

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-290-1
Relating to Certification of New Heavy-Duty Motor Vehicle Engines

DETROIT DIESEL CORPORATION

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102 and 43103 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-45-3;

IT IS ORDERED AND RESOLVED: That the following Detroit Diesel Corporation 1989 model-year diesel engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

<u>Engine Family</u>	<u>Displacement</u> <u>Liters (Cubic Inches)</u>		<u>Exhaust Emission Control Systems</u> <u>(Special Features)</u>
KDD0426FWF6	7.0	(426)	Smoke Puff Limiter (Turbocharger) (Intercooler) (Diesel Injection - Direct)
KDD0552FZG7	9.0	(552)	Electronic Injection Control (Turbocharger) (Intercooler) (Diesel Injection - Direct)
KDD0736FZH4	12.0	(736)	Electronic Injection Control (Turbocharger) (Intercooler) (Diesel Injection - Direct)
KDD12.7FZA1	11.1/12.7	(677/775)	Electronic Injection Control (Turbocharger) (Intercooler) (Diesel Injection - Direct)

Engine models and codes are listed on attachments.

The following are the certification emission standards for these engine families:

<u>Hydrocarbons</u> <u>gm/bhp-hr</u>	<u>Carbon</u> <u>Monoxide</u> <u>gm/bhp-hr</u>	<u>Nitrogen Oxides</u> <u>gm/bhp-hr</u>	<u>Particulates</u> <u>gm/bhp-hr</u>
1.3	15.5	6.0	0.60

The following are the certification emission values for these engine families:

<u>Engine Family</u>	<u>Hydrocarbons gm/bhp-hr</u>	<u>Carbon Monoxide gm/bhp-hr</u>	<u>Nitrogen Oxides gm/bhp-hr</u>	<u>Particulates gm/bhp-hr</u>
KDD0426FWF6	0.7	4.2	5.5	0.59
KDD0552FZG7	0.8	2.8	5.9	0.46
KDD0736FZH4	0.5	2.6	5.9	0.54
KDD12.7FZA1	0.1	3.1	5.0	0.53

BE IT FURTHER RESOLVED: That the Executive Officer has been provided all material required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Administrative Code, Section 2036).

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

The Bureau of Automotive Repair will be notified by copy of this order and attachments.

Executed at El Monte, California this 28th day of October, 1988.

Bob Cross for

K. D. Drachand, Chief
Mobile Source Division

17-KDD0426FWF6-9A

(For CARB Use Only)

(1989)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

HEAVY-DUTY DIESEL ENGINES

Manufacturer: Detroit Diesel Corporation

Executive Order No.: A-290-1

Engine Family: KDD0426FWF6

Liter (CID): 7 (426)

Emission Control System and (Special Features): Throttle Delay, Fuel Modulator,
(IC), (TC), (DID)

ENGINE MODEL	FUEL INJECTION PUMP MFR PART NO.	ENGINE CODE INJECTOR MFR PART NO.	MAXIMUM RATED HP AT RPM	FUEL RATE mm ³ /STROKE (LBS/HR)	MAXIMUM RATED TORQUE AT RPM	FUEL RATE mm ³ /STROKE (LBS/HR)
6L-71TA JWAC	NA	7G70 (1) 5229900	250@2100	74.6 (104.2)	730@1200	86.0 (68.6)
		7G75 (1) 5229905	270@2100	80.0 (111.7)	788@1200	91.6 (73.1)
		7G75 (1) 5229905	285@2100	81.0 (113.1)	850@1200	91.4 (72.9)
		7G75 (1) 5229905	264@1800	84.0 (100.6)	850@1200	91.4 (72.9)
		7G75CP (1) 5229905	230@1950 Min.	69.0 (89.5)	850@1200	91.4 (72.9)
		7G70 (1) 5229900	265@2100	74.9 (104.7)	792@1200	85.2 (68.0)
		7G70 (1) 5229900	245@1800	78.1 (93.5)	792@1200	85.2 (68.0)

(1) Diesel Technology Corporation

ISSUED: 10-22-88

REV. NO.:

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(1989)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

HEAVY-DUTY DIESEL ENGINES

Manufacturer: Detroit Diesel Corporation

Executive Order No.: A-290-1

Engine Family: KDD0552FZG7

Liter (CID): 9 (552)

Emission Control System and (Special Features): EIC, (IC), (TC), (DID)

ENGINE MODEL	FUEL INJECTION PUMP MFR PART NO.	ENGINE CODE INJECTOR MFR PART NO.	MAXIMUM RATED HP AT RPM	FUEL RATE mm ³ /STROKE (LBS/HR)	MAXIMUM RATED TORQUE AT RPM	FUEL RATE mm ³ /STROKE (LBS/HR)
6V-92TA DDEC	NA	1C (1) 5234915	277@2100	76.0 (106.1)	880@1200	87.6 (69.9)
6V-92TA DDEC	NA	2C (1) 5234915	253@2100	70.6 (98.6)	775@1200	77.4 (61.8)
6V-92TA DDEC	NA	3C (1) 5234915	300@2100	84.0 (117.3)	975@2100	99.5 (79.4)
6V-92TA DDEC	NA	4C (1) 5234915	300@2100	83.8 (117.0)	820@1200	83.2 (66.4)
6V-92TA DDEC	NA	5C (1) 5234775	350@2100	97.5 (136.2)	1020@1200	105.1 (83.9)
6V-92TA DDEC	NA	6C (1) 5234850	220@2100	66.6 (93.0)	675@1200	70.9 (56.6)

(1) Diesel Technology Corporation

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AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

HEAVY-DUTY DIESEL ENGINES

Manufacturer: Detroit Diesel Corporation

Executive Order No.: A-290-

Engine Family: KDD0736FZH4

Liter (CID): 12 (736)

Emission Control System and (Special Features): EIC, (IC), (TC), (DID)

ENGINE MODEL	FUEL INJECTION PUMP MFR PART NO.	ENGINE CODE INJECTOR MFR PART NO.	MAXIMUM RATED HP AT RPM	FUEL RATE mm ³ /STROKE (LBS/HR)	MAXIMUM RATED TORQUE AT RPM	FUEL RATE mm ³ /STROKE (LBS/HR)
8V-92TA DDEC	NA	1B (1) 5234775	450@2100	93.0 (173.2)	1425@1200	109.4 (116.4)
		2B (1) 5234915	400@1800	89.7 (143.2)	1315@1200	97.5 (103.7)
		3B (1) 5234915	400@2100	81.6 (152.0)	1150@1200	85.8 (91.3)

(1) Diesel Technology Corporation

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(1989)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

Manufacturer: Detroit Diesel Corporation

Executive Order No.: A-290-1

Engine Family: KDD12.7FZA1

Liter (CID): 11.1 (677)

Emission Control System and (Special Features): EIC, (DID), (TC), (IC)

ENGINE MODEL	FUEL INJECTION PUMP MFR PART NO.	ENGINE CODE INJECTOR MFR PART NO.	MAXIMUM RATED HP AT RPM	FUEL RATE mm ³ /STROKE (LBS/HR)	MAXIMUM RATED TORQUE AT RPM	FUEL RATE mm ³ /STROKE (LBS/HR)
11.1L	NA	1D (1) 5234870	350@1800	183.6 (109.9)	1250@1200	234.3 (93.5)
		2D (1) 5234870	320@2100	148.9 (104.0)	1200@1200	221.1 (88.2)
		3D (1) 5234870	320@1800	166.7 (99.8)	1150@1200	212.3 (84.7)
		4D (1) 5234870	285@2100	133.9 (93.5)	1100@1200	201.3 (80.3)
		5D (1) 5234870	285@1800	149.0 (89.2)	1100@1200	201.3 (80.3)
		6D (1) 5234870	250@2100	119.3 (83.3)	970@1200	179.2 (71.5)
		7D (1) 5234870	250@1800	132.5 (79.3)	1100@1200	201.3 (80.3)
		8D (1) 5234870	320@1800	166.7 (104.0)	1200@1200	211.1 (88.2)
		10D (1) 5234870	300@1800	156.9 (93.9)	1250@1200	234.3 (93.5)

1) Diesel Technology Corporation

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(1989)

AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

HEAVY-DUTY DIESEL ENGINES

Manufacturer: Detroit Diesel Corporation

Executive Order No.: A-290-1

Engine Family: KDDL2.7FZA1

Liter (CID): 12.7 (775)

Emission Control System and (Special Features): EIC, (DID), (TC), (IC)

ENGINE MODEL	FUEL INJECTION PUMP MFR PART NO.	ENGINE CODE INJECTOR MFR PART NO.	MAXIMUM RATED HP AT RPM	FUEL RATE mm ³ /STROKE (LBS/HR)	MAXIMUM RATED TORQUE AT RPM	FUEL RATE mm ³ /STROKE (LBS/HR)
12.7L	NA	1B (1) 5234795	400@2100	189.6 (126.4)	1400@1200	255.9 (102.1)
		2B (1) 5234785	400@1800	211.2 (126.4)	1400@1200	255.9 (102.1)
		3B Penske Power (1)	350@2100	166.0 (115.9)	1400@1200	258.1 (103.0)
		4B Penske Power (1)	350@1800	184.8 (110.6)	1400@1200	258.1 (103.0)
		5B (1) 5234785	425@2100	200.9 (140.3)	1400@1200	255.9 (102.1)

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