

# Troubleshooting

## Troubleshooting Precautions

### Before Troubleshooting

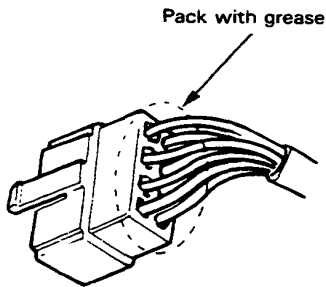
- Check the main fuse and the fuse box.
- Check the battery for damage, state of charge, and clean and tight connections.
- Check the alternator belt tension.

### CAUTION:

- Do not quick-charge a battery unless the battery ground cable has been disconnected, or you will damage the alternator diodes.
- Do not attempt to crank the engine with the battery ground cable connected incompletely or you will severely damage the wiring.

### While You're Working

- Make sure connectors are clean, and have no loose pins or receptacles.
- Make sure multiple pin connectors are packed with grease (except watertight connectors).



### CAUTION:

- Do not pull the wires when disconnecting a connector, pull only the connector housings.
- When connecting a connector, push it until it clicks into place.

## Five-Step Troubleshooting

### 1. Verify The Complaint

Turn on all the components in the problem circuit to check the accuracy of the customer complaint. Note the symptoms. Do not begin disassembly or testing until you have narrowed down the problem area.

### 2. Analyze The Schematic

Look up the schematic for the problem circuit. Determine how the circuit is supposed to work by tracing the current paths from the power feed through the circuit components to ground. If several circuits fail at the same time, the fuse or ground is a likely cause.

Based on the symptoms and your understanding of the circuit operation, identify one or more possible causes of the problem.

### 3. Isolate The Problem By Testing The Circuit

Make circuit tests to check the diagnosis you made in step 2. Keep in mind that a logical, simple procedure is the key to efficient troubleshooting. Test for the most likely cause of failure first. Try to make tests at points that are easily accessible.

### 4. Fix The Problem

Once the specific problem is identified, make the repair. Be sure to use proper tools and safe procedures.

### 5. Make Sure The Circuit Works

Turn on all components in the repaired circuit in all modes to make sure you've fixed the entire problem. If the problem was a blown fuse, be sure to test all of the circuits on that fuse. Make sure no new problems turn up and the original problem does not recur.