

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-194-8
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. 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>
KVE0238FAA9	3.9 (238)	Smoke Puff Limiter (Diesel Injection - Direct) (Intercooler) (Turbocharger)
KVE0358EAA0	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>
KVE0238FAA9	0.7	2.8	4.6	0.46
KVE0358EAA0	0.7	2.3	5.0	0.46

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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 Code of Regulations, 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 21st day of January, 1989.



K. D. Drachand, Chief
Mobile Source Division

Manufacturer IVECO B.V. Engine Family K VE0358EAA0 /KVE0238FAA9
 Evaporative Family NA Engine Type I6
 Liters (CID) 5.9 (358)

ABBREVIATIONS

<u>Ignition System</u>	<u>Exhaust Emissions Control System</u>	<u>Special Features</u>
CA-Centrifugal Advance	AIP-Air Injection-Pump	CCV-Combustion Chamber Valve
ECU-Electronic Control Unit	AIV-Air Injection-Valve	CFI-Central Fuel Injection or Throttle Body Injection
EI-Electronic Ignition	DBC-Dual Bed Catalyst	DID-Diesel Injection-Direct
ESAC-Electronic Spark Advance Control	EGR-Exhaust Gas Recirculation	DIP-Diesel Injection-Prechamber
VA-Vacuum Advance	EIC-Electronic Injection Control	EFI-Electronic Fuel Injection
VR-Vacuum Retard	EM-Engine Modification	IC-Intercooler or Aftercooler
	OC-Oxidation Catalyst	MFI-Mechanical Fuel Injection
	OS-Oxygen Sensor	OBD-On-Board Diagnostics
	HOS-Heated Oxygen Sensor	TC-Turbocharger
	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	

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
 EURO 12-11

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

19_89 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

MHIDB

Manufacturer IVECO B.V. Engine Family KVE0358EAA0

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: _____

19_89 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
HEAVY-DUTY DIESEL ENGINES

LHDD

Manufacturer IVECO B.V. Engine Family KVE0238FAA 9
 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	Robt. Bosch	Robt. Bosch	105@ 2700	68.7	232@ 1600	76.9
.263	482-4342	482-2812		(41.22)		(27.3)
.264						
.267						
.271						
.273						
.274						
.277						

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