Component Procedures: Fuse Block

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Ground Repair (Article 12983)

Electrical Grounds
Proper electrical system function relies on secure, positive, corrosion-free ground connections . Loose, stripped, or corroded connections increase the possibility of improper system function and loss of module communication. These conditions may also lead to unnecessary repairs and component replacements.
In general, electrical ground connections are accomplished using one, or a combination of, three attachment methods:
- Welded M6 stud and nut
- Welded M6 nut and bolt
- Welded M8 nut and bolt

Determine which attachment method is used, and carry out the appropriate repair.
M6 Weld Stud Replacement
- Select a location adjacent the damaged or missing M6 ground stud having 20 mm (0.79 in) clearance behind the

panel surface and 20 mm (0.79 in) clearance surrounding the M6 rivet stud flange.
- Using GM approved residue-free solvent or equivalent, remove any grease from the repair site and allow to dry.
- Drill a 10 mm (0.40 in) diameter hole through the panel.
- Carefully remove paint and primer from the area surrounding the rivet stud flange until bare metal is visible.
- Select a replacement conductive M6 rivet stud. Reference the GM parts catalog for the correct part number and application.
- Using a rivet stud installer, install the replacement conductive M6 rivet stud.
- Ensure the new rivet stud is securely fastened, with no detectable movement.
- Completely wrap the threads of the rivet stud with painters tape or equivalent.
- Refinish the repair area using an anti-corrosion primer.
- Allow the refinished repair area to cure sufficiently before removing the protective material applied to the rivet stud threads.
- Remove the painters tape or equivalent from the rivet stud threads.
- Using GM approved residue-free solvent or equivalent, thoroughly clean the rivet stud threads to remove any adhesive and allow to dry.
- Carefully remove any corrosion from the electrical ground wire terminal. Testing for Intermittent Conditions and Poor Connections
- Using a small brush, apply Dielectric Lubricant GM P/N 12377900 (Canadian P/N 10953529) to the new conductive M6 rivet stud threads.
- Install the ground terminal to the new rivet stud.
- Select a new, conductive M6 nut. Reference the GM parts catalog for the correct part number and application.
- Install the conductive M6 nut and tighten to 8 Nm (71 lb in) .
- Check for proper system operation.

M6 Weld Nut

- If the M6 weld nut at the electrical ground location is damaged or stripped, a new, conductive self-threading M7 bolt may be used to secure the ground terminal. Reference the GM parts catalog for the correct part number and application.
- Using GM approved residue-free solvent or equivalent, remove any grease from the surface surrounding the weld nut and allow to dry.
- Remove any loose metal particles from the damaged or stripped weld nut with a stiff brush.
- Using a small brush, apply Dielectric Lubricant GM P/N 12377900 (Canadian P/N 10953529) to the new, conductive, self-threading M7 bolt threads.
- Carefully remove any corrosion from the electrical ground terminal. Testing for Intermittent Conditions and Poor Connections
- Install the electrical ground terminal to the new, conductive M7 bolt.
- Install the conductive M7 bolt and tighten to 9 Nm (80 lb in) .

M6 Weld Nut (Alternative Repair)

- If the electrical ground location is accessible from both sides of the panel, a conductive M6 bolt and a conductive M6 nut may be used to secure the electrical ground terminal. Reference the GM parts catalog for the correct part number and application.
- Select a location adjacent the damaged M6 weld nut having 20 mm (0.79) clearance behind the panel surface and 20 mm (0.79 in) clearance surrounding the new electrical ground site.
- Using GM approved residue-free solvent or equivalent, remove any grease from the surface surrounding the ground location and allow to dry.
- Carefully remove paint and primer from the area surrounding the new ground site until bare metal is visible.
- Using a small brush, apply Dielectric Lubricant GM P/N 12377900 (Canadian P/N 10953529) to the new, conductive M6 bolt threads.
- Install the electrical ground terminal and new, conductive M6 bolt to the ground location.

M8 Weld Nut

- If the M8 weld nut electrical ground location is accessible from both sides of the panel, a conductive M8 bolt and a conductive M8 nut may be used to secure the ground terminal. Reference the GM parts catalog for the correct part number and application.
- Select a location adjacent to M8 weld nut having 20 mm (0.79 in) clearance behind the panel surface and 20 mm (0.79 in) clearance surrounding the new electrical ground site.
- Using a small brush, apply Dielectric Lubricant GM P/N 12377900 (Canadian P/N 10953529) to the new, conductive M8 bolt threads.
- Install the electrical ground terminal and new, conductive M8 bolt to the ground location.
- Install the conductive M8 nut and tighten to 22 Nm (16 lb ft) .

M8 Weld Nut (Alternative Repair)
- If the M8 weld nut electrical ground location is not accessible from both sides of the panel, a conductive M6 rivet stud and a conductive M6 nut may be used to secure the ground terminal. Reference the GM parts catalog for the correct part number and application.
- Select a location adjacent the damaged M8 weld nut having 20 mm (0.79 in) clearance behind the panel surface and 20 mm (0.79 in) clearance surrounding the new, conductive M6 rivet stud flange.
- Install the ground terminal to the new, conductive M6 rivet stud.
Securing Loose Electrical Ground Connections
If the electrical ground connection is loose and the ground attachments are not damaged, properly securing the loose electrical ground may be all that is necessary. Carry out the following procedure to secure loose electrical ground connections.
- Using GM approved residue-free solvent or equivalent, thoroughly clean the ground stud threads and allow to dry.
- Using a small brush, apply Dielectric Lubricant GM P/N 12377900 (Canadian P/N 10953529) to the ground stud threads.
- Install the ground wire terminal to the ground stud.
- Install the appropriate conductive nut.
- Conductive M6 nut: Tighten to 8 Nm (71 lb in)
- Conductive M8 nut: Tighten to 22 Nm (16 lb ft)
- Conductive M10 nut: Tighten to 45 Nm (33 lb ft)

Accessory Wiring Junction Block Replacement (Article 12962)

Callout Component Name
Preliminary Procedure Disconnect the battery . Refer to Battery Negative Cable Disconnection and Connection .
Preliminary Procedure
Disconnect the battery . Refer to Battery Negative Cable Disconnection and Connection .
1 Accessory Wiring Junction Block Cover Procedure Remove the accessory wiring junction block cover by pushing in on the 3 retainer tabs located on the ends of the cover and lift. To reinstall, fit together the retainer tabs located on the ends of the cover and push down on the cover until the tabs on the ends of the cover lock into place.
Procedure
Remove the accessory wiring junction block cover by pushing in on the 3 retainer tabs located on the ends of the cover and lift. To reinstall, fit together the retainer tabs located on the ends of the cover and push down on the cover until the tabs on the ends of the cover lock into place.
2 Battery Cable Nut Caution: Refer to Fastener Caution . Procedure Disconnect the battery positive cable from the junction block by removing the nut. Tighten 7 Nm (62 lb in)
Disconnect the battery positive cable from the junction block by removing the nut.
7 Nm (62 lb in)
3 Accessory Wiring Junction Block Harness Connector Bolt (Qty: 3) Procedure Remove the accessory wiring harness from the accessory wiring junction block retainer. Tighten 10 Nm (89 lb in)
Remove the accessory wiring harness from the accessory wiring junction block retainer.
10 Nm (89 lb in)
4 Accessory Wiring Junction Block Retainer Procedure Remove the accessory wiring junction block retainer by pushing in on the 4 retainer tabs located on the sides of the retainer and lift. To reinstall, fit together the retainer tabs located on the sides of the retainer and push down on the retainer until the tabs on the sides of the cover lock into place.
Remove the accessory wiring junction block retainer by pushing in on the 4 retainer tabs located on the sides of the retainer and lift. To reinstall, fit together the retainer tabs located on the sides of the retainer and push down on the retainer until the tabs on the sides of the cover lock into place.
5 Accessory Wiring Junction Block Retainer Base Bolt Tighten 20 Nm (15 lb ft)
20 Nm (15 lb ft)
6 Accessory Wiring Junction Block Retainer Base Procedure Position the junction block retainer base alignment tab to the bracket first, then install the bolt.
Position the junction block retainer base alignment tab to the bracket first, then install the bolt.