

Component Procedures: Auxiliary Power Outlet

Table of Contents

1. Power Outlets (Article 12854)
2. Cigar Lighter/Power Outlet Schematics (Article 12859)
3. Accessory Power Receptacle Replacement (Article 12857)
4. Symptoms - Power Outlets (Article 12856)
5. Power Outlet Receptacle Malfunction (120 VAC) (Article 12855)
6. Power Outlets - Special Tools (Article 12860)

Component Procedures: Auxiliary Power Outlet

Power Outlets (Article 12854)

System Description

The vehicle is fitted with a cigarette lighter and with a 12 V accessory power receptacle . The accessory power receptacle and cigarette lighter are operational when the ignition is turned to either the On or the Accessories positions. To operate the cigarette lighter, press in the lighter knob. When the element is hot, the lighter automatically pops out and is ready for use.

Cigar Lighter/Power Outlet Schematics (Article 12859)

Figure 1: Accessory Power Receptacles

Accessory Power Receptacle Replacement (Article 12857)

Special Tools

J 42059 - Cigar Lighter Socket Remover

Removal Procedure

- Remove the auxiliary power outlet fuse from the fuse block . [Click for full-size image](#)
- For the receptacle mounted in the cover, remove the front floor console cover. Refer to [Front Floor Console Front Cover Replacement](#) .
- Remove the receptacle:
 - Look into the receptacle. There are two 3 mm (0.11 in) tab windows 12 mm (0.47 in) from the front of the receptacle. The J 42059 - cigar lighter socket remover pushes the plastic latches from these tab windows and the receptacle can be pulled straight out.
 - Place one side of the "T" portion of the J 42059 - cigar lighter socket remover into the tab window. The J 42059 - cigar lighter socket remover will not fit straight into the receptacle. Angle the J 42059 - cigar lighter socket remover slightly for insertion into the receptacle.
 - Insert the other side of the "T" into the opposite tab window. You must move the J 42059 - cigar lighter socket remover handle toward horizontal to engage the other tab window.
 - Use the J 42059 - cigar lighter socket remover to pull the receptacle straight out.
 - If J 42059 - cigar lighter socket remover tool fails to release the lighter socket from the retainer, perform the following alternate method: [Click for full-size image](#)
 - Insert a small grinding tool with a cutoff wheel into the socket.
 - Remove the plastic latches in the 3 mm (0.11 in) square windows.
 - Use the J 42059 - cigar lighter socket remover as directed above to remove the socket.

Installation Procedure

- Route the connector through the retainer. Align the accessory power receptacle retainer to the slot in the opening. [Click for full-size image](#)
- Install the retainer by pressing into place fully seated.
- Connect the electrical connector to the receptacle.
- Align the tabs on the receptacle to the slots in the retainer. Install the accessory power receptacle by pressing into place until fully seated.
- Install the accessory power receptacle fuse.

Symptoms - Power Outlets (Article 12856)

Visual/Physical Inspection

- Inspect for aftermarket devices which can affect the operation of the power outlet s.
- Inspect the accessible system components or the visible system components for obvious damage or for obvious conditions which can cause the symptom.

Intermittent

Electrical connections or wiring may be the cause of intermittent conditions. Refer to [Testing for Intermittent Conditions and Poor Connections](#)

Symptom List

Refer to [Power Outlet Receptacle Malfunction](#) in order to diagnose the system.

Power Outlet Receptacle Malfunction (120 VAC) (Article 12855)

Diagnostic Instructions

- Perform the [Diagnostic System Check - Vehicle](#) prior to using this diagnostic procedure.
- Review [Strategy Based Diagnosis](#) for an overview of the diagnostic approach.
- [Diagnostic Procedure Instructions](#) provides an overview of each diagnostic category.

Diagnostic Fault Information

Circuit Short to Ground Open/High Resistance Short to Voltage Signal Performance

Ignition 1 1 — —

Ground — 1 1 —

1. Accessory Power Receptacle Malfunction

Circuit/System Description

The vehicle is fitted with a 12 V accessory power receptacle. The accessory power outlets are controlled by an ignition operated relay. The accessory power receptacle is operational when the ignition is turned to either the On or the Accessories positions.

Diagnostic Aids

It may be helpful to discuss with the customer the usage of any device that may have drawn too much current and caused an open fuse.

Reference Information

Schematic Reference

Cigar Lighter/Power Outlet Schematics

Connector End View Reference

Master Electrical Component List

Description and Operation

Power Outlets Description and Operation

Electrical Information Reference

- Circuit Testing
- Connector Repairs
- Testing for Intermittent Conditions and Poor Connections
- Wiring Repairs

Circuit/System Verification

- Ignition ON, connect an appropriate device to the X80 Accessory Power Receptacle.
- Verify the device is powered by the X80 Accessory Power Receptacle.
- If the device is not powered Refer to Circuit/System Testing
- If the device is powered
- All OK.

Circuit/System Testing

- Ignition OFF, disconnect the harness connector at the appropriate X80 Accessory Power Receptacle. It may take up to 2 min for all vehicle systems to power down.
- Test for less than 10 Ω between the ground circuit terminal C and ground.
- If greater than 10 Ω
- Ignition OFF.
- Test for less than 2 Ω in the ground circuit end to end.
- If 2 Ω or greater, repair the open/high resistance in the circuit.
- If less than 2 Ω , repair the open/high resistance in the ground connection.
- If less than 10 Ω
- Ignition ON.
- Verify that a test lamp illuminates between the control circuit terminal A and ground.
- If the test lamp does not illuminate and the circuit fuse is good
- Test for less than 2 Ω in the control circuit end to end.
- If greater than 2 Ω , repair the open/high resistance in the circuit.
- If less than 2 Ω , verify the fuse is not open and there is voltage at the fuse. Refer to Retained Accessory Power Malfunction .
- If the test lamp does not illuminate and the circuit fuse is open
- Test for infinite resistance between the control circuit terminal A and ground.
- If less than infinite resistance, repair the short to ground on the circuit.
- If infinite resistance, replace the appropriate X80 Accessory Power Receptacle.
- If the test lamp illuminates
- Test or replace the X80 Accessory Power Receptacle.

Repair Instructions

Perform the Diagnostic Repair Verification after completing the repair.

Accessory Power Receptacle Replacement .

Power Outlets - Special Tools (Article 12860)

Illustration Tool Number/ Description

Click for full-size image J 42059 Cigar Lighter Socket Remover