California Environmental Protection Agency AIR RESOURCES BOARD	CNH Engine Corporation, Inc.	EXECUTIVE ORDER U-R-011-0066-2 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 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-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2003	3X9XL0239ABA	3.9	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Turbocharger	Crane, Loader, Tractor, Dozer, Pump, Compressor

The engine models and codes are attached.

The following are the exhaust certification standards (STD), or family emission limit(s) (FEL) as applicable, and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
37 ≤ kW < 75	Tier 1	STD	N/A	9.2	N/A	N/A	N/A	20	15	50
		FEL	N/A	8.9	N/A	N/A	N/A	N/A	N/A	N/A
		CERT	--	8.4	--	--	--	13	2	31

BE IT FURTHER RESOLVED: That the family emission limit(s) (FEL) is an emission level declared by the manufacturer for use in any averaging, banking and trading program and in lieu of an emission standard for certification. It serves as the applicable emission standard for determining compliance of any engine within this engine family under 13 CCR Sections 2423 and 2427.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

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

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

This Executive Order hereby cancels and replaces Executive Order U-R-011-0066-1 dated April 10, 2003.

Executed at El Monte, California on this 18TH day of November 2003.

Allen Lyons, Chief
Mobile Source Operations Division

Engine Model Summary Form

U-R-011-0066-2

Manufacturer: **CNH Engine Corporation**

Engine category: **Nonroad over 50 HP**

EPA Engine Family: **3X9XL0239ABA**

Mfr Family Name: **A382**

Process Code: **Running Change**

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
1967;FR90131	4T-390	95@2200	73	35.9	283@1500	83	28.1	DDI,TC
1965;FR90130	4T-390	90@2200	70	34.4	269@1500	79	26.7	DDI,TC
1965;FR90144	4T-390	85@2200	69	34.1	254@1500	76	25.7	DDI,TC
2478;FR90126	4T-390	80@2200	64	31.6	229@1500	67	19.3	DDI,TC
2359;FR90127	4T-390	85@2500	60	33.9	239@1500	71	28.9	DDI,TC
2623;FR90618	4T-390	89@2200	72	35.5	268@1450	82	24.6	DDI,TC
2623;FR90540	4T-390	95@2000	77	34.6	291@1400	91	28.5	DDI,TC
1966;FR90369	4T-390	95@2200	73	35.9	283@1500	83	28.1	DDI,TC
1967;FR90963	4T-390	99@2200	76	73.8	295@1500	89	30.1	DDI,TC
1967;FR90954	4T-390	99@2200	76	73.8	295@1500	89	30.1	DDI,TC
2478;FR91024	4T-390	80@2000	67	30.0	285@1400	79	25.0	DDI,TC
8303;FR91025	4T-390	90@2000	76	34.0	296@1400	92	29.0	DDI,TC
1966;FR90953	4T-390	99@2200	76	37.6	295@1500	89	30.1	DDI,TC