California Environmental Protection Agency AIR RESOURCES BOARD	DETROIT DIESEL CORPORATION	EXECUTIVE ORDER U-R-007-0067 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 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 compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENTS (liters)	FUEL TYPE	USEFUL LIFE (hours)
2002	2DDXL65.0GTE	32.5, 48.7 and 65.0	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Engine Control Module, Turbocharger, Charge Air Cooler	Generator Set

ENGINE MODELS (rated power in kilowatts, kw)	8V-4000 (1095 kw), 12V-4000 (1380 kw), 12V-4000 (1641 kw), 16V-4000 (1902 kw), 16V-4000 (2190 kw)

The following are the exhaust certification standards (STD), or family emission limit(s) (FEL) as applicable, and certification levels (CERT) for hydrocarbons (HC), oxides of nitrogen (NOx), or non-methane hydrocarbons plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
KW > 560	Tier 1	STD	1.3	9.2	N/A	11.4	0.54	N/A	N/A	N/A
		FEL	N/A	7.2	--	N/A	N/A	--	--	--
		CERT	1.0	6.0	--	1.3	0.32	--	--	--

BE IT FURTHER RESOLVED: That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2423 and 2427.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

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

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 25th day of July 2001.

R. B. Summerfield, Chief
Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: **Detroit Diesel Corpertation**
Engine category: **Nonroad CI**
EPA Engine Family: **2DDXL65.0GTE**
Mfr Family Name: **SERIES 4000 - LOW NOX**
Process Code: **New Submission**

EO#U-R-007-0067

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
8GS1	8V-4000	1468 @ 1800 (1095 kw)	675	539	NA - GENSET	NA	NA	UDI, TC, CAC, ECM (All Models)
12GS1	12V-4000	1850 @ 1800 (1380 kw)	562	673	NA - GENSET	NA	NA	
12GS2	12V-4000	2200 @ 1800 (1641 kw)	666	797	NA - GENSET	NA	NA	
16GS1	16V-4000	2550 @ 1800 (1902 kw)	548	875	NA - GENSET	NA	NA	
16GS2	16V-4000	2935 @ 1800 (2190 kw)	635	1014	NA - GENSET	NA	NA	