

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-20-182
Relating to Certification of New Motor Vehicles

ISUZU MOTORS LIMITED

Pursuant to the authority vested in the Air Resources Board by the Health and Safety Code, Division 26, Part 5, Chapter 2; and

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

IT IS ORDERED AND RESOLVED: That 2000 model-year Isuzu Motors, Ltd. exhaust emission control systems are certified as described below for light-duty trucks:

Exhaust Emission Standard Category: Transitional Low-Emission Vehicle (TLEV)

Fuel Type: Gasoline

Engine Family: YSZXT02.22HK Displacement: 2.2 Liters (134 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

- Sequential Multiport Fuel Injection
- Exhaust Gas Recirculation
- Dual Three Way Catalytic Converters
- Dual Heated Oxygen Sensors (two)

Vehicle models, transmissions, engine codes, and evaporative emission control families are listed on attachments.

The TLEV certification exhaust emission standards for this engine family in grams per mile are (Title 13, California Code of Regulations, Section 1960.1):

Loaded Vehicle		Non-Methane	Carbon	Nitrogen		Carbon
<u>Weight (lb)</u>	<u>Miles</u>	<u>Organic Gases</u>	<u>Monoxide</u>	<u>Oxides</u>	<u>Formaldehyde</u>	<u>Monoxide (20°F)</u>
3751-5750	50,000	0.160	4.4	0.7	0.018	12.5
	100,000	0.200	5.5	0.9	0.023	n/a

Reactivity Adjustment Factor (RAF) for NMOG Mass Emission: 0.98

The certification exhaust emission values set forth for non-methane organic gases (NMOG) reflect application of a 0.98-RAF for 2000 model-year TLEVs. The certification exhaust emission values for this engine family in grams per mile are:

Loaded Vehicle		Non-Methane	Carbon	Nitrogen		Carbon
<u>Weight (lb)</u>	<u>Miles</u>	<u>Organic Gases</u>	<u>Monoxide</u>	<u>Oxides</u>	<u>Formaldehyde</u>	<u>Monoxide (20°F)</u>
3751-5750	50,000	0.088	1.6	0.3	0.0001	7.9
	100,000	0.097	1.8	0.4	0.0001	n/a

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying the listed vehicle models to the aforementioned exhaust emission standards based on its submitted plan to comply with the fleet-average NMOG exhaust mass emission requirements set forth in Title 13, California Code of Regulations, Section 1960.1 ("California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles.")

BE IT FURTHER RESOLVED: That under the submitted NMOG fleet-average compliance-plan, if the manufacturer incurs an NMOG debit for the aforementioned model-year based on the projected NMOG fleet-average exceeding the value required by the above-referenced standards and test procedures, all NMOG debits incurred by the manufacturer shall be equalized as required by the standards and test procedures.

BE IT FURTHER RESOLVED: That the vehicle-manufacturer is certifying the listed vehicle models to the running-loss and useful-life standards applicable to 1995 and subsequent model-year vehicles in "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles;" and that the listed vehicle models comply with those standards.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's "Specifications for Fill-Pipes and Openings of Motor Vehicle Fuel Tanks" for the aforementioned model-year (Title 13, California Code of Regulations, Section 2235).

BE IT FURTHER RESOLVED: That the listed models also comply with the Board's high-altitude requirements and highway emission standards, and with the Inspection and Maintenance standards in place at the time of certification as stipulated in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent-Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles."

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with "California Motor Vehicle Emission Control and Smog-Index Label Specifications" for the aforementioned model-year (Title 13, California Code of Regulations, Section 1965).

BE IT FURTHER RESOLVED: That the listed vehicle model also comply with "Malfunction- and Diagnostic-System Requirements--1994 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines" (Title 13, California Code of Regulations, Section 1968.1) for the aforementioned model-year.

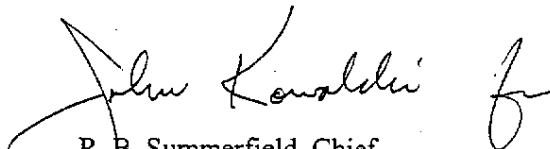
BE IT FURTHER RESOLVED: That for the listed vehicles, the manufacturer has submitted and the Executive Officer hereby approves the materials to demonstrate certification-compliance with the Board's emission-control system warranty-provisions (Title 13, California Code of Regulations, Section 2035 *et seq.*).

BE IT FURTHER RESOLVED: That the vehicle-manufacturer has demonstrated compliance with the exhaust emission standards at 50 degrees Fahrenheit as stipulated in "California Exhaust Emission Standards and Test Procedures for 1988 and Subsequent-Model Passengers Cars, Light-Duty Trucks, and Medium-Duty Vehicles."

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

The Bureau of Automotive Repair will be notified by copy of this order and attachment.

Executed at El Monte, California this 4th day of August 1999.


R. B. Summerfield, Chief
Mobile Source Operations Division

**2000 MODEL - YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET
PASSENGER CARS, LIGHT - DUTY TRUCKS AND MEDIUM - DUTY VEHICLES**

Manufacturer : ISUZU MOTORS LIMITED Exh Eng Fam : YSZXT02.22HK Evap. Fam : YSZXT0095ME0
 All Engine Codes in Engine Family : CA___ 49S___ 50S___x AB965___, ORVR : Yes___ No___x
 Exh. Std : CA Tier-1___ TLEV___x LEV___ ULEV___ SULEV___ ; US EPA___ NLEV___x
 Veh Class(es) : PC___ LDT 1___ LDT 2___x MDV1___ MDV2___ MDV3___ MDV4___ MDV5___
 Signal Cert Std for Multi-Class Eng Fam : N/A (specify : N/A, LDT1, MDV1, MDV2, MDV3, MDV4)
 Fuel Type(s) : Dedicated___ Flex-Fuel___ Dual-Fuel___ Bi-Fuel___ Gasoline___x Diesel___
 CNG___ LNG___ LPG___ M85___ Other (specify)_____
 Exh. Emiss Test Fuel(s) : Indo___ CBG___x CNG___ LPG___ M85___ Other (specify)_____
 Diesel : 13 CCR 2282___ 40 CFR 86.113-90___ 40 CFR 86.113-94___
 Evaporative Emission Test Procedure : California___ Federal___x
 Service Accum : Std AMA___x Mod AMA___ Mfr ADP___ Other (specify)_____
 NMOG Test Procedure : N/A___ Std___x Equip___ R/L Test Proc : SHED___ Pt Source___x
 Engine Configuration : L4 Displacement : 2.2 / Liters 134 / Cubic inches
 Valve per Cylinder : 4 Rated HP : 130 @ 5200 RPM
 Engine : Front___x Mid___ Rear___ Drive : FWD___ RWD___x 4WD-FT___ 4WD-PT___
 Exhaust ECS (e.g., MFI, EGR, TC, CAC) : SFI, EGR, 2TWC, 2HO2S (2)
 (use abbreviations per SAE J1930 JUN 93)

Engine Code (also list CA/49ST/50ST)	Vehicle Models (if coded see attachment)	Trans. (M5, A4 etc.)	ETW or Test Wt.	DPA or RLHP	Ignition (ECM/PCM) Part No.	EGR System Part No.	Catalytic Converter Part No.
222H-1	XO-R1D	M5	4000	14.5	ECM 8093617390	25180481	TWC 8251655950

XO-R1D : RODEO 2WD, Long Wheelbase, P225 tire

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 All Engine Codes in Engine Family : CA 49S 50S x AB965 , ORVR : Yes No x
 Exh. Std : CA Tier-1 TLEV x LEV ULEV SULEV ; US EPA NLEV x
 Veh Class(es) : PC LDT 1 LDT 2 x MDV1 MDV2 MDV3 MDV4 MDV5
 Signal Cert Std for Multi-Class Eng Fam : N/A (specify : N/A, LDT1, MDV1, MDV2, MDV3, MDV4)
 Fuel Type(s) : Dedicated Flex-Fuel Dual-Fuel Bi-Fuel Gasoline x Diesel
 CNG LNG LPG M85 Other (specify)
 Exh. Emiss Test Fuel(s) : Indo CBG x CNG LPG M85 Other (specify)
 Diesel : 13 CCR 2282 40 CFR 86.113-90 40 CFR 86.113-94
 Evaporative Emission Test Procedure : California Federal x
 Service Accum : Std AMA x Mod AMA Mfr ADP Other (specify)
 NMOG Test Procedure : N/A Std x Equip R/L Test Proc : SHED Pt Source x
 Engine Configuration : L4 Displacement : 2.2 / Liters 134 / Cubic inches
 Valve per Cylinder : 4 Rated HP : 130 @ 5200 RPM
 Engine : Front x Mid Rear Drive : FWD RWD x 4WD-FT 4WD-PT
 Exhaust ECS (e.g., MFI, EGR, TC, CAC) : SFI, EGR, 2TWC, 2HO2S (2)
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Engine Code (also list CA/49ST/50ST)	Vehicle Models (if coded see attachment)	Trans. (M5, A4 etc.)	ETW or Test Wt.	DPA or RLHP	Ignition (ECM/PCM) Part No.	EGR System Part No.	Catalytic Converter Part No.
222H-1 (50ST)	WO- R2C WO- R3C	M5	3875	14.7	ECM 8093617390	25180481	TWC 8251655950
WO- R2C : AMIGO 2WD, Short Wheelbase, Resin Top, P245 tire WO- R3C : AMIGO 2WD, Short Wheelbase, Soft Top, P245 tire							

Issue Date : May 28, 1999

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