

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-31-15
Relating to Certification of New 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-45-3;

IT IS ORDERED AND RESOLVED: That the following Hino Motors, Ltd. 1986 model-year diesel engines have shown compliance with the optional transient standards and are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating greater than 8500 pounds:

<u>Engine Family</u>	<u>Displacement Cubic Inches (Liters)</u>		<u>Exhaust Emission Control Systems (Special Features)</u>
GHM0065EAA0	396	(6.5)	Engine Modification (Diesel Injection - Direct) (Turbocharged)
GHM0067DAA5	411	(6.7)	Engine Modification (Diesel Injection - Direct)
GHM0094DAA8	575	(9.4)	Engine Modification (Diesel Injection - Direct)

Engine models and codes are listed on attachments.

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>
GHM0065EAA0	0.9	1.9	4.8
GHM0067DAA5	0.8	4.3	4.5
GHM0094DAA8	0.6	2.5	4.4

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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.

Executed at El Monte, California this 24 day of June, 1985.


K. D. Drachand, Chief
Mobile Source Division

Manufacturer HINO MOTORS, LTD Executive Order No. A-31-15
 Engine Family GHM0067DAA5 Evaporative Family NA
 Engine CID (Liters) 411(6.728)

ABBREVIATIONS

Ignition System

CA-Centrifugal Advance
 EEC-Electronic Engine Control
 EI-Electronic Ignition
 ESAC-Electronic Spark Advance Control
 VA-Vacuum Advance
 VR-Vacuum Retard

Fuel System

CFI, CL, DID, DIP, EFI, MFI
 nV-nVenturi Carburetor
 VV-Variable Venturi

Exhaust Emissions Control System

AIP-Air Injection-Pump
 AIV-Air Injection-Valve
 CL-Closed Loop
 EGR-Exhaust Gas Recirculation
 EM-Engine Modification
 OC-Oxidation Catalyst System
 TOC-Trap Oxidizer Continual
 TOP-Trap Oxidizer Periodical
 TR-Thermal Reactor
 TWC-Three-Way Catalyst System

Special Features

CCV-Combustion Chamber Valve
 CFI-Central Fuel Injection
 DID-Diesel Injection-Direct
 DIP-Diesel Injection-Prechamber
 EFI-Electronic Fuel Injection
 IC - Intercooler
 MFI-Mechanical Fuel Injection
 TC-Turbocharged

VEHICLE MODELS:

DRIVE SYSTEM: NA Engine/ NA -Wheel Drive

E.O. #A - 31-151986 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINESPage 2Manufacturer HINO MOTORS, LTD.Engine Family GHM0067DAA5 CID(Liter)-Type 411 (6.728) - L6ECS(Special Features) ENGINE MODIFICATION

Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP and RPM	Fuel Rate at Maximum HP mm ³ /stroke	Label Ident.
H07C-C	Nippon Denso 22010-4051	Nippon Denso 23610-1390	155@ 3,000	67	H07C-C Calif. & 49 States

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Manufacturer HINO MOTORS, LTD Executive Order No. A-31-15
 Engine Family GHM0094DAA8 Evaporative Family NA
 Engine CID (Liters) 575 (9.419)

ABBREVIATIONS

Ignition System

CA-Centrifugal Advance
 EEC-Electronic Engine Control
 EI-Electronic Ignition
 ESAC-Electronic Spark Advance
 Control
 VA-Vacuum Advance
 VR-Vacuum Retard

Fuel System

CFI, CL, DID, DIP, EFI, MFI
 nV-nVenturi Carburetor
 VV-Variable Venturi

Exhaust Emissions Control System

AIP-Air Injection-Pump
 AIV-Air Injection-Valve
 CL-Closed Loop
 EGR-Exhaust Gas Recirculation
 EM-Engine Modification
 OC-Oxidation Catalyst System
 TOC-Trap Oxidizer Continual
 TOP-Trap Oxidizer Periodical
 TR-Thermal Reactor
 TWC-Three-Way Catalyst System

Special Features

CCV-Combustion Chamber Valve
 CFI-Central Fuel Injection
 DID-Diesel Injection-Direct
 DIP-Diesel Injection-Prechamber
 EFI-Electronic Fuel Injection
 IC - Intercooler
 MFI-Mechanical Fuel Injection
 TC-Turbocharged

VEHICLE MODELS:

DRIVE SYSTEM: NA Engine/ NA -Wheel Drive

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1986 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINESManufacturer HINO MOTORS, LTD. Page 2Engine Family GHM0094DAA8 CID(Liter)-Type 575 (.419) - L6ECS and (Special Features) ENGINE MODIFICATION

Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP and RPM	Fuel Rate at Maximum HP mm ³ /stroke	Label Ident.
EM100F	Nippon Denso 22010-4101 (For Manual Transmission)	Nippon Denso 23610-1430	190@ 2,700	89	EM100F Calif. & 49 States
	Nippon Denso 22010-4101 (For Automatic Transmission)				

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Manufacturer HINO MOTORS, LTD.Executive Order No. A-31-15Engine Family GHM0065EAA0Evaporative Family NAEngine CID (Liters) 396 (6.485)

ABBREVIATIONS

Ignition System

CA-Centrifugal Advance
 EEC-Electronic Engine Control
 EI-Electronic Ignition
 ESAC-Electronic Spark Advance
 Control
 VA-Vacuum Advance
 VR-Vacuum Retard

Fuel System

CFI, CL, DID, DIP, EFI, MFI
 nV-nVenturi Carburetor
 VV-Variable Venturi

Exhaust Emissions Control System

AIP-Air Injection-Pump
 AIV-Air Injection-Valve
 CL-Closed Loop
 EGR-Exhaust Gas Recirculation
 EM-Engine Modification
 OC-Oxidation Catalyst System
 TOC-Trap Oxidizer Continual
 TOP-Trap Oxidizer Periodical
 TR-Thermal Reactor
 TWC-Three-Way Catalyst System

Special Features

CCV-Combustion
 Chamber Valve
 CFI-Central Fuel
 Injection
 DID-Diesel
 Injection-
 Direct
 DIP-Diesel
 Injection-
 Prechamber
 EFI-Electronic
 Fuel
 Injection
 IC - Intercooler
 MFI-Mechanical
 Fuel
 Injection
 TC-Turbocharged

VEHICLE MODELS:DRIVE SYSTEM: NA Engine/ NA -Wheel Drive

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HEAVY-DUTY DIESEL ENGINES

Manufacturer HINO MOTORS, LTD.

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Engine Family GHM0065EAA0

CID(Liter)-Type 396 (6.485)-L6

ECS and (Special Features) ENGINE MODIFICATION

Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP and RPM	Fuel Rate at Maximum HP mm ³ /stroke	Label Ident.
H06C-TD	Nippon Denso 22010-3782	Nippon Denso 23610-1412	175@ 3,000	73	H06C-TD Calif. & 49 States

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