

 AIR RESOURCES BOARD	DETROIT DIESEL CORPORATION	EXECUTIVE ORDER U-R-007-0103
		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 December 15, 1998 Settlement Agreement between the Air Resources Board and the manufacturer, and any modifications thereof to the Settlement Agreement;

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems 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	5DDXL14.0VLD	14.0	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Engine Control Module, Exhaust Gas Recirculation			Crane, Loader, Tractor, Pump, Compressor, Generator Set	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon 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
225 ≤ kW < 560	Tier 3	STD	N/A	N/A	4.0	3.5	0.20	20	15	50
		CERT	-	-	3.9	1.2	0.18	13	9	17

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 10th day of February 2005.



Allen Lyons, Chief
Mobile Source Operations Division

Engine Model Summary Form

ATTACHMENT 1 OF 1
 E0# U-R-007-0103

Manufacturer: Detroit Diesel Corporation
 Engine category: Nonroad CJ
 EPA Engine Family: SDDXL14.0VLD
 Mfr Family Name: SERIES 60, 14.0L
 Process Code: New Submission

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
5513	variable speed	300 @ 2100	169.5	118.4	1050 @ 1350	218.2	97.9	EC TAA EGR
5514	<i>SERIES 60, 14.0L</i>	325 @ 2100	182.8	127.7	1150 @ 1350	236.9	106.3	(all ratings)
5515		350 @ 2100	196.9	137.5	1350 @ 1350	278.3	124.9	
5516		375 @ 2100	204.1	142.5	1350 @ 1350	278.3	124.9	
5518		400 @ 2000	223.5	148.6	1445 @ 1200	280.3	111.9	
5517		400 @ 2100	218.0	152.3	1400 @ 1350	281.2	126.2	
5519		425 @ 2100	233.1	162.8	1475 @ 1350	312.2	140.1	
5520		450 @ 2000	252.0	167.6	1548 @ 1200	300.8	120.0	
5521		450 @ 2100	249.1	174.0	1550 @ 1350	329.8	148.0	
5522		475 @ 2100	263.2	183.8	1550 @ 1350	329.8	148.0	
5523		500 @ 2100	276.8	193.3	1550 @ 1350	329.8	148.0	
5524		525 @ 2100	297.2	207.6	1750 @ 1350	378.8	170.0	
5525		533 @ 2000	300.9	200.1	1750 @ 1350	378.8	170.0	
5526		550 @ 2100	311.3	217.4	1750 @ 1350	378.8	170.0	
5527		600 @ 2100	326.9	228.3	1900 @ 1350	411.3	184.6	
5529		600 @ 2300	329.4	252.0	1900 @ 1350	411.3	184.6	
5528		630 @ 2100	356.6	249.0	1900 @ 1350	411.3	184.6	
5530		665 @ 2300	345.9	264.6	1900 @ 1350	411.3	184.6	

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
5531	<i>SERIES 60, 14.0L constant speed</i>	415 @ 1800	248.4	148.7	NA	NA	NA	
5532		455 @ 1800	274.8	164.5				
5533		490 @ 1800	298.5	178.7				
5534		550 @ 1800	327.2	195.9				
5535		635 @ 1800	371.8	222.6				
5536		685 @ 1800	409.8	245.3				