State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-7-26

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 1998 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: Pump, Compressor, and Generator Set

Fuel Type: Diesel

Engine Family	Displacements in Liters	Exhaust Emission Control Systems and Special Features
WDDXL15.9TRE (8V-S2000)	15.9	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
WDDXL15.9TRE (8V-S2000)	0.2	0.8	6.3	0.05	13	2	32

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 26th day of February 1998.

R. B. Summerfield, Chief
Mobile Source Operations Division

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LARGE ENGINE MODEL SUMMARY

U-R-7-26

Manufacturer: **Detroit Diesel Corporation** Process Code: **New Submission**

EPA Engine Family: **WDDXL15.9TRE** Manufacturer Family Name: **8V-S2000**

Engine Code	Engine Model	BHP@RPM (SAE Gross)	Fuel Rate: mm/stroke @ peak HP (for diesel only)	Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	Torque @ RPM (SEA Gross)	Fuel Rate: mm/stroke@peak torque	Fuel Rate: (lbs/hr)@peak torque	Emission Control Device Per SAE J1930
1E21	8V-S2000 (SCCC)	650 @ 2100	247.0	230.0	2076 @ 1350	293.8	175.9	EC TAW
1E18	8V-S2000 (SCCC)	650 @ 1800	272.5	217.5	2076 @ 1350	293.8	175.9	EC TAW
1F21	8V-S2000 (SCCC)	605 @ 2100	233.5	208.1	2076 @ 1350	291.5	174.5	EC TAW
1F18	8V-S2000 (SCCC)	605 @ 1800	251.0	200.3	2076 @ 1350	291.5	174.5	EC TAW
GS2	8V-S2000 (SCCC)	685 @ 1800	291.5	232.6	NA	NA	NA	EC TAW
GS2-TL	8V-S2000 (SCCC)	623 @ 1800	260.0	207.5	NA	NA	NA	EC TAW

ECM, TC, CAC

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A15

LARGE ENGINE MODEL SUMMARY

Manufacturer: **Detroit Diesel Corporation** Process Code: **New Submission**

EPA Engine Family: **WDDXL15.9TRE** Manufacturer Family Name: **8V-S2000**

Engine Code	Engine Model	BHP@RPM (SAE Gross)	Fuel Rate: mm/stroke @ peak HP (for diesel only)	Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	Torque @ RPM (SEA Gross)	Fuel Rate: mm/stroke@peak torque	Fuel Rate: (lbs/hr)@peak torque	Emission Control Device Per SAE J1930
1A21	8V-S2000 (JWCC)	575 @ 2100	215.5	200.7	1871 @ 1350	275.0	164.6	EC TAW
1A18	8V-S2000 (JWCC)	575 @ 1800	240.5	191.9	1871 @ 1350	275.0	164.6	EC TAW
1B21	8V-S2000 (JWCC)	525 @ 2100	199.8	186.0	1708 @ 1350	253.0	151.4	EC TAW
1B18	8V-S2000 (JWCC)	525 @ 1800	222.0	177.2	1708 @ 1350	253.0	151.4	EC TAW
GS1	8V-S2000 (JWCC)	610 @ 1800	256.9	205.0	NA	NA	NA	EC TAW
GS1-TL	8V-S2000 (JWCC)	550 @ 1800	232.3	185.4	NA	NA	NA	EC TAW

ECM, TC, CAC

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