State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-7-5

Relating to Certification of New Heavy-Duty Off-Road Equipment Engines

DETROIT DIESEL CORPORATION

Pursuant to the authority vested in the Air Resources Board by Sections 43000.5, 43013 and 43018 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-45-9;

IT IS ORDERED AND RESOLVED: That the following Detroit Diesel Corporation 1996 model-year engine, with rated power between 175 and 750 horsepower, and exhaust emission control systems are certified as described below for use in heavy-duty off-road equipment:

Typical Equipment Usage: Industrial / Construction Equipment

Fuel Type: Diesel

Engine Family	Liters	(Cubic Inches)	Exhaust Emission Control Systems and Special Features
TDD12.TJDARE (Series-60)	12.7	(775)	Turbocharger Charge Air Cooler Engine Control Module

Engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The total hydrocarbons (THC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matters (PM) certification exhaust emission standards, in grams per brake horsepower-hour (g/bhp-hr), and the opacity of smoke emission standards, in percent (%), during acceleration (Accel), lugging (Lug), and peak (Peak) modes, for this engine family are (Title 13, California Code of Regulations, Section 2423):

Exhaust Emissions (g/bhp-hr)				Smoke Opacity (%)		
THC	CO	NOx	PM	Accel	Lug	Peak
1.0	8.5	6.9	0.4	20	15	50

The THC, CO, NOx and PM exhaust emission certification values, in g/bhp-hr, and the opacity of smoke emission certification values, in percent (%), for this engine family are:

	Exhaust Emission (g/bhp-hr)				Smoke Opacity (%)		
Engine Family	THC	CO	NOx	PM	Accel	Lug	Peak
TDD12.TJDARE (Series-60)	0.1	0.6	6.6	0.1	12	2	30

BE IT FURTHER RESOLVED: That the listed engine models comply with the "Exhaust Emission Standards and Test Procedures--Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2423) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the listed engine models also comply with the "Emission Control Labels--1996 and Later Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model year.

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 2425 et seq.).

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

Executed at El Monte, California this 29th day of January 1996.

R. B. Summerfield
Assistant Division Chief
Mobile Source Division

E.O. No: 4-R-7-5

1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL-STANDARD ENGINES

Manufacturer: Detroit Diesel Corporation — Engine Family: TDD12.TJDARE

Displacement: ____ / 12.7 Liters — ____ / 775 Cubic Inches

All Engine Codes in Family: CA___ 49S___ 50S_X_; Strokes/Cycle_4_; Valves/Cylinder_4_

Ignition: Compression _X_ Compression with Glow Plug ___ Spark___

Fuel Type(s): Dedicated_X_ Flex Fuel___ Dual-Fuel___ Diesel_X_ M100___ M85___

CNG LNG___ LPG___ Other (Specify)_____

Diesel Cert Fuel: 13CCR 2282___ 40 CFR 86.1313-90___ 40 CFR 86.1313-94_X_

Maximum Rated Power: 500 HP @ 2100 RPM — Engine Configuration: L-6

Exhaust ECS : ECM/~~PCM~~,CAC,(TC) // PRIMARY USAGE: INDUSTRIAL/CONSTRUCTION EQUIP

Engine Model (Eng Code)	Rated HP @ RPM	Fuel Rate @ Rated HP mm3/Stroke (Lbs/Hr)	Fuel Pump & Injector Part No.	ECM/PCM Part No.	EGR Valve Part No.	PTOX/ Catalytic Convertor Part No.
Series 60, 12.7L (1A)	500 @ 2100	248.5 (173.5)	5235695	23518645 23518743		
(2A)	475 @ 2100	236.3 (165.0)				
(3A)	450 @ 2100	220.5 (154.0)				
(1B)	425 @ 2100	216.2 (151.0)				
(1C)	425 @ 2100	207.6 (145.0)				
(1D)	400 @ 2100	194.8 (136.0)				
(1E)	375 @ 2100	190.5 (133.0)				
(1F)	350 @ 2100	167.5 (117.0)				
(1F)	350 @ 2100	167.5 (117.0)				

Issued: 12-09-95