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State of California AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-15-5

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. 1997 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, Crawler Loader, Dozer

Fuel Type: Diesel

Engine Family Liters (Cubic Inches)

Exhaust Emission Control Systems and Special Features

VVE7.7R6DARA

7.7 (469)

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 matter (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):

<u>Exhaust</u>	<u>Emissi</u>	ons (g/l	ohp-hp)	<u>Sm</u>	oke Opaciity	<u>/ (%)</u>
<u>THC</u>	<u>co</u>	<u>NOx</u>	<u>PM</u>	<u>Acce</u>	<u>Luq</u>	<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 Emissions (g/bhp-hr)					Smoke Opacity (%)		
Engine Family	<u>THC</u>	<u>co</u>	<u>N0x</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
VVE7.7R6DARA	0.6	0.8	6.7	0.2	4	4	6

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 January 1997.

🖟 R. B. Summerfield, Chief

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Mobile Source Operations Division

1997 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET HEAVY-DUTY OFF-ROAD DIESEL ENGINES

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Manufacturer:	IVEC	O N.V.		Engine Family:	_VVE7.7R6E	<u> ARA</u>		
Displacement: 7.7/469 Liters/Cubic Inches Eng. Config: I-6								
All Codes in Er	ng Fam: CA	49S	50S <u>X</u>	Cert Test Pro	cedures: ARI	B EPA_X_		
Valves/Ports pe	er Cylinder:	2 valves/cy	l. Strokes	per Combustion	Cycle: <u>4-st</u>	roke		
Maximum Rate	ed Power:	<u>193</u> HP	(144	_KW)	@2150	RPM		
Ignition: Comp	pression	Compr	ession with Gl	ow Plug <u>X</u>	Spark			
Fuel Type(s): Dedicated X Flex-Fuel Dual-Fuel Diesel X M100 M85								
		•		Other (specify) _				
Diesel Cert Fue				Other (specify) _				
Primary Service	e Equipment: _		heeled Loader.	. Crawler Loader	, Dozer	<u>. </u>		
Exhaust ECS (SPL, TC				
			(use abbrev	viations per SAE	J1930 JUN93	3)		
Engine Model (Eng Code)	Rated HP @ RPM	Fuel Rate @ Rated HP mm ³ / stroke (lbs/hr)	Fuel Pump & Injector Part no.	(Governor) ECM/PCM Part no.	EGR Valve Part no.	PTOX/ Catalytic Converter Part no.		
8365.26.584	193@2150	99 (70.0)	PES6P120A 720RS3369 0402076795 / KBEL 90 S76 554	RSV450 1075P5A631	N/A	N/A		
8365.26.540	182@2000	99 (65.4)	PES6P120A 720 RS3371 0402076798 / KBEL 90 S76 554	RSV450 1000P5A637-1	N/A	N/A		
8365.26.541	173@2000	94 (62.1)	PES6P120A 720RS3371 0402076797 / KBEL 90 S76 554	RSV450 1000P5A637	N/A	N/A		
Date Issued:								
Revisions:	I	1	1	r	1			