State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-12-13

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 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: Tractor, Wheel Loader, Industrial Equipment

Fuel Type: Diesel

Engine Family	Liters	(Cubic Inches)	Exhaust Emission Control Systems and Special Features
VNV466R6DASC	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):

Exhaust Emissions (g/bhp-hp)				Smoke Opaciity (%)		
THC	CO	NOx	PM	Accel	Lug	Peak
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	THC	CO	NOx	PM	Accel	Lug	Peak
VNV466R6DASC	0.1	1.2	6.6	0.1	18	8	32

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 16th day of December 1996.

R. B. Summerfield, Chief
Mobile Source Operations Division

E.O. # U - R - 12 - 13

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

Manafacturer Navistar International Transportation Corp. Engine Family VNV466R6DASC
Displacement : 7.6 / 466 Liters / Cubic Inches Engine Configuration: I - 6
All Eng Codes in Eng Family: CA ___ 49 ___ 50S X Cert Test Procedures: ARB X EPA X
Valves / Ports per Cylinder 2 valves / cylinder Stroke per Combustion Cycle 4 - stroke
Maximum Rated Power 210 HP @ 2400 RPM (157 KW) @ 2400 RPM
Ignition: Compression X Compression with Glow Plug ___ Spark ___
Fuel Types: Dedicated X Flex-Fuel ___ Dual-Fuel ___ Gasoline ___ Diesel X M100 ___
M85 ___ CNG ___ LNG ___ LPG ___ Other (specify) ___
Diesel Cert Fuel: 40 CFR 86.1313-94 X Other (specify) ___
Primary Service Equipment: Tractors(farm & industrial), Construction equip.(wheel loaders,cranes,etc.) Stationary power units, Etc
Exhaust ECS (e.g. , MFI, TC, CAC) : EM DI TC SPL
(Use abbreviations per **SAE J1930 JUN93**)

Engine Mode (Eng. Code)	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.
			Pumps	Nozzles		
IAL210	210 @ 2400	103.9 (83.6)	1820269C91B 1825466C91	1823759C91		
IA210	210 @ 2500	102.3 (85.7)	1820269C91D	1823759C91		
IA195	195 @ 2400	92.7 (74.6)	1820269C91C	1823759C91		
IA190	190 @ 2500	83.3 (69.8)	1823309C91	1823759C91		
IA180	180 @ 2200	94.3 (69.5)	1823369C91	1823759C91		
IA170	170 @ 2500	73.1 (61.2)	1823309C91A	1823759C91		
IA160	160 @ 2200	87.5 (64.5)	1824775C91	1823759C91		

Date Issued : 10/30/96

Revisions :

97nr^17, pp14

17.01-92 DT-466 PLN