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State of California AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-12-3

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

NAVISTAR INTERNATIONAL TRANSPORTATION CORPORATION

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 Navistar International Transportation Corporation 1996 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: Industrial Equipment, Tractor, Crawler, Wheeler

Loader, Stationary Power Unit

Fuel Type: Diesel

Engine Family	Liters	(Cubic Inches)	Exhaust Emission Control Systems and Special Features
TNV466R6DASC	7.6	(466)	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):

<u>Exhau</u>	<u>st Emissi</u>	ons (g/bhp	-hr)	Smoke	<u>Opacity</u>	(%)
THC	<u>CO</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</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 Emission (g/bhp-hr)			Smoke Opacity (%)			
Engine Family	<u>THC</u>	<u>co</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	<u>Luq</u>	<u>Peak</u>
TNV466R6DASC	0.2	1.5	6.8	0.2	3	7	8

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.).

Executive Order U-R-10-3, issued January 10, 1996, is hereby cancelled and replaced by Executive Order U-R-12-3.

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

Executed at El Monte, California this 26 day

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R. B. Summerfield
Assistant Division Chief
Mobile Source Division

day of January 1996.

1996 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET HEAVY-DUTY DIESEL-STANDARD ENGINES

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Manafacturer Navistar International Transportation Corp.			Engine Family	TNV466R6DASC
Displacement:	7.6 /	Liters	466	/ Cubic Inches
Ignition: Co	mpression X	Compression with Glow Plug		Spark
Fuel Type(s)	Dedicated Flex-Fuel	Dual-Fuel Bi-Fu	ıel Diesel	X CNG
	LNG LPG	M85 M100	Other (sp	ecify)
Diesel Cert Fue	l: 13 CCR 2282	40 CFR 86.1313-90	40 C	FR 86.1313-94 X
Maximum Rate	d Power: 210 H	P @2500 RPI	М	Engine Configuration I-6
Exhaust ECS (include. MFI, TC, CAC) :	DI TC SPL		
	•	(Use abbreviations per	SAE J1930 SEP9	1)

Rated HP @ RPM	Fuel Rate @ Rated HP mm^3 / stroke (lbs/hr)	Fuel Pump & Injector Part No.	ECM / PCM Part No.	EGR Valve Part No.	PTOX / Catalytic Converter Part No.
210 @ 2500	102.3 *	Pumps			
_	(85.7)	1820269C91D			
		Nozzles			ĺ
		1823759C91			
210 @ 2400		Pumps	1		
	(83.6)				
105 @ 2400	02.7 #				
193 @ 2400					
	(74.0)				
190 @ 2500	83.3 *				
O		1823309C91			
	,	Nozzles			
		1823759C91			
180 @ 2200	88.3 *	Pumps		•	
	(65.1)	1823369C91	ŀ		
		Nozzles			
		1823759C91	ŀ		
170 @ 2500	1	•			
	(61.2)				
			1		
	@ RPM	Rated HP @ Rated HP mm^3 / stroke (lbs/hr) 210 @ 2500	Rated HP @ Rated HP mm^3 / stroke (lbs/hr) 210 @ 2500	Rated HP @ Rated HP mm^3 / stroke (lbs/hr) 210 @ 2500 102.3 * Pumps 1820269C91D Nozzles 1823759C91 Pumps (83.6) 195 @ 2400 195 @ 2400 190 @ 2500 83.3 * Pumps 1820269C91B 1823759C91 Pumps (74.6) 190 @ 2500 83.3 * Pumps 1820269C91C Nozzles 1823759C91 Pumps (69.8) 180 @ 2200 88.3 * Pumps 1823309C91 Nozzles 1823759C91 Pumps (65.1) 180 @ 2500 73.1 * Pumps 1823309C91A Nozzles 1823759C91 Pumps (61.2) 1823309C91A Nozzles	Rated HP @ Rated HP mm^3 / stroke (lbs/hr)

Date Issued: 12/14/95

Revisions: 2/5/96, * 5/10/96

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1 17.01-77	DT 466	DIAL
17.01-77	D1-400	PLN