State of California AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-15-11

Relating to Certification of New Heavy-Duty Off-Road Equipment Engines

IVECO N.V.

Pursuant to the authority vested in the Air Resources Board by Sections 43000.5, 43013 and 43018 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 IVECO N.V., 1998 model-year engine, with rated power between 175 and 750 horsepower, and exhaust emission control systems are certified as described below for use in heavy-duty off-road equipment:

Typical Equipment Usage: Wheel Loader

Fuel Type: Diesel

Engine Family	Liters (Cubic Inches)	Exhaust Emission Control Systems and Special Features
WVEXL09.5DAS	9.5 (580)	Turbocharger Smoke Puff Limiter

Engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The total hydrocarbons (THC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matters (PM) certification exhaust emission standards, in grams per brake horsepower-hour (g/bhp-hr), and the opacity of smoke emission standards, in percent (%), during acceleration (Accel), lugging (Lug), and peak (Peak) modes, for this engine family are (Title 13, California Code of Regulations, Section 2423):

Exhaust Emissions (g/bhp-hr)			Smoke	Smoke Opacity (%)			
<u>THC</u>	<u>co</u>	NOx	<u>PM</u>	<u>Accel</u>	Lug	<u>Peak</u>	
1.0	8.5	6.9	0.4	20	15	50	

The THC, CO, NOx and PM exhaust emission certification values, in g/bhp-hr, and the opacity of smoke emission certification values, in percent (%), for this engine family are:

Exhaust Emission (g/bhp-hr)					Smoke Opacity (%)			
Engine Family	<u>THC</u>	<u>co</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	Lug	<u>Peak</u>	
WVEXLO9.5DAS	0.4	0.8	5.8	0.2	9	5	18	

BE IT FURTHER RESOLVED: That the listed engine models comply with the "Exhaust Emission Standards and Test Procedures--Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2423) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the listed engine models also comply with the "Emission Control Labels--1996 and Later Heavy-Duty Off-Road Diesel Cycle Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model year.

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 2425 et seq.).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed at El Monte, California this _______ day of March 1998.

R. B. Summerfield, Chief

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Mobile Source Operations Division

1998 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET HEAVY-DUTY OFF-ROAD DIESEL ENGINES

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Manufacturer:	IVECO N.	V		Engine Family)AS_	
Displacement:	9.5/580	Liters/Cub	ic Inches	Eng. (Config:_	<u> 1-6</u>		
All Codes in Eng	Fam: CA	49S	50S <u>X</u>	Cert Test I	Procedur	es: ARB_	_ EPA	<u>X</u>
Valves/Ports per	Cylinder:	2 valves/cyl.	Strokes	s per Combust	ion Cycl	e: <u>4-stro</u>	ke	
Maximum Rated	Power: 255	HP (190	_KW)	@	2200	RPM	
Tenition: Compa	ession	Compressi	on with GI	ow Plug >	<u></u>	Spark _		
Fuel Type(s): I	Dedicated X F	lex-Fuel	Dual-Fuel	Diesel_	<u>X</u> M10	0	M85	
1 402 2) [20(2)	CNG L	NGLP	G	Other (specif	y)			
	: 40 CFR 86.131							
	Equipment: Whe							
	.g., MFI, TC, CA		(use abbre	SPL, TC eviations per S	SAE J193	30 JUN93))	

Engine Model (Eng Code)	Rated HP @ RPM	Fuel Rate @ Rated HP mm³ / stroke (lbs/hr)	Fuel Pump & Injector Part no.	(Governor) ECM/PCM Part no.	EGR Valve Part no.	PTOX/ Catalytic Converter Part no.
8465.21.014	255@2200	137.5 (99.5)				

Date Issued:	December	8,	1997
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Revisions: