



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	2SZXL01.5WNA	1.5	Diesel	3000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Indirect Diesel Injection			Loader, Pump, Compressor, Generator, Excavator, Roller, Lift	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbons (HC), oxides of nitrogen (NO_x), or non-methane hydrocarbons plus oxides of nitrogen (NMHC+NO_x), 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	NO _x	NMHC+NO _x	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 19th day of November 2001.

R. B. Summerfield, Chief
Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: **Isuzu Motors Limited**
 Engine category: **Nonroad CI**
 EPA Engine Family: **2SZXL01.5WNA**
 Mfr Family Name: **NA**
 Process Code: **New Submission**

EO U-R-006-0066

ATTACHMENT

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
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 16.5	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

kw