

ISUZU MOTORS LIMITED

EXECUTIVE ORDER U-R-006-0134 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	3SZXL01.5YNA	1.5	Diesel	5000		
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION			
	Indirect Diesel Inje	ection	Loader, Pump, Co Generator Set, Excava	mpressor, ator, Lift, Roller		

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 (NOx), or non-methane hydrocarbons 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	EMISSION STANDARD				XHAUST (g/kw-ł	ır)		C	PACITY (%)
CLASS	CATEGORY		HC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
19≤ KW < 37	Tier 1	STD	N/A	N/A	9.5	5.5	0.80	20	15	50
		CERT			5.1	3.2	0.71	7	9	14

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.

_ day of November 2002.

Allen Lyons, Chief

Mobile Source Operations Division

Engine Model Summary Form

Isuzu Motors Limited Manufacturer:

Nonroad CI 3SZXL01.5YNA Engine category:

EPA Engine Family.

Mfr Family Name: NA

New Submission Process Code:

ATACHMENT

EOU-R-006-0134

3LD1 25.5@2100 3LD1 26.0@2200 3LD1 27.0@2300 3LD1 27.8@2400 3LD1 27.6@2450 3LD1 29.6@2600 3LD1 30.9@2800 3LD1 33.5@3000 3LD1 27.8@3000	1.Engine Code	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	8.Fuel Rate: 9.Emission Control (lbs/hr) @peak torque Device Per SAE J1930
3LD1 26.0@2200 30.1@22 3LD1 27.0@2300 30.1@22 3LD1 27.6@2450 29.7@22 3LD1 29.6@2600 28.3@26 3LD1 31.7@2700 31.1@28 3LD1 30.9@2800 34.0@36 3LD1 27.8@3000 27.9@36	3LD1NAAYB-01	3LD1	25.5@2100	31.7@2100	11.1@2100	67.9@1700	33.7@1700	9.5@1700	IOI MH
3LD1 27.0@2300 30.1@22 3LD1 27.8@2400 30.1@22 3LD1 27.6@2450 29.7@24 3LD1 29.6@2600 28.3@26 3LD1 31.7@2700 31.3@27 3LD1 30.9@2800 34.0@36 3LD1 27.8@3000 27.9@30	3LD1NAAYB-02	3LD1	26.0@2200	30.1@2200	11.0@2200	69.3@1800	34.5@1800	10.3@1800	EM.IDI
3LD1 27.8@2400 30.1@24 3LD1 27.6@2450 29.7@24 3LD1 29.6@2600 28.3@26 3LD1 31.7@2700 31.3@27 3LD1 30.9@2800 31.1@28 3LD1 33.5@3000 27.9@30 31.00.30.30.30.30.30.30.30.30.30.30.30.30.	3LD1NAAYB-03	3LD1	27.0@2300	30.1@2300	11.5@2300	69.3@1800	34.5@1800	10.3@1800	EM.IDI
3LD1 27.6@2450 29.7@26 3LD1 29.6@2600 28.3@26 3LD1 31.7@2700 31.1@28 3LD1 30.9@2800 31.1@28 3LD1 33.5@3000 34.0@36 3LD1 27.8@3000 27.9@36	3LD1NAAYB-04	3LD1	27.8@2400	30.1@2400	12.0@2400	69.3@1800	34.5@1800	10.3@1800	EM IDI
3LD1 29.6@2600 3LD1 31.7@2700 3LD1 30.9@2800 3LD1 33.5@3000 3LD1 27.8@3000	3LD1NAAYB-05	3LD1	27.6@2450	29.7@2450	12.1@2450	67.0@1800	34.1@1800	10.2@1800	EM IDI
3LD1 31.7@2700 3LD1 30.9@2800 3LD1 33.5@3000 3LD1 27.8@3000	3LD1NAAYB-06	3LD1	29.6@2600	28.3@2600	12.3@2600	69.3@1800	34.5@1800	10.3@1800	EM IDI
3LD1 30.9@2800 3LD1 33.5@3000 3LD1 27.8@3000	3LD1NAAYB-07	3LD1	31.7@2700	31.3@2700	14.1@2700	69.0 @ 2000	33.7@2000	11.2@2000	EM ID
3LD1 33.5@3000 3LD1 27.8@3000	3LD1NAAYB-08	3LD1	30.9@2800	31.1@2800	14.5@2800	69.1@2000	33.7@2000	11.2@2000	EMIDI
3LD1 27.8@3000	3LD1NAAYB-09	3LD1	33.5@3000	34.0@3000	17.0@3000	67.2@1750	33.9@1750	9.9@1750	EM IDI
31 D1 32 1@3000	3LD1NAAYB-10	3LD1	27.8@3000	27.9@3000	14.0@3000	62.4@1750	32.4@1750	9.5@1750	E E
0000	3LD1NAAYA-01	3LD1	32.1@3000	30.6@3000	15.3@3000	70.1@2000	34.6@2000	11.5@2000	FM ID
3LD1NAAYA-02 3LD1 (2.7.9 pt/37.4@3400 34.5@3400	3LD1NAAYA-02	3LD1 (2.7.	91537.4@3400	34.5@3400	19.5@3400	72.2@1800	38.9@1800	11.7@1800	EM,IDI

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