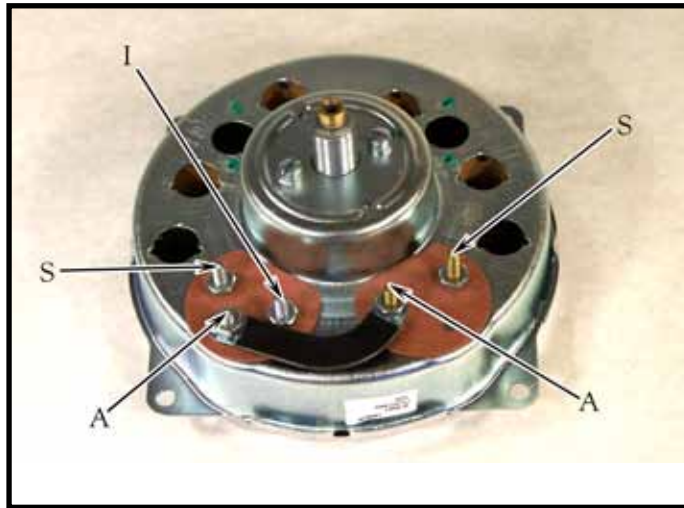




Crown Automotive Sales Co., Inc.

IMPORTANT NOTES REGARDING INSTALLATION!

Before attempting to install this replacement speedometer cluster, you should be aware that it is a delicate electrical component. It should only be installed by a qualified, knowledgeable service technician! It is very easy to “short out” one or both of the gauges contained within the Speedometer Cluster. Certain precautions must be taken prior to installation! Please read through these pages completely before you begin working on this unit.



INSTRUCTIONS:

- Battery terminals must be disconnected before removal and installation of this electrical unit.
- All wires, including grounds, lighting indicators, and gauge terminals should be labeled prior to removal from the original cluster in order to help reinstall them in the correct locations. If wires are reconnected in the wrong places you will short out one or both gauges.
- Once you have double checked the position of all wires you can reconnect the battery terminals.

NOTES:

- If your Fuel gauge is still not working you may have a defective Sending Unit in the gas tank, which will need to be replaced.
- If your Temperature Gauge is still not working, you may have a defective Temperature Sending Unit which will need to be replaced.
- If your Speedometer needle “jumps”, you may have a defective Speedometer Cable which will need to be replaced.

Continued on reverse side

ADDITIONAL TECHNICAL NOTES:

Fuel and Temperature Gauges

From the passenger side which is left to right in the picture above.

- Fuel Gauge S Terminal - pink wire (from fuel sender)
- Fuel Gauge A Terminal - 12v side of Jumper/Regulator Strip to temperature gauge
- Fuel Gauge I Terminal - red wire (ignition-on hot 12v)
- Temperature Gauge A Terminal - Jumper from fuel gauge A terminal (Jumper Strap regulated to 5v)
- Temperature Gauge S Terminal - Purple wire (from temperature sender)

Some manuals have the positions of these terminals incorrectly identified. You can see the letters stamped in the insulation material around the posts.

The Jumper/Regulator Strap is composed of two strips of metal that continuously make and break contact, regulating the output to the Temp gauge to 5 volts. A voltmeter applied to the A terminal on the Temp gauge should fluctuate (plus and minus) near 5 volts. A reading of 12 volts on the temperature side indicates a bad Jumper/Regulator Strap. 12 volts applied to the temperature gauge's A terminal will cook the gauge.

Checking the FUEL GAUGE

The fuel gauge should have the following resistances:

- S to Ground 68-72 ohms
- S to I 19-21 ohms
- S to A 19-21 ohms
- I to A Zero
- I to Ground 49-51 ohms
- A to Ground 49-51 ohms

The fuel sending unit wires are located on top of the gas tank where they are hard to get to without dropping the tank. The fuel sending unit should have a pink wire with voltage on the isolated center post. The other black wire on the sending unit with a tab style connector is a ground to the frame. Make sure it has good contact.

To be sure the problem is not the gauge, you can momentarily short the pink wire on the output of the sender to ground, and this should show up as FULL on your gauge. DO NOT hold it for very long in this position. If the gauge does not move from EMPTY either the wiring has an open circuit (no voltage, or no connection to ground) or the gauge is bad. If it does move, the sending unit is bad.

The sending unit can be checked with an ohmmeter to measure the resistance between the round sender post (pink wire) and ground. It should be:

Resistance Reading

73 ohms Empty
23 ohms 1/2 tank
10 ohms Full

If the resistance falls in this range (depending on how much gas you have in the tank), then the sending unit is fine. If it shows very HIGH resistance, then the sending unit could be bad OR the wire from the tank to the gauge could be open.

The gauge can be tested with the resistances listed above. Run an appropriate resistor to the S terminal of the fuel gauge and to ground and check the readings.

Checking the TEMPERATURE GAUGE

The temperature gauge has the following resistance :

S to A - 19-21 ohms

A voltmeter can be used to measure the voltage between the A terminal of the Temperature gauge and ground. It should be pulsing and averaging about 5 volts. If it reads 12 volts the Jumper Strip/Regulator is bad. If it reads 0 volts, it has been burnt out.

The sending unit can be checked with the following resistances between the post and ground:

Totally Cold	high resistance
Slightly Warm	73 ohms
Beginning of Band	36 ohms
End of Band	13 ohms
Hot	9 ohms

If an appropriate resistor is connected to the S terminal of the temperature gauge and to ground, the above resistances can be used to check the gauge. Use a resistor close to the specifications above to simulate the sending unit.