

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-6-13
Relating to Certification of New Heavy-Duty Off-Road Equipment Engines

ISUZU MOTORS, LTD.

Pursuant to the authority vested in the Air Resources Board at Sections 43000.5, 43013, and 43018 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned at Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9; and

IT IS ORDERED AND RESOLVED: That the following diesel engines and exhaust emission control systems produced by the manufacturer are certified as described below for use in heavy-duty off-road equipment:

Model Year: 2000

Typical Equipment Usage: Crane, Loader and Excavator

Engine Power Ratings Range: 175 – 750 horsepower, inclusive

Fuel Type: Diesel

<u>Engine Family</u>	<u>Displacement</u>		<u>Exhaust Emission Control Systems and Special Features</u>
	<u>Liters</u>	<u>Cubic Inches</u>	
YSZXL09.8ATB (B-6SD1T)	9.8	600	Turbocharger

The 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 in grams per brake horsepower-hour (g/bhp-h) for total hydrocarbons (THC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter (PM), 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>Exhaust Emissions (g/bhp-h)</u>				<u>Smoke Opacity (%)</u>		
	<u>THC</u>	<u>CO</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
Standard	1.0	8.5	6.9	0.4	20	15	50
Certification	0.5	1.1	6.7	0.2	17	9	29

BE IT FURTHER RESOLVED: Any engine models listed on the attachments with engine power ratings less than 175 horsepower are not covered by this Executive Order.

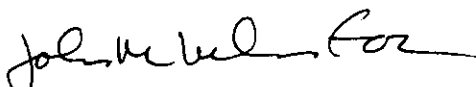
BE IT FURTHER RESOLVED: That the listed engine models comply with "Exhaust Emission Standards and Test Procedures—Heavy-Duty Off-Road Diesel-Cycle Engines" (Title 13, California Code of Regulations, Section 2423) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That the listed engine models also comply with "Emission Control Labels—1996 and Later Heavy-Duty Off-Road Diesel-Cycle 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 *et seq.*).

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

Executed at El Monte, California this 12th day of January 2000.



R. B. Summerfield, Chief
Mobile Source Operations Division

Engine Model Summary Form

EO:U-R-6-13

Manufacturer: Isuzu Motors Limited
Engine category: Nonroad CI
EPA Engine Family: YSZXL09.8ATB
Mfr Family Name: NA
Process Code: New Submission

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
6SD1TAAAB-01	B-6SD1T	250.8@2200	130.5@2200	95.8@2200	704.4@1600	139.0@1600	74.2@1600	TC NA
6SD1TAAAB-02	B-6SD1T	226.6@1750	139.0@1750	81.2@1750	704.4@1600	139.0@1600	74.2@1600	TC NA
6SD1TAAAB-03	B-6SD1T	190.4@2200	99.1@2200	72.8@2200	523.7@1600	103.7@1600	55.3@1600	TC NA
6SD1TAAAB-04	B-6SD1T	174.3@1750	103.7@1750	60.6@1750	523.7@1600	103.7@1600	55.3@1600	TC NA
6SD1TAAAB-05	B-6SD1T	235.3@2000	126.9@2000	84.7@2000	672.7@1600	134.0@1600	71.5@1600	TC NA
6SD1TAAAB-06	B-6SD1T	245.5@2000	137.6@2000	91.8@2000	704.4@1600	139.0@1600	74.2@1600	TC NA
6SD1TAAAB-07	B-6SD1T	214.0@2100	113.3@2100	79.4@2100	624.9@1600	122.5@1600	65.4@1600	TC NA