

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-194-7
Relating to Certification of New Heavy-Duty Motor Vehicle Engines

IVECO B.V.

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 Orders G-45-3;

IT IS ORDERED AND RESOLVED: That the following IVECO B.V. 1988 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>
JVE0238FAAX	3.9	(238)	Smoke Puff Limiter (Diesel Injection - Direct) (Intercooler) (Turbocharger)
JVE0358EAA1	5.9	(358)	Smoke Puff Limiter (Diesel Injection - Direct) (Turbocharger)

Engine models and codes are listed on attachments.

The following are the emission standards for these engine families:

<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 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>
JVE0238FAAX	0.7	2.8	4.6	0.46
JVE0358EAA1	0.7	2.3	5.0	0.46

IVECO B.V.

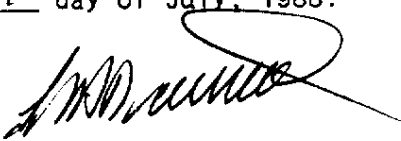
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BE IT FURTHER RESOLVED: That the Executive Officer has been provided all material required to demonstrate certification compliance with the Board's emission control system warranty regulations (Title 13, California Administrative Code, Section 2036).

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 and attachment.

Executed at El Monte, California this 14th day of July, 1988.



K. D. Drachand, Chief
Mobile Source Division

Manufacturer IVECO B.V. Engine Family JVE0238FAAX
 Evaporative Family NA Engine Type I4
 Liters (CID) 3.9 (238)

ABBREVIATIONS

Ignition System

CA-Centrifugal Advance
 ECU-Electronic Control Unit
 EI-Electronic Ignition
 ESAC-Electronic Spark Advance Control
 VA-Vacuum Advance
 VR-Vacuum Retard

Exhaust Emissions Control System

AIP-Air Injection-Pump
 AIV-Air Injection-Valve
 DBC-Dual Bed Catalyst
 EGR-Exhaust Gas Recirculation
 EIC-Electronic Injection Control
 EM-Engine Modification
 OC-Oxidation Catalyst
 OS-Oxygen Sensor
 HOS-Heated Oxygen Sensor
 SPL-Smoke Puff Limiter or Throttle Delay
 TOC-Trap Oxidizer, Continual
 TOP-Trap Oxidizer, Periodical
 TWC-Three-Way Catalyst
 WUOC-Warm-Up Oxidation Catalyst
 WUTWC-Warm-Up Three-Way Catalyt

Special Features

CCV-Combustion Chamber Valve
 CFI-Central Fuel Injection or Throttle Body Injection
 DID-Diesel Injection-Direct
 DIP-Diesel Injection-Prechamber
 EFI-Electronic Fuel Injection
 IC-Intercooler or Aftercooler
 MFI-Mechanical Fuel Injection
 OBD-On-Board Diagnostics
 TC-Turbocharger

Fuel System

CFI, CL, DID, DIP, EFI, MFI
 nV-nVenturi Carburetor

VEHICLE MODELS:

EURO 12-11

Engine: Front x Mid. Rear
 Drive: FWD RWD x 4WD Full Time 4WD Part Time

Manufacturer IVECO B.V. Engine Family JVE0358EAA1
 Evaporative Family NA Engine Type I6
 Liters (CID) 5.9 (358)

ABBREVIATIONS

Ignition System

CA-Centrifugal Advance
 ECU-Electronic Control Unit
 EI-Electronic Ignition
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 VA-Vacuum Advance
 VR-Vacuum Retard

Exhaust Emissions Control System

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 EM-Engine Modification
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 MFI-Mechanical Fuel Injection
 OBD-On-Board Diagnostics
 TC-Turbocharger

Fuel System

CFI, CL, DID, DIP, EFI, MFI
 nV-nVenturi Carburetor

VEHICLE MODELS:

EURO 10-14AS, 12-14, 15-14, 18-14, 23-16, 23-16T

Engine: Front X Mid. _____ Rear _____
 Drive: FWD _____ RWD X 4WD Full Time _____ 4WD Part Time _____

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1988 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

Manufacturer IVECO B.V. Engine Family JVE0238FAAX
 Liter (CID) 3.9 (238) Eng. Type I4
 Emission Control Sys. and (Special Features) EM, SPL (TC, DID, IC)

Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)
8040.45.261 .263 .264 .267 .271 .273 .274 .277	Robt. Bosch 482-4342	Robt. Bosch 482-2812	105@ 2700	68.7 (41.22)	232@ 1600	76.9 (27.3)

Date of Issue _____ Revisions: _____

1988 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

Manufacturer IVECO B.V. Engine Family JVEO358EAA1
 Liter (CID) 5.9 (358) Eng. Type I6
 Emission Control Sys. and (Special Features) EM, SPL (TC, DID)

Engine Model	Fuel Injection Pump Mfr. Part Number	Injector Mfr. Part Number	Maximum Rated HP at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)	Maximum Rated Torque at RPM	Fuel Rate mm ³ /stroke (lbs/Hr)
8060.25.221	Robt. Bosch 482-4346	Robt. Bosch 482-2812	155 @ 2700	68.9 (61.7)	354 @1600	77.3 (41.2)
8060.25.241 .243 .244 .246 .247	Robt. Bosch 482-4345	Robt. Bosch 481-2812	135 @ 2700	62.0 (56.2)	347 @1600	71.1 (37.9)

Date of Issue _____ Revisions: