

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-31-33

Relating to Certification of New Heavy-Duty Motor Vehicle Engines

HINO MOTORS, LTD.

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-45-9;

IT IS ORDERED AND RESOLVED: That the following 1997 model-year Hino Motors, Ltd. diesel-cycle engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

Fuel Type: Diesel

<u>Engine Family</u>	<u>Engine Displacement Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems and Special Features</u>
VHM8.0DHDARA	5.3/8.0 (324/486)	Turbocharger Charge Air Cooler Engine Control Module

Engine models and codes are listed on attachments.

The following are the certification exhaust emission standards for this engine family in grams per brake horsepower-hour:

<u>Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
1.3	15.5	5.0	0.10

The following are the certification exhaust emission values for this engine family in grams per brake horsepower-hour:

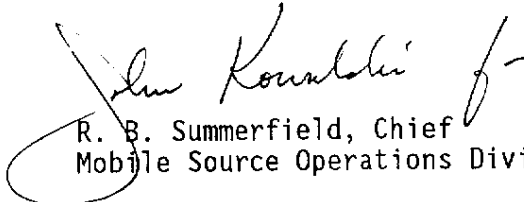
<u>Engine Family</u>	<u>Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Nitrogen Oxides</u>	<u>Particulates</u>
VHM8.0DHDARA	0.3	1.2	4.7	0.10

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, Section 2035 et seq.).

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 12<sup>th</sup> day of November 1996.

  
R. B. Summerfield, Chief  
Mobile Source Operations Division

17.01.00.00

E.O.# A-31-331997 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENT DATA SHEET  
HEAVY-DUTY DIESEL-STANDARD ENGINESPage 1

Manufacturer: Hino Motors, Ltd. Engine Family: VHM8.0DHDARA  
 Displacement: 5307 Liters 324 Cubic Inches  
 All Eng. Codes in Eng Family: CA     49S     50S x Strokes / Cylinder: 4 Valves / Cylinder: 4  
 Ignition: Compression     Compression with Glow Plug     Spark      
 Fuel Type(s): Dedicated X Flex-Fuel     Dual-Fuel     Bi-Fuel     Diesel x CNG      
                   LNG     LPG     M85     M100     Other (specify)      
 Diesel Cert Fuel: 13 CCR 2282     40 CFR 86.1313-90     40 CFR 86.1313-94 x  
 Maximum Rated Power: 165 HP @ 2,500 RPM Engine Configuration I-4  
 Exhaust ECS (e.g., PC, EGR, PTOX, IFI, TC, CAC) TC, CAC, ECM  
 (USE ABBREVIATIONS PER SAE J1930 SEP91)

Engine Model (ENG CODE)	Rated HP @RPM	Fuel Rate @Rated HP mm3 / stroke (lbs / hr)	Fuel Pump & Injector Part No.	ECM / PCM Part No.	EGR Valve Part No.	PTOX / Catalytic Converter Part No.
J05C-TB	165@2,500	113.0 (61.5)	<u>FUEL PUMP</u> Zexel Corp. 1) Mechanical T/M 833 (22000-9561) 2) Automatic T/M 834 (22000-9571)  <u>INJECTOR</u> Zexel Corp. 1) Nozzle & holder set 30-3680 (23600-2971) 2) Nozzle holder - (23620-2540) 3) Nozzle assy 126 (23640-2491)	<u>ECM</u> Injection Pump Control Computer Assy  89560-3161	-	-

( ): Hino Inventory No.

Date Issued: September 20, 1996

Revisions:

1997 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENT DATA SHEET  
HEAVY-DUTY DIESEL-STANDARD ENGINESPage 2

Manufacturer: Hino Motors, Ltd. Engine Family: VHM8.0DHDARA  
 Displacement: 7961 Liters 486 Cubic Inches  
 All Eng Codes in Eng Family: CA      49S      50S X Strokes / Cylinder: 4 Valves / Cylinder: 4  
 Ignition: Compression      Compression with Glow Plug      Spark       
 Fuel Type(s): Dedicated X Flex-Fuel      Dual-Fuel      Bi-Fuel      Diesel X CNG       
                   LNG      LPG      M85      M100      Other (specify)       
 Diesel Cert Fuel: 13 CCR 2282      40 CFR 86.1313-90      40 CFR 86.1313-94 X  
 Maximum Rated Power: 250 HP @ 2,500 RPM Engine Configuration I-6  
 Exhaust ECS (e.g., PC, EGR, PTOX, IFI, TC, CAC) TC, CAC, ECM  
 (USE ABBREVIATIONS PER SAE J1930 SEP91)

Engine Model (ENG CODE)	Rated HP @RPM	Fuel Rate @Rated HP mm <sup>3</sup> / stroke (lbs / hr)	Fuel Pump & Injector Part No.	ECM / PCM Part No.	EGR Valve Part No.	PTOX / Catalytic Converter Part No.
J08C-TD	200@2,500	93.0 (75.9)	<u>FUEL PUMP</u> Zexel Corp. 1) Mechanical T/M 824 (22000-9491) 827 (22000-9521) 2) Automatic T/M 826 (22000-9511) 828 (22000-9531)  <u>INJECTOR</u> Zexel Corp. 1) Nozzle & holder set 30-3680 (23600-2971) 2) Nozzle holder - (23620-2540) 3) Nozzle assy 126 (23640-2491)	<u>ECM</u>  Injection Pump Control Computer Assy  89560-3110	-	-
J08C-TE	250@2,500	115.0 (93.9)	<u>FUEL PUMP</u> Zexel Corp. 1) Mechanical T/M 823 (22000-9481) 2) Automatic T/M 825 (22000-9501)  <u>INJECTOR</u> Zexel Corp. 1) Nozzle & holder set 30-3680 (23600-2971) 2) Nozzle holder - (23620-2540) 3) Nozzle assy 126 (23640-2491)			

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