

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-289-2  
Relating to Certification of New Heavy-Duty Motor Vehicle Engines

HERCULES ENGINES, INC.

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 Hercules Engines, Inc. 1989 model-year diesel engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 8,500 pounds:

<u>Engine Family</u>	<u>Displacement Liters (Cubic Inches)</u>		<u>Exhaust Emission Control Systems (Special Features)</u>
KHE03.7FPA7	3.7	(226)	(Direct Injection) (Turbocharger) (Charge Air Cooler) (Smoke Puff Limiter)

Engine models and codes are listed on attachments.

The following are the certification emission standards for this engine family:

<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>
1.3	15.5	6.0	0.60

The following are the certification emission values for this engine family:

<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>
KHE03.7FPA7	1.0	2.6	5.2	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 Code of Regulations, Section 2036).

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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 10<sup>th</sup> day of December, 1988.



K. D. Drachand, Chief  
Mobile Source Division

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
HEAVY-DUTY DIESEL ENGINESManufacturer Hercules Engines, Inc. Engine Family KHE03.7FPA7Liter (CID) 3.7 (226) Eng. Type DID; I-4;TAEmission Control Sys. and (Special Features) Air to air charge air cooler  
smoke puff limiter

Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP at RPM	Fuel Rate mm <sup>3</sup> /stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm <sup>3</sup> /stroke (lbs/Hr)
DTIHU	Robert Bosch 40-3053602	Lucas CAV 40-3055262	125 HP @2800 RPM	82.5 (50.4)	291 @1800 RPM	91.9 (36.1)

Date of Issue \_\_\_\_\_ Revisions: \_\_\_\_\_