California Environmental Protection Agency AIR RESOURCES BOARD	CNH Engine Corporation, Inc.	EXECUTIVE ORDER U-R-011-0062 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-45-9;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system 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)
2002	2X9XL0505ABC	8.3	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Turbocharger, Charge Air Cooler, Powertrain Control Module	Tractor

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
130 ≤ KW < 225	Tier 1	STD	1.3	9.2	N/A	11.4	0.54	20	15	50
		FEL	N/A	6.9	N/A	N/A	N/A	N/A	N/A	N/A
		CERT	0.2	5.2	--	0.8	0.12	6	1	10

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.

Executed at El Monte, California on this 28th day of December 2001.

R. B. Summerfield, Chief
Mobile Source Operations Division

Engine Model S nmary Form

ATTACHMENT

U-R-011-0062

Manufacturer: **CNH Engine Corporation, Inc.**

Engine category: **Nonroad Over 50 Hp**

EPA Engine Family: **2X9XL0505ABC**

Mfr Family Name: **D413**

Process Code: **New Submission**

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
2241;FR90205	6TAA-8304	278@2000	138	93.1	1022 @ 1400	188	88.5	DOL, PCM, TC, CAC
2241;FR90204	6TAA-8304	246@2000	122	82.4	904 @ 1400	167	78.6	PCM, TC, CAC
2892;FR90691	6TAA-8304	300@2100	148	104.5	1000@1400	193	91.2	PCM, TC, CAC
2698;FR90739	6TAA-8304	246@2000	126	85.3	904@1400	173	81.7	PCM, TC, CAC
2698;FR90740	6TAA-8304	278@2000	138	93.0	1022@1400	191	90.2	PCM, TC, CAC
2698;FR90771	6TAA-8304	278@2000	138	93.0	1022 @ 1400	191	90.2	PCM, TC, CAC
8001;FR90934	6TAA-8304	275@2000	143	96.8	793@1400	150	70.7	PCM, TC, CAC
8001;FR91100	6TAA-8304	283@2000	151	102.0	1040@1400	201	94.6	PCM, TC, CAC
8001;FR91021	6TAA-8304	283@2000	151	102.0	1040@1400	201	94.6	PCM, TC, CAC
8001;FR91020	6TAA-8304	251@2000	130	88.0	922@1250	178	84.0	PCM, TC, CAC