

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-20-160  
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 1998 model-year Isuzu Motors Limited exhaust emission control systems are certified as described below for light-duty trucks:

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

Fuel Type: Gasoline

Engine Family: WSZXT02.22HK Displacement: 2.2 Liters (134 Cubic Inches)

Exhaust Emission Control Systems and Special Features:

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

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

The non-methane organic gas (NMOG), carbon monoxide (CO), oxides of nitrogen (NOx), and formaldehyde (HCHO) TLEV certification exhaust emission standards for this engine family in grams per mile are:

Loaded Vehicle Weight (lbs.)	Miles	NMOG	CO	NOx	HCHO	CO (20°F)
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 NMOG reflect application of a 0.98 RAF for 1998 model-year TLEVs. The TLEV certification exhaust emission values for this engine family in grams per mile are:

Loaded Vehicle Weight (lbs.)	Miles	NMOG	CO	NOx	HCHO	CO (20°F)
3751-5750	50,000	0.106	2.0	0.3	0.0002	9.6
	100,000	0.118	2.4	0.3	0.0003	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 as set forth 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 under the submitted NMOG fleet average compliance plan, if the manufacturer incurs a 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 incurred NMOG debits 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 the "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Motor Vehicles," and 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 vehicle models also comply with the Board's high-altitude requirements and highway emission standards, and with the California Inspection and Maintenance emission 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 the "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 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 Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles."

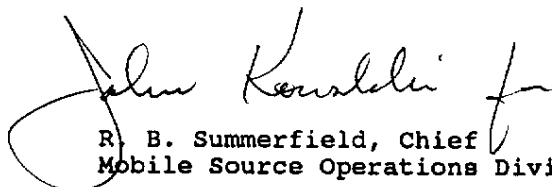
BE IT FURTHER RESOLVED: That for the listed vehicles, the manufacturer has submitted and the Executive Officer hereby approves the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et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

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the "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.

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 19<sup>th</sup> day of June 1997.

  
R. B. Summerfield, Chief  
Mobile Source Operations Division

**1998 MODEL - YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
PASSENGER CARS, LIGHT - DUTY TRUCKS AND MEDIUM - DUTY VEHICLES**

Manufacturer : ISUZU MOTORS LIMITED Exh Eng Fam : WSZXT02.22HK Evap. Fam : WSZXT0095ME0  
 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 Tier-1 x  
 Veh Class(es) : PC \_\_\_ LDT 1 \_\_\_ LDT2 x MDV1 \_\_\_ MDV2 \_\_\_ MDV3 \_\_\_ MDV4 \_\_\_ MDV5 \_\_\_  
 Single 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  
 Valves 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, TWC, EGR, HO2S (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 (50ST)	XO- R1A						
	XO- R1B	M5	3750	13.6	ECM 8162633490 8093552190*	25180481	TWC 8251655950
	XO- R1C						

XO- R1A : RODEO 2WD, Long wheelbase, P215 tire  
 XO- R1B : RODEO 2WD, Long wheelbase, P235 tire  
 XO- R1C : RODEO 2WD, Long wheelbase, P245 tire

Note : \* ECM is changed by RC98T06.

**1998 MODEL - YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET**  
**PASSENGER CARS, LIGHT - DUTY TRUCKS AND MEDIUM - DUTY VEHICLES**

Manufacturer : ISUZU MOTORS LIMITED Exh Eng Fam : WSZXT02.22HK Evap. Fam : WSZXT0095PE0  
 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 Tier-1 x  
 Veh Class(es) : PC \_\_\_ LDT1 \_\_\_ LDT2 x MDV1 \_\_\_ MDV2 \_\_\_ MDV3 \_\_\_ MDV4 \_\_\_ MDV5 \_\_\_  
 Single 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  
 Valves per Cylinder : 4 Rated HP : 130 @ 5200 RPM  
 Engine : Front x Mid \_\_\_ Rear \_\_\_ Drive : FWD \_\_\_ RWD \_\_\_ 4WD-FT \_\_\_ 4WD-PT x  
 Exhaust ECS (e.g., MFI, EGR, TC, CAC) : SFI, TWC, EGR, HO2S (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 (50ST)	WO-S3B WO-S3C	M5	3875	14.5	ECM 8162633490 8093552190*	25180481	TWC 8251655950
WO-S3B : AMIGO 4WD, Short wheelbase, P235 tire WO-S3C : AMIGO 4WD, Short wheelbase, P245 tire  Note : * ECM is changed by RC98T06.							

This SDS sheet was effected on our running change No. RC98T05 which introduce new vehicle model AMIGO.

Date Issued : 9-8-97 (98B-08)

Revisions : 9-19-97 (98B-AC-03) /RC98T06  
 11-19-97 (98B-09)