoline blendstock, and gasoline fuel additives subject to the gasoline standards of this part and volatility standards at §80.27, the maximum allowable standard deviation computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples using good laboratory practices taken from a single homogeneous commercially available gasoline must be less than or equal to 0.3 times the reproducibility (R), where ''R'' equals the ASTM reproducibility of ASTM D5191 (Example: A gasoline having a RVP of 6.8psi: Maximum allowable standard deviation of 20 tests withdrawn from a 250 milliliter container ≤0.3*(0.40psi) = 0.12 psi). The 20 results must be a series of tests with a sequential record of analysis and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

* * * * *

(h) * * *

(1) *Precision.* Beginning January 1, 2016, for motor vehicle gasoline, gasoline blendstock, and gasoline fuel additives subject to the gasoline standards of this part, the maximum allowable standard deviation computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples using good laboratory practices taken from a single homogeneous commercially available gasoline must be less than or equal to 0.3 times the reproducibility (R), where ''R'' equals the ASTM reproducibility in Table 10, Groups 2, 3 and 4 (Automated) of ASTM D86–07 for the initial boiling point, E10, E50, E90 and final boiling point. (Example: A gasoline having an initial boiling point of 26 °C and a final boiling point of 215 °C: Maximum allowable standard deviation of 20 tests for initial boiling point ≤0.3*(8.5 °C) = 2.55 °C, maximum allowable standard deviation of 20 tests for E10 ≤0.3*(3.0+2.64*Sc)°C, maximum allowable standard deviation of 20 tests for E50 ≤0.3*(2.9+3.97*Sc)°C, maximum allowable standard deviation of 20 tests for E90 ≤0.3*(2.0+2.53*Sc) °C, and maximum allowable standard deviation of 20 tests for final boiling point ≤0.3*(10.5 °C) = 3.15 °C), where Sc is the average slope (or rate of change) of the gasoline distillation curve as calculated in accordance with section 13.2 of ASTM D86–07. The 20 results must be a series of tests with a sequential record of analysis and no omissions. Note that the precision criteria described in this paragraph (h)(1) differ from what is specified in ASTM D86–12. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

* * * * *

(i) * * *

(1) *Precision.* Beginning January 1, 2016, for motor vehicle gasoline, gasoline blendstock, and gasoline fuel additives subject to the gasoline standards of this part and MSAT2 standards at §§80.41, 80.101, 80.1230, the maximum allowable standard deviation computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples using good laboratory practices taken from a single homogeneous commercially available gasoline must be less than or equal to 0.15 times the reproducibility (R), where ''R'' equals the ASTM reproducibility of ASTM D3606 (Example: A gasoline having a 1Vol% benzene: Maximum allowable standard deviation of 20 tests ≤0.15*(0.18 Vol%) = 0.027Vol%). The 20 results must be a series of tests with a sequential record of analysis and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

* * * * *

(j) * * *

(1) *Precision.* Beginning January 1, 2016, for motor vehicle diesel fuel subject to the motor vehicle diesel standards at §80.520, the maximum allowable standard deviation computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples using good laboratory practices taken from a single homogeneous commercially available diesel fuel must be less than or equal to 0.3 times the reproducibility (R), where ''R'' equals the ASTM reproducibility of ASTM D1319 (Example: A diesel fuel containing 35 Vol% aromatics: maximum allowable standard deviation of 20 tests ≤0.3*(3.3 Vol%) = 0.99Vol%). The 20 results must be a series of tests with a sequential record of analysis and no omissions. A laboratory facility may exclude a given sample or test result only if the

exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

* * * * *

(l) *Qualification criteria for Voluntary Consensus Standard Based (VCSB) Method-Defined Parameter Test Methods and Non-voluntary Consensus Standard Based (non-VCSB) Absolute Fuel Parameter of Sulfur in Gasoline and Butane.* (1)(i) Beginning January 1, 2016, the test facility or VCSB include full test method documentation by the Voluntary Consensus Standard Based (VCSB) organization, including a description of the technology and/or instrumentation that makes the method functional.

(ii) For the Non-voluntary Consensus Standard Based (non-VCSB) Absolute Fuel Parameter of Sulfur in Gasoline and Butane, the test facility include full test method documentation, including a description of the technology and/or instrumentation that makes the method functional.

(2)(i) The test facility or VCSB include information reported in the test method that demonstrates the test method meets the applicable precision information for the method-defined fuel parameter as described in this section.

(ii) For the Non-VCSB absolute fuel parameter of sulfur in gasoline and butane, the test facility include information reported in the test method that demonstrates the applicable accuracy criteria as described in §80.47(b)(2) for gasoline and §80.47(c)(2) for butane.

(3) The test facility or VCSB include information reported in the test method that demonstrates the test method has been evaluated using ASTM D6708 and whether the comparison is a ''null'' result or whether a correlation equation needs to be applied that predicts designated test method results from the applicable method-defined alternative test method.

(4) The test methods specified at §§80.2(w) and 80.46(a)(1), (a)(2), (b)(1), (c)(1), (d)(1), (e)(1), (f)(1), and (g)(1) and in use by a test facility prior to October 28, 2013 are exempt from the requirements of paragraphs (l)(1) through (3) of this section.

(m) * * *

(6) The candidate method-defined non-VCSB test method precision qualification must be conducted in the form of ''between methods reproducibility'' (Rcm) of the candidate method and applicable designated test method as recommended in ASTM D6708, where the Rcm must be equal to or less than 70 percent of the published reproducibility of the applicable designated test method using good laboratory practices.

* * * * *

(n) * * *

(1)(i) *Accuracy SQC.* Every facility shall conduct tests on every instrument with a commercially available gravimetric reference material, or check standard as defined in ASTM D6299 at least three times a year using good laboratory practices. The facility must pre-treat and assess results from the check standard testing after at least 15 testing occasions as described in section 8.2 of this standard practice. The facility must construct ''MR'' and ''I'' charts with control lines as described in section 8.4 and appropriate Annex sections of this standard practice. In circumstances where the absolute difference between the mean of multiple back-to-back tests of the standard reference material and the accepted reference value of the standard reference material is greater than 0.75 times the published reproducibility of the test method, the cause of such difference must be investigated by the facility. Records of the standard reference materials measurements as well as any investigations into any exceedance of these criteria must be kept for a period of five years.

(ii) The expanded uncertainty of the accepted reference value of consensus named fuels shall have the following accuracy qualification criterion: Accuracy qualification criterion = square root [(0.75R)^2+(0.75R)^2/L], where L = the number of single results obtained from different labs used to calculate the consensus ARV.

(2)(i) *Precision SQC.* Every facility shall conduct tests on every instrument with a quality control material as defined in paragraph 3.2.8 in ASTM D6299 either once per week or once per every 20 production tests, whichever is more frequent. The facility must construct and maintain an ''I'' chart as described in section 8 and section A1.5.1 and a ''MR'' chart as described in section A1.5.4. Any violations of control limit(s) should be investigated by personnel of the facility and records kept for a period of five years.

(ii) *Validation of New QC Material.* When a test facility is making a transition from one batch of QC material to the next batch of QC material, the facility will either construct an ''I'' chart as described in section 8.7 and section A1.5.1 of ASTM D6299, or follow the ''Q-Procedure'' in Annex 1.9 of ASTM D6299. In following the Q-Procedure, if the plot of results from the ''old'' and ''new'' QC materials on its respective chart shows no special-cause signals, then the result of the ''new'' QC material will be considered valid.

* * * * *

(iv) [Reserved]

* * * * *

(o) * * *

(1)(i) *Accuracy SQC.* Every facility shall conduct tests of every instrument with a commercially available check standard as defined in ASTM D6299 at least three times a year using good laboratory practices. The check standard must be an ordinary fuel with levels of the fuel parameter of interest close to either the applicable regulatory standard or the average level of use for the facility. For facilities using a VCSB designated method defined test method, the Accepted Reference Value of the check standard must be determined by the respective designated test method for the fuel parameter following the guidelines of ASTM D6299. Facilities using a VCSB alternative method defined test method must use the Accepted Reference Value of the check standard as determined in a VCSB Inter Laboratory Crosscheck Program (ILCP) or a commercially available ILCP following the guidelines of ASTM D6299. If the Accepted Reference Value is not provided in the ILCP, accuracy must be assessed based upon the respective EPA-designated test method using appropriate production samples. The facility must pre-treat and assess results from the check standard testing after at least 15 testing occasions as described in section 8.2 of this standard practice. The facility must construct ''MR'' and ''I'' charts with control lines as described in section 8.4 and appropriate Annex sections of this standard practice. In circumstances where the absolute difference between the mean of multiple back-to-back tests of the standard reference material and the accepted reference value of the standard reference material is greater than 0.75 times the published reproducibility of the test method, the cause of such difference must be investigated by the facility. Participation in a VCSB ILCP at least three times a year satisfies this Accuracy SQC requirement (Examples of ILCP: ASTM Reformulated Gasoline ILCP or ASTM motor gasoline ILCP). Records of the standard reference materials measurements as well as any investigations into any exceedance of these criteria must be kept for a period of five years.

(ii) The expanded uncertainty of the accepted reference value of consensus

named fuels shall have the following accuracy qualification criterion: Accuracy qualification criterion = square root [(0.75R)^2+(0.75R)^2/L], where L = the number of single results obtained from different labs used to calculate the consensus ARV.

(2)(i) *Precision SQC.* Every facility shall conduct tests of every instrument with a quality control material as defined in paragraph 3.2.8 in ASTM D6299 either once per week or once per every 20 production tests, whichever is more frequent. The facility must construct and maintain an ''I'' chart as described in section 8 and section A1.5.1 and a ''MR'' chart as described in section A1.5.4. Any violations of control limit(s) should be investigated by personnel of the facility and records kept for a period of five years.

(ii) *Validation of New QC Material.* When a test facility is making a transition from one batch of QC material to the next batch of QC material, the facility will either construct an ''I'' chart as described in section 8.7 and section A1.5.1 of ASTM D6299, or follow the ''Q-Procedure'' in Annex 1.9 of ASTM D6299. In following the Q-Procedure if the plot of results from the ''old'' and ''new'' QC materials on its respective chart shows no special-cause signals, then the result of the ''new'' QC material will be considered valid.

* * * * *

(iv) [Reserved]

* * * * *

(p) * * *

(1)(i) *Accuracy SQC for Non-VCSB Method-Defined test methods with minimal matrix effects.* Every facility shall conduct tests on every instrument with a commercially available check standard as defined in the ASTM D6299 at least three times a year using good laboratory practices. The check standard must be an ordinary fuel with levels of the fuel parameter of interest close to either the applicable regulatory standard or the average level of use for the facility. Facilities using a Non-VCSB alternative method defined test method must use the Accepted Reference Value of the check standard as determined in either a VCSB Inter Laboratory Crosscheck Program (ILCP) or a commercially available ILCP following the guidelines of ASTM D6299. If the Accepted Reference Value is not provided in the ILCP, accuracy must be assessed based upon the respective EPA designated test method using appropriate production samples. The facility must pre-treat and assess results from the check standard testing after at least 15 testing occasions as described in section 8.2 of this standard practice. The facility must construct ''MR'' and ''I'' charts with control lines as described in section 8.4 and appropriate Annex sections of this standard practice. In circumstances where the absolute difference between the mean of multiple back-to-back tests of the standard reference material and the accepted reference value of the standard reference material is greater than 0.75 times the published reproducibility of the fuel parameter's respective designated test method, the cause of such difference must be investigated by the facility. Records of the standard reference materials measurements as well as any investigations into any exceedance of these criteria must be kept for a period of five years.

(ii) The expanded uncertainty of the accepted reference value of consensus named fuels shall have the following accuracy qualification criterion: Accuracy qualification criterion = square root [(0.75R)^2+(0.75R)^2/L], where L = the number of single results obtained from different labs used to calculate the consensus ARV.

* * * * *

(3)(i) *Precision SQC.* Every facility shall conduct tests on every instrument with a quality control material as defined in paragraph 3.2.8 in ASTM D6299 either once per week or once per every 20 production tests, whichever is more frequent. The facility must construct and maintain an ''I'' chart as described in section 8 and section A1.5.1 and a ''MR'' chart as described in section A1.5.4. Any violations of control limit(s) should be investigated by personnel of the facility and records kept for a period of five years.

(ii) *Validation of New QC Material.* When a test facility is making a transition from one batch of QC material to the next batch of QC material, the facility will either construct an ''I'' chart as described in section 8.7 and section A1.5.1 of ASTM D6299, or follow the ''Q-Procedure'' in Annex 1.9 of ASTM D6299. In following the Q-Procedure, if the plot of results from the ''old'' and ''new'' QC materials on its respective chart shows no special-cause signals, then the result of the ''new'' QC material will be considered valid.

* * * * *

(iv) [Reserved]

* * * * *

(r) * * *

(1) *ASTM International material.* The following standards are available from ASTM International, 100 Barr Harbor Dr., P.O. Box C700, West Conshohocken, PA 19428–2959, (877) 909–ASTM, or *http://www.astm.org:*

(i) ASTM D86–07, Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure, approved January 15, 2007 (''ASTM D86'').

(ii) ASTM D1319–13, Standard Test Method for Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Adsorption, approved May 1, 2013 (''ASTM D1319'').

(iii) ASTM D3606–10, Standard Test Method for Determination of Benzene and Toluene in Finished Motor and Aviation Gasoline by Gas Chromatography, approved October 1, 2010 (''ASTM D3606'').

(iv) ASTM D5191–13, Standard Test Method for Vapor Pressure of Petroleum Products (Mini Method), approved December 1, 2013 (''ASTM D5191'').

(v) ASTM D5599–00 (Reapproved 2010), Standard Test Method for Determination of Oxygenates in Gasoline by Gas Chromatography and Oxygen Selective Flame Ionization Detection, approved October 1, 2010 (''ASTM D5599'').

(vi) ASTM D6299–13, Standard Practice for Applying Statistical Quality Assurance and Control Charting Techniques to Evaluate Analytical Measurement System Performance, approved October 1, 2013 (''ASTM D6299'').

(vii) ASTM D6667–10, Standard Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum Gases by Ultraviolet Fluorescence, approved October 1, 2010 (''ASTM D6667'').

(viii) ASTM D6708–13, Standard Practice for Statistical Assessment and Improvement of Expected Agreement Between Two Test Methods that Purport to Measure the Same Property of a Material, approved May 1, 2013 (''ASTM D6708'').

(ix) ASTM D6792–13, Standard Practice for Quality System in Petroleum Products and Lubricants Testing Laboratories, approved May 15, 2013 (''ASTM D6792'').

(x) ASTM D7039–13, Standard Test Method for Sulfur in Gasoline, Diesel Fuel, Jet Fuel, Kerosine, Biodiesel, Biodiesel Blends, and Gasoline-Ethanol Blends by Monochromatic Wavelength Dispersive X-ray Fluorescence Spectrometry, approved September 15, 2013, (''ASTM D7039'').

* * * * *

* 10. Section 80.75 is amended by revising paragraph (a)(2)(xi)(G) to read as follows:

§80.75 Reporting requirements.

* * * * *

(a) * * *

(2) * * *

(xi) * * *

(G) The properties of the pentane batch specified by the pentane supplier, or the properties specified in §80.86(a)(3) or (a)(4), as appropriate along with the test method used to measure these properties.

* * * * *

* 11. Section 80.82 is amended by revising paragraph (e)(1) to read as follows:

§80.82 Butane blending.

* * * * *

(e)(1) When butane is blended with conventional gasoline under this section during the period May 1 through September 15, the refiner shall demonstrate through sampling and testing, using the test method for Reid vapor pressure in §80.46 or §80.47, as applicable, that each batch of conventional gasoline blended with butane meets the volatility standards specified in §80.27 and in any EPA approved SIP.

* * * * *

* 12. Section 80.85 is amended by revising paragraphs (a) introductory text, (b) introductory text, (g), and (i) to read as follows:

§80.85 Pentane blending.

* * * * *

(a) Any refiner that blends pentane for which the refiner has product transfer documents from a registered pentane supplier which demonstrate that the pentane is blender-commercial grade, as defined in §80.86(a)(3), may demonstrate compliance with the standards in this part based on the properties specified in §80.86(a)(3), or the properties specified by the pentane supplier, provided that the refiner does all the following:

* * * * *

(b) Any refiner that blends pentane for which the refiner has product transfer documents from a registered pentane supplier which demonstrate that the pentane is blender-non-commercial grade, as defined in §80.86(a)(4), may demonstrate compliance with the standards in this part based on the properties specified in §80.86(a)(4), or the properties specified by the pentane supplier, provided that the refiner does all the following:

* * * * *

(g) All pentane blended into gasoline during the annual averaging period must be included in annual average compliance calculations by a refiner for each of its refineries.

* * * * *

(i) If a refiner does not fully implement the requirements of this section, it may not rely on test results from the pentane producer, and may only blend pentane with gasoline if it fully complies with all applicable requirements of this part 80, including the sampling and testing requirements applicable to refiners who produce gasoline by adding blendstocks to PCG.

* 13. Section 80.86 is amended by revising paragraphs (b)(2)(iv), (b)(3)(iii), and (c) to read as follows:

§80.86 Requirements for producers and importers of pentane used by pentane blenders.

* * * * *

(b) * * *

(2) * * *

(iv) A description of the production facility which demonstrates that the facility is capable of producing pentane that is compliant with the requirements of this section without significant modifications to the existing facility.

* * * * *

(3) * * *

(iii) A description of the importer's operating facility which demonstrates that the importer is capable of providing pentane that is compliant with the requirements of this section without significant modifications to the existing facility.

* * * * *

(c) *PTDs.* The producer or importer of pentane for use by pentane blenders must initiate a PTD for each batch that it ships from its facility which contains the information specified in paragraphs (c)(1) and (c)(2) of this section and the statement in paragraph (c)(3) or (c)(4) of this section, as applicable.

(1) The pentane producer or importer company name and facility registration number issued by EPA pursuant to paragraph (b) of this section.

(2) The name and address of the transferor and transferee.

(3) "Blender commercial grade pentane for use by pentane blenders".

(4) "Blender non-commercial grade pentane for use by pentane blenders".

(5) PTDs that are compliant with the requirements in paragraph (c) of this section must be transferred from each party transferring pentane for use by pentane blenders to each party that receives pentane for use by pentane blenders through to the pentane blender.

(6) Alternative PTD language to that specified in paragraphs (c)(3) and (c)(4) of this section may be used as approved by EPA.

* * * * *

Subpart H—Gasoline Sulfur

* 14. Section 80.315 is amended by revising paragraph (b)(1)(iii) to read as follows:

§80.315 How are credits used and what are the limitations on credit use?

* * * * *

(b) * * *

(1) * * *

(iii) Any credit transfer takes place no later than March 31 following the calendar year averaging period when the credits are used.

* * * * *

* 15. Section 80.330 is amended by:

* a. Revising paragraphs (b)(1)(i), (b)(1)(ii), and (b)(2);

* b. Revising paragraph (c)(1);

* c. Revising paragraph (d)(2); and

* d. Revising paragraph (e).

The revisions read as follows:

§80.330 What are the sampling and testing requirements for refiners and importers?

* * * * *

(b) * * *

(1) * * *

(i) ASTM D4057.

(ii) Samples collected under the applicable procedures in ASTM D5842 may be used for measuring sulfur content if there is no contamination present that could affect the sulfur test result.

(2) Automatic sampling of petroleum products in pipelines shall be performed according to the applicable procedures specified in ASTM D4177.

(c) * * *

(1) For purposes of paragraph (a) of this section, refiners and importers shall use the method provided in §80.46(a)(1) or one of the alternative test methods listed in §80.46(a)(3) to measure the sulfur content of gasoline they produce or import through December 31, 2015. Beginning January 1, 2016, for purposes of paragraph (a) of this section, refiners and importers shall use an approved method in §80.47.

* * * * *

(d) * * *

(2) Except as provided in paragraph (d)(1) of this section, any ASTM sulfur test method for gaseous fuels may be used for quality assurance testing under §§80.340(b)(4) and 80.400, if the protocols of the ASTM method are followed and the alternative test method is correlated to the method provided in §80.46(a)(2) through December 31, 2015, or in §80.47 beginning January 1, 2016.

(e) *Materials incorporated by reference.* The published materials identified in this section are incorporated by reference into this section with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, a document must be published in the **Federal Register** and the material must be available to the public. All approved materials are available for inspection at the Air and Radiation Docket and Information Center (Air Docket) in the EPA Docket Center (EPA/DC) at Rm. 3334, EPA West Bldg., 1301 Constitution Ave. NW., Washington, DC. The EPA/DC Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number of the EPA/DC Public Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1742. These approved materials are also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741–6030 or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.* In addition, these materials are available from the sources listed below.

(1) ASTM International material. The following standards are available from ASTM International, 100 Barr Harbor Dr., P.O. Box C700, West Conshohocken, PA 19428–2959, (877) 909–ASTM, or *http://www.astm.org:*

(i) ASTM D4057–12, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, approved December 1, 2012 (''ASTM D4057'').

(ii) ASTM D4177–95 (Reapproved 2010), Standard Practice for Automatic Sampling of Petroleum and Petroleum Products, approved May 1, 2010 (''ASTM D4177'').

(iii) ASTM D5842–14, Standard Practice for Sampling and Handling of Fuels for Volatility Measurement, approved January 15, 2014 (''ASTM D5842'').

(2) [Reserved]

Subpart I— Motor Vehicle Diesel Fuel; Nonroad, Locomotive, and Marine Diesel Fuel; and ECA Marine Fuel

* 16. Section 80.510 is amended by revising the section heading and paragraph (k) to read as follows:

§80.510 What are the standards and marker requirements for refiners and importers for NRLM diesel fuel and ECA marine fuel?

* * * * *

(k) Beginning June 1, 2014, all ECA marine fuel is subject to a maximum per-gallon sulfur content of 1,000 ppm. Note that ECA marine fuel does not include fuel used in exempted steamships (or other exempted or excluded vessels) or fuel that exceeds the fuel sulfur limits while operating in an ECA or an ECA associated area as allowed by the U.S. government consistent with MARPOL Annex VI Regulation 3 or Regulation 4 (see §80.2(ttt)).

* 17. Section 80.511 is amended by revising paragraph (b)(9) to read as follows:

§80.511 What are the per-gallon and marker requirements that apply to NRLM diesel fuel, ECA marine fuel, and heating oil downstream of the refiner or importer?

* * * * *

(b) * * *

(9) The per-gallon sulfur standard of §80.510(k) shall apply to all ECA marine fuel beginning August 1, 2014, for all downstream locations other than retail outlets or wholesale purchaser-consumer facilities, shall apply to all ECA marine fuel beginning October 1, 2014, for retail outlets and wholesale purchaser-consumer facilities, and shall apply to all ECA marine fuel beginning December 1, 2014, for all locations. Note that ECA marine fuel does not include fuel used in exempted steamships (or other exempted or excluded vessels) or fuel that exceeds the fuel sulfur limits while operating in an ECA or an ECA associated area as allowed by the U.S. government consistent with MARPOL Annex VI Regulation 3 or Regulation 4 (see §80.2(ttt)).

* * * * *

* 18. Section 80.574 is amended by revising paragraph (b) to read as follows:

§80.574 What labeling requirements apply to retailers and wholesale purchaser-consumers of ECA marine fuel beginning June 1, 2014?

* * * * *

(b) Alternative labels to those specified in paragraph (a) of this section may be used as approved by EPA. Send requests to—

(1) *For U.S. Mail:* U.S. EPA, Attn: ECA Marine Fuel Alternative Label Request, 6406J, 1200 Pennsylvania Avenue NW, Washington, DC 20460.

(2) *[Reserved]*

* 19. Section 80.584 is amended by revising paragraph (a) to read as follows:

§80.584 What are the precision and accuracy criteria for approval of test methods for determining the sulfur content of motor vehicle diesel fuel, NRLM diesel fuel, and ECA marine fuel?

(a) *Precision.* (1) For motor vehicle diesel fuel and diesel fuel additives subject to the 15 ppm sulfur standard of §80.520(a)(1) and NRLM diesel fuel and diesel fuel additives subject to the 15 ppm sulfur standard of §80.510(b) and (c), a standard deviation less than 0.72 ppm, computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples taken from a single homogeneous commercially available diesel fuel with a sulfur content in the range of 5–15 ppm. The 20 results must be a series of tests with a sequential record of the analyses and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

(2) For motor vehicle diesel fuel subject to the 500 ppm sulfur standard of §80.520(c), and for NRLM diesel fuel subject to the 500 ppm sulfur standard of §80.510(a), of a standard deviation less than 9.68 ppm, computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples taken from a single homogeneous commercially available diesel fuel with a sulfur content in the range of 200–500 ppm. The 20 results must be a series of tests with a sequential record of the analyses and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

(3) For ECA marine fuel subject to the 1,000 ppm sulfur standard of §80.510(k), of a standard deviation less than 18.07 ppm, computed from the results of a minimum of 20 tests made over 20 days (tests may be arranged into no fewer than five batches of four or fewer tests each, with only one such batch allowed per day over the minimum of 20 days) on samples taken from a single homogeneous commercially available diesel fuel with a sulfur content in the range of 700–1,000 ppm. The 20 results must be a

series of tests with a sequential record of the analyses and no omissions. A laboratory facility may exclude a given sample or test result only if the exclusion is for a valid reason under good laboratory practices and it maintains records regarding the sample and test results and the reason for excluding them.

* * * * *

* 20. Section 80.585 is amended by:

* a. Revising paragraph (a);

* b. Revising paragraphs (e)(1), (e)(2), and (e)(4); and

* c. Adding a new paragraph (f).

The revisions and addition read as follows:

§80.585 What is the process for approval of a test method for determining the sulfur content of diesel or ECA marine fuel?

(a)(1) *Approval of test methods approved by voluntary consensus-based standards bodies.* Through December 31, 2015, for such a method to be approved, the following information must be submitted to the Administrator by each test facility for each test method that it wishes to have approved: Any test method approved by a voluntary consensus-based standards body, such as ASTM International or the International Organization for Standardization (ISO), shall be approved as a test method for determining the sulfur content of diesel fuel if it meets the applicable accuracy and precision criteria under §80.584. The approval of a test method is limited to the single test facility that performed the testing for accuracy and precision. The individual facility must submit the accuracy and precision results for each method, including information on the date and time of each test measurement used to demonstrate precision, following procedures established by the Administrator.

(2) *Approval of test methods approved by voluntary consensus-based standards bodies.* Beginning January 1, 2016, any test method approved by a voluntary consensus-based standards body, such as the ASTM International or the International Organization for Standardization (ISO), shall be approved as a test method for determining the sulfur content of diesel fuel if it meets the applicable accuracy and precision criteria under §80.584. These records must be kept by the facility for a period of five years.

* * * * *

(e) * * *

(1) Follow all mandatory provisions of ASTM D6299 and construct control charts from the mandatory quality control testing prescribed in paragraph 7.1 of the reference method, following guidelines under A 1.5.1 for individual observation charts and A 1.5.4 for moving range charts.

(2) Follow paragraph 7.3.1 of ASTM D6299 to check standards using a reference material at least monthly or following any major change to the laboratory equipment or test procedure. Any deviation from the accepted reference value of a check standard greater than 1.44 ppm (for diesel fuel subject to the 15 ppm sulfur standard), 19.36 ppm (for diesel fuel subject to the 500 ppm sulfur standard), or 36.14 ppm (for ECA marine fuel subject to the 1,000 ppm sulfur standard must be investigated.

* * * * *

(4) Upon discovery of any quality control testing violation of paragraph A 1.5.1.3 for individual observation charts or A1.5.4.1 and A1.5.4.2 for moving range charts of ASTM D6299, or any check standard deviation greater than 1.44 ppm (for diesel fuel subject to the 15 ppm sulfur standard), 19.36 ppm (for diesel fuel subject to the 500 ppm sulfur standard), or 36.14 ppm (for ECA marine fuel subject to the 1,000 ppm sulfur standard), conduct an investigation into the cause of such violation or deviation and, after restoring method performance to statistical control, retest retained samples from batches originally tested since the last satisfactory quality control material or check standard testing occasion.

(f) *Materials incorporated by reference.* The published materials identified in this section are incorporated by reference into this section with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, a document must be published in the **Federal Register** and the material must be available to the public. All approved materials are available for inspection at the Air and Radiation Docket and Information Center (Air Docket) in the EPA Docket Center (EPA/DC) at Rm. 3334, EPA West Bldg., 1301 Constitution Ave. NW., Washington, DC. The EPA/DC Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number of the EPA/DC Public Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1742. These approved materials are also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741–6030 or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.* In addition, these materials are available from the sources listed below.

(1) *ASTM International material.* The following standards are available from ASTM International, 100 Barr Harbor Dr., P.O. Box C700, West Conshohocken, PA 19428–2959, (877) 909–ASTM, or *http://www.astm.org:*

(i) ASTM D6299–13, Standard Practice for Applying Statistical Quality Assurance and Control Charting Techniques to Evaluate Analytical Measurement System Performance, approved October 1, 2013 (''ASTM D6299'').

(ii) [Reserved]

(2) [Reserved]

* 21. Section 80.590 is amended by revising paragraphs (a)(7)(vii) and (b) to read as follows:

§80.590 What are the product transfer document requirements for motor vehicle diesel fuel, NRLM diesel fuel, heating oil, ECA marine fuel, and other distillates?

(a) * * *

(7) * * *

(vii) *ECA marine fuel.* For ECA marine fuel produced or imported beginning June 1, 2014, ''1,000 ppm sulfur (maximum) ECA marine fuel. For use in Category 3 marine vessels only. Not for use in engines not installed on C3 marine vessels.''

(b) Any of the following may be substituted for the descriptions in paragraph (a) of this section, as appropriate:

(1) ''This is high sulfur diesel fuel for use only in Guam, American Samoa, or the Northern Mariana Islands.''

(2) ''This diesel fuel is for export use only.''

(3) ''This diesel fuel is for research, development, or testing purposes only.''

(4) ''This diesel fuel is for use in diesel highway vehicles or nonroad equipment under an EPA-approved national security exemption only.''

(5) ''High sulfur fuel. For use only in ships with an approved permit as allowed by MARPOL Annex VI, Regulation 3.''

(6) ''High sulfur fuel. For use only in ships as allowed by MARPOL Annex VI, Regulation 4.''

(7) ''High sulfur fuel. For use only in ships as allowed by MARPOL Annex VI, Regulation 3 or Regulation 4.''

* * * * *

* 22. Section 80.597 is amended by revising paragraph (d)(3) introductory text to read as follows:

§80.597 What are the registration requirements?

* * * * *

(d) * * *

(3) Except as prescribed in paragraph (d)(6) of this section, each entity as defined in §80.502 that intends to deliver or receive custody of any of the following fuels beginning June 1, 2014, must register with EPA by December 31, 2012, or prior to commencement of producing, importing, or distributing any distillate or residual fuel listed in this paragraph (d)(3):

* * * * *

* 23. Section 80.607 is amended by:

* a. Revising the section heading;

* b. Revising paragraph (a);

* c. Revising paragraphs (c)(3)(iv) and (c)(4)(iv);

* d. Revising paragraphs (d)(1) and (d)(3); and

* e. Revising paragraph (f).

The revisions and addition read as follows:

§80.607 What are the requirements for obtaining an exemption for diesel fuel used for research, development or testing purposes?

(a) *Written request for a research and development exemption.* Any person may receive an exemption from the provisions of this subpart for MVNRLM diesel fuel used for research, development, or testing purposes by submitting the information listed in paragraph (c) of this section to: U.S. EPA—Attn: Research and Development Exemption Request, 6406J, 1200 Pennsylvania Avenue NW., Washington, DC 20460.

* * * * *

(c) * * *

(3) * * *

(iv) The quantity of fuel which does not comply with the requirements of §§80.520 and 80.521 for motor vehicle diesel fuel, or §80.510 for NRLM diesel fuel.

(4) * * *

(iv) The manner in which the party will ensure that the research and development fuel will be segregated from motor vehicle diesel fuel or NRLM diesel fuel, as applicable, and how fuel pumps will be labeled to ensure proper use of the research and development fuel.

* * * * *

(d) *Additional requirements.* (1) The product transfer documents associated with research and development diesel fuel must comply with the product transfer document requirements of §80.590(b)(3).

* * * * *

(3) The research and development fuel must be kept segregated from non-exempt MVNRLM diesel fuel at all points in the distribution system.

* * * * *

(f) *Effects of exemption.* Motor vehicle diesel fuel or NRLM diesel fuel that is subject to a research and development exemption under this section is exempt from other provisions of this subpart provided that the fuel is used in a manner that complies with the purpose of the program under paragraph (c) of this section and the requirements of this section.

* * * * *

* 24. Section 80.608 is amended by revising paragraph (d) to read as follows:

§80.608 What requirements apply to diesel fuel and ECA marine fuel for use in the Territories?

* * * * *

(d) Segregated from non-exempt MVNRLM diesel fuel and/or non-exempt ECA marine fuel at all points in the distribution system from the point the fuel is designated as exempt fuel only for use in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands, while the exempt fuel is in the United States (including an Emission Control Area, or an ECA associated area per 40 CFR 1043.20) but outside these Territories.

Subpart L—Gasoline Benzene

* 25. Section 80.1270 is amended by revising paragraph (b)(2) to read as follows:

§80.1270 Who may generate benzene credits under the ABT program?

* * * * *

(b) * * *

(2) Oxygenate blenders, butane blenders using the provisions of §80.82, pentane blenders using the provisions of §80.85, and transmix producers may not generate standard credits.

* * * * *

* 26. Section 80.1295 is amended by revising paragraph (b)(1)(ii) to read as follows:

§80.1295 How are gasoline benzene credits used?

* * * * *

(b) * * *

(1) * * *

(ii) Any credit transfer takes place no later than March 31 following the calendar year averaging period when the credits are used.

* * * * *

Subpart M—Renewable Fuel Standard

* 27. Section 80.1426 is amended by revising paragraph (c)(7) to read as follows:

§80.1426 How are RINs generated and assigned to batches of renewable fuel by renewable fuel producers or importers?

* * * * *

(c) * * *

(7) For renewable fuel oil that is heating oil as defined in paragraph (2) of the definition of heating oil in §80.1401, renewable fuel producers and importers shall not generate RINs unless they have received affidavits from the final end user or users of the fuel oil as specified in §80.1451(b)(1)(ii)(T)(2).

* * * * *

* 28. Section 80.1453 is amended by revising paragraphs (a) introductory text and (a)(12) introductory text to read as follows:

§80.1453 What are the product transfer document (PTD) requirements for the RFS program?

(a) On each occasion when any party transfers custody or ownership of neat and/or blended renewable fuels, except when such fuel is dispensed into motor vehicles or nonroad vehicles, engines, or equipment, or separated RINs subject to this subpart, the transferor must provide to the transferee documents that include all of the following information, as applicable:

* * * * *

(12) For the transfer of renewable fuel for which RINs were generated, an accurate and clear statement on the product transfer document of the fuel type from Table 1 to §80.1426, and designation of the fuel use(s) intended by the transferor, as follows:

* * * * *

* 29. Section 80.1471 is amended by revising paragraph (d)(1) to read as follows:

§80.1471 Requirements for QAP auditors.

* * * * *

(d)(1) In the event that an independent third-party auditor identifies a RIN that may have been invalidly generated, the independent third-party auditor shall, within five business days, send notification of the potentially invalidly generated RIN to the EPA and the renewable fuel producer that generated the RIN.

* * * * *

Subpart O—Gasoline Sulfur

* 30. Section 80.1609 is amended by revising paragraph (a) to read as follows:

§80.1609 Oxygenate blender requirements.

(a) Oxygenate blenders who blend only oxygenate that complies with the requirements of paragraph (b) of this section into gasoline downstream of the refinery that produced the gasoline or the import facility where the gasoline was imported are not subject to the refiner or importer requirements of this subpart for such gasoline, but are subject to the requirements and prohibitions applicable to downstream parties in this subpart. Such oxygenate blenders are subject to the requirements of paragraph (b) of this section, the requirements and prohibitions applicable to downstream parties, the requirements of §80.1603(d)(2), and the prohibition specified in §80.1660(e).

* * * * *

* 31. Section 80.1611 is amended by:

* a. Revising paragraph (a)(1);

* b. Revising paragraphs (c) introductory text, (c)(1), and (c)(2); and

* c. Revising paragraph (d).

* The revisions read as follows:

§80.1611 Standards and requirements for certified ethanol denaturant.

* * * * *

(a) *Standards.* (1) The sulfur content must not be greater than 330 ppm as determined in accordance with the test requirements of §80.1630. If the denaturant manufacturer represents a batch of denaturant as having a maximum sulfur content lower than 330 ppm in the PTD (for example, no greater than 120 ppm), then the actual sulfur content must be no greater than the stated value as determined in accordance with the requirements of §80.1644.

* * * * *

(c) *PTDs.* In addition to any other product transfer document requirements under this part 80, on each occasion when any person transfers custody or title to any certified ethanol denaturant upstream of a DFE production or import facility, the transferor shall provide to the transferee product transfer documents which include all the following information.

(1) The following statement: ''Certified Ethanol Denaturant suitable for use in the manufacture of denatured fuel ethanol meeting EPA standards.''

(2) The PTD must state the sulfur content is 330 ppm or less, or if the certified ethanol denaturant manufacturer represents a batch of denaturant as having a maximum sulfur content lower than 330 ppm the PTD must state that lower sulfur maximum (*e.g.,* has a sulfur content of 120 ppm or less).

* * * * *

(d) *Batch numbers.* Every batch of certified ethanol denaturant produced or imported at a denaturant production or import facility shall be assigned a number (the ''batch number''), consisting of the EPA-assigned ethanol denaturant producer or importer registration number, the EPA facility registration number, the last two digits of the year in which the batch was produced, and a unique number for the batch, beginning with the number one for the first batch produced or imported each calendar year and each subsequent batch during the calendar year being assigned the next sequential number (*e.g.,* 4321–54321–95–000001, 4321–54321–95–000002, etc.).

* 32. Section 80.1613 is amended by revising paragraph (a) introductory text and adding paragraph (b)(3) to read as follows:

§80.1613 Standards and other requirements for gasoline additive manufacturers and blenders.

* * * * *

(a) Gasoline additive manufacturers, as defined in 40 CFR 79.2(f), who manufacture additives with a maximum allowed treatment rate of less than 1.0 volume percent must meet all the following requirements:

* * * * *

(b) * * *

(3) The person does not add the additive at a concentration that contributes more than 3 ppm on a per gallon basis to the sulfur content of gasoline.

* 33. Section 80.1615 is amended by revising paragraphs (d) introductory text, (d)(1), and (d)(2) to read as follows:

§80.1615 Credit generation.

* * * * *

(d) For approved small refiners and small volume refineries only, the number of credits generated from January 1, 2017 through December 31, 2019 shall be calculated annually for each applicable averaging period as follows:

(1) From January 1, 2017 through December 31, 2019, if a small refiner or small volume refinery has an annual average sulfur level (S_a) less than 30.00 ppm but greater than 10.00 ppm, the refiner may generate credits using the equation specified in paragraph (b) of this section for use in complying with the annual average standards of subpart H of this part.

(2) From January 1, 2017 through December 31, 2019, if a small refiner or small volume refinery has an annual average sulfur level (S_a) less than 10.00 ppm, the refiner may generate credits using the equation specified in paragraph (c) of this section for use in complying with the annual average standards of §80.1603(c)(1) and the following equation for complying with the annual average standards of subpart H of this part:

$$CR_{T2} = V_a \times (20.00)$$

Where:

CR_{T2} = Credits generated for the averaging period for use in complying with the annual average standards of subpart H of this part only.

V_a = Total annual volume of gasoline produced at a refinery or imported during the averaging period.

(For example: A small refiner with an annual average sulfur level of 8 ppm in 2018 may generate CR_a = 2 ppm-volume credits (10–8) for compliance with the annual average standards of §80.1603(c)(1) plus CR_{T2} = 20 ppm-volume credits (30–10) for compliance with the annual average sulfur standards of subpart H of this part.)

* * * * *

* 34. Section 80.1616 is amended by adding and reserving paragraph (a)(4) and revising paragraph (b)(2) to read as follows:

§80.1616 Credit use and transfer.

(a) * * *

(4) [Reserved]

* * * * *

(b) * * *

(2) Credits generated under §80.1615(b) through (d) are valid for use for five years after the year in which they are generated, except that any CR_a credits generated in 2015 and 2016 and any remaining CR_{T2} credits will expire and become invalid after December 31, 2019, (with the 2019 annual compliance report, due March 31, 2020).

* * * * *

* 35. Section 80.1620 is amended by revising paragraphs (d), (e)(1), (e)(2), and (f)(1) to read as follows:

§80.1620 Small refiner definition.

* * * * *

(d) Notwithstanding the provisions of paragraphs (a) and (e)(1) of this section, a refiner that acquires or reactivates a refinery that was shut down or non-operational during calendar year 2012, may apply for small refiner status under this subpart O.

(e) * * *

(1) Refiners with refineries built or started up on or after January 1, 2013.

(2) Persons who exceed the employee or crude oil capacity criteria under this section on January 1, 2013, but who meet these criteria after that date, regardless of whether the reduction in employees or crude oil capacity is due

to operational changes at the refinery or a company sale or reorganization.

* * * * *

(f)(1) A refiner approved as a small refiner under §80.1622 who subsequently ceases production of gasoline from processing crude oil through refinery processing units, employs more than 1,500 people, or exceeds the 155,000 bpcd crude oil capacity limit after January 1, 2013 as a result of merger with or acquisition of or by another entity, is disqualified as a small refiner, except as provided for under paragraph (f)(4) of this section. If such disqualification occurs, the refiner shall notify EPA in writing no later than 20 days following the disqualifying event.

* * * * *

* 36. Section 80.1621 is amended by adding and reserving paragraph (c) and adding paragraph (d) to read as follows:

§80.1621 Small volume refinery definition.

* * * * *

(c) [Reserved]

(d)(1) A refinery approved as a small refinery under §80.1622 that subsequently ceases production of gasoline from processing crude oil through refinery processing units or exceeds the 75,000 barrel average aggregate daily crude oil throughput limit is disqualified as a small refinery. If such disqualification occurs, the refinery shall notify EPA in writing no later than 20 days following the disqualifying event.

(2) Any refinery whose status changes under this paragraph (d) shall meet the applicable standards of §80.1603 within a period of up to 30 months from the disqualifying event.

* 37. Section 80.1640 is amended by revising paragraph (a)(2) to read as follows:

§80.1640 Standards and requirements that apply to refiners producing gasoline by blending blendstocks into previously certified gasoline (PCG).

(a) * * *

(2) To accomplish the exclusion required in paragraph (a)(1) of this section, the refiner must determine the volume and sulfur content of the PCG used at the refinery and the volume and sulfur content of the gasoline produced at the refinery, and use the compliance calculation procedures in paragraphs (a)(3) and (4) of this section.

* * * * *

* 38. Section 80.1642 is amended by revising paragraphs (c)(1) and (c)(3) to read as follows:

§80.1642 Sampling and testing requirements for producers and importers of denatured fuel ethanol and other oxygenates for use by oxygenate blenders.

* * * * *

(c) * * *

(1) The sulfur content of the batch of DFE shall be calculated by volume weighting the sulfur contribution from the denaturant, and the neat ethanol used.

* * * * *

(3) The sulfur content of the certified denaturant used in the calculation in paragraph (c)(1) of this section must be consistent with the PTD obtained from a registered certified ethanol denaturant producer or importer in accordance with the requirements of §80.1611. If the PTD from the certified ethanol denaturant states that the sulfur content is 330 ppm, then the sulfur content of the sulfur content of the ethanol denaturant must be assumed to be 330 ppm.

* * * * *

* 39. Section 80.1645 is amended by revising the section heading and the introductory text to read as follows:

§80.1645 Sample retention requirements for producers and importers of certified ethanol denaturant.

Beginning January 1, 2017, or on the first day that any producer or importer of ethanol denaturant designates a batch of certified ethanol denaturant, whichever is earlier, the ethanol denaturant producer or importer shall do all the following:

* * * * *

* 40. Section 80.1650 is amended by revising paragraphs (a)(4), (b), and (g)(3) to read as follows:

§80.1650 Registration.

* * * * *

(a) * * *

(4) Producer or importer of certified ethanol denaturant subject to the standards under §80.1611.

(b) *Registration dates.* (1) Any gasoline refiner or importer required to register shall do so by December 1, 2016, or at least 30 days in advance of the first date that such person will produce or import reformulated gasoline, conventional gasoline, RBOB, or CBOB. If a previously unregistered refiner or importer intends to generate credits prior to January 1, 2017 (pursuant to §80.1615), registration must occur at least 90 days prior to submitting an annual compliance report demonstrating credit generation.

(2) Any oxygenate producer or importer required to register shall do so by November 1, 2016, or at least 60 days in advance of the first date that such person will produce or import oxygenate.

(3) Any oxygenate blender required to register shall do so by November 1, 2016, or at least 90 days in advance of the first date that such person will blend oxygenate into RBOB.

(4) Any ethanol denaturant producer or importer required to register shall do so by November 1, 2016, or at least 60 days in advance of the first date that such person will produce or import ethanol denaturant.

* * * * *

(g) * * *

(3) Any oxygenate blender shall submit updated registration information to the Administrator within thirty days of any occasion when the registration information previously supplied becomes incomplete or inaccurate.

* * * * *

* 41. Section 80.1652 is amended by revising paragraph (c) introductory text to read as follows:

§80.1652 Reporting requirements for gasoline refiners, gasoline importers, oxygenate producers, and oxygenate importers.

* * * * *

(c) *Oxygenate producer and importer annual reports.* Any oxygenate producer, for each of its production facilities, and any importer for the oxygenate it imports, shall submit a report for each calendar year period that includes all the following information:

* * * * *

§80.1667 [Amended]

* 42. Section 80.1667 is amended by removing and reserving paragraph (c)(1).

PART 85—CONTROL OF AIR POLLUTION FROM MOBILE SOURCES

* 43. The authority citation for part 85 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart V—[Amended]

§85.2108 [Removed]

* 44. Remove §85.2108.

PART 86—CONTROL OF EMISSIONS FROM NEW AND IN-USE HIGHWAY VEHICLES AND ENGINES

* 45. The authority citation for part 86 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

* 46. Section 86.1 is amended by revising paragraph (b) to read as follows:

§86.1 Incorporation by reference.

* * * * *

(b) *ASTM International material.* The following standards are available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA, 19428–2959, (610) 832–9585, or *http://www.astm.org/:*

(1) ASTM C1549–09, Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer, approved August 1, 2009 (''ASTM C1549''), IBR approved for §86.1869–12(b).

(2) ASTM D86–12, Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure, approved December 1, 2012 (''ASTM D86''), IBR approved for §§86.113–04(a), 86.113–94(b), 86.213(a), and 86.513(a).

(3) ASTM D93–13, Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester, approved July 15, 2013 (''ASTM D93''), IBR approved for §86.113–94(b).

(4) ASTM D445–12, Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and Calculation of Dynamic Viscosity), approved April 15, 2012 (''ASTM D445''), IBR approved for §86.113–94(b).

(5) ASTM D613–13, Standard Test Method for Cetane Number of Diesel Fuel Oil, approved December 1, 2013 (''ASTM D613''), IBR approved for §86.113–94(b).

(6) ASTM D975–13a, Standard Specification for Diesel Fuel Oils, approved December 1, 2013 (''ASTM D975''), IBR approved for §86.1910(c).

(7) ASTM D976–06 (Reapproved 2011), Standard Test Method for Calculated Cetane Index of Distillate Fuels, approved October 1, 2011 (''ASTM D976''), IBR approved for §86.113–94(b).

(8) ASTM D1319–13, Standard Test Method for Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Adsorption, approved May 1, 2013 (''ASTM D1319''), IBR approved for §§86.113–04(a), 86.213(a), and 86.513(a).

(9) ASTM D1945–03 (reapproved 2010), Standard Test Method for Analysis of Natural Gas by Gas Chromatography, approved January 1, 2010 (''ASTM D1945''), IBR approved for §§86.113–94(e) and 86.513(d).

(10) ASTM D2163–07, Standard Test Method for Determination of Hydrocarbons in Liquefied Petroleum (LP) Gases and Propane/Propene Mixtures by Gas Chromatography, approved December 1, 2007 (''ASTM D2163''), IBR approved for §§86.113–94(f).

(11) ASTM D2622–10, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-ray Fluorescence Spectrometry, approved February 15, 2010 (''ASTM D2622''), IBR approved for §§86.113–04(a), 86.113–94(b), 86.213(a), and 86.513(a).

(12) ASTM D2699–13b, Standard Test Method for Research Octane Number of Spark-Ignition Engine Fuel, approved October 1, 2013 (''ASTM D2699''), IBR approved for §§86.113–04(a) and 86.213(a).

(13) ASTM D2700–13b, Standard Test Method for Motor Octane Number of Spark-Ignition Engine Fuel, approved October 1, 2013 (''ASTM D2700''), IBR approved for §§86.113–04(a) and 86.213(a).

(14) ASTM D3231–13, Standard Test Method for Phosphorus in Gasoline, approved June 15, 2013 (''ASTM D3231''), IBR approved for §§86.113–04(a), 86.213(a), and 86.513(a).

(15) ASTM D3237–12, Standard Test Method for Lead in Gasoline by Atomic Absorption Spectroscopy, approved June 1, 2012 (''ASTM D3237''), IBR approved for §§86.113–04(a), 86.213(a), and 86.513(a).

(16) ASTM D4052–11, Standard Test Method for Density, Relative Density, and API Gravity of Liquids by Digital Density Meter, approved October 15, 2011 (''ASTM D4052''), IBR approved for §86.113–94(b).

(17) ASTM D5186–03 (Reapproved 2009), Standard Test Method for Determination of the Aromatic Content and Polynuclear Aromatic Content of Diesel Fuels and Aviation Turbine Fuels by Supercritical Fluid Chromatography, approved April 15, 2009 (''ASTM D5186''), IBR approved for §86.113–94(b).

(18) ASTM D5191–13, Standard Test Method for Vapor Pressure of Petroleum Products (Mini Method), approved December 1, 2013 (''ASTM D5191''), IBR approved for §§86.113–04(a), 86.213(a), and 86.513(a).

(19) ASTM E29–93a, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications, approved March 15, 1993 (''ASTM E29''), IBR approved for §§86.004–15(c), 86.007–11(a), 86.007–15(m), 86.1803–01, 86.1823–01(a), 86.1824–01(c), 86.1825–01(c).

(20) ASTM E903–96, Standard Test Method for Solar Absorptance, Reflectance, and Transmittance of Materials Using Integrating Spheres, approved April 10, 1996 (''ASTM E903''), IBR approved for §86.1869–12(b).

(21) ASTM E1918–06, Standard Test Method for Measuring Solar Reflectance of Horizontal and Low-Sloped Surfaces in the Field, approved August 15, 2006 (''ASTM E1918''), IBR approved for §86.1869–12(b).

* * * * *

Subpart A—General Provisions for Emission Regulations for 1977 and Later Model Year New Light-Duty Vehicles, Light-Duty Trucks and Heavy-Duty Engines, and for 1985 and Later Model Year New Gasoline Fueled, Natural Gas-Fueled, Liquefied Petroleum Gas-Fueled and Methanol-Fueled Heavy-Duty Vehicles

* 47. Section 86.007–35 is revised to read as follows:

§86.007–35 Labeling.

Section 86.007–35 includes text that specifies requirements that differ from §86.095–35. Where a paragraph in §86.095–35 is identical and applicable to §86.007–35, this may be indicated by specifying the corresponding paragraph and the statement ''[Reserved]. For guidance see §86.095–35.''.

(a) The manufacturer of any motor vehicle (or motor vehicle engine) subject to the applicable emission standards (and family emission limits, as appropriate) of this subpart, shall, at the time of manufacture, affix a permanent legible label, of the type and in the manner described below, containing the information hereinafter provided, to all production models of such vehicles (or engines) available for sale to the public and covered by a Certificate of Conformity under §86.007–30(a).

(a)(1)–(2) [Reserved]

(a)(3) heading through (b) [Reserved]. For guidance see §86.095–35.

(c) Vehicles powered by model year 2007 through 2013 diesel-fueled engines must include permanent, readily visible labels on the dashboard (or instrument panel) and near all fuel inlets that state ''Use Ultra Low Sulfur Diesel Fuel Only''; or ''Ultra Low Sulfur Diesel Fuel Only''.

(d) through (g) [Reserved]

(h) [Reserved]. For guidance see §86.095–35.

(i) [Reserved]

(j) The Administrator may approve in advance other label content and formats provided the alternative label contains information consistent with this section.

* 48. Section 86.095–35 is amended by revising paragraph (a)(4) and removing and reserving paragraph (g) to read as follows:

§86.095–35 Labeling.

(a) * * *

(4) *Heavy-duty vehicles employing a fuel or fuels covered by evaporative*

emission standards. This paragraph (a)(4) applies for vehicles subject to evaporative emission standards under this subpart, as described in §86.016–1(a)(4). See 40 CFR part 1037 for provisions that apply in later model years.

(i) A permanent, legible label shall be affixed in a readily visible position in the engine compartment. If such vehicles do not have an engine compartment, the label required in this paragraph (a)(4) shall be affixed in a readily available position on the operator's enclosure or on the engine.

(ii) The label shall be affixed by the vehicle manufacturer who has been issued the Certificate of Conformity for such vehicle, in such a manner that it cannot be removed without destroying or defacing the label. The label shall not be affixed to any equipment which is easily detached from such vehicle.

(iii) The label shall contain the following information lettered in the English language in block letters and numerals, which shall be of a color that contrasts with the background of the label:

(A) The label heading: Vehicle Emission Control Information;

(B) Full corporate name and trademark of manufacturer;

(C) Evaporative family identification;

(D) The maximum nominal fuel tank capacity (in gallons), as specified in 40 CFR 1037.135; and

(E) An unconditional statement of compliance with the appropriate model year U.S. Environmental Protection Agency regulations which apply to XXX-fueled heavy-duty vehicles.

(F) Vehicles granted final admission under §85.1505 of this chapter must comply with the labeling requirements contained in §85.1510 of this chapter.

* * * * *

(g) [Reserved]

* * * * *

Subpart B—Emission Regulations for 1977 and Later Model Year New Light-Duty Vehicles and New Light-Duty Trucks and New Otto-Cycle Complete Heavy-Duty Vehicles; Test Procedures

* 49. Section 86.101 is amended by revising paragraphs (b)(1), (b)(2)(i), and (b)(3) to read as follows:

§86.101 General applicability.

* * * * *

(b) * * *

(1) Through model year 2021, manufacturers may use the test procedures specified in paragraph (c) or (d) of this section or, using good engineering judgement, elements of both. For any EPA testing before model year 2022, EPA will use the manufacturer's selected procedures for applying acceptable speed-tolerance criteria (either §86.115–78 or 40 CFR 1066.425(c)). For any other parameters, EPA may conduct testing using either of the specified procedures. As allowed under this part, manufacturers may use carryover data from previous model years to demonstrate compliance with emission standards, without regard to the provisions of this section.

(2) * * *

(i) For vehicles certified to any of the Tier 3 emission standards specified in subpart S of this part, determine overall driver accuracy based on drive-cycle metrics as described in 40 CFR 1066.425(j).

* * * * *

(3) For model years 2022 and later, manufacturers must use the test procedures specified in paragraph (d) of this section. Manufacturers may continue to use data based on the test procedures specified in paragraph (c) of this section for an engine family in 2022 and later model years, as long as the engine family is eligible for certification with carryover emission data.

* * * * *

* 50. Section 86.113–04 is amended by revising paragraph (a)(1) to read as follows:

§86.113–04 Fuel specifications.

* * * * *

(a) *Gasoline fuel.* (1) Gasoline meeting the following specifications, or substantially equivalent specifications approved by the Administrator, must be used for exhaust and evaporative emission testing:

TABLE 1 OF §86.113–04—TEST FUEL SPECIFICATIONS FOR GASOLINE WITHOUT ETHANOL

Item	Regular	Reference procedure [1]
Research octane, Minimum [2]	93	ASTM D2699; ASTM D2700
Octane sensitivity [2]	7.5	ASTM D2699; ASTM D2700
Distillation Range (°F):		
Evaporated initial boiling point [3]	75–95	ASTM D86
10% evaporated	120–135.	
50% evaporated	200–230.	
90% evaporated	300–325.	
Evaporated final boiling point	415 Maximum.	
Hydrocarbon composition (vol %):		
Olefins	10% Maximum	ASTM D1319
Aromatics	35% Maximum.	
Saturates	Remainder.	
Lead, g/gallon (g/liter), Maximum	0.050 (0.013)	ASTM D3237
Phosphorous, g/gallon (g/liter), Maximum	0.005 (0.0013)	ASTM D3231
Total sulfur, wt. % [4]	0.0015–0.008	ASTM D2622
Dry Vapor Pressure Equivalent (*DVPE*), psi (kPa) [5]	8.7–9.2 (60.0–63.4)	ASTM D5191

[1] ASTM procedures are incorporated by reference in §86.1.
[2] Octane specifications are optional for manufacturer testing.
[3] For testing at altitudes above 1,219 m (4000 feet), the specified range is 75–105 °F.
[4] Sulfur concentration will not exceed 0.0045 weight percent for EPA testing.
[5] For testing unrelated to evaporative emission control, the specified range is 8.0–9.2 psi (55.2–63.4 kPa). For testing at altitudes above 1,219 m (4000 feet), the specified range is 7.6–8.0 psi (52.4–55.2 kPa). Calculate dry vapor pressure equivalent, *DVPE,* based on the measured total vapor pressure, p_T, using the following equation: *DVPE* (psi) = 0.956 · p_T ¥ 0.347 (or *DVPE* (kPa) = 0.956 · p_T ¥ 2.39). *DVPE* is intended to be equivalent to Reid Vapor Pressure using a different test method.

* * * * *

Subpart C—Emission Regulations for 1994 and Later Model Year Gasoline-Fueled New Light-Duty Vehicles, New Light-Duty Trucks and New Medium-Duty Passenger Vehicles; Cold Temperature Test Procedures

* 51. Section 86.201 is revised to read as follows:

§86.201 General applicability.

(a) Vehicles are subject to cold temperature testing requirements as described in subpart S of this part and 40 CFR part 600.

(b) *Migration to 40 CFR parts 1065 and 1066.* This subpart transitions to rely on the test procedure specifications in 40 CFR parts 1065 and 1066 as follows:

(1) Through model year 2021, manufacturers may use the test procedures specified in paragraph (c) or (d) of this section or, using good engineering judgement, elements of both. For any EPA testing before model year 2022, EPA will use the manufacturer's selected procedures for applying acceptable speed-tolerance criteria. For any other parameters, EPA may conduct testing using either of the specified procedures. As allowed under this part, manufacturers may use carryover data from previous model years to demonstrate compliance with emission standards, without regard to the provisions of this section.

(2) For vehicles certified before model year 2022 to any of the Tier 3 emission standards specified in subpart S of this part, manufacturers must determine overall driver accuracy based on driven cycle energy as described in 40 CFR 1066.425(j).

(c) *Interim procedures.* Through model year 2021, manufacturers may certify vehicles based on data collected according to previously published cold temperature and intermediate temperature testing procedures.

(d) *Long-term procedures.* Starting in model year 2022, perform testing to measure CO and NMHC emissions and determine fuel economy as described in 40 CFR part 1066; see especially 40 CFR 1066.710. We may approve the use of previously published cold temperature and intermediate temperature testing procedures for later model years as an alternative procedure under 40 CFR 1066.10(c). Perform intermediate temperature testing as follows:

(1) For testing during ambient temperatures of less than 50 °F (10 °C), perform testing as described in 40 CFR part 1066, subpart H.

(2) For testing at temperatures of 50 °F (10 °C) or higher, perform FTP testing as described in 40 CFR part 1066.

(e) Section 86.213 describes special provisions related to test fuel specifications.

* 52. Section 86.213 is amended by revising Table 1 in paragraph (a)(2) to read as follows:

§86.213 Fuel specifications.

(a) * * *

(2) * * *

TABLE 1 OF §86.213—COLD TEMPERATURE TEST FUEL SPECIFICATIONS FOR GASOLINE WITHOUT ETHANOL

Item	Regular	Premium	Reference procedure [1]
(RON+MON)/2 [2]	87.8±0.3	92.3±0.5	ASTM D2699; ASTM D2700
Sensitivity [3]	7.5	7.5	ASTM D2699; ASTM D2700
Distillation Range (°F):			
Evaporated initial boiling point	76–96	76–96	ASTM D86
10% evaporated	98–118	105–125.	
50% evaporated	179–214	195–225.	
90% evaporated	316–346	316–346.	
Evaporated final boiling point	413 Maximum	413 Maximum.	
Hydrocarbon composition (vol %):			
Olefins	12.5±5.0	10.5±5.0	ASTM D1319
Aromatics	26.4±4.0	32.0±4.0.	
Saturates	Remainder	Remainder.	
Lead, g/gallon	0.01, Maximum	0.01, Maximum	ASTM D3237
Phosphorous, g/gallon	0.005, Maximum	0.005, Maximum	ASTM D3231
Total sulfur, wt. % [3]	0.0015–0.008	0.0015–0.008	ASTM D2622
RVP, psi	11.5±0.3	11.5±0.3	ASTM D5191

[1] ASTM procedures are incorporated by reference in §86.1.
[2] Octane specifications are optional for manufacturer testing. The premium fuel specifications apply for vehicles designed to use high-octane premium fuel.
[3] Sulfur concentration will not exceed 0.0045 weight percent for EPA testing.

* * * * *

Subpart F—Emission Regulations for 1978 and Later New Motorcycles; Test Procedures

* 53. Section 86.513 is amended by revising paragraph (a)(1) to read as follows:

§86.513 Fuel and engine lubricant specifications.

(a) * * *

(1) Gasoline meeting the following specifications, or substantially equivalent specifications approved by the Administrator, must be used for exhaust and evaporative emission testing:

TABLE 1 OF §86.513—GASOLINE TEST FUEL SPECIFICATIONS

Item	Value	Procedure [1]
Distillation Range:		
1. Initial boiling point, °C	23.9–35.0 [2]	ASTM D86

TABLE 1 OF §86.513—GASOLINE TEST FUEL SPECIFICATIONS—Continued

Item	Value	Procedure [1]
2. 10% point, °C	48.9–57.2.	
3. 50% point, °C	93.3–110.0.	
4. 90% point, °C	148.9–162.8.	
5. End point, °C	212.8 maximum.	
Hydrocarbon composition:		
1. Olefins, volume %	10 maximum	ASTM D1319
2. Aromatics, volume %	35 maximum.	
3. Saturates	Remainder.	
Lead (organic), g/liter	0.013 maximum	ASTM D3237
Phosphorous, g/liter	0.0013 maximum	ASTM D3231
Sulfur, weight %	0.008 maximum	ASTM D2622
Dry Vapor Pressure Equivalent (*DVPE*), kPa	55.2 to 63.4 [3]	ASTM D5191

[1] ASTM procedures are incorporated by reference in §86.1.
[2] For testing at altitudes above 1,219 m, the specified initial boiling point range is (23.9 to 40.6) °C.
[3] For testing at altitudes above 1,219 m, the specified volatility range is 52 to 55 kPa. Calculate dry vapor pressure equivalent, *DVPE*, based on the measured total vapor pressure, p_T, using the following equation: *DVPE* (kPa) = 0.956 · p_T ¥ 2.39 (or *DVPE* (psi) = 0.956 · p_T ¥ 0.347). *DVPE* is intended to be equivalent to Reid Vapor Pressure using a different test method.

* * * * *

§86.513–2004 [Removed]

* 54. Remove §86.513–2004.

§86.529–98 [Amended]

* 55. Section 86.529–98 paragraph (b) is amended in Figure F98–9, under the first column titled ''Loaded vehicle mass (kg)'' by removing ''565–665'' and adding ''656–665'' in its place.

Subpart S—General Compliance Provisions for Control of Air Pollution From New and In-Use Light-Duty Vehicles, Light-Duty Trucks, and Heavy-Duty Vehicles

* 56. The heading for subpart S is revised as set forth above.

* 57. Section 86.1801–12 is amended by:

* a. Revising paragraph (a)(2)(ii);

* b. Adding paragraph (a)(2)(iii);

* c. Revising paragraph (a)(3) introductory text;

* d. Removing paragraph (a)(4); and

* e. Redesignating paragraph (a)(5) as paragraph (a)(4).

The revisions and addition read as follows:

§86.1801–12 Applicability.

(a) * * *

(2) * * *

(ii) Greenhouse gas emission standards apply as specified in 40 CFR part 1037 instead of the standards specified in this subpart.

(iii) The provisions of this subpart are optional for diesel-fueled Class 3 heavy-duty vehicles in a given model year if those vehicles are equipped with engines certified to the appropriate standards in §86.007–11 for which less than half of the engine family's sales for the model year in the United States are for complete Class 3 heavy-duty vehicles. This includes engines sold to all vehicle manufacturers. If you are the original manufacturer of the engine and the vehicle, base this showing on your sales information. If you manufacture the vehicle but are not the original manufacturer of the engine, you must use your best estimate of the original manufacturer's sales information.

(3) The provisions of this subpart generally do not apply to incomplete heavy-duty vehicles or to complete vehicles above 14,000 pounds GVWR (see subpart A of this part and 40 CFR parts 1036 and 1037). However, this subpart applies to such vehicles in the following cases:

* * * * *

* 58. Section 86.1803–01 is amended by revising the definition of ''Averaging set'' to read as follows:

§86.1803–01 Definitions.

* * * * *

Averaging set means a category or subcategory of vehicles within which test groups can average and trade emission credits with one another.

* * * * *

* 59. Section 86.1805–17 is amended by revising paragraphs (a), (b), and (c) to read as follows:

§86.1805–17 Useful life.

(a) *General provisions.* The useful life values specified in this section apply for all exhaust, evaporative, refueling, and OBD emission requirements described in this subpart, except for standards that are specified to apply only at certification. These useful life requirements also apply to all air conditioning leakage credits, air conditioning efficiency credits, and other credit programs used by the manufacturer to comply with the fleet-average CO_2 emission standards in §86.1818. Useful life values are specified as a given number of calendar years or miles of driving, whichever comes first.

(b) *Greenhouse gas pollutants.* The emission standards in §86.1818 apply for a useful life of 10 years or 120,000 miles for LDV and LLDT and 11 years or 120,000 miles for HLDT and MDPV. Manufacturers may alternatively certify based on a longer useful life as specified in paragraph (d) of this section.

(c) *Cold temperature emission standards.* The cold temperature NMHC emission standards in §86.1811 apply for a useful life of 10 years or 120,000 miles for LDV and LLDT, and 11 years or 120,000 miles for HLDT and HDV. The cold temperature CO emission standards in §86.1811 apply for a useful life of 5 years or 50,000 miles.

* * * * *

* 60. Section 86.1806–17 is amended by revising paragraph (a)(8) to read as follows:

§86.1806–17 Onboard diagnostics.

* * * * *

(a) * * *

(8) Apply thresholds for exhaust emission malfunctions from Tier 3 vehicles based on the thresholds calculated for the corresponding bin standards in the California LEV II program as prescribed for the latest model year in 13 CCR 1968.2(e) and (f). For example, for Tier 3 Bin 160 standards, apply the threshold that applies for the LEV standards. For cases involving Tier 3 standards that have no corresponding bin standards from the California LEV II program, use the next highest LEV II bin. For example, for Tier 3 Bin 50 standards, apply the threshold that applies for the ULEV standards. You may apply thresholds that are more

stringent than we require under this paragraph (a)(8).

* * * * *

* 61. Section 86.1810–01 is amended by revising paragraph (o) and removing paragraph (p) to read as follows:

§86.1810–01 General standards; increase in emissions; unsafe condition; waivers.

* * * * *

(o) *NMOG determination procedures.* Measure NMOG emissions or determine NMOG emissions based on NMHC measurements using the procedures described in 40 CFR 1066.635. For Tier 2 and interim non-Tier 2 vehicles fueled by gasoline, manufacturers may instead measure NMHC and multiply the result by an adjustment factor of 1.04 before comparing with the NMOG standard to determine compliance with that standard.

* 62. Section 86.1810–17 is amended by revising paragraph (h)(1) to read as follows:

§86.1810–17 General requirements.

* * * * *

(h) * * *

(1) For criteria exhaust emissions, we may identify the worst-case fuel blend for testing in addition to what is required for gasoline-fueled vehicles. The worst-case fuel blend may be the fuel specified in 40 CFR 1065.725, or it may consist of a combination of the fuels specified in 40 CFR 1065.710(b) and 1065.725. We may waive testing with the worst-case blended fuel for US06 and/or SC03 duty cycles; if we waive only SC03 testing, substitute the SC03 emission result using the standard test fuel for gasoline-fueled vehicles to calculate composite SFTP emissions.

* * * * *

* 63. Section 86.1811–04 is amended by revising paragraph (j) to read as follows:

§86.1811–04 Emission standards for light-duty vehicles, light-duty trucks and medium-duty passenger vehicles.

* * * * *

(j) *Highway NO_X exhaust emission standard.* The NO_X emissions measured on the federal Highway Fuel Economy Test in 40 CFR 1066.840 must not be greater than 1.33 times the applicable FTP NO_X standard to which the manufacturer certifies the test group. Both the measured emissions and the product of the NO_X standard and 1.33 must be rounded to the nearest 0.01 g/mi before being compared.

* * * * *

* 64. Section 86.1811–17 is amended by:

* a. Revising paragraph (a);

* b. Revising paragraphs (b)(2), (b)(8), (b)(9) introductory text, (b)(10), and (b)(11);

* c. Adding paragraph (b)(14); and

* d. Revising paragraphs (c) and (g).

The revisions and addition read as follows:

§86.1811–17 Exhaust emission standards for light-duty vehicles, light-duty trucks and medium-duty passenger vehicles.

(a) *Applicability and general provisions.* This section describes exhaust emission standards that apply for model year 2017 and later light-duty vehicles, light-duty trucks, and medium-duty passenger vehicles. MDPVs are subject to all the same emission standards and certification provisions that apply to LDT4. Some of the provisions of this section also apply to heavy-duty vehicles as specified in §86.1816. See §86.1818 for greenhouse gas emission standards. See §86.1813 for evaporative and refueling emission standards. This section may apply to vehicles from model years earlier than 2017 as specified in paragraph (b)(11) of this section.

(b) * * *

(2) Table 1 of this section describes fully phased-in Tier 3 standards that apply as specified in this paragraph (b) for the identified driving schedules. The FTP standards for NMOG+NO_X apply on a fleet-average basis using discrete bin standards as described in paragraph (b)(4) of this section. The bin standards include additional emission standards for high-altitude testing and for CO emissions when testing over the FTP driving schedule. The SFTP standards for NMOG+NO_X apply on a fleet-average basis as described in paragraph (b)(5) of this section. Table 1 follows:

TABLE 1 OF §86.1811–17—FULLY PHASED-IN TIER 3 EXHAUST EMISSION STANDARDS (g/mile)

NMOG+NO_X		PM		CO	Formaldehyde
FTP [1]	SFTP	FTP	US06	SFTP	FTP
0.030	0.050	0.003	0.006	4.2	0.004

[1] The fleet-average FTP emission standard for NMOG+NO_X is 0.026 g/mile for LDV and LDT1 test groups certified to standards based on a useful life of 120,000 miles or 10 years in a given model year.

* * * * *

(8) The following provisions describe the primary approach for phasing in the Tier 3 standards other than PM in 2025 and earlier model years:

(i) *FTP phase-in.* The fleet-average FTP emission standard for NMOG+NO_X phases in over several years as described in this paragraph (b)(8)(i). You must identify FELs as described in paragraph (b)(4) of this section and calculate a fleet-average emission level to show that you meet the FTP emission standard for NMOG+NO_X that applies for each model year. For model year 2017, do not include vehicles above 6,000 pounds GVWR. Through model year 2019, you may also certify to transitional Bin 85 or Bin 110 standards, which consist of all-altitude FTP emission standards for NMOG+NO_X of 0.085 or 0.110 g/mile, respectively; additional FTP standards for PM, CO, and formaldehyde apply as specified in this section for vehicles certified to Bin 125 standards. Fleet-average FTP emission standards decrease through the phase-in period as shown in the following table:

TABLE 3 OF §86.1811–17—DECLINING FLEET-AVERAGE TIER 3 FTP EMISSION STANDARDS FOR NMOG+NO_X (g/mile)

Model year	LDV, LDT1—150,000 mile useful life [1]	LDV, LDT1—120,000 mile useful life [1]	LDT2, HLDT
2017 [2]	0.086	0.073	0.101
2018	0.079	0.067	0.092
2019	0.072	0.061	0.083

TABLE 3 OF §86.1811–17—DECLINING FLEET-AVERAGE TIER 3 FTP EMISSION STANDARDS FOR NMOG+NO_X (g/mile)—Continued

Model year	LDV, LDT1—150,000 mile useful life [1]	LDV, LDT1—120,000 mile useful life [1]	LDT2, HLDT
2020	0.065	0.055	0.074
2021	0.058	0.049	0.065
2022	0.051	0.043	0.056
2023	0.044	0.037	0.047
2024	0.037	0.031	0.038
2025	0.030	0.026	0.030

[1] Vehicles certified to standards based on a useful life of 120,000 miles may comply based on the fleet-average standard specified for 150,000 mile useful life in certain circumstances as specified in paragraph (b)(8)(iii)(A) of this section.
[2] HLDT and MDPV must meet the Tier 3 standards starting with model year 2018.

(ii) *SFTP phase-in.* The fleet-average SFTP emission standard for NMOG+NO_X phases in over several years as described in this paragraph (b)(8)(ii). You must identify FELs as described in paragraph (b)(5) of this section and calculate a fleet-average emission level to show that you meet the SFTP emission standard for NMOG+NO_X that applies for each model year.

(A) Calculate the fleet-average emission level together for all your light-duty vehicles and light-duty trucks, except for those certified using the provisions of paragraph (b)(8)(ii)(C) of this section. For model year 2017, do not include vehicles above 6,000 pounds GVWR (in the numerator or denominator).

(B) Fleet-average SFTP emission standards decrease through the phase-in period as shown in the following table:

TABLE 4 OF §86.1811–17—DECLINING FLEET-AVERAGE TIER 3 SFTP EMISSION STANDARDS

Model year	NMOG+NO_X (g/mile)
2017 [1]	0.103
2018	0.097
2019	0.090
2020	0.083
2021	0.077
2022	0.070
2023	0.063
2024	0.057
2025	0.050

[1] HLDT and MDPV must meet the Tier 3 standards starting with model year 2018.

(C) You may use the SFTP stand-alone option specified in 13 CCR 1961.2 (a)(7)(A)1 of the LEV III program to demonstrate compliance with EPA's SFTP standards. Do not include any such test groups when demonstrating compliance with the phased-in fleet-average SFTP standards specified in this paragraph (b)(8)(ii). Note that this option is not available for vehicles certified to the transitional bins described in paragraph (b)(8)(i) of this section.

(iii) *Interim provisions.* (A) For vehicles certified to bins higher than Bin 70 under this section through model year 2019, the Tier 2 useful life period applies as specified in §86.1805–12 for all criteria pollutants other than PM. However, LDV and LDT1 test groups certified to bin standards above Bin 70 through model year 2019 may be included in the same averaging set with vehicles meeting standards over a 150,000 mile useful life, notwithstanding the provisions of §86.1861–17(b)(1)(iii). Any such vehicles you include in the averaging set for 150,000 mile useful life are also subject to the fleet-average NMOG+NO_X standard specified for 150,000 mile useful life; similarly, any such vehicles you include in the averaging set for 120,000 mile useful life are also subject to the fleet-average NMOG+NO_X standard specified for 120,000 mile useful life.

(B) You may use the E0 test fuel specified in §86.113 through model year 2019 for gasoline-fueled vehicles certified to bins higher than Bin 70. You may not certify these vehicles using carryover data after model year 2019.

(C) Vehicles must continue to comply with the Tier 2 SFTP emission standards for NMHC+NO_X and CO for 4,000-mile testing as specified in §86.1811–04(f)(1) if they are certified to transitional Bin 85 or Bin 110 standards, or if they are certified based on a fuel without ethanol, or if they are not certified to the Tier 3 p.m. standard.

(iv) You may use the alternative phase-in provisions described in paragraph (b)(9) of this section to transition to the Tier 3 exhaust emission standards on a different schedule.

(9) This paragraph (b)(9) describes an alternative approach to phasing in the Tier 3 emission standards for vehicles above 6,000 pounds GVWR. If you choose this approach, you must phase in the Tier 3 standards for all your vehicles above 6,000 pounds GVWR that are subject to this section according to this schedule. Under this alternative phase-in, you must meet the fully phased-in standards specified in this paragraph (b) with 40, 70, and 100 percent of your projected nationwide sales of all vehicles above 6,000 pounds GVWR that are subject to this section in model years 2019 through 2021, respectively. Any vehicles not subject to Tier 3 standards during the phase-in period must continue to comply with the Tier 2 standards in §86.1811–04(c) and (f), including the Tier 2 SFTP emission standards for NMHC+NO_X and CO for 4,000-mile testing as specified in §86.1811–04(f)(1). Vehicles subject to Tier 2 standards under this paragraph (b)(9) are subject to the useful life provisions in §86.1805–12 relative to exhaust emission standards. Each vehicle counting toward the phase-in percentage under this paragraph (b)(9) must meet all the standards that apply throughout the useful life as specified in §86.1805–17, and must use the Tier 3 test fuel specified in §86.113–15. The following exceptions and special provisions apply under this paragraph (b)(9):

* * * * *

(10) You may not use credits generated from Tier 2 vehicles for demonstrating compliance with the Tier 3 standards except as specified in this paragraph (b)(10). You may generate early credits with U.S. sales of Tier 2 vehicles in the two model years before the Tier 3 standards start to apply for a given vehicle model. Vehicles certified to the Tier 2 standards must meet all the Tier 2 requirements in §86.1811–10, including the fleet-average Tier 2 standards. Calculate early Tier 3 emission credits as described in §86.1861 by subtracting the appropriate Tier 2 fleet-average value for FTP

emissions of NMOG+NO_X from 0.160 g/mile. Calculate your fleet-average value for the model year based on vehicles at or below 6,000 pounds GVWR in 2015, on all sizes of vehicles in 2016, and on vehicles above 6,000 pounds GVWR in 2017. You may use these early credits as described in §86.1861 for demonstrating compliance with the FTP emission standard for NMOG+NO_X starting in model year 2017. You may use these early credits interchangeably for vehicles certified based on a useful life of either 120,000 or 150,000 miles. For model years 2018 and later, you may use any remaining early credits for banking or trading subject to a limitation based on credits generated in California, as follows:

(i) For the applicable model years in which you generate emission credits relative to California's LEV III fleet-average NMOG+NO_X standard, determine the actual California sales of light-duty vehicles and light-duty trucks and the actual nationwide sales of those same vehicles. (Note: If you have a credit deficit in a given model year for your LEV III vehicles, apply the provisions of this paragraph (b)(10)(i) based on the appropriate negative credit quantity.) In 2015, count sales only from vehicle models at or below 6,000 pounds GVWR. For each model year, multiply the credits generated under the California program by the ratio of nationwide vehicle sales to LEV III vehicle sales to calculate an effective nationwide quantity. Sum these results for model years 2015 through 2017. Note that this calculation results in a maximum credit quantity based on vehicle sales in all states, even though the initial credit calculation does not include vehicle sales in California or the section 177 states. If you comply with the LEV III standards based on pooled emission credits for California and the section 177 states, use those pooled emission credits and corresponding sales for calculating the maximum credit quantity under this paragraph (b)(10)(i).

(ii) You may not use more early credits generated under this paragraph (b)(10) for banking or trading to demonstrate compliance with Tier 3 emission standards than the calculated value of the effective nationwide credit quantity summed in paragraph (b)(10)(i) of this section. If your generated credits are greater than this threshold, determine the ratio by which your generated early credits exceed the threshold. Calculate an adjusted quantity of early credits generated under this paragraph (b)(10) by dividing the generated credit quantity from each model year by this ratio of generated credits relative to the applicable threshold. This adjusted quantity of credits may be used for banking or trading relative to the Tier 3 standards, subject to the five-year credit life described in §86.1861.

(11) You may certify vehicles to the Tier 3 standards starting in model year 2015. To do this, you may either sell all your LEV III vehicle models nationwide, or you may certify a subset of your fleet to alternate fleet-average emission standards as follows:

(i) The alternate fleet-average FTP emission standards for NMOG+NO_X are 0.100 g/mile in 2015 and 0.093 g/mile in 2016 for LDV and LDT1.

(ii) The alternate fleet-average FTP emission standards for NMOG+NO_X are 0.119 g/mile in 2015, 0.110 g/mile in 2016, and 0.101 g/mile in 2017 for LDT2 and HLDT.

(iii) The alternate fleet-average SFTP emission standards for NMOG+NO_X are 0.140 in 2015 for all vehicles, 0.110 in 2016 for all vehicles, and 0.103 in 2017 for LDT2 and HLDT.

(iv) The vehicles must meet FTP and SFTP standards for PM as specified in §86.1811–04. The PM testing provisions of §86.1829–01(b)(1)(iii)(B) apply for these vehicles.

(v) Vehicles not certified to the Tier 3 standards in a given model year must meet all the requirements that apply for Tier 2 vehicles in that model year.

(vi) For cold temperature testing and for high-altitude testing, you may use the E0 fuel specified in §86.113–04(a) or §86.213 instead of the E10 test fuel specified in §86.113–15.

(vii) Vehicles certified under this paragraph (b)(11) to a bin standard at or below Bin 70 must be certified to a useful life of 150,000 miles.

(viii) The interim provisions described in paragraph (b)(8)(iii) of this section apply for vehicles certified under this paragraph (b)(11), except that credits generated under this paragraph (b)(11) may be used interchangeably for vehicles certified based on a useful life of either 120,000 or 150,000 miles.

(ix) For vehicles certified under this paragraph (b)(11), you may generate emission credits and use those credits for demonstrating compliance with Tier 3 standards as described in paragraph (b)(10) of this section or as described in §86.1861.

* * * * *

(14) This subpart describes several ways that the transition to Final Tier 3 standards applies differently for vehicles above and below 6,000 pounds GVWR. All these distinctions apply only for LDT. LDV as a category is defined independent of GVWR, so any LDV above 6,000 pounds GVWR are subject to the same provisions that apply for LDV at or below 6,000 pounds GVWR. Where this section refers to "vehicles above 6,000 pounds GVWR," this should be understood to include LDT above 6,000 pounds GVWR and MDPV (or HLDT and MDPV), and to exclude all LDV.

(c) *Highway NMOG+NO_X exhaust emission standard.* NMOG+NO_X emissions measured on the federal Highway Fuel Economy Test in 40 CFR 1066.840 may not exceed the applicable FTP bin standard for NMOG+NO_X. Demonstrate compliance with this standard for low-mileage vehicles by applying the appropriate deterioration factor. For vehicles not certified to any Tier 3 emission standards specified in paragraph (b) of this section, the provisions of §86.1811–04(j) apply instead of this paragraph (c).

* * * * *

(g) *Cold temperature exhaust emission standards.* The standards in this paragraph (g) apply for certification and in-use vehicles tested over the test procedures specified in subpart C of this part, for testing at both low-altitude conditions and high-altitude conditions. These standards apply only to gasoline-fueled vehicles. Multi-fuel, bi-fuel or dual-fuel vehicles must comply with requirements using gasoline only. Testing with other fuels such as a high-level ethanol-gasoline blend, or testing on diesel vehicles, is not required.

(1) Cold temperature CO standards. Cold temperature CO exhaust emission standards apply as follows:

(i) For LDV and LDT1, the standard is 10.0 g/mile CO.

(ii) For LDT2, LDT3 and LDT4, the standard is 12.5 grams per mile CO.

(2) Cold temperature NMHC standards. The following fleet average cold temperature NMHC standards apply as follows:

* * * * *

* 65. Section 86.1813–17 is amended by revising paragraphs (a)(1)(iv) and (a)(2)(i) to read as follows:

§86.1813–17 Evaporative and refueling emission standards.

* * * * *

(a) * * *

(1) * * *

(iv) Emissions are generally measured with a flame ionization detector (FID). In the case of rig, diurnal, hot soak, and running loss testing with E10 test fuel, multiply measured (unspeciated) FID values by 1.08 to account for the FID's reduced response to ethanol. However, you may instead determine total hydrocarbon equivalent for E10 testing

based on speciated measurements as described in §86.143–96(c). You may use different methods (with or without speciation) for different test elements for a given test vehicle; however, you must always use the same method for diurnal and hot soak testing. In addition, any later testing with vehicles from that evaporative/refueling family must use the same method that was used for the original testing. Similarly, any evaporative/refueling families certified in later model years using carryover data must use the same method that was used for the original testing. We may do testing with or without speciation, but we will apply the 1.08 correction factor to unspeciated measurements for any of these four categories of evaporative emissions only if you also use it to determine your final test results.

(2) * * *

(i) The emission standard for the sum of diurnal and hot soak measurements from the two-diurnal test sequence and the three-diurnal test sequence is based on a fleet average in a given model year. You must specify a family emission limit (FEL) for each evaporative family. The FEL serves as the emission standard for the evaporative family with respect to all required diurnal and hot soak testing. Calculate your fleet-average emission level as described in §86.1860 based on the FEL that applies for low-altitude testing to show that you meet the specified standard. For multi-fueled vehicles, calculate fleet-average emission levels based only on emission levels for testing with gasoline. You may generate emission credits for banking and trading and you may use banked or traded credits for demonstrating compliance with the diurnal plus hot soak emission standard for vehicles required to meet the Tier 3 standards, other than electric vehicles and gaseous-fueled vehicles, as described in §86.1861 starting in model year 2017. You comply with the emission standard for a given model year if you have enough credits to show that your fleet-average emission level is at or below the applicable standard. You may exchange credits between or among evaporative families within an averaging set as described in §86.1861. Separate diurnal plus hot soak emission standards apply for each evaporative/refueling emission family as shown for high-altitude conditions. The sum of diurnal and hot soak measurements may not exceed the following Tier 3 standards:

TABLE 1 OF §86.1813–17—TIER 3 DIURNAL PLUS HOT SOAK EMISSION STANDARDS

[grams per test]

Vehicle category	Low-altitude conditions—fleet-average	High-altitude conditions
LDV, LDT1	0.300	0.65
LDT2	0.400	0.85
HLDT	0.500	[1] 1.15
HDV	0.600	1.75

[1] 1.25 g/test for MDPVs.

* * * * *

* 66. Section 86.1816–18 is amended by revising paragraphs (b)(1)(ii)(C), (b)(8) introductory text, (b)(12)(iii), and (c) to read as follows:

§86.1816–18 Emission standards for heavy-duty vehicles.

* * * * *

(b) * * *

(1) * * *

(ii) * * *

(C) For Class 3 vehicles, the Hot LA–92 driving schedule as specified in paragraph (c) of Appendix I of this part.

* * * * *

(8) This paragraph (b)(8) describes an alternative approach to phasing in the Tier 3 emission standards. If you choose this approach, you must phase in the Tier 3 standards for all your vehicles subject to this section according to this schedule. Under this alternative phase in, you must meet all the standards specified in paragraph (b)(2) of this section according to the phase-in schedule specified in Table 6 of this section based on the indicated percentage of your projected nationwide sales in each model year. These vehicles must meet the applicable FTP emission standard for CO and the HD–SFTP emission standards for NMOG+NO_X and CO that apply for Class 2b Bin 170 and Class 3 Bin 230 as described in paragraph (b)(4) of this section. Any vehicles not subject to Tier 3 standards during the phase-in period must continue to comply with the gaseous exhaust emission standards in §86.1816–08. Each vehicle counting toward the PM phase-in percentage under this paragraph (b)(8) in model years 2019 and 2020 must also be included in the portion of the fleet meeting the Tier 3 standards for pollutants other than PM. Each vehicle counting toward the phase-in percentage for any pollutant must use the Tier 3 test fuel specified in §86.113–15. The following exceptions and special provisions apply under this paragraph (b)(8):

* * * * *

(12) * * *

(iii) Alternate in-use FTP and HD–SFTP standards for NMOG+NO_X apply as specified in the following table:

TABLE 7 OF §86.1816–18—ALTERNATE IN-USE NMOG+NO_X STANDARDS

[g/mile]

Class	FEL name	FTP	HD–SFTP [1]
2b	Bin 250 ..	0.370	1.120
Bin 200 ..	0.300	1.120	.....
Bin 170 ..	0.250	0.630	.....
Bin 150 ..	0.220	0.630	.....
3	Bin 400 ..	0.600	0.770
Bin 270 ..	0.400	0.770	.....
Bin 230 ..	0.340	0.490	.....
Bin 200 ..	0.300	0.490	.....

[1] For Class 2b vehicles with a power-to-weight ratio at or below 0.024 hp/pound that are certified to optional standards under paragraphs (b)(2) and (4) of this section, the following alternate in-use HD–SFTP standards for NMOG+NO_X apply instead of those identified in the table: 0.490 g/mile for Bin 150 and Bin 170; and 0.770 g/mile for Bin 200 and Bin 250. Note that vehicles certified to transitional Tier 3 FTP bins are not subject to HD–SFTP standards.

* * * * *

(c) *Highway NMOG+NO_X exhaust emission standard.* For vehicles certified to any of the Tier 3 standards specified in paragraph (b) of this section, NMOG+NO_X emissions measured on the highway test cycle in 40 CFR 1066.840 may not exceed the applicable NMOG+NO_X bin standard for FTP testing. Demonstrate compliance with this standard for low-mileage vehicles by applying the appropriate deterioration factor.

* * * * *

* 67. Section 86.1829–15 is amended by:

* a. Revising paragraphs (b)(2) and (d)(1);

* b. Adding paragraph (d)(6); and

* c. Revising paragraph (e)(9).

The revisions and addition read as follows:

§86.1829–15 Durability and emission testing requirements; waivers.

* * * * *

(b) * * *

(2) Test one EDV in each test group using the FTP, SFTP, and HFET test procedures in 40 CFR part 1066 to

demonstrate compliance with other exhaust emission standards.

* * * * *

(d) * * *

(1) For vehicles subject to the Tier 3 PM standards in §86.1811, a manufacturer may provide a statement in the application for certification that vehicles comply with applicable PM standards instead of submitting PM test data for a certain number of vehicles. However, each manufacturer must test vehicles from a minimum number of durability groups as follows:

(i) Manufacturers with a single durability group subject to the Tier 3 PM standards in §86.1811 must submit PM test data for that group.

(ii) Manufacturers with two to eight durability groups subject to the Tier 3 PM standards in §86.1811 must submit PM test data for at least two durability groups each model year. EPA will work with the manufacturer to select durability groups for testing, with the general expectation that testing will rotate to cover a manufacturer's whole product line over time. If a durability group has been certified in an earlier model year based on submitted PM data, and that durability group is eligible for certification using carryover test data, that carryover data may count toward meeting the requirements of this paragraph (d)(1), subject to the selection of durability groups.

(iii) Manufacturers with nine or more durability groups subject to the Tier 3 PM standards in §86.1811 must submit PM test data for at least 25 percent of those durability groups each model year. We will work with the manufacturer to select durability groups for testing as described in paragraph (d)(1)(ii) of this section.

* * * * *

(6) For model years 2012 through 2016, a manufacturer may provide a statement in its application for certification that vehicles comply with the applicable standards instead of measuring N_2O emissions. Such a statement may also be used for model year 2017 and 2018 vehicles only if the application for certification for those vehicles is based upon data carried over from a prior model year, as allowed under this subpart. No model year 2019 and later vehicles may be waived from testing for N_2O emissions. Vehicles certified to N_2O standards using a compliance statement instead of submitting test data are not required to collect and submit N_2O emission data under the in-use testing requirements of §86.1845.

(e) * * *

(9) For complete vehicles above 10,000 pounds GVWR with fuel tanks exceeding 35 gallons nominal fuel tank capacity, and for any incomplete vehicles above 10,000 pounds GVWR, a manufacturer may provide a statement in the application for certification that vehicles comply with refueling emission standards instead of submitting test data, consistent with 40 CFR 1037.103(c).

* * * * *

* 68. Section 86.1844–01 is amended by revising paragraphs (d)(3) and (d)(7)(i) to read as follows:

§86.1844–01 Information requirements: Application for certification and submittal of information upon request.

* * * * *

(d) * * *

(3) A description of applicable evaporative/refueling families and leak families in accordance with the criteria listed in §86.1821–01, or as otherwise used to group a product line.

* * * * *

(7) * * *

(i) For vehicles certified to any Tier 3 emission standards, include a comparison of drive-cycle metrics as specified in 40 CFR 1066.425(j) for each drive cycle or test phase, as appropriate.

* * * * *

* 69. Section 86.1845–04 is amended by revising paragraphs (b)(5), (c)(5), and (f)(2) to read as follows:

§86.1845–04 Manufacturer in-use verification testing requirements.

* * * * *

(b) * * *

(5) *Testing.* (i) Each test vehicle of a test group shall be tested in accordance with the FTP and the US06 portion of the SFTP as described in subpart B of this part, when such test vehicle is tested for compliance with applicable exhaust emission standards under this subpart. Test vehicles subject to applicable exhaust CO_2 emission standards under this subpart shall also be tested in accordance with the HFET as described in 40 CFR 1066.840.

(ii) For vehicles subject to Tier 3 p.m. standards, manufacturers must measure PM emissions over the FTP and US06 driving schedules for at least 50 percent of the vehicles tested under paragraph (b)(5)(i) of this section.

(iii) Starting with model year 2018 vehicles, manufacturers must demonstrate compliance with the Tier 3 leak standard specified in §86.1813, if applicable, as described in this paragraph (b)(5)(iii). Manufacturers must evaluate each vehicle tested under paragraph (b)(5)(i) of this section, except that leak testing is not required for vehicles tested under paragraph (b)(5)(iv) of this section for diurnal emissions. In addition, manufacturers must evaluate at least one vehicle from each leak family for a given model year. Manufacturers may rely on OBD monitoring instead of testing as follows:

(A) A vehicle is considered to pass the leak test if the OBD system completed a leak check within the previous 750 miles of driving without showing a leak fault code.

(B) Whether or not a vehicle's OBD system has completed a leak check within the previous 750 miles of driving, the manufacturer may operate the vehicle as needed to force the OBD system to perform a leak check. If the OBD leak check does not show a leak fault, the vehicle is considered to pass the leak test.

(C) If the most recent OBD leak check from paragraph (b)(5)(iii)(A) or (B) of this section shows a leak-related fault code as specified in §86.1806–17(b), the vehicle is presumed to have failed the leak test. Manufacturers may perform the leak measurement procedure described in 40 CFR 1066.985 for an official result to replace the finding from the OBD leak check.

(D) Manufacturers may not perform repeat OBD checks or leak measurements to over-ride a failure under paragraph (b)(5)(iii)(C) of this section.

(iv) For nongaseous-fueled vehicles, one test vehicle of each evaporative/refueling family shall be tested in accordance with the supplemental 2-diurnal-plus-hot-soak evaporative emission and refueling emission procedures described in subpart B of this part, when such test vehicle is tested for compliance with applicable evaporative emission and refueling standards under this subpart. For gaseous-fueled vehicles, one test vehicle of each evaporative/refueling family shall be tested in accordance with the 3-diurnal-plus-hot-soak evaporative emission and refueling emission procedures described in subpart B of this part, when such test vehicle is tested for compliance with applicable evaporative emission and refueling standards under this subpart. The test vehicles tested to fulfill the evaporative/refueling testing requirement of this paragraph (b)(5)(iv) will be counted when determining compliance with the minimum number of vehicles as specified in Table S04–06 and Table S04–07 in paragraph (b)(3) of this section for testing under paragraph (b)(5)(i) of this section only if the vehicle is also tested for exhaust emissions under the requirements of paragraph (b)(5)(i) of this section.

* * * * *

(c) * * *

(5) *Testing.* (i) Each test vehicle shall be tested in accordance with the FTP and the US06 portion of the SFTP as described in subpart B of this part when such test vehicle is tested for compliance with applicable exhaust emission standards under this subpart. Test vehicles subject to applicable exhaust CO_2 emission standards under this subpart shall also be tested in accordance with the HFET as described in 40 CFR 1066.840. One test vehicle from each test group shall be tested over the FTP at high altitude. The test vehicle tested at high altitude is not required to be one of the same test vehicles tested at low altitude. The test vehicle tested at high altitude is counted when determining the compliance with the requirements shown in Table S04–06 and Table S04–07 in paragraph (b)(3) of this section or the expanded sample size as provided for in this paragraph (c).

(ii) For vehicles subject to Tier 3 p.m. standards, manufacturers must measure PM emissions over the FTP and US06 driving schedules for at least 50 percent of the vehicles tested under paragraph (c)(5)(i) of this section.

(iii) Starting with model year 2018 vehicles, manufacturers must evaluate each vehicle tested under paragraph (c)(5)(i) of this section to demonstrate compliance with the Tier 3 leak standard specified in §86.1813, except that leak testing is not required for vehicles tested under paragraph (c)(5)(iv) of this section for diurnal emissions. In addition, manufacturers must evaluate at least one vehicle from each leak family for a given model year. Manufacturers may rely on OBD monitoring instead of testing as described in paragraph (b)(5)(iii) of this section.

(iv) For nongaseous-fueled vehicles, one test vehicle of each evaporative/refueling family shall be tested in accordance with the supplemental 2-diurnal-plus-hot-soak evaporative emission procedures described in subpart B of this part, when such test vehicle is tested for compliance with applicable evaporative emission and refueling standards under this subpart. For gaseous-fueled vehicles, one test vehicle of each evaporative/refueling family shall be tested in accordance with the 3-diurnal-plus-hot-soak evaporative emission procedures described in subpart B of this part, when such test vehicle is tested for compliance with applicable evaporative emission and refueling standards under this subpart. The vehicles tested to fulfill the evaporative/refueling testing requirement of this paragraph (c)(5)(iv) will be counted when determining compliance with the minimum number of vehicles as specified in Table S04–06 and table S04–07 in paragraph (b)(3) of this section for testing under paragraph (c)(5)(i) of this section only if the vehicle is also tested for exhaust emissions under the requirements of paragraph (c)(5)(i) of this section.

* * * * *

(f) * * *

(2) For flexible-fueled vehicles certified to NMOG (or NMOG+NO_X) standards, the manufacturer may ask for EPA approval to demonstrate compliance using an equivalent NMOG emission result calculated from a ratio of ethanol NMOG exhaust emissions to gasoline NMHC exhaust emissions. Ethanol NMOG exhaust emissions are measured values from testing with the ethanol test fuel, expressed as NMOG. Gasoline NMHC exhaust emissions are measured values from testing with the gasoline test fuel, expressed as NMHC. This ratio must be established during certification for each emission-data vehicle for the applicable test group. Use good engineering judgment to establish a different ratio for each duty cycle or test interval as appropriate. Identify the ratio values you develop under this paragraph (f)(2) and describe the duty cycle or test interval to which they apply in the Part II application for certification. Calculate the equivalent NMOG emission result by multiplying the measured gasoline NMHC exhaust emissions for a given duty cycle or test interval by the appropriate ratio.

* * * * *

* 70. Section 86.1846–01 is amended by revising paragraphs (b)(1)(i) and (ii) to read as follows:

§86.1846–01 Manufacturer in-use confirmatory testing requirements.

* * * * *

(b) * * *

(1) * * *

(i) Additional testing is not required under this paragraph (b)(1) based on Supplemental FTP testing or evaporative/refueling testing. Testing conducted at high altitude under the requirements of §86.1845–04(c) will be included in determining if a test group meets the criteria triggering the testing required under this section.

(ii) The vehicle designated for testing under the requirements of §86.1845–04(c)(2) with a minimum odometer reading of 105,000 miles or 75% of useful life, whichever is less, will not be included in determining if a test group meets the triggering criteria.

* * * * *

* 71. Section 86.1861–17 is amended by revising paragraphs (a) and (b)(1) to read as follows:

§86.1861–17 How do the NMOG+NO_X and evaporative emission credit programs work?

* * * * *

(a) Calculate emission credits as described in this paragraph (a) instead of using the provisions of 40 CFR 1037.705. Calculate positive or negative emission credits relative to the applicable fleet-average standard. Calculate positive emission credits if your fleet-average level is below the standard. Calculate negative emission credits if your fleet-average value is above the standard. Calculate credits separately for each type of standard and for each averaging set. Calculate emission credits using the following equation, rounded to the nearest whole number:

$$\textit{Emission credit} = \textit{Volume} \cdot [\textit{Fleet average standard} - \textit{Fleet average value}]$$

Where:

Emission credit = The positive or negative credit for each discrete fleet-average standard, in units of vehicle-grams per mile for NMOG+NO_X and vehicle-grams per test for evaporative emissions.

Volume = Sales volume in a given model year from the collection of test groups or evaporative families covered by the fleet-average value, as described in §86.1860.

(b) * * *

(1) Except as specified in paragraph (b)(2) of this section, emission credits may be exchanged only within an averaging set, as follows:

(i) HDV represent a separate averaging set with respect to all emission standards.

(ii) Except as specified in paragraph (b)(1)(iii) of this section, LDV and LDT represent a single averaging set with respect to all emission standards. Note that FTP and SFTP credits are not interchangeable.

(iii) LDV and LDT1 certified to standards based on a useful life of 120,000 miles and 10 years together represent a single averaging set with respect to NMOG+NO_X emission standards. Note that FTP and SFTP credits are not interchangeable.

(iv) The following separate averaging sets apply for evaporative emission standards:

(A) LDV and LDT1 together represent a single averaging set.

(B) LDT2 represents a single averaging set.

(C) HLDT represents a single averaging set.

(D) HDV represents a single averaging set.

* * * * *

* 72. Appendix I to part 86 is amended by revising paragraph (c) introductory text to read as follows:

Appendix I to Part 86—Dynamometer Schedules

* * * * *

(c) *EPA driving schedule for class 3 heavy-duty vehicles.* This driving schedule is also known as the LA–92 cycle. The first 1,435 seconds are the Hot LA–92 driving schedule.

* * * * *

PART 600—FUEL ECONOMY AND GREENHOUSE GAS EXHAUST EMISSIONS OF MOTOR VEHICLES

* 73. The authority citation for part 600 continues to read as follows:

Authority: 49 U.S.C. 32901–23919q, Pub. L. 109–58.

Subpart B—[Amended]

* 74. Section 600.116–12 is amended by revising paragraph (c)(5) to read as follows:

§600.116–12 Special procedures related to electric vehicles and hybrid electric vehicles.

* * * * *

(c) * * *

(5) The End-of-Test criterion is based on a 1 percent Net Energy Change as specified in Section 3.8 of SAE J1711. We may approve alternate Net Energy Change tolerances as specified in Section 3.9.1 of SAE J1711 for charge-depleting tests or Appendix C of SAE J1711 for charge-sustaining tests if the 1 percent threshold is insufficient or inappropriate. For charge-sustaining tests, we may approve the use of alternate Net Energy Change tolerances as specified in Appendix C of SAE J1711 to correct final fuel economy values, CO_2 emissions, and carbon-related exhaust emissions. For charge-sustaining tests, do not use alternate Net Energy Change tolerances to correct emissions of criteria pollutants. Additionally, if we approve an alternate End-of-Test criterion or Net Energy Change tolerances for a specific vehicle, we may use the alternate criterion or tolerances for any testing we conduct on that vehicle.

* * * * *

* 75. Section 600.117 is amended by revising paragraphs (a), (b), (c), and (d) to read as follows:

§600.117 Interim provisions.

* * * * *

(a) Except as specified in paragraph (e) of this section, manufacturers must demonstrate compliance with greenhouse gas emission standards and determine fuel economy values using E0 gasoline test fuel as specified in 40 CFR 86.113–04(a)(1), regardless of any testing with Tier 3 test fuel under paragraph (b) of this section.

(b) Manufacturers may demonstrate that vehicles comply with Tier 3 emission standards as specified in 40 CFR part 86, subpart S, during fuel economy measurements using the E0 gasoline test fuel specified in 40 CFR 86.113–04(a)(1), as long as this test fuel is used in fuel economy testing for all applicable duty cycles specified in 40 CFR part 86, subpart S. If a vehicle fails to meet a Tier 3 emission standard using the E0 gasoline test fuel specified in 40 CFR 86.113–04(a)(1), the manufacturer must retest the vehicle using the Tier 3 test fuel specified in 40 CFR 1065.710(b) (or the equivalent LEV III test fuel for California) to demonstrate compliance with all applicable emission standards over that test cycle.

(c) If a manufacturer demonstrates compliance with emission standards for criteria pollutants over all five test cycles using the Tier 3 test fuel specified in 40 CFR 1065.710(b) (or the equivalent LEV III test fuel for California), the manufacturer may use test data with the same test fuel to determine whether a test group meets the criteria described in §600.115 for derived 5-cycle testing for fuel economy labeling. Such vehicles may be tested over the FTP and HFET cycles with the E0 gasoline test fuel specified in 40 CFR 86.113–04(a)(1) under this paragraph (c); the vehicles must meet the Tier 3 emission standards over those test cycles as described in paragraph (b) of this section.

(d) Manufacturers may perform testing with the appropriate gasoline test fuels specified in 40 CFR 86.113–04(a)(1), 40 CFR 86.213(a)(2), and in 40 CFR 1065.710(b) to evaluate whether their vehicles meet the criteria for derived 5-cycle testing under 40 CFR 600.115. All five tests must use test fuel with the same nominal ethanol concentration.

* * * * *

PART 1037—CONTROL OF EMISSIONS FROM NEW HEAVY-DUTY MOTOR VEHICLES

* 76. The authority citation for part 1037 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart B—Emission Standards and Related Requirements

* 77. Section 1037.103 is amended by revising paragraphs (b)(6) and (f) to read as follows:

§1037.103 Evaporative and refueling emission standards.

* * * * *

(b) * * *

(6) Vehicles not yet subject to the Tier 3 standards in 40 CFR 86.1813 must meet evaporative emission standards as specified in §§86.008–10(b)(1) and (2) for Otto-cycle applications and 86.007–11(b)(3)(ii) and (b)(4)(ii) for diesel-cycle applications.

* * * * *

(f) *Useful life.* Your vehicles must meet the evaporative emission standards of this section throughout their useful life, expressed in service miles or calendar years, whichever comes first. The useful life values for the standards of this section are described in 40 CFR 86.1805.

* * * * *

* 78. Section 1037.104 is amended by revising paragraph (e) to read as follows:

§1037.104 Exhaust emission standards for CO_2, CH_4, and N_2O for heavy-duty vehicles at or below 14,000 pounds GVWR.

* * * * *

(e) *Useful life.* Your vehicles must meet the exhaust emission standards of this section throughout their full useful life, expressed in service miles or calendar years, whichever comes first. The useful life values for the standards of this section are those that apply to model year 2014 vehicles for criteria pollutants under 40 CFR part 86.1805–12.

* * * * *

* 79. Section 1037.135 is amended by revising paragraph (c)(9) to read as follows:

§1037.135 Labeling.

* * * * *

(c) * * *

(9) If you rely on another company to design and install fuel tanks in incomplete vehicles that use an evaporative canister for controlling diurnal emissions, include the following statement: ''THIS VEHICLE IS DESIGNED TO COMPLY WITH EVAPORATIVE EMISSION STANDARDS WITH UP TO x GALLONS OF FUEL TANK CAPACITY.'' Complete this statement by identifying the maximum specified fuel tank capacity associated with your certification.

* * * * *

PART 1043—CONTROL OF NO_X, SO_X, AND PM EMISSIONS FROM MARINE ENGINES AND VESSELS SUBJECT TO THE MARPOL PROTOCOL

* 80. The authority citation for part 1043 is revised to read as follows:

Authority: 33 U.S.C. 1901–1912.

§1043.5 [Amended]

* 81. Section 1043.5 is amended by removing and reserving paragraph (b).

* 82. Section 1043.10 is amended by revising paragraphs (a)(2) introductory text, (a)(2)(iii), and (b)(2) to read as follows:

§1043.10 Applicability.

(a) * * *

(2) Vessels that operate only domestically and conform to the requirements of this paragraph (a)(2) are excluded from Regulation 13 of Annex VI and the NO_X-related requirements of this part (including the requirement to obtain an EIAPP certificate and to keep a Technical File and an Engine Book of Record Parameters). For the purpose of this exclusion, the phrase ''operate only domestically'' means the vessels do not enter waters subject to the jurisdiction or control of any foreign country, except for Canadian portions of the Great Lakes. (See §§1043.60 and 1043.70 for provisions related to fuel use by such vessels). To be excluded, the vessel must conform to each of the following provisions:

* * * * *

(iii) Any engine installed in the vessel that is not covered by an EIAPP certificate must be labeled as specified in 40 CFR 1042.135 with respect to whether it meets the requirements of Regulation 13 of Annex VI.

(b) * * *

(2) For non-public vessels flagged by a country that is not a party to Annex VI, the requirements of this part apply in the same manner as apply for Party vessels, except as otherwise provided in this part. For example, see §1043.30(c)(4) for provisions related to showing compliance with this requirement without an EIAPP certificate. See §1043.60 for specific operating requirements.

* * * * *

* 83. Section 1043.20 is amended by revising the definitions for ''2008 Annex VI'', ''Emission control area (ECA)'', and ''Public vessels'' to read as follows:

§1043.20 Definitions.

* * * * *

2008 Annex VI means Annex VI to the MARPOL Protocol, including the amendments from Annex 12, adopted through April 2014 (incorporated by reference in §1043.100). This version of Annex VI does not include any amendments that may be adopted in the future. This 2008 version applies for certain provisions of this part such as those applicable for internal waters and for non-Party vessels.

* * * * *

Emission control area (ECA) means an area designated pursuant to Annex VI as an Emission Control Area that is in force.

* * * * *

Public vessels means warships, naval auxiliary vessels, and other vessels owned or operated by a sovereign country when engaged in noncommercial service. Vessels with a national security exemption under 40 CFR 80.606 or 1042.635 are deemed to be public vessels.

* * * * *

* 84. Section 1043.40 is amended by redesignating paragraphs (d) through (f) as paragraphs (e) through (g), adding a new paragraph (d), and revising the newly redesignated paragraph (g) to read as follows:

§1043.40 EIAPP certificates.

* * * * *

(d) EPA may issue both an EPA certificate and an EIAPP certificate for the same engine, as long as the manufacturer and the engine meet all applicable requirements. EPA may not issue an EIAPP certificate if the engine is certified with an FEL under 40 CFR part 1042 that is higher than the applicable NO_X emission standard under Annex VI.

* * * * *

(g) This paragraph (g) applies for engines that were originally excluded from this part because they were intended for domestic use and were introduced into U.S. commerce without an EIAPP certificate. Note that such engines must be labeled as specified under 40 CFR 1042.135 to indicate that they are intended for domestic use. Such engines may be installed on vessels not intended only for domestic operation provided the engine manufacturer, vessel manufacturer, or vessel owner obtains an EIAPP certificate. Similarly, vessels originally intended only for domestic operation may be used internationally provided the engine manufacturer, vessel manufacturer, or vessel owner obtains an EIAPP certificate. The limitations for engine manufacturers described in paragraphs (a) and (d) of this section also apply for all EIAPP certificates issued under this paragraph (g). In either case, the Technical File must specify that the engine was originally certified for domestic use only, prior to being covered by an EIAPP certificate. Engine manufacturers may provide a supplemental label to clarify that the engine is no longer limited to domestic service. An engine manufacturer, vessel manufacturer, or vessel owner may also ask to apply the provisions of this paragraph (g) to engines originally certified for public vessels.

* 85. Section 1043.60 is amended by revising paragraphs (a) and (b) to read as follows:

§1043.60 Operating requirements for engines and vessels subject to this part.

* * * * *

(a) Except as specified otherwise in this part, NO_X emission limits apply to all vessels subject to this part as specified in the following table:

TABLE 1 TO §1043.60 ANNEX VI NO_X EMISSION STANDARDS (g/kW-hr)

Tier	Area of applicability	Implementation date [a]	Maximum in-use engine speed		
			Less than 130 RPM	130–2000 RPM [b]	Over 2000 RPM
Tier I	All U.S. navigable waters and EEZ	January 1, 2004–December 31, 2010.	17.0	$45.0 \cdot n^{(-0.20)}$	9.8
Tier II	All U.S. navigable waters and EEZ	January 1, 2011–December 31, 2015.	14.4	$44.0 \cdot n^{(-0.23)}$	7.7
Tier II	All U.S. navigable waters and EEZ, exluding ECA and ECA associated areas.	January 1, 2016 and later	14.4	$44.0 \cdot n^{(-0.23)}$	7.7
Tier III	ECA and ECA associated areas	January 1, 2016 and later [c]	3.4	$9.0 \cdot n^{(-0.20)}$	2.0

[a] Standards apply for engines installed on vessels with a build date in the specified time frame, or for engines that undergo a major conversion in the specified time frame.

[b] Applicable standards are calculated from *n* (maximum in-use engine speed, in RPM, as specified in §1042.140). Round the standards to one decimal place.

[c] In the case of recreational vessels of less than 500 gross tonnage with length at or above 24 meters, the Tier III standards start to apply January 1, 2021.

(b) Except as specified otherwise in this part, fuel sulfur limits apply to all vessels subject to this part as specified in the following table:

TABLE 2 TO §1043.60 ANNEX VI FUEL SULFUR LIMITS (wt %) [a]

Calendar years	Sulfur limit in all U.S. navigable waters and EEZ (percent)	Sulfur limit in ECA and ECA associated areas (percent)
2010–2011	4.50	1.00
2012–2014	3.50	1.00
2015–2019	3.50	0.10
2020 and later	0.50	0.10

[a] Note that Regulation 3 and Regulation 4 of Annex VI allow for the use of noncompliant fuel in certain circumstances.

* * * * *

* 86. Section 1043.70 is amended by revising paragraph (a) to read as follows:

§1043.70 General recordkeeping and reporting requirements.

(a) Under APPS, owners and operators of Party vessels must keep records related to NO_X standards and in-use fuel specifications such as the Technical File, the Engine Book of Record Parameters, and bunker delivery notes. Owners and operators of non-Party vessels must keep these records as specified in the NO_X Technical Code and Regulations 13, 14, and 18 of 2008 Annex VI (incorporated by reference in §1043.100). We may inspect these records as allowed by APPS. As part of our inspection, we may require that the owner submit copies of these records to us.

* * * * *

* 87. Section 1043.80 is amended by revising paragraph (b)(9) to read as follows:

§1043.80 Recordkeeping and reporting requirements for fuel suppliers.

* * * * *

(b) * * *

(9) A signed statement by an authorized representative of the fuel supplier certifying that the fuel supplied conforms to Regulations 14 and 18 of Annex VI consistent with its designation, intended use, and the date on which it is to be used. For example, with respect to conformity to Regulation 14 of Annex VI, a fuel designated and intended for use in an ECA any time on or after January 1, 2015 may not have a sulfur content above 0.10 weight percent. This statement is not required if the vessel is not subject to fuel standards of Regulation 14 of Annex VI. The statement described in this paragraph (b)(9) is deemed to be a submission to EPA.

* * * * *

* 88. Section 1043.95 is amended by revising the section heading, the introductory text, and paragraph (b)(1)(ii) to read as follows:

§1043.95 Great Lakes provisions.

The provisions of this section apply for vessels operating exclusively in the Great Lakes.

* * * * *

(b) * * *

(1) * * *

(ii) We may approve the use of an engine meeting less stringent standards if the owner can demonstrate that it took possession of the engine before October 30, 2009, and that engine is a new engine that has not been installed in a non-marine application. Such an engine must at a minimum be certified to the Annex VI NO_X emission standard referenced in §1043.60 that applies based on its build date.

* * * * *

* 89. Add §1043.97 to read as follows:

§1043.97 Interim provisions.

(a) The fuel-related requirements under APPS for operation in the North American ECA, the United States Caribbean Sea ECA, and ECA-associated areas do not apply until January 1, 2020 for steamships built on or before August 1, 2011 if they are powered by propulsion boilers that were not originally designed for continued operation on marine distillate fuel or natural gas.

(b) [Reserved]

* 90. Section 1043.100 is amended by revising paragraph (a) to read as follows:

§1043.100 Reference materials.

* * * * *

(a) *IMO material.* This paragraph (a) lists material from the International Maritime Organization that we have incorporated by reference. Anyone may purchase copies of these materials from the International Maritime Organization, 4 Albert Embankment, London SE1 7SR, United Kingdom, or *www.imo.org, or 44-(0)20–7735–7611.*

(1) MARPOL Annex VI, Regulations for the Prevention of Air Pollution from Ships, Third Edition, 2013, and NO_X Technical Code 2008.

(i) Revised MARPOL Annex VI, Regulations for the Prevention of Pollution from Ships, Third Edition, 2013 (''2008 Annex VI''); IBR approved for §1043.1 introductory text, 1043.20, 1043.30(f), 1043.60(c), and 1043.70(a).

(ii) NO_X Technical Code 2008, Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines, 2013 Edition, (''NO_X Technical Code''); IBR approved for §§1043.20, 1043.41(b) and (h), and 1043.70(a).

(iii) Annex 12, Resolution MEPC.251(66) from the Report of the Marine Environment Protection Committee on its Sixty-Sixth Sesson, April 25, 2014. This document describes new and revised provisions that are considered to be part of Annex VI and NO_X Technical Code 2008 as referenced in paragraphs (a)(1)(i) and (ii) of this section. IBR approved for §1043.1 introductory text, 1043.20, 1043.30(f), 1043.41(b) and (h), 1043.60(c), and 1043.70(a).

(2) [Reserved]

* * * * *

PART 1051—CONTROL OF EMISSIONS FROM RECREATIONAL ENGINES AND VEHICLES

* 91. The authority citation for part 1051 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart F—Test Procedures

* 92. Section 1051.501 is amended by revising paragraph (b) to read as follows:

§1051.501 What procedures must I use to test my vehicles or engines?

* * * * *

(b) *Motorcycles and ATVs.* For motorcycles and ATVs, use the equipment, procedures, and duty cycle in 40 CFR part 86, subpart F, to determine whether your vehicles meet the exhaust emission standards in §1051.105 or §1051.107. Measure the emissions of all the pollutants we regulate in §1051.105 or §1051.107. Measure CO_2, N_2O, and CH_4 as described in §1051.235. If we allow you to certify ATVs based on engine testing, use the equipment, procedures, and duty cycle described or referenced in the section that allows engine testing. For motorcycles with engine displacement at or below 169 cc and all ATVs, use the driving schedule in paragraph (b) of appendix I to 40 CFR part 86. For all other motorcycles, use the driving schedule in paragraph (a) of Appendix I to part 86. With respect to vehicle-speed governors, test motorcycles and ATVs in their ungoverned configuration, unless we approve in advance testing in a governed configuration. We will only approve testing in a governed configuration if you can show that the governor is permanently installed on all production vehicles and is unlikely to be removed in use. With respect to engine-speed governors, test motorcycles and ATVs in their governed configuration. Run the test engine, with all emission-control systems operating, long enough to stabilize emission levels; you may consider emission levels stable without measurement if you accumulate 12 hours of operation.

* * * * *

PART 1054—CONTROL OF EMISSIONS FROM NEW, SMALL NONROAD SPARK-IGNITION ENGINES AND EQUIPMENT

* 93. The authority citation for part 1054 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart B—Emission Standards and Related Requirements

* 94. Section 1054.135 is amended by revising paragraph (c)(8) to read as follows:

§1054.135 How must I label and identify the engines I produce?

* * * * *

(c) * * *

(8) Include one of the following statements:

(i) If you are an integrated equipment manufacturer certifying engines with respect to exhaust emissions and meeting all applicable evaporative emission requirements under 40 CFR part 1060, state—

"THIS ENGINE MEETS U.S. EPA EXH/EVP REGS FOR [MODEL YEAR]."

(ii) In all other cases, state—

"THIS ENGINE MEETS U.S. EPA EXH REGS FOR [MODEL YEAR]."

* * * * *

* 95. Section 1054.145 is amended by revising paragraph (n) introductory text and removing paragraph (o) to read as follows:

§1054.145 Are there interim provisions that apply only for a limited time?

* * * * *

(n) *California test fuel.* You may perform testing with a fuel meeting the requirements for certifying the engine in California instead of the fuel specified in §1054.501(b)(2), as follows:

* * * * *

Subpart F—Test Procedures

* 96. Section 1054.501 is amended by revising paragraph (b)(2) to read as follows:

§1054.501 How do I run a valid emission test?

* * * * *

(b) * * *

(2) Use the appropriate fuels and lubricants specified in 40 CFR part 1065, subpart H, for all the testing we require in this part. Except as specified in paragraph (d) of this section, use gasoline specified for general testing. For service accumulation, use the test fuel or any commercially available fuel that is representative of the fuel that in-use engines will use. Note that §1054.145(n) allows for testing with gasoline test fuels specified by the California Air Resources Board for any individual engine family.

* * * * *

Subpart G—Special Compliance Provisions

* 97. Section 1054.690 is amended by adding the introductory text and revising paragraphs (a) through (f) to read as follows:

§1054.690 What bond requirements apply for certified engines?

This section generally applies for certifying engine manufacturers. It also applies to importers that do not certify engines as described in paragraph (j) of this section.

(a) Before introducing certified engines into U.S. commerce, you must post a bond to cover any potential compliance or enforcement actions under the Clean Air Act with respect to engines certified under this part unless you demonstrate to us in your application for certification that you are able to meet any potential compliance- or enforcement-related obligations, as described in this section. Note that you might also need to post bond under this section to meet your obligations under §1054.120(f).

(b) The bonding requirements apply if you do not have long-term assets in the United States meeting any of the following thresholds:

(1) A threshold of $3 million applies if you have been a certificate holder in each of the preceding ten years without failing a test conducted by EPA officials or having been found by EPA to be noncompliant under applicable regulations.

(2) A threshold of $6 million applies if you are a secondary engine manufacturer.

(3) A threshold of $10 million applies if you do not qualify for the smaller bond thresholds in paragraph (b)(1) or (2) of this section.

(c) For the purpose of establishing your level of long-term assets under paragraph (b) of this section, include the values from your most recent balance sheet for buildings, land, and fixed equipment, but subtract depreciation and related long-term liabilities (such as a mortgage). If you have sufficient long-term assets to avoid bond payments under this section, you must identify the location of these assets in your application for certification.

(d) Determine the value of the bond as follows:

(1) Calculate a value based on the per-engine bond values shown in Table 1 to this section and on the projected U.S.-directed production volume from each displacement grouping for the model year. For example, if you have projected U.S.-directed production volumes of 10,000 engines with 180 cc displacement and 10,000 engines with 400 cc displacement in 2013, the calculated bond amount is $750,000. If the calculated value is less than $500,000, the appropriate bond amount is $500,000. If the calculated value exceeds the applicable threshold value specified in paragraph (b) of this section, use the applicable threshold value as the appropriate value of the bond. These values may be adjusted as described in paragraphs (d)(2) through (4) of this section. You may generally change your projected U.S.-directed production volume under §1054.225

during the model year; however, you may not decrease your bond based on new projected U.S.-directed production volumes once you have imported or otherwise introduced into U.S. commerce your first engine from that model year.

TABLE 1 TO §1054.690—PER-ENGINE BOND VALUES

For engines with displacement falling in the following ranges . . .	The per-engine bond value is . . .
Disp. < 225 cc	$25
225 ≤ Disp. < 740 cc	50
740 ≤ Disp. ≤ 1,000 cc	100
Disp. > 1,000 cc	200

(2) If your estimated or actual U.S.-directed production volume increases beyond the level appropriate for your current bond payment, you must post additional bond to reflect the increased volume within 90 days after you change your estimate or determine the actual production volume. You may not decrease your bond in a given year, but you may calculate a lower bond value in a later year based on the highest actual U.S.-directed production volumes from the preceding three years.

(3) If you sell engines without aftertreatment components under the provisions of §1054.610, you must increase the per-engine bond values for the current year by 20 percent.

(4) The minimum bond value is $25,000 instead of $500,000 if you are a small-volume engine manufacturer or a small-volume equipment manufacturer that has been a certificate holder in each of the preceding five years without failing a test conducted by EPA officials or having been found by EPA to be noncompliant under applicable regulations.

(e) The threshold identified in paragraph (b) of this section and the bond values identified in paragraph (d) of this section are in 2008 dollars. We will adjust these values for 2020 and later, and every 10 years after that, by considering the current Consumer Price Index values published by the Bureau of Labor Statistics relative to 2008. We will generally round values for thresholds and total bond obligations as follows:

(1) Round calculated values at or below $125,000 to the nearest $5,000.

(2) Round calculated values above $125,000 and at or below $2.25 million to the nearest $50,000.

(3) Round calculated values above $2.25 million to the nearest $500,000.

(f) If you are required to post a bond under this section, you must get the bond from a third-party surety that is cited in the U.S. Department of Treasury Circular 570, ''Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies'' (*http://www.fms.treas.gov/c570/c570.html#certified*). You must maintain this bond for every year in which you sell certified engines. The surety agent remains responsible for obligations under the bond for two years after the bond is cancelled or expires without being replaced.

* * * * *

PART 1060—CONTROL OF EVAPORATIVE EMISSIONS FROM NEW AND IN-USE NONROAD AND STATIONARY EQUIPMENT

* 98. The authority citation for part 1060 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart A—Overview and Applicability

* 99. Section 1060.5 is amended by revising paragraphs (b)(2), (e), and (f), including Tables 1 through 3, to read as follows:

§1060.5 Do the requirements of this part apply to me?

* * * * *

(b) * * *

(2) Vessel manufacturers are subject to all the requirements of this part 1060 that apply to Marine SI engines and fuel systems. However, they must certify to the emission standards specified in §§1060.102 through 1060.105 only if one or more of the following conditions apply:

(i) Vessel manufacturers must certify fuel system components they install in their vessels if the components are not certified to meet all applicable evaporative emission standards, including both permeation and diurnal standards. This would include vessel manufacturers that make their own fuel tanks. Vessel manufacturers would need to act as component manufacturers to certify under this part 1060.

(ii) Vessel manufacturers must certify their vessels only if they intend to generate or use evaporative emission credits. Vessel manufacturers would certify under part 40 CFR part 1045 using the emission-credit provisions in subpart H of that part to demonstrate compliance with the emission standard.

* * * * *

(e) *Small SI.* Certify engines, equipment, and fuel-system components as follows:

(1) Component manufacturers must certify their fuel lines and fuel tanks intended for Small SI engines and equipment under this part 1060, except as allowed by §1060.601(f).

(2) Equipment manufacturers must certify fuel system components they install in their equipment if the components are not certified to meet applicable evaporative emission standards. Equipment manufacturers would need to act as component manufacturers to certify fuel-system components under this part 1060.

(3) Engine manufacturers must meet all the requirements of this part 1060 that apply to equipment manufacturers for all fuel-system components they install on their engines. Engine manufacturers that produce Small SI engines with complete fuel systems are considered the equipment manufacturers for those engines under this part 1060.

(4) Equipment manufacturers must certify their equipment and are subject to all the requirements of this part 1060; however, this does not apply for equipment using portable nonroad fuel tanks.

(f) *Summary of certification responsibilities.* Tables 1 through 3 of this section summarize the certification responsibilities for different kinds of manufacturers as described in paragraphs (b) through (e) of this section. The term ''No'' as used in the tables means that a manufacturer is not required to obtain a certificate of conformity under paragraphs (b) through (e) of this section. In situations where multiple manufacturers are subject to the standards and other requirements of this part, such a manufacturer must nevertheless certify if the manufacturer who is required to certify under paragraphs (b) through (e) of this section fails to obtain a certificate of conformity.

TABLE 1 TO §1060.5—SUMMARY OF ENGINE MANUFACTURER EVAPORATIVE CERTIFICATION RESPONSIBILITIES

Equipment type	Is the engine manufacturer required to certify for evaporative emission standards? [a]	Code of Federal Regulations Cite for Certification
Marine SI	No.	
Large SI	Yes	40 CFR part 1048.
Recreational vehicles	No.	
Small SI	No, unless engines are sold with complete fuel systems	40 CFR part 1060.

[a] Fuel lines and fuel tanks that are attached to or sold with engines must be covered by a certificate of conformity.

TABLE 2 TO §1060.5—SUMMARY OF EQUIPMENT MANUFACTURER EVAPORATIVE CERTIFICATION RESPONSIBILITIES

Equipment type	Is the equipment manufacturer required to certify for evaporative emission standards?	Code of Federal Regulations Cite for Certification
Marine SI	Yes, but only if vessel manufacturers install uncertified fuel lines or fuel tanks, or they intend to generate or use evaporative emission credits.	40 CFR part 1060.[a]
Large SI	Allowed but not required	40 CFR part 1060.
Recreational vehicles	Yes, even if vehicle manufacturers install certified components	40 CFR part 1051.
Small SI	Yes, unless the equipment uses portable nonroad fuel tanks	40 CFR part 1060.[a]

[a] See the exhaust standard-setting part for provisions related to generating or using evaporative emission credits.

TABLE 3 OF §1060.5—SUMMARY OF COMPONENT MANUFACTURER CERTIFICATION RESPONSIBILITIES

Equipment type	Is the component manufacturer required to certify fuel lines and fuel tanks?	Code of Federal Regulations Cite for Certification
Marine SI	Yes, including portable marine fuel tanks and associated fuel lines [a]	40 CFR part 1060.
Large SI	Allowed but not required	40 CFR part 1060.
Recreational vehicles	Allowed but not required	40 CFR part 1060.
Small SI	Yes [a]	40 CFR part 1060.

[a] See §1060.601 for an allowance to make contractual arrangements with engine or equipment manufacturers instead of certifying.

Subpart F—Test Procedures

* 100. Section 1060.515 is amended by revising paragraphs (c) and (d) and adding paragraph (e) to read as follows:

§1060.515 How do I test EPA Nonroad Fuel Lines and EPA Cold-Weather Fuel Lines for permeation emissions?

* * * * *

(c) Except as specified in paragraph (d) of this section, measure fuel line permeation emissions using the equipment and procedures for weight-loss testing specified in SAE J30 or SAE J1527 (incorporated by reference in §1060.810). Start the measurement procedure within 8 hours after draining and refilling the fuel line. Perform the emission test over a sampling period of 14 days. You may omit up to two daily measurements in any seven day period. Determine your final emission result based on the average of measured values over the 14-day period. Maintain an ambient temperature of 23±2 °C throughout the sampling period.

(d) For fuel lines with a nominal inner diameter below 5.0 mm, you may alternatively measure fuel line permeation emissions using the equipment and procedures for weight-loss testing specified in SAE J2996 (incorporated by reference in §1060.810). Determine your final emission result based on the average of measured values over the 14-day sampling period. Maintain an ambient temperature of 23±2 °C throughout the sampling period.

(e) Use good engineering judgment to test short fuel line segments. For example, you may need to join individual fuel line segments using proper connection fittings to achieve enough length and surface area for a proper measurement. Size the fuel reservoir appropriately for the tested fuel line.

* 101. Section 1060.520 is amended by revising paragraphs (a)(1), (c)(1), and (d)(9) to read as follows:

§1060.520 How do I test fuel tanks for permeation emissions?

* * * * *

(a) * * *

(1) *Pressure cycling.* Perform a pressure test by sealing the tank and cycling it between +13.8 and ¥3.4 kPa (+2.0 and ¥0.5 psig) for 10,000 cycles at a rate of 60 seconds per cycle. The purpose of this test is to represent environmental wall stresses caused by pressure changes and other factors (such as vibration or thermal expansion). If your tank cannot be tested using the pressure cycles specified by this paragraph (a)(1), you may ask to use special test procedures under §1060.505.

* * * * *

(c) * * *

(1) Obtain a second tank whose total volume is within 5 percent of the test tank's volume. You may not use a tank that has previously contained fuel or any other contents that might affect its mass stability.

* * * * *

(d) * * *

(9) Record the difference in mass between the reference tank and the test tank for each measurement. This value is M_i, where i is a counter representing the number of days elapsed. Subtract M_i from M_o and divide the difference by the internal surface area of the fuel tank. Divide this g/m^2 value by the number of test days (using at least two decimal places) to calculate the emission rate in g/m^2/day. Example: If a tank with an internal surface area of 0.720 m^2 weighed 1.31 grams less than the reference tank at the beginning of the test and weighed 9.86 grams less than

the reference tank after soaking for 10.03 days, the emission rate would be—

((¥1.31 g)¥(¥9.86 g))/0.720 m^2/10.03 days = 1.1839 g/m^2/day

* * * * *

* 102. Section 1060.525 is revised to read as follows:

§1060.525 How do I test fuel systems for diurnal emissions?

Use the procedures of this section to determine whether your fuel tanks meet diurnal emission standards as specified in §1060.105.

(a) Use the following procedure to measure diurnal emissions:

(1) Diurnal measurements are based on representative temperature cycles, as follows:

(i) Diurnal fuel temperatures for marine fuel tanks that will be installed in nontrailerable boats must undergo repeat temperature swings of 2.6 °C between nominal values of 27.6 and 30.2 °C.

(ii) Diurnal fuel temperatures for other installed marine fuel tanks must undergo repeat temperature swings of 6.6 °C between nominal values of 25.6 and 32.2 °C.

(iii) For fuel tanks installed in equipment other than marine vessels, the following table specifies a profile of ambient temperatures:

TABLE 1 TO §1060.525—DIURNAL TEMPERATURE PROFILES FOR NONMARINE FUEL TANKS

Time (hours)	Ambient temperature profile (°C)
0	22.2
1	22.5
2	24.2
3	26.8
4	29.6
5	31.9
6	33.9
7	35.1
8	35.4
9	35.6
10	35.3
11	34.5
12	33.2
13	31.4
14	29.7
15	28.2
16	27.2
17	26.1
18	25.1
19	24.3
20	23.7
21	23.3
22	22.9
23	22.6
24	22.2

(2) Fill the fuel tank to 40 percent of nominal capacity with the gasoline specified in 40 CFR 1065.710 for general testing.

(3) Install a vapor line from any vent ports that would not be sealed in the final in-use configuration. Use a length of vapor line representing the largest inside diameter and shortest length that would be expected with the range of in-use installations for the emission family.

(4) If the fuel tank is equipped with a carbon canister, load the canister with butane or gasoline vapors to its canister working capacity as specified in §1060.240(e)(2)(i) and attach it to the fuel tank in a way that represents a typical in-use configuration. Purge the canister as follows to prepare for emission measurement:

(i) For marine fuel tanks, perform a single heating and cooling cycle as specified in paragraph (a)(7) of this section without measuring emissions.

(ii) For nonmarine fuel tanks, establish a characteristic purge volume by running an engine with the fuel tank installed to represent an in-use configuration. Measure the volume of air flowing through the canister while the engine operates for 30 minutes over repeat cycles of the appropriate duty cycle used for certifying the engine for exhaust emissions. Set up the loaded canister for testing by purging it with the characteristic purge volume from the engine simulation run.

(5) Stabilize the fuel tank to be within 2.0 °C of the nominal starting temperature specified in paragraph (a)(1) of this section. In the case of marine fuel tanks, install a thermocouple meeting the requirements of 40 CFR 86.107–96(e) in the approximate mid-volume of fuel and record the temperature at the end of the stabilization period to the nearest 0.1 °C. For sealed fuel systems, replace the fuel cap once the fuel reaches equilibrium at the appropriate starting temperature.

(6) Prepare the tank for mass measurement using one of the following procedures:

(i) Place the stabilized fuel tank in a SHED meeting the specifications of 40 CFR 86.107–96(a)(1) that is equipped with a FID analyzer meeting the specifications of 40 CFR 1065.260. Take the following steps in sequence:

(A) Purge the SHED.

(B) Close and seal the SHED.

(C) Zero and span the FID analyzer.

(D) Within ten minutes of sealing the SHED, measure the initial hydrocarbon concentration. This is the start of the sampling period.

(ii) If your testing configuration involves mass emissions at the standard of 2.0 grams or more, you may alternatively place the stabilized fuel tank in any temperature-controlled environment and establish mass emissions as a weight loss relative to a reference fuel tank using the procedure specified in §1060.520(d) instead of calculating it from changing hydrocarbon concentrations in the SHED.

(7) Control temperatures as follows:

(i) For marine fuel tanks, supply heat to the fuel tank for continuously increasing temperatures such that the fuel reaches the maximum temperature in 8 hours. Set the target temperature by adding the temperature swing specified in paragraph (a)(1) of this section to the recorded starting temperature. Hold the tank for approximately 60 minutes at a temperature no less than 0.1 °C below the target temperature. For example, if the recorded starting fuel temperature for a fuel tank that will be installed in a nontrailerable vessel is 27.1 °C, the target temperature is 29.7 °C and the fuel must be stabilized for 60 minutes with fuel temperatures not falling below 29.6 °C. For EPA testing, fuel temperatures may not go 1.0 °C above the target temperature at any point during the heating or stabilization sequence. Measure the hydrocarbon concentration in the SHED at the end of the high-temperature stabilization period. Calculate the diurnal emissions for this heating period based on the change in hydrocarbon concentration over this sampling period. Allow the fuel temperature to cool sufficiently to stabilize again at the starting temperature without emission sampling. Repeat the heating and measurement sequence for three consecutive days, starting each heating cycle no more than 26 hours after the previous start.

(ii) For nonmarine fuel tanks, follow the air temperature trace from paragraph (a)(1)(iii) of this section for three consecutive 24-hour periods. Measured temperatures must follow the profile with a maximum deviation of 1.7 °C for any hourly measurement and an average temperature deviation not to exceed 1.0 °C, where the average deviation is calculated using the absolute value of each measured deviation. Start measuring emissions when you start the temperature profile. The end of the first, second, and third emission sampling periods must occur 1440±6, 2880±6, and 4320±6 minutes, respectively, after starting the measurement procedure.

(8) Use the highest of the three emission levels to determine whether your fuel tank meets the diurnal emission standard.

(9) For emission control technologies that rely on a sealed fuel system, you may omit the preconditioning steps in paragraph (a)(4) of this section and the last two 24-hour periods of emission

measurements in paragraph (a)(7) of this section. For purposes of this paragraph (a), sealed fuel systems include those that rely on pressure-relief valves, limiting flow orifices, bladder fuel tanks, and volume-compensating air bags.

(b) You may subtract your fuel tank's permeation emissions from the measured diurnal emissions if the fuel tank is preconditioned with diurnal test fuel as described in §1060.520(b) or if you use good engineering judgment to otherwise establish that the fuel tank has stabilized permeation emissions. Measure permeation emissions for subtraction as specified in §1060.520(c) and (d) before measuring diurnal emissions, except that the permeation measurement must be done with diurnal test fuel at 28±2 °C. Use appropriate units and corrections to subtract the permeation emissions from the fuel tank during the diurnal emission test. You may not subtract a greater mass of emissions under this paragraph (b) than the fuel tank would emit based on meeting the applicable emission standard for permeation.

* 103. Section 1060.810 is revised to read as follows:

§1060.810 What materials does this part reference?

(a) *Materials incorporated by reference.* Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, a document must be published in the **Federal Register** and the material must be available to the public. All approved material is available for inspection at U.S. EPA, Air and Radiation Docket and Information Center, 1301 Constitution Ave. NW., Room B102, EPA West Building, Washington, DC 20460, (202) 202–1744, and is available from the sources listed below. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.*

(b) *ASTM International material.* The following standards are available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA, 19428–2959, (610) 832–9585, or *http://www.astm.org/:*

(1) ASTM D471–06, Standard Test Method for Rubber Property—Effect of Liquids, approved October 1, 2006 (''ASTM D471''), IBR approved for §1060.515(a).

(2) ASTM D2862–97 (Reapproved 2004), Standard Test Method for Particle Size Distribution of Granular Activated Carbon, approved April 1, 2004 (''ASTM D2862''), IBR approved for §1060.240(e).

(3) ASTM D3802–79 (Reapproved 2005), Standard Test Method for Ball-Pan Hardness of Activated Carbon, approved October 1, 2005 (''ASTM D3802''), IBR approved for §1060.240(e).

(4) ASTM D4806–07, Standard Specification for Denatured Fuel Ethanol for Blending with Gasolines for Use as Automotive Spark-Ignition Engine Fuel, approved July 15, 2007 (''ASTM D4806''), IBR approved for §1060.501(c).

(5) ASTM D5228–92 (Reapproved 2005), Standard Test Method for Determination of Butane Working Capacity of Activated Carbon, approved October 1, 2005 (''ASTM D5228''), IBR approved for §1060.801.

(c) *SAE International material.* The following standards are available from SAE International, 400 Commonwealth Dr., Warrendale, PA 15096–0001, (877) 606–7323 (U.S. and Canada) or (724) 776–4970 (outside the U.S. and Canada), or *http://www.sae.org:*

(1) SAE J30, Fuel and Oil Hoses, Revised June 1998, IBR approved for §1060.515(c).

(2) SAE J1527, Marine Fuel Hoses, Revised February 1993, IBR approved for §1060.515(c).

(3) SAE J2260, Nonmetallic Fuel System Tubing with One or More Layers, Revised November 2004, IBR approved for §1060.510.

(4) SAE J2659, Test Method to Measure Fluid Permeation of Polymeric Materials by Speciation, Issued December 2003, IBR approved for §1060.801.

(5) SAE J2996, Surface Vehicle Recommended Practice, Small Diameter Fuel Line Permeation Test Procedure, Issued January 2013, IBR approved for §1060.515(d).

(d) *California Air Resources Board.* The following documents are available from the California Air Resources Board, 1001 I Street, Sacramento, CA, 95812, (916) 322–2884, or *http://www.arb.ca.gov:*

(1) Final Regulation Order, Article 1, Chapter 15, Division 3, Title 13, California Code of Regulations, July 26, 2004, IBR approved for §1060.105(e), and 1060.240(e).

(2) [Reserved]

(e) *American Boat and Yacht Council Material.* The following documents are available from the American Boat and Yacht Council, 613 Third Street, Suite 10, Annapolis, MD 21403 or (410) 990–4460 or *http://www.abycinc.org/:*

(1) ABYC H–25, Portable Marine Gasoline Fuel Systems, July 2010, IBR approved for §1060.105(f).

(2) [Reserved]

PART 1065—ENGINE-TESTING PROCEDURES

* 104. The authority citation for part 1065 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart A—Applicability and General Provisions

* 105. Section 1065.10 is amended by revising paragraph (c)(6) to read as follows:

§1065.10 Other procedures.

* * * * *

(c) * * *

(6) During the 12 months following the effective date of any change in the provisions of this part 1065 (and 40 CFR part 1066 for vehicle testing), you may use data collected using procedures specified in the previously applicable version of this part 1065 (and 40 CFR part 1066 for vehicle testing). This also applies for changes to test procedures specified in the standard-setting part to the extent that these changes do not correspond to new emission standards. This paragraph (c)(6) does not restrict the use of carryover certification data otherwise allowed by the standard-setting part.

* * * * *

Subpart E—Engine Selection, Preparation, and Maintenance

§1065.410 [Amended]

* 106. Section 1065.410 is amended by removing paragraph (e).

Subpart G—Calculations and Data Requirements

* 107. Section 1065.610 is amended by republishing paragraph (a)(1)(vi), adding paragraph (a)(1)(vii), and removing paragraph (a)(1)(viii) to read as follows:

§1065.610 Duty cycle generation.

* * * * *

(a) * * *

(1) * * *

(vi) Determine the lowest and highest engine speeds corresponding to the value calculated in paragraph (a)(1)(v) of this section, using linear interpolation as appropriate. Calculate f_{ntest} as the average of these two speed values.

(vii) The following example illustrates a calculation of f_{ntest}:

P_{max} = 230.0

(f_{n1} = 2360, P_1 = 222.5, f_{nnorm1} = 1.002, P_{norm1} = 0.9675)

(f_{n2} = 2364, P_2 = 226.8, f_{nnorm2} = 1.004, P_{norm2} = 0.9859)

(f_{n3} = 2369, P_3 = 228.6, f_{nnorm3} = 1.006, P_{norm3} = 0.9940)

(f_{n4} = 2374, P_4 = 218.7, f_{nnorm4} = 1.008, P_{norm4} = 0.9508)

Sum of squares = ($1.002^2 + 0.9675^2$) = 1.94

Sum of squares = ($1.004^2 + 0.9859^2$) = 1.98

Sum of squares = ($1.006^2 + 0.9940^2$) = 2.00

Sum of squares = ($1.008^2 + 0.9508^2$) = 1.92

$$f_{ntest} = \frac{\left(\left(2360 + (2364 - 2360) \cdot \frac{0.98 \cdot 2.0 - 1.94}{1.98 - 1.94}\right) + \left(2369 + (2374 - 2369) \cdot \frac{0.98 \cdot 2.0 - 2.0}{1.92 - 2.0}\right)\right)}{2}$$

$$= \frac{2362.0 + 2371.5}{2} = 2366.8 \text{ r/min}$$

$$f_{npmax} = \frac{\left(\left(2360 + (2364 - 2360) \cdot \frac{0.98 \cdot 230.0 - 222.5}{226.8 - 222.5}\right) + \left(2369 + (2374 - 2369) \cdot \frac{0.98 \cdot 230.0 - 228.6}{218.7 - 228.6}\right)\right)}{2}$$

$$= \frac{2362.7 + 2370.6}{2} = 2366.7 \text{ r/min}$$

* * * * *

* 108. Section 1065.650 is amended by revising paragraph (c)(1)(i) to read as follows:

§1065.650 Emission calculations.

* * * * *

(c) * * *

(1) * * *

(i) Correct all gaseous emission analyzer concentration readings, including continuous readings, sample bag readings, and dilution air background readings, for drift as described in §1065.672. Note that you must omit this step where brake-specific emissions are calculated without the drift correction for performing the drift validation according to §1065.550(b). When applying the initial THC and CH_4 contamination readings according to §1065.520(f), use the same values for both sets of calculations. You may also use as-measured values in the initial set of calculations and corrected values in the drift-corrected set of calculations as described in §1065.520(f)(7).

* * * * *

Subpart H—Engine Fluids, Test Fuels, Analytical Gases and Other Calibration Standards

* 109. Section 1065.710 is amended by revising paragraph (c), including Table 2 to read as follows:

§1065.710 Gasoline.

* * * * *

(c) The specifications of this paragraph (c) apply for testing with neat gasoline. This is sometimes called indolene or E0 test fuel. Gasoline for testing must have octane values that represent commercially available fuels for the appropriate application. Test fuel specifications apply as follows:

TABLE 2 OF §1065.710—TEST FUEL SPECIFICATIONS FOR NEAT (E0) GASOLINE

Property	Unit	Specification		Reference procedure [1]
		General testing	Low-temperature testing	
Distillation Range:				
Evaporated initial boiling point	°C	24–35[2]	24–36	ASTM D86
10% evaporated		49–57	37–48.	
50% evaporated		93–110	82–101.	
90% evaporated		149–163	158–174.	
Evaporated final boiling point		Maximum, 213	Maximum, 212.	
Hydrocarbon composition:				
Olefins	volume %	Maximum, 10	Maximum, 17.5	ASTM D1319
Aromatics		Maximum, 35	Maximum, 30.4.	
Saturates		Remainder	Remainder.	
Lead	g/liter	Maximum, 0.013	Maximum, 0.013	ASTM D3237
Phosphorous	g/liter	Maximum, 0.0013	Maximum, 0.005	ASTM D3231
Total sulfur	mg/kg	Maximum, 80	Maximum, 80	ASTM D2622
Dry vapor pressure equivalent [3]	kPa (psi)	60.0–63.4 [2,4] (8.7–9.2)	77.2–81.4 (11.2–11.8)	ASTM D5191

[1] ASTM procedures are incorporated by reference in §1065.1010. See §1065.701(d) for other allowed procedures.

[2] For testing at altitudes above 1219 m, the specified initial boiling point range is (23.9 to 40.6) °C and the specified volatility range is (52.0 to 55.2) kPa ((7.5 to 8.0) psi).

[3] Calculate dry vapor pressure equivalent, *DVPE*, based on the measured total vapor pressure, p_T, in kPa using the following equation: *DVPE* (kPa) = 0.956 · p_T ¥ 2.39 or *DVPE* (psi) = 0.956 · p_T ¥ 0.347. *DVPE* is intended to be equivalent to Reid Vapor Pressure using a different test method.

[4] For testing unrelated to evaporative emissions, the specified range is (55.2 to 63.4) kPa ((8.0 to 9.2) psi).

* * * * *

PART 1066—VEHICLE–TESTING PROCEDURES

* 110. The authority citation for part 1066 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart A—Applicability and General Provisions

* 111. Section 1066.10 is amended by revising paragraph (c) to read as follows:

§1066.10 Other procedures.

* * * * *

(c) *Exceptions.* You may use procedures other than those specified in this part as described in 40 CFR 1065.10(c). All the test procedures noted as exceptions to the specified procedures are considered generically as ''other procedures.'' Note that the terms ''special procedures'' and ''alternate procedures'' have specific meanings; ''special procedures'' are those allowed by 40 CFR 1065.10(c)(2) and ''alternate procedures'' are those allowed by 40 CFR 1065.10(c)(7). If we require you to request approval to use other procedures under this paragraph (c), you may not use them until we approve your request.

Subpart B—Equipment, Measurement Instruments, Fuel, and Analytical Gas Specifications

* 112. Section 1066.125 is amended by revising paragraph (a)(1) to read as follows:

§1066.125 Data updating, recording, and control.

* * * * *

(a) * * *

(1) This paragraph (a)(1) applies where we specify a minimum command and control frequency that is greater than the minimum recording frequency, such as for sample flow rates from a CVS that does not have a heat exchanger. For these measurements, the rate at which you read and interpret the signal must be at least as frequent as the minimum command and control frequency. You may record values at the same frequency, or you may record them as mean values, as long as the frequency of the mean values meets the minimum recording frequency. You must use all read values, either by recording them or using them to calculate mean values. For example, if your system reads and controls the sample flow rate at 10 Hz, you may record these values at 10 Hz, record them at 5 Hz by averaging pairs of consecutive points together, or record them at 1 Hz by averaging ten consecutive points together.

* * * * *

Subpart C—Dynamometer Specifications

* 113. Section 1066.235 is amended by revising paragraph (c)(1)(i) to read as follows:

§1066.235 Speed verification procedure.

* * * * *

(c) * * *

(1) * * *

(i) Set the dynamometer to speed-control mode. Set the dynamometer speed to a value of approximately 4.5 m/s (10 mph); record the output of the frequency counter after 10 seconds. Determine the roll speed, $v_{act,}$ using the following equation:

$$v_{act} = \frac{f \cdot d_{roll} \cdot \pi}{n} \qquad \text{Eq. 1066.235-1}$$

Where:

f = frequency of the dynamometer speed sensing device, accurate to at least four significant figures.

d_{roll} = nominal roll diameter, accurate to the nearest 1.0 mm, consistent with §1066.225(d).

n = the number of pulses per revolution from the dynamometer roll speed sensor.

Example:

f = 2.9231 Hz = 2.9231 s^{-1}

d_{roll} = 904.40 mm = 0.90440 m

n = 1 pulse/rev

$$v_{act} = \frac{2.9231 \cdot 0.90440 \cdot \pi}{1}$$

v_{act} = 8.3053 m/s

* * * * *

* 114. Section 1066.255 is amended by revising paragraph (d) to read as follows:

§1066.255 Parasitic loss verification.

* * * * *

(d) *Performance evaluation.* Some dynamometers automatically update the parasitic loss curve for further testing. If this is not the case, compare the new parasitic loss curve to the original parasitic loss curve from the dynamometer manufacturer or the most recent parasitic loss curve you programmed into the dynamometer. You may reprogram the dynamometer to accept the new curve in all cases, and you must reprogram the dynamometer if any point on the new curve departs from the earlier curve by more than ±9.0 N (±2.0 lbf) for dynamometers capable of testing vehicles at or below 20,000 pounds GVWR, or ±36.0 N (±8.0 lbf) for dynamometers not capable of testing vehicles at or below 20,000 pounds GVWR.

* 115. Section 1066.270 is amended by revising paragraph (c)(4) to read as follows:

§1066. 270 Unloaded coastdown verification.

* * * * *

(c) * * *

(4) Determine the average coastdown force, F, for each speed and inertia setting for each of the coastdowns performed using the following equation:

$$F = \frac{I \cdot \left(v_{init} - v_{final}\right)}{t} \qquad \text{Eq. 1066.270-1}$$

Where:

F = the average force measured during the coastdown for each speed interval and inertia setting, expressed in lbf · s^2/ft and rounded to four significant figures.

I = the dynamometer's inertia setting, in lbf · s^2/ft.

v_{init} = the speed at the start of the coastdown interval, expressed in ft/s to at least four significant figures.

v_{final} = the speed at the end of the coastdown interval, expressed in ft/s to at least four significant figures.
t = coastdown time for each speed interval and inertia setting, accurate to at least 0.01 s.

Example:
I = 2000 lbm = 62.16 lbf · s²/ft
v_{init} = 25 mph = 36.66 ft/s
v_{final} = 15 mph = 22.0 ft/s
t = 5.00 s

$$F = \frac{62.16 \cdot (36.66 - 22.0)}{5.00}$$

F = 182.2 lbf

* * * * *

Subpart D—Coastdown

* 116. Section 1066.301 is revised to read as follows:

§1066.301 Overview of road-load determination procedures.

(a) The procedures described in this subpart are used to determine the road-load target coefficients (A, B, and C) for the simulated road-load equation in §1066.210(d)(3).

(b) The general procedure for determining road-load force is performing coastdown tests and calculating road-load coefficients. This procedure is described in SAE J1263 and SAE J2263 (incorporated by reference in §1066.1010). This subpart specifies certain deviations from those procedures for certain applications.

(c) Use good engineering judgment for all aspects of road-load determination. For example, minimize the effects of grade by performing coastdown testing on reasonably level surfaces and determining coefficients based on average values from vehicle operation in opposite directions over the course.

* 117. Section 1066.305 is revised to read as follows:

§1066.305 Procedures for specifying road-load forces for motor vehicles at or below 14,000 pounds GVWR.

(a) For motor vehicles at or below 14,000 pounds GVWR, develop representative road-load coefficients to characterize each vehicle covered by a certificate of conformity. Calculate road-load target coefficients by performing coastdown tests using the provisions of SAE J2263 (incorporated by reference in §1066.1010). This protocol establishes a procedure for determination of vehicle road load force for speeds between 115 and 15 km/h (71.5 and 9.3 mi/h); the final result is a model of road-load force (as a function of speed) during operation on a dry, level road under reference conditions of 20 °C, 98.21 kPa, no wind, no precipitation, and the transmission in neutral. You may use other methods that are equivalent to SAE J2263, such as equivalent test procedures or analytical modeling, to characterize road load using good engineering judgment. Determine dynamometer settings to simulate the road-load profile represented by these road-load target coefficients as described in §1066.315. Supply representative road-load forces for each vehicle at speeds above 15 km/hr (9.3 mph), and up to 115 km/hr (71.5 mph), or the highest speed from the range of applicable duty cycles.

(b) For cold temperature testing described in subpart H of this part, determine road-load target coefficients using one of the following methods:

(1) You may perform coastdown tests or use other methods to characterize road load as described in paragraph (a) of this section based on vehicle operation at a nominal ambient temperature of ¥7 °C (20 °F).

(2) You may multiply each of the road-load target coefficients determined using the procedures described in paragraph (a) of this section by 1.1 to approximate a 10 percent decrease in coastdown time for the test vehicle.

Subpart E—Preparing Vehicles and Running an Exhaust Emission Test

* 118. Section 1066.410 is amended by revising paragraph (b) introductory text to read as follows:

§1066.410 Dynamometer test procedure.

* * * * *

(b) Place the vehicle onto the dynamometer without starting the engine (for any test cycles) or drive the vehicle onto the dynamometer (for hot-start and hot-running cycles only) and position a fan that directs cooling air to the vehicle during dynamometer operation as described in this paragraph (b). This generally requires squarely positioning the fan in front of the vehicle and directing the airflow to the vehicle's radiator. Use good engineering judgment to design and configure fans to cool the test vehicle in a way that properly simulates in-use operation, consistent with the specifications of §1066.105. Except for the following special cases, use a road-speed modulated fan meeting the requirements of §1066.105(c)(2) that is placed within 90 cm of the front of the vehicle and ensure that the engine compartment cover (*i.e.,* hood) is closed:

* * * * *

* 119. Section 1066.420 is amended by revising paragraph (b) to read as follows:

§1066.420 Test preparation.

* * * * *

(b) For vehicles above 14,000 pounds GVWR with compression-ignition engines, verify the amount of nonmethane hydrocarbon contamination as described in 40 CFR 1065.520(f).

* * * * *

Subpart F—Electric Vehicles and Hybrid Electric Vehicles

* 120. Section 1066.501 is amended by revising paragraphs (a)(2)(ii) and (iii) to read as follows:

§1066.501 Overview.

* * * * *

(a) * * *

(2) * * *

(ii) We may approve the use of the alternate End-of-Test criterion in Section 3.9.1 of SAE J1711 for charge-depleting tests and the Net Energy Change correction in Appendix C of SAE J1711 for charge-sustaining tests if the specified criterion and correction are insufficient or inappropriate.

(iii) For charge-sustaining tests Appendix C of SAE J1711 may be used to correct final fuel economy values, CO_2 emissions, and carbon-related exhaust emissions, but may not be used to correct measured values for criteria pollutant emissions.

* * * * *

Subpart G—Calculations

* 121. Section 1066.605 is amended by revising paragraphs (c)(5) and (c)(6) to read as follows:

§1066.605 Mass-based and molar-based exhaust emission calculations.

* * * * *

(c) * * *

(5) Correct all gaseous concentrations for dilution air background as described in §1066.610.

(6) Correct NO_X emission values for intake-air humidity as described in §1066.615.

* * * * *

* 122. Section 1066.615 is revised to read as follows:

§1066.615 NO_X intake-air humidity correction.

You may correct NO_X emissions for intake-air humidity as described in this section if the standard-setting part allows it. See §1066.605(c) for the proper sequence for applying the NO_X intake-air humidity correction.

(a) For vehicles at or below 14,000 pounds GVWR, apply a correction for vehicles with reciprocating engines operating over specific test cycles as follows:

(1) Calculate a humidity correction using a time-weighted mean value for ambient humidity over the test interval. Calculate absolute ambient humidity, *H*, using the following equation:

$$H = \frac{1000 \cdot M_{H2O} \cdot p_d \cdot RH\%}{M_{air} \cdot (p_{atmos} - p_d \cdot RH\%)} \qquad \text{Eq. 1066.615-1}$$

Where:

M_{H2O} = molar mass of H_2O.

p_d = saturated vapor pressure at the ambient dry bulb temperature.

RH = relative humidity of ambient air

M_{air} = molar mass of air.

p_{atmos} = atmospheric pressure.

Example:

M_{H2O} = 18.01528 g/mol

p_d = 2.93 kPa

RH = 37.5%

M_{air} = 28.96559 g/mol

p_{atmos} = 96.71 kPa

$$H = \frac{1000 \cdot 18.01528 \cdot 2.93 \cdot 37.5 \cdot 0.01}{28.96559 \cdot (96.71 - 2.93 \cdot 37.5 \cdot 0.01)} = 7.14741 \text{ g } H_2O \text{ vapor/kg dry air}$$

(2) Use the following equation to correct measured concentrations to a reference condition of 10.71 grams H_2O vapor per kilogram of dry air for the FTP, US06, LA–92, SC03, and HFET test cycles:

$$x_{NOxcor} = x_{NOx} \cdot \frac{H_s}{1 - 0.0329 \cdot (H - 10.71)} \qquad \text{Eq. 1066.615-2}$$

Where:

c_{NOx} = measured NO_X emission concentration in the sample, after dry-to-wet and background corrections.

H_s = humidity scale. Set = 1 for FTP, US06, LA–92, and HFET test cycles. Set = 0.8825 for the SC03 test cycle.

H = ambient humidity, as determined in paragraph (a)(1) of this section.

Example:

H = 7.14741 g H_2O vapor/kg dry air time weighted over the FTP test cycle

c_{NOx} = 1.21 ppm

$$x_{NOxcor} = 1.21 \cdot \frac{1}{1 - 0.0329 \cdot (7.14741 - 10.71)} = 1.08305 \text{ ppm}$$

(b) For vehicles above 14,000 pounds GVWR, apply correction factors as described in 40 CFR 1065.670.

* 123. Section 1066.635 is amended by adding paragraph (c)(6) to read as follows:

§1066.635 NMOG determination.

* * * * *

(c) * * *

(6) For PHEVs, you may determine NMOG based on testing over one full UDDS using Eq. 1066.635–3.

* * * * *

Subpart H—Cold Temperature Test Procedures

* 124. Section 1066.701 is amended by revising paragraph (a) to read as follows:

§1066.701 Applicability and general provisions.

(a) The procedures of this part 1066 may be used for testing at any ambient temperature. Section 1066.710 describes the provisions that apply for testing vehicles at a nominal temperature of ¥7 °C (20 °F); these procedures apply for motor vehicles as described in 40 CFR part 86, subpart S, and 40 CFR part 600. For other vehicles, see the standard-setting part to determine if your vehicle is required to meet emission standards outside the normal (20 to 30) °C ((68 to 86) °F) temperature range.

* * * * *

* 125. Section 1066.710 is amended by revising paragraph (c) to read as follows:

§1066.710 Cold temperature testing procedures for measuring CO and NMHC emissions and determining fuel economy.

* * * * *

(c) *Heater and defroster.* During the test, operate the vehicle's interior climate control system with the heat on and set to primarily defrost the front window. Turn air conditioning off. You may not use any supplemental auxiliary heat during this testing. You may set the heater to any temperature and fan setting during vehicle preconditioning.

(1) *Manual control.* Unless you rely on automatic control as specified in paragraph (c)(2) of this section, take the following steps to control heater settings:

(i) Set the climate control system as follows before the first acceleration (t=20 s), or before starting the vehicle if the climate control system allows it:

(A) *Temperature.* Set controls to maximum heat. For automatic control systems running in manual mode, set the heater control to 72 °F or higher.

(B) *Fan speed.* Set the fan speed to full off or the lowest available speed if a full off position is not available.

(C) *Airflow direction.* Direct airflow to the front window (window defrost mode).

(D) *Air source.* If independently controllable, set the system to draw in outside air.

(ii) At the second idle of the test cycle, which occurs 125 seconds after the start of the test, set the fan speed to maximum. Complete by 130 seconds after the start of the test. Leave temperature and air source settings unchanged.

(iii) At the sixth idle of the test interval, which occurs at the deceleration to zero miles per hour 505

seconds after the start of the test, set the fan speed to the lowest setting that maintains air flow. Complete these changes by 510 seconds after the start of the test. You may use different vent and fan speed settings for the remainder of the test. Leave the temperature and air source settings unchanged.

(2) *Automatic control.* For vehicles with automatic control systems running in automatic mode, set the temperature to 72 °F and the air flow control to the front window defrost mode for the whole test.

(3) *Multiple-zone systems.* For vehicles that have separate driver and passenger controls or separate front and rear controls, you must set all temperature and fan controls as described in paragraphs (c)(1) and (2) of this section, except that rear controls need not be set to defrost the front window.

(4) *Alternative test procedures.* We may approve the use of other settings under 40 CFR 86.1840 if a vehicle's climate control system is not compatible with the provisions of this section.

* * * * *

Subpart I—Exhaust Emission Test Procedures for Motor Vehicles

* 126. Section 1066.801 is amended by revising paragraph (c)(2) and Figure 1 in paragraph (e) to read as follows:

§1066.801 Applicability and general provisions.

* * * * *

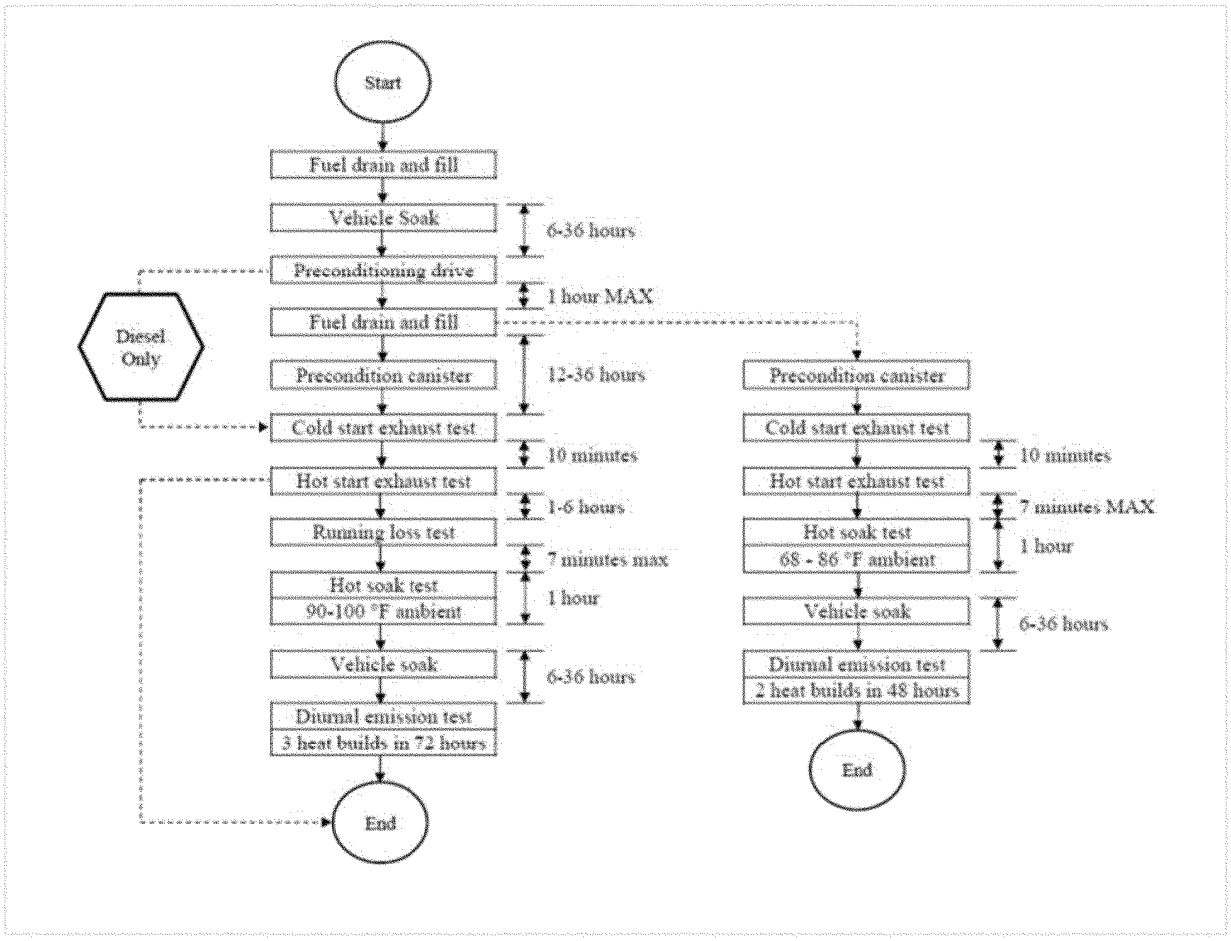
(c) * * *

(2) The Supplemental Federal Test Procedure (SFTP) measures the emission effects from aggressive driving and operation with the vehicle's air conditioner. The SFTP is based on a composite of three different test elements. In addition to the FTP, vehicles generally operate over the US06 and SC03 driving schedules as specified in paragraphs (g) and (h) of Appendix I of 40 CFR part 86, respectively. In the case of heavy-duty vehicles above 10,000 pounds GVWR and at or below 14,000 pounds GVWR, SFTP testing involves additional driving over the Hot LA–92 driving schedule as specified in paragraph (c) of 40 CFR part 86, Appendix I, instead of the US06 driving schedule. Note that the US06 driving schedule represents about 8.0 miles of relatively aggressive driving; the SC03 driving schedule represents about 3.6 miles of urban driving with the air conditioner operating; and the hot portion of the LA–92 driving schedule represents about 9.8 miles of relatively aggressive driving for commercial trucks. See §§1066.815 and 1066.820.

* * * * *

(e) * * *

Figure 1 of §1066.801 —FTP test sequence



* 127. Section 1066.815 is amended by revising paragraphs (d)(2)(ii) and (iii) to read as follows:

§1066.815 Exhaust emission test procedures for FTP testing.

* * * * *

(d) * * *

(2) * * *

(ii) Repeat the steps in paragraph (d)(1)(ii) of this section. Operate the vehicle over the first 505 seconds of the UDDS. For tests that do not include bag 4 operation, turn off the engine and simultaneously stop all hot-start sampling and recording, including background sampling, and any integrating devices at the end of the deceleration scheduled to occur 505 seconds into the hot-start UDDS.

(iii) To include bag 4 measurement, operate the vehicles over the remainder of the UDDS and conclude the testing as described in paragraphs (d)(1)(iii) and (iv) of this section.

* * * * *

* 128. Section 1066.831 is amended as follows:

* a. By revising paragraph (b)(3)(ii)(D).

* b. By adding paragraph (b)(3)(ii)(G).

* c. By revising paragraphs (e)(2)(i) and (iii).

§1066.831 Exhaust emission test procedures for aggressive driving.

* * * * *

(b) * * *

(3) * * *

(ii) * * *

(D) US06 driving schedule or, for heavy-duty vehicles at or below 10,000 pounds GVWR with a power-to-weight ratio at or below 0.024 hp/lbm, just the highway portion of the US06 driving schedule.

* * * * *

(G) The Hot LA–92 driving schedule.

* * * * *

(e) * * *

(2) * * *

(i) For heavy-duty vehicles above 10,000 pounds GVWR, operate the vehicle over the Hot LA–92 driving schedule.

* * * * *

(iii) Non-MDPV heavy-duty vehicles shall be tested at their adjusted loaded vehicle weight as described in 40 CFR 86.1816.

* * * * *

* 129. Section 1066.835 is amended by revising paragraph (e)(2) to read as follows:

§1066.835 Exhaust emission test procedure for SC03 emissions.

* * * * *

(e) * * *

(2) *Vehicle frontal air flow.* Verify that the fan configuration meets the requirements of §1066.105(c)(5).

* * * * *

* 130. Section 1066.845 is amended by revising paragraphs (b) and (e)(2) and adding paragraph (e)(3) to read as follows:

§1066.845 AC17 air conditioning efficiency test procedure.

* * * * *

(b) *Test cell.* Operate the vehicle in a test cell meeting the specifications described in §1066.835(e). You may add airflow up to a maximum of 4 miles per hour during engine idling and when the engine is off if that is needed to meet ambient temperature or humidity requirements.

* * * * *

(e) * * *

(2) For manual systems, select A/C mode, set the temperature to full cold and ''maximum'', set airflow to ''recirculate'' (if so equipped), and select the highest fan setting. During the first idle period of the SC03 driving schedule (between 186 and 204 seconds), reduce the fan speed setting to nominally 50% of maximum fan speed, set airflow to ''fresh air'' (if so equipped), and adjust the temperature setting to target a temperature of 55 °F (13 °C) at the dashboard air outlet. Maintain these settings for the remainder of the test. You may rely on prior temperature measurements to determine the temperature setting; however, if the system is unable to meet the 55 °F (13 °C) target, you may instead set airflow to ''fresh air'' and temperature to full cold. If the vehicle is equipped with technology that defaults to recirculated air at ambient temperatures above 75 °F (22 °C), that technology should remain enabled throughout the test; this may mean not setting the airflow to ''recirculate'' at the start and not setting the airflow to ''fresh air'' during the first idle period of the SC03 driving schedule. Except as specified in paragraph (e)(3) of this section, use good engineering judgment to apply the settings described in this paragraph (e)(2) equally throughout the vehicle if there are separate controls for different zones (such as rear air conditioning).

(3) If the air conditioning system is designed with parameters that switch back to a default setting at key-off, perform testing in that default condition. If the air conditioning system includes any optional equipment or user controls not addressed in this paragraph (e), the manufacturer should ask us for preliminary approval to determine the appropriate settings for testing.

* * * * *

Subpart J—Evaporative Emission Test Procedures

* 131. Section 1066.985 is amended by revising paragraph (d)(9) to read as follows:

§1066.985 Fuel storage system leak test procedure.

* * * * *

(d) * * *

(9) Repeat the test described in this paragraph (d) for each access point described in the application for certification. Use each test result (without averaging) to determine whether the vehicle passes the leak standard.

* * * * *

Subpart K—Definitions and Other Reference Material

* 132. Section 1066.1001 is amended by adding a definition for ''Hot LA–92'' in alphabetical order to read as follows:

§1066.1001 Definitions.

* * * * *

Hot LA–92 means the first 1435 seconds of the LA–92 driving schedule.

* * * * *

* 133. Section 1066.1005 is amended by revising paragraph (h) to read as follows:

§1066.1005 Symbols, abbreviations, acronyms, and units of measure.

* * * * *

(h) *Prefixes.* This part uses the following prefixes to define a quantity:

Symbol	Quantity	Value
n	nano	10^{-9}
μ	micro	10^{-6}
m	milli	10^{-3}
c	centi	10^{-2}
k	kilo	10^{3}
M	mega	10^{6}

* 134. Section 1066.1010 is amended by revising paragraph (b)(1) to read as follows:

§1066.1010 Incorporation by reference.

* * * * *

(b) * * *

(1) SAE J1263, Road Load Measurement and Dynamometer Simulation Using Coastdown Techniques, revised March 2010, IBR approved for §§1066.301(b) and 1066.310(b).

* * * * *

[FR Doc. 2015–02846 Filed 2–18–15; 8:45 am]

BILLING CODE 6560–50–P

Verify Light-Duty Tier 3 Updates

July 24, 2014

United States Environmental Protection Agency

EPA FOIA Production 2016-07-19

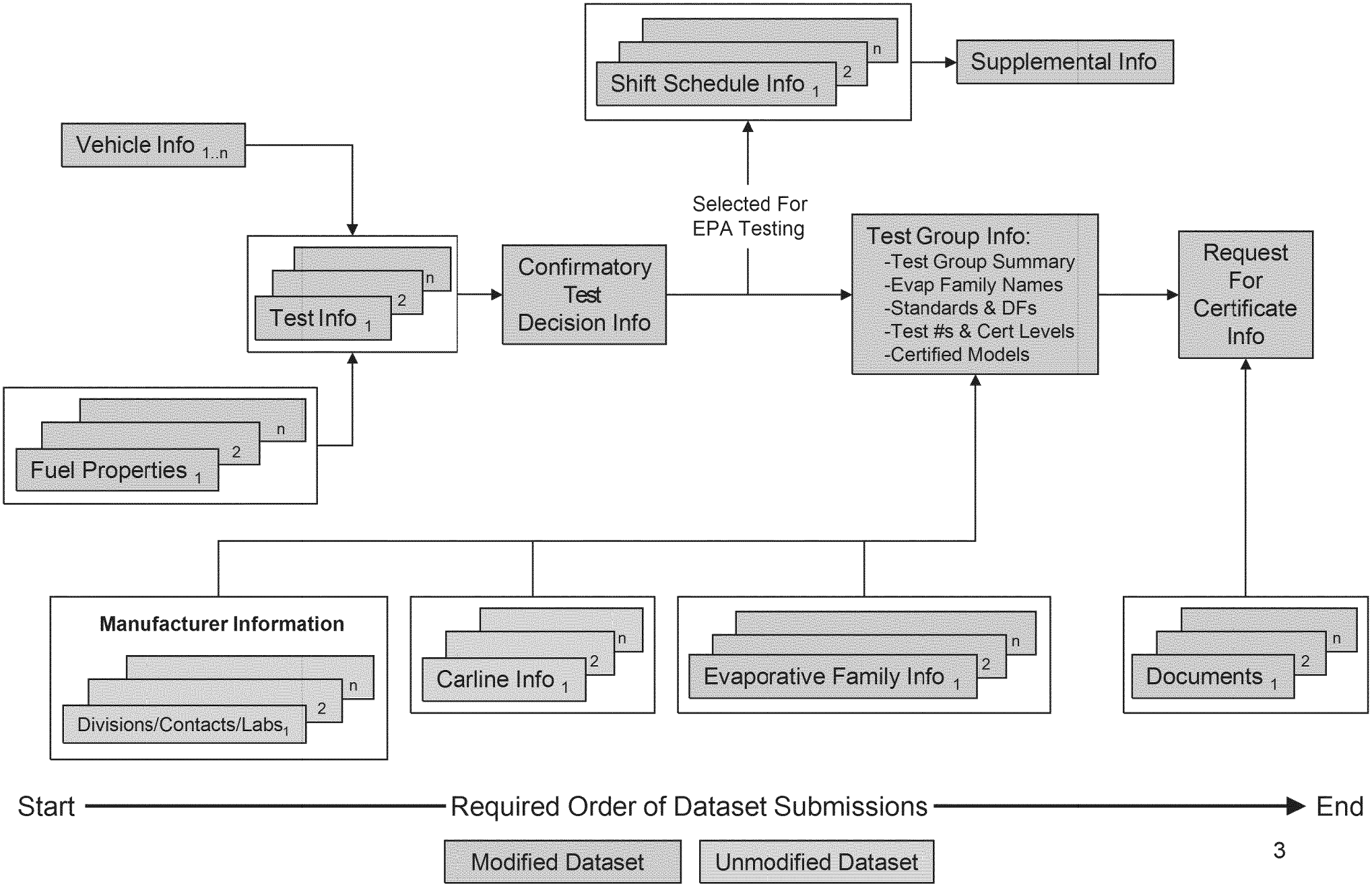
2015-011105_000258

Verify Light-Duty GHG Draft Deployment Schedule

- October 2011: Changes to CREE/Opt-CREE Calculations in Test Information and Test Group, Footprint, and Model Year 2011/2012+ CAFE/GHG Datasets (Release 9)
- May 2012: New Road Load Dataset, New Footprint Dataset Calculations, New Test Information ADFE & ADCREE Calculations, Updates to Model Year 2013+ FE Label Dataset (Release 10)
- November 2012: LEV3 Changes & Integration of EPA CAFE/GHG Calculations into Verify (Release 11)
- March 11, 2013: Completion of CAFE/GHG Calculation Integration (Release 11.1)
- September 2014: Tier 3 Updates

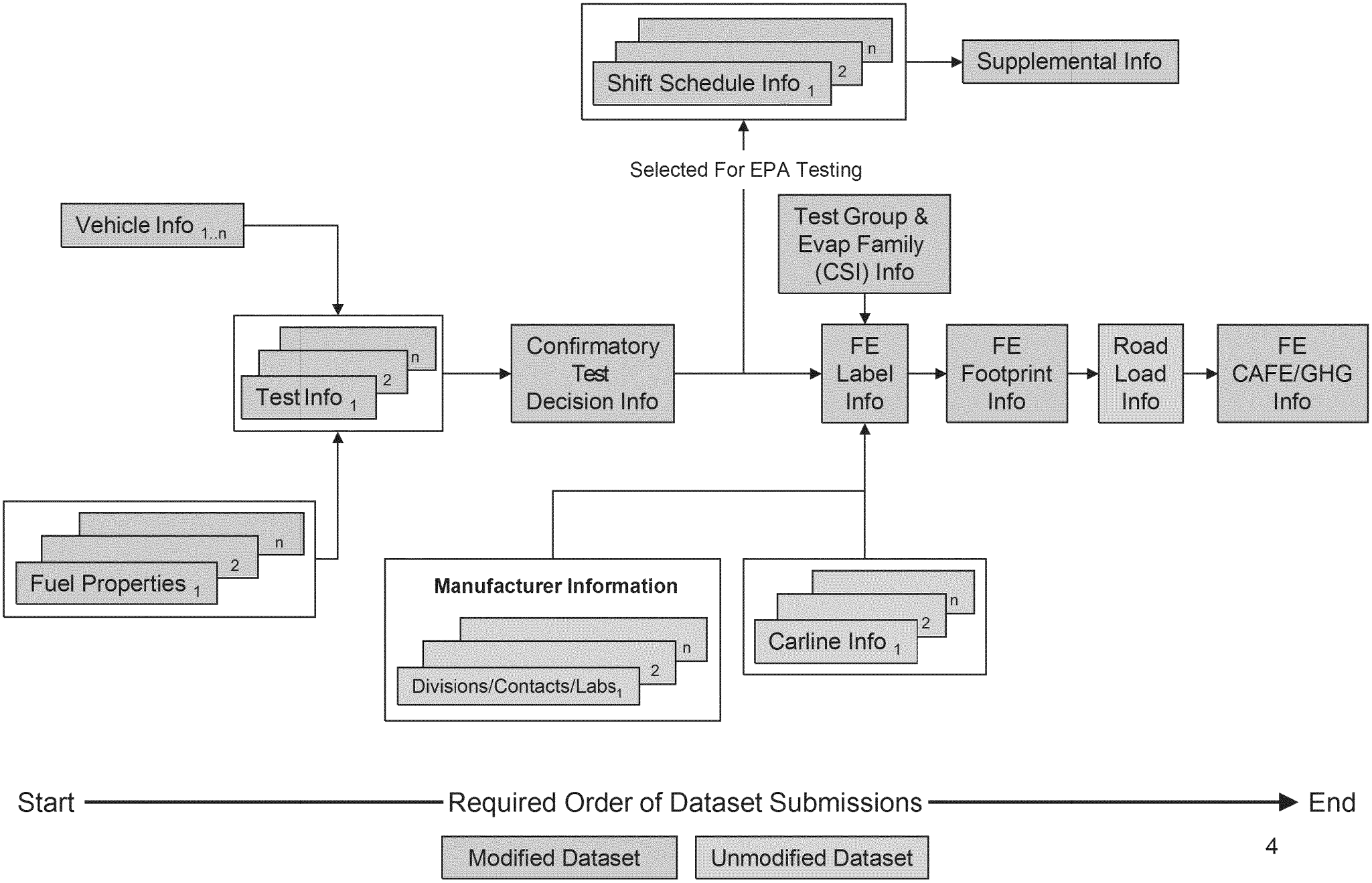
EPA FOIA Production 2016-07-19

Verify Light-Duty Certification Dataset Submission Process (07/24/2014)



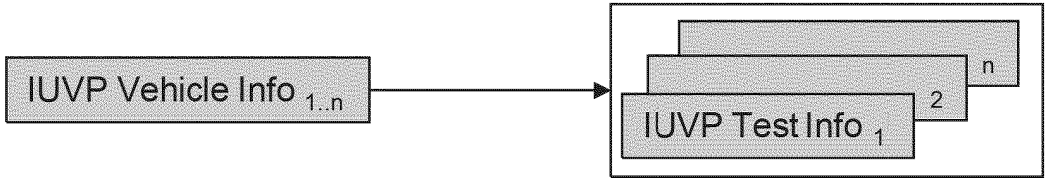
EPA FOIA Production 2016-07-19

Verify Light-Duty Fuel Economy Dataset Submission Process (07/24/2014)



EPA FOIA Production 2016-07-19

Verify Light-Duty IUVP Dataset Submission Process (07/24/2014)



Start → Required Order of Dataset Submissions → End

Modified Dataset | Unmodified Dataset

EPA FOIA Production 2016-07-19

Changes to Vehicle Information Dataset

- New data element for Leak Family Identifier (VI-6.5)
  - Manufacturers will enter a three character string to identify each Leak Family
- New data element for Leak Family Name (VI-6.6)
  - Verify will create the Leak Family Name by concatenating the Leak Family Identifier with the Evaporative Family Name

EPA FOIA Production 2016-07-19

Changes to Fuel Properties Dataset

- New Test Fuel Types (FP-4)
  - 28 = COLD CO E10 REGULAR GASOLINE (TIER 3)
  - 29 = COLD CO E10 PREMIUM GASOLINE (TIER 3)
  - 30 = COLD CO DIESEL 7-15 PPM SULFUR
  - 48 = TIER 3 E10 REGULAR GASOLINE (9 RVP @Low Alt.)
  - 49 = TIER 3 E10 PREMIUM GASOLINE (9 RVP@Low Alt.)
  - 58 = TIER 3 E10 REGULAR GASOLINE (10 RVP-FFV ORVR Only)
  - 59 = TIER 3 E10 PREMIUM GASOLINE (10 RVP-FFV ORVR Only)
- New business rule:
  - If Process Code (FP-0.5) equals ‘N’ (New) then Test Fuel Type (FP-4) cannot equal ‘1’ (Indolene 30 (with 30 ppm lead)) or ‘6’ (EPA Unleaded Gasoline) or ‘9’ (CERT Diesel 300 ppm Sulfur) or ‘24’ (Cold CO Regular (CERT)) or ‘25’ (Cold CO Premium (CERT)).

EPA FOIA Production 2016-07-19

Changes to Test Information Dataset

- New Test Procedures (TI-8)
  - 9 = HWY80 (80 mph Highway Test)
  - 62 = AC17 - Manual A/C Controls
  - 63 = AC17 - Automatic A/C Controls
  - 64 = Evap CARB Fuel Only (Rig) Test
  - 65 = Evap Canister Bleed Test
  - 66 = Leak Test - Evap Fuel System OBD
  - 67 = Leak Test - Port Near Canister
  - 68 = Leak Test - Port Near Fuel Pipe
  - 69 = Leak Test - Evap Gas Cap
- New Test Fuel Type (TI-9)
  - 28 = COLD CO E10 REGULAR GASOLINE (TIER 3)
  - 29 = COLD CO E10 PREMIUM GASOLINE (TIER 3)
  - 30 = COLD CO DIESEL 7-15 PPM SULFUR
  - 48 = TIER 3 E10 REGULAR GASOLINE (9 RVP @Low Alt.)
  - 49 = TIER 3 E10 PREMIUM GASOLINE (9 RVP @Low Alt.)
  - 58 = TIER 3 E10 REGULAR GASOLINE (10 RVP-FFV ORVR Only)
  - 59 = TIER 3 E10 PREMIUM GASOLINE (10 RVP-FFV ORVR Only)
- New Business Rule:
  - If Process Code (TI-0.5) equals ‘N’ (New) then Test Fuel Type (TI-9) cannot equal ‘24’ (Cold CO Regular (CERT)) or ‘25’ (Cold CO Premium (CERT)).

EPA FOIA Production 2016-07-19

Changes to Test Information Dataset- continued

- New data element for E10 Evaporative Test Measurement Method (TI-24.5)
  - ACTUAL = Actual Total Hydrocarbon Equivalent Measurement (with speciation)
  - CALC = Calculated (1.08 x FID Total Hydrocarbons)
  - FID-EPA = Actual FID w/o Speciation (EPA Only)
- New data element for Drive Cycle Speed Tolerance Criteria (TI-24.6)
  - PART86 = Used Part 86 (+/- 2 mph, +/- 1 sec)
  - PART1066 = Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)
- New data element for Road Speed Fan Usage Indicator (TI-24.8)

EPA FOIA Production 2016-07-19

Changes to Test Information Dataset- continued

- New business rules:
  - If the Test Fuel Type (TI-9) equals '46' (CARB LEV3 E10 REGULAR GASOLINE), '47' (CARB LEV3 E10 PREMIUM GASOLINE), AND the Test Procedure (TI-8) equals '23' (FED FUEL 2 DAY EVAP (BUTANE)), '27' (CA FUEL 2 DAY EVAP (BUTANE LOAD)), '32' (FED FUEL RUNNING LOSS), '34' (FED FUEL 3 DAY EVAP(BUTANE LOAD)), '37' ('CA FUEL RUNNING LOSS'), '38' (CA FUEL 3 DAY EVAP (BUTANE LOAD)), '43' (FED FUEL 2DAY EVAP(HEAT TO LOAD)), '47' (CA FUEL 2 DAY EVAP(HEAT TO LOAD)), '58' (TIER 3 E10 REGULAR GASOLINE (10 RVP-FFV ORVR Only)), or '59' (TIER 3 E10 PREMIUM GASOLINE (10 RVP-FFV ORVR Only)), then E10 Evaporative Test Measurement Method (TI-24.5) is required.
  - If the Submitting Manufacturer Code is not 'LOD' or 'EPA' then E10 Evaporative Test Measurement Method (TI-24.5) cannot equal 'FID-EPA'.
  - If the Submitting Manufacturer Code is 'LOD' or 'EPA' then E10 Evaporative Test Measurement Method (TI-24.5) must either match the E10 Evaporative Test Measurement Method (TI-24.5) for the test specified Test Number (DI-17.5) by the manufacturer for the corresponding test procedure/test fuel type combination in Decision Information, or, must equal 'FID-EPA' (Actual FID w/o Speciation (EPA Only)).

EPA FOIA Production 2016-07-19

Changes to Test Information Dataset- continued

- New Test Result/Emission Name (TI-19)
  - HC-TOTAL-EQUIV (Total Hydrocarbon equivalent – Evap-only)
  - METHANE-COMB (Combined CH4 for HD 2b/3 vehicles only)
  - N2O-COMB (Combined Nitrous Oxide for HD 2b/3 vehicles only)
  - LEAK-DIA - Effective Leak Diameter (inches)
  - LEAK-GAS CAP - Gas Cap Leakage (cc/min)
- New business rules:
  - If Test Procedure (TI-8) = '65' (Evap Canister Bleed Test), '66' (Leak Test - Evap Fuel System OBD), '67' (Leak Test - Port Near Canister) or '68' (Leak Test - Port Near Fuel Pipe) then Test Result/Emission Name (TI-19) must only equal 'LEAK-DIA' (Effective Leak Diameter).
  - If Test Procedure (TI-8) = '69' (Leak Test - Evap Gas Cap) then Test Result/Emission Name (TI-19) must only equal 'LEAK-GAS CAP' (Gas Cap Leakage).
  - If the Fuel Type (TI-9) equals '46' (CARB LEV3 E10 REGULAR GASOLINE), '47' (CARB LEV3 E10 PREMIUM GASOLINE),'48' (TIER 3 E10 REGULAR GASOLINE), or '49' (TIER 3 E10 PREMIUM GASOLINE) AND the Test Procedure (TI-8) equals '23' (FED FUEL 2 DAY EVAP (BUTANE)), '27' (CA FUEL 2 DAY EVAP (BUTANE LOAD)), '32' (FED FUEL RUNNING LOSS), '34' (FED FUEL 3 DAY EVAP(BUTANE LOAD)), '37' ('CA FUEL RUNNING LOSS'), '38' (CA FUEL 3 DAY EVAP (BUTANE LOAD)), '43' (FED FUEL 2DAY EVAP(HEAT TO LOAD)), '47' (CA FUEL 2 DAY EVAP(HEAT TO LOAD)), '58' (TIER 3 E10 REGULAR GASOLINE (10 RVP-FFV ORVR Only)), or '59' (TIER 3 E10 PREMIUM GASOLINE (10 RVP-FFV ORVR Only)), then Test Result/Emission Name (TI-19) must include 'HC-TOTAL-EQUIV'.
  - If Test Procedure (TI-8) is not equal to '2' (CVS 75 AND LATER (W/O CAN. LOAD)), '21' (FED FUEL 2 DAY EXH (BUTANE LOAD)), '25' (CA FUEL 2 DAY EXH (BUTANE LOAD)), '31' (FED FUEL 3 DAY EXH (BUTANE LOAD)), '35' (CA FUEL 3 DAY EXH (BUTANE LOAD)), '41' (FED FUEL 2 DAY EXH(HEAT TO LOAD)) or '45' (CA FUEL 2 DAY EXH (HEAT TO LOAD)); then, Test Result/Emission Name (TI-19) cannot equal 'METHANE-COMB' or 'N2O-COMB'.

EPA FOIA Production 2016-07-19

Changes to Decision Information Dataset

- New values for Federal Exhaust Emission Standard Level (DI-9)
  - T3B160 - Federal Tier 3 Bin 160
  - T3B125- Federal Tier 3 Bin 125
  - T3B110- Federal Tier 3 Transitional Bin 110
  - T3B85 - Federal Tier 3 Transitional Bin 85
  - T3SULEV30 – Federal Tier 3 Transitional LEV-II SULEV30 Carryover
  - T3B70 - Federal Tier 3 Bin 70
  - T3B50 - Federal Tier 3 Bin 50
  - T3B30 - Federal Tier 3 Bin 30
  - T3B20 - Federal Tier 3 Bin 20
  - T3B0 - Federal Tier 3 Bin 0
  - HDV2B395 - Federal Tier 3 HD Class 2b Transitional Bin 395
  - HDV2B340 - Federal Tier 3 HD Class 2b Transitional Bin 340
  - HDV2B250 - Federal Tier 3 HD Class 2b Bin 250
  - HDV2B170 - Federal Tier 3 HD Class 2b Bin 170
  - HDV2B150 - Federal Tier 3 HD Class 2b Bin 150
  - HDV2B0 - Federal Tier 3 HD Class 2b Bin 0
  - HDV3B630 - Federal Tier 3 HD Class 3 Transitional Bin 630
  - HDV3B570 - Federal Tier 3 HD Class 3 Transitional Bin 570
  - HDV3B400 - Federal Tier 3 HD Class 3 Bin 400
  - HDV3B270 - Federal Tier 3 HD Class 3 Bin 270
  - HDV3B230 - Federal Tier 3 HD Class 3 Bin 230
  - HDV3B200 - Federal Tier 3 HD Class 3 Bin 200
  - HDV3B0 - Federal Tier 3 HD Class 3 Bin 0
- New business rules:
  - 'T3B110', 'T3B85' and 'T3SULEV30' are not allowed for Model Year (DI-5) 2020 and later.
  - 'HDV2B395', 'HDV2B340', 'HDV3B630' and 'HDV3B570' are not allowed for Model Year (DI-5) 2022 and later.

EPA FOIA Production 2016-07-19

Changes to Decision Information Dataset- continued

- New values for Federal Evaporative Emission Standard Level (DI-11)
  - T3 - Federal Tier 3 Evap
  - T3-3Z - Federal Tier 3 LEV-III Zero Evap (Option 1) Carryover
- New business rule:
  - 'T3-3Z' is not allowed for Model Year (DI-5) 2022 and later.
- New values for Manufacturer Test Procedures Used (DI-18)
- New values for Test Fuel Type Code (DI-19)

EPA FOIA Production 2016-07-19

Changes to Decision Information Dataset- continued

- New values for Test Procedure Codes Selected for EPA Confirmatory Testing (DI-38)
- New values for Test Fuel Type Code for EPA Confirmatory Testing (DI-38.5)
- New data element for EPA Road Speed Fan Usage Indicator (DI-38.8)

EPA FOIA Production 2016-07-19

Changes to Shift Schedule Dataset

- New/Deleted values for Drive Schedule Name Code (SS-56)
  - NEW: '006' - HWY80
  - NEW: '007' - LA92
  - DELETED: '021' - LA4 (prep only);
  - DELETED: '022' - LA4;
  - DELETED: '023' - 505;
  - DELETED: '031' - HWFE (no warmup);
  - DELETED: '101' - SCC#1;
  - DELETED: '102' - SCC#2;
  - DELETED: '103' - BIH (Auto);
  - DELETED: '104' - BIH (Manual);
  - DELETED: '111' - 3BagHWFE;
  - DELETED: '112' - 3Bag505;
  - DELETED: '121' - LA4 (perturbed 1.5)

EPA FOIA Production 2016-07-19

Changes to Supplemental Information Dataset

- New values for Test Procedure Codes Selected For EPA Confirmatory Testing (SI-41.5)
- New value for Primary Engine Cooling Fan Placement Code (SI-42)
  - 20 = Road Speed Fan (width 31.5" x height 24")
- New data element Road Speed Fan Setup Specifications (SI-44.5)
- New business rule:
  - If Primary Engine Cooling Fan Placement Code (SI-42) equals '20' (Road Speed Fan) then Road Speed Fan Setup Specifications (SI-44.5) is required

EPA FOIA Production 2016-07-19

Changes to Supplemental Information Dataset- continued

- New data element E10 Evaporative Test Measurement Method (SI-49.5)
- New data element Drive Cycle Speed Tolerance Criteria (SI-49.7)
- New values for Exhaust Emission Standard Level (SI-57A)
- New business rules:
  - 'T3B110', 'T3B85' and 'T3SULEV30' are not allowed for Model Year (SI-3.5) 2020 and later.
  - 'HDV2B395', 'HDV2B340', 'HDV3B630' and 'HDV3B570' are not allowed for Model Year (SI-3.5) 2022 and later.
- New values for Test Procedure (SI-92 & SI-98)
- New values for Test Result/Emission Name (SI-59 & SI-71)
- New values for Evaporative/Refueling Standard Level (SI-57B)

EPA FOIA Production 2016-07-19

Changes to Evap Family Information Dataset

- New data elements:
  - Leak Family Indicator (EV-20)
  - Canister Bleed Test Indicator (EV-21)
  - CARB Fuel Only (Rig) Test Indicator (EV-22)
  - Leak Family Identifier (EV-23)
  - Leak Family Name (EV-24)
  - Applicability of Leak Family Requirements (EV-25)
  - Leak Family Standard (EV-26)
  - Leak Family Description (EV-27)
  - Applicability of Evaporative Canister Bleed Emission Test (EV-28)
  - Evaporative Canister Bleed Test Comments (EV-29)
  - Applicability of CARB Fuel Only (Rig) Test (EV-30)
  - CARB Fuel Only (Rig) Test Comments (EV-31)
  - E10 Evaporative Test Measurement Method (EV-32)

EPA FOIA Production 2016-07-19

Changes to Evap Family Information Dataset

- New business rules:
  - If Leak Family Indicator (EV-20) equals 'Y' (Yes) then Leak Family Identifier (EV-23) is required.
  - If Leak Family Identifier (EV-23) exists then Applicability of Leak Family Requirements (EV-25) is required.
  - If Leak Family Identifier (EV-23) exists then Leak Family Standard (EV-26) is required.
  - The maximum allowed value for Leak Family Standard (EV-26) must be less than or equal to 0.040.
  - If Canister Bleed Test Indicator (EV-21) equals 'Y' (Yes) then Applicability of Evaporative Canister Bleed Emission Test (EV-28) is required.
  - If CARB Fuel Only (Rig) Test Indicator (EV-22) equals 'Y' (Yes) then Applicability of CARB Fuel Only (Rig) Test (EV-30) is required.

EPA FOIA Production 2016-07-19

Changes to Test Group Information Dataset- continued

- New values for Exhaust Emission Standard Level (TG-201)
- NEW business rules:
  - 'T3B110', 'T3B85' and 'T3SULEV30' are not allowed for Model Year (TG-6) 2020 and later.
  - 'HDV2B395', 'HDV2B340', 'HDV3B630' and 'HDV3B570' are not allowed for Model Year (TG-6) 2022 and later.
- New values for Test Procedure (TG-204.5 & TG-223.5)
- New values for Test Result/Emission Name (TG-209 & TG-225)
- New data format for Ratio of NMOG/NMHC (TG-207)
  - Changed from N(3,2) to N(7,6)
- New values for Evaporative/Refueling Standard Level (TG-224)
- NEW business rule :
  - 'T3-3Z' is not allowed for Model Year (TG-6) 2022 and later.

EPA FOIA Production 2016-07-19

Changes to Test Group Information Dataset- continued

- Modified data element name and description for TG-216.8
  - Changed to “SFTP **Tier 2** Compliance Indicator”
- Modified data element name and description for TG-216.9
  - Changed to “SFTP **Tier 2** Composite CO Option”
- New data element for SFTP Tier 3 Compliance Indicator (TG-260)
- New business rule:
  - SFTP Tier 2 Compliance Indicator (TG-216.8) and SFTP Tier 3 Compliance Indicator (TG-260) cannot both equal 'Y' (Yes).
- New data element for SFTP LEVIII Compliance Indicator (TG-261)
- New Tier 3/LEVIII SFTP calculations
- Modified data element name and description for TG-217.2
  - Changed to “Test Group Fuel **– Charge Depleting**”

EPA FOIA Production 2016-07-19

Changes to Test Group Information Dataset- continued

- New data elements:
  - Test Group Fuel – SFTP LEVIII (TG-262)
  - Official SFTP LEVIII FTP Test Number (TG-263)
  - Official SFTP LEVIII US06 Test Number (TG-264)
  - Official SFTP LEVIII SC03 Test Number (TG-265)
  - NMOG+NOX-COMP – Tier 3 (TG-255) (Verify-calculated field)
  - NMOG+NOX-COMP – LEVIII (TG-256) (Verify-calculated field)
  - CO-COMP – LEVIII (TG-257) (Verify-calculated field)
- Modified data element names/descriptions
  - Changed to "HC-NM+NOX-COMP – **Tier 2**" (TG-219.5)
  - Changed to "CO-COMP – **Tier 2/Tier 3**" (TG-219.6)
  - Changed to "PM-COMP – **Tier 2**" (TG-219.7)

EPA FOIA Production 2016-07-19

Changes to Request For Certificate Dataset

- Modified description for “Meet All Applicable Requirements Indicator” (CR-10)
  - Does this test group/evaporative family comply with all the applicable requirements of 40 CFR Parts **85, 86, 88, 600, 1037, 1065, 1066 and other regulations which may apply?**
- Modifications to Certificate templates

EPA FOIA Production 2016-07-19

Changes to FE Label Dataset

- Modified data element name/description for GL-200
  - Changed to "**Litmus Bypass Indicator**" from "MDVP-Only or ICI-Indicator".

EPA FOIA Production 2016-07-19

Changes to IUVP Vehicle Information Dataset

- New data element for Leak Family Identifier (IV-7.1)
- New business rule:
  - The combination of Evaporative Family Name (IV-7) and Leak Family Identifier (IV-7.1) must be an existing Evap/Refueling Family Name(EV-1) and Leak Family Identifier (EV-23) combination previously entered in the Evap/Refueling Family dataset.
- New data element for Mileage Since OBD Leak Check Performed (IV-39.5)
- New business rule:
  - If 'Readiness Status Complete?' (IV-38) equals 'Y' (Yes) or 'Incomplete Readiness Status Codes' (IV-39) does not include 'EVAP' (Evaporative System) then Mileage Since OBD Leak Check Performed (IV-39.5) is required.

EPA FOIA Production 2016-07-19

Changes to IUVP Test Information Dataset

- New values for Test Procedure (IT-14)
- New values for Fuel Type (IT-15)
- New values for Test Result/Emission Name (IT-28)
- New business rules:
  - If Test Procedure (IT-14) is not equal to '3' (HWFE Highway Test) then Test Result/Emission Name (IT-28) cannot equal 'COMB-CREE' or 'COMB-OPT-CREE'.
  - If Model Year (IV-8) of the IUVP test vehicle is >= 2012 and Test Procedure (IT-14) is equal to '3' (HWFE Highway Test) then Test Result/Emission Name (IT-28) must include 'COMB-CREE' or 'COMB-OPT-CREE'.
  - If the Fuel Type (IT-15) equals '46' (CARB LEV3 E10 REGULAR GASOLINE), '47' (CARB LEV3 E10 PREMIUM GASOLINE), '48' (TIER 3 E10 REGULAR GASOLINE), or '49' (TIER 3 E10 PREMIUM GASOLINE) AND the Test Procedure (IT-14) equals '23' (FED FUEL 2 DAY EVAP (BUTANE)), '27' (CA FUEL 2 DAY EVAP (BUTANE LOAD)), '32' (FED FUEL RUNNING LOSS), '34' (FED FUEL 3 DAY EVAP(BUTANE LOAD)), '37' ('CA FUEL RUNNING LOSS'), '38' (CA FUEL 3 DAY EVAP (BUTANE LOAD)), '43' (FED FUEL 2DAY EVAP(HEAT TO LOAD)), '47' (CA FUEL 2 DAY EVAP(HEAT TO LOAD)), '58' (TIER 3 E10 REGULAR GASOLINE (10 RVP-FFV ORVR Only)), or '59' (TIER 3 E10 PREMIUM GASOLINE (10 RVP-FFV ORVR Only)), then Test Result/Emission Name (IT-28) must include 'HC-TOTAL-EQUIV'.
- New data element for E10 Evaporative Test Measurement Method (IT-38.5)
- New values for Test Result Unit (IT-30)
  - in = inches
  - cc/min = cubic centimeters per minute

EPA FOIA Production 2016-07-19

Changes to Footprint Dataset

- New data elements for Car/Truck Determination
  - To be deployed in release after Tier 3

EPA FOIA Production 2016-07-19

Verify Manufacturer Testing Information

- Tentative Tier 3 testing dates:
  - September 3 through September 16th
  - Testing meetings will be held on Tuesdays and Thursdays at 3pm during the 2 testing weeks
  - Issue trackers must be submitted to verify@epa.gov by 3pm the day before the applicable testing meeting
- Contact Sandra Somoza if you have questions about the upcoming Light-Duty Verify system testing
  - somoza.sandra@epa.gov (734-214-4704)
- Join the Verify Listserve
- Draft documents will be posted to the Verify website under the Light Duty section:
  - http://epa.gov/otaq/verify/publications.htm#workdocuments

EPA FOIA Production 2016-07-19

To: Yang, Ching-Shih[Yang.Ching-Shih@epa.gov]
Cc: richard.thomas@vw.com[richard.thomas@vw.com]
From: Good, David
Sent: Wed 3/4/2015 5:47:23 PM
Subject: ASTM rounding formula used in the FE Guide macro - please send our formula to VW

Ching-shih,

When you get a chance, please send Richard Thomas of VW, the astm rounding formula in the FE Guide Macro (and cc me).

They are having trouble with Excel astm rounding, and would like to use our formula.

Thanks

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
Cc: Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Good, David
Sent: Tue 1/27/2015 6:36:07 PM
Subject: RE: Audi A7 quattro TDI voluntary lower label ..... Index #004

Richard,

Thanks for checking your emails.

I'll check my emails and my files and let you know if I find anything.

Like I was telling you last week, Rob French and I are not aware of any EPA regulations which would allow mfrs to voluntarily perform the 3-cycle test (or any EPA precedents/guidance in the past).

I'll let you know if I find anything new.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Tuesday, January 27, 2015 7:05 AM
To: Good, David
Cc: Kata, Leonard (EEO)
Subject: RE: Audi A7 quattro TDI voluntary lower label ..... Index #004

Hi Dave;

I don' t have any mail earlier than 2013 calendar year and I didn't find anything in 2013 calendar year that addresses this issue. I only remember our phone discussion and you telling me that when we pass the litmus test we have the option to use any of the three calculation

methods in the calculator. At the time there was no issue so I don't remember any written correspondence between Volkswagen and EPA. I always use the EPA issued calculator. That's the way I remember our discussion, that's not to say it's correct. Perhaps you can review the references below when you have the time and it will help you recall some thoughts.

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Friday, January 23, 2015 11:52 AM
To: Thomas, Richard (EEO)
Cc: Kata, Leonard (EEO)
Subject: RE: Audi A7 quattro TDI voluntary lower label ..... Index #004

Richard,

Both Rob French & I think that the regulations and the guidance letter indicate that the Vehicle specific method is optional (any time), but not the 3-cycle.

I'll try to dig thru my files and see if that is consistent with the same answer we gave a manufacturer a couple years ago. Please double check my emails to you over the past 3-4 years, if possible, and let me know what you find (if anything).

Thanks

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Friday, January 23, 2015 11:09 AM
To: Good, David
Cc: Kata, Leonard (EEO)

Subject: RE: Audi A7 quattro TDI voluntary lower label ..... Index #004

Hi Dave;

My question was only hypothetical we don't wish to use a modified 5-cycle method for any new labels thus far, but wanted to confirm my understand in the case where we might benefit from this method for future labels. In general, I almost never see any improvement using the modified 5-cycle method and the whole MPG label numbers.

It is still my understanding that we can use either of the three label calculation methods if we pass both city and highway litmus test contained in 600.115-11. The paragraph I wish to point out is contained in 600-210-12 (d)(1), where by it says if the criteria 600.115-11(a) (city litmus) is met then we must use the same method for city, highway and CO2 values. If the criteria in 600.115-11(b) (highway litmus) is met then the city and CO2 values may use the same method but the highway must use specific 5-cycle method and in brackets it says "or modified 5-cycle method as allowed under 600-114-12(b)(2)", which refers to 600.115-08(b)(2)(iii)(B) which has been redesignated as paragraph 600.115-11(b)(2)(iii)(B).

When you have time, let me know if you agree with my understanding.

Have a nice weekend.

Thanks,

Richard

From: Good, David [mailto:good.david@epa.gov]
Sent: Tuesday, January 13, 2015 4:51 PM
To: Thomas, Richard (EEO)

Subject: RE: Audi A7 quattro TDI voluntary lower label ..... Index #004

Richard,

The attached guidance letter and the FE regulations clearly state that mfrs can voluntarily use the vehicle specific labels, but I'm not sure about the modified 5-cycle. I think the FE regulations are silent on that one. Also, I don't think that case has come up in previously---or at least in quite a while. I need to run that by a few others here at EPA.

If you want to use voluntarily use the modified 5-cycle, you'd better send us an official letter---- and find a paragraph in the regulations that would allow it.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Tuesday, January 13, 2015 11:52 AM
To: Good, David
Subject: Audi A7 quattro TDI voluntary lower label ..... Index #004

Thanks Dave, that tip worked perfectly and I calculated the raised combined CO2 value according to CD-14-15 guidance.

I have one more question unrelated to this label. I am sure we discussed this years ago but just to confirm my understanding; if the worse case for a test group passes both the city and highway litmus test, then a manufacturer may use any of the three fuel economy label calculation methods for the label (either Derived 5-cycle, full 5-cycle or modified 5-cycle). Is this correct? When you have time, not an issue.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Good, David
Sent: Thur 1/15/2015 2:52:47 PM
Subject: RE: 2015 SAE Automotive Engineering Article - electric assist turbochargers (e-boosters)

Thanks Richard.

-----Original Message-----
From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Thursday, January 15, 2015 8:35 AM
To: Good, David
Cc: Snyder, Jim; Kata, Leonard (EEO)
Subject: RE: 2015 SAE Automotive Engineering Article - electric assist turbochargers (e-boosters)

Hi Dave;

I was informed by Audi Neckarsulm yesterday that the e-boost turbocharger is not yet in production. We will keep an eye open for its introduction.

Thanks,
Richard

-----Original Message-----
From: Good, David [mailto:good.david@epa.gov]
Sent: Tuesday, January 13, 2015 4:36 PM
To: Thomas, Richard (EEO)
Cc: Snyder, Jim; Kata, Leonard (EEO)
Subject: FW: 2015 SAE Automotive Engineering Article - electric assist turbochargers (e-boosters)

Richard,

Here's the article in SAE Automotive Engineering magazine I was talking about this morning.

Please let me know if any of the 2015 3.0L Diesels (Audi, Touareg, etc) are equipped.

I'd like to add this control system to Verify in the future.

Dave

-----Original Message-----
From: Fearnside, Judy
Sent: Tuesday, January 13, 2015 1:25 PM
To: Good, David
Subject: 2015 SAE Automotive Engineering Article

Judy Fearnside
Technical Support Specialist/Fees Team
A Senior Service America SEE
USEPA Compliance Division
(734) 214-4002

Life is what happens to you while you're busy making other plans.

To: Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Good, David
Sent: Tue 1/13/2015 9:51:13 PM
Subject: RE: Audi A7 quattro TDI voluntary lower label ..... Index #004

Richard,

The attached guidance letter and the FE regulations clearly state that mfrs can voluntarily use the vehicle specific labels, but I'm not sure about the modified 5-cycle. I think the FE regulations are silent on that one. Also, I don't think that case has come up in previously---or at least in quite a while. I need to run that by a few others here at EPA.

If you want to use voluntarily use the modified 5-cycle, you'd better send us an official letter---- and find a paragraph in the regulations that would allow it.

Dave

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Tuesday, January 13, 2015 11:52 AM
To: Good, David
Subject: Audi A7 quattro TDI voluntary lower label ..... Index #004

Thanks Dave, that tip worked perfectly and I calculated the raised combined CO2 value according to CD-14-15 guidance.

I have one more question unrelated to this label. I am sure we discussed this years ago but just to confirm my understanding; if the worse case for a test group passes both the city and highway litmus test, then a manufacturer may use any of the three fuel economy label calculation methods for the label (either Derived 5-cycle, full 5-cycle or modified 5-cycle). Is this correct? When you have time, not an issue.

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: richard.thomas@vw.com[richard.thomas@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; leonard.kata@vw.com[leonard.kata@vw.com]
From: Good, David
Sent: Tue 1/13/2015 9:36:11 PM
Subject: FW: 2015 SAE Automotive Engineering Article - electric assist turbochargers (e-boosters)
2015 SAE Automotive Engineering Article.pdf

Richard,

Here's the article in SAE Automotive Engineering magazine I was talking about this morning.

Please let me know if any of the 2015 3.0L Diesels (Audi, Touareg, etc) are equipped.

I'd like to add this control system to Verify in the future.

Dave

-----Original Message-----
From: Fearnside, Judy
Sent: Tuesday, January 13, 2015 1:25 PM
To: Good, David
Subject: 2015 SAE Automotive Engineering Article

Judy Fearnside
Technical Support Specialist/Fees Team
A Senior Service America SEE
USEPA Compliance Division
(734) 214-4002

Life is what happens to you while you're busy making other plans.

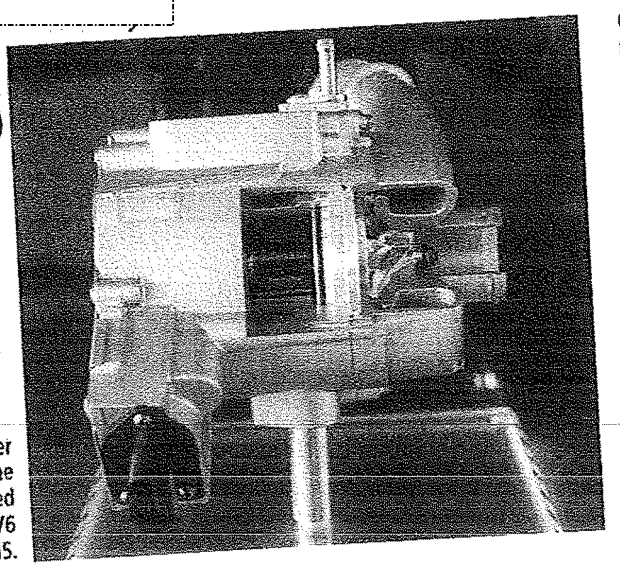
Ex. 5

2015 engines ride a technology tidal wave

Ex. 5

Ex. 5

Ex. 5



Prototype electric turbocharger with housing cutaway to show the e-motor inside. Audi is expected to have an "e-boosted" 3.0-L V6 in production in 2015.

features cam phasers operating with over 30° of authority. The TI-CVT system helps eliminate the need for an EGR valve. Compression ratio is 10:1. For more details, go to http://articles.sae.org/13388/.

E-boosting for VW-Audi's 2015 V6 diesel

Electrically enhanced turbochargers are under investigation across the industry, and **Volkswagen-Audi** may be the first OEM to offer the efficiency-and-power-boosting devices in production—likely in MY2015.

Popularly dubbed "e-booster," the machines integrate an electric motor within the turbocharger architecture. They are used in **Formula 1** in more sophisticated form, for eliminating typical turbo "lag" while also offering a modicum of energy recovery that can be applied back to the driveline. Earlier this year, VW's R&D chief Dr. Ulrich Hackenburg announced that a high-performance version of the 2015 Q7, to be badged SQ7, will offer an electric turbo system on its new-generation 3.0-L V6 TDI diesel.

Audi engineers have been testing "e-boosters" for years, and *Automotive Engineering* has driven a prototype equipped with the technology (see http://articles.sae.org/13421/ and http://articles.sae.org/13223/). The major turbocharger manufacturers, including BorgWarner, **Hitachi**, **Valeo**, and **Honeywell**, have prototypes under customer evaluation, sources tell *Automotive Engineering*.

OEM powertrain engineers see e-boosting as a potential alternative to two-stage turbocharging systems, and an opportunity to gain a small bit of package space underhood—depending on engine configuration and vehicle. But along with the benefits of e-boosting are various challenges, primarily electric-power consumption and cost. Systems currently in development require 48-V power.

Engineers familiar with the technology reckon a properly calibrated electric turbocharger can reduce fuel consumption by between 7 and 15%, the greatest opportunity being when combined with regenerative braking, they said. Boost is available instantaneously, and the increased mass-airflow the devices produce at low loads can help reduce PM emissions.

In an interview with *Automotive Engineering* at the 2014 Geneva Motor Show, Dr. Heinz-Jakob Neusser, VW Group's top powertrain engineer, voiced his enthusiasm for e-boosters: "I think they're a good solution for increasing the specific output of smaller engines, so they can be used in larger vehicles without suffering a performance loss," he said. ■

EPA FOIA Production 2016-07-19 2015-011105_000297

To: richard.thomas@vw.com[richard.thomas@vw.com]
Cc: leonard.kata@vw.com[leonard.kata@vw.com]
From: Good, David
Sent: Wed 1/7/2015 5:41:15 PM
Subject: FW: 2013 VW LT CAFE/GHG report - error
FW: URGENT RESPONSE NEEDED FOR NHTSA - FW: Reminder: Second Requisition-- MY 2013 Light Duty Trucks Production Volumes (Split Volumes)
2013 VW LT CAFE-GHG Report-from Verify-1-7-2015.pdf

Richard,

NHTSA found an error in the 2013 VW LT CAFE/GHG report, where the footprint descriptions of Carlines 330 and 340 on page 4 of the CAFE/GHG report were listed as a Q7 models instead of Q5 models. See attachments.

I'm thinking that this mistake is a typo in the footprint (information-only) description which will not affect the CAFE or GHG calculations in any way. The GHG and CAFE target values agree with VW's target values in your 3/17/2014 letter.

Please let me know what you think.

Thanks

From: Henrietta.Dandy@dot.gov [mailto:Henrietta.Dandy@dot.gov]
Sent: Tuesday, January 06, 2015 6:56 AM
To: Good, David; Ken.Katz@dot.gov; Maurice.Hicks@dot.gov; t.letkiewicz.ctr@dot.gov
Cc: james.tamm@dot.gov
Subject: FW: URGENT RESPONSE NEEDED FOR NHTSA - FW: Reminder: Second Requisition-- MY 2013 Light Duty Trucks Production Volumes (Split Volumes)
Importance: High

Hi All,

Regarding MY 2013 Volkswagen's Light Trucks, Audi Q5 vehicles were erroneously

reported as Q7. (See the attached document.)

Best regards,

Henrietta L. Dandy

U.S. Department of Transportation

National Highway Traffic Safety Administration

W43-456

1200 New Jersey Ave., SE

Washington, DC 20590

Henrietta.Dandy@dot.gov

Office: (202) 366-4802

CAFE/GHG Final Calculation Information Report

Manufacturer Name:	Volkswagen	**Manufacturer Code:**	VWX
Model Year:	2013	**Compliance Category:**	Light Trucks

Calculation Summary

	CAFE		GHG		TLAAS	
	Mfr	**Verify**	**Mfr**	**Verify**	**Mfr**	**Verify**
Baseline Calculation:						
Unrounded	27.0963	27.0963	327.1079	327.1079	--	--
Rounded	27.1	27.1	327	327	--	--
Final Calculation:						
Unrounded	29.6127	29.6127	287.8897	287.8897	--	--
Rounded	29.6	29.6	288	288	--	--
Final Production Volume	87875	87875	68414	68414	--	--
Official Value	28.3	28.3	312	312	--	--
Unrounded Reformed Standard	27.3807	27.3807	316.6	316.6	--	--
Rounded Reformed Standard	--	27.4	--	317	--	--

Calculation Method:	CREE
Mfr Final Status:	Yes
Reformed Standard Comment:	--
CAFE/GHG Calculation Errors:	--

EPA FOIA Production 2016-07-19

Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI

To: Ex. 7 @vw.com]
From: Bunker, Byron
Sent: Fri 9/18/2015 8:14:33 PM
Subject: RE: Press Information

Here is the change we made. We added/redid this answer on our webpage to try to address the recall questions.

Is EPA officially requiring Volkswagen to issue a recall now?

No. EPA expects to compel VW to issue a recall in the future to reduce the emissions impacts of these vehicles. Owners will be notified of that recall once Volkswagen and Audi have developed a remedial plan and EPA has approved the plan. Manufacturers are given a reasonable amount of time to develop a plan to complete the repairs, including both the repair procedure and manufacture of any needed parts. Depending on the complexity of the repair and the lead time needed to obtain the necessary components, it could take up to one year to identify corrective actions, develop a recall plan, and issue recall notices

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: Ex. 6

****

From: Ex. 7 @vw.com]
Sent: Friday, September 18, 2015 4:10 PM
To: Bunker, Byron

Subject: Press Information

Hello Byron,

If you do revise or try to clarify any messages to the public can you also forward to me?

Thanks,

Ex. 7

To: Ex. 7 @vw.com]
From: Bunker, Byron
Sent: Thur 9/17/2015 6:02:17 PM
Subject: Can you give me a call as soon as practical?

Thanks. Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: Ex. 6

****

From: Bunker, Byron
Location: Conf Call
Importance: Normal
Subject: Accepted: CARB-EPA-VW Diesel Conf Call
Start Date/Time: Thur 9/17/2015 5:00:00 PM
End Date/Time: Thur 9/17/2015 7:00:00 PM

To: Ex. 7 @vw.com]
From: Bunker, Byron
Sent: Thur 9/10/2015 1:17:13 PM
Subject: Can you give me a call when you have a minute?

Hi Ex. 7

When you have a minute, can you give me a call?

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: Ex. 6

****

From: Bunker, Byron
Location: Conf Call (El Monte)
Importance: Normal
Subject: Accepted: VW CARB Conf Call (Pacific Time)
Start Date/Time: Thur 9/3/2015 7:00:00 PM
End Date/Time: Thur 9/3/2015 10:00:00 PM

To: Ex. 7 @vw.com]
Cc: Wehrly, Linc[wehrly.linc@epa.gov]
From: Bunker, Byron
Sent: Fri 8/21/2015 12:15:22 PM
Subject: Time to talk today?

Hi Ex. 7

If you can spare 20 minutes today, I would like to follow up on a conversation that you had with Linc. My calendar is mostly open today with only a few internal meetings. Please let me know if there is a convenient time to talk, and I will give you a call.

Thanks,

Byron

****

Byron Bunker

Director Compliance Division

Office of Transportation and Air Quality

Environmental Protection Agency

2000 Traverwood Drive

Ann Arbor, MI 48105

Bunker.Byron@epa.gov

Phone: (734) 214-4155

Mobile: Ex. 6

****

From: Ex. 7 @vw.com]
Sent: Wednesday, March 06, 2013 11:13 AM
To: Bunker, Byron
Subject: Fuel Economy Testing Correlation

Hello Byron,

Hey, I just wanted to say thanks for the conversation we had concerning fuel economy testing. I've continued to think about it and wanted to make an additional point that maybe wasn't so clear during the discussion.

Ex. 4 - CBI

Ex. 4 - CBI

Hope that helps if you have further internal discussions.

Thanks again,

Ex. 7

Ex. 4 - CBI

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Glas, Tobias
Sent: Wed 5/6/2015 6:00:32 PM
Subject: RE: Wednesday Meeting

Hi Bill,

The car was rejected because of the time range. DO you know why?

Vehicle Process Code : C
EPA Manufacturer Code : VWX
Vehicle Identification Number Text : Ex. 6
Emission Program Identifier : IUVE
Test Group Name : DVWXV02.5U3A
Evaporative Refueling Family Name : DVWXR0110238
Model Year : 2013
Engine Displacement Value : 2.48
Manufacturer Division Code : 1
Carline Code : 221
Division Make Name : VW
Carline Name : Jetta
Trim Level Text : Jetta
Vehicle Model Name : Jetta
Vehicle Procured Sales Area Identifier : FA
Vehicle Procured State Identifier : MI
Vehicle Procured Altitude Indicator : L
Vehicle Procured Climate Indicator : C
Mileage Category Indicator : L
Seventy Five Percent Useful Life Indicator : N
Odometer Start Value : 45218
Transmission Type Identifier : A
Transmission Lockup Indicator : N
Transmission Creeper Gear Indicator : N
Transmission Gear Count : 6
Tire Size Text : 205/55 R16
Axle Ratio Value : 3.5
Engine Code Text : CBTA
Equivalent Test Weight Value : 3500
Vehicle Inspection Date : 20150204
Vehicle Built Date : 20120727
Visual Malfunction Light Indicator : N
Commanded Malfunction Light Indicator : N

Active Trouble Code Indicator : N
Readiness Status Complete Indicator : Y
Mileage SinceOBD Leak Check Measure : 1
Vehicle Rejection Code : 0
Air Aspiration Method Identifier : NA
In Use Test Drive Code : 3
Vehicle Comment Text : Leak check = 1 work around according to Verify Help Desk Car has 55K miles but is supposed to be Low Mileage. We did not receive response for a real Low Mileage car so we tested this car and submitted it as Low Mileage with Low Mileage Standards, which are passed.
Transaction Status Details

Transaction Status Identifier : REJECTED
Transaction Message Text : IV-BR24 - IUVP Vehicle Information can only be accepted within the allowed time range of submissions for the Model Year (IV-8) and Mileage Category (IV-20).

From: Pidgeon, Bill [mailto:pidgeon.bill@epa.gov]
Sent: Tuesday, May 05, 2015 8:36 AM
To: Glas, Tobias
Subject: RE: Wednesday Meeting

Hi Tobias – they are open through Fri.

Best wishes,

Bill

****

William M. Pidgeon
Mechanical Engineer
U.S. Environmental Protection Agency
Compliance Division, N69
2000 Traverwood Drive
Ann Arbor, MI 48105-2195
pidgeon.bill@epa.gov

Phone: 734-214-4416
Fax: 734-214-4869

From: Glas, Tobias [mailto:Tobias.Glas@vw.com]
Sent: Tuesday, May 05, 2015 7:48 AM
To: Pidgeon, Bill
Subject: FW: Wednesday Meeting

Hi Bill,

As mentioned last week I still have 3 cars to submit. Can you please open CDX this week Wednesday through Friday?

Thank you

Tobias Glas

In-Use Emission Compliance Specialist

Engineering & Environmental Office

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

United States of America

Phone: (248) 754-4211

Cell: (248) 494-1537

Fax: (248) 754-4207

E-Mail: Tobias.Glas@vw.com

To: Pidgeon, Bill[pidgeon.bill@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Glas, Tobias
Sent: Wed 5/6/2015 3:15:34 PM
Subject: My 09 High Mileage
Verify_Second.docx

Hi Bill, hi Jim,

I just submitted a My 09 High Mileage car.

The car was submitted first with 83K miles last year and now I submitted it now with 105K miles.

We didn't find any other car with 105Kand I think it is fair game because we have over 20K miles between the test, so better test this than no car.

Of course CDX didn't accept the same VIN but accepted the test results, see attachement.

Please let me know if I should change something or if that is ok because all results should be in the system.

Best regards

Tobias Glas

In-Use Emission Compliance Specialist

Engineering & Environmental Office

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

United States of America

Phone: (248) 754-4211

Cell: (248) 494-1537

Fax: (248) 754-4207

E-Mail: Tobias.Glas@vw.com

Verify Processing Report**Total Datasets Submitted:** 3
Accepted Datasets: 2
Rejected Datasets: 1

The original datasets are listed below. In addition, any information generated by the Verify system is also included. For any rejected datasets, the reason(s) the dataset was rejected is provided below in the Transaction Report for that particular dataset.

In Use Verification Program Submission
Vehicle Information Details
Vehicle Process Code : N
EPA Manufacturer Code : ADX
Vehicle Identification Number Text Ex. 6
Emission Program Identifier : IUVB
Test Group Name : 9ADXV02.03PA
Evaporative Refueling Family Name : 9ADXR0110237
Model Year : 2009
Engine Displacement Value : 1.984
Manufacturer Division Code : 1
Carline Code : 211
Division Make Name : VW
Carline Name : GTI
Trim Level Text : GTI
Vehicle Model Name : GTI
Vehicle Procured Sales Area Identifier : CA
Vehicle Procured State Identifier : MI
Vehicle Procured Altitude Indicator : L
Vehicle Procured Climate Indicator : C
Mileage Category Indicator : H
Seventy Five Percent Useful Life Indicator : Y
Odometer Start Value : 105508
Transmission Type Identifier : A
Transmission Lockup Indicator : N
Transmission Creeper Gear Indicator : N
Transmission Gear Count : 6
Tire Size Text : 225/45 R17
Axle Ratio Value : 3.14
Engine Code Text : CBFA
Equivalent Test Weight Value : 3500
Vehicle Inspection Date : 20150318
Vehicle Built Date : 20080610
Visual Malfunction Light Indicator : N
Commanded Malfunction Light Indicator : N
Active Trouble Code Indicator : N
Readiness Status Complete Indicator : Y
Mileage SinceOBD Leak Check Measure : 1
Vehicle Rejection Code : 0
Air Aspiration Method Identifier : TC
In Use Test Drive Code : 3
Vehicle Comment Text : Mileage since Leak Test = 1 work around according to CDX Help Desk
Transaction Status Details
Transaction Status Identifier : REJECTED
Transaction Message Text : IV-BR2 - If Process Code (IV-1) is equal to 'N' (New), then an active record must not exist in the system with the same Manufacturer Code (IV-2), VIN (IV-3), Emission Program (IV-4) and Mileage

Category (IV-20).

Test Information Details
Test Process Code : N
EPA Manufacturer Code : ADX
Vehicle Identification Number Text : Ex. 6
Emission Program Identifier : IUVB
Verify Test Number : 1028459
LOD Mfr Test Number Text : 20150331TC212
Test Laboratory Site Code : 13
Test Laboratory Name : Test Center California
Odometer Start Value : 105563
Federal Pass Fail Indicator : P
California Pass Fail Indicator : P
Test Date : 20150331
Test Conditions Identifier : AR
Test Procedure Identifier : 21
Test Fuel Type Identifier : 61
Shift Indicator Light Usage Indicator : N
Transmission Mode Indicator : P
Transmission Test Configuration Identifier : A
Test Altitude Indicator : L
Dynamometer Type Identifier : E3
Road Load Horsepower Value : 50.5
Dynamometer Set Target Details
Set CoefficientA Value : 68.66
Set CoefficientB Value : 0.0723
Set CoefficientC Value : 0.03283
Target CoefficientA Value : 156
Target CoefficientB Value : 0.5
Target CoefficientC Value : 0.0331

Mileage Category Indicator : H
Test Result Details
Test Result Identifier : HCHO
Weighted Result Value : 0
Test Result Unit Identifier : g/m
Federal InUse Standard Value : 0.004
California InUse Standard Value : 0.004
Bag1 Result Value : 0.001
Bag2 Result Value : 0
Bag3 Result Value : 0

Test Result Details
Test Result Identifier : CO
Weighted Result Value : 0.718
Test Result Unit Identifier : g/m
Federal InUse Standard Value : 2.1
California InUse Standard Value : 1.0
Bag1 Result Value : 1.508
Bag2 Result Value : 0.562
Bag3 Result Value : 0.417

Test Result Details
Test Result Identifier : NOX
Weighted Result Value : 0.01
Test Result Unit Identifier : g/m
Federal InUse Standard Value : 0.02
California InUse Standard Value : 0.02
Bag1 Result Value : 0.029
Bag2 Result Value : 0.006
Bag3 Result Value : 0.005

Test Result Details
Test Result Identifier : PM
Weighted Result Value : 0.009
Test Result Unit Identifier : g/m
Federal InUse Standard Value : 0.01
California InUse Standard Value : 0.01
Bag1 Result Value : 0.010
Bag2 Result Value : 0.001
Bag3 Result Value : 0.008

Test Result Details
Test Result Identifier : CO2
Weighted Result Value : 318.466
Test Result Unit Identifier : g/m
Bag1 Result Value : 344.415
Bag2 Result Value : 323.363
Bag3 Result Value : 289.674

Test Result Details
Test Result Identifier : NMOG
Weighted Result Value : 0.01
Test Result Unit Identifier : g/m
Federal InUse Standard Value : 0.01
California InUse Standard Value : 0.01
Bag1 Result Value : 0.035
Bag2 Result Value : 0.003
Bag3 Result Value : 0.004

Test Result Details
Test Result Identifier : MFR FE
Weighted Result Value : 27.93
Test Result Unit Identifier : mpg
Bag1 Result Value : 25.73
Bag2 Result Value : 27.53
Bag3 Result Value : 30.74

Test Result Details
Test Result Identifier : HC-TOTAL
Weighted Result Value : 0.017
Test Result Unit Identifier : g/m
Bag1 Result Value : 0.048
Bag2 Result Value : 0.007

Bag3 Result Value : 0.011

Test Result Details
Test Result Identifier : HC-NM
Weighted Result Value : 0.009
Test Result Unit Identifier : g/m
Bag1 Result Value : 0.033
Bag2 Result Value : 0.003
Bag3 Result Value : 0.004

EPA Generated Test Information Details
Original Receipt Date : 20150506
Federal Pass Fail Indicator : P
California Pass Fail Indicator : P
EPA Generated Test Result Details
Test Result Identifier : HCHO
Federal Pass Fail Indicator : P
California Pass Fail Indicator : P

EPA Generated Test Result Details
Test Result Identifier : CO
Federal Pass Fail Indicator : P
California Pass Fail Indicator : P

EPA Generated Test Result Details
Test Result Identifier : NOX
Federal Pass Fail Indicator : P
California Pass Fail Indicator : P

EPA Generated Test Result Details
Test Result Identifier : PM
Federal Pass Fail Indicator : P
California Pass Fail Indicator : P

EPA Generated Test Result Details
Test Result Identifier : CO2
Federal Pass Fail Indicator : NA
California Pass Fail Indicator : NA

EPA Generated Test Result Details
Test Result Identifier : NMOG
Federal Pass Fail Indicator : P
California Pass Fail Indicator : P

EPA Generated Test Result Details
Test Result Identifier : MFR FE
Federal Pass Fail Indicator : NA
California Pass Fail Indicator : NA

EPA Generated Test Result Details
Test Result Identifier : HC-TOTAL
Federal Pass Fail Indicator : NA
California Pass Fail Indicator : NA

EPA Generated Test Result Details
Test Result Identifier : HC-NM
Federal Pass Fail Indicator : NA
California Pass Fail Indicator : NA

Transaction Status Details
Transaction Status Identifier : ACCEPTED

Test Information Details
Test Process Code : N
EPA Manufacturer Code : ADX
Vehicle Identification Number Text : Ex. 6
Emission Program Identifier : IUVB
Verify Test Number : 1028460
LOD Mfr Test Number Text : 20150331TC213
Test Laboratory Site Code : 13
Test Laboratory Name : Test Center California
Odometer Start Value : 105575
Federal Pass Fail Indicator : P
California Pass Fail Indicator : P
Test Date : 20150331
Test Conditions Identifier : AR
Test Procedure Identifier : 90
Test Fuel Type Identifier : 61
Shift Indicator Light Usage Indicator : N
Transmission Mode Indicator : P
Transmission Test Configuration Identifier : A
Test Altitude Indicator : L
Dynamometer Type Identifier : E3
Road Load Horsepower Value : 50.5
Dynamometer Set Target Details
Set CoefficientA Value : 68.66
Set CoefficientB Value : 0.0723
Set CoefficientC Value : 0.03283
Target CoefficientA Value : 156
Target CoefficientB Value : 0.5
Target CoefficientC Value : 0.0331

Mileage Category Indicator : H
Test Result Details
Test Result Identifier : HC-NM+NOX-COMP
Weighted Result Value : 0.025
Test Result Unit Identifier : g/m
Federal InUse Standard Value : 0.6

Test Result Details
Test Result Identifier : NOX
Weighted Result Value : 0.045
Test Result Unit Identifier : g/m

Test Result Details
Test Result Identifier : MFR FE
Weighted Result Value : 26.97
Test Result Unit Identifier : mpg

Test Result Details
Test Result Identifier : CO
Weighted Result Value : 1.073
Test Result Unit Identifier : g/m
Federal InUse Standard Value : 11.1

Test Result Details
Test Result Identifier : HC-NM
Weighted Result Value : 0.006
Test Result Unit Identifier : g/m

EPA Generated Test Information Details
Original Receipt Date : 20150506
Federal Pass Fail Indicator : P
California Pass Fail Indicator : P
EPA Generated Test Result Details
Test Result Identifier : HC-NM+NOX-COMP
Federal Pass Fail Indicator : P
California Pass Fail Indicator : NA

EPA Generated Test Result Details
Test Result Identifier : NOX
Federal Pass Fail Indicator : NA
California Pass Fail Indicator : NA

EPA Generated Test Result Details
Test Result Identifier : MFR FE
Federal Pass Fail Indicator : NA
California Pass Fail Indicator : NA

EPA Generated Test Result Details
Test Result Identifier : CO
Federal Pass Fail Indicator : P
California Pass Fail Indicator : NA

EPA Generated Test Result Details
Test Result Identifier : HC-NM
Federal Pass Fail Indicator : NA
California Pass Fail Indicator : NA

Transaction Status Details
Transaction Status Identifier : ACCEPTED

To: Glas, Tobias[Tobias.Glas@vw.com]
From: Pidgeon, Bill
Sent: Tue 5/5/2015 12:35:52 PM
Subject: RE: Wednesday Meeting

Hi Tobias – they are open through Fri.

Best wishes,

Bill

****

William M. Pidgeon
Mechanical Engineer
U.S. Environmental Protection Agency
Compliance Division, N69
2000 Traverwood Drive
Ann Arbor, MI 48105-2195
pidgeon.bill@epa.gov

Phone: 734-214-4416
Fax: 734-214-4869

From: Glas, Tobias [mailto:Tobias.Glas@vw.com]
Sent: Tuesday, May 05, 2015 7:48 AM
To: Pidgeon, Bill
Subject: FW: Wednesday Meeting

Hi Bill,

As mentioned last week I still have 3 cars to submit. Can you please open CDX this week Wednesday through Friday?

Thank you

Tobias Glas

In-Use Emission Compliance Specialist

Engineering & Environmental Office

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

United States of America

Phone: (248) 754-4211

Cell: (248) 494-1537

Fax: (248) 754-4207

E-Mail: Tobias.Glas@vw.com

To: Snyder, Jim[Snyder.Jim@epa.gov]; Pidgeon, Bill[pidgeon.bill@epa.gov]
Cc: Smith, Brett (EEO)[Brett.Smith@vw.com]
From: Glas, Tobias
Sent: Wed 4/29/2015 12:47:39 PM
Subject: RE: the IUVP High Altitude testing.

We will be in the lobby, just come and pick us up when you have time.

Tobias

-----Original Appointment-----
From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Wednesday, April 29, 2015 8:44 AM
To: Glas, Tobias; Pidgeon, Bill
Cc: Smith, Brett (EEO)
Subject: the IUVP High Altitude testing.
When: Wednesday, April 29, 2015 2:00 PM-2:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: meet by Lab lobby

When: Wednesday, April 29, 2015 2:00 PM-2:30 PM (GMT-05:00) Eastern Time (US & Canada).
Where: meet by Lab lobby

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

Mtgs seem to be running long this week. I think its safer to push it back to 2:15 or 2:30.

I have mtgs but I'm open after 2:00.

Hi Jim,

I'll be at EPA on Wednesday from 12:30 pm on.

I was wondering if you'll have a couple of minutes to meet because I have a few questions about the IUVP High Altitude testing.

Please let me know.

Best regards

Tobias Glas
In-Use Emission Compliance Specialist
Engineering & Environmental Office

Volkswagen Group of America, Inc.

3800 Hamlin Road
Auburn Hills, MI 48326
United States of America

Phone: (248) 754-4211
Cell: (248) 494-1537

To: Pidgeon, Bill[pidgeon.bill@epa.gov]
From: Glas, Tobias
Sent: Wed 4/29/2015 12:08:57 PM
Subject: RE: Wednesday Meeting

Hi Bill,

Let's talk about that this afternoon.

See you later

Tobias Glas

In-Use Emission Compliance Specialist

Engineering & Environmental Office

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

United States of America

Phone: (248) 754-4211

Cell: (248) 494-1537

Fax: (248) 754-4207

E-Mail: Tobias.Glas@vw.com

From: Pidgeon, Bill [mailto:pidgeon.bill@epa.gov]
Sent: Tuesday, April 28, 2015 4:41 PM
To: Glas, Tobias; Snyder, Jim
Subject: RE: Wednesday Meeting

Hi Tobias,

I neglected to look at your attachment. I can open the IUVP database to allow you enter the data. If you let me know which day you prefer to enter the data, I'll open the database.

I need the model year, and the mileage category (low or high), and I'll open the database appropriately. It is not always obvious which mileage category to open, because I sometimes receive requests to correct data that has already been entered. In this case it is obvious that the 2009s are high mileage and 2012 is low mileage.

Best wishes,

Bill

****

William M. Pidgeon
Mechanical Engineer
U.S. Environmental Protection Agency
Compliance Division, N69
2000 Traverwood Drive
Ann Arbor, MI 48105-2195
pidgeon.bill@epa.gov

Phone: 734-214-4416
Fax: 734-214-4869

From: Glas, Tobias [mailto:Tobias.Glas@vw.com]
Sent: Tuesday, April 28, 2015 2:00 PM
To: Snyder, Jim; Pidgeon, Bill
Subject: Wednesday Meeting

Hi Jim, hi Bill,

As Bill will be there too, I want to talk about these points:

-High Altitude testing

-Submitting the last cars for My 09/12 see attachment

-In House procurement VW/Audi

-EVAP testing waiver

I will not have big presentations nor do I want to discuss every detail, I just want to get a feeling where you want or need information from our side and where we will be able to make the IUVP program more efficient.

See you tomorrow

Tobias Glas

In-Use Emission Compliance Specialist

Engineering & Environmental Office

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

United States of America

Phone: (248) 754-4211

Cell: (248) 494-1537

Fax: (248) 754-4207

E-Mail: Tobias.Glas@vw.com

From: Snyder, Jim
Required Attendees: Wehrly, Linc; Wright, DavidA; Ball, Joel; Dalton, Joel; Pidgeon, Bill; Kata, Leonard (EEO)
Location: AA-Room-Office-C126-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: VW SIL light shift schedule survey and test drive.
Start Date/Time: Wed 5/13/2015 1:00:00 PM
End Date/Time: Wed 5/13/2015 2:00:00 PM

VW will present results of SIL survey on their new 1.4L manual along with a vehicle to test drive the SIL.

To: Mitcham, Arvon[mitcham.arvon@epa.gov]; Pugliese, Holly[pugliese.holly@epa.gov]; Wehrly, Linc[wehrly.linc@epa.gov]; Peavyhouse, Robert[Peavyhouse.Robert@epa.gov]
From: Immekus, Kurt
Sent: Thur 2/19/2015 8:51:38 PM
Subject: Erwin vw, audi and Bentley subscriptions

To our EPA Associates

We have renewed all of your subscriptions for another year to the following three web sites

https://erwin.vw.com

https://erwin.audiusa.com

https://erwinusa.bentleymotors.com

You can use the subscription by logging into the sites and selecting a one year subscription and the credit will be applied.

For Robert Peaveyhouse: Please go to "my Erwin" on the home page of one of the sites and fill out a registration. Then send me your chosen log-in name and I will set up your access.

Thank You

Best Regards

Kurt Immekus

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Tamborra, Nick (EEO)
Sent: Fri 2/6/2015 11:24:39 PM
Subject: voicemail

Hi Linc,

Received your voicemail, thanks for the quick response. We will put the final document together next week.

Have a good weekend,

Nick

Nick Tamborra
Emissions Regulatory Manager

Engineering and Environmental Office

Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326
Phone: (248) 754-4217
Ex. 6
FAX: (248) 754-4207
E-Mail: nick.tamborra@vw.com

From: Ex. 7 (EEO)
Location: Conf Call
Importance: Normal
Subject: CARB-EPA-VW Diesel Conf Call
Start Date/Time: Thur 9/17/2015 5:00:00 PM
End Date/Time: Thur 9/17/2015 7:00:00 PM

;;;;;;
;;;;;;

Good Morning,
Please see below for dial-in information. Conf ID is at the bottom.
Thanks

Ex. 7

EPA:
Byron Bunker
Linc Wehrly
Jim Snyder
CARB:

Ex. 7

Join Skype Meeting

This is an online meeting for Skype for Business, the professional meetings and communications app

formerly known as Lync.

Join by phone

+1 (248) 754-6400 (Auburn Hills) English (United States)
+1 (855) 858-8080 (Auburn Hills) English (United States)
+1 (248) 630-0170 (Auburn Hills) English (United States)
+1 (248) 754-5055 (Auburn Hills) English (United States)

Find a local number

Conference ID: Ex. 6

Forgot your dial-in PIN? | Help

From: Snyder, Jim
Required Attendees: McBryde, Dan; Smithson, Arlene; Wright, DavidA; Giles, Michael (EEO); Sigelko, Jenny (EEO); Horton, Garett (VWGoA Imp); Schlueter, Hannah (EASZ/1); Kata, Leonard (EEO)
Location: AA-Room-Office-N125-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: Audi A3 e-tron PHEV Testing at EPA
Start Date/Time: Tue 8/11/2015 5:00:00 PM
End Date/Time: Tue 8/11/2015 6:00:00 PM

Audi is hoping to get their vehicle scheduled for week of 8/31, **Ex. 4 - CBI**
Ex. 4 - CBI

To all:

On August 4, 2015, representatives from Volkswagen Group of America, Inc. (VWGoA) had a brief telephone conversation with EPA, which included discussion of certification of the 2016 model year Audi A3 e-tron plug-in hybrid vehicle. At that time, VWGoA informed EPA that confirmatory testing of this concept could begin the week of August 31, 2015, (assuming that the agency will request confirmatory testing at the EPA laboratory). A definite test date will not be established until submission of the test request.

EPA requested a meeting to provide the agency with information regarding vehicle technology, operating characteristics, and information concerning test considerations. In light of the short lead-time before the projected test date, we prefer to conduct this meeting as soon as possible.

Based on my notes from the recent telephone conference, I have listed the following discussion points:

- Coordination with the EPA Laboratory Branch, of the charging box; including necessary hardware, wiring, operation and so on.
- Vehicle operation strategy and function (e.g., blended mode, early engine start)
- Data handling
- Energy calculations
- Other

EPA informed VWGoA that PHEV testing can be completed quickly (within two weeks), but since the process is a long string of testing, it can take a longer period if something goes wrong (up to six weeks). Thus, the importance of having this discussion. As stated, the discussion would be by telephone. Call-in details are shown below.

@Jim - Tuesday afternoon August 11, 2015, is the soonest our colleagues in Germany would be available. An alternate meeting time would need to be after that date. Please let me know if this is acceptable. I expect that you may forward this invitation to other EPA staff.

Best regards,

Len

Leonard W. Kata
Senior Manager
Emission Regulations and Certification
Engineering and Environmental Office
Volkswagen Group of America, Inc.

Phone: (248) 754-4204
Cell: (248) 797-3886
Fax: (248) 754-4207
E-Mail: leonard.kata@vw.com

→ Join Skype Meeting

This is an online meeting for Skype for Business, the professional meetings and communications app formerly known as Lync.

Join by phone

+1 (248) 754-6400 (Auburn Hills)	English (United States)
+1 (855) 858-8080 (Auburn Hills)	English (United States)
+1 (248) 630-0170 (Auburn Hills)	English (United States)
+1 (248) 754-5055 (Auburn Hills)	English (United States)

Find a local number

Ex. 6

Forgot your dial-in PIN? | Help

[IOC([1033])!]

From: Kata, Leonard (EEO)
Location: Telephone Conference
Importance: Normal
Subject: Jetta 1.4L SIL (GSI)
Start Date/Time: Wed 7/29/2015 1:00:00 PM
End Date/Time: Wed 7/29/2015 1:30:00 PM

.....
,,,,,,,
To all:
A telephone conference has been set up to further discuss the Jetta 1.4L SIL topic.
Discussion points are:
1. Official EPA letter stating approval/denial
2. Reasoning for denial
3. Further possibilities
Call-in details are provided below.
Best regards,
Len

Leonard W. Kata
Senior Manager
Emission Regulations and Certification
Engineering and Environmental Office
Volkswagen Group of America, Inc.
Phone: (248) 754-4204
Cell: (248) 797-3886
Fax: (248) 754-4207
E-Mail: leonard.kata@vw.com

Join Skype Meeting

This is an online meeting for Skype for Business, the professional meetings and communications app formerly known as Lync.

Join by phone

Non-Responsive

Forgot your dial-in PIN? | Help

From: Kata, Leonard (EEO)
Location: Telephone
Importance: Normal
Subject: SIL Shift Speeds
Start Date/Time: Fri 7/24/2015 2:00:00 PM
End Date/Time: Fri 7/24/2015 2:30:00 PM

;;;;;;
;;;;;;
Hello Jim:
I communicated your position regarding the Volkswagen 1.4L manual shift speeds w/SIL to my colleagues at Volkswagen AG. They would still like to speak with you, if possible. Therefore, I have set up a brief telephone conference for tomorrow. I know that this is on the spur of the moment, so if the time doesn't work, please let me know. I will watch my e-mail and can contact Germany early tomorrow.
Len

Join Skype Meeting

This is an online meeting for Skype for Business, the professional meetings and communications app formerly known as Lync.

Join by phone

Non-Responsive

Forgot your dial-in PIN? | Help

From: Kata, Leonard (EEO)
Location: Skype Meeting
Importance: Normal
Subject: Volkswagen SIL Survey
Start Date/Time: Thur 6/18/2015 1:30:00 PM
End Date/Time: Thur 6/18/2015 2:00:00 PM

.....
,,,,,,,
To all:
I just spoke with Jim Snyder and the conference call is on as scheduled.
Len

Hello Jim:
I have set this tentative telephone call to further discuss the VW SIL survey topic.
Please let me know if you are available or prefer an alternate time.
Thanks
Len

Join Skype Meeting

This is an online meeting for Skype for Business, the professional meetings and communications app formerly known as Lync.

Join by phone

Non-Responsive

Forgot your dial-in PIN? | Help

From: Snyder, Jim
Required Attendees: Wehrly, Linc; Wright, DavidA; Ball, Joel; Dalton, Joel; Pidgeon, Bill; Kata, Leonard (EEO); Anderson, Tom
Optional Attendees: Schlueter, Hannah (EASZ/1); Glas, Tobias
Location: AA-Room-Office-C126-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: VW SIL light shift schedule survey and test drive.
Start Date/Time: Wed 5/13/2015 1:00:00 PM
End Date/Time: Wed 5/13/2015 2:00:00 PM

VW will present results of SIL survey on their new 1.4L manual along with a vehicle to test drive the SIL.

From: Snyder, Jim
Required Attendees: Wehrly, Linc; French, Roberts; Wright, DavidA; Kata, Leonard (EEO); Giles, Michael (EEO); Tamborra, Nick (EEO); Dalton, Joel; Ball, Joel; Ott, William
Location: AA-Room-Office-N95-ConfRoom-AAOTAQ-Office
Importance: Normal
Subject: VW MTG: Off Cycle and A/C Credits
Start Date/Time: Thur 2/5/2015 6:00:00 PM
End Date/Time: Thur 2/5/2015 7:30:00 PM

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Giles, Michael (EEO)
Sent: Thur 9/24/2015 8:54:18 PM
Subject: RE: vehicle question

Jim,

The comment I am looking at I interpret as AMS. Is this what you saw?

"MY 2016 VOLKSWAGEN Passat tested as Passat sedan with **Automated Manual Selectable** 6 speed - ETW: 3875

From: Giles, Michael (EEO)
Sent: Thursday, September 24, 2015 4:53 PM
To: 'Snyder, Jim' <Snyder.Jim@epa.gov>
Subject: RE: vehicle question

AMS is correct! Do you want me to correct it?

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, September 24, 2015 4:45 PM
To: Giles, Michael (EEO) <michael.giles@vw.com>
Subject: vehicle question

There's a stray comment in here that says "Diesel with manual transmission". This is an automated Manual (DCT) right?

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency

(734) 214-4946
snyder.jim@epa.gov

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Rodgers, William (EEO)
Sent: Wed 9/16/2015 4:48:16 PM
Subject: Decision information

Hello Jim,

I have submitted a Decision Information file for tests Ex. 4 - CBI
Ex. 4 - CBI
Ex. 4 - CBI No manufacturer confirmatory tests are required. No re-labeling is expected.

Regards,

Bill Rodgers

Emissions Certification Engineer

Volkswagen Group

3800 Hamlin Rd

Auburn Hills, MI 48326

p. (248) 754-4219

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Allen, Gregory (EEO)
Sent: Wed 9/16/2015 12:35:03 PM
Subject: Automatic reply: Volkswagen PHEV Ex. 4 - CBI

Hello,

I will be out of the office Ex. 6 I will be returning to the office on Friday, September 18th.

I will have access to e-mails during this time, but please expect a delay in my response

Thank You and Best Regards,

Greg Allen

VWGoA EEO

To: Danzeisen, Karen[Danzeisen.Karen@epa.gov]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Snyder, Jim[Snyder.Jim@epa.gov]; Vincent E Coleman[vcoleman2@csc.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Rodgers, William (EEO)
Sent: Wed 9/16/2015 11:38:42 AM
Subject: RE: Volkswagen PHEV $ Ex. 4 - CBI

It worked!!!!

Thanks for the help everyone.

@Jim – Can you follow up with Ben to see if next week is still possible for the testing. Our test vehicle arrived yesterday.

Regards,

Bill Rodgers

Emissions Certification Engineer

Volkswagen Group

3800 Hamlin Rd

Auburn Hills, MI 48326

p. (248) 754-4219

From: Danzeisen, Karen [mailto:Danzeisen.Karen@epa.gov]
Sent: Tuesday, September 15, 2015 5:12 PM
To: Rodgers, William (EEO)
Cc: Giles, Michael (EEO); Snyder, Jim

Subject: RE: Volkswagen PHEV Ex. 4 - CBI

Hi Bill,

Vince Coleman at the Verify Help Desk has been following your progress on this and let me know a little while ago that you attempted to submit your Supplemental Info but got an error. It looks like you removed the test details (e.g. fan placements, shift schedule ID, etc…) for Test Ex. 4 - CBI I think if you add those two rows back into the submission it should work.

The standards look like they were acceptable as entered.

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

danzeisen.karen@epa.gov
(734)214-4444

www.epa.gov/nvfel/

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Tuesday, September 15, 2015 10:01 AM
To: Danzeisen, Karen
Cc: Giles, Michael (EEO); Snyder, Jim
Subject: RE: Volkswagen PHEV Ex. 4 - CBI

Thanks Karen.

I have successfully submitted a Decision Information revision without Ex. 4 - CBI

@Jim – Once Ex. 4 - CBI are removed from the confirmatory test I can resubmit Ex. 4 - CBI Of course it's understood that the Ex. 4 - CBI test will be run anyway.

Regards,

Bill Rodgers

Volkswagen Group

(248) 754-4219

From: Danzeisen, Karen [mailto:Danzeisen.Karen@epa.gov]
Sent: Tuesday, September 15, 2015 9:26 AM
To: Rodgers, William (EEO)
Cc: Giles, Michael (EEO); Snyder, Jim
Subject: RE: Volkswagen PHEV Ex. 4 - CBI

Hello Bill,

Thank you for these examples illustrating what's going on. The reason you get an abnormal error when you don't submit those Ex. 4 - CBI is because Verify is accepting whatever standards you are entering and then moving on to compile the necessary data to send to our Lab for scheduling. It's at this point that it reaches back to your Decision Info (DI) and grabs the "paired data" from the Test Number section of DI. The system is not designed to handle tests with multiple bag/phase data and that's where the crash occurs.

So, I think the next step is to attempt a Decision Information correction submission where you would remove your manufacturer test numbers for Ex. 4 - CBI It's possible we may run into some problem because Jim has selected confirmatory tests already, but I think it's worth a try rather than scraping everything right off the bat. If it does work, then the next step would be to proceed to your Ex. 4 - CBI and

resubmitting that.

Let me know how it goes.

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

danzeisen.karen@epa.gov
(734)214-4444

www.epa.gov/nvfel/

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Tuesday, September 15, 2015 8:22 AM
To: Danzeisen, Karen; Snyder, Jim
Cc: Giles, Michael (EEO)
Subject: Volkswagen PHEV Ex. 4 - CBI
Importance: High

Hello Karen and Jim,

I have attached the Supplemental Information (SI) and rejection submission report which include all test types required by the confirmatory test decision Ex. 4 - CBI

Additionally as indicated below we only get a Verify processing error when attempting to submit the SI with Ex. 4 - CBI emission names other than those emissions names listed in the attached rejection submission report.

Please assist in resolving this matter today to avoid test scheduling problems.

Regards,

Bill Rodgers

Volkswagen Group

(248) 754-4219

There was a problem processing your request

From

Verify Administrator

Date

9/15/2015 7:44:33 AM

There was an unexpected error processing your submission. Please retry your submission at a later date. If you continue to receive this message please contact the Verify Helpdesk. It can be reached through email (verifyhelp@csc.com) or by phone (1-888-890-1995 and choose option 4).

The rejection occurred at Tue Sep 15 07:44:21 EDT 2015 while processing document: **Ex. 4 - CBI**

Vehicle ID: A **Ex. 4 - CBI**

Vehicle Configuration #: 0

Transaction Identifier: **Ex. 4 - CBI**

To: Rodgers, William (EEO)[William.Rodgers@vw.com]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Danzeisen, Karen
Sent: Tue 9/15/2015 2:04:27 PM
Subject: RE: Volkswagen PHEV Ex. 4 - CBI

Yeah! I'm glad that worked. Let us know when you get the corresponding Ex. 4 - CBI successfully submitted.

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

danzeisen.karen@epa.gov
(734)214-4444

www.epa.gov/nvfel/

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Tuesday, September 15, 2015 10:01 AM
To: Danzeisen, Karen
Cc: Giles, Michael (EEO); Snyder, Jim
Subject: RE: Volkswagen PHEV Ex. 4 - CBI

Thanks Karen.

I have successfully submitted a Decision Information revision without test Ex. 4 - CBI

@Jim – Once Ex. 4 - CBI are removed from the confirmatory test I can resubmit the Ex. 4 - CBI Of course it's understood that the Ex. 4 - CBI test will be run anyway.

Regards,

Bill Rodgers

Volkswagen Group

(248) 754-4219

From: Danzeisen, Karen [mailto:Danzeisen.Karen@epa.gov]
Sent: Tuesday, September 15, 2015 9:26 AM
To: Rodgers, William (EEO)
Cc: Giles, Michael (EEO); Snyder, Jim
Subject: RE: Volkswagen PHEV Ex. 4 - CBI

Hello Bill,

Thank you for these examples illustrating what's going on. The reason you get an abnormal error when you don't submit those Ex. 4 - CBI is because Verify is accepting whatever standards you are entering and then moving on to compile the necessary data to send to our Lab for scheduling. It's at this point that it reaches back to your Decision Info (DI) and grabs the "paired data" from the Test Number section of DI. The system is not designed to handle tests with multiple bag/phase data and that's where the crash occurs.

So, I think the next step is to attempt a Decision Information correction submission where you would remove your manufacturer test numbers for test Ex. 4 - CBI It's possible we may run into some problem because Jim has selected confirmatory tests already, but I think it's worth a try rather than scraping everything right off the bat. If it does work, then the next step would be to proceed to your Ex. 4 - CBI and resubmitting that.

Let me know how it goes.

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

danzeisen.karen@epa.gov
(734)214-4444

www.epa.gov/nvfel/

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Tuesday, September 15, 2015 8:22 AM
To: Danzeisen, Karen; Snyder, Jim
Cc: Giles, Michael (EEO)
Subject: Volkswagen PHEV Ex. 4 - CBI
Importance: High

Hello Karen and Jim,

I have attached the Supplemental Information (SI) and rejection submission report which include all test types required by the confirmatory test decision Ex. 4 - CBI

Additionally as indicated below we only get a Verify processing error when attempting to submit the SI with test Ex. 4 - CBI emission names other than those emissions names listed in the attached rejection submission report.

Please assist in resolving this matter today to avoid test scheduling problems.

Regards,

Bill Rodgers

Volkswagen Group

(248) 754-4219

There was a problem processing your request

From

Verify Administrator

Date

9/15/2015 7:44:33 AM

There was an unexpected error processing your submission. Please retry your submission at a later date. If you continue to receive this message please contact the Verify Helpdesk. It can be reached through email (verifyhelp@csc.com) or by phone (1-888-890-1995 and choose option 4).

The rejection occurred at Tue Sep 15 07:44:21 EDT 2015 while processing document: Ex. 4 - CBI

Vehicle ID: Ex. 4 - CBI

Vehicle Configuration #: 0

Transaction Identifier: Ex. 4 - CBI

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]
From: Giles, Michael (EEO)
Sent: Mon 9/14/2015 8:51:12 PM
Subject: VW Group - Ex. 4 - CBI

Ho Jim,

I was unable to submit a trimmed down supplemental XML with only a few tags for the coast down tags (these would be child tags under parent tag name ExhaustEmissionsStandardDetails).

As we have already determined, removing entries for the Ex. 4 - CBI will cause a rejection.

You mentioned possibly removing these tests from the "CTDI" which I believe means the ConfirmatoryTestDecisionInformation. How can we try that approach? Please let us know if we need to re-submit our Ex. 4 - CBI these have been selected.

Mike

Michael Giles

Certification Engineer

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4229

Fax: 248 754 4207

mailto: Michael.Giles@VW.com

To: Snyder, Jim[Snyder.Jim@epa.gov]; verifyhelp@csc.com[verifyhelp@csc.com]
From: Rodgers, William (EEO)
Sent: Mon 9/14/2015 7:13:57 PM
Subject: RE: VW processing error

Correct Jim.

I get the Processing Error attached.

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Monday, September 14, 2015 3:12 PM
To: Rodgers, William (EEO); verifyhelp@csc.com
Subject: RE: VW processing error

And from what you said, Ex. 4 - CBI resulted in an immediate rejection, correct?

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Monday, September 14, 2015 3:09 PM
To: verifyhelp@csc.com
Cc: Snyder, Jim
Subject: VW processing error

Vince, We tried to submit Ex. 4 - CBI Ex. 4 - CBI but still get the processing error attached.

Ex. 4 - CBI instead it will process but returns this rejection:

Transaction Status Details

Transaction Status Identifier : REJECTED

Ex. 4 - CBI

Ex. 4 - CBI

Please let me know a next step so we can get this SI submitted.

Bill Rodgers

Volkswagen Group

248-754-4219

There was a problem processing your request

From

Verify Administrator

Date

9/14/2015 2:57:50 PM

There was an unexpected error processing your submission. Please retry your submission at a later date. If you continue to receive this message please contact the Verify Helpdesk. It can be reached through email (verifyhelp@csc.com) or by phone (1-888-890-1995 and choose option 4).

The rejection occurred at Mon Sep 14 14:57:18 EDT 2015 while processing document:

Ex. 4 - CBI

Ex. 4 - CBI

Regards,

Bill Rodgers

EEO

To: Good, David[good.david@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Mon 9/14/2015 5:06:46 PM
Subject: FW: 2016 Audi S8

Ex. 4 - CBI

Hi Dave;

To summarize our phone discussion I have the following. Ex. 4 - CBI

Ex. 4 - CBI

If you have any questions or I did not capture the discussion correctly please let me know.

Best regards,

Richard

From: Thomas, Richard (EEO)
Sent: Monday, September 14, 2015 11:59 AM
To: 'Good.David@epamail.epa.gov' <Good.David@epamail.epa.gov>
Cc: Jim Snyder (snyder.jim@epa.gov) <snyder.jim@epa.gov>; Kata, Leonard (EEO) <Leonard.Kata@vw.com>
Subject: 2016 Audi S8

Hi Dave;

I guess you are in the office today (Monday). As a reminder, I have attached an email I wrote to you before your vacation week. Ex. 4 - CBI

Ex. 4 - CBI

Best regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Tue 9/1/2015 1:52:34 PM
Subject: Running Change Fuel Economy 2016 Audi S8

Hi Dave;

A reminder to look into this issue when you have time on Thursday, maybe. First allow me to

Ex. 4 - CBI

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Mon 9/14/2015 3:59:12 PM
Subject: 2016 Audi S8

Ex. 4 - CBI

Hi Dave;

I guess you are in the office today (Monday). As a reminder, I have attached an email I wrote to you before your vacation week. Ex. 4 - CBI

Ex. 4 - CBI

Best regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Good, David[good.david@epa.gov]
Cc: Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Thomas, Richard (EEO)
Sent: Tue 9/1/2015 1:52:34 PM
Subject: Running Change Fuel Economy 2016 Audi S8

Hi Dave;

A reminder to look into this issue when you have time on Thursday, maybe. First allow me to

Ex. 4 - CBI

Thanks,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Mon 9/14/2015 2:15:13 PM
Subject: Supplemental data

I spoke too soon.

It looks like I cannot include Ex. 4 - CBI

Bill

Transaction Status Details

Transaction Status Identifier : REJECTED
Transaction Message Text : Ex. 4 - CBI

Ex. 4 - CBI

Regards,

Bill Rodgers

EEO

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Mon 9/14/2015 2:04:52 PM
Subject: PHEV supplemental data

Hi Jim,

I submitted the supplemental data as discussed. Thanks for the help.

Regards,

Bill Rodgers

Volkswagen Group

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Ex. 7 (EEO)
Sent: Thur 9/10/2015 5:43:00 PM
Subject: RE: Durability Ex. 4 - CBI

Hello Jim,

Thanks. Sorry, I wanted to call you this morning but the day got away from me with many other phone calls – all on the same topic. I heard from Byron you were putting together a list of questions, so if you have any don't hesitate to send them.

Ex. 7

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, September 10, 2015 1:41 PM
To: Ex. 7 (EEO)
Subject: RE: Durability For Ex. 4 - CBI

Thanks for the addition data. I will review it tomorrow.

Jim

From: Ex. 7 @vw.com]
Sent: Thursday, September 10, 2015 1:28 PM
To: Snyder, Jim
Cc: Wehrly, Linc; Bunker, Byron; Ex. 7 @ARB'; Ex. 7 @arb.ca.gov'; Ex. 7 @ARB; Ex. 7 @arb.ca.gov)
Subject: Durability For Ex. 4 - CBI

Hello Jim,

Attached please find more details regarding the durability testing that Volkswagen carried out on

Ex. 4 - CBI

Thank you and best regards,

Ex. 7

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Thur 9/10/2015 4:13:53 PM
Subject: RE: PHEV data

thanks

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, September 10, 2015 11:44 AM
To: Rodgers, William (EEO); Allen, Gregory (EEO)
Subject: PHEV data

Here is the latest Cmax PHEV data:

http://iaspub.epa.gov/otaqpub/display_file.jsp?docid=33392&flag=1

page 24 starts the CD UDDS data. Unfortunately I think the UDDSs are out of order so it may confuse. Reviewing SAE 1711 (you should get it if you don't already) the end-of-test criterion is to run to a transition to CS UDDS and then continue running UDDSs until you meet the net SOC <1% criteria . Ex. 4 - CBI
SOC.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Ex. 7
Ex. 7 @vw.com]
From: Ex. 7
Sent: Wed 9/9/2015 7:26:58 PM
Subject: RE: 2015MY (the Gen3) 2.0 diesel durability

Hello Jim:

Regarding your questions, the following response is provided by the emission certification group at Volkswagen AG.

Ex. 4 - CBI

If you have any further questions, please let us know.

Best regards,

Ex. 7

Ex. 7

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: Ex. 7

Cell: Ex. 7

Fax: (248) 754-4207

E-Mail: Ex. 7

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, September 03, 2015 7:39 PM
To: Ex. 7 @vw.com>
Cc: Ex. 7 @vw.com>
Subject: 2015MY (the Gen3) 2.0 diesel durability

Ex. 7

I will be of Friday and of course Monday But rather than wait til Tuesday I want to ask for

Ex. 4 - CBI

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946

snyder.jim@epa.gov

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Rodgers, William (EEO)
Sent: Tue 9/1/2015 1:15:45 PM
Subject: RE: Audi Q7 questions

Hello Jim,

Ex. 4 - CBI

Let me know if you need more information.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Rodgers, William (EEO)
Sent: Monday, August 31, 2015 3:53 PM
To: "Jim Snyder' (Snyder.Jim@epamail.epa.gov)'
Cc: Allen, Gregory (EEO); Giles, Michael
Subject: Audi Q7 questions

Hello Jim,

I received your phone message late in the day regarding the 2017 Audi Q7:

Ex. 4 - CBI

Thanks,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Allen, Gregory (EEO)
Sent: Tue 9/1/2015 12:58:59 PM
Subject: Ex. 4 - CBI

Hello Jim,

I've spoken with our Lamborghini certification colleagues, and they would like to (your schedule permitting of course) schedule a conference call within the next few days to discuss Ex. 4 - CBI

Ex. 4 - CBI

Please let me know your schedule, and if EPA is willing to discuss I can send out a conference call meeting when a time has been agreed upon.

Thanks Jim.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

From: Glodich, Jeffrey (J.M.)
Location: Toyota, Ann Arbor
Importance: Normal
Subject: SAE J2263 LDVP Committee Meeting
Start Date/Time: Thur 9/24/2015 5:00:00 PM
End Date/Time: Thur 9/24/2015 7:30:00 PM

;;;
Purpose: Focused on J2263 next steps. Agenda TBD.
SAE Light-Duty Vehicle Performance and Economy Measures Committee Meeting 1-3:30 PM, Toyota Technical Center, Ann Arbor.
Call in numb Ex. 6
Access code
Web Address https://www.connectmeeting.att.com <https://www.connectmeeting.att.com/>
meeting id Ex. 6
access code

From: Glodich, Jeffrey (J.M.)
Location: Toyota, Ann Arbor
Importance: Normal
Subject: SAE J1634 LDVP Committee Meeting
Start Date/Time: Thur 9/17/2015 5:00:00 PM
End Date/Time: Thur 9/17/2015 7:30:00 PM

;;;
Purpose: Agree on final updates before 1st level balloting.
SAE Light-Duty Vehicle Performance and Economy Measures Committee Meeting 1-3:30 PM, Toyota Technical Center, Ann Arbor.
Call in numb Ex. 6
Access code
Web Address https://www.connectmeeting.att.com <https://www.connectmeeting.att.com/>
meeting id Ex. 6
access code

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Rodgers, William (EEO)
Sent: Fri 8/28/2015 5:11:15 PM
Subject: VW Group Decision Information

Hello Jim,

We have submitted the exhaust tests and decision information for the new generation Ex. 4 - CBI

Ex. 4 - CBI

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Mazaitis, Vincent[mazaitis.vincent@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Allen, Gregory (EEO)
Sent: Tue 8/25/2015 3:08:48 PM
Subject: RE: VW324-5-0017/16

Sounds good. We will see you in the morning.

Thanks.

Regards,

Greg Allen

VWGoA EEO

Work: (248) 754-4209

Cell: (989) 875-9031

From: Mazaitis, Vincent [mailto:mazaitis.vincent@epa.gov]
Sent: Tuesday, August 25, 2015 11:06 AM
To: Allen, Gregory (EEO) <Gregory.Allen@vw.com>
Cc: Snyder, Jim <Snyder.Jim@epa.gov>
Subject: VW324-5-0017/16

Good morning Gregory,

As the schedule is fluid, let's shoot for 7:00 am. If things change, I'll contact you by phone or e-mail.

Thanks,

Vince Mazaitis

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]; Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Allen, Gregory (EEO)
Sent: Thur 8/20/2015 6:10:45 PM
Subject: Volkswagen Test Vehicle Engineering Report - VW324-3-0108/16

Ex. 4 - CBI

Hello Jim,

Ex. 4 - CBI

This FEDV was originally scheduled to be confirmatory tested at EPA on June 10, 2015.

Ex. 4 - CBI

The report was also uploaded electronically to Verify. Please let us know if you have any questions/concerns with the report.

Thank You and Best Regards,

Greg Allen

VWGoA EEO

(248)754-4209

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Thur 8/20/2015 2:07:16 PM
Subject: RE: VW Group Request for Approval

Thanks Jim.

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Wednesday, August 19, 2015 3:07 PM
To: Rodgers, William (EEO)
Subject: RE: VW Group Request for Approval

See attachment.

-Jim

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Wednesday, August 19, 2015 10:24 AM
To: Snyder, Jim
Subject: FW: VW Group Request for Approval
Importance: High

Jim,

I uploaded the RFA letter to Verify as **Ex. 4 - CBI**

Thanks,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Rodgers, William (EEO)
Sent: Tuesday, August 18, 2015 11:02 AM
To: "Jim Snyder' (Snyder.Jim@epamail.epa.gov)'
Cc: Schuetze, Michael (N/EA-521); Giles, Michael; Allen, Gregory (EEO)
Subject: VW Group Request for Approval
Importance: High

Hello Jim,

Ex. 4 - CBI

Thanks,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Ross Gatzke[Ross.Gatzke@porsche.us]; Bill Rodgers (william.Rodgers@vw.com)[william.Rodgers@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Mazaitis, Vincent
Sent: Thur 8/20/2015 12:10:13 PM
Subject: Ex. 4 - CBI

Ex. 4 - CBI

Please find enclosed, the Ex. 4 - CBI. If you have any questions or concerns, please contact me.

Thank you,

Vince Mazaitis

(734)214-4864

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Wed 8/19/2015 2:24:19 PM
Subject: FW: VW Group Request for Approval

Jim,

I uploaded the RFA letter to Verify as Ex. 4 - CBI

Thanks,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Rodgers, William (EEO)
Sent: Tuesday, August 18, 2015 11:02 AM
To: "Jim Snyder' (Snyder.Jim@epamail.epa.gov)'
Cc: Schuetze, Michael (N/EA-521); Giles, Michael; Allen, Gregory (EEO)
Subject: VW Group Request for Approval
Importance: High

Hello Jim,

[redacted]

Ex. 4 - CBI

Thanks,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Schuetze, Michael (N/EA-521)[Michael.Schuetze@audi.de]; Giles, Michael (EEO)[michael.giles@vw.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Rodgers, William (EEO)
Sent: Tue 8/18/2015 3:02:16 PM
Subject: VW Group Request for Approval

Ex. 4 - CBI

Hello Jim,

Ex. 4 - CBI

Thanks,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]; Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Allen, Gregory (EEO)
Sent: Mon 8/17/2015 7:55:46 PM
Subject: Volkswagen Test Vehicle Engineering Report

Ex. 4 - CBI

Hello Jim,

Please see the attached engineering report for Vehicle ID: Ex. 4 - CBI Automatic)

This FEDV is scheduled to be delivered to EPA on August 24,2015, with a scheduled test date of August 26,2015.

The attached report describes an issue that occurred during certification testing, as well as the steps that were taken to resolve the issue. We expect no influence on emissions or fuel economy with this repair.

The report was also uploaded electronically to Verify. Please let us know if you have any questions/concerns with the report.

Thank You and Best Regards,

Greg Allen

VWGoA EEO

(248)754-4209

VOLKSWAGEN

GROUP OF AMERICA

Mr. Jim Snyder
Compliance and Innovative Strategies Division
Office of Mobile Sources
U. S. Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, MI 48105

Leonard W. Kata	Name
Manager	Title
EEO	Department
248-754-4204	Phone
248-754-4207	Fax
leonard.kata@vw.com	E-Mail

August 13, 2015 Date

Subject: MY 2016 Volkswagen Engineering Report for test vehicle: Ex. 4 - CBI

Dear Mr. Snyder,

We submit, with this letter, the engineering report for the Volkswagen Certification

Ex. 4 - CBI

Ex. 4 - CBI

VOLKSWAGEN GROUP OF AMERICA, INC.
3800 HAMLIN ROAD
AUBURN HILLS, MI 48326
PHONE +1 248 754 5000

If you have any questions with regard to this information please contact our office in Auburn Hills at (248) 754-4219.

Sincerely,

Leonard W. Kata
Volkswagen Group of America, Inc.

Engineering and Environmental Office

Enclosure(s)

Engineering Report

Report Number:

Test Group:
Effected Vehicle:

Ex. 4 - CBI

Problem:

Solution:

Ex. 4 - CBI

Comments: Total vehicle mileage remains within the required specifications for certification testing. No additional testing was performed after the transmission repair, and no change in emissions/fuel economy is expected.

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Kata, Leonard (EEO)
Sent: Mon 8/17/2015 7:39:17 PM
Subject: Volkswagen SIL Shift Speed Request.

Hello Jim:

As we had discussed previously, would you be able to send a written response to our request for

Ex. 4 - CBI

Best regards,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

Fax: (248) 754-4207

E-Mail: leonard.kata@vw.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Wright, DavidA[Wright.DavidA@epa.gov]; McBryde, Dan[mcbryde.dan@epa.gov]; Smithson, Arlene[smithson.arlene@epa.gov]; Thomas, Richard (EEO)[Richard.Thomas@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]; Sigelko, Jenny (EEO)[Jenny.Sigelko@vw.com]; Rodgers, William (EEO)[William.Rodgers@vw.com]
From: Kata, Leonard (EEO)
Sent: Wed 8/12/2015 3:08:35 PM
Subject: RE: additional questions regarding the PHEV Testing

Ex. 4 - CBI

Hello Jim:

Attached are the Volkswagen responses to the questions raised during and after our conference call of Aug. 11, 2015, Ex. 4 - CBI If any additional clarification is needed, do not hesitate to contact me.

Best regards,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

Fax: (248) 754-4207

E-Mail: leonard.kata@vw.com

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Tuesday, August 11, 2015 2:56 PM
To: Kata, Leonard (EEO)
Subject: additional questions regarding the PHEV Testing

Len, there were some additional questions/comments brought up after the meeting. Please forward these to the appropriate persons.

Ex. 4 - CBI

4. Additionally, we all hope the testing goes smoothly. Detailed instructions and labeling on the vehicle for start procedure and testing procedure are always helpful and should be delivered with the vehicle. Photos of any indicators on the instrument panel to look for to confirm proper settings. Special fan placement? Seat belt req'd?

Jim Snyder
Light-Duty Vehicle Group
Compliance Division

United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

VOLKSWAGEN

GROUP OF AMERICA

Plug-in Hybrid (A3 eTron) follow up questions EPA – Volkswagen meeting 08-11-2015

EPA Question:
What timing is Volkswagen planning for testing the Audi A3 etron at EPA?

VW Answer:
Our target is to have the vehicle tested at the end of September (Calender Week 40)

Ex. 4 - CBI

Ex. 4 - CBI

Plug-in Hybrid (A3 eTron) follow up questions EPA – Volkswagen meeting 08-11-2015

Ex. 4 - CBI

EPA Question:
Detailed instructions and labeling on the vehicle for start procedure and testing procedure are always helpful and should be delivered with the vehicle. Photos of any indicators on the instrument panel to look for to confirm proper settings. Special fan placement? Seat belt req'd?

VW Answer:
We will deliver a booklet with the vehicle we will bring to EPA.

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Kata, Leonard (EEO)
Sent: Tue 8/11/2015 6:58:47 PM
Subject: RE: additional questions regarding the PHEV Testing

Hello Jim:

I will forward these additional questions immediately. Thanks again to you and the other EPA staff for participating in the call.

Best regards,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

Fax: (248) 754-4207

E-Mail: leonard.kata@vw.com

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Tuesday, August 11, 2015 2:56 PM
To: Kata, Leonard (EEO)
Subject: additional questions regarding the PHEV Testing

Len, there were some additional questions/comments brought up after the meeting. Please forward these to the appropriate persons.

Ex. 4 - CBI

4. Additionally, we all hope the testing goes smoothly. Detailed instructions and labeling on the vehicle for start procedure and testing procedure are always helpful and should be delivered with the vehicle. Photos of any indicators on the instrument panel to look for to confirm proper settings. Special fan placement? Seat belt req'd?

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Snyder, Jim[Snyder.Jim@epa.gov]; McBryde, Dan[mcbryde.dan@epa.gov]; Smithson, Arlene[smithson.arlene@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]; Ex. 7

Ex. 7

Sent: Tue 8/11/2015 3:36:07 PM
Subject: RE: Ex. 4 - CBI Testing at EPA
Ex. 4 - CBI

To all:

In preparation for our telephone conference today at 1:00 p.m., I have attached a deck of slides. We will not have the ability to share graphics online. Therefore, please use these slides to follow along with the conversation.

Volkswagen Group of America, Inc. participants will join in the EEO Conference Room.

Best regards,

Ex. 7

Ex. 7
Senior Manager
Emission Regulations and Certification
Engineering and Environmental Office
Volkswagen Group of America, Inc.

Ex. 7

-----Original Appointment-----
From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Wednesday, August 05, 2015 4:42 PM
To: Snyder, Jim; McBryde, Dan; Smithson, Arlene; Wright, DavidA; Ex. 7
Ex. 7
Subject: Audi A3 e-tron PHEV Testing at EPA
When: Tuesday, August 11, 2015 1:00 PM-2:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: AA-Room-Office-N125-ConfRoom/AA-OTAQ-OFFICE

Audi is hoping to get their vehicle scheduled for week of 8/31, although I haven't even seen the waiver request yet. Thought we should talk about lab testing details beforehand.

To all:

On August 4, 2015, representatives from Volkswagen Group of America, Inc. (VWGoA) had a brief telephone conversation with EPA, which included discussion of certification of Ex. 4 - CBI Ex. 4 - CBI vehicle. At that time, VWGoA informed EPA that confirmatory testing of this concept could begin the week of August 31, 2015, (assuming that the agency will request confirmatory testing at the EPA laboratory). A definite test date will not be established until submission of the test request.

EPA requested a meeting to provide the agency with information regarding vehicle technology, operating characteristics, and information concerning test considerations. In light of the short lead-time before the projected test date, we prefer to conduct this meeting as soon as possible.

Based on my notes from the recent telephone conference, I have listed the following discussion points:

Ex. 4 - CBI

EPA informed VWGoA that Ex. 4 - CBI testing can be completed quickly (within two weeks), but since the process is a long string of testing, it can take a longer period if something goes wrong (up to six weeks). Thus, the importance of having this discussion. As stated, the discussion would be by telephone. Call-in details are shown below.

@Jim – Tuesday afternoon August 11, 2015, is the soonest our colleagues in Germany would be available. An alternate meeting time would need to be after that date. Please let me know if this is acceptable. I expect that you may forward this invitation to other EPA staff.

Best regards,

Ex. 7

Ex. 7
Senior Manager
Emission Regulations and Certification
Engineering and Environmental Office
Volkswagen Group of America, Inc.

Ex. 7

→ Join Skype Meeting

This is an online meeting for Skype for Business, the professional meetings and communications app formerly known as Lync.

Join by phone

+1 (248) 754-6400 (Auburn Hills)	English (United States)
+1 (855) 858-8080 (Auburn Hills)	English (United States)
+1 (248) 630-0170 (Auburn Hills)	English (United States)
+1 (248) 754-5055 (Auburn Hills)	English (United States)

Find a local number

Ex. 6

Forgot your dial-in PIN? | Help

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Allen, Gregory (EEO)
Sent: Mon 8/10/2015 4:43:20 PM
Subject: Ex. 4 - CBI

Hello Jim,

As discussed --Today I uploaded the Ex. 4 - CBI testgroup.

As you know, this is an ongoing topic of discussion; and, although Ex. 4 - CBI has not been approved yet, we would appreciate your review of the application so that when the appropriate approvals are received we can expedite the certificate for this testgroup. As discussed, a cert request has not been generated yet for this testgroup, we will await the Ex. 4 - CBI approval before we proceed with the cert request in Verify.

If you have any questions upon your review please feel free to contact us.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

From: Kata, Leonard (EEO)
Location: AA-Room-Office-N125-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: Accepted: Ex. 4 - CBI Testing at EPA
Start Date/Time: Tue 8/11/2015 5:00:00 PM
End Date/Time: Tue 8/11/2015 6:00:00 PM

;

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Schuetze, Michael (N/EA-521)[Michael.Schuetze@audi.de]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Rodgers, William (EEO)
Sent: Thur 8/6/2015 4:14:15 PM
Subject: RE: Meeting request

Hello Jim,

Just as follow up to our phone conversation today. Please us informed about your schedule and we will make ourselves available during the week of August 17th. As discussed the purpose of the meeting will be to present our intention to use existing durability data from a p Ex. 4 - CBI Ex. 4 - CBI for Tier 3 compliance.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, August 06, 2015 9:05 AM
To: Rodgers, William (EEO)
Cc: Schuetze, Michael (N/EA-521); Kata, Leonard (EEO)
Subject: RE: Meeting request

I can't promise a specific day right now. We are planning to do coastdown testing that week so I don't know when I'll be in the office. It depends on the weather each day. Rain and wind mean I'm available.

Ex. 4 - CBI

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Wednesday, August 05, 2015 8:15 AM
To: Snyder, Jim
Cc: Schuetze, Michael (N/EA-521); Kata, Leonard (EEO)
Subject: Meeting request

Hello Jim,

Myself and Michael Schuetze of Audi would like to meet with you at your offices to discuss alternative deterioration factors for upcoming certification of the Ex. 4 - CBI We plan to be at EPA late morning August 17th and all day August 19th supporting Porsche confirmatory testing so either day would work good for us. Please let us know if you are available these days and a place and time to meet.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Horton, Garett (VWGoA Imp)
Location: AA-Room-Office-N125-ConfRoom/AA-OTAQ-OFFICE
Importance: Normal
Subject: Zugesagt Ex. 4 - CBI Testing at EPA
Start Date/Time: Tue 8/11/2015 5:00:00 PM
End Date/Time: Tue 8/11/2015 6:00:00 PM

;

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Schlueter, Hannah (EASZ/1)
Sent: Wed 8/5/2015 8:56:42 PM
Subject: Automatische Antwort: Ex. 4 - CBI Testing at EPA

Ich bin bis einschliesslich Ex. 6 außer Haus.

I will be out of the office through Ex. 6

Meine Emails werde ich nur sporadisch lesen können.

I will not be able to read my emails regularly.

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Kata, Leonard (EEO)
Sent: Wed 8/5/2015 6:54:09 PM
Subject: RE: PHEV calculation spreadsheet

Jim:

Will do. Did you see my meeting invitation to discuss Ex. 4 - CBI testing?

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

Fax: (248) 754-4207

E-Mail: leonard.kata@vw.com

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]

Sent: Wednesday, August 05, 2015 2:50 PM
To: Kata, Leonard (EEO)
Subject: PHEV calculation spreadsheet

Len, please pass this on to Hannah whoever is doing the numbers.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: French, Roberts
Sent: Wednesday, August 05, 2015 2:01 PM
To: Snyder, Jim
Subject: RE: Questions regarding CD-15-15

There will be a new version in the next month or two that has a few more things automated and will add some new CAFÉ calculations that came about as a result of new legislation from last December (for MY16 CAFÉ).

Please let users know they should contact me with any questions.

Thanks,

Rob

Roberts W. French, Jr.

U.S. Environmental Protection Agency

National Vehicle and Fuel Emissions Laboratory

2000 Traverwood Drive

Ann Arbor, Michigan 48105

(734) 214-4380

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Schuetze, Michael (N/EA-521)[Michael.Schuetze@audi.de]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Rodgers, William (EEO)
Sent: Wed 8/5/2015 12:15:16 PM
Subject: Meeting request

Hello Jim,

Myself and Michael Schuetze of Audi would like to meet with you at your offices to discuss Ex. 4 - CBI for upcoming certification of the Ex. 4 - CBI We plan to be at EPA late morning August 17th and all day August 19th supporting Ex. 4 - CBI confirmatory testing so either day would work good for us. Please let us know if you are available these days and a place and time to meet.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Kata, Leonard (EEO)
Sent: Tue 8/4/2015 12:49:05 PM
Subject: Telephone call

Hi Jim.

If you have a few minutes we have a couple of test rated questions. Could you call or tell me when you have about 15 minutes?
Thank you
Len

Sent from my iPhone

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]; Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Rodgers, William (EEO)
Sent: Fri 7/31/2015 6:02:55 PM
Subject: VW Group Decision Information VW324-5-0017/16

Jim,

I just submitted FTP and Hwy test results and Decision Information for the replacement vehicle for Volkswagen test vehicle VW324-3-0108/16 configuration-1 previously randomly selected for confirmatory tests on 6/10/2015. As you might remember we were unable to deliver the car due to a mechanic breakdown. The extent of the failure has not yet been determined so a replacement vehicle was tested to represent that configuration. A Manufacturer retest of the City cycle is required due to high City MPG if waived. Please let us know if you still intend to select this vehicle for confirmatory testing.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

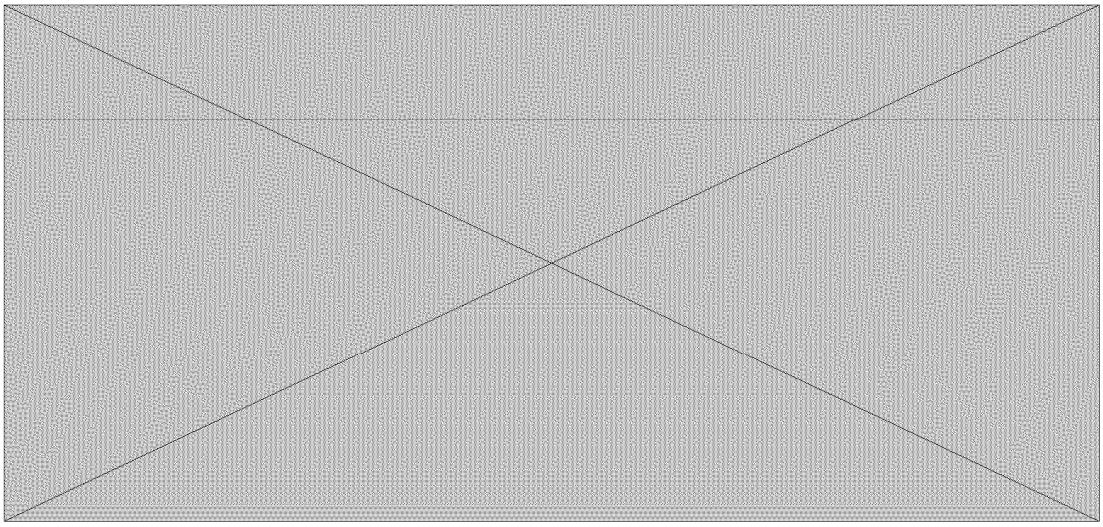
To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Rodgers, William (EEO)
Sent: Thur 7/30/2015 2:29:06 PM
Subject: TDI generations
removed.txt

Jim,

Sorry for the delay in my response to your 2.0l TDI generations question?

This chart from my German colleague might help clarify what generation came when. Although the 14.5 model year identified in the chart was actually introduced in North America as 2015 model year.

The main technical differences between generations 1 and 2 was related to changes in after-treatment technology, NSC vs. SCR. The generation 3 engines also included a change to an integral liquid-cooled intercooler/intake manifold assembly and a closer coupled DPF and Catalyst assembly as the major changes.



Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Kata, Leonard (EEO)
Sent: Tue 7/28/2015 7:55:00 PM
Subject: Volkswagen SIL

Hello Jim:

I communicated your position regarding the Volkswagen 1.4L manual shift speeds w/SIL to my colleagues at Volkswagen AG. They would still like to speak with you. I tried to set up a brief call last Friday on short notice, but you may have been out of the office. Would you have about 30 minutes tomorrow morning, or at some other time convenient for you? The discussion topics are as follows:

1. Official EPA letter stating approval/denial
2. Reasoning for denial
3. Further possibilities

Please let me know if this is possible and I will set up a call-in number.

Thanks,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

Fax: (248) 754-4207

E-Mail: leonard.kata@vw.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]; Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Allen, Gregory (EEO)
Sent: Mon 7/27/2015 3:01:09 PM
Subject: MY2016 Volkswagen Group Decision Request

Hello Jim,

I have submitted test information and a decision request for the vehicle listed below. This configuration represents a new FEDV for the GVGAV04.0NUA testgroup.

Vehicle ID: GNUA-S8P

FEDV: Configuration: 0 (Audi S8 Plus, 4.0L TFSI , 8 Speed Semi-Automatic Transmission)

These tests represent a new fuel economy vehicle for this new S8 Plus model being introduced in the GVGAV04.0NUA Tier 2 Bin5 / LEVII ULEV Testgroup. There is no hardware changes in comparison to the MY2016 4.0L S8 engine; but, there have been software enhancements / improvements to increase the horsepower to 605 for the S8 Plus model. Manufacturer Confirmatory testing is required for the FTP and HWY cycles due to high FE for the ETW.

Please inform us of your decision as soon as possible.

Thanks Jim.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

To: Mazaitis, Vincent[mazaitis.vincent@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Gordinier, Terry[Gordinier.Terry@epa.gov]
From: Allen, Gregory (EEO)
Sent: Fri 7/24/2015 1:16:07 PM
Subject: RE: VW370-4-0145/16

Hello Vince,

Has the vehicle mentioned below been released?

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

From: Allen, Gregory (EEO)
Sent: Thursday, July 23, 2015 2:50 PM
To: Mazaitis, Vincent
Cc: Snyder, Jim; Gordinier, Terry
Subject: VW370-4-0145/16

Hello Vince,

Please release the VW Jetta TDI (actual vehicle is Golf) referenced in the subject line above for pick up. We will be having a carrier pick-up the vehicle tomorrow. Please let me know if you have any questions/concerns with this.

To my knowledge, Richard Thomas has already spoken with Ben Haynes on the carrier pick up details.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

From: Kata, Leonard (EEO)
Location: Telephone
Importance: Normal
Subject: SIL Shift Speeds
Start Date/Time: Fri 7/24/2015 2:00:00 PM
End Date/Time: Fri 7/24/2015 2:30:00 PM

;;;;;;
;;;;;;
Hello Jim:
I communicated your position regarding the Volkswagen 1.4L manual shift speeds w/SIL to my colleagues at Volkswagen AG. They would still like to speak with you, if possible. Therefore, I have set up a brief telephone conference for tomorrow. I know that this is on the spur of the moment, so if the time doesn't work, please let me know. I will watch my e-mail and can contact Germany early tomorrow.
Len

Join Skype Meeting

Non-Responsive

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Giles, Michael (EEO)
Sent: Thur 7/23/2015 5:15:53 PM
Subject: RE: Diesel nicknames

Hi Jim,

As we discussed, Passat with SCR began in MY 2012.

The other models were non SCR until MY 2015, when all models have SCR and in addition the 288 generation was introduced.

Regards,

Mike

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, July 23, 2015 1:04 PM
To: Giles, Michael (EEO)
Subject: FW: Diesel nicknames

From: Snyder, Jim
Sent: Wednesday, July 22, 2015 3:32 PM
To: 'Rodgers, William (EEO)'
Subject: Diesel nicknames

Hi Bill, can you clarify the 4 cylinder Diesel engine naming? I'm hearing new and next gen, and gen 3 kicked around, , it may be confusing

Prior to 2013 MY there was the TDi with NOX adsorber (Gen 1?)

For 2013 MY a new version with SCR was available in the Passat only. (Gen 2?, new Gen?)

For 2014MY the SCR version expanded to Golf, Jetta, and Beetle.

For 2015MY a newer, more compact TDI w/SCR offered on Passat, Golf, Jetta, and Beetle. (do you call this Gen 3? Handouts call it "next generation")

For 2016MY, I'm testing a carryover version in a Golf right now.

I know you call the latest gasoline TFSI engine the "Gen III" but Carb is calling the latest diesel that too.

And this doesn't cover the Audi V6s…

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Gregory Allen (EEO) (Gregory.Allen@vw.com)[Gregory.Allen@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
Cc: Bill Rodgers (william.Rodgers@vw.com)[william.Rodgers@vw.com]; Gordinier, Terry[Gordinier.Terry@epa.gov]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Mazaitis, Vincent
Sent: Wed 7/22/2015 12:39:32 PM
Subject: VW370 40145/16_7-211-15
VW370 40145-16_7-12-15.pdf

Please find enclosed, the Subject information. If you have any questions or concerns, please contact me.

Thank you,

Vince Mazaitis

(734)214-4864

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Giles, Michael (EEO)
Sent: Fri 7/17/2015 3:24:52 PM
Subject: VW Group - Certificate Request for MY2016 Jetta Hybrid - Carryover Test Group GVGV01.4VPA

Hello Jim,

The application and certificate request for the MY2016 Jetta Hybrid (Carryover Test Group GVGV01.4VPA) was submitted today.

Please let me know if there are any related questions when processing this request.

Regards,

Mike

Michael Giles

Certification Engineer

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4229

Fax: 248 754 4207

mailto: Michael.Giles@VW.com

To: Rodgers, William (EEO)[William.Rodgers@vw.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Wilson, Dale[Wilson.Dale@epa.gov]
From: Mazaitis, Vincent
Sent: Fri 7/17/2015 2:33:34 PM
Subject: RE: VW411-4-0167-16

Will do Bill.

If you pick this vehicle up today, please contact Dale Wilson (734)214-4226, in the lab.

Thanks Bill and have a nice weekend!

Vince Mazaitis

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Friday, July 17, 2015 10:26 AM
To: Mazaitis, Vincent; Allen, Gregory (EEO)
Cc: Snyder, Jim; Gordinier, Terry
Subject: RE: VW411-4-0167-16

Hello Vince,

Please release the VW Passat referenced above for pick up. No further testing is allowed or requested.

Thanks

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Mazaitis, Vincent [mailto:mazaitis.vincent@epa.gov]
Sent: Thursday, July 16, 2015 2:29 PM
To: Allen, Gregory (EEO); Rodgers, William (EEO)
Cc: Snyder, Jim; Gordinier, Terry
Subject: VW411-4-0167-16

Please find enclosed, the Subject information. If you have any questions or concerns, please contact me.

Thank you,

Vince Mazaitis

(734)214-4864

To: Mazaitis, Vincent[mazaitis.vincent@epa.gov]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Gordinier, Terry[Gordinier.Terry@epa.gov]
From: Rodgers, William (EEO)
Sent: Fri 7/17/2015 2:26:03 PM
Subject: RE: VW411-4-0167-16

Hello Vince,

Please release the VW Passat referenced above for pick up. No further testing is allowed or requested.

Thanks

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Mazaitis, Vincent [mailto:mazaitis.vincent@epa.gov]
Sent: Thursday, July 16, 2015 2:29 PM
To: Allen, Gregory (EEO); Rodgers, William (EEO)
Cc: Snyder, Jim; Gordinier, Terry
Subject: VW411-4-0167-16

Please find enclosed, the Subject information. If you have any questions or concerns, please contact me.

Thank you,

Vince Mazaitis

(734)214-4864

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Gordinier, Terry[Gordinier.Terry@epa.gov]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Mazaitis, Vincent[mazaitis.vincent@epa.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Rodgers, William (EEO)
Sent: Fri 7/17/2015 1:30:08 PM
Subject: RE: VW370 40145/16

Hello Jim,

We are requesting a retest for the Highway cycle for Vehicle ID: VW370 40145/16, a 2016 Golf TDI configured as a Jetta Sedan. This decision is based on the official EPA rounded adjusted fuel economy of 64.4 MPG Highway found in Verify which is 3.2% below the Volkswagen test result of 66.5 MPG.

We are asking that this test be reschedule as soon as possible because of a short lead time to product launch. Please let us know the test date as soon as possible.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Mazaitis, Vincent [mailto:mazaitis.vincent@epa.gov]
Sent: Thursday, July 16, 2015 11:56 AM
To: Allen, Gregory (EEO); Rodgers, William (EEO)
Cc: Snyder, Jim; Gordinier, Terry
Subject: VW370 40145/16

Please find enclosed, the Subject information. If you have any questions or concerns, please contact me.

Thank you,

Vince Mazaitis

(734)214-4864

To: Gregory Allen (EEO) (Gregory.Allen@vw.com)[Gregory.Allen@vw.com]; Bill Rodgers (william.Rodgers@vw.com)[william.Rodgers@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Gordinier, Terry[Gordinier.Terry@epa.gov]
From: Mazaitis, Vincent
Sent: Thur 7/16/2015 6:28:44 PM
Subject: VW411-4-0167-16
VW411-4-0167-16_7-15-15.pdf

Please find enclosed, the Subject information. If you have any questions or concerns, please contact me.

Thank you,

Vince Mazaitis

(734)214-4864

cert

NVFEL Laboratory Test Data

CVS

Final Laboratory Test Results

Test Number: 2015-0231-004 | Vehicle ID: VW411-4-0167/16

Test Information

Test Date:	7/15/2015	MFR Name:	Volkswagen Group of
Key Start / Hot Soak:	13:41:04 / 09:38	MFR Codes:	VGA 10015
Fuel Container ID:	F0027N	Config #:	00
Fuel Type:	61 Tier 2 Cert Test Fuel	Transmission:	Auto
Test Procedure:	21 Federal fuel 2-day exhaust (w/can loa	Shift Schedule:	A0EPA0005
FE Calculation Method:	Gasoline	Beginning Odometer:	005343.0 MI
Pretest Remarks:		Drive Schedule:	ftp3bag
Drive Axle:	FWD	Soak Period:	21.0 hours

Bag Data

Phase 1	HC-FID (ppmC)	CO (ppm)	NOx (ppm)	CO2 (%)	CH4 (ppm)	NMHC (ppmC)
Sample	4.221	10.696	0.430	0.656	2.252	
Ambient	3.099	0.789	0.021	0.044	2.016	
Net Concentration	1.274	9.945	0.410	0.614	0.335	0.914

Remarks: small fan down on 8" block

Phase 2						
Sample	3.022	2.558	0.090	0.436	1.962	
Ambient	3.131	0.736	0.026	0.043	2.015	
Net Concentration	0.000	1.846	0.065	0.394	0.013	-0.014

Remarks:

Phase 3						
Sample	3.344	4.544	0.099	0.575	2.053	
Ambient	3.397	0.671	0.023	0.043	2.035	
Net Concentration	0.094	3.903	0.077	0.534	0.105	-0.020

Remarks:

Phase 4	
Sample	
Ambient	
Net Concentration	

Remarks:

Results

	HC-FID (gpm)	CO (gpm)	NOx (gpm)	CO2 (gpm)	CH4 (gpm)	NMHC (gpm)	Vol MPG (mpg)
Phase 1	0.019	0.295	0.018	286.3	0.006	0.013	31.237
Phase 2	0.000	0.087	0.005	293.3	0.000	0.000	30.532
Phase 3	0.001	0.115	0.003	248.2	0.002	0.000	36.067
Weighted	0.00426	0.13820	0.00704	279.452	0.00185	NMOG=1.04 x NMHC 0.0028 / 0.0029	

Fuel Economy

	Gasoline MPG
Phase 1	31.14
Phase 2	30.44
Phase 3	35.95
Weighted	31.99

Dyno Settings: FWD

Dyno #: D002
Inertia: 3625
EPA Set Co A: 3.94
EPA Set Co B: 0.1863
EPA Set Co C: 0.01576
Emiss-Bench: D002

NVFEL Laboratory Test Data

CVS

Final Laboratory Test Results

Test Number: 2015-0231-004 Vehicle ID: VW411-4-0167/16

Results

	HC-FID (grams)	CO (grams)	NOx (grams)	CO2 (grams)	CH4 (grams)	NMHC (grams)	Meth Response
							1.074
Phase 1	0.067	1.060	0.065	1028.7	0.020	0.048	
Phase 2	0.000	0.337	0.018	1131.7	0.001	0.000	
Phase 3	0.005	0.416	0.012	894.7	0.006	0.000	

Test Conditions

	Phase 1	Phase 2	Phase 3	Phase 4
Barometer (inHg)	29.01	29.02	29.01	
Avg Cell Temp (degF)	75.13	75.09	75.16	
Dew Point (degF)	48.59	48.63	48.55	
Specific Humidity (grains/lbm)	52.37	52.45	52.29	
NOx Corr Factor	0.9039	0.9042	0.9036	
CO2 Dilution Factor	20.379	30.725	23.263	
CFV Vmix (scf @68F)	3234.38	5545.08	3231.03	
CVS Flow Rate Avg (scfm)	382.92	382.46	382.14	

Fan Placement: Other (record in post-test comments)

Phase Time (secs)	506.81	869.89	507.31
Distance (miles)	3.593	3.858	3.604
Bag Analysis Time (secs)	142.5	142.1	141.5

	FTP B1	FTP B2	FTP B3	FTP-W	MFR
IWR % diff	-2.758	-2.218	-2.049	-2.282	-1.210
ASCR % diff	-0.987	-1.249	-0.860	-1.123	-0.440
EER	-0.915	-2.037	-0.984	-1.467	-0.300

MFR Test Results for Procedure 21 Federal fuel 2-day exhaust (w/can load)

MFR Number	HC	CO	NOx	CO2	NMOG	NonMeth HC	CH4
10036322	0.0094	0.24	0.0122	276	0	0.006	0.0034

Odometer	MPG	PM
5149 M	32.1	0.001

MPG is 0.35 % higher than EPA MPG

MFR Lab: Volksawgen AG

Dyno: 21

Fuel: 61 Tier 2 Cert Gasoline

Cert

NVFEL Laboratory Test Data

CVS

Final Laboratory Test Results

Test Number: 2015-0231-003

Vehicle ID: VW411-4-0167/16

Test Information

Test Date:	7/15/2015	MFR Name:	Volkswagen Group of
Key Start:	15:37:35	MFR Codes:	VGA 10015
Fuel Container ID:	F0027N	Config #:	00
Fuel Type:	61 Tier 2 Cert Test Fuel	Transmission:	Auto
Test Procedure:	3 HWFET (hwfetprep_hwfet)	Shift Schedule:	A0EPA0011
FE Calculation Method:	Gasoline	Beginning Odometer:	005354.0 MI
Pretest Remarks:		Drive Schedule:	hwfetwarmup_hwfet
Drive Axle:	FWD		

Bag Data

Phase 1	HC-FID (ppmC)	CO (ppm)	NOx (ppm)	CO2 (%)	CH4 (ppm)	NMHC (ppmC)
Sample	2.760	11.902	0.144	1.115	1.872	
Ambient	2.971	0.598	0.015	0.044	2.002	
Net Concentration	0.036	11.354	0.131	1.075	0.037	-0.003

Remarks: small fan down on 8" block

Phase 2

Sample
Ambient
Net Concentration

Remarks:

Phase 3

Sample
Ambient
Net Concentration

Remarks:

Phase 4

Sample
Ambient
Net Concentration

Remarks:

Results

	HC-FID (gpm)	CO (gpm)	NOx (gpm)	CO2 (gpm)	CH4 (gpm)	NMHC (gpm)	Vol MPG (mpg)
Phase 1	0.000	0.112	0.002	166.6	0.000	0.000	53.712

NMOG=1.04 x NMHC

Fuel Economy

	Gasoline MPG
Phase 1	53.54

Dyno Settings

Dyno #:	D002
Inertia:	3625
EPA Set Co A:	3.94
EPA Set Co B:	0.1863
EPA Set Co C:	0.01576
FWD Emiss-Bench:	D002

NVFEL Laboratory Test Data

CVS

Final Laboratory Test Results

Test Number: 2015-0231-003

Vehicle ID: VW411-4-0167/16

Results

	HC-FID (grams)	CO (grams)	NOx (grams)	CO2 (grams)	CH4 (grams)	NMHC (grams)	Meth Response
Phase 1	0.002	1.153	0.020	1714.4	0.002	0.000	1.074

Test Conditions

	Phase 1	Phase 2	Phase 3	Phase 4
Barometer (inHg)	29.02			
Avg Cell Temp (degF)	75.15			
Dew Point (degF)	48.62			
Specific Humidity (grains/lbm)	52.42			
NOx Corr Factor	0.9041			
CO2 Dilution Factor	12.005			
CFV Vmix (scf @68F)	3079.03			
CVS Flow Rate Avg (scfm)	241.46			

Fan Placement: Other (record in post-test comments)

Phase Time (secs)	765.11
Distance (miles)	10.288
Bag Analysis Time (secs)	143.3

	HWY	MFR
IWR % diff	-1.083	-2.050
ASCR % diff	-0.928	-1.510
EER	-0.420	-0.910

MFR Test Results for Procedure 3 HWFE

MFR Number	HC	CO	NOx	CO2	NMOG	NonMeth HC	CH4
10036323	0.0008	0.087	0.0027	166	0	0.0008	0.0001

Odometer	MPG
5160 M	53.3

MPG is -0.45 % lower than EPA MPG

MFR Lab: Volksawgen AG

Dyno: 21

Fuel: 61 Tier 2 Cert Gasoline

To: Gregory Allen (EEO) (Gregory.Allen@vw.com)[Gregory.Allen@vw.com]; Bill Rodgers (william.Rodgers@vw.com)[william.Rodgers@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Gordinier, Terry[Gordinier.Terry@epa.gov]
From: Mazaitis, Vincent
Sent: Thur 7/16/2015 3:56:00 PM
Subject: VW370 40145/16
VW370 40145_16_7-15-15.pdf

Please find enclosed, the Subject information. If you have any questions or concerns, please contact me.

Thank you,

Vince Mazaitis

(734)214-4864

Cert

NVFEL Laboratory Test Data

CVS

Final Laboratory Test Results- Refer to VERIFY Reports for Official Data

Test Number: 2015-0244-002 | Vehicle ID: VW370 40145 /16

Test Information

Test Date:	7/15/2015	MFR Name:	Volkswagen Group of
Key Start / Hot Soak:	12:18:07 / 09:57	MFR Codes:	VGA 10015
Fuel Container ID:	F00023	Config #:	01
Fuel Type:	19 Cert Diesel 7-15 ppm Sulfur	Transmission:	Manual
Test Procedure:	2 CVS 75 and later (w/o can. load)	Shift Schedule:	A0VGA0100
FE Calculation Method:	Diesel	Beginning Odometer:	004720.0 MI
Pretest Remarks:		Drive Schedule:	ftp3bag
Drive Axle:	FWD	Soak Period:	21.3 hours

Bag Data	N2O (ppm)	THC / IntTHC (ppmC)	CO (ppm)	NOx (ppm)	CO2 (%)	CH4 (ppm)	NMHC (ppmC)
Phase 1							
Sample	0.877	4.627 / 4.962	9.234	1.897	0.661	2.643	
Ambient	0.324	2.152	0.125	0.009	0.042	2.002	
Net Concentration	0.569	2.581 / 2.916	9.115	1.889	0.621	0.740	2.120
Remarks:							
Phase 2							
Sample	0.674	3.306 / 3.358	0.802	0.199	0.433	2.407	
Ambient	0.324	2.182	0.106	0.006	0.041	1.990	
Net Concentration	0.361	1.195 / 1.247	0.699	0.193	0.393	0.481	0.729
Remarks:							
Phase 3							
Sample	0.881	3.210 / 3.310	0.930	0.793	0.580	2.235	
Ambient	0.323	2.207	0.085	0.005	0.041	1.985	
Net Concentration	0.571	1.098 / 1.199	0.849	0.788	0.541	0.336	0.837
Remarks:							
Phase 4							
Sample							
Ambient							
Net Concentration							

Remarks: This test has particulate results.

Results	N2O (gpm)	THC / IntTHC (gpm)	CO (gpm)	NOx (gpm)	CO2 (gpm)	CH4 (gpm)	NMHC / NMOG (gpm)	Vol MPG (mpg)
Phase 1	0.024	- / 0.038	0.241	0.074	257.4	0.011	0.028	39.440
Phase 2	0.024	- / 0.026	0.030	0.012	261.2	0.012	0.015	38.924
Phase 3	0.024	- / 0.016	0.022	0.031	223.5	0.005	0.011	45.501
Weighted	0.02381	0.02572	0.07147	0.03017	250.005	0.00975	NMOG=NMHC 0.01666	

Fuel Economy

	Diesel MPG
Phase 1	39.45
Phase 2	38.94
Phase 3	45.52
Weighted	40.67

Dyno Settings	
Dyno #:	D329 - FWD
Aug Brake	Inertia: 3500
Y	EPA Set Co A: 6.94
	EPA Set Co B: 0.1353
	EPA Set Co C: 0.01599
FWD	Emiss-Bench: Mexa 7200dle

NVFEL Laboratory Test Data

CVS

Final Laboratory Test Results- Refer to VERIFY Reports for Official Data

Test Number: 2015-0244-002

Vehicle ID: VW370 40145 /16

Results

	N2O (grams)	THC / IntTHC (grams)	CO (grams)	NOx (grams)	CO2 (grams)	CH4 (grams)	NMHC (grams)	Meth Response
Phase 1	0.084	- / 0.136	0.856	0.264	916.4	0.040	0.099	1.075
Phase 2	0.091	- / 0.099	0.113	0.046	992.7	0.044	0.058	
Phase 3	0.084	- / 0.056	0.080	0.110	797.9	0.018	0.039	

Test Conditions

	Phase 1	Phase 2	Phase 3	Phase 4
Barometer (inHg)	29.08	29.08	29.08	
Avg Cell Temp (degF)	74.16	73.90	74.13	
Dew Point (degF)	48.52	48.88	48.45	
Specific Humidity (grains/lbm)	52.11	52.83	51.98	
NOx Corr Factor	0.9029	0.9056	0.9024	
CO2 Dilution Factor	20.244	30.942	23.071	
CFV Vmix (scf @68F)	2827.72	4840.58	2824.86	
Total CVS Vmix (scf@68F)	2850.10	4878.90	2847.22	
CVS Flow Rate Avg (scfm)	334.31	333.49	333.84	

Fan Placement: One Small Fan - Down - Front

Phase Time (secs)	507.50	870.90	507.70
Distance (miles)	3.560	3.801	3.570
Bag Analysis Time (secs)	928.3	132.4	57.3

	FTP B1	FTP B2	FTP B3	FTP-W	MFR
IWR % diff	-3.290	-3.662	-1.859	-3.101	99.990
ASCR % diff	-2.279	-2.411	-1.323	-2.157	99.990
EER	-1.490	-1.358	-0.681	-1.153	99.990

MFR Test Results for Procedure 2 CVS 75 and later (w/o can. load)

MFR Number	HC	CO	NOx	CO2	NMOG	NonMeth HC	CH4
10036788	0.033	0.1	0.048	246	0	0.0227	0.0104

Odometer	MPG
4505 M	41.3

MPG is 1.54 % higher than EPA MPG

MFR Lab: Volksawgen AG

Dyno: 21

Fuel: 19 Federal Cert Diesel 7-15 PPM Sulfur

NVFEL Laboratory Test Data

PARTICULATE

Final Laboratory Test Results- Refer to VERIFY Reports for Official Data

Test Number: 2015-0244-002

Vehicle ID: VW370 40145 /16

Test Information

Test Date: 7/15/2015
Key Start: 12:18:07 / 09:57
Fuel Container ID: F00023
Fuel Type: 19 Cert Diesel 7-15 ppm Sulfur
Test Procedure: 2 CVS 75 and later (w/o can. load)
Calculation Method: Diesel
Pretest Remarks:

MFR Name: Volkswagen Group of
MFR Codes: VGA 10015
Config #: 01
Transmission: Manual
Shift Schedule: A0VGA0100
Beginning Odometer: 004720.0 MI
Drive Schedule: ftp3bag
Soak Period: 21.3 hours

All filter weights are corrected for buoyancy

Particulate	Filter Sampler	Filter No.	Tare (Pre Wt)	Gross (Post Wt)	Net Wt mg	Total Mass mg	Total Mass mg / mi	Filter comment
Phase 1	A	220213951	363.5861	363.5870	0.00090	0.342	0.096	
	B	220213954	364.5500	364.5544	0.00440	1.680	0.472	
	C	220213957	366.7755	366.7788	0.00332	1.269	0.357	
Remarks:								
Phase 2	A	220213952	362.8916	362.8914	0.00000	0.000	0.000	
	B	220213955	368.6017	368.6043	0.00263	1.007	0.265	
	C	220213958	362.5792	362.5813	0.00209	0.797	0.210	
Remarks:								
Phase 3	A	220213953	362.8684	362.8699	0.00149	0.570	0.160	
	B	220213956	365.0363	365.0408	0.00451	1.719	0.481	
	C	220213959	363.4668	363.4712	0.00440	1.682	0.471	
Remarks:								
Phase 4								
Remarks:	This test has particulate results.							

Average Results

	Net Wt mg	Total Mass mg	Total Mass mg / mi
Phase 1	0.00287	1.097	0.308
Phase 2	0.00157	0.902	0.237
Phase 3	0.00346	1.324	0.371

All filter weights are corrected for buoyancy

Weighted All Filters: 0.28895

Reference Filter Stability Check

2% of Avg Net or 0.01 mg	No.	Tare (Pre Wt)	Gross (Post Wt)	Net Wt mg	Stability Check PASS/FAIL
0.01	1	365.03084	365.03184	0.00101	PASS
	2	368.07951	368.08033	0.00083	PASS

PM Media
MTL PTFE_PFA

Dyno #: D329 - FWD
Inertia: 3500
EPA Set Co A: 6.94
EPA Set Co B: 0.1353
EPA Set Co C: 0.01599

Emissions Benc: Mexa 7200dle

EPA FOIA Production 2016-07-19 2015-011105_000453

NVFEL Laboratory Test Data

PARTICULATE

Final Laboratory Test Results- Refer to VERIFY Reports for Official Data

Test Number: 2015-0244-002

Vehicle ID: VW370 40145 /16

WEIGHING CHAMBER	Timestamp	Buoyancy Factor	Operator (id)	Chamber Temp (°F)	Dew Point (°F)	Barometer (°Hg)	Last Change in Status Status @ timestamp
Pre-test	7/14/15 13:21	1.0003841	322990	72	49.8	28.57	NORM @ 07/14/15 12:48:54
Post-test	7/15/15 15:31	1.0003909	322990	71.4	49.4	29.05	NORM @ 07/14/15 12:48:54

Test Conditions	Phase 1	Phase 2	Phase 3	Phase 4
Barometer (inHg)	29.08	29.08	29.08	
Avg Cell Temp (degF)	74.16	73.90	74.13	
Dew Point (degF)	48.52	48.88	48.45	
Specific Humidity (grains/lbm)	52.11	52.83	51.98	
NOx Corr Factor	0.9029	0.9056	0.9024	
Dilution Factor	20.24	30.94	23.07	
CFV Vmix (scf @68F)	2827.72	4840.58	2824.86	
Sample Volume A (scf @68F)	7.460	12.795	7.453	
Sample Volume B (scf @68F)	7.470	12.745	7.465	
Sample Volume C (scf @68F)	7.451	12.783	7.442	
Sample Volume D (scf @68F)				
Sample Volume Average (scf @68F)	7.460	12.774	7.454	
Total PM Vmix (scf @68F)	2850.10	4878.90	2847.22	
Phase Time (sec)	507.50	870.90	507.70	
Distance (miles)	3.560	3.801	3.570	
PSU Probe A (degC)				
PSU Probe B (degC)				
PSU Probe C (degC)				
PSU Dil Air A (degC)	46.8	44.5	43.8	
PSU Dil Air B (degC)	39.4	37.4	39.6	
PSU Dil Air C (degC)	41.3	40.3	39.7	
PSU Filter A (degC)	44.0	43.9	44.9	
PSU Filter B (degC)	44.1	44.3	45.2	
PSU Filter C (degC)	46.0	46.1	45.7	
PSU Dil Flow A (lpm)	30.0	29.9	29.9	
PSU Dil Flow B (lpm)	30.0	29.9	29.9	
PSU Dil Flow C (lpm)	29.9	30.0	29.9	
PSU A Proportionality				
PSU B Proportionality				
PSU C Proportionality				

Cert

NVFEL Laboratory Test Data

CVS

Final Laboratory Test Results

Test Number: 2015-0244-001

Vehicle ID: VW370 40145 /16

Test Information

Test Date: 7/15/2015
Key Start: 13:42:00
Fuel Container ID: F00023
Fuel Type: 19 Cert Diesel 7-15 ppm Sulfur
Test Procedure: 3 HWFET (hwfetprep_hwfet)
FE Calculation Method: Diesel
Pretest Remarks:
Drive Axle: FWD

MFR Name: Volkswagen Group of
MFR Codes: VGA 10015
Config #: 01
Transmission: Manual
Shift Schedule: A0VGA0101
Beginning Odometer: 004731.0 MI
Drive Schedule: hwfetwarmup_hwfet

Bag Data	N2O (ppm)	THC / IntTHC (ppmC)	CO (ppm)	NOx (ppm)	CO2 (%)	CH4 (ppm)	NMHC (ppmC)
Phase 1							
Sample	0.550	2.851 / 2.861	0.800	0.007	0.773	2.414	
Ambient	0.323	2.235	0.074	0.004	0.041	2.022	
Net Concentration	0.246	0.745 / 0.755	0.731	0.003	0.735	0.509	0.208
Remarks:							
Phase 2							
Sample							
Ambient							
Net Concentration							
Remarks:							
Phase 3							
Sample							
Ambient							
Net Concentration							
Remarks:							
Phase 4							
Sample							
Ambient							
Net Concentration							
Remarks:							

Results	N2O (gpm)	THC / IntTHC (gpm)	CO (gpm)	NOx (gpm)	CO2 (gpm)	CH4 (gpm)	NMHC (gpm)	Vol MPG (mpg)
Phase 1	0.005	- / 0.005	0.010	0.000	157.6	0.004	0.001	64.525
							NMOG=NMHC	

Fuel Economy

	Diesel MPG
Phase 1	64.55

Dyno Settings
Aug Brake: Y
FWD

Dyno #: D329 - FWD
Inertia: 3500
EPA Set Co A: 6.94
EPA Set Co B: 0.1353
EPA Set Co C: 0.01599
Emiss-Bench: Mexa 7200dle

v130711 - d329 EPAVDAEm1507151131838

Print Time 16-Jul-2015 10:46

7/16/2015 10:46 AM

VTAURdxxx.xls

NVFEL Laboratory Test Data

CVS

Final Laboratory Test Results

Test Number: 2015-0244-001

Vehicle ID: VW370 40145 /16

Results

	N2O (grams)	THC / IntTHC (grams)	CO (grams)	NOx (grams)	CO2 (grams)	CH4 (grams)	NMHC (grams)	Meth Response
Phase 1	0.054	- / 0.052	0.102	0.001	1510.4	0.041	0.014	1.075

Test Conditions

	Phase 1	Phase 2	Phase 3	Phase 4
Barometer (inHg)	29.06			
Avg Cell Temp (degF)	74.03			
Dew Point (degF)	48.70			
Specific Humidity (grains/lbm)	52.49			
NOx Corr Factor	0.9043			
CO2 Dilution Factor	17.320			
CFV Vmix (scf @68F)	4229.99			
CVS Flow Rate Avg (scfm)	331.72			

Fan Placement: One Small Fan - Down - Front

Phase Time (secs)	765.10
Distance (miles)	10.217
Bag Analysis Time (secs)	58.2

	HWY	MFR
IWR % diff	-3.829	99.990
ASCR % diff	-2.726	99.990
EER	-0.501	99.990

MFR Test Results for Procedure 3 HWFE

MFR Number	HC	CO	NOx	CO2	NMOG	NonMeth HC	CH4
10036789	0.0069	0.01	0.001	153	0	0.0025	0.0045

Odometer	MPG
4516 M	66.5

MPG is 3.03 % higher than EPA MPG

MFR Lab: Volkswagen AG

Dyno: 21

Fuel: 19 Federal Cert Diesel 7-15 PPM Sulfur

To: Mazaitis, Vincent[mazaitis.vincent@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Allen, Gregory (EEO)
Sent: Tue 7/14/2015 4:54:55 PM
Subject: RE: Volkswagen Testing - July 15

Hello Vince,

Ok – we will plan to be there at 7 a.m.

Thanks

Best Regards,

Greg Allen

VWGoA EEO

(248)754-4209

From: Mazaitis, Vincent [mailto:mazaitis.vincent@epa.gov]
Sent: Tuesday, July 14, 2015 12:51 PM
To: Allen, Gregory (EEO)
Cc: Snyder, Jim
Subject: RE: Volkswagen Testing - July 15

Hello Allen,

the two may be running on different sites. I am unable to tell you at this time if they will run at the same time or if they will run at different times. My suggestion is to be here at 7:00 am in any case. If things change, I'll call you.

Thanks Allen,

Vince Mazaitis

From: Allen, Gregory (EEO) [mailto:Gregory.Allen@vw.com]
Sent: Tuesday, July 14, 2015 9:30 AM
To: Mazaitis, Vincent
Subject: Volkswagen Testing - July 15

Hello Vince,

I just wanted to let you know that myself, as well as a few other German colleagues, will be coming over tomorrow for the two vehicles we have scheduled to be tested.

Do we have any indication yet on a time they will be tested? Also, do you know if they will run simultaneously, or back to back? Just so we can try and plan ahead.

If not, we'll plan on being there at 7am and see how things go.

If anything changes in the morning please give me a call on my cell.

Thanks Vince!

Best Regards / Mit freundlichen Grüßen,

Greg Allen

Emissions Certification Engineering Analyst

Engineering and Environmental Office

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

U.S.A.

Phone: (248) 754-4209

Cell: (989) 875-9031

E-mail: Gregory.Allen@vw.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Jackson, Judy[Jackson.Judy@epa.gov]; Pugliese, Holly[pugliese.holly@epa.gov]; Somoza, Sandra[Somoza.Sandra@epa.gov]; Verify[Verify@epa.gov]; Rodgers, William (EEO)[William.Rodgers@vw.com]
From: Ex. 6
Sent: Tue 7/14/2015 4:27:15 PM
Subject: Re: Fw: Request from VOLKSWAGEN Group of America: RE: Certificate for TG: GVGAV02.0VBD Evap: GVGAR0110VAE Is Waiting To Be Signed (HLP-6382)

Hello Mr. Snyder,

We will look into this issue further. I will contact Greg Allen for the transaction id in the latest notification sent to his inbox.

Ex. 6

Verify Help Desk
Staffed by Computer Sciences Corporation,
Contractor to the Environmental Protection Agency

This is a PRIVATE message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery. NOTE: Regardless of content, this e-mail shall not operate to bind CSC to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

To verifyhelp@csc.com

cc

Ex. 6

Subject Fw: Request from VOLKSWAGEN Group of America: RE: Certificate for TG: GVGAV02.0VBD Evap: GVGAR0110VAE Is Waiting To Be Signed

07/14/2015 12:11 PM

----- Forwarded by Ex. 6 on 07/14/2015 12:11 PM -----

From: "Snyder, Jim" <Snyder.Jim@epa.gov>
To: Ex. 6
Cc: "Jackson, Judy" <Jackson.Judy@epa.gov>, "Pugliese, Holly" <pugliese.holly@epa.gov>, "Somoza, Sandra" <Somoza.Sandra@epa.gov>, Verify <Verify@epa.gov>, "Rodgers, William (EEO)" <William.Rodgers@vw.com>
Date: 07/14/2015 09:08 AM
Subject: RE: Request from VOLKSWAGEN Group of America: RE: Certificate for TG: GVGAV02.0VBD Evap: GVGAR0110VAE Is Waiting To Be Signed

It looks like this is still an issue. Yesterday I denied a certificate request for GVGAV01.4VUP to unlock it and then VW resubmitted it. When I opened it and started reviewing it, Greg Allen at VW started getting additional rejection notices. It appeared that every time I refreshed the page he received another notification (?)

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Ex. 6
Sent: Tuesday, July 07, 2015 4:00 PM
To: Snyder, Jim
Cc: Jackson, Judy; Pugliese, Holly; Somoza, Sandra; Verify; Rodgers, William (EEO)
Subject: RE: Request from VOLKSWAGEN Group of America: RE: Certificate for TG: GVGAV02.0VBD Evap: GVGAR0110VAE Is Waiting To Be Signed

It looks like the last notification was sent at 1:57 PM today. Now that the certificate has been issued these notifications may have stopped. I will check periodically to see if it happens again and warrants investigation.

Ex. 6

Ex. 6
Help Desk Analyst
CSC

1201 M Street SE, Suite 400, Washington, DC 20003
Ex. 6 | Ex. 6 | Ex. 6 | www.csc.com

This is a PRIVATE message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery.
NOTE: Regardless of content, this e-mail shall not operate to bind CSC to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

From: "Snyder, Jim" <Snyder.Jim@epa.gov>
To: "Rodgers, William (EEO)" <William.Rodgers@vw.com>, Verify <Verify@epa.gov>
Cc: "Somoza, Sandra" <Somoza.Sandra@epa.gov>, "Jackson, Judy" <Jackson.Judy@epa.gov>, "Pugliese, Holly" <pugliese.holly@epa.gov> Ex. 6
Date: 07/07/2015 03:34 PM
Subject: RE: Request from VOLKSWAGEN Group of America: RE: Certificate for TG: GVGAV02.0VBD Evap: GVGAR0110VAE Is Waiting To Be Signed

I think it was a result of resubmitting into the signing queue. I had trouble getting them to "send back". Unless it happens again I don't think it warrants the help desk's time.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

-----Original Message-----
From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Tuesday, July 07, 2015 3:24 PM
To: Snyder, Jim; Verify
Cc: Somoza, Sandra; Jackson, Judy; Pugliese, Holly; Ex. 6
Subject: RE: Request from VOLKSWAGEN Group of America: RE: Certificate for TG: GVGAV02.0VBD Evap: GVGAR0110VAE Is Waiting To Be Signed

It was 6 copies of each message to each recipient in the office. Using ASTM rounding that's more than 6. ;) -Bill

-----Original Message-----
From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Tuesday, July 07, 2015 3:14 PM
To: Verify; Rodgers, William (EEO)
Cc: Somoza, Sandra; Jackson, Judy; Pugliese, Holly; Ex. 6
Subject: RE: Request from VOLKSWAGEN Group of America: RE: Certificate for TG: GVGAV02.0VBD Evap: GVGAR0110VAE Is Waiting To Be Signed

Bill, was it less than 6 messages? If so I'd say lets ignore it. There were 2 certificates for same test group that I had to resubmit because they had the wrong signature on them.
-Jim

-----Original Message-----
From: Ellinger, Sandy On Behalf Of Verify
Sent: Tuesday, July 07, 2015 2:27 PM
To: Rodgers, William (EEO); Snyder, Jim
Cc: Verify; Somoza, Sandra; Jackson, Judy; Pugliese, Holly
Subject: Request from VOLKSWAGEN Group of America: RE: Certificate for TG: GVGAV02.0VBD Evap: GVGAR0110VAE Is Waiting To Be Signed

July 7, 2015

Dear Mr. Rodgers,

The email you have forwarded appears to be an automatic email sent to you by the VERIFY system. I have copied Jim Snyder of the Light Duty Vehicle Center in Ann Arbor. I believe Jim is your certification rep. Perhaps Jim can help resolve this issue.

Thank you.

Sandy Ellinger

Senior Environmental Employment (SEE) Program US Environmental Protection Agency Office of Transportation and Air Quality Compliance Division * Data Analysis and Information Center
Tel: 734.214.4764 * Fax: 734.214.4053 * Office: N -102 ellinger.sandy@epa.gov * http://epa.gov/otaq/verify/

-----Original Message-----
From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Tuesday, July 07, 2015 12:23 PM
To: Verify
Subject: FW: Certificate for TG: GVGAV02.0VBD Evap: GVGAR0110VAE Is Waiting To Be Signed

We are getting repeats of the attached message over and over. Please cancel them.

Bill Rodgers
Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.
Engineering and Environmental Office
Auburn Hills, MI
(248) 754-4219
william.rodgers@vw.com

-----Original Message-----
From: no-reply@epa.gov [mailto:no-reply@epa.gov]
Sent: Tuesday, July 07, 2015 12:21 PM
To: Allen, Gregory (EEO); Giles, Michael (EEO); Rodgers, William (EEO); Thomas, Richard (EEO); Kata, Leonard (EEO)
Subject: Certificate for TG: GVGAV02.0VBD Evap: GVGAR0110VAE Is Waiting To Be Signed

The following is a courtesy copy of status message for a Verify submission. Any references made to links refer to links which will appear in the CDX Inbox message.

The certificate request for Test Group GVGAV02.0VBD and Evaporative Family GVGAR0110VAE has been approved and is now waiting to be signed. A copy of the signed certificate will be sent as soon as it is available.

The Verify submission this message relates to has the following values:

Test Group Name: GVGAV02.0VBD

The following transaction identifier has been assigned to this request:

_0b883d2b-9416-461d-b3ba-2bce362882de

Please do not reply to this message.

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Kata, Leonard (EEO)
Sent: Mon 7/13/2015 5:24:30 PM
Subject: Jetta 1.4L Shift Light Survey
Customer_Shift_Survey_update_07.03.15.pdf

Hello Jim:

I presented your suggestion regarding establishing shift speeds for the 2016 Jetta 1.4L based on good engineering judgment, supported by a follow-up survey of customers. The factory had considered this option but decided not to follow this approach.

Instead, I have attached a follow-up presentation which addresses your earlier suggestion to examine the survey data for driving experience relevant to the FTP and US06 test cycles. We would like to discuss this approach with you at your earliest convenience. Would you have a time that we could hold another telephone conference, preferably one morning early this week?

Best regards,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

Fax: (248) 754-4207

E-Mail: leonard.kata@vw.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Giles, Michael (EEO)
Sent: Mon 7/13/2015 5:13:42 PM
Subject: RE: GVGAV01.4VUP correction

Thanks Jim,

I submitted the correction and another cert request.

Regards,

Mike

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Monday, July 13, 2015 11:39 AM
To: Giles, Michael (EEO)
Subject: RE: GVGAV01.4VUP correction

Okay, it should be unlocked now.

From: Giles, Michael (EEO) [mailto:michael.giles@vw.com]
Sent: Monday, July 13, 2015 11:27 AM
To: Snyder, Jim
Cc: Rodgers, William (EEO); Allen, Gregory (EEO)
Subject: GVGAV01.4VUP correction

Hello Jim,

As we just discussed, the corrected test group data was rejected.

Please reject the existing cert request for this test group and we will try to submit the correction for the engine displacement.

Thanks,

Mike

Michael Giles

Certification Engineer

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4229

Fax: 248 754 4207

mailto: Michael.Giles@VW.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]; Thomas, Richard (EEO)[Richard.Thomas@vw.com]
From: Allen, Gregory (EEO)
Sent: Fri 7/10/2015 6:38:22 PM
Subject: MY2016 Cert Request - GVGAV00.0VZZ

Hello Jim,

I have uploaded the MY2016 Application for the Volkswagen carryover GVGAV00.0VZZ testgroup (Volkswagen e-Golf, Tier 3 Bin 0, ZEV) and generated the cert request.

Please let us know if you have any questions upon your review.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

To: Glodich, Jeffrey (J.M.)[jglodich@ford.com]
Cc: 'ball.joel@epa.gov'['ball.joel@epa.gov']; 'RMiller@hatci.com'['RMiller@hatci.com']; 'snyder.jim@epa.gov'['snyder.jim@epa.gov']; 'tommy_chang@ahm.honda.com'['tommy_chang@ahm.honda.com']; 'tom.beierschmitt@tema.toyota.com'['tom.beierschmitt@tema.toyota.com']; brian.mace@horiba.com[brian.mace@horiba.com]; Christopher J Twarog [christopher.twarog@gm.com]; Mccarthy, Chris (C.)[CMCCAR61@ford.com]; Chris Nevers[CNevers@autoalliance.org]; david.woods@chrysler.com[david.woods@chrysler.com]; 'Douglas Reid'[Douglas.Reid@na.mitsubishi-motors.com]; "Beth Perry <eperry@sae.org>" <BethPerry[eperry@sae.orgeperry]; guanghui.cai@gm.com[guanghui.cai@gm.com]; 'Schlueter, Hannah (EASZ/1)'[hannah.schlueter@volkswagen.de]; 'Jeff Foor'[jdf14@chrysler.com]; Jenny.Sigelko@vw.com[Jenny.Sigelko@vw.com]; JNIKEUS@volvocars.com[JNIKEUS@volvocars.com]; Peabody, Jason (J.A.)[jpeabod6@ford.com]; 'Keith Thompson'[Keith.Thompson@bepco.com]; kyle.bedsole@gm.com[kyle.bedsole@gm.com]; 'Marc Belzile'[marc.a.belzile@tc.gc.ca]; 'Duoba, Mike'[mduoba@anl.gov]; Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>[michel.mahrous@fcagroup.com]; mike.timmerman@horiba.com[mike.timmerman@horiba.com]; 'Mahmoud Yassine'[mky@chrysler.com]; 'mark paxton'[mpaxton@ganassi.com]; 'Meyer, Norm'[norm.meyer@tc.gc.ca]; Yuhase, Nicole (L.)[nyuhase@ford.com]; Okawa, Naoyasu (N.)[okawa.n@mazda.co.jp]; 'Berg, Olle ()'[olle.berg@volvocars.com]; Ott, William[ott.william@epa.gov]; Buller, Patrick[patrick.buller@volvocars.com]; Paulina, Carl[paulina.carl@epa.gov]; 'Peter Z. Janosi'[peter.janosi@roush.com]; 'Bob Maxwell'[remaxwell@comcast.net]; 'Roxanne Loeffler'[rloeffler@sae.org]; Dr. Robert Otto Rasmussen, PE [Robotto@TheTranstecGroup.com]; sconrad@hatci.com [sconrad@hatci.com]; Ex. 6 steve.baldus@gm.com[steve.baldus@gm.com]; Suanne.Thomas@vw.com[Suanne.Thomas@vw.com]; Beierschmitt, Thomas (T.A.)[tbeiers1@ford.com]; Vineet Mehta[vineet@teslamotors.com]; William Beggs <william.beggs@gm.com>[william.beggs@gm.com]; william.meschievitz@tema.toyota.com[william.meschievitz@tema.toyota.com]; Wright, DavidA[Wright.DavidA@epa.gov]; yosuke_sato@ahm.honda.com[yosuke_sato@ahm.honda.com]
From: Dennis Pawlak
Sent: Wed 8/26/2015 6:22:15 PM
Subject: Re: Upcoming SAE LDVP Committee Meetings

Those dates are fine with me.

Best Regards,

Dennis M. Pawlak
Manager, Vehicle Verification
Mitsubishi Motors R&D of America, Inc.
dennis.pawlak@na.mitsubishi-motors.com
Office: 734-477-6146 fax: 734-971-0901
Cell: 734-674-4546

############### CONFIDENTIALITY STATEMENT ###############
This email is intended only for the use of the individual or entity to which it is addressed and may contain information that is confidential and prohibited from disclosure. If you are not the intended recipient, you are hereby notified that any dissemination, or copying of this message, or any attachment, is strictly prohibited. If you have received this email in error, please notify the original sender immediately by telephone or by return email and destroy this email and any copies.
##

From: "Glodich, Jeffrey (J.M.)" <jglodich@ford.com>
To: "'ball.joel@epa.gov'" <'ball.joel@epa.gov'>, "Beierschmitt, Thomas (T.A.)" <tbeiers1@ford.com>, "'Berg, Olle ()'" <olle.berg@volvocars.com>, "\"Beth Perry <eperry@sae.org>\" <BethPerry"<eperry@sae.org>, "'Bob Maxwell'" <remaxwell@comcast.net>, "brian.mace@horiba.com" <brian.mace@horiba.com>, "Buller, Patrick" <patrick.buller@volvocars.com>, "'Carl Paulina'" <Paulina.Carl@epamail.epa.gov>, Chris Nevers <CNevers@autoalliance.org>, "Christopher J Twarog " <christopher.twarog@gm.com>, "david.woods@chrysler.com" <david.woods@chrysler.com>, "'Dennis Pawlak'" <Dennis.Pawlak@na.mitsubishi-motors.com>, "'Douglas Reid'" <Douglas.Reid@na.mitsubishi-motors.com>, "Dr. Robert Otto Rasmussen, PE " <Robotto@TheTranstecGroup.com>, "'Duoba, Mike'" <mduoba@anl.gov>, "Glodich, Jeffrey (J.M.)" <jglodich@ford.com>, "guanghui.cai@gm.com" <guanghui.cai@gm.com>, "'Jeff Foor'" <jdf14@chrysler.com>, "Jenny.Sigelko@vw.com" <Jenny.Sigelko@vw.com>, "JNIKEUS@volvocars.com" <JNIKEUS@volvocars.com>, "'Keith Thompson'" <Keith.Thompson@bepco.com>, "kyle.bedsole@gm.com" <kyle.bedsole@gm.com>, "'Mahmoud Yassine'" <mky@chrysler.com>, "Mahrous Michel (FCA) <michel.mahrous@fcagroup.com>" <michel.mahrous@fcagroup.com>, "'Marc Belzile'" <marc.a.belzile@tc.gc.ca>, "'mark paxton'" <mpaxton@ganassi.com>, "Mccarthy, Chris (C.)" <CMCCAR61@ford.com>, "'Meyer, Norm'" <norm.meyer@tc.gc.ca>, "mike.timmerman@horiba.com" <mike.timmerman@horiba.com>, "Okawa, Naoyasu (N.)" <okawa.n@mazda.co.jp>, "Peabody, Jason (J.A.)" <jpeabod6@ford.com>, "'Peter Z. Janosi'" <peter.janosi@roush.com>, "'RMiller@hatci.com'" <'RMiller@hatci.com'>, "'Roxanne Loeffler'" <rloeffler@sae.org>, "'Schlueter, Hannah (EASZ/1)'" <hannah.schlueter@volkswagen.de>, "sconrad@hatci.com " <sconrad@hatci.com>, "'snyder.jim@epa.gov'" <'snyder.jim@epa.gov'>, "Steve Karamihas" <stevemk@umich.edu>, "steve.baldus@gm.com" <steve.baldus@gm.com>, "Suanne.Thomas@vw.com" <Suanne.Thomas@vw.com>, "'tom.beierschmitt@tema.toyota.com'" <'tom.beierschmitt@tema.toyota.com'>, "'tommy_chang@ahm.honda.com'" <'tommy_chang@ahm.honda.com'>, Vineet Mehta <vineet@teslamotors.com>, "William Beggs <william.beggs@gm.com>" <william.beggs@gm.com>, "'William Ott'" <Ott.William@epamail.epa.gov>, "william.meschievitz@tema.toyota.com" <william.meschievitz@tema.toyota.com>, "Wright, DavidA" <Wright.DavidA@epa.gov>, "yosuke_sato@ahm.honda.com" <yosuke_sato@ahm.honda.com>, "Yuhase, Nicole (L.)" <nyuhase@ford.com>
Date: 08/26/2015 12:30 PM
Subject: Upcoming SAE LDVP Committee Meetings

All,

Please send me your input on the following proposed dates for the next J1634 and J2263 meetings:

SAE J1634 Sept 17th

SAE J2263 Sept 24th

Thanks,
Jeff

Jeff Glodich
Ford Motor Company
Vehicle Environmental Regulatory Strategy and Planning
217-E4 WHQ
(313) 845-1579

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Kata, Leonard (EEO)
Sent: Wed 3/4/2015 3:02:29 PM
Subject: Volkswagen Submittals

Hello Jim:

This morning we spoke about three requests sent to EPA. I wanted to inquire about the status. It turns out that all three requests were sent to you by e-mail from Greg Allen. The topics are as follows:

Ex. 4 - CBI

Best regards,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

Fax: (248) 754-4207

E-Mail: leonard.kata@vw.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Rodgers, William (EEO)
Sent: Tue 3/3/2015 3:02:15 PM
Subject: Initial Application f Ex. 4 - CBI

Hello Jim,

We have submitted the Ex. 4 - CBI

Ex. 4 - CBI

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Rodgers, William (EEO)
Sent: Fri 2/27/2015 12:37:48 PM
Subject: RE: VW Group Request For Approval - Ex. 4 - CBI

Jim,

There's no concern about the timing because we are well ahead of certification for once. The Ex. 4 - CBI I suggest starting with the Ex. 4 - CBI in case of questions that need time to get answered.

Thanks,

Bill

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Thursday, February 26, 2015 6:19 PM
To: Rodgers, William (EEO)
Subject: RE: VW Group Request For Approval - 2.0TDI SCR and AECD

Bill, I was hoping to get through some of these Ex. 4 - CBI approvals this week but too many meetings and I have Friday off. Monday is open though. Do you have any preference of the Ex. 4 - CBI approvals?

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Thursday, February 26, 2015 9:04 AM
To: Snyder, Jim
Cc: Giles, Michael (EEO); Allen, Gregory (EEO); Kata, Leonard (EEO)
Subject: VW Group Request For Approval - 2.0TDI SCR and AECD

Hello Jim,

We have submitted to verify our Request For Approval for the Ex. 4 - CBI

Ex. 4 - CBI

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Rodgers, William (EEO)[William.Rodgers@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]; Wilson, Dale[Wilson.Dale@epa.gov]
From: Mazaitis, Vincent
Sent: Thur 2/26/2015 5:50:56 PM
Subject: RE: Ex. 4 - CBI

Hello Bill,

We'll have the vehicle ready. Please contact Dale Wilson (734)214-4226 at the lab. I'm not sure if the vehicle will be outside or not, but he'd be the correct person to contact.

Thanks Bill and have a good weekend!

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Thursday, February 26, 2015 11:12 AM
To: Mazaitis, Vincent
Cc: Snyder, Jim
Subject: RE: Ex. 4 - CBI

Thanks for the good news. Please release the vehicle for pick up sometime Friday.

Thanks,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Mazaitis, Vincent [mailto:mazaitis.vincent@epa.gov]
Sent: Thursday, February 26, 2015 10:08 AM
To: Rodgers, William (EEO)
Cc: Snyder, Jim
Subject: Ex. 4 - CBI

Please find enclosed, the Subject information. If you have any questions or concerns, please contact me.

Thank you,

Vince Mazaitis

(734)214-4864

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]
From: Rodgers, William (EEO)
Sent: Thur 2/26/2015 2:03:44 PM
Subject: VW Group Request For Approval - Ex. 4 - CBI

Hello Jim,

We have submitted to verify our Request For Approval for the Ex. 4 - CBI

Ex. 4 - CBI

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Kata, Leonard (EEO)[Leonard.Kata@vw.com]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Danzeisen, Karen
Sent: Tue 2/24/2015 7:35:49 PM
Subject: RE: verify error mail

Ok, your staff is all set up in our listserver as requested. You may or may not be aware that Verify includes other industries (e.g. Locomotive, Motorcycle, Marine, Non-Road, etc...), so there will be messages your people can disregard. We usually try to identify the intended audience in the Subject line of a message so as to not waste peoples' time.

Thanks for helping me clean this list up for VW.

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

danzeisen.karen@epa.gov
(734)214-4444

www.epa.gov/nvfel/

-----Original Message-----
From: Kata, Leonard (EEO) [mailto:Leonard.Kata@vw.com]
Sent: Tuesday, February 24, 2015 2:11 PM
To: Danzeisen, Karen
Cc: Snyder, Jim
Subject: RE: verify error mail

Hello Karen:

Okay, now I understand. For VW, it looks like this listserver needs some clean-up.

Robert Hart also retired some time ago, so both he and Dennis Reineke can be removed.

Michael Giles and William Rodgers should remain on the list. Also, please add the following people to the list, who aslo work with Verify:

Gregory Allen - Emission Certification. E-Mail: gregory.allen@vw.com (Greg replaced Robert Hart)

Richard Thomas - CAFE/Fuel Economy Labeling/Non-Road Certification. E-Mail: richard.thomas@vw.com

Dale Harris - CAFE/GHG Reporting. E-Mail: dale.harris@vw.com

Best regards,

Len
_____

Leonard W. Kata
Senior Manager

Emission Regulations and Certification
Engineering and Environmental Office
Volkswagen Group of America, Inc.

Phone: (248) 754-4204
Cell: (248) 797-3886
Fax: (248) 754-4207
E-Mail: leonard.kata@vw.com

-----Original Message-----
From: Danzeisen, Karen [mailto:Danzeisen.Karen@epa.gov]
Sent: Tuesday, February 24, 2015 11:46 AM
To: Kata, Leonard (EEO)
Cc: Snyder, Jim
Subject: RE: verify error mail

Len,

The list that Dennis showed up on was our Verify email notification listserver that provides information about things such as new Verify releases or temporary system maintenance outages. It looks like current VW employees receiving these emails are: Michael Giles, Robert Hart, and William Rodgers. If you have any other employees who would be interested in receiving these notifications just let me know.

Thank you,

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality U.S. Environmental Protection Agency

danzeisen.karen@epa.gov
(734)214-4444

www.epa.gov/nvfel/

-----Original Message-----
From: Kata, Leonard (EEO) [mailto:Leonard.Kata@vw.com]
Sent: Tuesday, February 24, 2015 11:32 AM
To: Snyder, Jim
Cc: Danzeisen, Karen
Subject: RE: verify error mail

Hello Jim:

Dennis Reineke has retired, effective January 31, 2015. Britta Gerdes is his replacement; however, I do not see a need for her to have VERIFY access at this time. Dennis was kept active as a back-up to our certification activities; however, Britta will not be acting in this capacity.

Best regards,

Len

Leonard W. Kata
Senior Manager
Emission Regulations and Certification
Engineering and Environmental Office
Volkswagen Group of America, Inc.

Phone: (248) 754-4204
Cell: (248) 797-3886
Fax: (248) 754-4207
E-Mail: leonard.kata@vw.com

-----Original Message-----
From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Tuesday, February 24, 2015 11:17 AM
To: Danzeisen, Karen
Cc: Kata, Leonard (EEO)
Subject: RE: verify error mail

Yes, he's retiring(ed). I believe Britta Gerdes is replacing him but I don't have her email. Is that right Len?
-Jim

-----Original Message-----
From: Danzeisen, Karen
Sent: Tuesday, February 24, 2015 10:02 AM
To: Snyder, Jim
Subject: FW: verify error mail

Hey Jim,

Has Dennis Reineke moved on from VW? Or perhaps his email address has changed?

Thanks,

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality U.S. Environmental Protection Agency

danzeisen.karen@epa.gov
(734)214-4444

www.epa.gov/nvfel/

-----Original Message-----
From: Lyris ListManager [mailto:lyris@lists.epa.gov]
Sent: Tuesday, February 24, 2015 3:00 AM
To: Danzeisen, Karen
Subject: verify error mail

The following members on list verify have been placed on hold because of their inability to receive email:

dennis.reineke@vw.com

To: Rodgers, William (EEO)[William.Rodgers@vw.com]; Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Mazaitis, Vincent
Sent: Tue 2/24/2015 6:17:48 PM
Subject: RE: Audi Ex. 4 - CBI testing

Hello Bill,

I verified with the Lab and 0700 will be good. They plan to test your vehicle first.

Thanks Bill,

Vince Mazaitis

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Tuesday, February 24, 2015 12:26 PM
To: Snyder, Jim; Mazaitis, Vincent
Cc: Giles, Michael (EEO); Allen, Gregory (EEO)
Subject: RE: Audi Ex. 4 - CBI testing

Hi Jim,

Myself and two colleagues will be there by 7AM to witness the Audi testing, unless you or Vince tells us otherwise. Please call my cell number after 3:30 today if anything changes.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

Cell (810) 287-4581

william.rodgers@vw.com

From: Giles, Michael (EEO)
Sent: Tuesday, February 24, 2015 12:01 PM
To: Rodgers, William (EEO)
Subject: FW: Audi Ex. 4 - CBI testing

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Tuesday, February 24, 2015 11:38 AM
To: Allen, Gregory (EEO); Giles, Michael (EEO)
Cc: Mazaitis, Vincent
Subject: Audi Ex. 4 - CBI testing

Greg, I saw the Audi in the lab yesterday. Is anyone from VW coming Wednesday to watch?

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

To: Glodich, Jeffrey (J.M.)[jglodich@ford.com]; 'ball.joel@epa.gov'['ball.joel@epa.gov']; Beierschmitt, Thomas (T.A.)[tbeiers1@ford.com]; 'Berg, Olle ()'[olle.berg@volvocars.com]; 'Bob Maxwell'[remaxwell@comcast.net]; brian.mace@horiba.com[brian.mace@horiba.com]; Buller, Patrick[patrick.buller@volvocars.com]; Paulina, Carl[paulina.carl@epa.gov]; Chris Nevers[CNevers@autoalliance.org]; david.woods@chrysler.com[david.woods@chrysler.com]; 'Dennis Pawlak'[Dennis.Pawlak@na.mitsubishi-motors.com]; 'Douglas Reid'[Douglas.Reid@na.mitsubishi-motors.com]; Dr. Robert Otto Rasmussen, PE [Robotto@TheTranstecGroup.com]; 'Duoba, Mike'[mduoba@anl.gov]; 'Jeff Foor'[jdf14@chrysler.com]; Jenny.Sigelko@vw.com[Jenny.Sigelko@vw.com]; JNIKEUS@volvocars.com[JNIKEUS@volvocars.com]; 'Keith Thompson'[Keith.Thompson@bepco.com]; kyle.bedsole@gm.com[kyle.bedsole@gm.com]; 'Mahmoud Yassine'[mky@chrysler.com]; 'Marc Belzile'[marc.a.belzile@tc.gc.ca]; 'mark paxton'[mpaxton@ganassi.com]; Mccarthy, Chris (C.)[CMCCAR61@ford.com]; 'Meyer, Norm'[norm.meyer@tc.gc.ca]; mike.timmerman@horiba.com[mike.timmerman@horiba.com]; Okawa, Naoyasu (N.)[okawa.n@mazda.co.jp]; Peabody, Jason (J.A.)[jpeabod6@ford.com]; 'Peter Z. Janosi'[peter.janosi@roush.com]; 'RMiller@hatci.com'['RMiller@hatci.com']; 'Roxanne Loeffler'[rloeffler@sae.org]; 'Schlueter, Hannah (EASZ/1)'[hannah.schlueter@volkswagen.de]; sconrad@hatci.com [sconrad@hatci.com]; 'snyder.jim@epa.gov'['snyder.jim@epa.gov']; Steve Karamihas[stevemk@umich.edu]; steve.baldus@gm.com[steve.baldus@gm.com]; Suanne.Thomas@vw.com[Suanne.Thomas@vw.com]; 'tom.beierschmitt@tema.toyota.com'['tom.beierschmitt@tema.toyota.com']; 'tommy_chang@ahm.honda.com'['tommy_chang@ahm.honda.com']; Vineet Mehta[vineet@teslamotors.com]; William Beggs <william.beggs@gm.com>[william.beggs@gm.com]; Ott, William[ott.william@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]; yosuke_sato@ahm.honda.com[yosuke_sato@ahm.honda.com]; Yuhase, Nicole (L.)[nyuhase@ford.com]
Cc: Will Meschievitz (TEMA TTC)[william.meschievitz@tema.toyota.com]
From: Tom Beierschmitt (TEMA TTC)
Sent: Tue 2/24/2015 5:13:02 PM
Subject: RE: SAE LDVP Agenda 2-26-15

Hello all:

If anyone has anything they want to share with the committee please email it to William Meschievitz (TEMA TTC) (william.meschievitz@tema.toyota.com)

Thanks

Tom Beierschmitt

From: Glodich, Jeffrey (J.M.) [mailto:jglodich@ford.com]
Sent: Monday, February 23, 2015 12:54 PM
To: 'ball.joel@epa.gov'; Beierschmitt, Thomas (T.A.); 'Berg, Olle ()'; 'Bob Maxwell'; brian.mace@horiba.com; Buller, Patrick; 'Carl Paulina'; Chris Nevers; david.woods@chrysler.com; 'Dennis Pawlak'; 'Douglas Reid'; Dr. Robert Otto Rasmussen, PE ; 'Duoba, Mike'; Glodich, Jeffrey (J.M.); 'Jeff Foor'; Jenny.Sigelko@vw.com; JNIKEUS@volvocars.com; 'Keith Thompson';

kyle.bedsole@gm.com; 'Mahmoud Yassine'; 'Marc Belzile'; 'mark paxton'; Mccarthy, Chris (C.); 'Meyer, Norm'; mike.timmerman@horiba.com; Okawa, Naoyasu (N.); Peabody, Jason (J.A.); 'Peter Z. Janosi'; 'RMiller@hatci.com'; 'Roxanne Loeffler'; 'Schlueter, Hannah (EASZ/1)'; sconrad@hatci.com ; 'snyder.jim@epa.gov'; Steve Karamihas; steve.baldus@gm.com; Suanne.Thomas@vw.com; 'tom.beierschmitt@tema.toyota.com'; 'tommy_chang@ahm.honda.com'; Vineet Mehta; William Beggs <william.beggs@gm.com>; 'William Ott'; Wright, DavidA; yosuke_sato@ahm.honda.com; Yuhase, Nicole (L.)
Subject: SAE LDVP Agenda 2-26-15

Agenda for Thursday attached.

Jeff

To: 'ball.joel@epa.gov'['ball.joel@epa.gov']; Beierschmitt, Thomas (T.A.)[tbeiers1@ford.com]; 'Berg, Olle ()'[olle.berg@volvocars.com]; 'Bob Maxwell'[remaxwell@comcast.net]; brian.mace@horiba.com[brian.mace@horiba.com]; Buller, Patrick[patrick.buller@volvocars.com]; Paulina, Carl[paulina.carl@epa.gov]; Chris Nevers[CNevers@autoalliance.org]; david.woods@chrysler.com[david.woods@chrysler.com]; 'Dennis Pawlak'[Dennis.Pawlak@na.mitsubishi-motors.com]; 'Douglas Reid'[Douglas.Reid@na.mitsubishi-motors.com]; Dr. Robert Otto Rasmussen, PE [Robotto@TheTranstecGroup.com]; 'Duoba, Mike'[mduoba@anl.gov]; Glodich, Jeffrey (J.M.)[jglodich@ford.com]; 'Jeff Foor'[jdf14@chrysler.com]; Jenny.Sigelko@vw.com[Jenny.Sigelko@vw.com]; JNIKEUS@volvocars.com[JNIKEUS@volvocars.com]; 'Keith Thompson'[Keith.Thompson@bepco.com]; kyle.bedsole@gm.com[kyle.bedsole@gm.com]; 'Mahmoud Yassine'[mky@chrysler.com]; 'Marc Belzile'[marc.a.belzile@tc.gc.ca]; 'mark paxton'[mpaxton@ganassi.com]; Mccarthy, Chris (C.)[CMCCAR61@ford.com]; 'Meyer, Norm'[norm.meyer@tc.gc.ca]; mike.timmerman@horiba.com[mike.timmerman@horiba.com]; Okawa, Naoyasu (N.)[okawa.n@mazda.co.jp]; Peabody, Jason (J.A.)[jpeabod6@ford.com]; 'Peter Z. Janosi'[peter.janosi@roush.com]; 'RMiller@hatci.com'['RMiller@hatci.com']; 'Roxanne Loeffler'[rloeffler@sae.org]; 'Schlueter, Hannah (EASZ/1)'[hannah.schlueter@volkswagen.de]; sconrad@hatci.com [sconrad@hatci.com]; 'snyder.jim@epa.gov'['snyder.jim@epa.gov']; Steve Karamihas[stevemk@umich.edu]; steve.baldus@gm.com[steve.baldus@gm.com]; Suanne.Thomas@vw.com[Suanne.Thomas@vw.com]; 'tom.beierschmitt@tema.toyota.com'['tom.beierschmitt@tema.toyota.com']; 'tommy_chang@ahm.honda.com'['tommy_chang@ahm.honda.com']; Vineet Mehta[vineet@teslamotors.com]; William Beggs <william.beggs@gm.com>[william.beggs@gm.com]; Ott, William[ott.william@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]; yosuke_sato@ahm.honda.com[yosuke_sato@ahm.honda.com]; Yuhase, Nicole (L.)[nyuhase@ford.com]
From: Glodich, Jeffrey (J.M.)
Sent: Mon 2/23/2015 5:54:28 PM
Subject: SAE LDVP Agenda 2-26-15
Agenda - Light Duty Vehicle Performance Measurement Standards Committee - 2_26_2015.doc

Agenda for Thursday attached.

Jeff

AGENDA

Light-Duty Vehicle Performance Measurement Standards Committee
Chair – Jeff Glodich
Secretary – Nicole Yuhase
Thursday, February 26th, 2015
1:00-3:00 PM
Toyota Technical Center, Ann Arbor
(Building 1555, 1555 Woodridge)

Conference Call:
Access number: Non-Responsive
Meeting ID:

Web Meeting:
https://www.connectmeeting.att.com
Meeting Number: 888-270-9936
Code: 9442682

1. Welcome and Introductions

2. Membership Review

3. Document Review

J2263: "Road Load Measurement Using Onboard Anemometry and Coastdown Techniques"

- Sponsor: Tom Beierschmitt
- Continue document review

J1634: "Electric Vehicle Energy Consumption and Range Test Procedure"

- Sponsor: Jeff Glodich
- Review EPA Approved Tesla Test Method

J3066: "On-Board Fuel Consumption and Measurement Reporting Standard"

- Sponsor: David Wright
- Subcommittee status

4. Other Business

NEXT MEETING

- 3/26 (proposed)

Anti-Trust Statement: In discharging their responsibilities, members of the Technical Standards Board, Councils/Division, and Technical Committees function as individuals and not as agents or representatives of any organization with which they may be associated, except that government employees participate in accordance with governmental regulations. Members are appointed to SAE Technical Committees on the basis of their individual qualifications which enable them to contribute to the work of the Committee.

Patent Disclosure: Each SAE Technical Committee or SAE working group member would be required to disclose at specified times during a development process all patents and patent applications that are owned, controlled or licensed by the member, member's employer or third party and that the member believes may become essential to the draft specification under development. The member would make this disclosure based on the member's good faith and reasonable inquiry. If SAE International receives a notice that a proposed SAE Technical Report may require the use of an invention claimed in a patent, the respective part of the SAE Technical Standards Board Policy will be followed.

Transparency Statement: This Technical Committee/Task Force is committed to transparency at the highest level. All topics are discussed in open meetings and decisions are consensus based (not unanimous). Committee/Task Force members are required to be vigilant in their efforts to monitor Committee/Task Force activities and decisions by actively participating in the Committee/Task Force. Any issues with the transparency of this Committee/Task Force not resolved by the Committee/Task Force Chairman should be brought to the attention of the SAE for resolution.

IP Statement: SAE's intellectual property is its most valuable asset. As such, the Society expends considerable resources maintaining and protecting its rights to its intellectual property.

SAE reserves the right to copyright any of its print products, electronic products, databases, audio/visual products and any other subject matter. This is intended to protect SAE and its members from unauthorized copying and distribution of SAE intellectual property. SAE's intellectual property may only be used in a manner that furthers the organization's purposes.

It is also SAE policy that the copyrights and other intellectual property rights of third parties be respected and not infringed upon by SAE or any of its committees, or any employee, member or other person acting on behalf of SAE.

As a participant in SAE Technical Committees, individuals agree that the collective work of the committee(s) is the property of SAE, and SAE is charged with its publication, dissemination, and protection.

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Rodgers, William (EEO)
Sent: Mon 2/23/2015 1:47:53 PM
Subject: VW Group Request for Approval - Ex. 4 - CBI

Hello Jim,

We have uploaded to Verify a Request For Approval letter related to Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI Please let me know if you have any questions.

Filename: Ex. 4 - CBI

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Rodgers, William (EEO)
Sent: Tue 2/17/2015 7:32:33 PM
Subject: VW Group Ex. 4 - CBI

Hello Jim,

Ex. 4 - CBI

Ex. 4 - CBI

Please let me know if you have any questions.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Allen, Gregory (EEO)
Sent: Wed 2/11/2015 4:25:32 PM
Subject: Ex. 4 - CBI

Hello Jim,

I originally meant to send the e-mail below yesterday, but noticed today that it was stuck in my draft folder, not sure what happened. Regardless, I heard from Mike G that you had some questions about Ex. 4 - CBI

Ex. 4 - CBI

This is the e-mail which should have been sent out yesterday:

Hello Jim,

Today I uploaded test information and decision requests for the vehicles listed below.

Vehicle Ex. 4 - CBI

Configuration: Ex. 4 - CBI

Vehicle ID: Ex. 4 - CBI

Configuration Ex. 4 - CBI

Ex. 4 - CBI

Sorry for the confusion on this. I will give you a call here shortly to follow up and see if you have any further questions.

Thanks Jim.

Regards,

Greg Allen

VWGoA EEO

(248)754-4209

To: Snyder, Jim[Snyder.Jim@epa.gov]
From: Kata, Leonard (EEO)
Sent: Thur 2/5/2015 1:29:05 PM
Subject: RE: VW MTG: Ex. 4 - CBI

Yes. That's fine

Len

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Wednesday, February 04, 2015 7:09 PM
To: Kata, Leonard (EEO)
Subject: RE: VW MTG: Ex. 4 - CBI

Len , just wanted to make sure you noticed that I pushed the mtg back 30 minutes to 1:00.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Kata, Leonard (EEO) [mailto:Leonard.Kata@vw.com]
Sent: Wednesday, February 04, 2015 5:36 PM
To: Snyder, Jim; Wehrly, Linc; French, Roberts; Wright, DavidA; Dalton, Joel; Ball, Joel; Ott, William
Cc: Giles, Michael (EEO); Tamborra, Nick (EEO); Lucht, Joseph (EEO)
Subject: RE: VW MTG: Ex. 4 - CBI

To all:

We look forward to meeeting with you tomorrow. There will be a total of four people representing VW (Nick Tamborra, Mike Giles, Joe Lucht, and me).

As mentioned, we have two main topics that we wish to discuss.

Ex. 4 - CBI

Best regards,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

Fax: (248) 754-4207

E-Mail: leonard.kata@vw.com

-----Original Appointment-----
From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Tuesday, February 03, 2015 1:22 PM
To: Snyder, Jim; Wehrly, Linc; French, Roberts; Wright, DavidA; Kata, Leonard (EEO); Giles, Michael (EEO); Tamborra, Nick (EEO); Dalton, Joel; Ball, Joel; Ott, William
Subject: VW MTG: **Ex. 4 - CBI**
When: Thursday, February 05, 2015 1:00 PM-2:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: AA-Room-Office-N95-ConfRoom-AAOTAQ-Office

When: Thursday, February 05, 2015 1:00 PM-2:30 PM (GMT-05:00) Eastern Time (US & Canada).

Where: AA-Room-Office-N95-ConfRoom-AAOTAQ-Office

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*~*

From: Tamborra, Nick (EEO)
Location: AA-Room-Office-N95-ConfRoom-AAOTAQ-Office
Importance: Normal
Subject: Accepted: VW MTG: Ex. 4 - CBI
Start Date/Time: Thur 2/5/2015 6:00:00 PM
End Date/Time: Thur 2/5/2015 7:30:00 PM

;

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Rodgers, William (EEO)
Sent: Tue 2/3/2015 8:56:19 PM
Subject: Audi Confirmatory Test

Hi Jim,

I received your phone messages and have since submitted the necessary Supplemental Information to Verify for Ex. 4 - CBI We are currently arranging to air freight the test car from Germany and fully expect it to be delivered to EPA on Monday morning February 23rd for testing. Thanks for your help.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Kata, Leonard (EEO)
Location: AA-Room-Office-N95-ConfRoom-AAOTAQ-Office
Importance: Normal
Subject: Accepted: VW MTG: Ex. 4 - CBI
Start Date/Time: Thur 2/5/2015 6:00:00 PM
End Date/Time: Thur 2/5/2015 7:30:00 PM

;

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Rodgers, William (EEO)
Sent: Mon 2/2/2015 9:47:06 PM
Subject: Audi Ex. 4 - CBI

Hello Jim,

We have submitted Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI Please call me tomorrow if possible to confirm the test date and if needed discuss any questions you may have.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Tamborra, Nick (EEO)[Nick.Tamborra@vw.com]
From: Kata, Leonard (EEO)
Sent: Wed 1/28/2015 4:20:24 PM
Subject: Volkswagen Meeting

Hello Jim:

If possible can we squeeze our meeting on Ex. 4 - CBI into the Wednesday, 02/04/15, 12:30-2:00 p.m. time slot that you mentioned?

Best regards,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

Fax: (248) 754-4207

E-Mail: leonard.kata@vw.com

From: Glodich, Jeffrey (J.M.)
Location: Toyota, Ann Arbor
Importance: Normal
Subject: SAE Light-Duty Vehicle Performance and Economy Measures Committee Meeting
Start Date/Time: Thur 1/29/2015 6:30:00 PM
End Date/Time: Thur 1/29/2015 8:30:00 PM

;;;
Updated Access Code
SAE Light-Duty Vehicle Performance and Economy Measures Committee Meeting 1-3:30 PM, Toyota Technical Center, Ann Arbor.

Ex. 6

Web Address https://www.connectmeeting.att.com <https://www.connectmeeting.att.com/>

Ex. 6

To: andrew.ramos@gm.com[andrew.ramos@gm.com]; 'ball.joel@epa.gov'['ball.joel@epa.gov']; Beierschmitt, Thomas (T.A.)[tbeiers1@ford.com]; 'Berg, Olle ()'[olle.berg@volvocars.com]; 'Bob Maxwell'[remaxwell@comcast.net]; brian.mace@horiba.com[brian.mace@horiba.com]; Buller, Patrick[patrick.buller@volvocars.com]; Paulina, Carl[paulina.carl@epa.gov]; Chris Nevers[CNevers@autoalliance.org]; david.woods@chrysler.com[david.woods@chrysler.com]; 'Dennis Pawlak'[Dennis.Pawlak@na.mitsubishi-motors.com]; 'Douglas Reid'[Douglas.Reid@na.mitsubishi-motors.com]; Dr. Robert Otto Rasmussen, PE [Robotto@TheTranstecGroup.com]; 'Duoba, Mike'[mduoba@anl.gov]; Glodich, Jeffrey (J.M.)[jglodich@ford.com]; 'Jeff Foor'[jdf14@chrysler.com]; Jenny.Sigelko@vw.com[Jenny.Sigelko@vw.com]; JNIKEUS@volvocars.com[JNIKEUS@volvocars.com]; 'Keith Thompson'[Keith.Thompson@bepco.com]; kyle.bedsole@gm.com[kyle.bedsole@gm.com]; 'Mahmoud Yassine'[mky@chrysler.com]; 'Marc Belzile'[marc.a.belzile@tc.gc.ca]; 'mark paxton'[mpaxton@ganassi.com]; Mccarthy, Chris (C.)[CMCCAR61@ford.com]; 'Meyer, Norm'[norm.meyer@tc.gc.ca]; mike.timmerman@horiba.com[mike.timmerman@horiba.com]; Okawa, Naoyasu (N.)[okawa.n@mazda.co.jp]; Peabody, Jason (J.A.)[jpeabod6@ford.com]; 'Peter Z. Janosi'[peter.janosi@roush.com]; 'RMiller@hatci.com'['RMiller@hatci.com']; 'Roxanne Loeffler'[rloeffler@sae.org]; 'Schlueter, Hannah (EASZ/1)'[hannah.schlueter@volkswagen.de]; sconrad@hatci.com [sconrad@hatci.com]; 'snyder.jim@epa.gov'['snyder.jim@epa.gov']; Steve Karamihas[stevemk@umich.edu]; steve.baldus@gm.com[steve.baldus@gm.com]; Suanne.Thomas@vw.com[Suanne.Thomas@vw.com]; 'tom.beierschmitt@tema.toyota.com'['tom.beierschmitt@tema.toyota.com']; 'tommy_chang@ahm.honda.com'['tommy_chang@ahm.honda.com']; Vineet Mehta[vineet@teslamotors.com]; William Beggs <william.beggs@gm.com>[william.beggs@gm.com]; Ott, William[ott.william@epa.gov]; Wright, DavidA[Wright.DavidA@epa.gov]; yosuke_sato@ahm.honda.com[yosuke_sato@ahm.honda.com]; Yuhase, Nicole (L.)[nyuhase@ford.com]
From: Glodich, Jeffrey (J.M.)
Sent: Tue 1/27/2015 8:13:19 PM
Subject: SAE LDVP Agenda 1-29-15
Agenda - Light Duty Vehicle Performance Measurement Standards Committee - 1_29_2015.doc

Thursday's agenda attached.

Jeff

Jeff Glodich
Ford Motor Company
Vehicle Environmental Regulatory Strategy and Planning
217-E4 WHQ
(313) 845-1579

AGENDA

Light-Duty Vehicle Performance Measurement Standards Committee
Chair – Jeff Glodich
Secretary – Nicole Yuhase
Thursday, January 29th, 2015
1:00-3:00 PM
Toyota Technical Center, Ann Arbor
(Building 1555, 1555 Woodridge)

Conference Call:

Non-Responsive

Web Meeting:

Non-Responsive

1. Welcome and Introductions

2. Membership Review

3. Document Review

J1634: "Electric Vehicle Energy Consumption and Range Test Procedure"

- Open for review
- Continue discussion on 5-cycle test cycle inputs (20F Test, SC03)
- Review Tesla Test Method Recommendations

J2263: "Road Load Measurement Using Onboard Anemometry and Coastdown Techniques"

- Sponsor: Tom Beierschmitt
- J2263 To Do List (posted)
- Continue document review

J3066: "On-Board Fuel Consumption and Measurement Reporting Standard"

- Sponsor: David Wright
- Subcommittee status

4. Other Business

NEXT MEETING

- 2/26 (proposed)

Anti-Trust Statement: In discharging their responsibilities, members of the Technical Standards Board, Councils/Division, and Technical Committees function as individuals and not as agents or representatives of any organization with which they may be associated, except that government employees participate in accordance with governmental regulations. Members are appointed to SAE Technical Committees on the basis of their individual qualifications which enable them to contribute to the work of the Committee.

Patent Disclosure: Each SAE Technical Committee or SAE working group member would be required to disclose at specified times during a development process all patents and patent applications that are owned, controlled or licensed by the member, member's employer or third party and that the member believes may become essential to the draft specification under development. The member would make this disclosure based on the member's good faith and reasonable inquiry. If SAE International receives a notice that a proposed SAE Technical Report may require the use of an invention claimed in a patent, the respective part of the SAE Technical Standards Board Policy will be followed.

Transparency Statement: This Technical Committee/Task Force is committed to transparency at the highest level. All topics are discussed in open meetings and decisions are consensus based (not unanimous). Committee/Task Force members are required to be vigilant in their efforts to monitor Committee/Task Force activities and decisions by actively participating in the Committee/Task Force. Any issues with the transparency of this Committee/Task Force not resolved by the Committee/Task Force Chairman should be brought to the attention of the SAE for resolution.

IP Statement: SAE's intellectual property is its most valuable asset. As such, the Society expends considerable resources maintaining and protecting its rights to its intellectual property.

SAE reserves the right to copyright any of its print products, electronic products, databases, audio/visual products and any other subject matter. This is intended to protect SAE and its members from unauthorized copying and distribution of SAE intellectual property. SAE's intellectual property may only be used in a manner that furthers the organization's purposes.

It is also SAE policy that the copyrights and other intellectual property rights of third parties be respected and not infringed upon by SAE or any of its committees, or any employee, member or other person acting on behalf of SAE.

As a participant in SAE Technical Committees, individuals agree that the collective work of the committee(s) is the property of SAE, and SAE is charged with its publication, dissemination, and protection.

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Tamborra, Nick (EEO)[Nick.Tamborra@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]
From: Kata, Leonard (EEO)
Sent: Tue 1/27/2015 7:24:45 PM
Subject: Meeting With Volkswagen

Hello Jim:

Thanks for the return message yesterday. I have consulted with my colleagues and they agree that Tuesday, February 3, 2015 would be good. Preferably in the morning. We would like to present EPA with updated materials regarding a previously-submitted Ex. 4 - CBI request. We would also like to discuss our plans regarding Ex. 4 - CBI particularly since this is the first time we are applying this Ex. 4 - CBI

Please let me know if this works for you. In the past, you have set the date through Outlook in order to reserve an EPA conference room. If you plan to do so this time, please include Nick and Mike.

Best regards,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

Fax: (248) 754-4207

E-Mail: leonard.kata@vw.com

To: 'Nikolaus.Steininger@ec.europa.eu'[Nikolaus.Steininger@ec.europa.eu]; 'Annette.Feucht@AUDI.DE'[Annette.Feucht@AUDI.DE]; 'Pedro.Casals@bmw.de'[Pedro.Casals@bmw.de]; 'wouter.vandermeulen@daimler.com'[wouter.vandermeulen@daimler.com]; 'Toshihisa_Yamaguchi@hm.honda.co.jp'[Toshihisa_Yamaguchi@hm.honda.co.jp]; 'winfried.hartung@de.gm.com'[winfried.hartung@de.gm.com]; 'Takashi_Fujiwara@n.t.rd.honda.co.jp'[Takashi_Fujiwara@n.t.rd.honda.co.jp]; 'christian.hartmann@maha.de'[christian.hartmann@maha.de]; 'laura.bigi@mpsa.com'[laura.bigi@mpsa.com]; 'Heinz.Steven@t-online.de'[Heinz.Steven@t-online.de]; 'thomas.b.wagner@daimler.com'[thomas.b.wagner@daimler.com]; 'Andreas.EA.Eder@bmw.de'[Andreas.EA.Eder@bmw.de]; 'thomas.vogel@de.opel.com'[thomas.vogel@de.opel.com]; 'raymond.petrovan@gm.com'[raymond.petrovan@gm.com]; 'stefan.klimek@daimler.com'[stefan.klimek@daimler.com]; 'marcel.hassler@daimler.com']['marcel.hassler@daimler.com']; 'klaus.land@daimler.com'[klaus.land@daimler.com]; 'ARijnders@rdw.nl'[ARijnders@rdw.nl]; 'hschmidt@tuev-nord.de'[hschmidt@tuev-nord.de]; Krueger, Lothar (L.)[lkruege1@ford.com]; 'beatrice.lopez@utac.com']['beatrice.lopez@utac.com']; 'anoop.bhat@maruti.co.in'[anoop.bhat@maruti.co.in]; Crisp, Darren (D.)[dcrisp4@ford.com]; 'Gerhard.Wickern@AUDI.DE'[Gerhard.Wickern@AUDI.DE]; 'pg@acea.be'[pg@acea.be]; 'nakhawa.ecl@araiindia.com']['nakhawa.ecl@araiindia.com']; Guenther, Mark (M.T.)[mguenthe@ford.com]; 'bertrand.mercier@mpsa.com'[bertrand.mercier@mpsa.com]; Smith, Anthony (A.C.)[asmit685@ford.com]; 'kai.behlau@volkswagen.de'[kai.behlau@volkswagen.de]; 'Christoph.Lueginger@bmw.de'[Christoph.Lueginger@bmw.de]; 'bob.latu@renault.com'[bob.latu@renault.com]; 'celine.vallaude@utaceram.com'[celine.vallaude@utaceram.com]; 'iddo@sidekickprojects.nl'[iddo@sidekickprojects.nl]; 'Thomas.ST.Schuetz@bmw.de'[Thomas.ST.Schuetz@bmw.de]; 'Markus.Bergmann@AUDI.DE'[Markus.Bergmann@AUDI.DE]; 'folko.rohde@volkswagen.de'[folko.rohde@volkswagen.de]; 'william.coleman@volkswagen.de'[william.coleman@volkswagen.de]; Dirk Bosteels (Dirk.Bosteels@aecc.eu)[Dirk.Bosteels@aecc.eu]; Ligterink, N.E. (Norbert)[norbert.ligterink@tno.nl]; Hosier, Caro (C.S.)[chosier@ford.com]; Cecile Favre (Cecile.Favre@aecc.eu)[Cecile.Favre@aecc.eu]
Cc: 'noriyuki_ichikawa@mail.toyota.co.jp'[noriyuki_ichikawa@mail.toyota.co.jp]; 'ka-koba@shinsa.ntsel.go.jp'[ka-koba@shinsa.ntsel.go.jp]; 'stephan.redmann@bmvi.bund.de'[stephan.redmann@bmvi.bund.de]; 'Konrad.Kolesa@AUDI.DE'[Konrad.Kolesa@AUDI.DE]; 'Adriana POP'[amp@acea.be]
From: Cuelenaere, R.F.A. (Rob)
Sent: Mon 1/19/2015 9:58:17 AM
Subject: Agenda WLTP Annex 4: face-to-face progress meeting - 3 February 2015
Task Force WLTP Annex 4.docx

Dear all,
Please find attached a proposal for the agenda of the Annex 4 progress meeting, 3 February 2015, Brussels.
Kind regards,
Rob Cuelenaere
Co-ordinator WLTP Annex 4 Open Issues

Drs. R.F.A. (Rob) Cuelenaere
Senior consultant
T +31 (0)88 866 63 23
M +31 (0)6 528 03764
Location
Disclaimer

Sustainable Transport and Logistics E rob.cuelenaere@tno.nl

-----Original Appointment-----
From: Cuelenaere, R.F.A. (Rob)
Sent: 10 December 2014 10:26
To: Cuelenaere, R.F.A. (Rob); 'Nikolaus.Steininger@ec.europa.eu'; 'Annette.Feucht@AUDI.DE'; 'Pedro.Casals@bmw.de'; 'wouter.vandermeulen@daimler.com'; 'Toshihisa_Yamaguchi@hm.honda.co.jp'; 'winfried.hartung@de.gm.com'; 'Takashi_Fujiwara@n.t.rd.honda.co.jp'; 'christian.hartmann@maha.de'; 'laura.bigi@mpsa.com'; 'Heinz.Steven@t-online.de'; 'thomas.b.wagner@daimler.com'; 'Andreas.EA.Eder@bmw.de'; 'thomas.vogel@de.opel.com'; 'raymond.petrovan@gm.com'; 'stefan.klimek@daimler.com'; 'marcel.hassler@daimler.com'; 'klaus.land@daimler.com'; 'ARijnders@rdw.nl'; 'hschmidt@tuev-nord.de'; 'lkruege1@ford.com'; 'beatrice.lopez@utac.com'; 'anoop.bhat@maruti.co.in'; 'Dcrisp4@ford.com'; 'Gerhard.Wickern@AUDI.DE'; 'pg@acea.be'; 'nakhawa.ecl@araiindia.com'; 'Guenther, Mark (M.T.)'; 'bertrand.mercier@mpsa.com'; 'Smith, Anthony (A.C.)'; 'kai.behlau@volkswagen.de'; 'Christoph.Lueginger@bmw.de'; 'bob.latu@renault.com'; 'celine.vallaude@utaceram.com'; 'iddo@sidekickprojects.nl'; 'Thomas.ST.Schuetz@bmw.de'; 'Markus.Bergmann@AUDI.DE'; 'folko.rohde@volkswagen.de'; 'william.coleman@volkswagen.de'; Ligterink, N.E. (Norbert); 'chosier@ford.com'
Cc: 'noriyuki_ichikawa@mail.toyota.co.jp'; 'ka-koba@shinsa.ntsel.go.jp'; 'stephan.redmann@bmvi.bund.de'; 'Konrad.Kolesa@AUDI.DE'; 'Adriana POP'
Subject: WLTP Annex 4: face-to-face progress meeting
When: 03 February 2015 10:00-17:30 (UTC+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna.
Where: ACEA, Brussels

Telco/web access will be available

Address : Avenue des Nerviens 85 | B-1040 Brussels | www.acea.be

Agenda and documents will be made available only after WLTP IWG #9 in Geneva (14 Jan 2015)

This message may contain information that is not intended for you. If you are not the addressee or if this message was sent to you by mistake, you are requested to inform the sender and delete the message. TNO accepts no liability for the content of this e-mail, for the manner in which you use it and for damage of any kind resulting from the risks inherent to the electronic transmission of messages.

Task Force WLTP Annex 4: Road load determination & Chassis dyno settings

Agenda
Date: 3 February 2015
Time: 10:00 – 17:30
Venue: ACEA, Brussels – web/telco facilities

10:00 – 12:00 **Wind tunnel**

a. Advise if equivalency is sufficiently demonstrated: introduction Céline Vallaude, Folko Rohde, Christoph Lueginger
b. Wind tunnel text proposals to gtr: Christoph Lueginger
c. Moving-belt text proposal to gtr: Folko Rohde
d. Next steps

12:00 – 12:30 **Combined default RL approach**

a. Short presentation Daimler on way forward: Wouter Vandermeulen
b. Procedure, participation, next f2f meeting: André Rijnders

Lunch break

13:30 – 14.15 **Drafting issues**

a. Procedure following decision WLTP IWG in Geneva: introduction Rob Cuelenaere
b. First comments to list drafting co-ordinator
c. Additional points
    - Tyre rolling resistance - "Annex 6 of R117-02": Rob Cuelenaere
    - Improved description chassis dyno setting: Markus Bergmann
d. Next steps

14:15 – 15:45 **Torque meter**

a. Text proposals to gtr: Darren Crisp
b. Include OI#4 from Annex 2 Task Force: introduction Rob Cuelenaere
c. Additional tests: planning and set-up (if required)
d. Next steps

15:45 – 16:00 **Road load family concept**

a. Status report and planning: Christoph Lueginger

16:00 – 17:00 **On-board anemometer**

a. Decomposition results: Anthony Smith
b. Additional controlled experiments
c. Text proposals gtr specifications: Anthony Smith

17:00 **AOB**

To: Rodgers, William (EEO)[William.Rodgers@vw.com]
Cc: Haynes, Ben[haynes.ben@epa.gov]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]; Giles, Michael (EEO)[michael.giles@vw.com]; Snyder, Jim[Snyder.Jim@epa.gov]
From: Mazaitis, Vincent
Sent: Wed 1/14/2015 2:56:59 PM
Subject: RE: Ex. 4 - CBI

Thanks for the information Bill!

Vince Mazaitis

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Wednesday, January 14, 2015 9:47 AM
To: Mazaitis, Vincent; Snyder, Jim
Cc: Haynes, Ben; Allen, Gregory (EEO); Giles, Michael (EEO)
Subject: RE: Ex. 4 - CBI

Thanks again. We realize that nothing can be official until the manufacturer test data is submitted into Verify. However, we want to let you know our intentions so you can possibly pencil us in for the last week of February.

Ex. 4 - CBI

morning February 23rd . We will keep you advised of any changes to our plan. Please let me know if you have any concerns or questions.

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Mazaitis, Vincent [mailto:mazaitis.vincent@epa.gov]
Sent: Monday, January 12, 2015 12:57 PM
To: Rodgers, William (EEO)
Cc: Snyder, Jim; Haynes, Ben
Subject: RE: Ex. 4 - CBI

Hello Bill,

I had a great Holiday as I hope you did too! I'll reserve comment on the "fully charged" part!

I spoke with Ben and the schedule looks good for the end of Feb.

If you have any other questions or concerns, please let me know.

Thanks Bill,

Vince Mazaitis

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]

Sent: Monday, January 12, 2015 11:47 AM
To: Mazaitis, Vincent
Cc: Snyder, Jim
Subject: FW: Ex. 4 - CBI

Hello Vince,

I hope you had a wonderful holiday and are fully charged for 2015 ☺

In Jim Snyder's absence, I was wondering if you can inquire with Ben Haynes concerning my request below. Sometimes it helps us to get a feel for the lab's work load (or expected down-time) even prior to submitting tests when timing is critical.

Many thanks,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

From: Rodgers, William (EEO)
Sent: Monday, January 12, 2015 11:41 AM
To: "Jim Snyder' (Snyder.Jim@epamail.epa.gov)'
Cc: Giles, Michael; Allen, Gregory (EEO)
Subject: Ex. 4 - CBI

Hello Jim,

We hope to soon present Ex. 4 - CBI This is the vehicle that we recently promised you for confirmatory testing when it came. For our planning purposes, can you let us know how the lab's work load looks for Ex. 4 - CBI testing in week 8 or 9 (Feb 16-27th)?

Regards,

Bill Rodgers

Emissions Certification Engineer

VOLKSWAGEN GROUP OF AMERICA, INC.

Engineering and Environmental Office

Auburn Hills, MI

(248) 754-4219

william.rodgers@vw.com

To: Stump, Barbara[Stump.Barbara@epa.gov]
Cc: Snyder, Jim[Snyder.Jim@epa.gov]
From: Thomas, Richard (EEO)
Sent: Tue 1/13/2015 2:57:00 PM
Subject: RE: Certification Fee Account Balance

Hello Barbara;

I'm sorry have taken so long in responding to you mail, I have a couple of questions. As I see it,

Ex. 4 - CBI

Ex. 4 - CBI

Can you tell me what forms need to be completed in order to recoup these balances? If you have any questions, or can provide any information please feel free to call me, I am in the office until 3 pm.

Bet regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

From: Stump, Barbara [mailto:Stump.Barbara@epa.gov]
Sent: Thursday, October 16, 2014 10:18 AM
To: Thomas, Richard (EEO)
Cc: Snyder, Jim
Subject: RE: Certification Fee Account Balance

Hello Mr. Thomas,

Ex. 4 - CBI

Feel free to contact me if you have any other questions.

Thank you,

Barbara Stump

U.S. EPA Compliance Division

MVECP Fees

734-214-4256

From: Thomas, Richard (EEO) [mailto:Richard.Thomas@vw.com]
Sent: Thursday, October 16, 2014 8:46 AM
To: Stump, Barbara
Cc: Snyder, Jim
Subject: Certification Fee Account Balance

Hello Barbara;

Would you be able to tell me the balance in the Volkswagen Group account for certification fees.

Ex. 4 - CBI

Ex. 4 - CBI I don't know if there are any funds remaining in any another brand such as Audi or Bentley.

If you have any questions regarding my request, I can be reached at the number below.

Best regards,

Richard

Richard E. Thomas

Senior Emission Certification Specialist

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4213

Fax: 248 754 4207

mailto: Richard.Thomas@VW.com

To: Snyder, Jim[Snyder.Jim@epa.gov]
Cc: Wehrly, Linc[wehrly.linc@epa.gov]; Kata, Leonard (EEO)[Leonard.Kata@vw.com]; Peter, Juergen (EASZ/1)[juergen.peter@volkswagen.de]
From: Allen, Gregory (EEO)
Sent: Thur 1/8/2015 4:50:29 PM
Subject: Volkswagen Group of America - Ex. 4 - CBI

Ex. 4 - CBI

Hello Jim,

Ex. 4 - CBI

If you would like us to schedule a phone conference to go through the details of the presentation please let me know.

Thank You and Best Regards,

Greg Allen

VWGoA EEO

(248)754-4209

To: Wright, DavidA[Wright.DavidA@epa.gov]
From: Sigelko, Jenny (EEO)
Sent: Thur 4/9/2015 4:58:33 PM
Subject: RE: Reminder - April 9th SAE J3066 Task Force Meeting at EPA Office

Hi David,

I do regret to tell you that I've gotten no response from my experts on either file.

And, I'm not going to be able to call-in to the meeting, either. So I've completely struck out for completing tasks!

Thanks,

Jenny

From: Wright, DavidA [mailto:Wright.DavidA@epa.gov]
Sent: Monday, April 06, 2015 1:44 PM
To: Tommy_Chang@ahm.honda.com; Buller, Patrick; sconrad@hatci.com; Tom Beierschmitt (TEMA TTC); mky@chrysler.com; dennis.pawlak@na.mitsubishi-motors.com; douglas.reid@na.mitsubishi-motors.com; Paulina, Carl; Chris Nevers; Glodich, Jeffrey (J.M.); William Beggs; Ryan McGavock; Sigelko, Jenny (EEO); nokawa@mazdausa.com; Duoba, Michael J.; Yuhase, Nicole (L.); yosuke_sato@ahm.honda.com; Ellies, Ben; Bowu Reed; cmccar61@ford.com; Beth Perry
Subject: Reminder - April 9th SAE J3066 Task Force Meeting at EPA Office

The J3066 Task Force will meet this Thursday, April 9 at 1 pm at the main EPA office conference room at 2000 Traverwood. The April 9th meeting notice with conference call and webex details can be found at the Task Force webpage at the SAE Standards Works website, http://www.sae.org/servlets/works/committeeHome.do?comtID=TEVLDVPMTF#.

The agenda for this month's meeting is the expert review and comments on the Draft Mass Fuel Injected Calculation and the Draft – Fuel Economy Display Chassis Dynamometer Validation Testing documents. Both of these documents can be downloaded from the Task Force work

area, http://www.sae.org/servlets/works/postDiscussion.do?comtID=TEVLDVPMTF. The Draft Mass Fuel Injected Calculation summarizes the standard method for determining the quantity of fuel injected to be used for the on-board fuel economy calculation. The Fuel Economy Display Chassis Dynamometer Validation Testing summarizes the method used to verify the on-board calculation to chassis dynamometer exhaust emission test results.

The detailed Agenda will be posted later this week. Let me know if you have any questions or issues with accessing the documents at the Task Force website.

Regards,

David

David A. Wright

Light-Duty Vehicle Center, Compliance Division

National Vehicle and Fuel Emissions Laboratory

Phone: (734) 214-4467

E-mail: wright.davida@epa.gov

To: Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Snyder, Jim
Sent: Mon 9/21/2015 7:01:33 PM
Subject: etron

Got ur vm but I'm leaving for Ex. 6 Being here sound slike a good idea. Arlene Smithson will call you today or Bill when they know what time tues.

Jim Snyder
Light-Duty Vehicle Group
Compliance Division
United States Environmental Protection Agency
(734) 214-4946
snyder.jim@epa.gov

From: Snyder, Jim
Location: Conf Call
Importance: Normal
Subject: Accepted: CARB-EPA-VW Diesel Conf Call
Start Date/Time: Thur 9/17/2015 5:00:00 PM
End Date/Time: Thur 9/17/2015 7:00:00 PM

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Ex. 7 (EEO)
Sent: Tue 6/23/2015 3:39:12 PM
Subject: Automatic reply: VW Group Off-Cycle Review

Thank you for your email, however I am out of the office and will return on June 24th.

Please contact Ex. 7 if you need assistance.

Thanks

Ex. 7

To: Rodgers, William (EEO)[William.Rodgers@vw.com]; Danzeisen, Karen[Danzeisen.Karen@epa.gov]
Cc: Giles, Michael (EEO)[michael.giles@vw.com]; Vincent E Coleman[vcoleman2@csc.com]; Allen, Gregory (EEO)[Gregory.Allen@vw.com]
From: Snyder, Jim
Sent: Wed 9/16/2015 12:34:37 PM
Subject: RE: Volkswagen Ex. 4 - CBI

Ben confirmed that he received it. He wouldn't say when it will run but didn't immediately dismiss the possibility of next week.

-Jim

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Wednesday, September 16, 2015 7:39 AM
To: Danzeisen, Karen
Cc: Giles, Michael (EEO); Snyder, Jim; Vincent E Coleman; Allen, Gregory (EEO)
Subject: RE: Volkswagen Ex. 4 - CBI

It worked!!!!

Thanks for the help everyone.

@Jim – Can you follow up with Ben to see if next week is still possible for the testing. Our test vehicle arrived yesterday.

Regards,

Bill Rodgers

Emissions Certification Engineer

Volkswagen Group

3800 Hamlin Rd

Auburn Hills, MI 48326

p. (248) 754-4219

From: Danzeisen, Karen [mailto:Danzeisen.Karen@epa.gov]
Sent: Tuesday, September 15, 2015 5:12 PM
To: Rodgers, William (EEO)
Cc: Giles, Michael (EEO); Snyder, Jim
Subject: RE: Volkswagen Ex. 4 - CBI

Hi Bill,

Vince Coleman at the Verify Help Desk has been following your progress on this and let me know a little while ago that you attempted to submit your Ex. 4 - CBI but got an error. It looks like you removed the test details Ex. 4 - CBI for Test Ex. 4 - CBI

Ex. 4 - CBI

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

danzeisen.karen@epa.gov

(734)214-4444

www.epa.gov/nvfel/

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Tuesday, September 15, 2015 10:01 AM
To: Danzeisen, Karen
Cc: Giles, Michael (EEO); Snyder, Jim
Subject: RE: Volkswagen Ex. 4 - CBI

Thanks Karen.

I have successfully submitted a Ex. 4 - CBI

@Jim – Ex. 4 - CBI Of course it's understood that the Ex. 4 - CBI

Regards,

Bill Rodgers

Volkswagen Group

(248) 754-4219

From: Danzeisen, Karen [mailto:Danzeisen.Karen@epa.gov]
Sent: Tuesday, September 15, 2015 9:26 AM
To: Rodgers, William (EEO)
Cc: Giles, Michael (EEO); Snyder, Jim
Subject: RE: Volkswagen Ex. 4 - CBI

Hello Bill,

Thank you for these examples illustrating what's going on. The reason you get an Ex. 4 - CBI Ex. 4 - CBI whatever standards you are entering and then moving on to compile the necessary data to send to our Lab for scheduling. It's at this point that it reaches back to Ex. 4 - CBI grabs the Ex. 4 - CBI The system is not designed to handle tests with Ex. 4 - CBI and that's where the crash occurs.

So, I think the next step is to attempt a Ex. 4 - CBI where you would Ex. 4 - CBI It's possible we may run into some problem because Jim has selected Ex. 4 - CBI tests already, but I think it's worth a try rather than scraping everything right off the bat. If it does work, then the next step would be to proceed to your Ex. 4 - CBI and resubmitting that.

Let me know how it goes.

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

danzeisen.karen@epa.gov
(734)214-4444

www.epa.gov/nvfel/

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Tuesday, September 15, 2015 8:22 AM
To: Danzeisen, Karen; Snyder, Jim
Cc: Giles, Michael (EEO)
Subject: Volkswagen Ex. 4 - CBI
Importance: High

Hello Karen and Jim,

I have attached the Ex. 4 - CBI report which include all test types required by the Ex. 4 - CBI

Additionally as indicated below we only get a Verify processing error when attempting to submit

Ex. 4 - CBI

Please assist in resolving this matter today to avoid test scheduling problems.

Regards,

Bill Rodgers

Volkswagen Group

(248) 754-4219

There was a problem processing your request

From

Verify Administrator

Date

9/15/2015 7:44:33 AM

There was an unexpected error processing your submission. Please retry your submission at a later date. If you continue to receive this message please contact the

Verify Helpdesk. It can be reached through email (verifyhelp@csc.com) or by phone (1-888-890-1995 and choose option 4).

The rejection occurred at Tue Sep 15 07:44:21 EDT 2015 while processing document:

Ex. 4 - CBI

Vehicle ID: Ex. 4 - CBI

Vehicle Configuration #: 0

Transaction Identifier: Ex. 4 - CBI

To: Giles, Michael (EEO)[michael.giles@vw.com]; Rodgers, William (EEO)[William.Rodgers@vw.com]
From: Snyder, Jim
Sent: Mon 9/14/2015 9:45:11 PM
Subject: FW: VW Group - Ex. 4 - CBI

Mike can you send her your XML and error report?

From: Danzeisen, Karen
Sent: Monday, September 14, 2015 5:36 PM
To: Snyder, Jim
Subject: RE: VW Group - Ex. 4 - CBI

Jim,

Without looking at their processing report that includes the submitted XML and the error msg, it's hard for me to say if anything else needs to be done in the Ex. 4 - CBI submission. I'm a little confused that he mentions Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI

Sorry this is such a hassle… until the Lab changes how they accept data from us we're kind of stuck with these special case problems.

Karen

Karen E. Danzeisen
Information Technology Specialist
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

danzeisen.karen@epa.gov
(734)214-4444

www.epa.gov/nvfel/

From: Snyder, Jim
Sent: Monday, September 14, 2015 5:11 PM
To: Danzeisen, Karen
Subject: FW: VW Group - Ex. 4 - CBI

Karen , Bill went home and Mike took over. Ex. 4 - CBI

Ex. 4 - CBI

From: Giles, Michael (EEO) [mailto:michael.giles@vw.com]
Sent: Monday, September 14, 2015 4:51 PM
To: Snyder, Jim
Cc: Rodgers, William (EEO)
Subject: VW Group - Ex. 4 - CBI

Ho Jim,

I was unable to submit a trimmed down supplemental XML with only a few tags for the Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI

Mike

Michael Giles

Certification Engineer

Engineering & Environmental Office (EEO)

Volkswagen Group of America, Inc.

3800 Hamlin Road

Auburn Hills, MI 48326

Phone: 248 754 4229

Fax: 248 754 4207

mailto: Michael.Giles@VW.com

To: Danzeisen, Karen[Danzeisen.Karen@epa.gov]
Cc: Rodgers, William (EEO)[William.Rodgers@vw.com]
From: Snyder, Jim
Sent: Mon 9/14/2015 7:38:13 PM
Subject: RE: VW Ex. 4 - CBI

Ex. 4 - CBI
Ex. 4 - CBI is that correct Bill?

From: Danzeisen, Karen
Sent: Monday, September 14, 2015 3:33 PM
To: Snyder, Jim
Subject: RE: VW Ex. 4 - CBI

If the error snippet shown below is what they most recently submitted, then it seems like they are

Ex. 4 - CBI

Ex. 4 - CBI

Thanks,

Karen

From: Snyder, Jim
Sent: Monday, September 14, 2015 3:24 PM
To: Danzeisen, Karen
Subject: FW: VW Ex. 4 - CBI

Looks like it didn't work.

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Monday, September 14, 2015 3:14 PM
To: Snyder, Jim; verifyhelp@csc.com
Subject: RE: VW Ex. 4 - CBI

Correct Jim.

Ex. 4 - CBI

From: Snyder, Jim [mailto:Snyder.Jim@epa.gov]
Sent: Monday, September 14, 2015 3:12 PM
To: Rodgers, William (EEO); verifyhelp@csc.com
Subject: RE: VW processing error

Ex. 4 - CBI

From: Rodgers, William (EEO) [mailto:William.Rodgers@vw.com]
Sent: Monday, September 14, 2015 3:09 PM
To: verifyhelp@csc.com
Cc: Snyder, Jim
Subject: VW Ex. 4 - CBI

Ex. 4 - CBI

Transaction Status Details

Ex. 4 - CBI

Bill Rodgers

Volkswagen Group

248-754-4219

There was a problem processing your request

From

Verify Administrator

Date

9/14/2015 2:57:50 PM

There was an unexpected error processing your submission. Please retry your submission at a later date. If you continue to receive this message please contact the Verify Helpdesk. It can be reached through email (verifyhelp@csc.com) or by phone (1-888-890-1995 and choose option 4).

The rejection occurred at Mon Sep 14 14:57:18 EDT 2015 while processing document:

Ex. 4 - CBI

Vehicle ID: Ex. 4 - CBI

Vehicle Configuration #: 0

Transaction Identifier: _ Ex. 4 - CBI

Regards,

Bill Rodgers

EEO

To: Wehrly, Linc[wehrly.linc@epa.gov]
From: Kata, Leonard (EEO)
Sent: Thur 2/19/2015 10:04:17 PM
Subject: Audi Q7 Coastdown

Hello Linc:

I have checked further into your question about the 2016 model year Audi Q7 for coastdown testing. Ex. 4 - CBI

Ex. 4 - CBI

Ex. 4 - CBI

Best regards,

Len

Leonard W. Kata

Senior Manager

Emission Regulations and Certification

Engineering and Environmental Office

Volkswagen Group of America, Inc.

Phone: (248) 754-4204

Cell: (248) 797-3886

Fax: (248) 754-4207

E-Mail: leonard.kata@vw.com

To: Ex. 7
Cc: Ex. 7
From: Wehrly, Linc
Sent: Wed 7/15/2015 1:27:53 PM
Subject: RE: GHG Off-cycle credits

Thanks!

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Ex. 7 @vw.com]
Sent: Wednesday, July 15, 2015 8:40 AM
To: Wehrly, Linc
Cc: Ex. 7
Subject: RE: GHG Off-cycle credits

No problem, please see attached. Thanks again for the discussion.

From: Wehrly, Linc [mailto:wehrly.linc@epa.gov]
Sent: Tuesday, July 14, 2015 4:25 PM
To: Ex. 7
Subject: GHG Off-cycle credits

Nick,

Could you please send me an electronic version of the presentation you shared with me last Friday?

Thanks,

Linc

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Wehrly, Linc
Location: Ann Arbor Lab
Importance: Normal
Subject: Accepted: Off-Cycle Tech Discussion
Start Date/Time: Fri 7/10/2015 5:00:00 PM
End Date/Time: Fri 7/10/2015 6:00:00 PM

To: Ex. 7

Ex. 7

From: Wehrly, Linc
Sent: Tue 6/23/2015 3:39:08 PM
Subject: RE: VW Group Off-Cycle Review

Nick,

That would be fine. Check your schedules and propose a new date.

Linc

Linc Wehrly
Director, Light-Duty Vehicle Center
Compliance Division
Office of Transportation and Air Quality
United States Environmental Protection Agency
(734) 214-4286
wehrly.linc@epa.gov

-----Original Appointment-----
From: Ex. 7 @vw.com]
Sent: Tuesday, June 23, 2015 10:38 AM
To: Ex. 7
Ex. 7
Subject: Canceled: VW Group Off-Cycle Review
When: Thursday, June 25, 2015 1:00 PM-2:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: EPA Offices
Importance: High

Hello Linc, Rob,

Unfortunately I need to ask if we can postpone our discussion regarding some future off-cycle technologies. With the holidays coming up, could we look at sometime after the 4th? I will check on our side and forward some proposals.

Thanks for understanding and we will follw-up soon,
Ex. 7

From: Wehrly, Linc
Importance: Normal
Subject: Meeting Forward Notification: VW Group Off-Cycle Review
Start Date/Time: Tue 6/23/2015 1:00:00 PM
End Date/Time: Tue 6/23/2015 1:30:00 PM

Your meeting was forwarded

Wehrly, Linc has forwarded your meeting request to additional people.

Meeting
VW Group Off-Cycle Review

Meeting Time
Thursday, June 25, 2015 1:00 PM - Thursday, June 25, 2015 2:00 PM

Recipients
Fearnside, Judy

All times listed are in the following time zone: (UTC-05:00) Eastern Time (US & Canada)

From: Wehrly, Linc
Location: EPA Offices
Importance: Normal
Subject: Accepted: VW Group Off-Cycle Review
Start Date/Time: Thur 6/25/2015 5:00:00 PM
End Date/Time: Thur 6/25/2015 6:00:00 PM

To: Ex. 7
Cc:
Ex. 7
From: Wehrly, Linc
Sent: Tue 6/9/2015 8:13:40 PM
Subject: RE: VW Group Off-Cycle Concepts Review

Ex. 7

Next week would be fine, but I will out Thursday and Friday, so it will have to be before that. Let me know if you are available or whether you want to wait another week.

Regards,

Linc

Linc Wehrly

Director, Light-Duty Vehicle Center

Compliance Division

Office of Transportation and Air Quality

United States Environmental Protection Agency

(734) 214-4286

wehrly.linc@epa.gov

From: Ex. 7
Sent: Tuesday, June 09, 2015 9:21 AM
To: Wehrly, Linc; French, Roberts
Cc: Ex. 7
Subject: VW Group Off-Cycle Concepts Review

Hi Linc, Rob,

Various departments throughout our organization have been approaching us with concepts for advanced technologies which may Ex. 4, 7

Ex. 4, 7

We would like to set-up a brief introductory review of the technologies with you both just to get the concepts in front of you and start the discussion on Ex. 4, 7

Ex. 4, 7

Nothing formal, just a few slides on each concept. Could we look at scheduling an hour sometime for later next week? Probably just Len, Stuart, and myself from our side. At this point, we have Ex. 4, 7 being discussed.

Thanks,

Ex. 7

Ex. 7

Engineering and Environmental Office

Volkswagen Group of America, Inc.
3800 Hamlin Road
Auburn Hills, MI 48326

Ex. 7

From: Ex. 7
Location: Ann Arbor Lab
Importance: Normal
Subject: Off-Cycle Tech Discussion
Start Date/Time: Fri 7/10/2015 5:00:00 PM
End Date/Time: Fri 7/10/2015 6:00:00 PM

;
Reschedule from last week.
Quick overview of some off-cycle technologies

From: Snyder, Jim
Required Attendees: Wehrly, Linc; French, Roberts; Wright, DavidA; Kata, Leonard (EEO); Giles, Michael (EEO); Tamborra, Nick (EEO); Dalton, Joel; Ball, Joel; Ott, William
Location: AA-Room-Office-N95-ConfRoom-AAOTAQ-Office
Importance: Normal
Subject: VW MTG: Off Cycle and A/C Credits
Start Date/Time: Thur 2/5/2015 6:00:00 PM
End Date/Time: Thur 2/5/2015 7:30:00 PM