

ISUZU & LUV

DESCRIPTION & OPERATION

All models have an instrument cluster with speedometer, fuel gauge and temperature gauge. The gauges use variable resistance sending units. A voltage regulator in the cluster ensures readings stay constant when charging voltage varies.

The hazard flashers, windshield wiper/washer and turn signals are controlled by steering column levers. The I-Mark uses 2 combination switches. Pickup models have one switch which controls all functions. All models have a panel-mounted light switch.

TESTING

VOLTAGE REGULATOR

1) The regulator is built into the fuel gauge. Remove gauge cluster and measure resistance of regulator. I-Mark regulator should have 65-75 ohms resistance. Pickup models should measure 110 ohms.

2) Connect voltage regulator to battery and check output. Voltmeter at output terminal should swing above and below 7 volts on Pickup models. It should swing between 0-12 volts on I-Mark. See Fig. 1.

FUEL GAUGE & SENDING UNIT

1) Connect ohmmeter to fuel gauge terminals. Resistance should be 25 ohms on Pickups. See Fig. 1. If not, replace gauge. For I-Mark, measure resistance across gauge terminals.

2) Resistance from IG to U and U to E should be approximately 102 ohms, and resistance from IG to E should be approximately 204 ohms. If resistances are incorrect, replace gauge.

3) Connect ohmmeter to fuel tank sending unit. As float is moved, resistance reading should change smoothly. Check resistance at 3 positions. If readings are not correct, replace sending unit.

FUEL GAUGE SENDING UNIT RESISTANCE

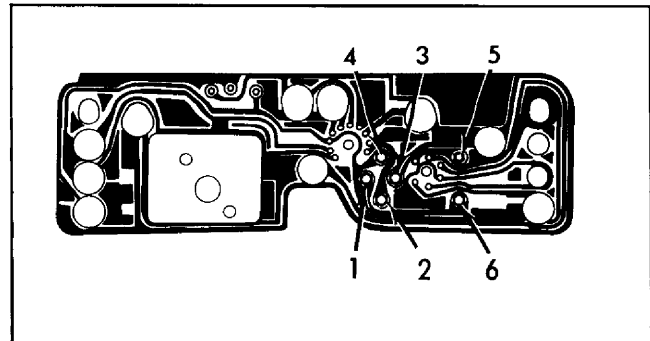
Application	Ohms
Isuzu	
I-Mark	
Empty	97
Half	33
Full	6
Isuzu P'UP & LUV	
Empty	114-127
Half	41-50
Full	15-19

TEMPERATURE GAUGE & SENDING UNIT

1) Measure temperature gauge resistance. It should be 25 ohms on Pickups. See Fig. 1. On I-Mark, measure for approximate resistances across lettered terminals. Resistance from IG to U should be 90 ohms, from U to E 158 ohms, and IG to E 248 ohms. If not, replace gauge.

2) Measure resistance of sending unit. It should be 55 ohms for I-Mark (at room temperature). Resistance on Pickups should be 147 ohms at 140° F (60° C). If not, replace sending unit.

Fig. 1: Connection Points for Testing Pickup Gauges



Be sure to use correct terminals while testing

REMOVAL & INSTALLATION

INSTRUMENT CLUSTER

Removal (I-Mark)

Disconnect battery ground. Remove cluster panel. Remove cluster attaching screws. Rotate cluster assembly outward, and disconnect the 6 and 12-pole electrical connectors. Disconnect speedometer cable. Remove instrument panel screws or nuts to take out gauges.

Installation

To install, reverse removal procedure.

Removal (Isuzu P'UP & LUV)

1) Remove radio knobs and nuts. Remove radio bezel. Remove 5 cluster screws and cluster panel.

2) Disconnect speedometer cable. Remove 4 cluster screws. Pull cluster out part way and unplug wiring. Remove cluster.

Installation

To install, reverse removal procedure.

COMBINATION SWITCH

Removal (I-Mark)

Disconnect battery ground. Remove steering wheel. Remove steering column covers. Unplug wiring. Remove 2 screws and wiper switch. Remove 4 screws and left combination switch.

Installation

To install, reverse removal procedure.

Removal (Isuzu P'UP & LUV)

Disconnect battery ground. Remove steering column covers. Unplug wiring. Remove steering wheel with "C" clamp type puller (J-24292-A). Remove 2 screws and combination switch.

Installation

To install, reverse removal procedure.