California Environmental Protection Agency AIR RESOURCES BOARD	CNH Engine Corporation, Inc.	EXECUTIVE ORDER U-R-011-0051 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	2X9XL0359ABA	5.9	Diesel	8000

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

The engine models and codes are attached.

The following are the exhaust certification standards (STD) 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
75 ≤ KW < 130	Tier 1	STD	N/A	9.2	N/A	N/A	N/A	20	15	50
130 ≤ KW < 225	Tier 1	STD	1.3	9.2	N/A	11.4	0.54	20	15	50
		CERT	0.4	6.9	--	0.8	0.18	6	1	22

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 17th day of December 2001.

R. B. Summerfield, Chief
Mobile Source Operations Division

Engine Model S mary Form

ATTACHMENT

U-R-011-00051

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

Engine category: **Nonroad Over 50 Hp**

EPA Engine Family: **2X9XL0359ABA**

Mfr Family Name: **A403**

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
1889;FR90001	6TA-590	200@2500	91	77.1	593@1500	112	56.8	TC, CAC
1889;FR9898	6TA-590	185@2500	85	71.9	550@1500	104	52.5	TC, CAC
2072;FR90080	6TA-590	174@2500	78	65.8	458@1500	88	43.7	TC, CAC
1962;FR90338	6TA-590	168@2200	84	62.0	541@1500	101	51.0	TC, CAC
1962;FR90018	6TA-590	165@2200	81	60.4	512@1500	97	48.9	TC, CAC
1962;FR90337	6TA-590	153@2200	74	55.0	493@1500	96	48.5	TC, CAC
1962;FR90020	6TA-590	150@2200	75	55.8	466@1500	89	45.1	TC, CAC
1962;FR90812	6TA-590	150@2200	74	54.9	483@1500	93	47.0	TC, CAC
2072;FR91092	6TA-590	173@2500	78	65.8	458@1500	88	43.7	TC, CAC
8028;FR91089	6TA-590	173@2200	88	65.1	590@1500	112	56.8	TC, CAC