

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER A-20-11
Relating to Certification of New Motor Vehicles

ISUZU MOTORS LIMITED

Pursuant to the authority vested in the Air Resources Board by Health and Safety Code Sections 43100, 43102, 43103, and 43835; 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 Isuzu Motors Limited exhaust emission control systems for 1979 model-year gasoline-powered light duty trucks are certified for the vehicles described below:

| <u>Engine Family</u> | <u>Displacement Cubic Inches</u> | <u>Exhaust Emission Control Systems (Special Features)</u> |
|----------------------|--------------------------------------|--|
| G180ZL-E | 110.8 | Air Injection Exhaust Gas Recirculation Oxidation Catalyst |

Vehicle Models, Transmissions, Engine Codes and Evaporative Emission Control Families as listed on attachments.

The following are the certification emission values to be listed on the window decal required by California Assembly-Line Test Procedures for 1979 model-year vehicles:

| <u>Engine Family</u> | <u>Inertia Weight Class</u> | <u>Hydrocarbons Grams per Mile</u> | <u>Carbon Monoxide Grams per Mile</u> | <u>Nitrogen Oxides Grams per Mile</u> |
|----------------------|-------------------------------------|--|---|---|
| G180ZL-E | 0-3999 | .18 | 4.2 | 1.5 |

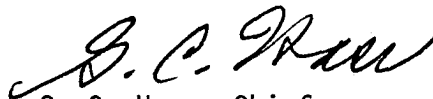
BE IT FURTHER RESOLVED: That the listed vehicle models also comply with "California Evaporative Emission Standards and Test Procedures for 1978 and Subsequent Model Gasoline-Powered Motor Vehicles except Motorcycles".

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.

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

The Department of Motor Vehicles, the California Highway Patrol, and the Bureau of Automotive Repair will be notified by copy of this order and attachment.

Executed at El Monte, California this 14 day of September, 1978.



G. C. Hass, Chief
Vehicle Emissions Control Division

1979 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer ISUZU MOTORS LIMITED Executive Order No. A-20-11 Page 1

Engine Family G180ZL-E Engine (CID) 110.8

ABBREVIATIONS

Ignition System

CA-Centrifugal Advance

EI-Electronic Ignition

ESAC

VA-Vacuum Advance

VR-Vacuum Retard

Fuel System

EFI, MFI

nV-nVenturi Carburetor

VV-Variable Venturi

Exhaust Emissions Control System

AI-Air Injection

CCAV-Comb. Chamber Air Valve

EFI-Electronic Fuel Injection

EGR-Exhaust Gas Recirculation

EM-Engine Modification

ESAC-Electronic Spark Advance Control

MFI-Mechanical Fuel Injection

OC-Oxidation Catalyst

PAI-Pulse Air Injection

TC-Turbo Charged

TR-Thermal Reactor

TWC-Three Way Catalyst
(Feedback Control)

WOC-Warm-up Oxidation
Catalyst

Evaporative Emission Family CRK-L

Models:

LUV-1 & -3 Two-wheel drive Pick-up

LUV-2 Two-wheel drive Cab-Chassis

LUV-4 Four-wheel drive Pick-up

1979 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

E.O. #A 20 - 11

Passenger Cars

Light-Duty Trucks

Medium-Duty Vehicles

Manufacturer ISUZU MOTORS LIMITED

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Engine Family G180ZL-E

Engine (CID) 110.8

Engine Code _____

Emission Control System AI, EGR, OC

+ 10% (A/C)

Yes _____ No X

| Eng. Code | Vehicle Models (If Coded see attachment) | Trans. | Inertia Weight Class (Axle Ratio)* | Ign. Sys. CA, VA Distrib. Part No. | Fuel System 2V Carb. Part No. | EGR Valve Part No. | Tune-up Specification (1) Basic Timing (2) Idle Mixture (3) Idle Speed | | |
|-----------|--|------------|------------------------------------|---------------------------------------|----------------------------------|---|---|------------|--------------------|
| LE-1 | LUV-1 | M-4 | 2750 | Nippon Denso Ltd. 8942099010 | Hitachi Ltd. 8942141900 | Automobile Parts Mfg. Co., Ltd. 8942123000 | See Tune-up label 6660 (pg. 3) | | |
| | LUV-3 | | 3000 | | | | | | |
| LE-2 | LUV-2 | | 3000 | | | | | 8942141910 | Label 6670 (pg. 4) |
| | LUV-4 | | A-3 | | | | | 2750 | |
| LE-3 | LUV-1 | 3000 | | Label 6670 | | | | | |
| | LUV-3 | Label 6660 | | | | | | | |

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, equipment and inertia weight class.

*Axle ratio is that of medium duty certification vehicle.

Date of Issue - 091578.

AIR RESOURCES BOARD 1979 SUPPLEMENTAL DATA SHEET

Mfgr. ISUZU MOTORS LIMITED Engine Family G180ZL-E

CID 110.8 S.D. Sheet 3

LUV VEHICLE EMISSION CONTROL INFORMATION
ISUZU MOTORS LIMITED



SET PARKING BRAKE AND BLOCK DRIVE WHEELS.

ENGINE TUNE-UP CONDITIONS

MARK ALL ADJUSTMENTS AT NORMAL OPERATING TEMPERATURE, CHOKE OPEN, AIR CLEANER INSTALLED, DISTRIBUTOR, IDLE COMPENSATOR AND EGR VACUUM LINES DISCONNECTED AND PLUGGED, ALL ACCESSORIES OFF, AND TRANSMISSION IN NEUTRAL (NOTH MANUAL AND AUTOMATIC).

1. TURN THE IDLE MIXTURE ADJUST SCREW ALL THE WAY IN AND BACK OUT 3 TURNS.
2. ADJUST THROTTLE ADJUST SCREW TO 900 RPM.
3. ADJUST SETTING OF IDLE MIXTURE ADJUST SCREW TO ACHIEVE THE MAXIMUM SPEED.
4. RESET THROTTLE ADJUST SCREW TO 900 RPM.
5. TURN IDLE MIXTURE ADJUST SCREW CLOCKWISE (LEAN) UNTIL ENGINE SPEED IS DOWN TO 850 RPM.
6. RESET IDLE MIXTURE ADJUST SCREW 1/2 TURN COUNTERCLOCKWISE (RICH).
7. RESET THROTTLE ADJUST SCREW TO 900 RPM.

ADDITIONAL PROCEDURES

IF AIR CONDITIONER IS INSTALLED: TURN A.C. ON MAX. COLD AND HIGH BLOWER. OPEN THE THROTTLE TO APPROX. 1/3 AND ALLOW THE THROTTLE TO CLOSE (THIS ALLOWS THE SPEED-UP SOLENOID TO REACH FULL TRAVEL.) ADJUST THE SPEED-UP CONTROLLER ADJUSTING SCREW TO SET IDLE AT 900 RPM.

CATALYST
OC, AI AND EGR EXHAUST EMISSION CONTROL

| | |
|---------------------|---|
| EVAPORATIVE FAMILY | CRK-L |
| ENGINE FAMILY | G180ZL-E |
| ENGINE DISPLACEMENT | 110.8 CID (1.8 LITRE) |
| IDLE SPEED | 800 RPM |
| IDLE MIXTURE | IDLE SPEED DRIP |
| IGNITION TIMING | 6° BTDC AT 900 RPM |
| DWELL ANGLE | 52° |
| BREAKER POINT GAP | 0.018 IN. (0.45 MM) |
| SPARK PLUG GAP | 0.030 IN. (0.75 MM) |
| VALVE LASH | IN. 0.006 IN. (0.15 MM) EXH. 0.010 IN. (0.25 MM) |

IGNITION TIMING SETTING PROCEDURE

1. SET IDLE SPEED TO 900 RPM.
2. CONNECT TIMING LIGHT LEAD TO NO. 1 CYLINDER.
3. ALIGN MARK ON CRANKSHAFT PULLEY TO TIMING MARK WITH TIMING LIGHT AIMED TOWARD TIMING MARK.

UNPLUG AND RECONNECT ALL VACUUM LINES WHEN ADJUSTMENTS ARE COMPLETED.
SEE SHOP MANUAL AND MAINTENANCE SCHEDULE FOR ADDITIONAL INFORMATION.

THIS VEHICLE CONFORMS TO U.S. EPA AND CALIFORNIA REGULATIONS APPLICABLE TO 1979 MODEL YEAR NEW MOTOR VEHICLES.

PT. NO. 8942166660

Issued: 091578

AIR RESOURCES BOARD 1979 SUPPLEMENTAL DATA SHEET

Mfg. ISUZU MOTORS LIMITED Engine Family G180ZL-E CID 110.8 S.D. Sheet 4

LUV VEHICLE EMISSION CONTROL INFORMATION
ISUZU MOTORS LIMITED



SET PARKING BRAKE AND BLOCK DRIVE WHEELS

ENGINE TUNE-UP CONDITIONS

MARK ALL ADJUSTMENT AT NORMAL OPERATING TEMPERATURE, CHOKE OPEN, AIR FILTER INSTALLED, DISTRIBUTOR, IDLE COMPENSATOR AND EGR VACUUM LINES DISCONNECTED AND PLUGGED, ALL ACCESSORIES OFF, AND TRANSMISSION IN NEUTRAL (BOTH MANUAL AND AUTOMATIC).

1. TURN THE IDLE MIXTURE ADJUST SCREW ALL THE WAY IN AND BACK OUT 3 TURNS.
2. ADJUST THROTTLE ADJUST SCREW TO 900 RPM.
3. ADJUST SETTING OF IDLE MIXTURE ADJUST SCREW TO ACHIEVE THE MAXIMUM SPEED.
4. RESET THROTTLE ADJUST SCREW TO 900 RPM.
5. TURN IDLE MIXTURE ADJUST SCREW CLOCKWISE (LEAN) UNTIL ENGINE SPEED IS DOWN TO 850 RPM.
6. RESET IDLE MIXTURE ADJUST SCREW 1/2 TURN COUNTERCLOCKWISE (RICH).
7. RESET THROTTLE ADJUST SCREW TO 900 RPM.

ADDITIONAL PROCEDURES

IF AIR CONDITIONER IS INSTALLED: TURN A.C. ON MAX. COLD AND HIGH BLOWER. OPEN THE THROTTLE TO APPROX. 1/3 AND ALLOW THE THROTTLE TO CLOSE. (THIS ALLOWS THE SPEED-UP SOLENOID TO REACH FULL TRAVEL.)
ADJUST THE SPEED-UP CONTROLLER ADJUSTING SCREW TO SET IDLE AT 900 RPM.

CATALYST
OC, AI AND EGR EXHAUST EMISSION CONTROL

| | |
|---------------------|---|
| EVAPORATIVE FAMILY | CRK-L |
| ENGINE FAMILY | G180ZL-E |
| ENGINE DISPLACEMENT | 110.8 CID (1.8 LITER) |
| IDLE SPEED | 900 RPM |
| IDLE MIXTURE | IDLE SPEED DROP |
| IGNITION TIMING | 6° BTDC AT 900 RPM |
| DWELL ANGLE | 52° |
| BREAKER POINT GAP | 0.018 IN. (0.45 MM) |
| SPARK PLUG GAP | 0.030 IN. (0.75 MM) |
| VALVE LASH | IN. 0.005 IN. (0.15 MM) EXH. 0.010 IN. (0.25 MM) |

IGNITION TIMING SETTING PROCEDURE

1. SET IDLE SPEED TO 900 RPM.
2. CONNECT TIMING LIGHT LEAD TO NO. 1 CYLINDER.
3. ALIGN MARK ON CRANKSHAFT PULLEY TO TIMING MARK WITH TIMING LIGHT AIMED TOWARD TIMING MARK.

UNPLUG AND RECONNECT ALL VACUUM LINES WHEN ADJUSTMENTS ARE COMPLETED.
SEE SHOP MANUAL AND MAINTENANCE SCHEDULE FOR ADDITIONAL INFORMATION.

THIS VEHICLE CONFORMS TO U.S. EPA AND CALIFORNIA REGULATIONS APPLICABLE TO 1979 MODEL YEAR NEW MOTOR VEHICLES, WHEN COMPLETED AT A MAXIMUM CURB WEIGHT OF 2,950 POUNDS AND A MAXIMUM FRONTAL AREA OF 25.4 SQUARE FEET.
PT. NO. 8942166670

Issued: 091578

