California Environmental Protection Agency AIR RESOURCES BOARD	ISUZU MOTORS LIMITED	EXECUTIVE ORDER U-R-006-0152 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	3SZXL15.7EXA	15.7	Diesel	8000

SPECIAL FEATURES & EMISSION CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION
Direct Diesel Injection, Turbocharger, Charge Air Cooler	Crane, Loader, Compressor, Generator Set, Lift, 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 CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
225≤ KW < 450	Tier 2	STD	N/A	N/A	6.4	3.5	0.20	20	15	50
		CERT	--	--	6.1	0.8	0.13	19	5	49

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 25th day of November 2002.

Allen Lyons, Chief
Mobile Source Operations Division

Engine Model Summary Form

Manufacturer: **Isuzu Motors Limited**

Engine category: **Nonroad CI**

EPA Engine Family: **3SZXL15.7EXA**

Mfr Family Name: **NA**

Process Code: **Running Change** 2-7-03

ATTACHMENT

EO U-R-006-0152

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
6WG1XABEA-01	BB-6WG1X	483.3@2000	273.6@2000	182.5@2000	1554@1500	300.6@1500	150.4@1500	EM,TC,CAC,DFI DOI
6WG1XABEA-02	BB-6WG1X	483.3@1800	287.1@1800	172.4@1800	1554@1500	300.6@1500	150.4@1500	EM,TC,CAC,DFI
6WG1XABEA-03	BB-6WG1X	345.2@2000	191.7@2000	127.9@2000	1158@1500	221.8@1500	111.0@1500	EM,TC,CAC,DFI
6WG1XABEA-04	BB-6WG1X	345.2@1800	201.1@1800	120.7@1800	1158@1500	221.8@1500	111.0@1500	EM,TC,CAC,DFI
6WG1XABEA-05	BB-6WG1X	415.7@1800	247.0@1800	147.3@1800	1350@1500	261.0@1500	130.6@1500	EM,TC,CAC,DFI
6WG1XABEB-01	BB-6WG1X	483.3@2000	273.6@2000	182.5@2000	1554@1500	300.6@1500	150.4@1500	EM,TC,CAC,DFI
6WG1XABEB-02	BB-6WG1X	483.3@1800	287.1@1800	172.4@1800	1554@1500	300.6@1500	150.4@1500	EM,TC,CAC,DFI
6WG1XABEB-03	BB-6WG1X	345.2@2000	191.7@2000	127.9@2000	1158@1500	221.8@1500	111.1@1500	EM,TC,CAC,DFI
6WG1XABEB-04	BB-6WG1X	345.2@1800	201.1@1800	120.7@1800	1158@1500	221.8@1500	111.1@1500	EM,TC,CAC,DFI
6WG1XABEB-05	BB-6WG1X	483.3@2000	273.6@2000	182.5@2000	1541@1400	295.4@1400	138.0@1400	EM,TC,CAC,DFI
6WG1XABEC-01	CC-6WG1X	290.5@2200	162.0@2200	118.9@2200	1099@1500	217.5@1500	108.8@1500	EM,TC,CAC,DFI
6WG1XABEC-02	CC-6WG1X	325.5@1800	200.5@1800	120.4@1800	1099@1500	217.5@1500	108.8@1500	EM,TC,CAC,DFI
6WG1XABEC-03	CC-6WG1X	274.9@2200	153.3@2200	112.5@2200	996@1500	197.2@1500	98.7@1500	EM,TC,CAC,DFI
6WG1XABEC-04	CC-6WG1X	302.5@1800	186.4@1800	111.9@1800	996@1500	197.2@1500	98.7@1500	EM,TC,CAC,DFI

R/C