

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-6-59
Relating to Certification of New Off-Road Compression-Ignition Engines

ISUZU MOTORS LIMITED

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:

Model Year: 2001

Typical Equipment Usage: Pump, Compressor, Generator and Other Industrial Equipment

Fuel Type: Diesel

<u>Engine Family</u>	<u>Engine Displacement (liters)</u>	<u>Useful Life (hours)</u>	<u>Emission Control Systems and Special Features</u>
1SZXL01.5WNA	1.5	3000	Indirect Diesel Injection

Engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The exhaust emission certification standards and certification values for hydrocarbons (HC), oxides of nitrogen (NOx), or non-methane hydrocarbons plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) (units are expressed in grams per kilowatt-hour (g/kw-hr)), and the opacity-of-smoke certification standards and certification values in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family are as follows (Title 13, California Code of Regulations, Section 2423):

<u>Engine Power Rating (kw)</u>	<u>Emission Standard Category</u>		<u>Exhaust Emissions (g/kw-hr)</u>					<u>Smoke Opacity (%)</u>		
			<u>HC</u>	<u>NOx</u>	<u>NMHC+NOx</u>	<u>CO</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
8<KW<19	Tier 1	Standard	N/A	N/A	9.5	6.6	0.80	20	15	50
		Certification	--	--	4.7	0.8	0.31	6	4	13

BE IT FURTHER RESOLVED: That the listed engine models also comply with "Emission Control Labels— 1996 and Later Off-Road Compression-Ignition Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Sections 2425 and 2426).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed at El Monte, California this 17TH day of January 2001.

 FOR
R. B. Summerfield, Chief
Mobile Source Operations Division

Model Year: 2001
 Manufacturer: Isuzu Motors Limited
 Engine Family: 1SZXL01.5WNA

ATTACHMENT

Issued:
 Revised: 10/4/2000
 E.O. Number: U-R-6-59

Small Off-Road Engine Model Summary Form

Units for Table: kw

Worst Case?	47. Model Designation	48. Sales Code	49. Displ (cc)	50. Bore/ Stroke	51. Ignition Timing	52. Max Power	53. Rated Speed (RPM)	54. Rated Torque	55. Torque Speed (RPM)	56. Emiss Control Sys
	3LD1NAAWA-01	50-State	1496	83.1/92	16	15.5	1750	84.5	1750	EM,IDI
	3LD1NAAWA-02	50-State		83.1/92	16	16.7	1750	91.0	1750	EM,IDI
	3LD1NAAWA-03	50-State	1496	83.1/92	16	17.3	1800	91.7	1800	EM,IDI
X	3LD1NAAWA-04	50-State	1496	83.1/92	16	18.4	1900	92.7	1900	EM,IDI
	3LD1NAAWA-05	50-State	1496	83.1/92	16	17.5	1950	92.9	1700	EM,IDI
	3LD1NAAWA-06	50-State	1496	83.1/92	16	18.5	2000	93.9	1800	EM,IDI
	3LD1NAAWA-07	50-State	1496	83.1/92	16	16.3	2450	70	1800	EM,IDI