California Environmental Protection Agency AIR RESOURCES BOARD	ISUZU MOTORS LIMITED	EXECUTIVE ORDER U-R-006-0162 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)
2004	4SZXL01.5WNA	1.5	Diesel	3000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Indirect Diesel Injection	Loader, Pump, Compressor, Generator Set, Other Industrial Equipment

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
8 ≤ kW < 19	Tier 1	STD	N/A	N/A	9.5	6.6	0.80	20	15	50
		CERT	--	--	4.7	0.8	0.31	6	4	13

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 10TH day of December 2003.

Allen Lyons, Chief
Mobile Source Operations Division

Engine Model Summary Form

ATTACHMENT

U-R-006-0162

Manufacturer: **Isuzu Motors Limited**

Engine category: **Nonroad CI**

EPA Engine Family: **4SZXL01.5WNA**

Mfr Family Name: **NA**

Process Code: **New Submission**

1.Engine Code	2.Engine Model	lb/W	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
3LD1NAAWA-01	3LD1	15.5	20.8@1750	32.4@1750	9.5@1750	62.4@1750	32.4@1750	9.5@1750	EM,IDI
3LD1NAAWA-02	3LD1		22.4@1750	33.9@1750	9.9@1750	67.2@1750	33.9@1750	9.9@1750	EM,IDI
3LD1NAAWA-03	3LD1		23.2@1800	33.3@1800	10.0@1800	67.7@1800	33.3@1800	10.0@1800	EM,IDI
3LD1NAAWA-04	3LD1		24.7@1900	34.8@1900	11.0@1900	68.4@1900	34.8@1900	11.0@1900	EM,IDI
3LD1NAAWA-05	3LD1		23.5@1950	31.7@1950	10.3@1950	68.6@1700	33.7@1700	9.5@1700	EM,IDI
3LD1NAAWA-06	3LD1	18.5	24.8@2000	31.7@2000	10.6@2000	69.3@1800	34.5@1800	10.3@1800	EM,IDI
3LD1NAAWA-07	3LD1		21.9@2450	25.1@2450	10.3@2450	51.7@1800	27.9@1800	8.4@1800	EM,IDI