

ISUZU MOTORS LIMITED

EXECUTIVE ORDER U-R-006-0178 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	4SZXL04.3FXA	4.3	Diesel				
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION				
Direct Diesel Injection, Turbocharger, Charge Air Cooler			Compressor, 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	EMISSION STANDARD				XHAUST (g/kW-i	OPACITY (%)				
CLASS	CATEGORY		HC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
75 ≤ kW < 130	Tier 2	STD	N/A	N/A	6.6	5.0	0.30	20	15	
		CERT			5.8	1.2	0.28	13	7	50
				<u> </u>			0.20			36

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 ______ day of December 2003.

Allen Jons, Chief

Mobile Source Operations Division

Engine Model Surmary Form

Manufacturer: Isuzu Motors Limited

Engine category: Nonroad Cl

EPA Engine Family: 4SZXL04.3FXA

Mfr Family Name: NA

Process Code: New Submission

ATTACHMENI

U-R-006-0178

8.Fuel Rate: 9.Emission Control (Ibs/hr)@peak torque Device Per SAE J1930			EM, IC, CAC, DFI	IN TAC OAD	E1V, 1 C, CAC, UF!	EM.TC.CAC.DFI		EM, IC,CAC,DFI	EW TO CAC DEL		EM.TC.CAC DEI		LIM, IC, CAC, DFI
8.Fuel Rate: (lbs/hr)@peak torque			43.1@1800	35.7@1800 F	200	40.9@1800	0007000	30.3(@1800	40.9@1800	2001	46.8@1800	44 6@1800	2700-800-4
7.Fuel Rate: mm/stroke@peak torque		107.7@1800		89.3@1800		102.1@1800		32.3 <i>@</i> 160U	102.1@1800		117.0@1800	1113@1800	22.3
6.Torque @ RPM (SEA Gross)		347.8@1800		305.9@1800		347.9@1800		320.6@1800		270 004 000	3/2.0(4) 1800	354,0@1800)
5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)		47.0@2200		41.0@2150	47 2@2300	Ti.2@2300	41.4@2150) (((((((((((((((((((46.3@2200	58 2@2500	20.2 (22.000	52.6@2300	
4.Fuel Rate: mm/stroke @ peak HP (for diesel only)		96.1@2200	020000	00.00	92.3@2300		86.7@2150	0017	0077@1.46	104 6@2500	0001	102.9@2300	The state of the s
3.BHP@RPM \(\lambda\) (SAE Gross)	0000	126.7@2200	111 7@21E0	1	127.4@2300	44100001	051200711	125 1@2200	20:100	N140.0@2500) (1	137.1@2300	
3.BHP@RPM 1.Engine Code 2.Engine Model, W (SAE Gross)	TANDA A	1150444	AA-4RG1T & 2 6, 111 7@21E0		AA-4BG1T	Troop VV		AA-4BG1T		AA-4BG1T [04, \$140.0@2500	F7007 44	1	
1.Engine Code	4RG1XAREA.05		4BG1XABFA-06		45G1XABFA-U/	4BG1XARFA-08		4BG1XABFA-09	ABCAVABED 04	10-91974	4BG1XABEB.02	7021230	