

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-20-73
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 Orders G-45-3 and G-45-4;

IT IS ORDERED AND RESOLVED: That 1989 model-year Isuzu Motors Limited exhaust emission control systems are certified as described below for gasoline-powered passenger cars:

<u>Engine Family</u>	<u>Displacement Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems (Special Features)</u>
KSZ090V2FEA8	1.5 (90)	Air Injection - Valve Exhaust Gas Recirculation Oxygen Sensor Three-Way Catalyst Warm-Up Three-Way Catalyst On-Board Diagnostics (Exempted)

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

The following are the emission standards for this engine family:

<u>Hydrocarbons (Grams per Mile)</u>	<u>Carbon Monoxide (Grams per Mile)</u>	<u>Nitrogen Oxides (Grams per Mile)</u>
0.41	7.0	0.7

The following are the certification emission values for this engine family:

<u>Hydrocarbons (Grams per Mile)</u>	<u>Carbon Monoxide (Grams per Mile)</u>	<u>Nitrogen Oxides (Grams per Mile)</u>
0.12	1.2	0.4

BE IT FURTHER RESOLVED: That the listed models are certified to the optional NOx emission standard thereby making the vehicle manufacturer subject to Section 1960.1.5 of Title 13, California Administrative Code which includes recall liability for emission control components up to 7 years or 75,000 miles if found defective by the Executive Officer.

BE IT FURTHER RESOLVED: That the vehicle manufacturer is certifying to the optional NOx standard by providing evidence that there are sufficient projected sales of vehicles certifying to the primary NOx emission standard, or is allowed a delay in implementation under small volume manufacturer provisions, or is allowed a delay in implementation under the "In lieu" standards, or is certifying passenger cars weighing more than 5250 lbs. loaded vehicle weight.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Gasoline-Powered Motor Vehicles".

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" (Title 13, California Administrative Code, Section 2290) for the aforementioned model-year.

BE IT FURTHER RESOLVED: That the listed vehicle models also comply with the Board's high altitude requirements and highway emission standards 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 Tune-Up Label Specifications" (Title 13, California Administrative Code, Section 1965) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the vehicle models listed have been granted an exemption from compliance with the requirements of the "Malfunction and Diagnostic System for 1988 and Subsequent Model Year[s]..." (Title 13, California Administrative Code, Section 1968) 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 regulations (Title 13, California Administrative Code, Section 2035 et seq.) and with the 2 year/24,000 mile warranty provisions of Health and Safety Code Section 43204.

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 18th day of June, 1988


K. D. Drachand, Chief
Mobile Source Division

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer ISUZU MOTORS LIMITED Engine Family KSZ090V2FEA8
 Evaporative Family CAN-D Engine Type L4
 Liters (CID) 1.5 (90)

ABBREVIATIONS

<u>Ignition System</u>	<u>Exhaust Emissions Control System</u>	<u>Special Features</u>
CA-Centrifugal Advance	AIP-Air Injection - Pump	CFI-Central Fuel Injection or Throttle Body Injection
ECU-Electronic Control Unit	AIV-Air Injection - Valve	EPFI-Electronic Port Fuel Injection
EI-Electronic Ignition	EGR-Exhaust Gas Recirculation	MPFI-Mechanical Port Fuel Injection
ESAC-Electronic Spark Advance Control	EIC-Electronic Injection Control (Diesel Only)	SFI-Sequential Fuel Injection
VA-Vacuum Advance	EM-Engine Modification	DID-Diesel Injection-Direct
VR-Vacuum Retard	SPL-Smoke Puff Limiter or Throttle Delay	DIP-Diesel Injection-Prechamber
	TOC-Trap Oxidizer, Continual	TC-Turbocharger
	TOP-Trap Oxidizer, Periodical	SC-Supercharger
	DBC-Dual Bed Catalyst	IC-Intercooler or Aftercooler
	OC-Oxidation Catalyst	CCV-Combustion Chamber Valve
	TWC-Three-Way Catalyst	OBD-On-Board Diagnostics
	WUOC-Warm-Up Oxidation Catalyst	
	WUTWC-Warm-Up Three-Way Catalyst	
	OS-Oxygen Sensor	
	HOS-Heated Oxygen Sensor	

Fuel System

CFI, EPFI, MPFI, SFI,
 DID, DIP, HOS, OS
 nV-nVenturi Carburetor
 VV-Variable Venturi Carburetor

VEHICLE MODELS:

Isuzu I-MARK
 TID-L1H, TID-L1: 4 Door Notchback
 TID-L2H, TID-L2: 2 Door Hatchback

Chevrolet SPECTRUM
 TCD-L1: 4 Door Notchback
 TCD-L2: 2 Door Hatchback

Engine: Front X Mid. _____ Rear _____
 Drive: FWD X RWD _____ 4WD Full Time _____ 4WD Part Time _____

1989 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

E.O. # A-20-73

Page 2

Passenger Cars X Light-Duty Trucks _____ Medium-Duty Vehicles _____ Gas X Diesel _____

Manufacturer ISUZU MOTORS LIMITED Engine Family KSZ090V2FEA8

Liter (CID) 1.5 (90) Eng. Type L4

Emission Control Sys. (Special Features) AIV, EGR, OS, TWC, WUTWC

Engine Code	Vehicle Models (If Coded see attachment) (Dyno Hp)	Trans. Type	Equiv. Test Weight	Ign. System (ECU) CA, VA Part No. Distributor	Fuel System OS, 2V Part No. Carburetor	EGR Valve Part No.	Catalyst Part No.
EA-1	TID-L1 TID-L2 TID-L1H TID-L2H	M-5	2,375	8941764883	8943251980	8944016380	Under Floor Converter 8251274720 Exh Manifold Converter 8944234400
EA-2	TCD-L1 TCD-L2 (Dyno Hp: 7.7)	A-3		8941782193	8943251990	8941403712	

Comments: See page one for abbreviations and evaporative emission family identification. Please refer to manufacturer's HP list for correct dyno test HP settings based on model and quipment. If two test weights are listed, the lower weight will be used for testing.

Date of Issue _____ Revisions: