UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

NCI: Stopping Aftermarket Defeat Devices for Vehicles and Engines

Numerous companies and individuals have manufactured and sold hardware and software specifically designed to defeat required emissions controls in violation of the CAA

Illegally-modified vehicles and engines contribute substantial excess pollution that harms public health and impedes efforts by the EPA, tribes, states, and local agencies to plan for and attain air quality standards

What drives demand?

- premature death in people with heart or lung disease,
- nonfatal heart attacks,
- irregular heartbeat,
- aggravated asthma,
- decreased lung function, and
- increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing.

Title II of the Clean Air Act: Vehicles and Engines

NOx

CO

PM

EPA determines pollutants and sets legal limit

Manufacturer designs vehicles to comply

Certificate of Conformity

For Internal Use Only, Not for Public Release

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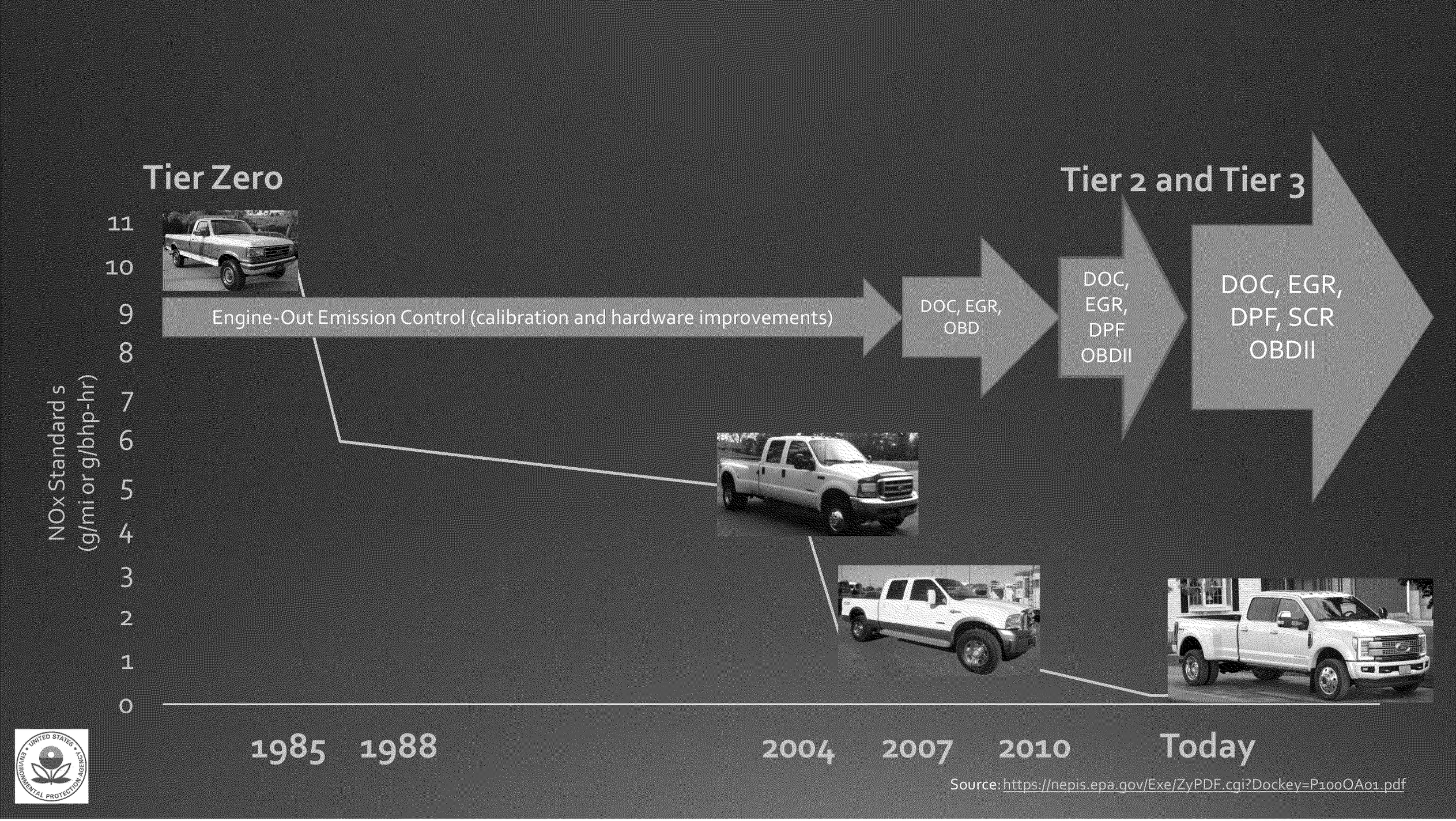
Tampering and Aftermarket Defeat Devices Undermine EPA's Vehicle and Engine Program


Tier Zero
Tier 2 and Tier 3
NOx Standard s
(g/mi or g/bhp-hr)
11
10
9
8
7
6
5
4
3
2
1
0
Engine-Out Emission Control (calibration and hardware improvements)
DOC, EGR, OBD
DOC, EGR, DPF OBDII
DOC, EGR, DPF, SCR OBDII
1985
1988
2004
2007
2010
Today
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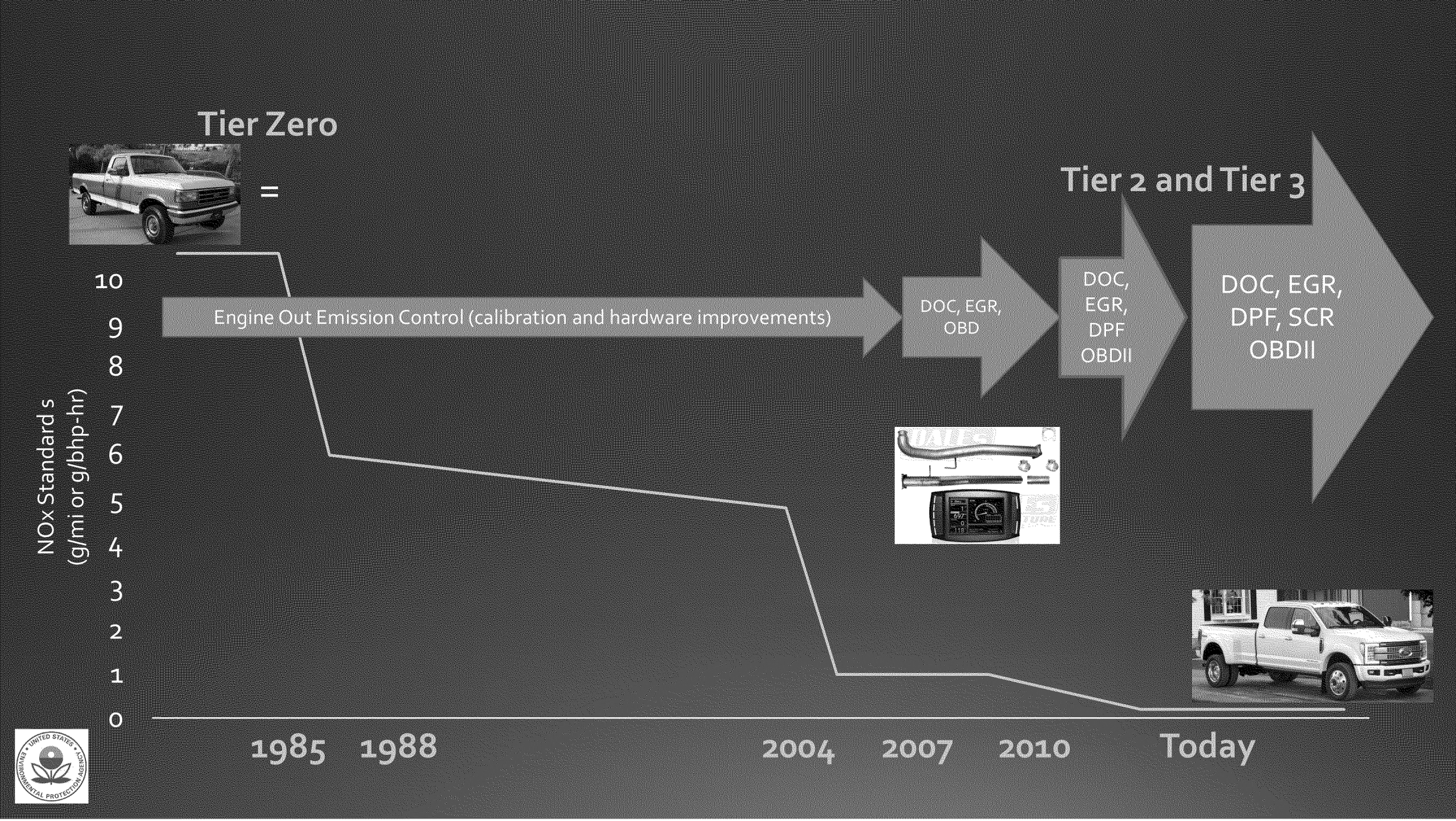
Tier Zero
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10
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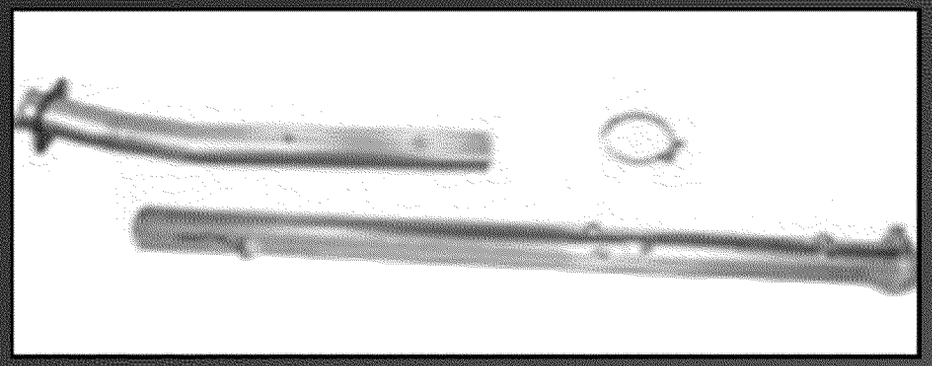
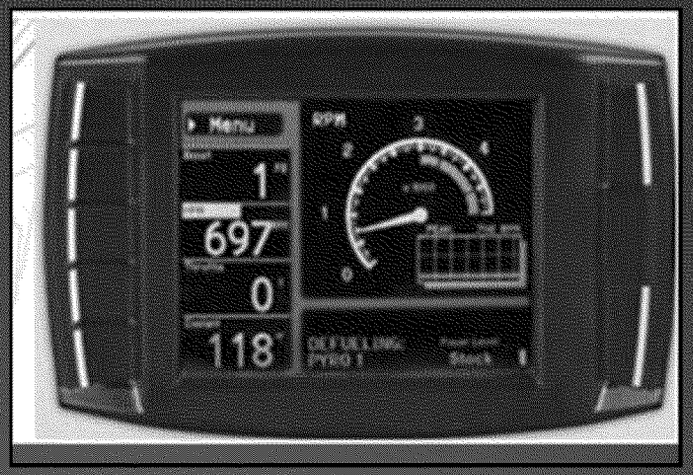
Hardware



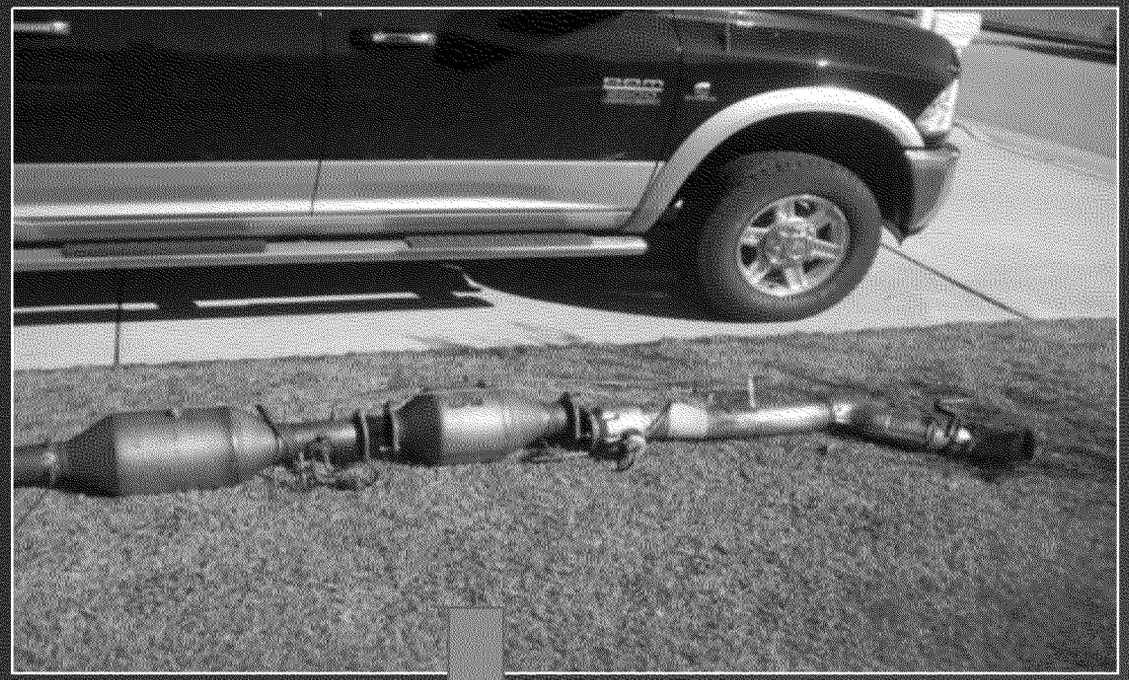
Straight Pipe

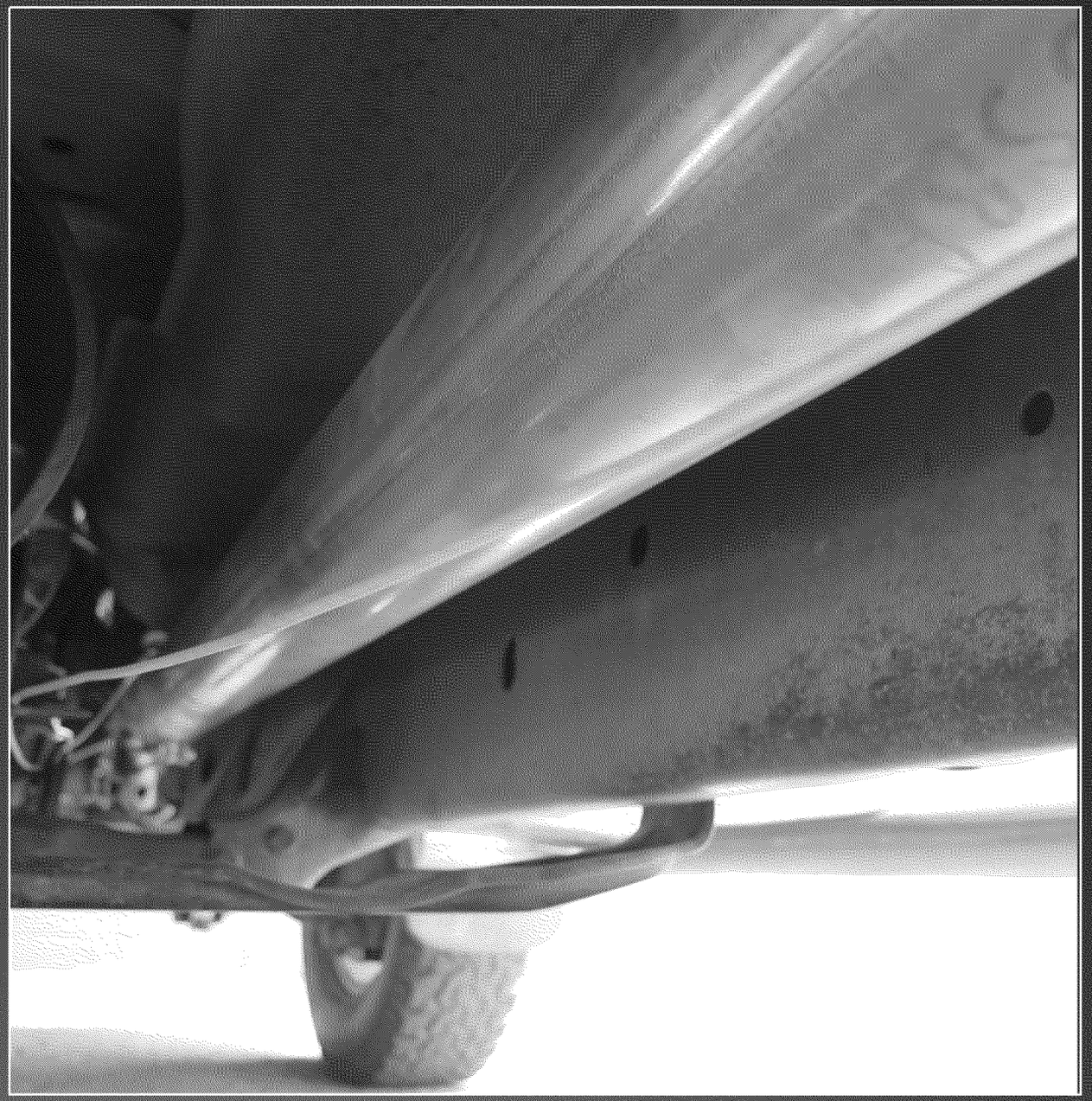
Software



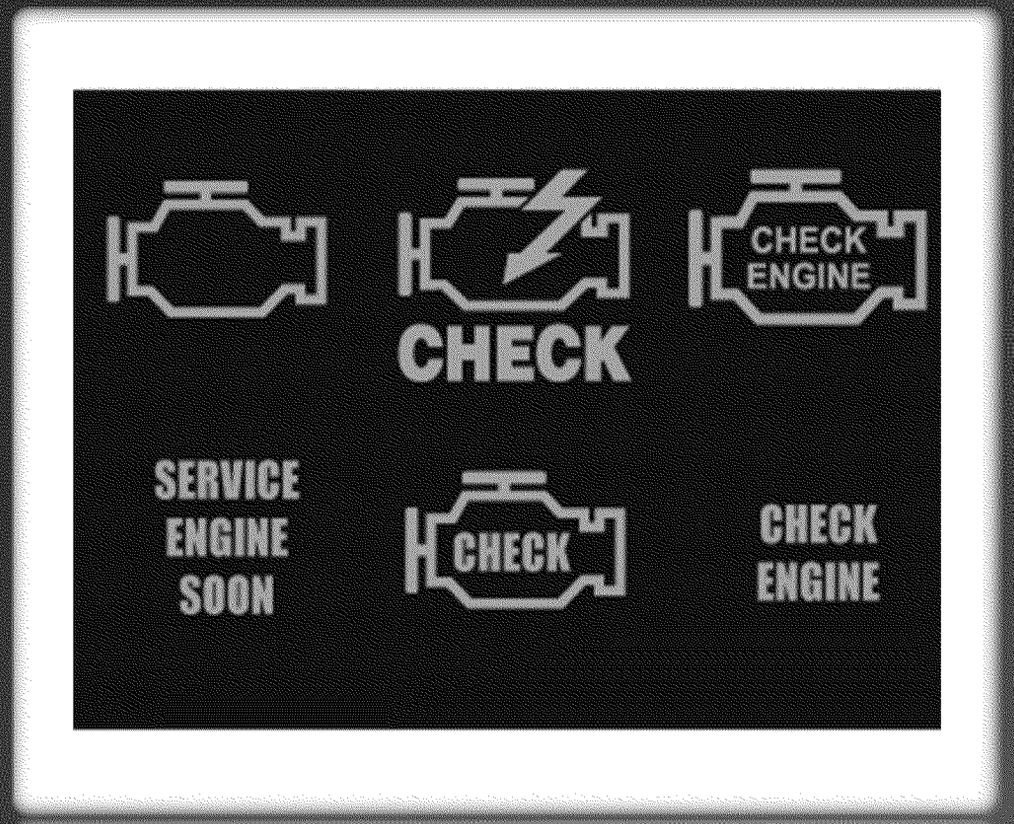
Tuner

Aftertreatment system removed…





…and replaced with a straight pipe


CHECK
CHECK ENGINE
SERVICE ENGINE SOON
CHECK
CHECK ENGINE

"The Acme Defeat Device unlocks your vehicle's hidden performance by recalibrating your vehicle's computer for maximum horsepower & torque, increased throttle response, firmer shifts and even increased fuel mileage."

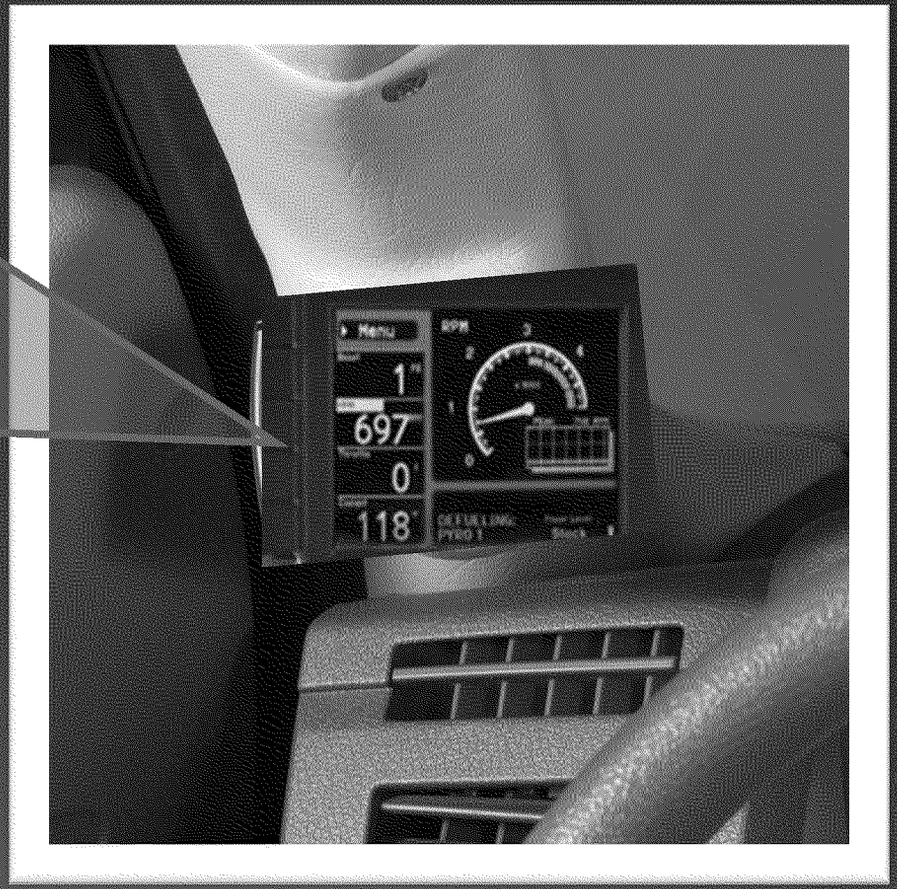


Photo of a **tuner** mounted on a dashboard

61.6 %: 99.19
104.19
86.72
72.48

Manufacturers

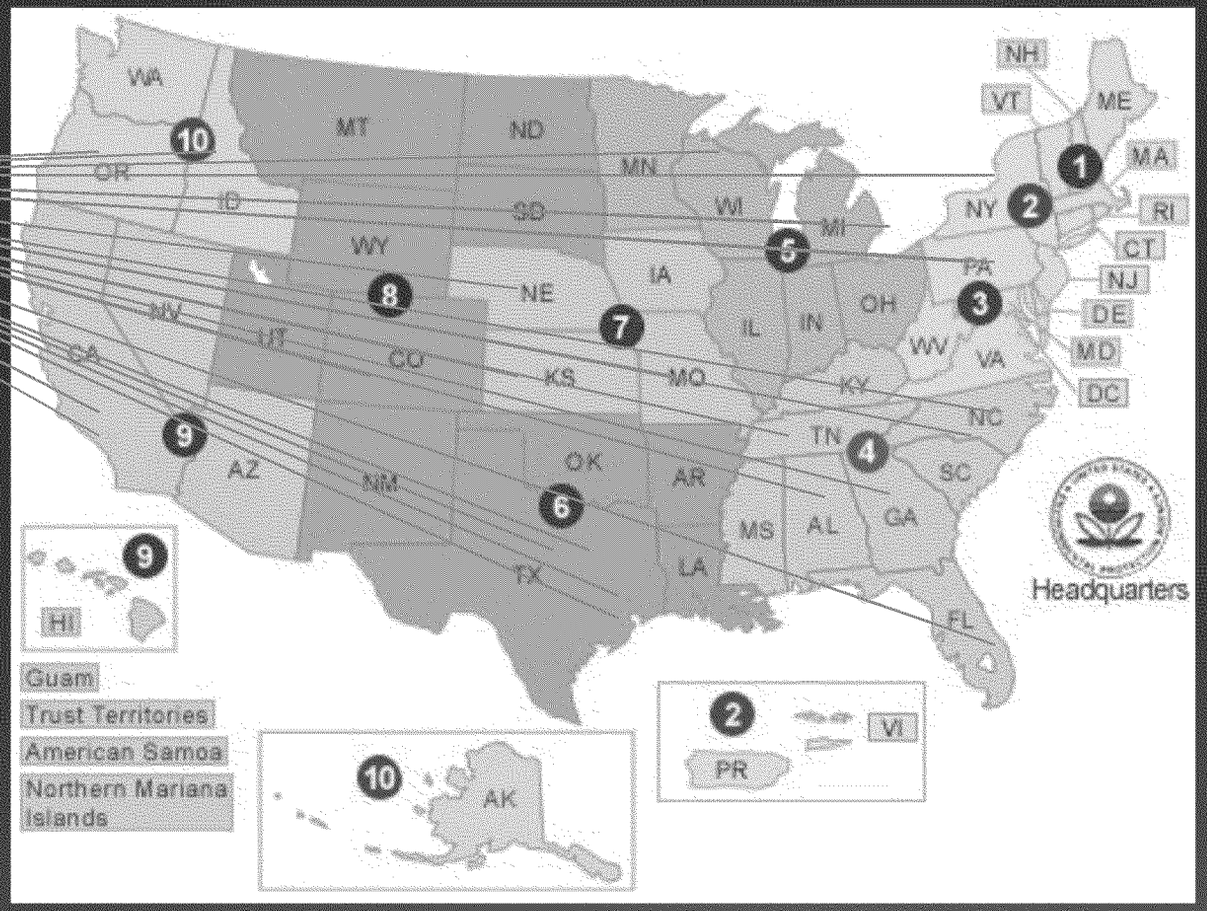
Retailers

Installers

End users

Sampling of tips in a month

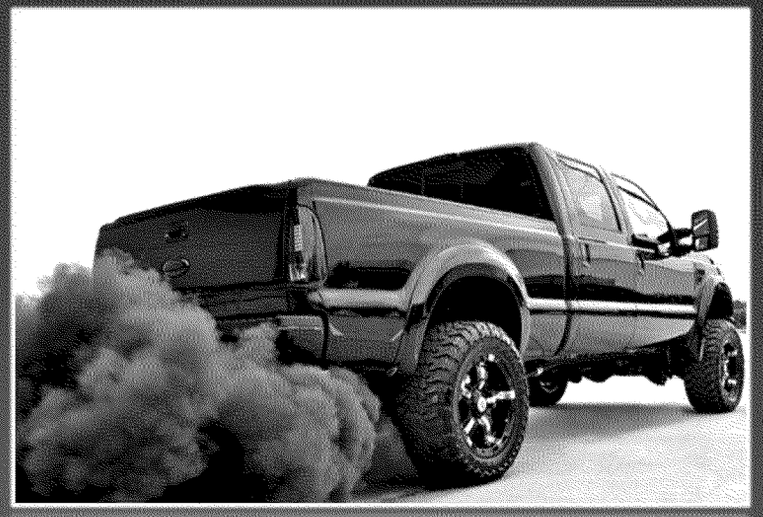
16 States



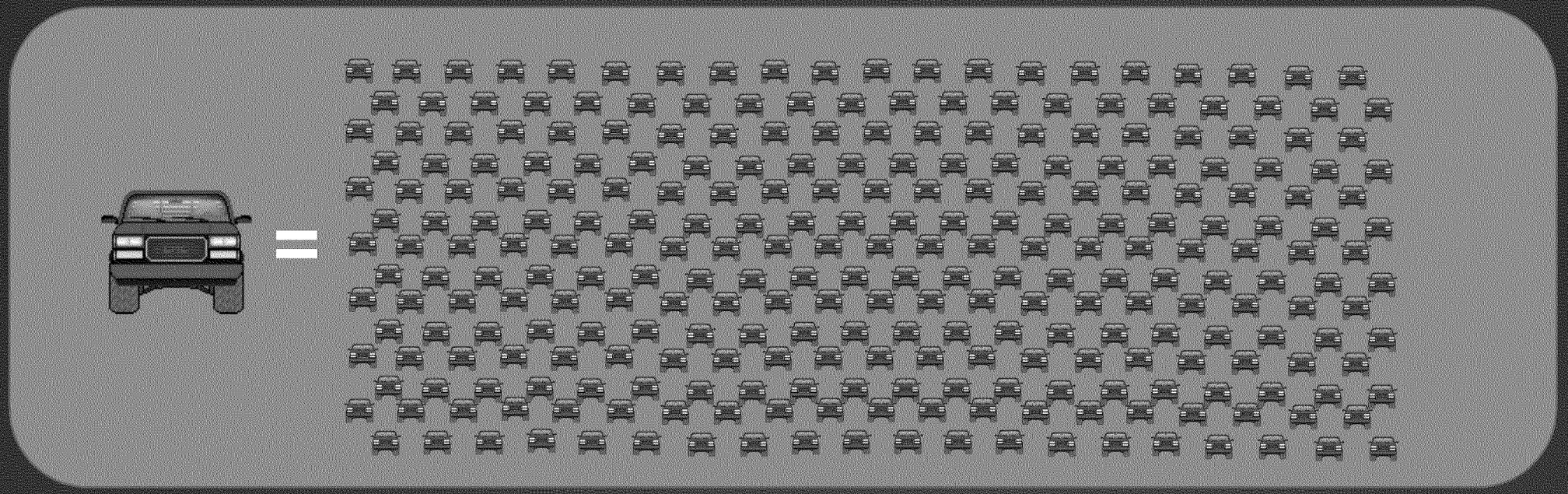
If you suspect someone is manufacturing, selling, or installing illegal defeat devices, or is tampering with emission controls, tell the EPA by writing to: **tampering@epa.gov**

Air Quality & Public Health

- Testing shows that vehicles equipped with defeat devices can have emissions **tens to hundreds of times higher** than compliant vehicles, depending on the device and the extent of the work done on the vehicle.
- Our cases show that these devices are effectively adding **millions of cars and trucks** to our public roads.



Emissions Increase Due to Full Delete



NOx increased ~310x
NMHC increased ~1,140x
CO increased ~120x
PM increased ~40x

Test results when a tuner enables the full removal of emissions controls.

In EPA enforcement cases alone…

500,000+ trucks have been deleted.
That's ~13% of all trucks.
500,000+ tons of excess NOx

Air quality impact equivalent to adding 9 million more trucks to our roads, doubling truck sales over the past decade.

✓

✓

✓

F150

Department of Justice

U.S. Attorney's Office

Southern District of California

SHARE

FOR IMMEDIATE RELEASE

Thursday, April 11, 2019

San Marcos Companies and Executives Charged with Tampering with Emission Control Devices on Diesel Truck Fleet

Assistant U.S. Attorney Melanie K. Pierson (619) 546-7976

NEWS RELEASE SUMMARY – April 11, 2019

SAN DIEGO – A federal grand jury in San Diego today returned a six-count indictment charging three San Marcos companies, two managers and a technician with various felonies related to tampering with emission control devices on heavy-duty diesel trucks.

Diamond Environmental Services LP, Diamond Maintenance Services, LLC and Diamond Solid Waste, Inc. (collectively "Diamond") of San Marcos, California, plus owner and manager Arie Eric De Jong III, manager Warren Van Dam and technician Jorge Leyva Rodriguez of ECM Diesel Programming were charged with conspiring to manipulate the electronic control module (ECM) on Diamond's fleet of heavy duty diesel trucks. The alleged manipulation was designed to disable the monitoring system that would

EMISSIONS-RELATED PARTS

BEFORE YOU SELL...

Have proof that the parts will not increase emissions (for example, emissions test results or an Executive Order from California Air Resources Board demonstrating no illegal emissions increase for the intended use of the part).

BEFORE YOU INSTALL...

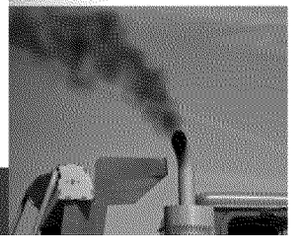
Have proof that the vehicle will be returned to its original, stock configuration after installation; or

Have proof that the parts will not increase emissions.

REPORT PROBLEMS

If you suspect someone is manufacturing, selling or installing illegal defeat devices, or is tampering with emissions controls, tell the EPA by writing to:

tampering@epa.gov

EPA

TAMPERING
POLLUTES OUR AIR