Message

From: Brad Edgar [brad.edgar@44energytech.com]
Sent: 7/25/2018 6:30:53 PM
To: Bunker, Byron [bunker.byron@epa.gov]
CC: Juston Smithers [juston.smithers@44energytech.com]
Subject: Follow Up Documents
Attachments: Emission Test Summary for DIesels.pdf; PastedGraphic-1.tiff

Byron: Our client just cleared us to share some information with you. Attached are two documents:

1. SAE paper on the Ford 6.7L PowerStroke engine. Discussion of how same basic engine can be configured to meet both the easier chassis cycle and more difficult engine dyno cycle.

2. Summary of PEMS (and some chassis dyno) testing of a variety of engines. It's a little hard to rank order them from worst to least work, but we do highlight the emission results and discuss some of the defeat device behavior observed.

Let us know if you have any questions.

Thanks,

Brad

SAE International

The New Ford 6.7L V-8 Turbocharged Diesel Engine

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ABSTRACT

A new diesel engine, called the 6.7L Power Stroke® V-8 Turbocharged Diesel, and code named "Scorpion" has been designed and developed by Ford Motor Company for the full-size pickup truck and light commercial vehicle markets. It incorporates the latest design technology to meet 2010 model year emission regulations for both chassis and dynamometer based certifications, and is compatible with up to B20 biodiesel fuel. The engine is an entirely new 90 degree V-8 design featuring inboard exhaust, piezo common rail fuel injection, a new dual compressor wheel turbocharger, and dual loop cooling systems. The 6.7L, shown in Figure 1 , is Ford's first diesel engine designed for the North American pickup and light commerical truck market.

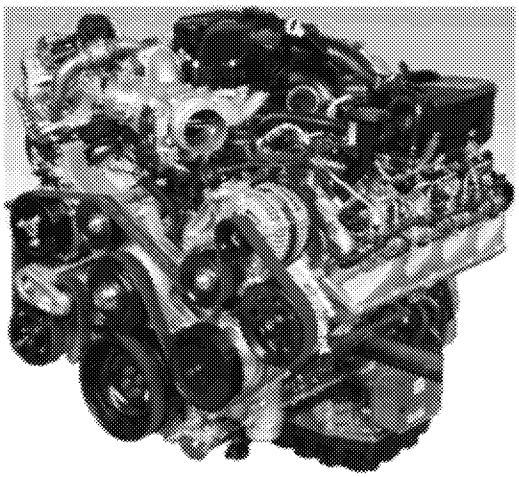

Figure 1. Ford 6.7L Power Stroke® Diesel Engine

INTRODUCTION

Diesel engines have been a large and growing part of the pickup truck and light commercial vehicle market for over 25 years. Ford recently developed several diesels in Europe as the diesel market expanded there. Increasingly complex diesel technology and market competitiveness demanded Ford aquire personnel with diesel specific skills and knowledge. Moreover, the diesel competition is continually improving.

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