 AIR RESOURCES BOARD	ISUZU MOTORS LIMITED	EXECUTIVE ORDER U-R-006-0077 New Off-Road Compression-Ignition Engines
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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	2SZXL02.2YNB	2.2	Diesel	5000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Direct Diesel Injection			Loader, Pump, Compressor, Excavator, 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 (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 CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			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	--	--	8.2	3.3	0.31	5	8	10

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: **2SZXL02.2YNB**
 Mr Family Name: **NA**
 Process Code: **New Submission**

E0 U-R-006-0077

ATTACHMENT

kw

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
4LE2NABDA-01	4LE2 30.0	39.9@2300	29.5@2300	15.1@2300	101.6@1600	31.6@1600	11.3@1600	EM,DFI
4IRL5NBDA-01	4IRL5N	44.5@2400	32.7@2400	17.5@2400	106.9@1800	35.0@1800	14.0@1800	EM,DFI
4LE2NABDA-02	4LE2	44.5@2400	32.7@2400	17.5@2400	106.9@1800	35.0@1800	14.0@1800	EM,DFI
4IRL5NBDA-02	4IRL5N	45.5@2500	32.0@2500	17.9@2500	106.9@1800	35.0@1800	14.0@1800	EM,DFI
4LE2NABDA-03	4LE2	45.5@2500	32.0@2500	17.9@2500	106.9@1800	35.0@1800	14.0@1800	EM,DFI
4LE2NABDA-04	4LE2 35.7	47.9@2700	31.2@2700	18.8@2700	104.0@1800	32.5@1800	13.0@1800	EM,DFI
4LE2NABDA-05	4LE2	47.9@2800	29.6@2800	18.5@2800	99.6@2000	30.7@2000	13.7@2000	EM,DFI
4LE2NABDA-01	AA-4LE2	39.9@2300	29.5@2300	15.1@2300	101.6@1600	31.6@1600	11.3@1600	EM,DFI
4LE2NABDA-02	AA-4LE2	44.5@2400	32.7@2400	17.5@2400	106.9@1800	35.0@1800	14.0@1800	EM,DFI
4LE2NABDA-03	AA-4LE2	45.5@2500	32.0@2500	17.9@2500	106.9@1800	35.0@1800	14.0@1800	EM,DFI
4LE2NABDA-04	AA-4LE2	47.9@2700	31.2@2700	18.8@2700	104.0@1800	32.5@1800	13.0@1800	EM,DFI
4LE2NABDA-05	AA-4LE2	47.9@2800	29.6@2800	18.5@2800	99.6@2000	30.7@2000	13.7@2000	EM,DFI