

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-7-48
Relating to Certification of New Heavy-Duty Off-Road Equipment Engines

DETROIT DIESEL CORPORATION

Pursuant to the authority vested in the Air Resources Board at Sections 43000.5, 43013, and 43018 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned at Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9; and

Pursuant to the December 15, 1998 Settlement Agreement between the Air Resources Board and Detroit Diesel Corporation and any modification to the Settlement Agreement;

IT IS ORDERED AND RESOLVED: That the following diesel engines and exhaust emission control systems produced by the manufacturer are certified as described below for use in heavy-duty off-road equipment:

Model Year: 2000

Typical Equipment Usage: Pump, Compressor and Industrial equipment

Engine Power Ratings Range: 175 horsepower and greater

Fuel Type: Diesel

<u>Engine Family</u>	<u>Displacement</u>		<u>Exhaust Emission Control Systems and Special Features</u>
	<u>Liters</u>	<u>Cubic Inches</u>	
YDDXL18.1TFE (12V-92TADDEC)	18.1	1104	Engine Control Module Turbocharger Charge Air Cooler

The 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 exhaust emission certification standards and certification values in grams per brake horsepower-hour (g/bhp-h) for engines with power ratings between 175 and 750 horsepower, inclusive, for total hydrocarbons (THC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter (PM), and the opacity-of-smoke certification standards and certification values in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family are as follows (Title 13, California Code of Regulations, Section 2423):

	<u>Exhaust Emissions (g/bhp-h)</u>				<u>Smoke Opacity (%)</u>		
	<u>THC</u>	<u>CO</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
Standard	1.0	8.5	6.9	0.4	20	15	50
Certification	0.3	2.3	5.6	0.2	15	14	30

The exhaust emission certification standards and certification values in grams per brake horsepower-hour (g/bhp-h) for engines with power ratings above 750 horsepower for total hydrocarbons (THC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter (PM), and the opacity-of-smoke certification standards and certification values in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family are as follows (Title 13, California Code of Regulations, Section 2423):

	<u>Exhaust Emissions (g/bhp-h)</u>				<u>Smoke Opacity (%)</u>		
	<u>THC</u>	<u>CO</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
Standard	1.0	8.5	6.9	0.4	20	15	50
Certification	0.3	2.3	5.6	0.2	15	14	30

BE IT FURTHER RESOLVED: That the listed engine models comply with "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 "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, Sections 2425 *et seq.*).

BE IT FURTHER RESOLVED: That the aforementioned engine family has been conditionally certified subject to the following conditions:

1. The Settlement Agreement is in effect.
2. The manufacturer is in compliance with all applicable certification requirements of the Settlement Agreement.

Engines certified under this Executive Order must conform to all applicable California emission regulations and to all applicable terms and conditions of the Settlement Agreement.

Executed at El Monte, California this 16th day of January 2000.



R. B. Summerfield, Chief
Mobile Source Operations Division

LARGE ENGINE MODEL SUMMARY

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

EO: U-R-7-48

EPA Engine Family: **YDDXL18.1TFE** Manufacturer Family Name: **12V-92TA DDEC**

Engine Code	Engine Model	BHP@RPM (SAE Gross)	Fuel Rate: mm/stroke @ peak HP <i>(for diesel only)</i>	Fuel Rate: (lbs/hr) @ peak HP <i>(for diesel only)</i>	Torque @ RPM (SEA Gross)	Fuel Rate: mm/stroke@peak torque	Fuel Rate: (lbs/hr)@peak torque	Emission Control Device Per SAE J1930
1A	12V-92TA DDEC	760 @ 2100	103.0	287.3	2185 @ 1350	118.0	210.9	EC TAW
1B	12V-92TA DDEC	720 @ 2100	99.0	276.5	2180 @ 1200	111.0	177.7	EC TAW
1C	12V-92TA DDEC	675 @ 2100	92.0	257.1	2040 @ 1200	106.0	168.8	EC TAW
1D	12V-92TA DDEC	625 @ 2100	84.8	236.3	1900 @ 1200	99.5	158.4	EC TAW
2D	12V-92TA DDEC	600 @ 1800	91.2	217.8	1900 @ 1200	100.1	158.8	EC TAW
1E	12V-92TA DDEC	540 @ 2100	73.7	206.3	1750 @ 1200	91.8	146.0	EC TAW
1F	12V-92TA DDEC	520 @ 2100	79.8	222.7	1663 @ 1200	85.3	136.0	EC TAW
1H	12V-92TA DDEC	620 @ 1900	90.8	229.5	2212 @ 1200	114.1	182.2	EC TAW
2H	12V-92TA DDEC	700 @ 1800	109.0	261.5	2212 @ 1200	115.5	184.3	EC TAW
3H	12V-92TA DDEC	675 @ 1700	110.0	249.0	2212 @ 1200	113.5	181.2	EC TAW
1J	12V-92TA DDEC	440 @ 1800	73.4	177.8	1536 @ 1200	82.2	132.7	EC TAW

1A-TL 12V-92TA DDEC 645 @ 2100 89.2 249.2 2185 @ 1350 118.0 210.9 EC TAW

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TC, LAC, ECM