 <b>AIR RESOURCES BOARD</b>	<b>DETROIT DIESEL CORPORATION AND MTU</b>	<b>EXECUTIVE ORDER U-R-007-0099</b>
		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	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2005	5DDXL65.0GTP	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	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) 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):

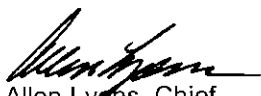
RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
kW > 560	Tier 1	STD	1.3	9.2	N/A	11.4	0.54	N/A	N/A	N/A
		CERT	0.9	7.5	--	0.8	0.20	--	--	--

**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 9<sup>TH</sup> day of December 2004.



Allen Lyons, Chief  
New Vehicle/Engine Programs Branch

# Engine Model Summary Form

ATTACHMENT 1 OF 3

EO# U-R-007-0099

Manufacturer: Detroit Diesel Corporation and MTU

Engine category: Nonroad CI

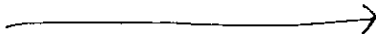
EPA Engine Family: 5DDXL65.0GTP

Mfr Family Name: SERIES 4000 MDEC

Process Code: RUNNING CHANGE  
MODEL ADDITION

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
					Constant speed (all ratings)	NA (all ratings)	NA (all ratings)	EC TAW (all ratings)
5301	8V-4000 (S)	1475 @ 1800	621	496				
5302	(P)	1341 @ 1800	559	446				
5303	(C)	1005 @ 1800	418	334				
5307	12V-4000 (S)	1998 @ 1800	546	654				
5308	(P)	1816 @ 1800	491	588				
5309	(C)	1651 @ 1800	448	536				
5310	(S)	2199 @ 1800	610	730				
5311	(P)	1998 @ 1800	546	654				
5312	(C)	1502 @ 1800	413	494				
5539	(C)	1166 @ 1200	460	367				
5540	(S)	1481 @ 1200	586	468				

EO# U-R-007-0099



# Engine Model Summary Form

ATTACHMENT 2 OF 3

EO # U-R-007-0099

Manufacturer: **Detroit Diesel Corporation and MTU**  
 Engine category: **Nonroad CI**  
 EPA Engine Family: **5DDXL65.0GTP**  
 Mfr Family Name:  
 Process Code: **New Sub - continued**

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
					Constant speed (all ratings)	NA (all ratings)	NA (all ratings)	EC TAW (all ratings)
5318	16V-4000 (S)	2668 @ 1800	547	873				
5319	(S)	2937 @ 1800	613	978				
5320	(P)	2668 @ 1800	547	873				
5321	(C)	2005 @ 1800	413	659				
5494	(P)	1863 @ 1200	550	585				
5493	(C)	1528 @ 1200	455	484				
5510	(C)	1823 @ 1800	350	559				
5511	(P)	2426 @ 1800	510	814				

DDI, ECM, TC, CAC



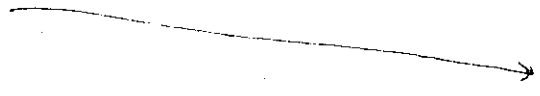
S - standby  
 P - prime  
 C - continuous

Engine Model Summary Form

Manufacturer: Detroit Diesel Corporation and MTU  
 Engine category: Nonroad CI  
 EPA Engine Family: 5DDXL65.0GTP  
 Mfr Family Name:  
 Process Code: New Sub - continued

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
Low NOx	Ratings				Constant speed (all ratings)	NA (all ratings)	NA (all ratings)	EC TAW (all ratings)
5496	8V-4000 (C)	1005 @ 1800	465	371		NA	NA	
5497	(P)	1341 @ 1800	610	487				
5498	12V-4000 (C)	1651 @ 1800	470	563				
5499	(P)	1816 @ 1800	510	611				
5500	(P)	1998 @ 1800	560	670				
5501	(C)	1502 @ 1800	430	515				
5502	(S)	1998 @ 1800	560	670				
5504	16V-4000 (C)	1823 @ 1800	405	646				
5505	(P)	2426 @ 1800	525	838				
5506	(S)	2668 @ 1800	580	926				
5507	(C)	2005 @ 1800	440	702				
5508	(P)	2668 @ 1800	580	926				

ECM, DDI, TC, CAL



S - standby  
 P - prime  
 C - continuous