State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-290-23

Relating to Certification of New Heavy-Duty Motor Vehicle Engines

DETROIT DIESEL CORPORATION

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102 and 43103 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-3;

IT IS ORDERED AND RESOLVED: That the following Detroit Diesel Corporation 1993 model diesel engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 8,500 pounds:

Fuel Type: Diesel

| Engine Family | Liters | (Cubic Inches) | Exhaust Emission Control Systems and Special Features |
|---|---|---|---|
| PDD12.7FZA7 | 12.7 | (775) | Turbocharger<br>Charge Air Cooler<br>Powertrain Control Module |

Engine models and codes are listed on attachments.

The following are the certification emission standards for this engine family in grams per brake-horsepower-hour:

| Hydrocarbons | Carbon Monoxide | Nitrogen Oxides | Particulates |
|---|---|---|---|
| 1.3 | 15.5 | 5.0 | 0.25 |

The following are the certification emission values for this engine family in grams per brake-horsepower-hour:

| Engine Family | Hydrocarbons | Carbon Monoxide | Nitrogen Oxides | Particulates |
|---|---|---|---|---|
| PDD12.7FZA7 | 0.1 | 2.3 | 4.8 | 0.23 |

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et seq.).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this order and attachments.

Executed at El Monte, California this 9th day of December, 1992.

R. B. Summerfield
Assistant Division Chief
Mobile Source Division

Executive Order No.: A-290-23

# 1993 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
## HEAVY-DUTY DIESEL ENGINES

Manufacturer: Detroit Diesel Corporation  Engine Family: PDD12.7FZA7

Liter (CID): 12.7 (775)  Fuel Type: Diesel No. 2  Engine Config.: I-6

Emission Control System and (Special Features): ECM/PCM,CAC,(TC)

| ENGINE MODEL (ENG. CODE) | RATED HP AT RPM | FUEL RATE @ RATED HP mm3/STROKE (LBS/HR) | FUEL PUMP & INJECTOR P/N | ECM/PCM P/N | PART. TRAP/ CATALYST P/N |
|---|---|---|---|---|---|
| 12.7L | | | | | |
| 1A | 450@2100 | 212.0 (148.1) | 5234970 | 7570050 | |
| 2A | 450@1800 | 236.8 (141.8) | 5234970 | 7570050 | |
| 3A | 425@2100 | 197.8 (138.1) | 5234970 | 7570050 | |
| 4A | 400@2100 | 185.0 (129.2) | 5234940 | 7570050 | |
| 5A | 425@1800 | 221.5 (132.6) | 5234940 | 7570050 | |
| 5B | 365@1800 | 189.6 (113.5) | | | |
| 5C | 355@1800 | 184.4 (110.4) | | | |
| 6A | 400@2100 | 185.0 (129.2) | 5234940 | 7570050 | |
| 7A | 400@1800 | 207.8 (124.4) | 5234940 | 7570050 | |
| 7B | 365@1800 | 189.6 (113.5) | | | |
| 7C | 355@1800 | 184.4 (110.4) | | | |

(1) Diesel Technology Corporation

ISSUED: 09-15-92  REV. NO.:

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| ENGINE MODEL (ENG. CODE) | RATED HP AT RPM | FUEL RATE @ RATED HP mm3/STROKE (LBS/HR) | FUEL PUMP & INJECTOR P/N | ECM/PCM P/N | PART. TRAP/ CATALYST P/N |
|---|---|---|---|---|---|
| 12.7L | | | | | |
| 8A | 365@2100 | 168.8 (117.9) | 5234940 | 7570050 | |
| 9A | 365@1800 | 189.6 (113.5) | 5234940 | 7570050 | |
| 10A | 355@2100 | 164.3 (114.7) | 5234940 | 7570050 | |
| 11A | 355@1800 | 184.4 (110.4) | 5234940 | 7570050 | |
| 12A | 400@1950 | 195.6 (126.8) | 5234940 | 7570050 | |
| 13A | 375@1800 | 194.8 (116.6) | 5234940 | 7570050 | |
| 13B | 350@1800 | 181.8 (108.8) | | | |

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|---|---|---|---|---|---|
| 12.7L | | | | | |
| 1A | 450@2100 | 212.0 (148.1) | 5234970 5235695(1) | 7570050 | |
| 2A | 450@1800 | 236.8 (141.8) | 5234970 5235695(1) | 7570050 | |
| 3A | 425@2100 | 197.8 (138.1) | 5234970 5235695(1) | 7570050 | |
| 4A | 400@2100 | 185.0 (129.2) | 5234940 5235600(1) | 7570050 | |
| 5A | 425@1800 | 221.5 (132.6) | 5234940 5235600(1) | 7570050 | |
| 5B | 365@1800 | 189.6 (113.5) | | | |
| 5C | 355@1800 | 184.4 (110.4) | | | |
| 6A | 400@2100 | 185.0 (129.2) | 5234940 5235600(1) | 7570050 | |
| 7A | 400@1800 | 207.8 (124.4) | 5234940 5235600(1) | 7570050 | |
| 7B | 365@1800 | 189.6 (113.5) | | | |
| 7C | 355@1800 | 184.4 (110.4) | | | |

(1) Effective with implementation of Running Change No. 30.

Executive Order No.: A-290-23

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| ENGINE MODEL (ENG. CODE) | RATED HP AT RPM | FUEL RATE @ RATED HP mm3/STROKE (LBS/HR) | FUEL PUMP & INJECTOR P/N | ECM/PCM P/N | PART. TRAP/ CATALYST P/N |
|---|---|---|---|---|---|
| 12.7L | | | | | |
| 8A | 365@2100 | 168.8 (117.9) | 5234940 5235600(1) | 7570050 | |
| 9A | 365@1800 | 189.6 (113.5) | 5234940 5235600(1) | 7570050 | |
| 10A | 355@2100 | 164.3 (114.7) | 5234940 5235600(1) | 7570050 | |
| 11A | 355@1800 | 184.4 (110.4) | 5234940 5235600(1) | 7570050 | |
| 12A | 400@1950 | 195.6 (126.8) | 5234940 5235600(1) | 7570050 | |
| 13A | 375@1800 | 194.8 (116.6) | 5234940 5235600(1) | 7570050 | |
| 13B | 350@1800 | 181.8 (108.8) | | | |
| 14A | 430@2100 | 200.8 (140.2) | 5234970 5235695(1) | 7570050 | |
| 15A | 430@1800 | 224.9 (134.6) | 5234940 5235600(1) | 7570050 | |
| 15B | 365@1800 | 189.6 (113.5) | | | |
| 15C | 355@1800 | 184.4 (110.4) | | | |

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