

## ISUZU MOTORS LIMITED

EXECUTIVE ORDER U-R-006-0157 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	3SZXL04.3FXA	4.3	Diesel	8000		
SPECIAL I	FEATURES & EMISSION		TYPICAL EQUIPMENT APPLICATION			
Direct Dies	el Injection, Turbocharg	er, Charge Air Cooler	Compressor, Excavator			

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		EXHAUST (g/kw-hr)				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	50
		CERT			5.8	1.2	0.28	13	7	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 January 2003.

Aller Lyons, Chief

Mobile Source Operations Division

## **Engine Model Summary Form**

Manufacturer: Isuzu Motors Limited
Engine category: Nonroad CI

EPA Engine Family: 3SZXL04.3FXA

Mfr Family Name: NA

Process Code: New Submission

ATTACHMEN

EO U-R-006-0157

4BG1XABFB-02	4BG1XABFB-01	4BG1XABFA-09	4BG1XABFA-08	4BG1XABFA-07	4BG1XABFA-06	4BG1XABFA-05	1.Engine Code
AA-4BG1T	AA-4BG1T (	AA-4BG1T	AA-4BG1T	AA-4BG1T	AA-4BG1T	AA-4BG1T	2.Éngine Model
137.1@2300	104 4140.0@2500	125.1@2200	117.0@2150	127.4@2300	\$3_111.7@2150	126.7@2200	3.BHP@RPM (SAE Gross)
102.9@2300	104.6@2500	94.7@2200	86.7@2150	92.3@2300	85.8@2150	96.1@2200	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)
52.6@2300	58.2@2500	46.3@2200	41.4@2150	47.2@2300	41.0@2150	47.0@2200	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)
354.0@1800	372.0@1800	347.9@1800	320.6@1800	347.9@1800	305.9@1800	347.8@1800	6.Torque @ RPM (SEA Gross)
111.3@1800	117.0@1800	102.1@1800	92.3@1800	102.1@1800	89.3@1800	107.7@1800	7.Fuel Rate: mm/stroke@peak torque
44.6@1800	46.8@1800	40.9@1800	36.9@1800	40.9@1800	35.7@1800	43.1@1800	8.Fuel Rate: (lbs/hr)@peak torque
EM,TC,CAC,DFI	EM,TC,CAC,DFI	EM,TC,CAC,DFI	EM,TC,CAC,DFI	EM,TC,CAC,DFI	EM,TC,CAC,DFI	EM,TC,CAC,DFI ομ/	8.Fuel Rate: 9.Emission Control (lbs/hr)@peak torque Device Per SAE J1930