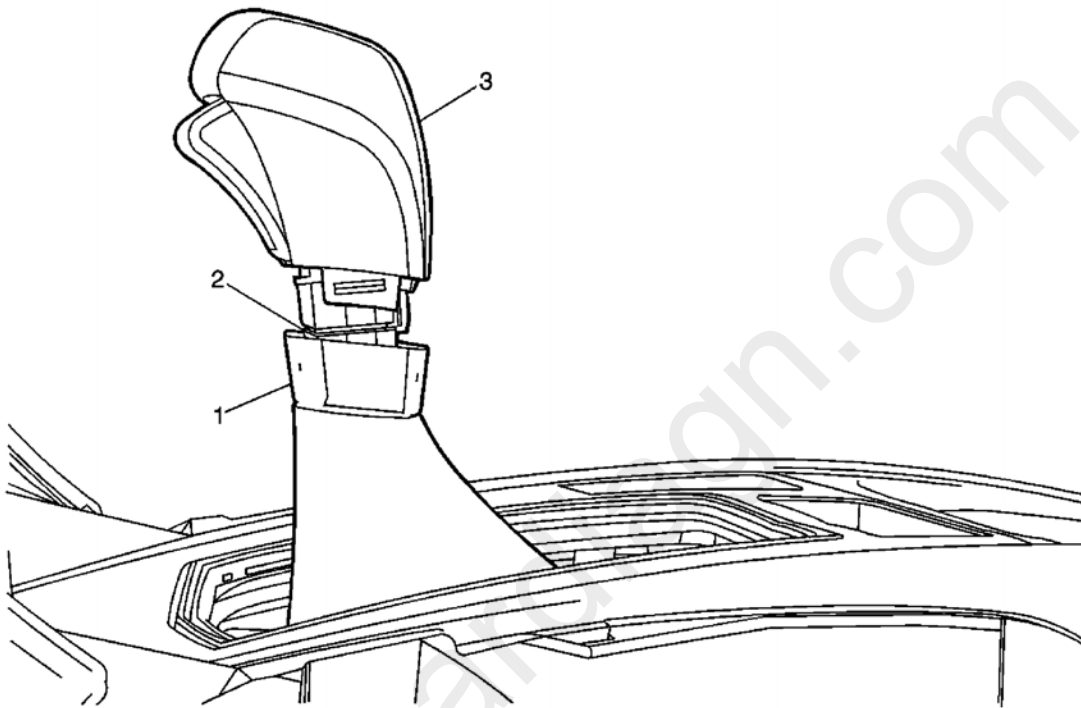


2010 TRANSMISSION

Automatic Transmission AF40-6 SRX

REPAIR INSTRUCTIONS ON SHIC

TRANSMISSION CONTROL LEVER NOB REPLACEMENT

**Fig. 1: Identifying Transmission Control Lever nob**

Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
1	Shift Control nob Bezel Tip: - Removal: carefully insert a small flat-bladed tool between the bezel (1) and the shift knob (3). Apply careful downward pressure to the bezel to separate the bezel from the shift knob. The bezel will drop down approximately 13.0mm (.5 in) exposing the spring clip (2). - Installation: Lift the bezel (1) up to the shift knob (3) until a click sound is heard indicating the bezel is secured to the shift knob.
2	Shift Control nob Spring Clip Tip: Place the shift control in the Drive position, then remove the spring clip from the front of the shift knob.

TRANSMISSION CONTROL LEVER BOOT REPLACEMENT

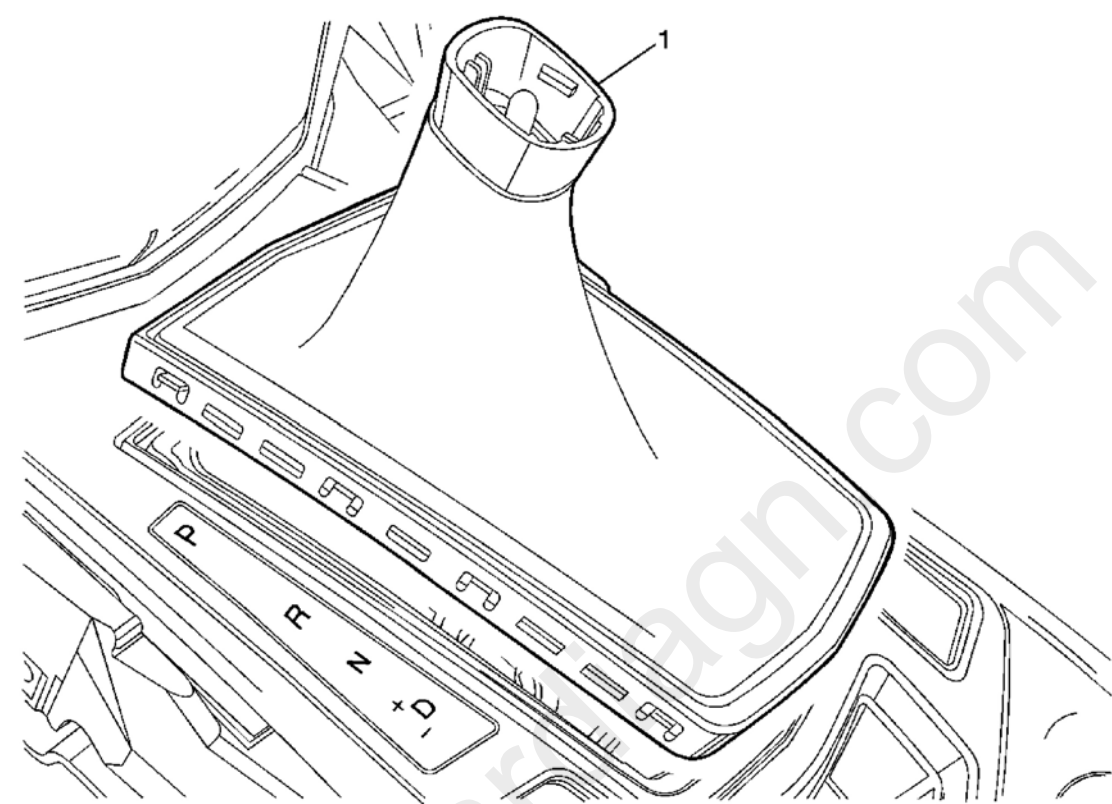


Fig. 2: Identifying Transmission Control Lever Boot
Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
Preliminary Procedure: Remove the automatic transmission control knob. Refer to Transmission Control Lever Knob Replacement .	
1	Automatic Transmission Control Boot Assembly Procedure: Use a flat bladed plastic trim tool in order to release the retaining tabs securing the boot assembly to the front floor console transmission shift opening trim plate.

TRANSMISSION CONTROL REPLACEMENT

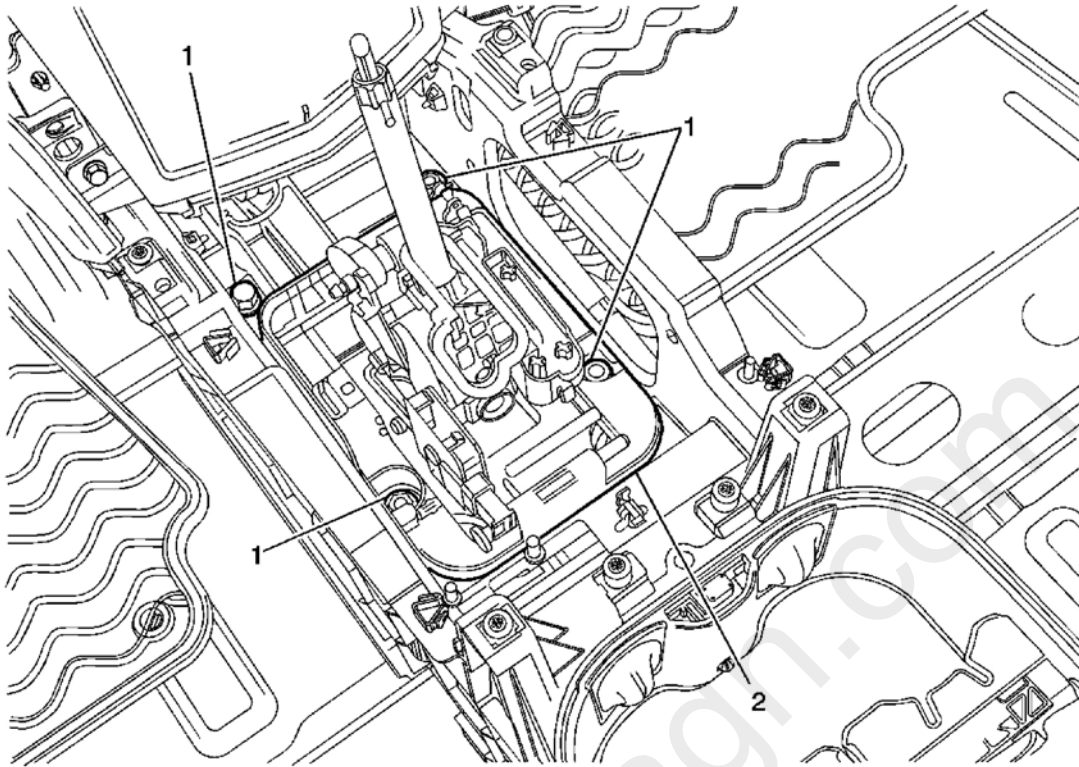


Fig. 3: View Of Transmission Control
Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
Preliminary Procedures	
1. Remove the front floor console trim plate. Refer to <u>Front Floor Console Trim Plate Replacement</u> .	
2. Disconnect the range selector lever cable. Refer to <u>Range Selector Lever Cable Replacement</u> .	
3. Disconnect the transmission control electrical connectors.	
1	Transmission Control Fasteners (Qty: 4) CAUTION: Refer to <u>Fastener Caution</u>. Tighten: 25 N.m (18 lb ft).
2	Transmission Control

RANGE SELECTOR LEVER CABLE ADJUSTMENT

NOT: Adjust the automatic transmission range selector cable while the transmission and the gear selector are in the Park position only. Failure to

do so may cause misadjustment.

1. Set the park brake and chock the wheels.
2. Verify the transmission range select lever is in the park position.
3. Verify the transmission manual shift lever is in the park position.

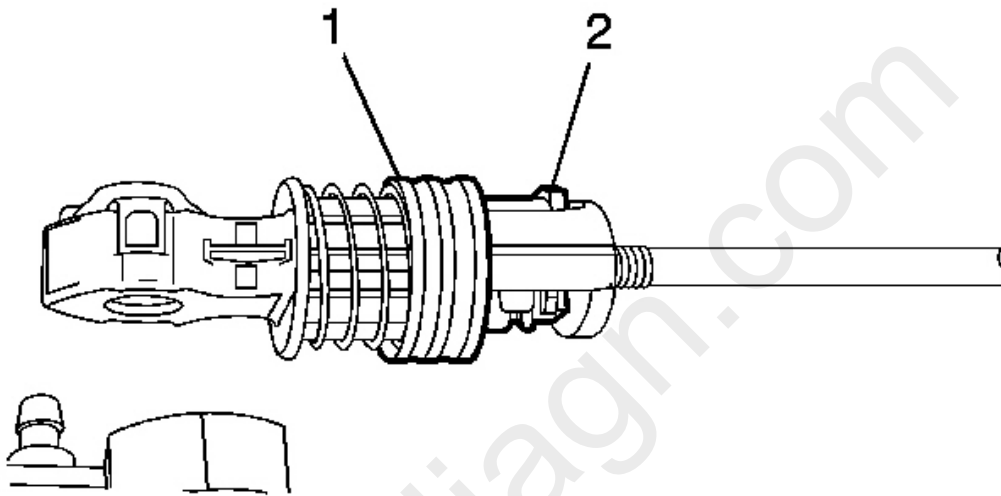


Fig. 4: Releasing Range Select Cable Adjuster Clip
Courtesy of GENERAL MOTORS CORP.

4. Pull the retaining collar (1) forward, then release the range select cable adjuster clip (2) by pushing up on the adjuster clip from the underside.
5. Depress the adjuster clip (2) locking the adjuster clip completely, then release the retaining collar.
6. Ensure that the cable adjuster is secured.
7. Check the transmission range select lever in all gear selections for proper operation.

RANGE SELECTOR LEVER CABLE REPLACEMENT

Removal Procedure

1. Set the park brake and chock the wheels.

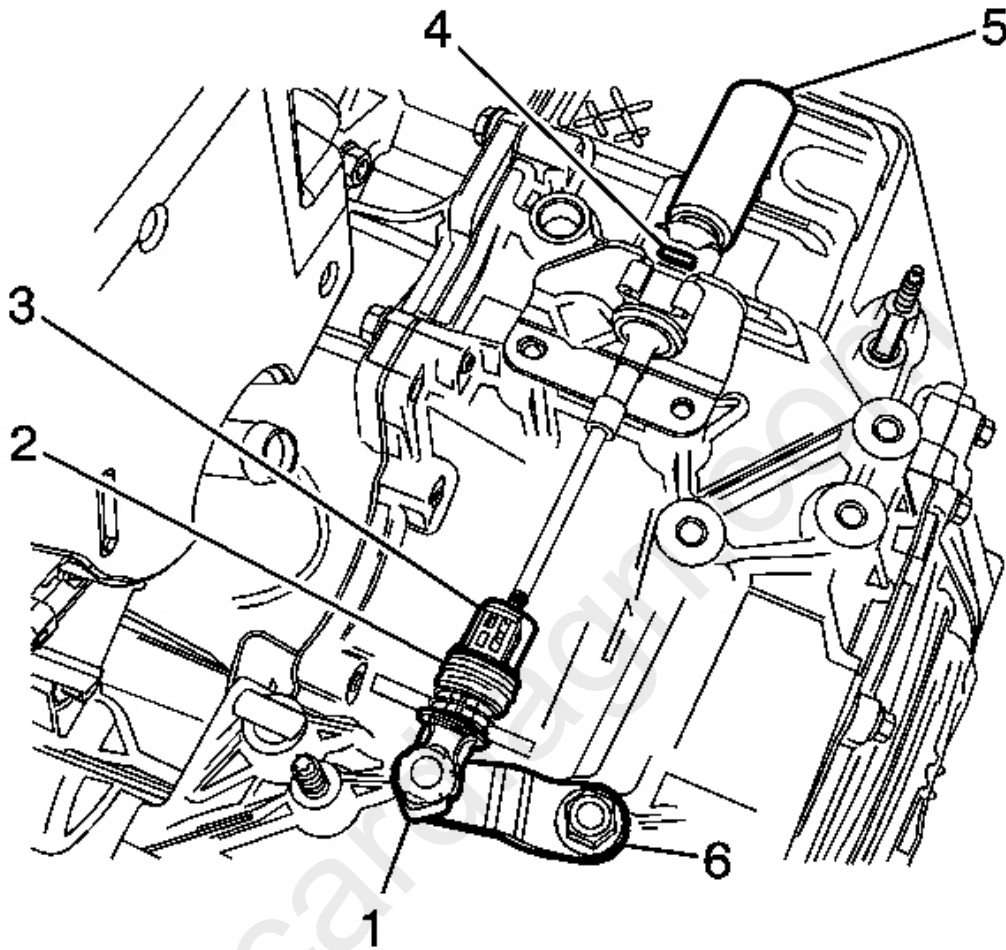


Fig. 5: Identifying Transmission Range Selector Lever Components
Courtesy of GENERAL MOTORS CORP.

2. Disconnect the transmission range selector lever cable terminal (1) from the transmission manual shift lever pin (6).
3. Slide the retainer (4) rearward to release the transmission range selector lever cable from the bracket.
4. Remove the front floor console extension. Refer to **Front Floor Console Extension Replacement**.

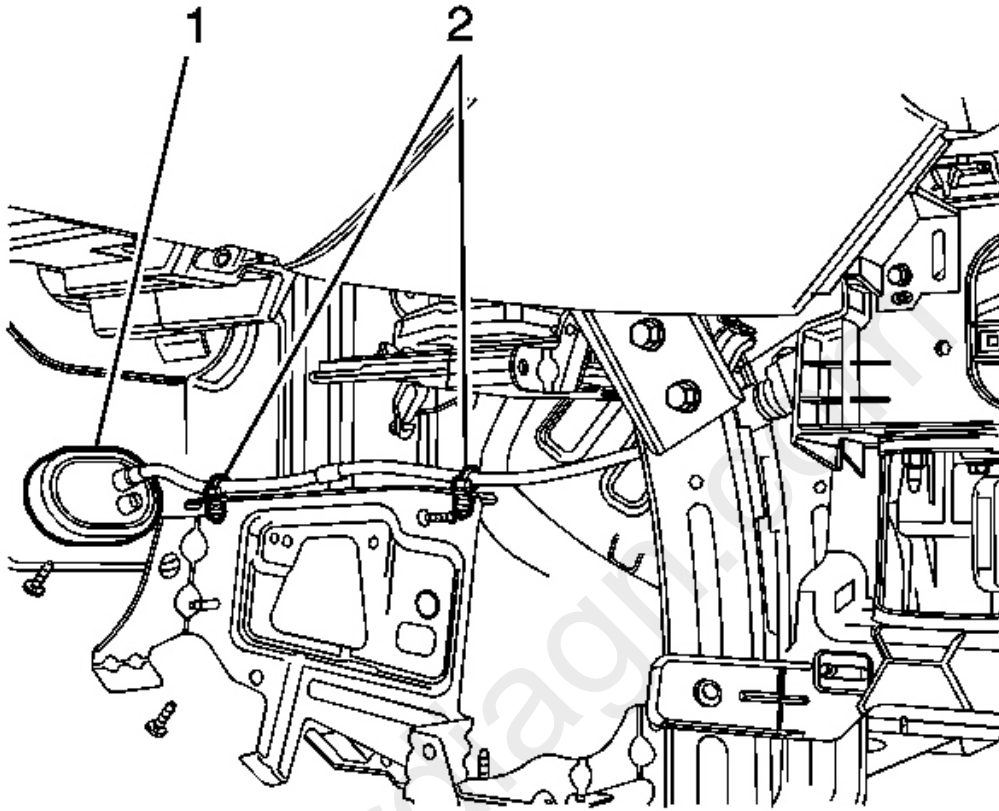


Fig. 6: Identifying Transmission Range Selector Lever Cable Retainers & Grommet
Courtesy of GENERAL MOTORS CORP.

5. Disconnect the transmission range selector lever cable retainers (2) from the support bracket.
6. Remove the grommet (1) and cable assembly from the floor panel.

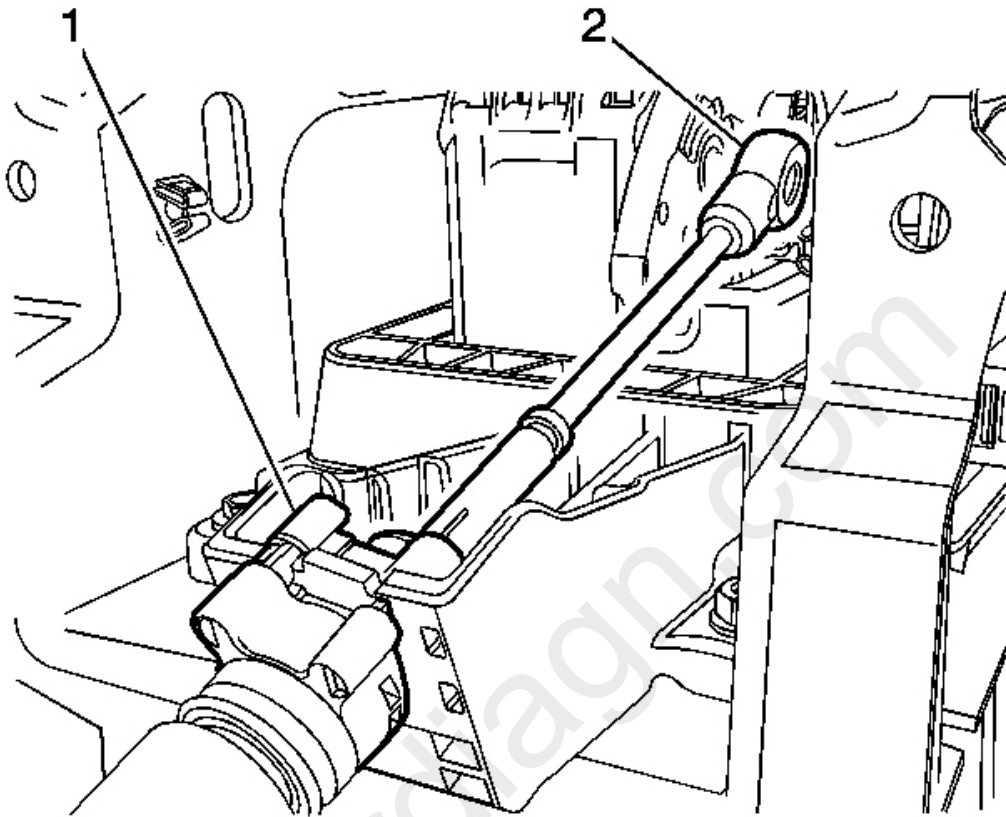


Fig. 1 View Of Transmission Range Selector Lever Cable Retainer & Terminal
Courtesy of GENERAL MOTORS CORP.

7. Slide the transmission range selector lever cable retainer forward (1) and remove the transmission range selector cable from the transmission control base.
8. Disconnect the transmission range selector lever cable terminal (2) from the shift lever pin.
9. Remove the transmission range selector lever cable from the vehicle.

Installation Procedure

1. Install the transmission range selector lever cable in the vehicle.

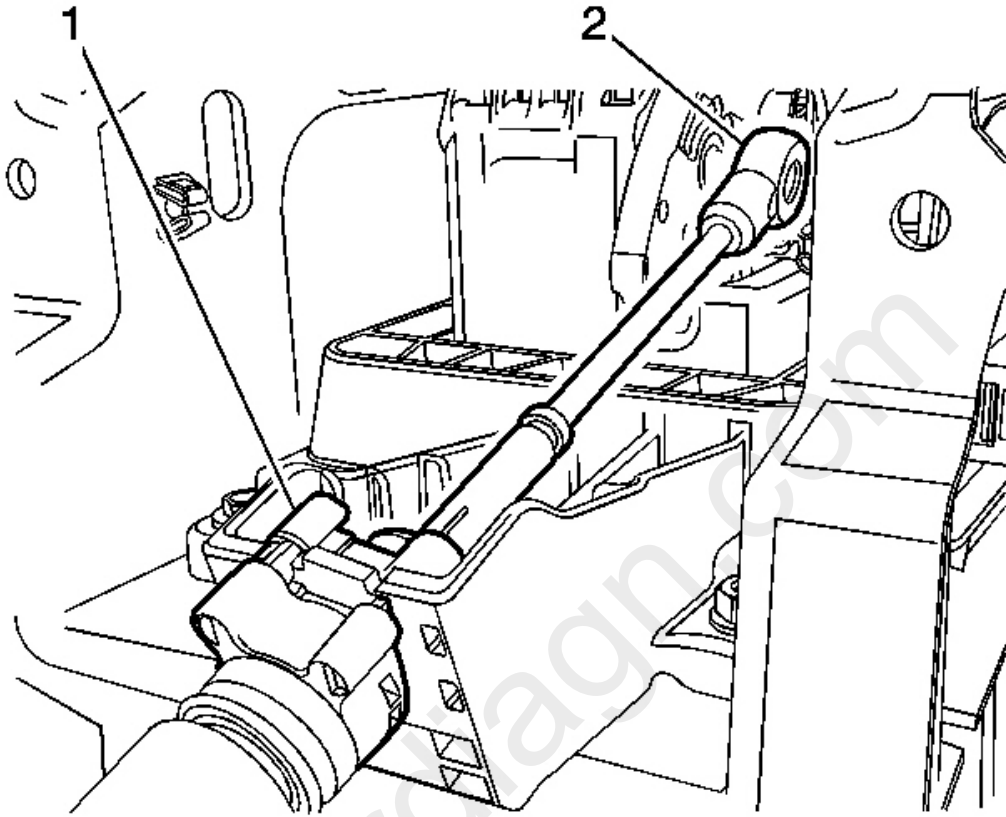


Fig. 1 View Of Transmission Range Selector Lever Cable Retainer & Terminal
Courtesy of GENERAL MOTORS CORP.

2. Connect the transmission range selector lever cable terminal (2) to the shift lever pin.

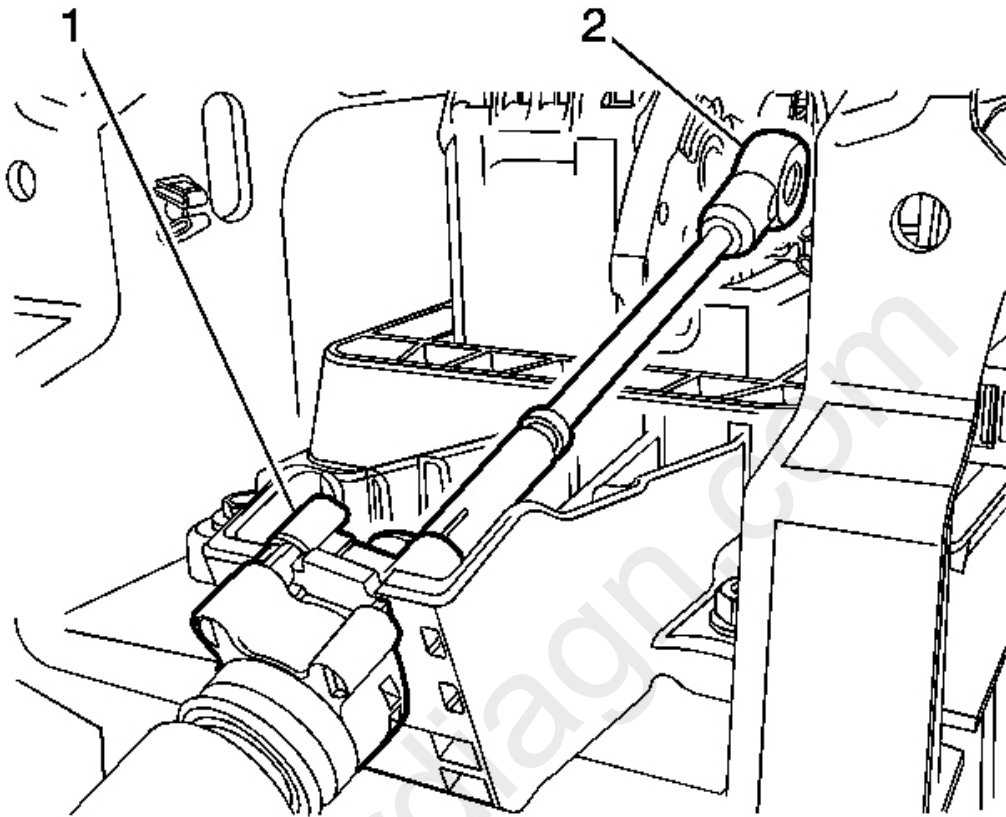


Fig. 9: View Of Transmission Range Selector Lever Cable Retainer & Terminal
Courtesy of GENERAL MOTORS CORP.

3. Install the transmission range selector cable to the transmission control base, then slide the transmission range selector lever cable retainer rearward (1) to lock the cable in place.

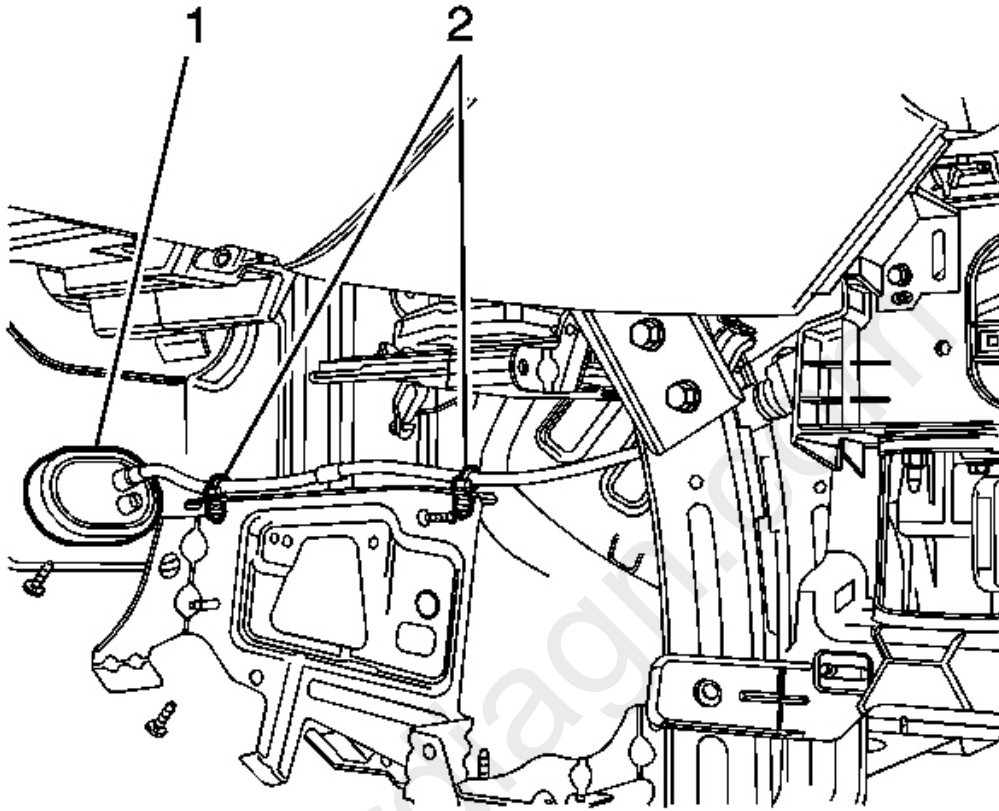


Fig. 10: Identifying Transmission Range Selector Lever Cable Retainers & Grommet
Courtesy of GENERAL MOTORS CORP.

NOT: Ensure the grommet is properly oriented with paint dot facing top.

4. Install the grommet (1) and cable assembly into the floor panel.
5. Connect the transmission range selector lever cable retainers (2) to the support bracket.
6. Install the front floor console extension. Refer to **Front Floor Console Extension Replacement** .

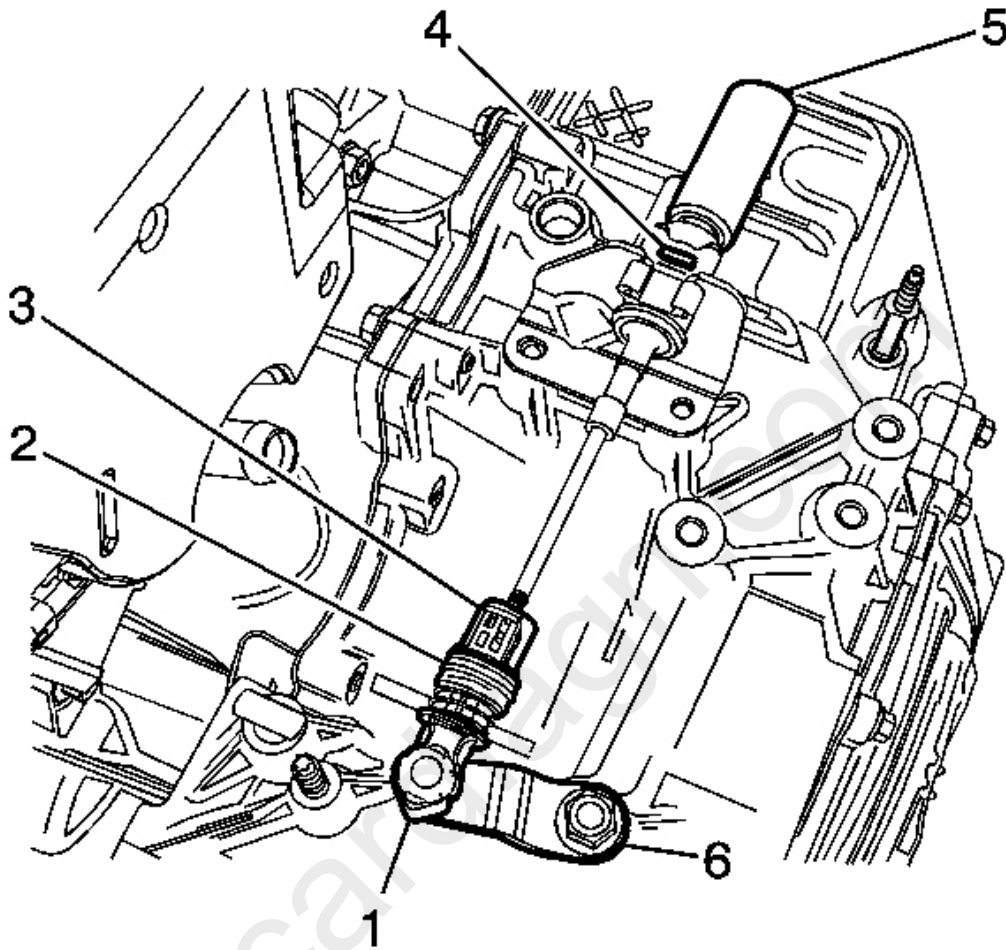


Fig. 11: Identifying Transmission Range Selector Lever Components
Courtesy of GENERAL MOTORS CORP.

7. Connect the transmission range selector lever cable terminal (1) to the transmission manual shift lever pin (6).
8. Install the cable in the bracket, then slide the retainer (4) forward to lock the transmission range selector lever cable in the bracket.
9. Adjust the cable. Refer to **Range Selector Lever Cable Adjustment** .

AUTOMATIC TRANSMISSION RANGE SELECTOR LEVER REPLACEMENT

2010 Cadillac SRX

2010 TRANSMISSION Automatic Transmission - AF40-6 - SRX

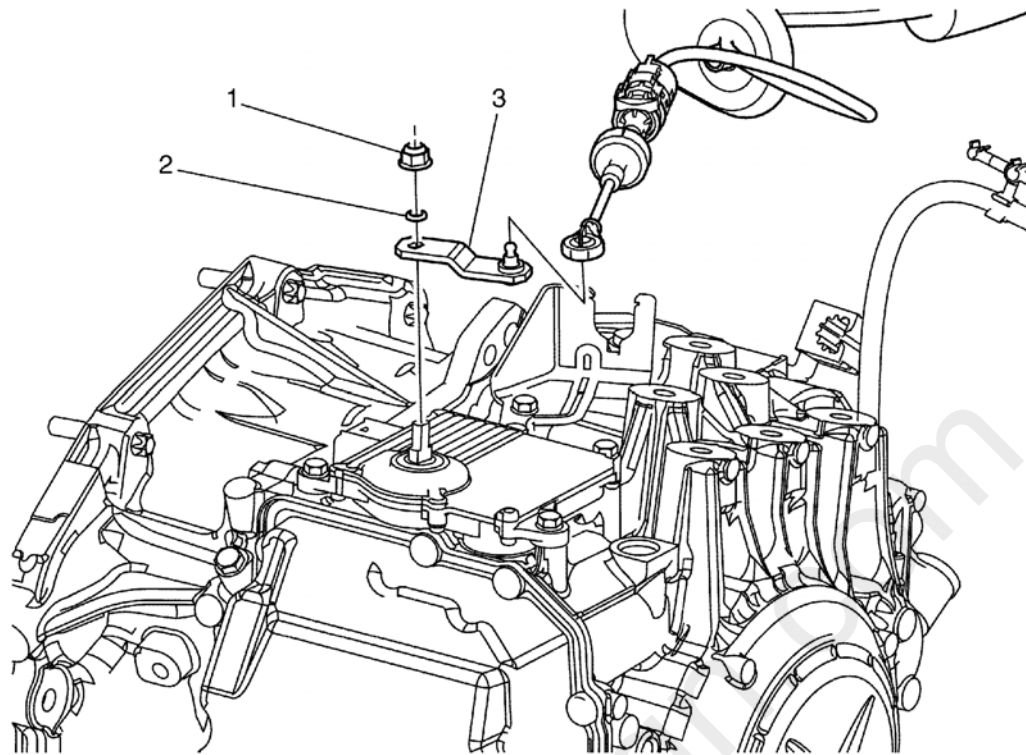


Fig. 12: Identifying Automatic Transmission Range Selector Lever
Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
Preliminary Procedures	
1. Remove the battery tray. Refer to Battery Tray Replacement . 2. Ensure that the shift control range select lever is in the park (P) position. 3. Disconnect the shift control cable from the transaxle range switch lever. 4. Depress the shift control cable retainer clip tabs and remove the shift control cable from the shift control cable bracket.	
1	Automatic Transmission Range Selector Lever Fastener WARNING: Hold the transmission range selector lever while removing or installing the lever retaining nut. Failure to hold the lever can cause damage to the transmission internal park system components which could allow the vehicle to roll when placed in the park position. CAUTION: Refer to Fastener Caution . Tighten: 15 N.m (11 lb ft)
2	Automatic Transmission Range Selector Lever Washer

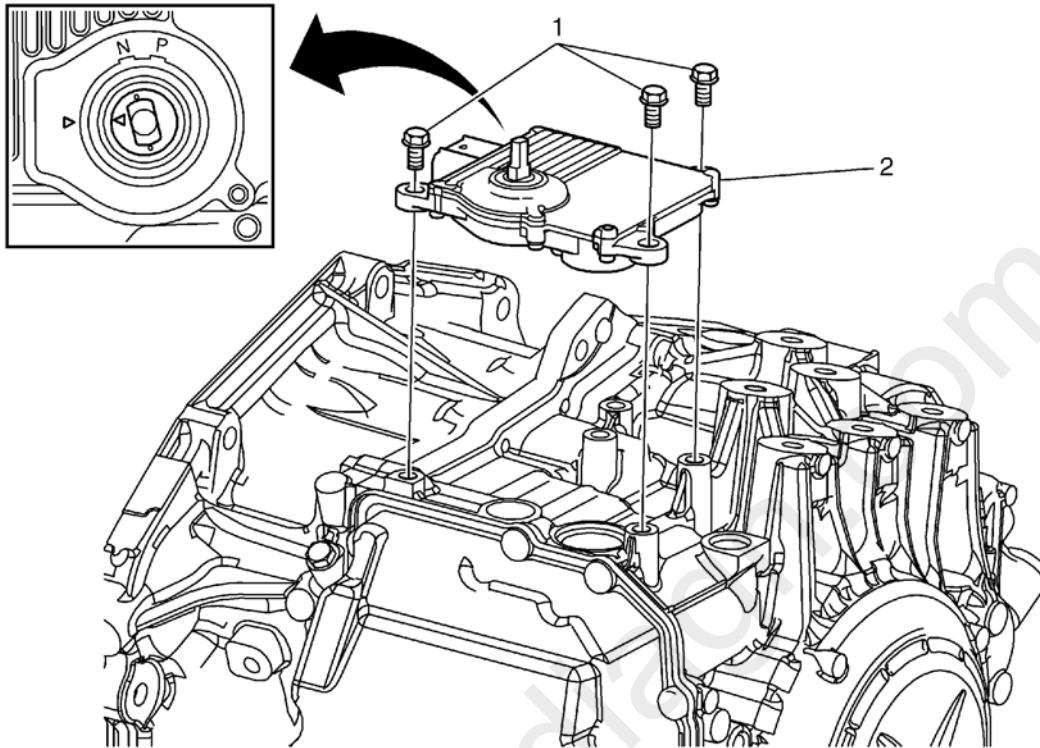
TRANSMISSION CONTROL MODULE REPLACEMENT

Fig. 13: Identifying Transmission Control Module
Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
Preliminary Procedures	
1. Remove the battery tray. Refer to Battery Tray Replacement .	
2. Remove the lever linkage. Refer to Automatic Transmission Range Selector Lever Replacement .	
3. Disconnect the TCM electrical connector.	
1	Transmission Control Module Fastener (Qty: 3) CAUTION: Refer to <u>Fastener Caution</u> . Tighten: 25 N.m (18 lb ft)
	Transmission Control Module Procedure

2

1. Set the inner, rotating section of the control module so that the arrow is pointing towards the marking on the housing.
2. Carry out adaptation, resetting. Refer to **Transmission Adaptive Functions** .
3. Program the gear selector position sensor in neutral, using the scan tool.

Tip:

Twisting or tilting of the transmission control module electrical connector while disconnecting may result in bent or misaligned electrical terminal pins.

TRANSMISSION FRONT MOUNT REPLACEMENT**Removal Procedure**

1. Raise and support the vehicle. Refer to **Lifting and Jacking the Vehicle** .

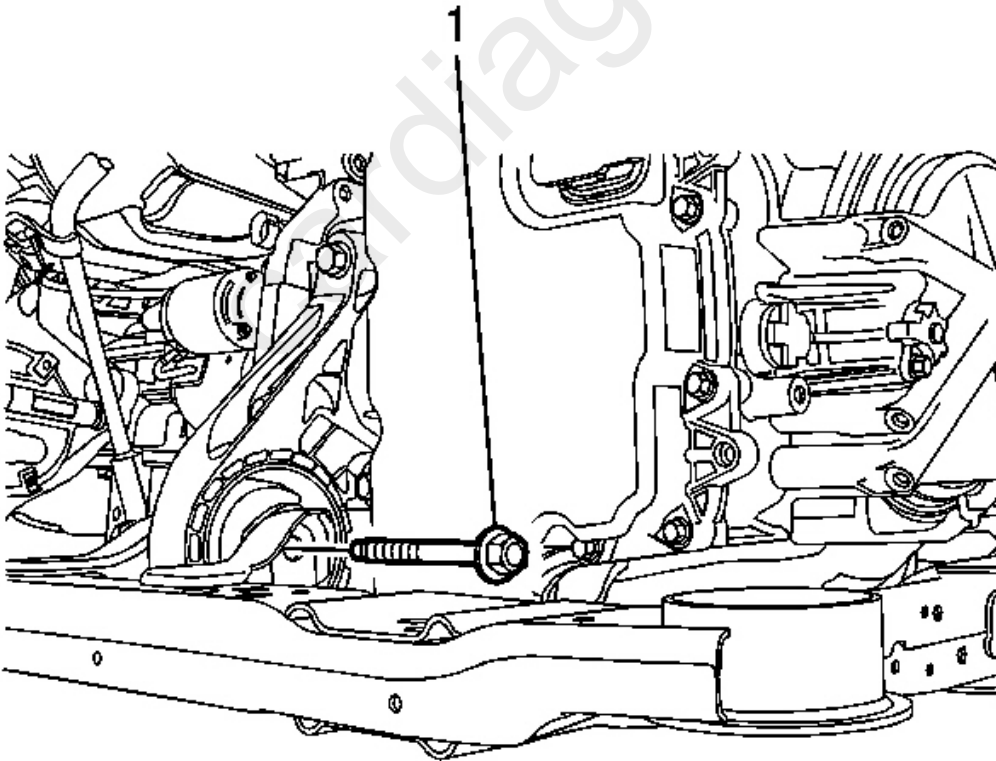


Fig. 14: Identifying Front Transmission Mount Through Bolt

Courtesy of GENERAL MOTORS CORP.

2. Remove the front transaxle mount through bolt (1).

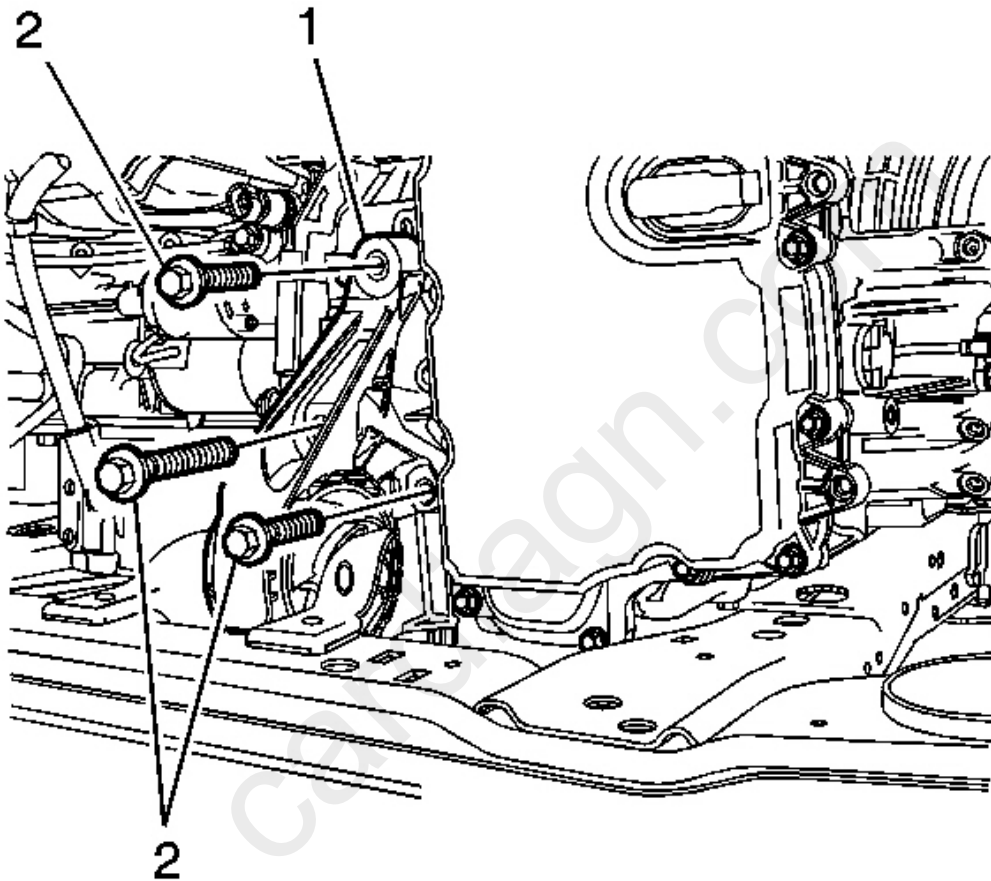


Fig. 15: Locating Transaxle Mount & Attachment Bolts
Courtesy of GENERAL MOTORS CORP.

3. Remove and discard the three transaxle mount-to-transaxle attachment bolts (2).
4. Remove the transaxle mount (1) from the vehicle.

Installation Procedure

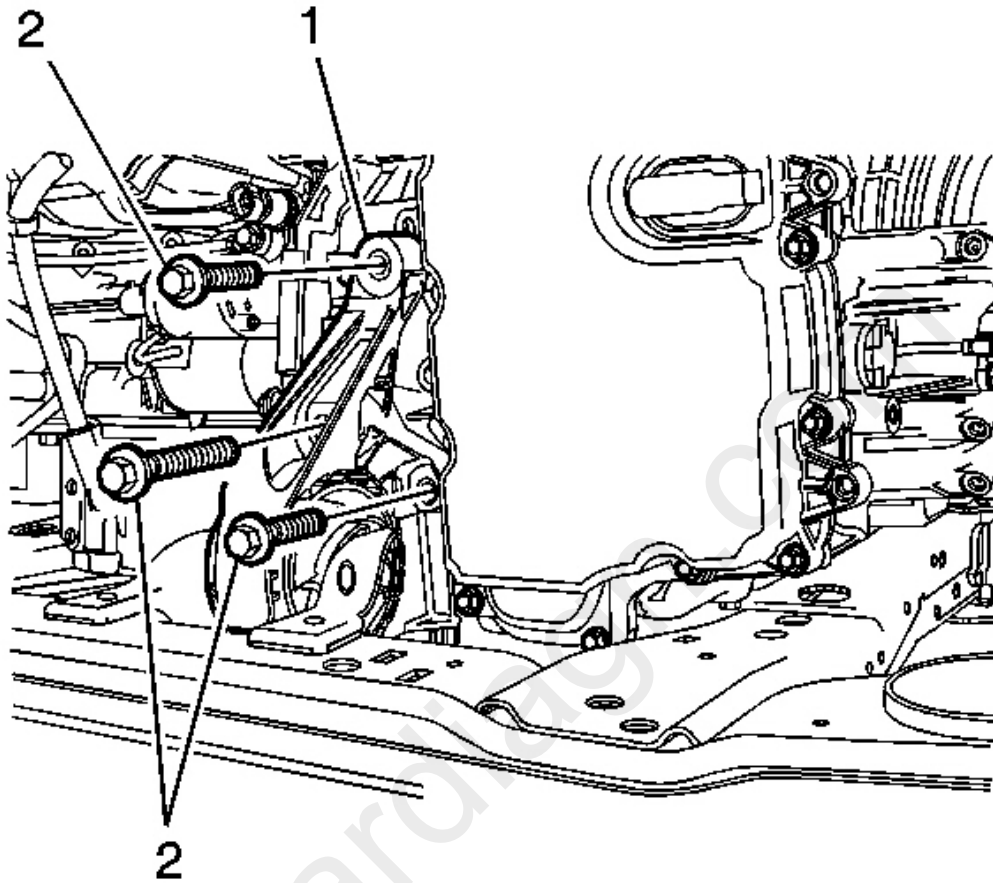


Fig. 1: Locating Transaxle Mount & Attachment Bolts
Courtesy of GENERAL MOTORS CORP.

1. Install the transaxle mount (1).

CAUTION: Refer to Fastener Caution .

2. Install the N $\square$ transaxle mount bolts (2) and tighten to 62 N.m (46 lb ft).

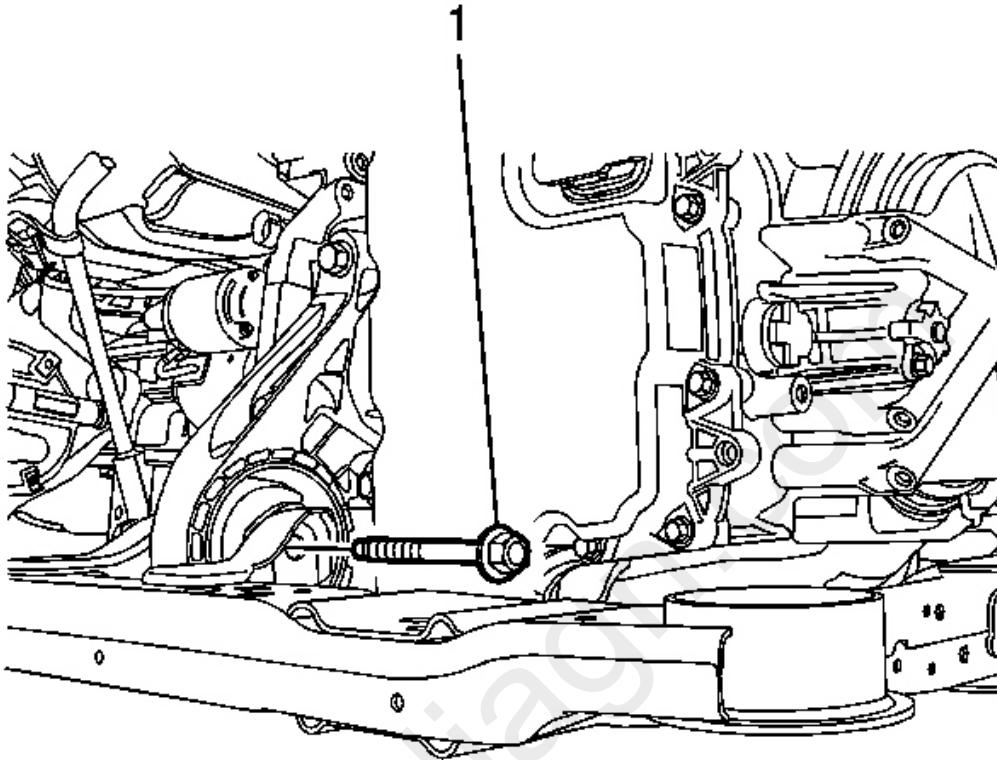


Fig. 1 □ Identifying Front Transmission Mount Through Bolt
Courtesy of GENERAL MOTORS CORP.

3. Install the transa□le mount through bolt (1) and tighten to 100 N.m (74 lb ft).
4. □ower the vehicle.

TRANSMISSION REAR MO□NT REPLACEMENT

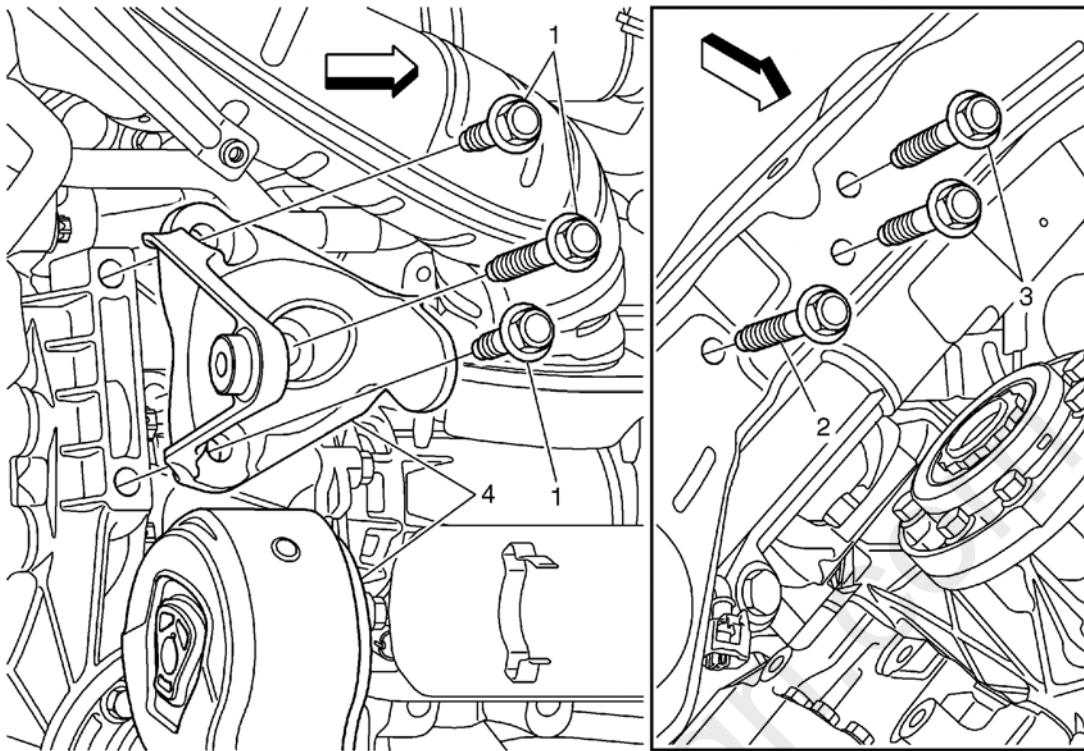


Fig. 1 □: Identifying Transmission Rear Mount □ Bolts
 Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
Preliminary Procedure 1. Raise and suitably support the vehicle. Refer to <u>Lifting and Jacking the Vehicle</u>. 2. Lower the drivetrain and front suspension frame approx 10 cm. Refer to <u>Drivetrain and Front Suspension Frame Replacement</u>.	
1	Transmission Rear Mount Fastener (Qty 3) CAUTION: Refer to <u>Fastener Caution</u> . Tighten: 100 N.m (74 lb ft)
2	Transmission Rear Mount Fastener Tighten: 62 N.m (46 lb ft)
3	Transmission Rear Mount Fastener (Qty 2) Tighten: 100 N.m (74 lb ft)
4	Transmission Rear Mount

Removal Procedure

1. Remove the battery box. Refer to **Battery Tray Replacement**.
2. Install the engine support fixture. Refer to **Engine Support Fixture**.
3. Raise and support the vehicle. Refer to **Lifting and Jacking the Vehicle**.

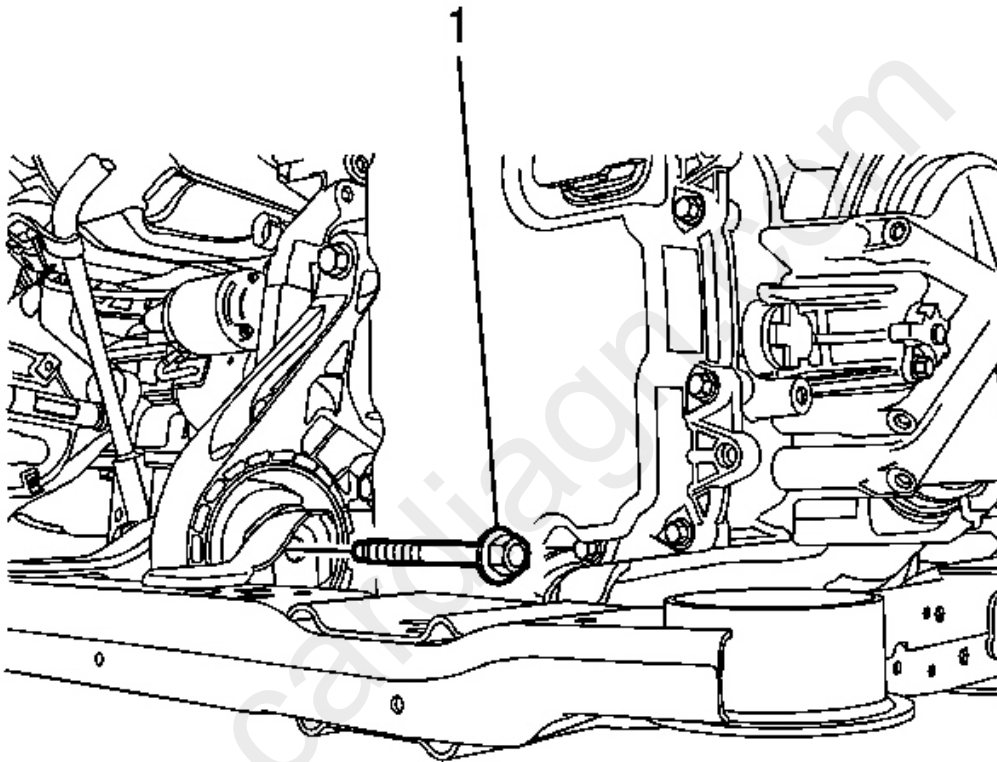


Fig. 1: Identifying Front Transmission Mount Through Bolt
Courtesy of GENERAL MOTORS CORP.

4. Remove the front transmission mount through bolt (1).

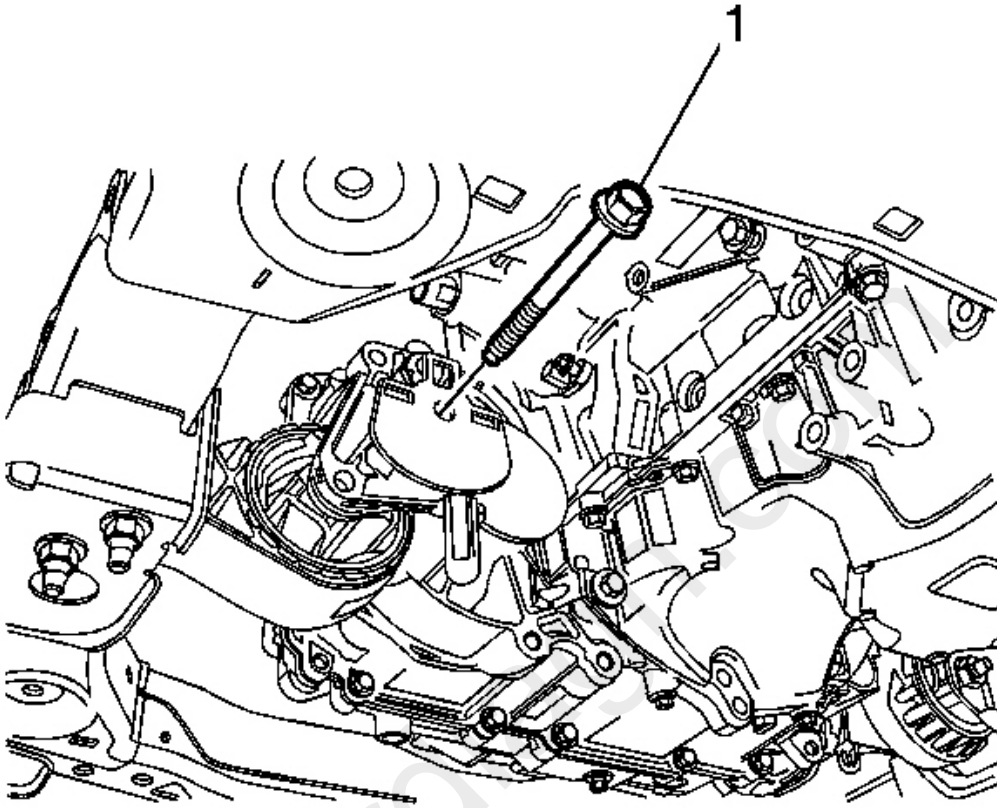


Fig. 2 Locating Rear Transmission Mount Through Bolt
Courtesy of GENERAL MOTORS CORP.

5. Remove the rear transmission mount through bolt (1).
6. Lower the vehicle.

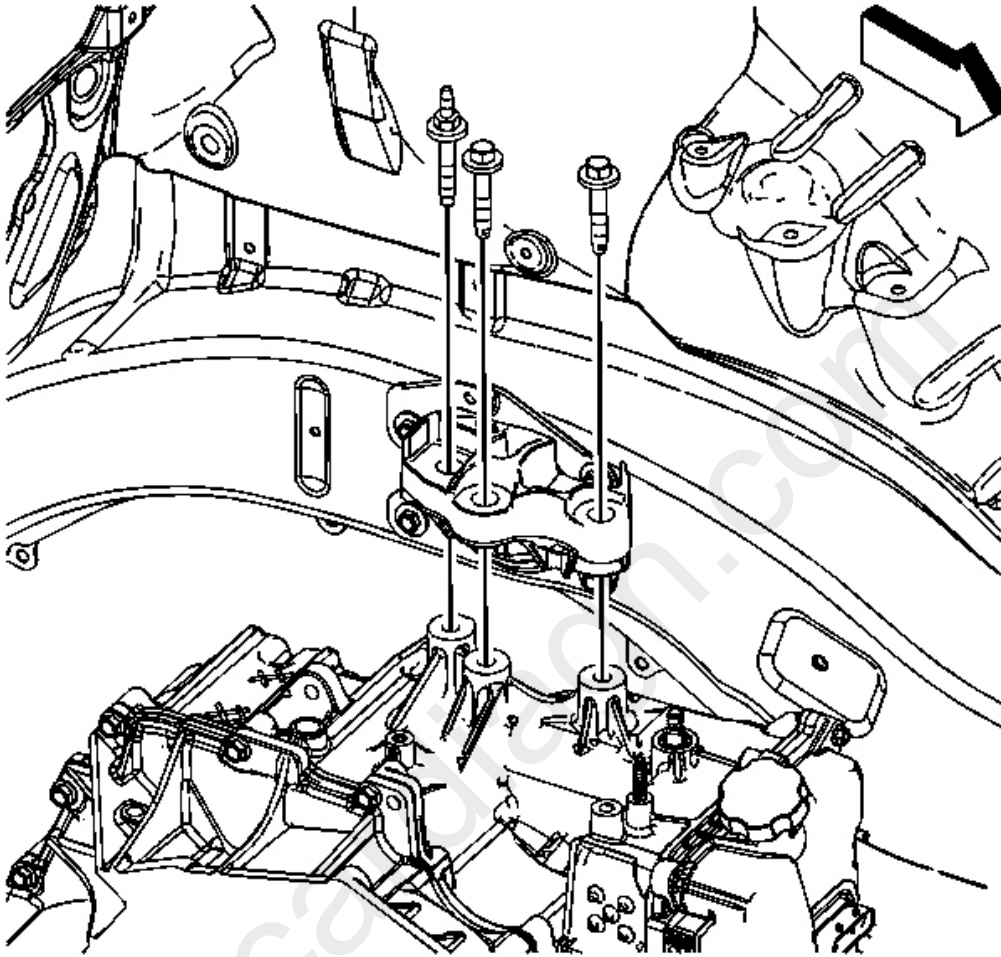


Fig. 21: Transmission Mount To Transmission Bolts
Courtesy of GENERAL MOTORS CORP.

7. Remove the transmission mount to transmission bolts.

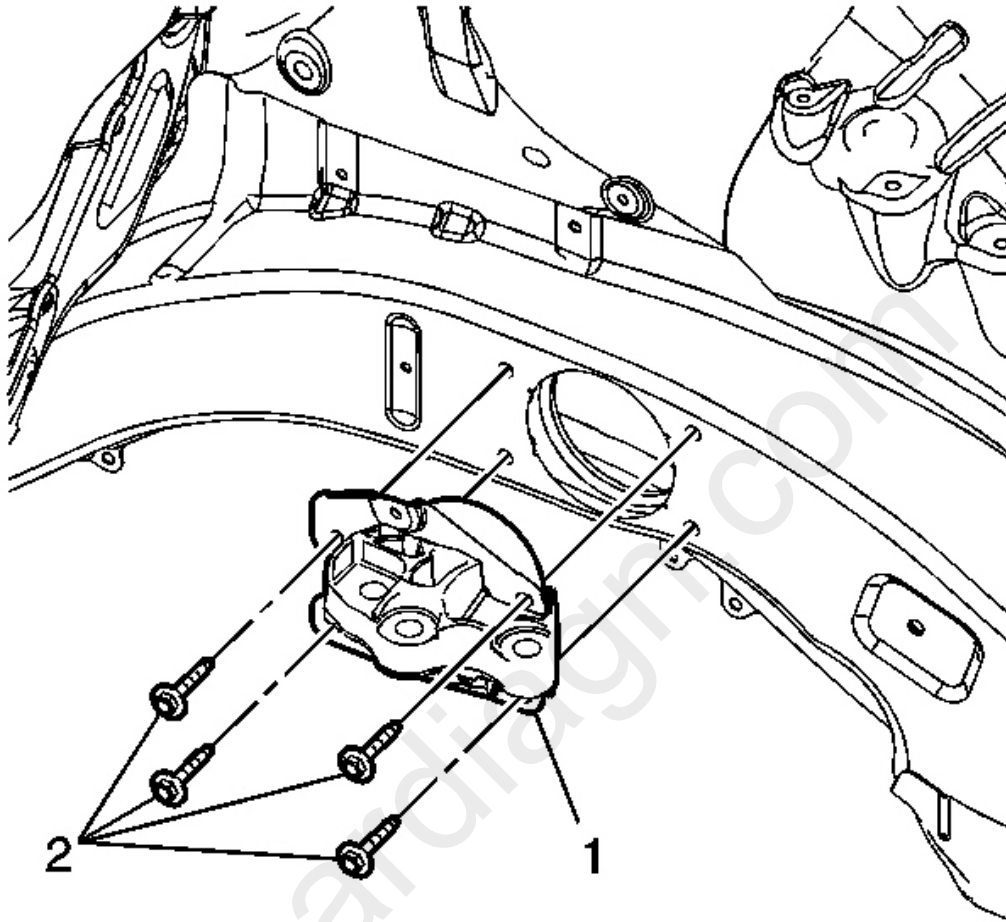


Fig. 22: Transmission Mount To Frame Rail Bolts
Courtesy of GENERAL MOTORS CORP.

8. Using the engine support, lower the transmission enough to provide clearance for the left transmission mount.
9. Remove the transmission mount to frame rail bolts (2).
10. Remove the left transmission mount (1).

Installation Procedure

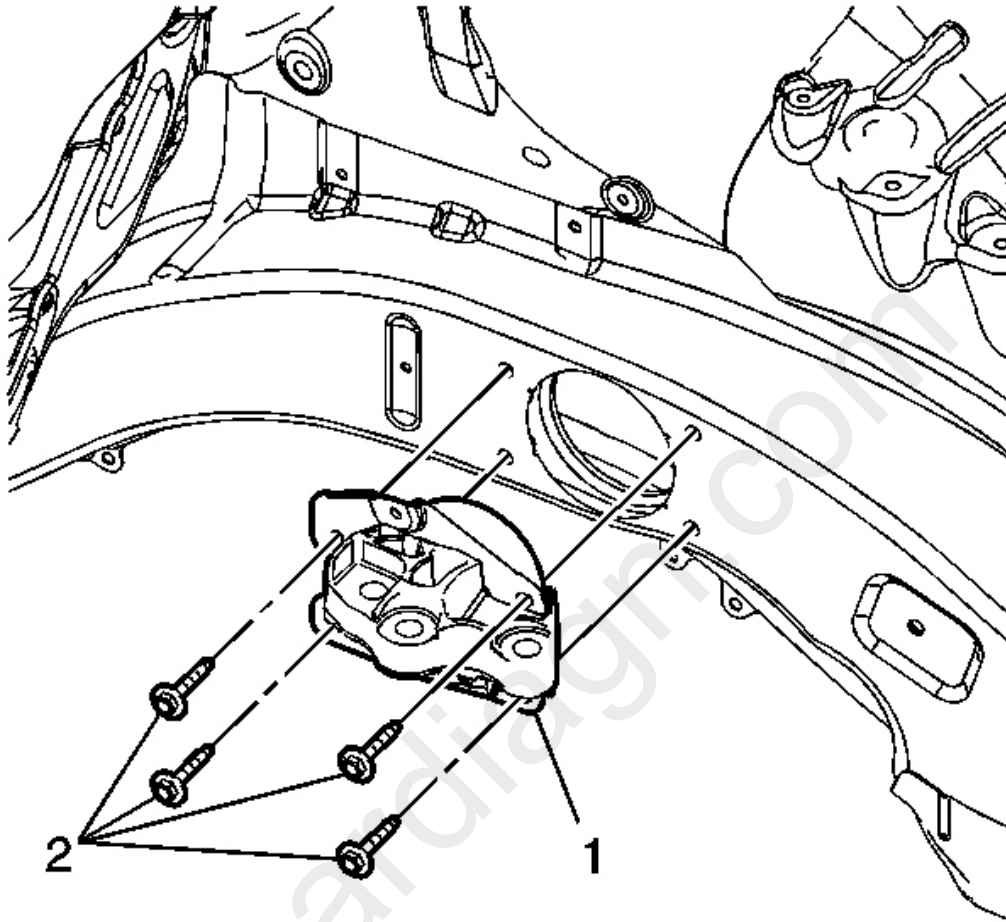


Fig. 23: Transmission Mount To Frame Rail Bolts
Courtesy of GENERAL MOTORS CORP.

1. Install the left transmission mount (1).

CAUTION: Refer to Fastener Caution .

2. Install the transmission mount to frame rail bolts (2) and tighten to 22 N.m (16 lb ft).
3. Using the engine support, raise the transmission until the transmission contacts the left transmission mount.

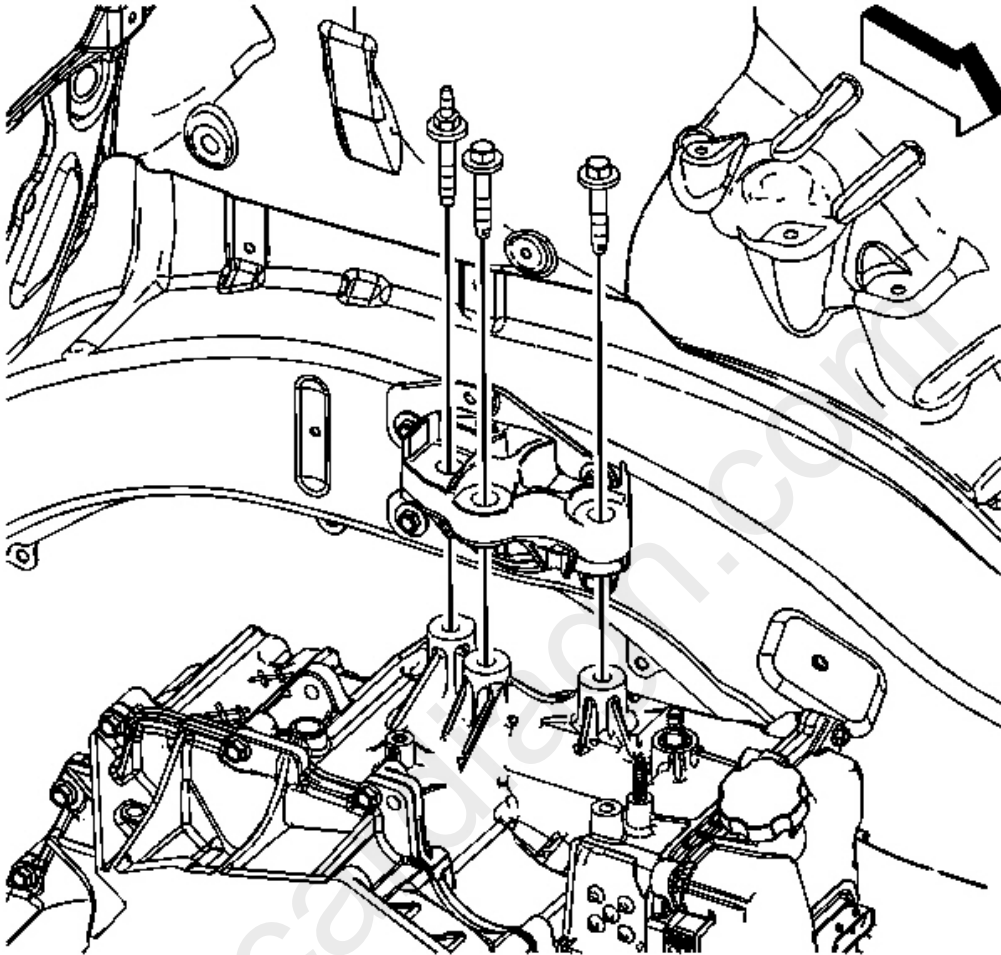


Fig. 24: Transmission Mount To Transmission Bolts
Courtesy of GENERAL MOTORS CORP.

NOTE: **DO NOT** reuse the old bolts. Always use **NEW** bolts when reinstalling the mount.

4. Install the transmission mount to transmission bolts and tighten to 50 N.m (37 lb ft) plus 60-75 degrees.
5. Install the wheel and tire assembly. Refer to **Tire and Wheel Removal and Installation** .
6. Raise the vehicle.

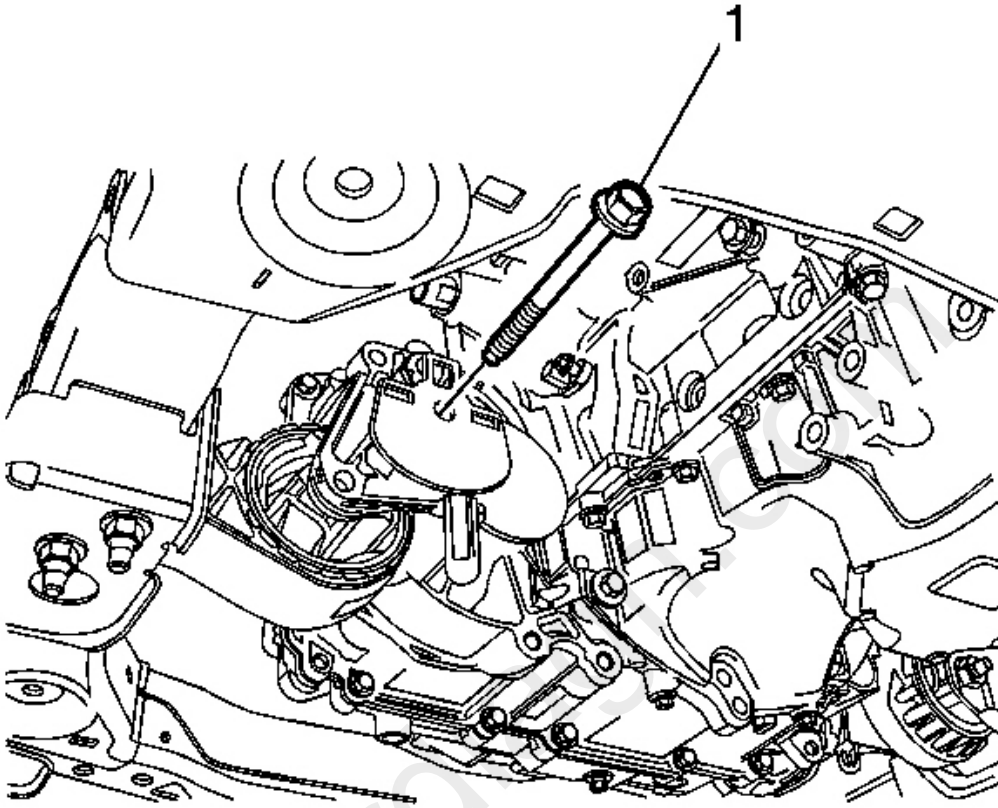


Fig. 25: Locating Rear Transmission Mount Through Bolt
Courtesy of GENERAL MOTORS CORP.

7. Install the rear transmission mount through bolt (1) and tighten to 105 N.m (77 lb ft).

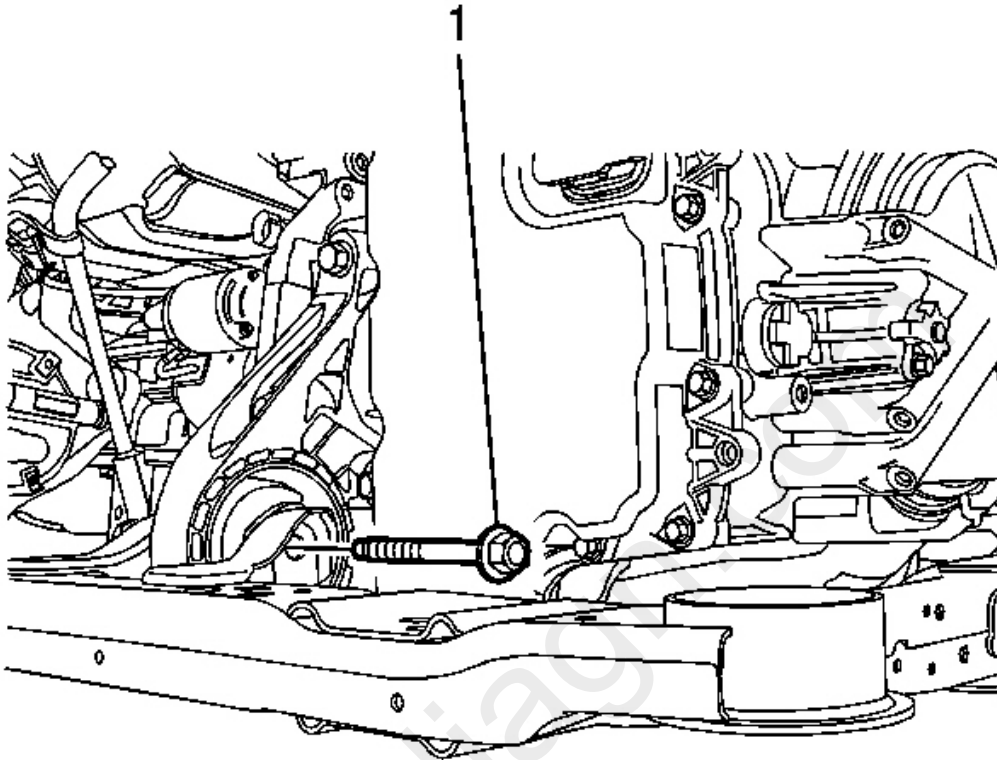


Fig. 2: Identifying Front Transmission Mount Through Bolt
Courtesy of GENERAL MOTORS CORP.

8. Install the front transmission mount through Bolt (1) and tighten to 100 N.m (74 lbf.ft).
9. Lower the vehicle.
10. Remove the engine support fixture.
11. Install the battery box. Refer to **Battery Tray Replacement**.

CONTROL VALVE BODY COVER REPLACEMENT

2010 Cadillac SRX

2010 TRANSMISSION Automatic Transmission - AF40-6 - SRX

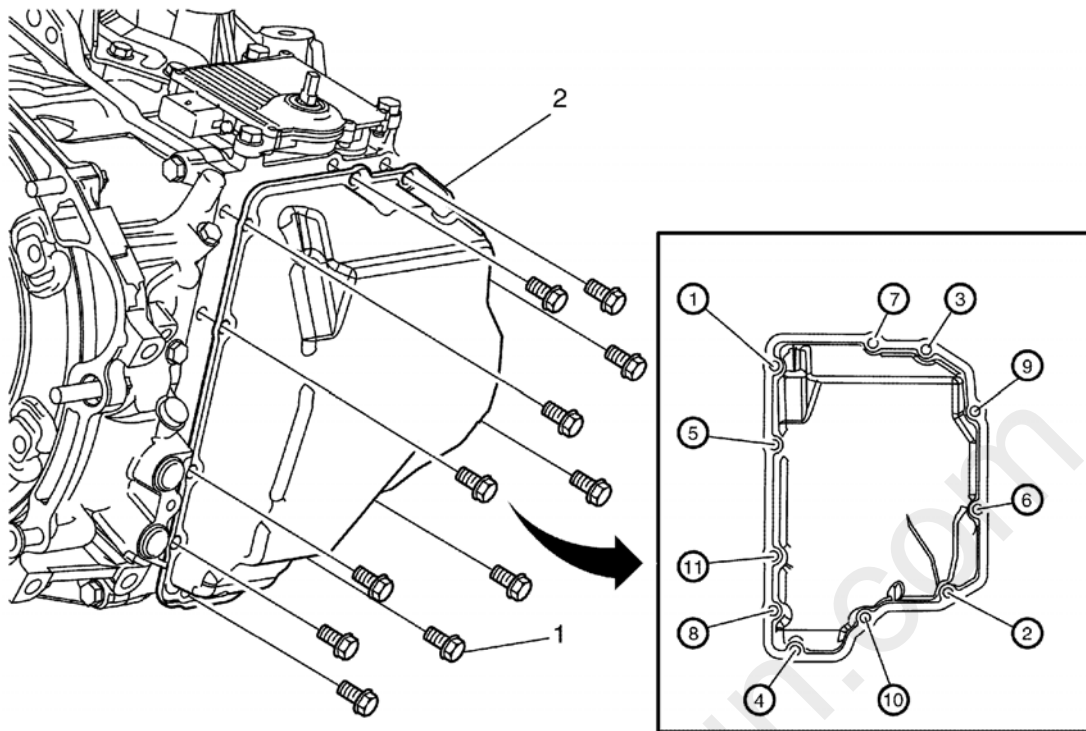


Fig. 2 □ Identifying Control Valve Body Cover & Bolts
Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
Preliminary Procedure	
1. Raise and support the vehicle. Refer to <u>Lifting and Jacking the Vehicle</u> . 2. Remove the left front wheelhouse liner. Refer to <u>Front □ heelhouse Liner Replacement</u> . 3. Remove the transaxle oil cooler lines and seals from the transaxle. Refer to <u>Transmission Fluid Cooler Hose Replacement</u>.	
1	Control □alve □ody □astener (□ty□□1) CAUTION: Refer to <u>Fastener Caution</u> . Procedure 1. □nstall the control valve □ody cover □olts hand tight. Use locking agent on □LL □olts. Refer to <u>Adhesives□Fluids□Lubricants□and Sealers</u> . 2. □ighten the control valve □ody cover □olts in the se□uence shown. Tighten: 13 □.m (10 l□ft)
	Control □alve □ody Cover

Procedure

2

1. Install a 3 mm (0.125 in) O-ring sealer on to the control valve body cover.
2. Clean any gasket material from the control valve body cover and inspect the gasket mounting surface.
3. Check the transaxle fluid level. Refer to **Transmission Fluid Level and Condition Check**.

Tip: Do not pry with a tool on the transaxle control valve body cover case or sealing surfaces.

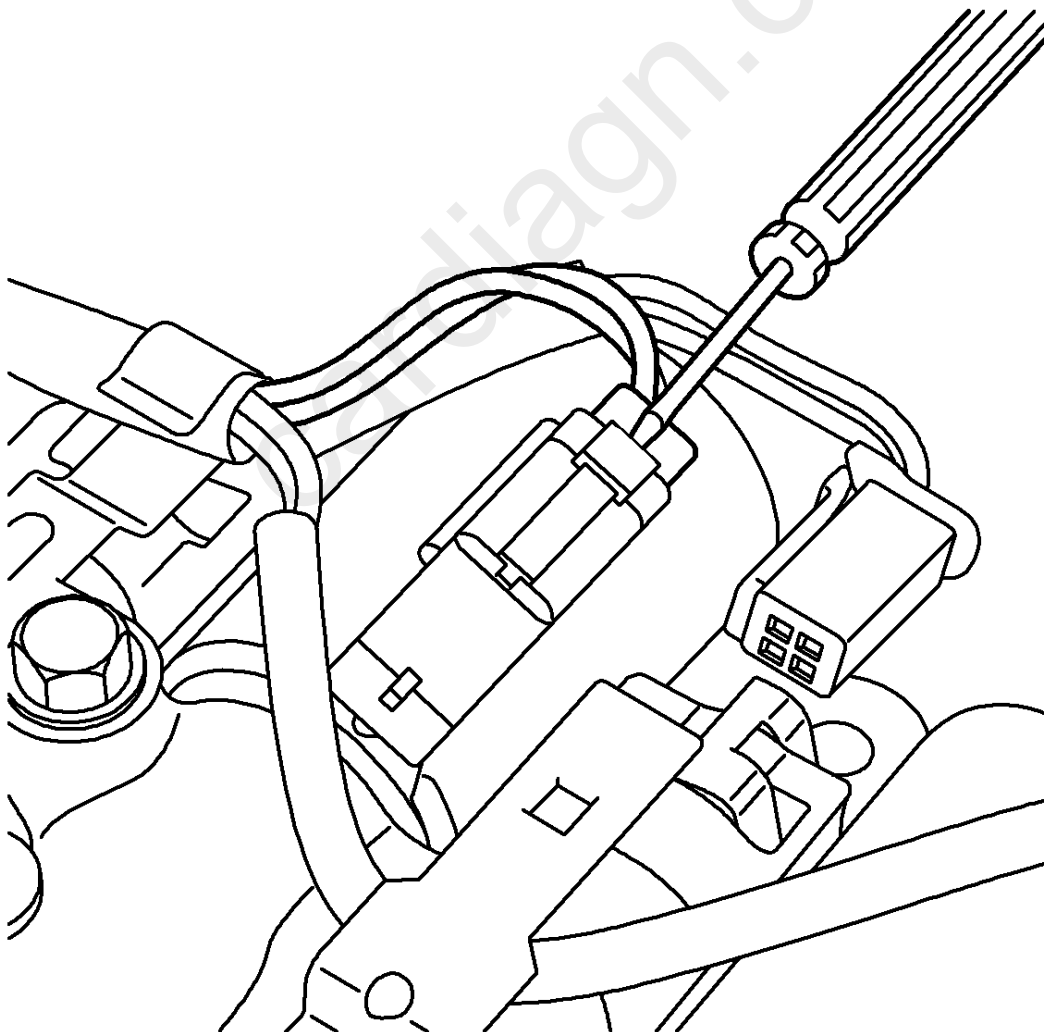
CONTROL VALVE BODY REPLACEMENT**Removal Procedure**

Fig. 2: View Of Control Valve Body Cover

Courtesy of GENERAL MOTORS CORP.

1. Remove control valve body cover. Refer to Control Valve Body Cover Replacement.

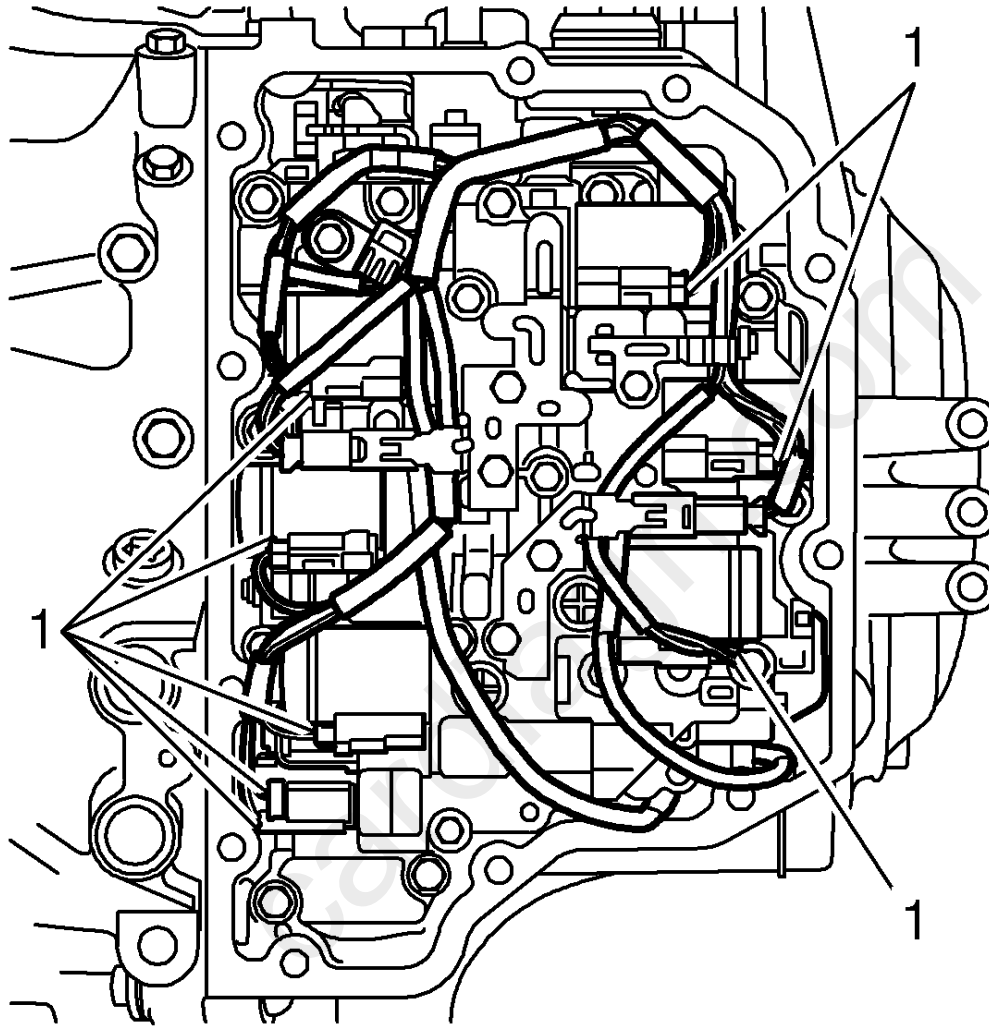


Fig. 2: Identifying Solenoid Valves Wiring Harness
Courtesy of GENERAL MOTORS CORP.

2. Detach the wiring harness for the solenoid valves. (The illustration shows how to use a screwdriver for detaching the different connectors.)
 1. Detach 8 connectors from the solenoid valves (1).

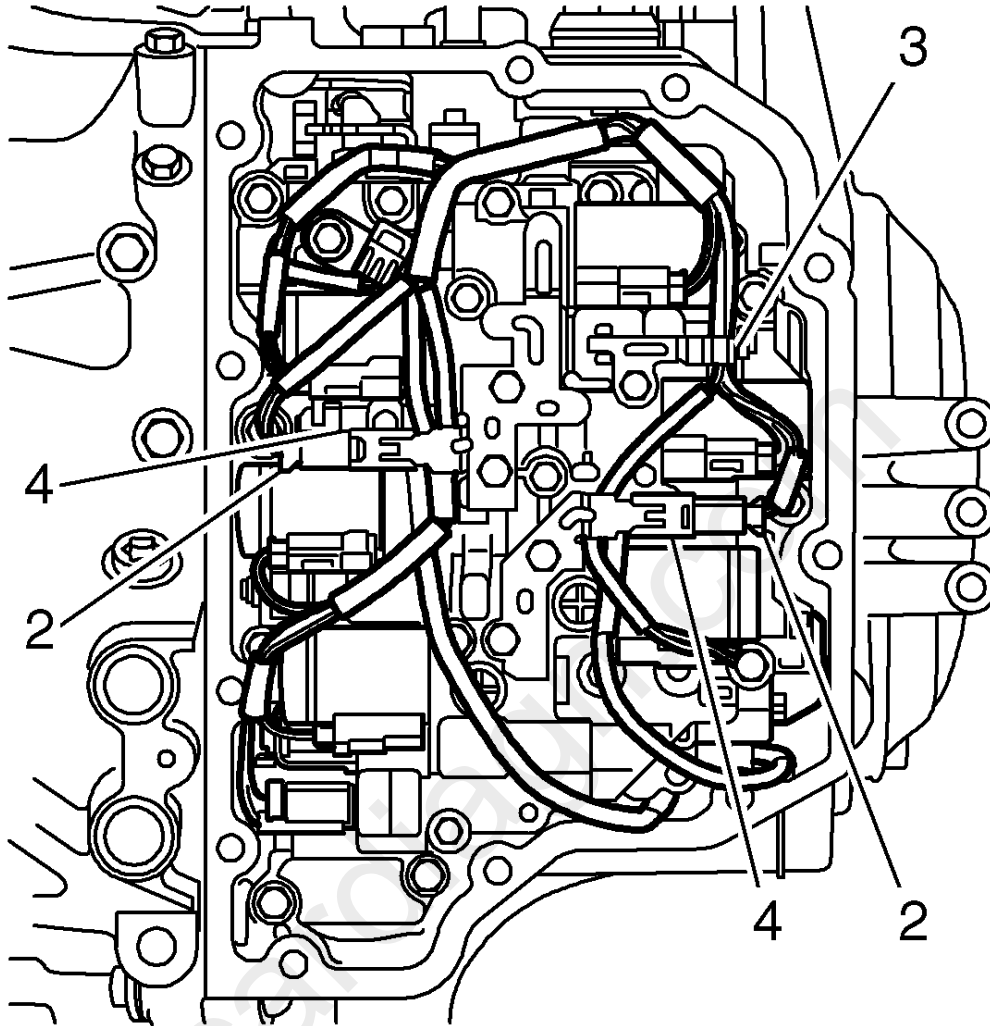


Fig. 3 □ Locating Engine Speed Sensors
Courtesy of GENERAL MOTORS CORP.

2. Unplug the 2 connectors from the engine speed sensors (2).
 3. Remove the wiring harness from the 2 retaining clips (3).
 3. Unplug the engine speed sensor connectors.
- etach the connectors from the two mountings (4).

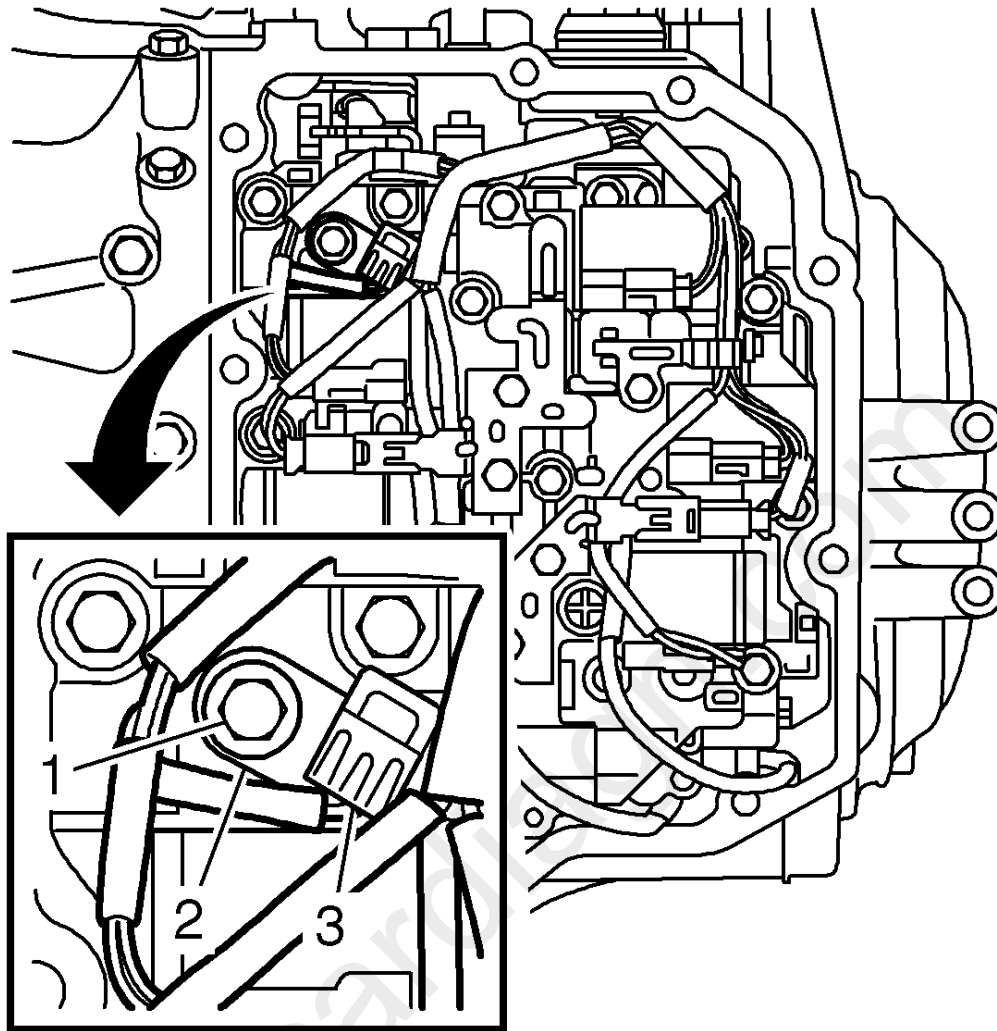


Fig. 31: Identifying Temperature Sensor
Courtesy of GENERAL MOTORS CORP.

4. Remove the temperature sensor.
 1. Remove the screw (1).
 2. Lift away the attaching plate (2).
 3. Remove the temperature sensor (3).
5. Move the wiring harness for the solenoid valves and the wiring harness for the engine speed sensors aside.

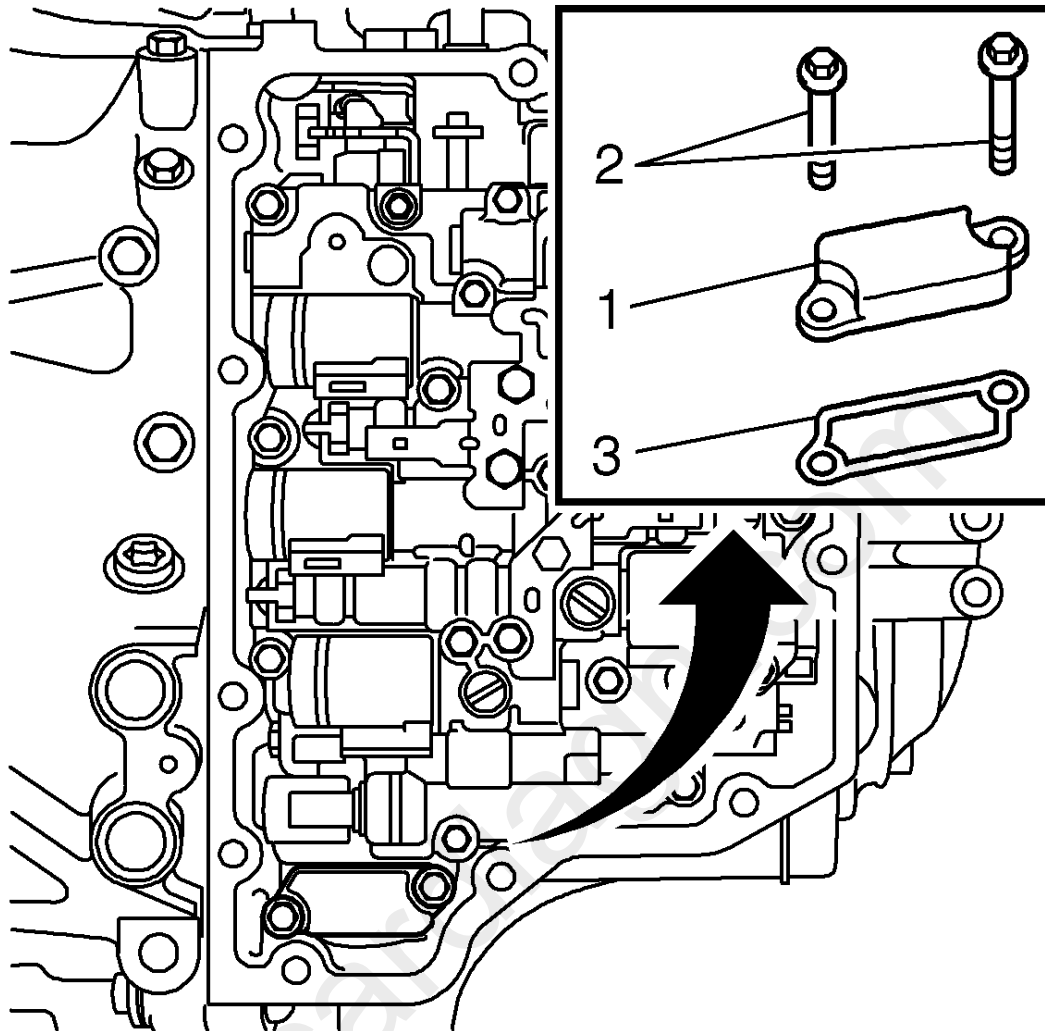


Fig. 32: Identifying Cover Gasket & Screws
Courtesy of GENERAL MOTORS CORP.

6. Remove the cover (1).
 1. Remove the screws (2).
 2. Remove the gasket (3).

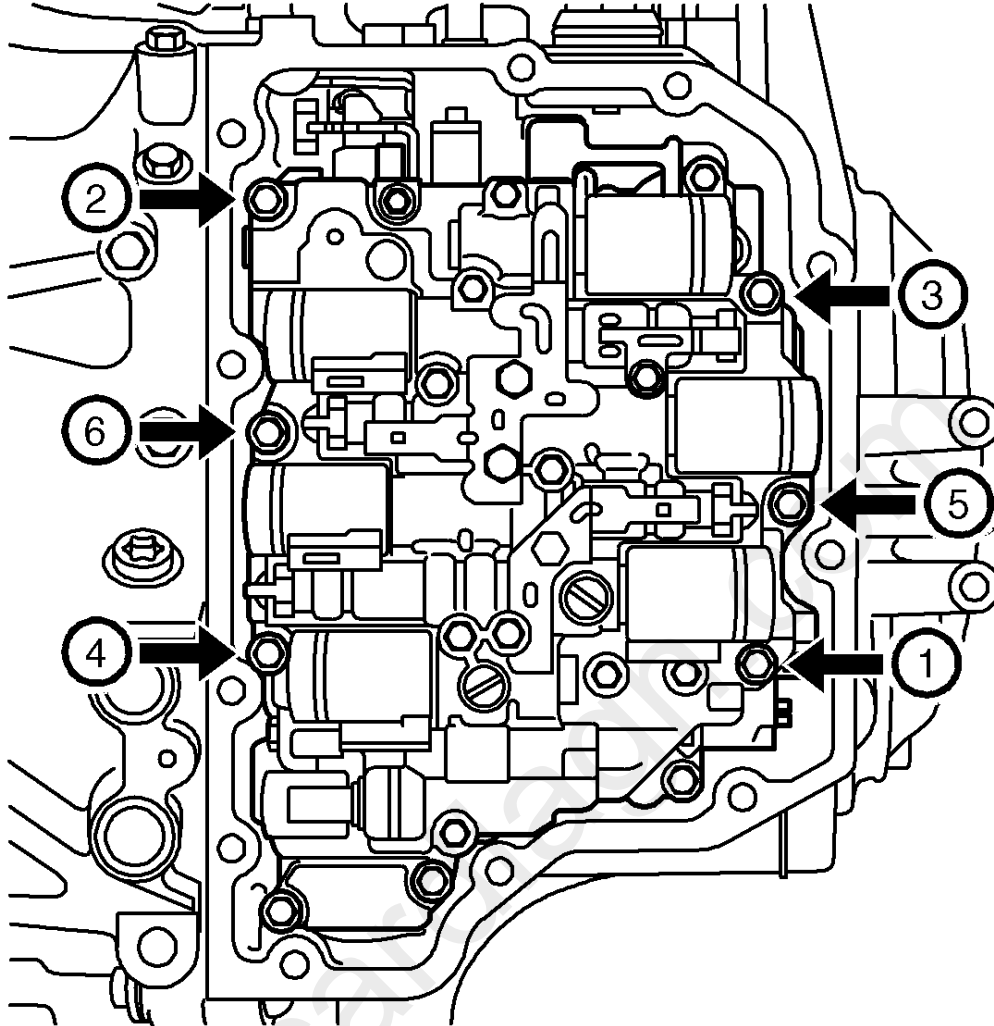


Fig. 33: Identifying Valve Housing Bolt Loosening Sequence
Courtesy of GENERAL MOTORS CORP.

7. Remove the valve housing.
 1. Undo the fasteners in the specified order.
 2. Remove the fasteners.
8. Lower the car to the floor.

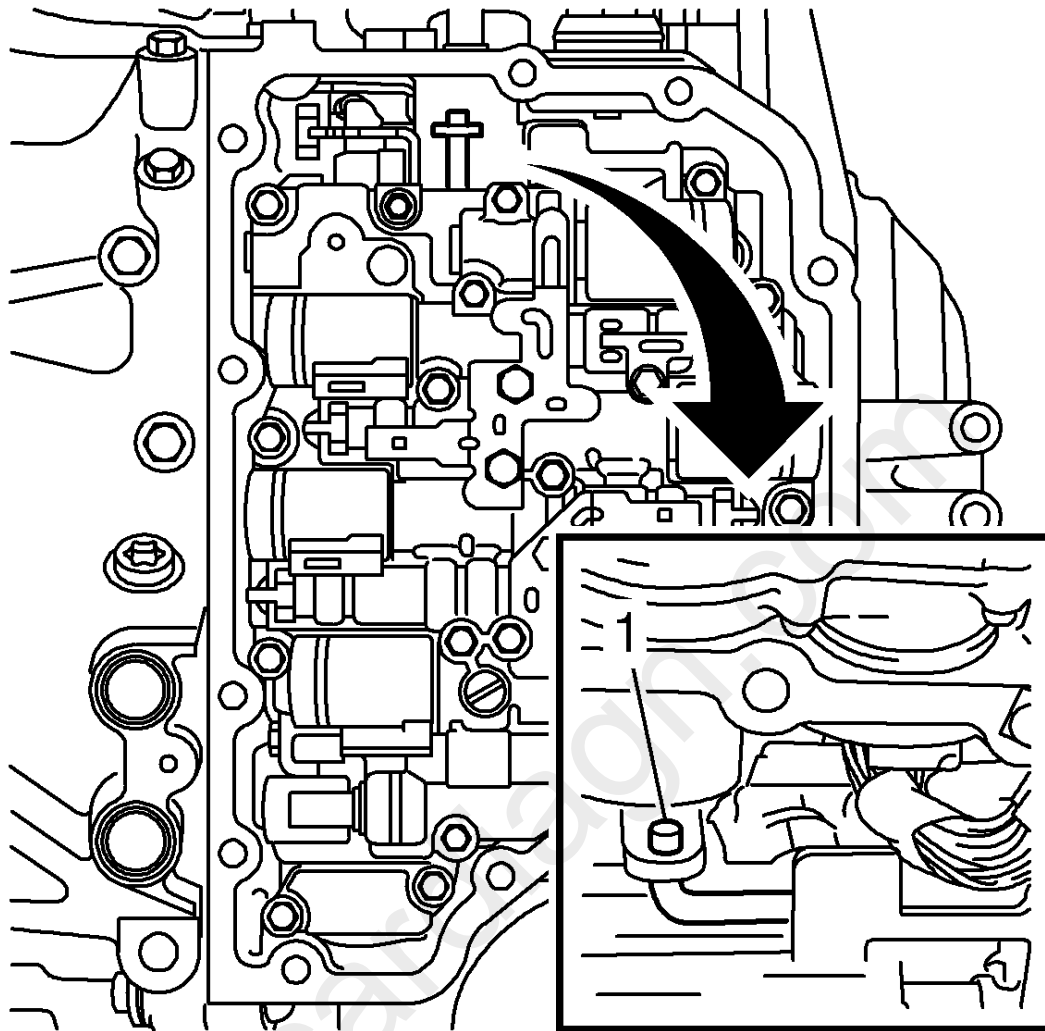


Fig. 34: Identifying Clutch Rod
Courtesy of GENERAL MOTORS CORP.

9. Unhook the clutch rod (1).

NOT: The ducts are filled with oil.

10. Carefully lift the valve housing upwards.

Installation Procedure

1. Clean the sealing surfaces.

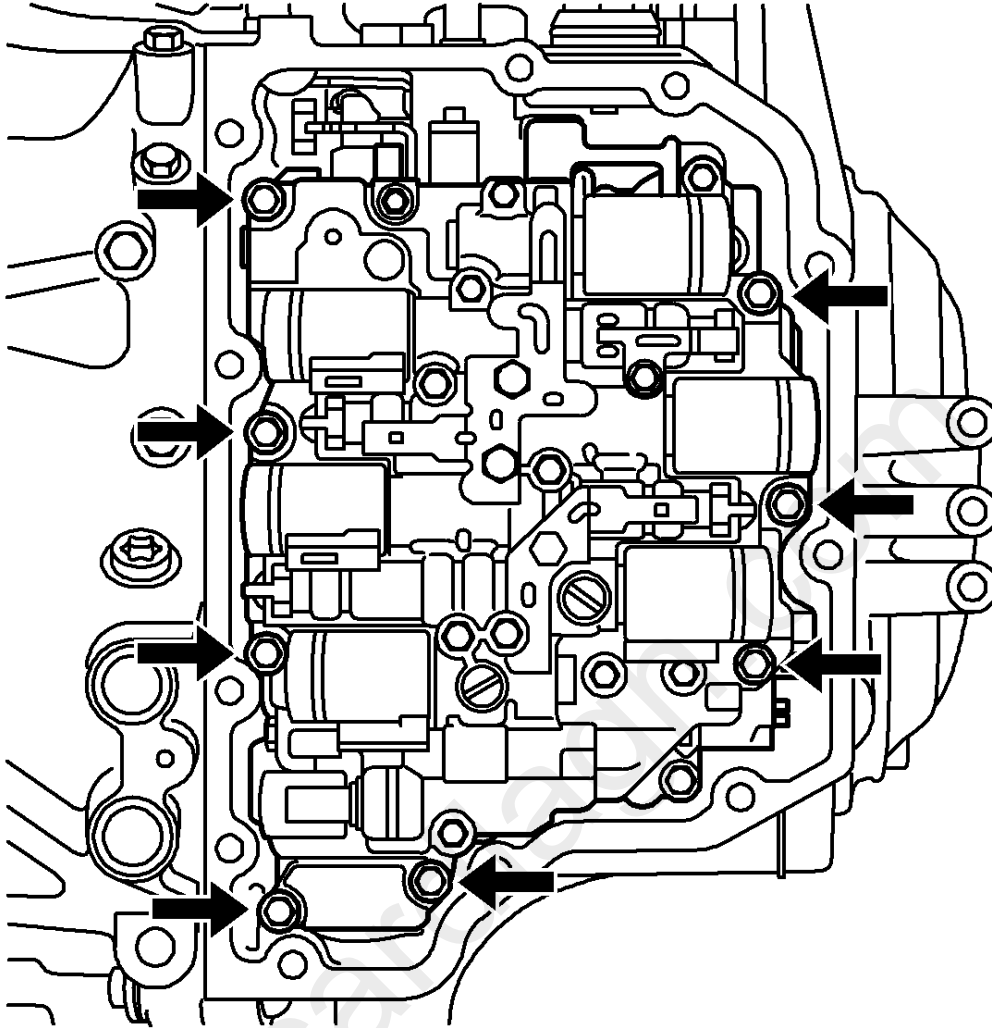


Fig. 35: Identifying Valve Housing Bolts
Courtesy of GENERAL MOTORS CORP.

2. Clean the threads (arrows).

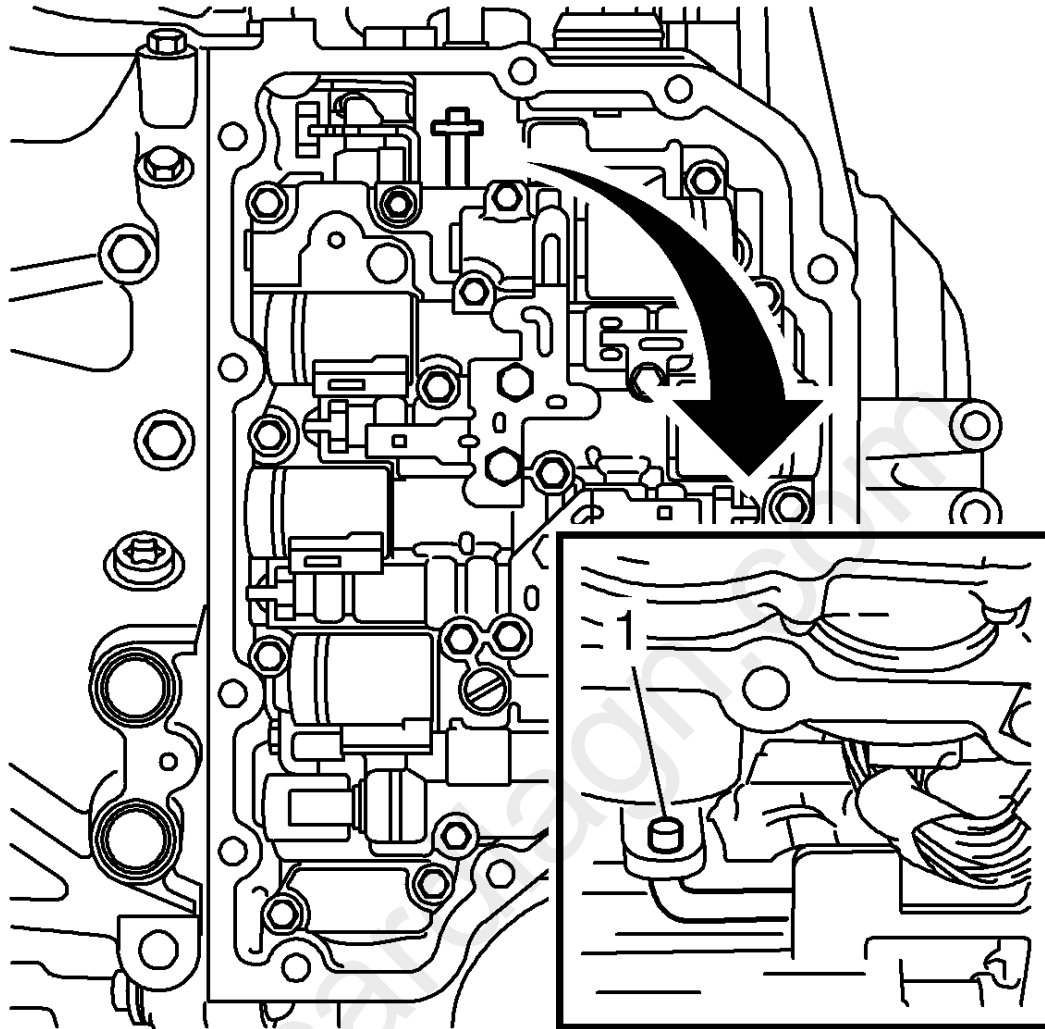


Fig. 3 □ Identifying Clutch □ Rod
Courtesy of GENERAL MOTORS CORP.

3. Install the valve housing.
 1. Hook in the clutch rod (1).
 2. Install □ fasteners.
4. Raise and support the vehicle. Refer to Lifting and □acking t□e Ve□icle .

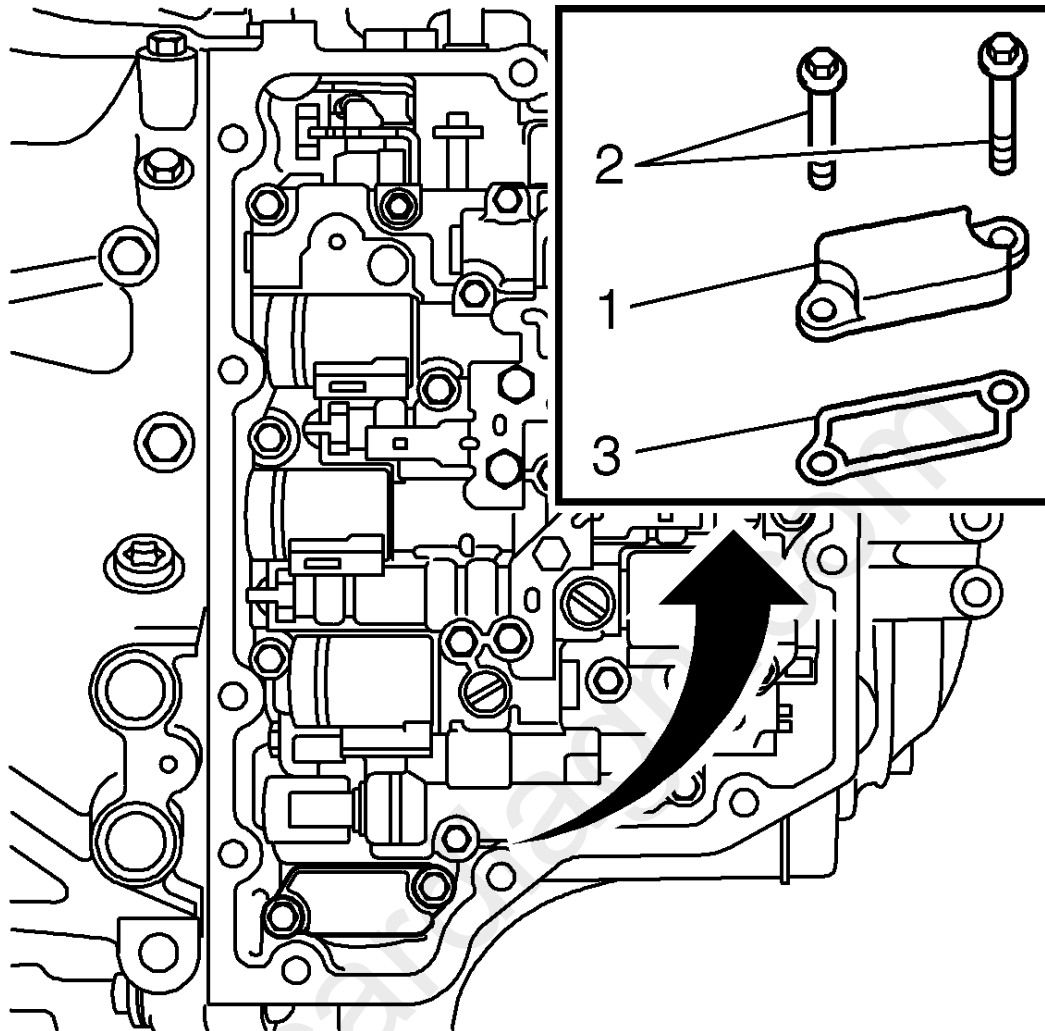


Fig. 3 □ Identifying Cover Gasket & Screws
Courtesy of GENERAL MOTORS CORP.

5. Install the cover.
 1. Install a new gasket (3).
 2. Install the cover (1).
 3. Install two screws (2).

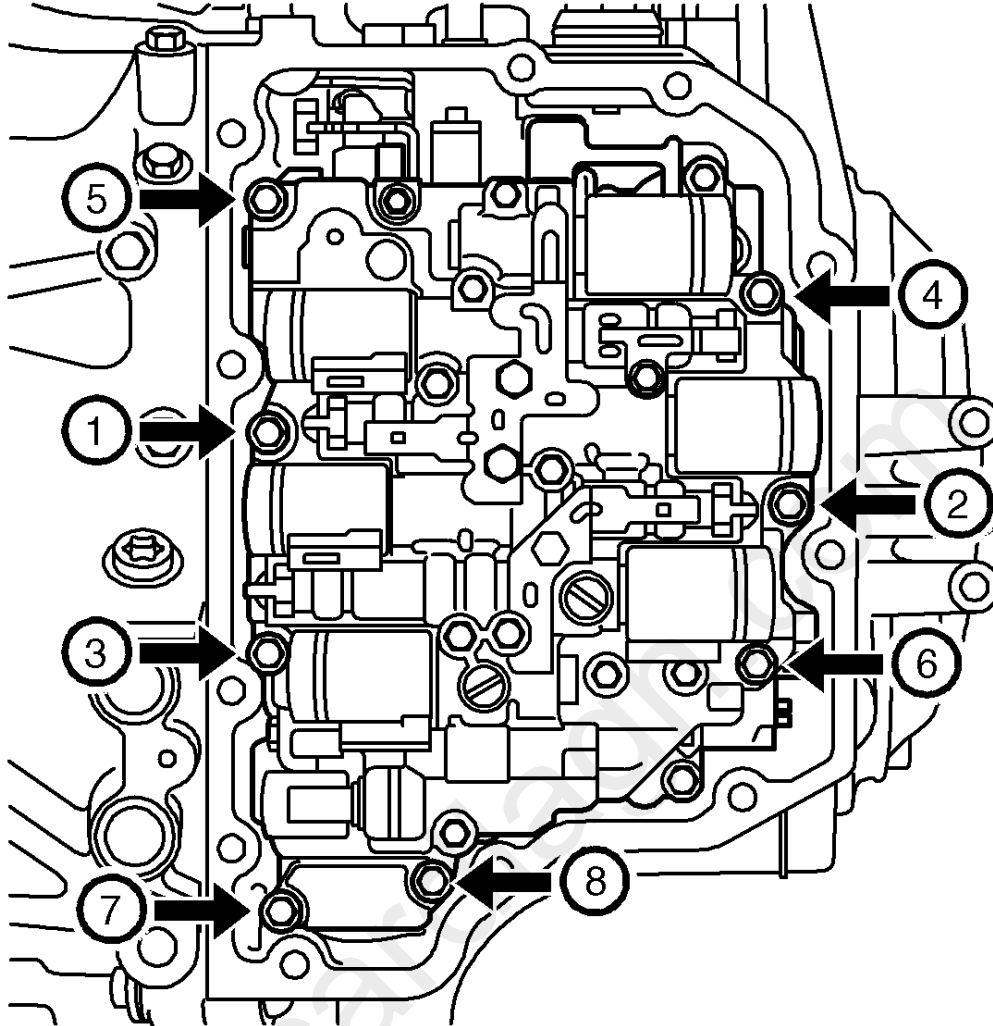


Fig. 3: Identifying Valve Housing Bolt Tightening Sequence
Courtesy of GENERAL MOTORS CORP.

- Finish fitting the valve housing.

CAUTION: Refer to Fastener Caution .

- Tighten the 8 fasteners (arrows) in the specified order.

Tighten: 1□□.m (88 lb in)

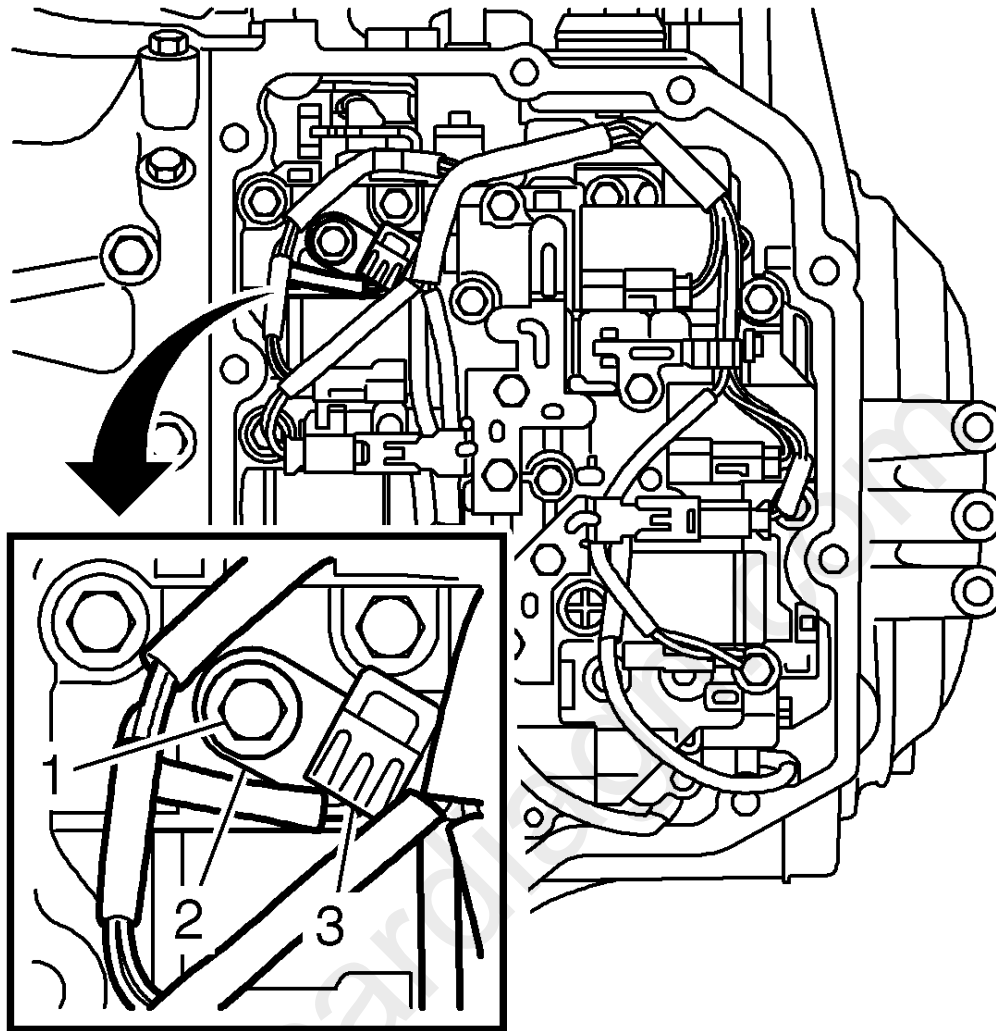


Fig. 3 □ Identifying Temperature Sensor
 Courtesy of GENERAL MOTORS CORP.

8. Install the temperature sensor (3).
 1. □ oisten the temperature sensor □-ring with gearbo□oil.
 2. Install the attaching plate (2).
 3. □ ighten the fastener (1).

Tig□ten: 1 □ □.m (88 lb in)

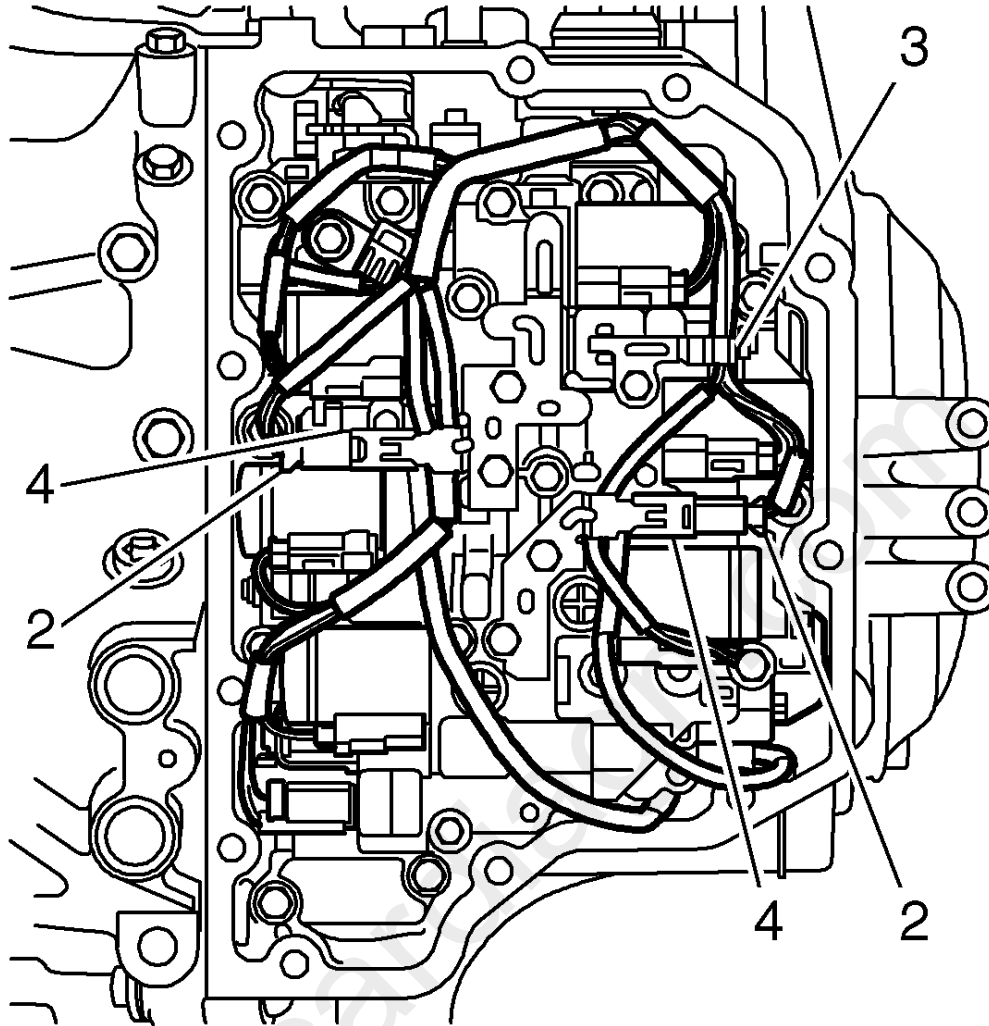


Fig. 4 Locating Engine Speed Sensors
Courtesy of GENERAL MOTORS CORP.

- ☐ Plug in the engine speed sensor connectors.
- ☐ Attach the connectors to the two mountings (4).
- 1 ☐ Plug in the connector for the solenoid valves.
 - 1. ☐ Secure the wiring harness in the 2 retaining clips (3).
 - 2. Plug in the 2 connectors for the engine speed sensors (2).

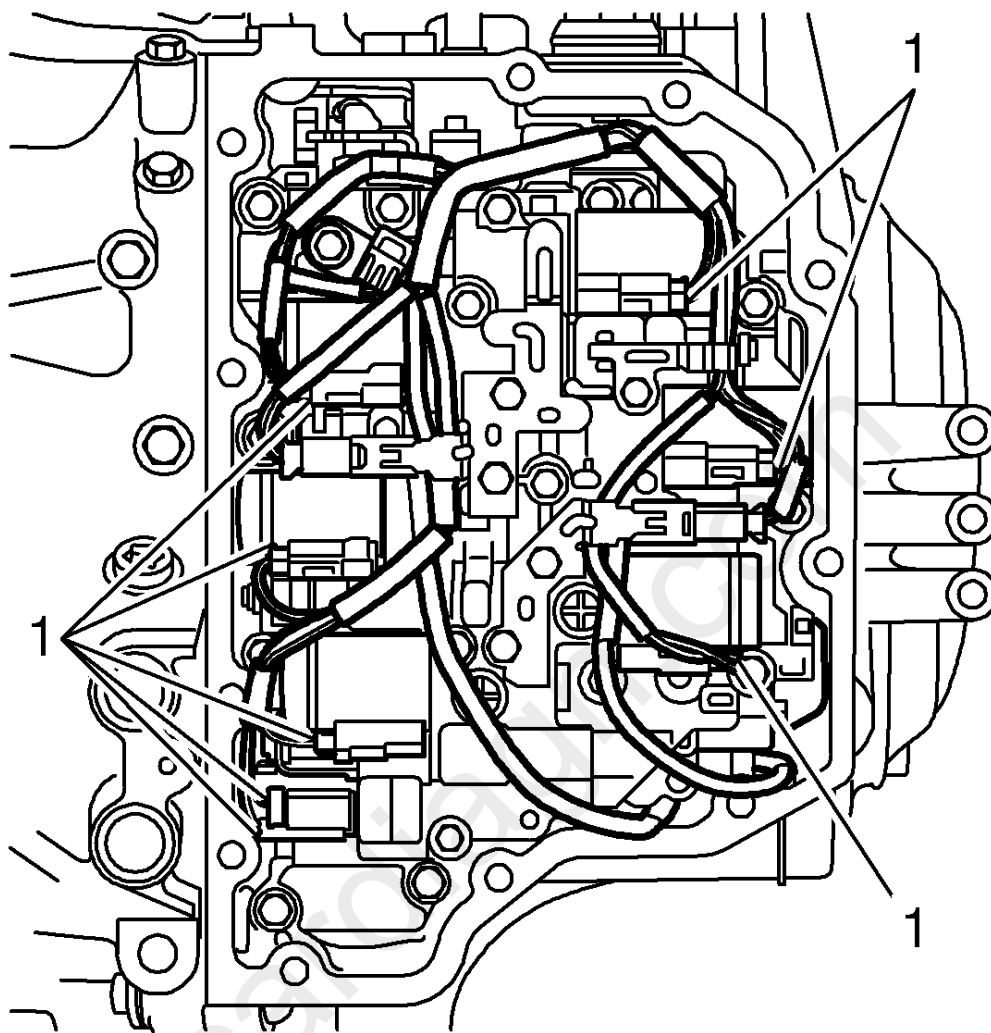


Fig. 41: Identifying Solenoid Valves Wiring Harness

Courtesy of GENERAL MOTORS CORP.

3. Plug in the 8 connectors for the solenoid valves (1).
11. Install control valve body. Refer to **Control Valve Body Cover Replacement**.
12. Lower the vehicle.

TRANSMISSION FLUID COOLER HOSE/PIPE QUICK-CONNECT FITTING DISCONNECTION AND CONNECTION

Removal Procedure

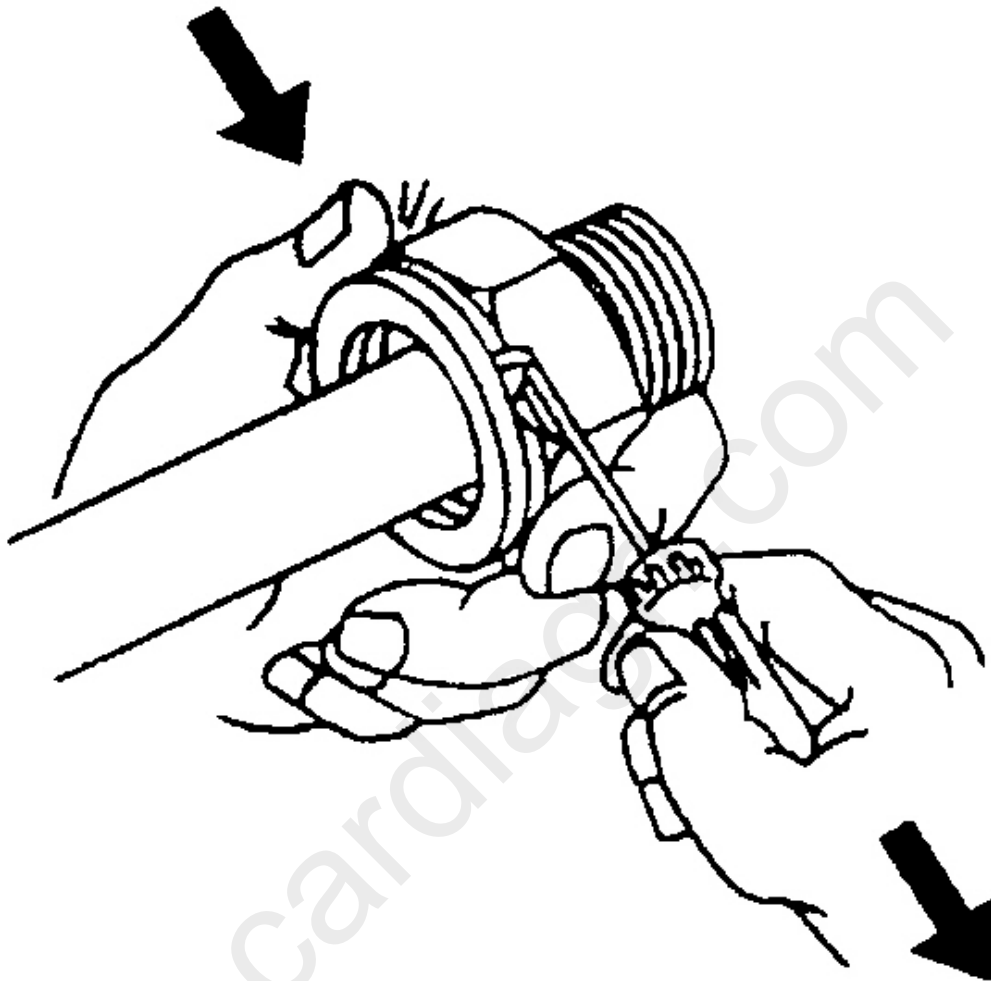


Fig. 42: Identifying Retaining Ring On Quick Connect Fitting
Courtesy of GENERAL MOTORS CORP.

NOTE: Perform the following procedure when removing the retaining rings and cooler lines from the quick connect fittings located on the radiator and/or the transmission.

1. Pull the plastic cap back from the quick connect fitting and down along the cooler line about 5 cm (2 in).
2. Using a bent-tip screwdriver, pull on one of the open ends of the retaining ring in order to rotate the retaining ring around the quick connect fitting until the retaining ring is out of position and can be completely removed.
3. Remove the retaining ring from the quick connect fitting.

4. Discard the retaining ring.

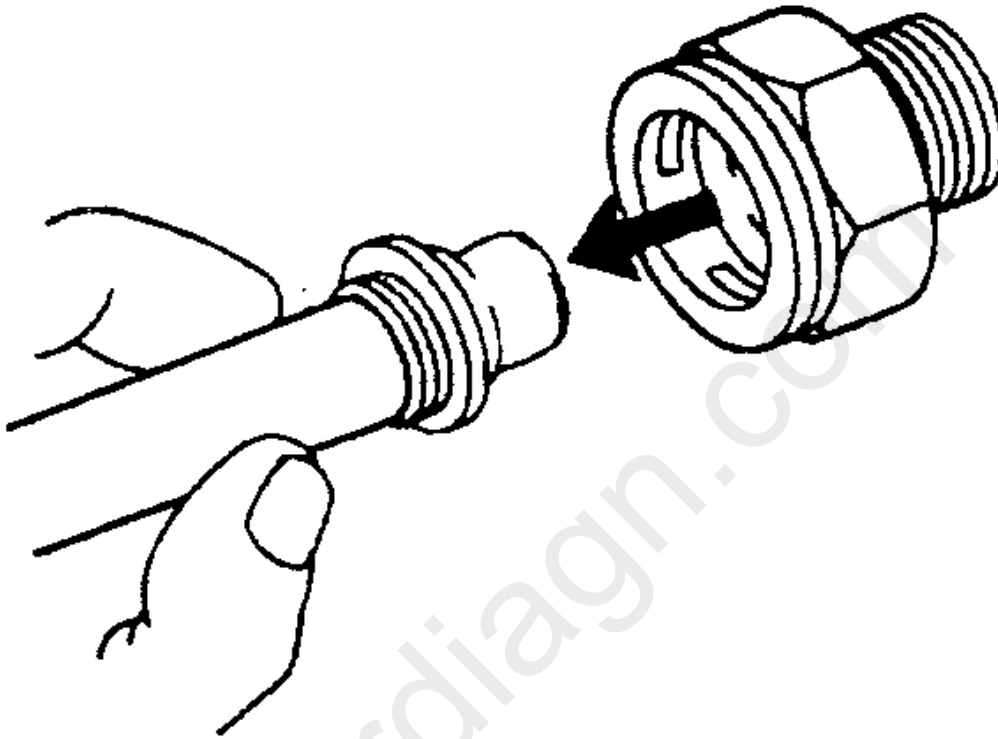


Fig. 43: Identifying Cooler Line & Quick Connect Fitting
Courtesy of GENERAL MOTORS CORP.

5. Pull the cooler line straight out from the quick connect fitting.

Installation Procedure

NOTE:

- Do not reuse any of the existing oil lines or oil line fittings if there is excessive corrosion.
- Do not reuse any of the existing retaining rings that were removed from the existing quick connect fittings. Install new retaining rings.
- Ensure the following procedures are performed when installing the new retaining rings onto the fittings.

1. Install a new retaining ring into the quick connect fitting using the following procedure:

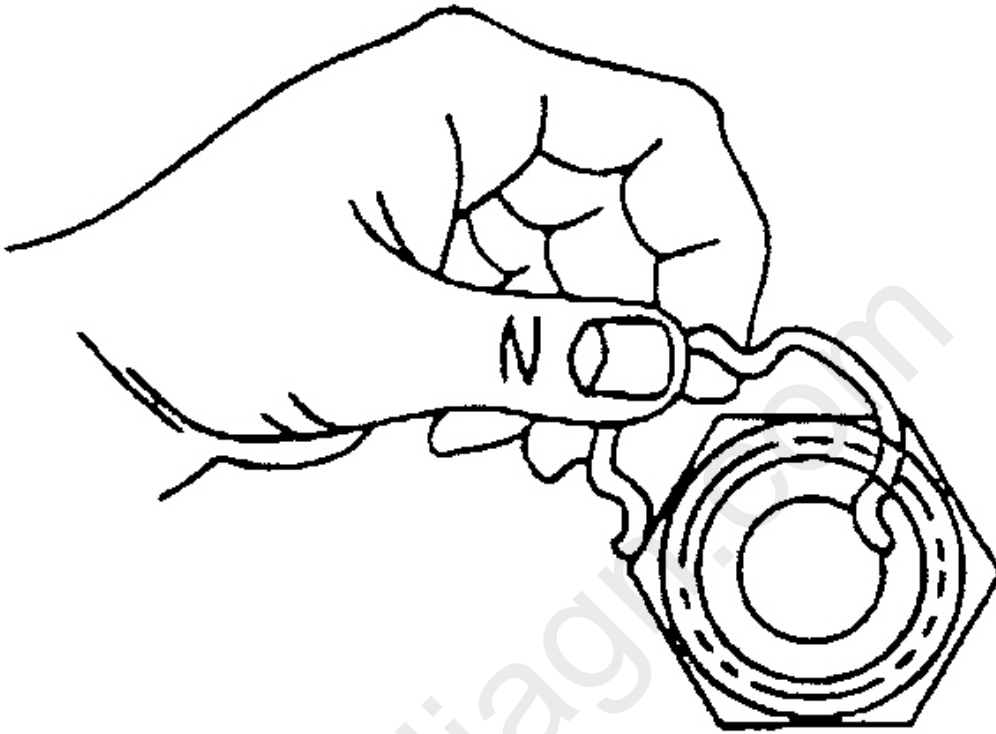


Fig. 44: Identifying Retaining Ring & Quick Connect Fitting
Courtesy of GENERAL MOTORS CORP.

2. Hook one of the open ends of the retaining ring in one of the slots in the quick connect fitting.

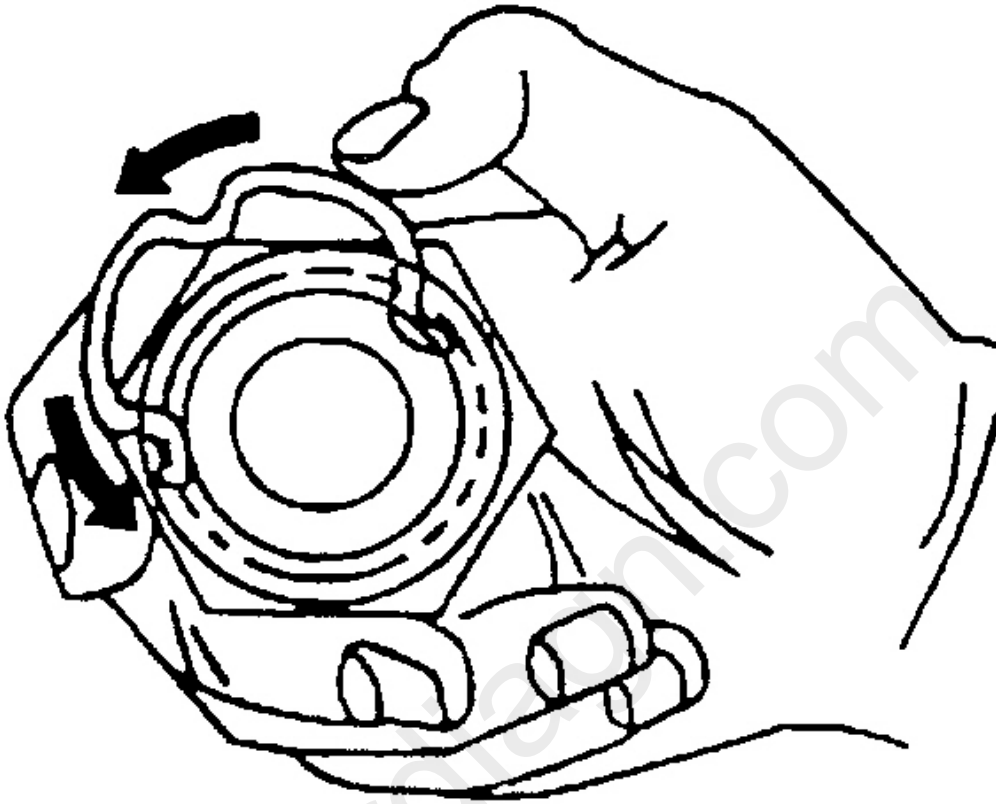


Fig. 45: Rotating Retaining Ring Around Fitting
Courtesy of GENERAL MOTORS CORP.

3. Rotate the retaining ring around the fitting until the retaining ring is positioned with all three ears through the three slots on the fitting.

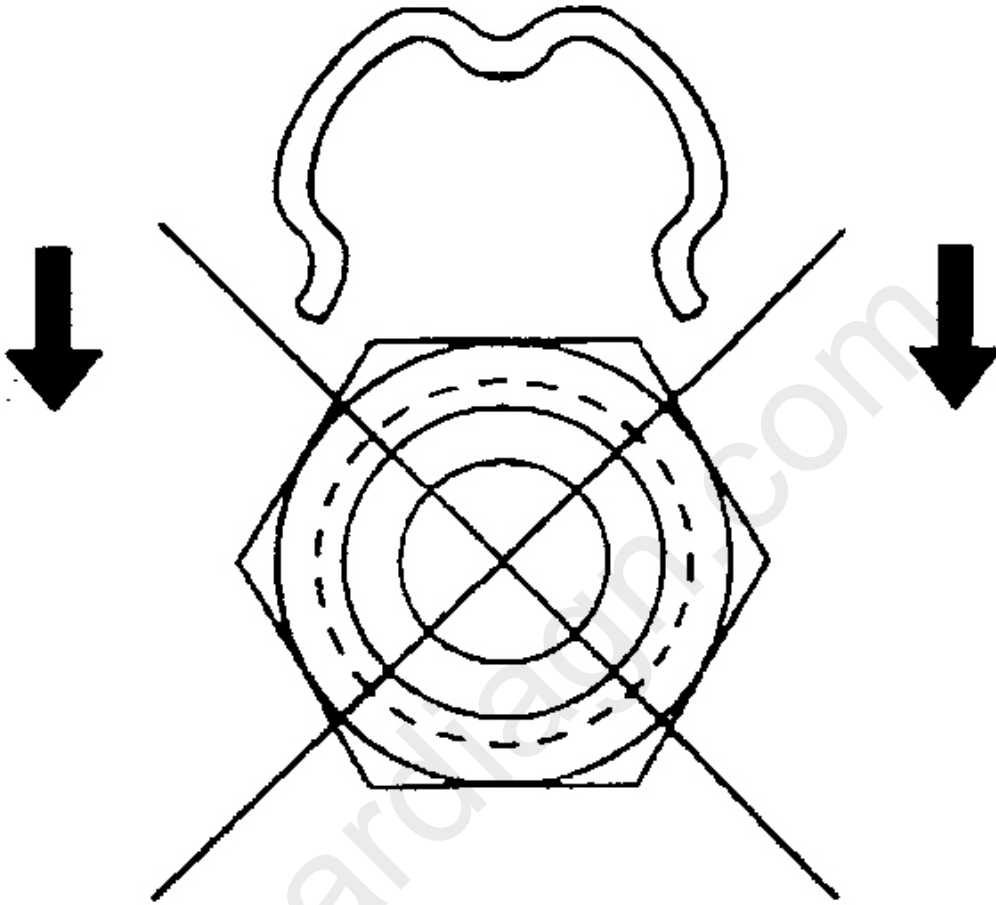


Fig. 46: Identifying Improper Engine Oil Cooler Hose/Pipe Retaining Ring Installation
Courtesy of GENERAL MOTORS CORP.

4. Do not install the new retaining ring onto the fitting by pushing the retaining ring.

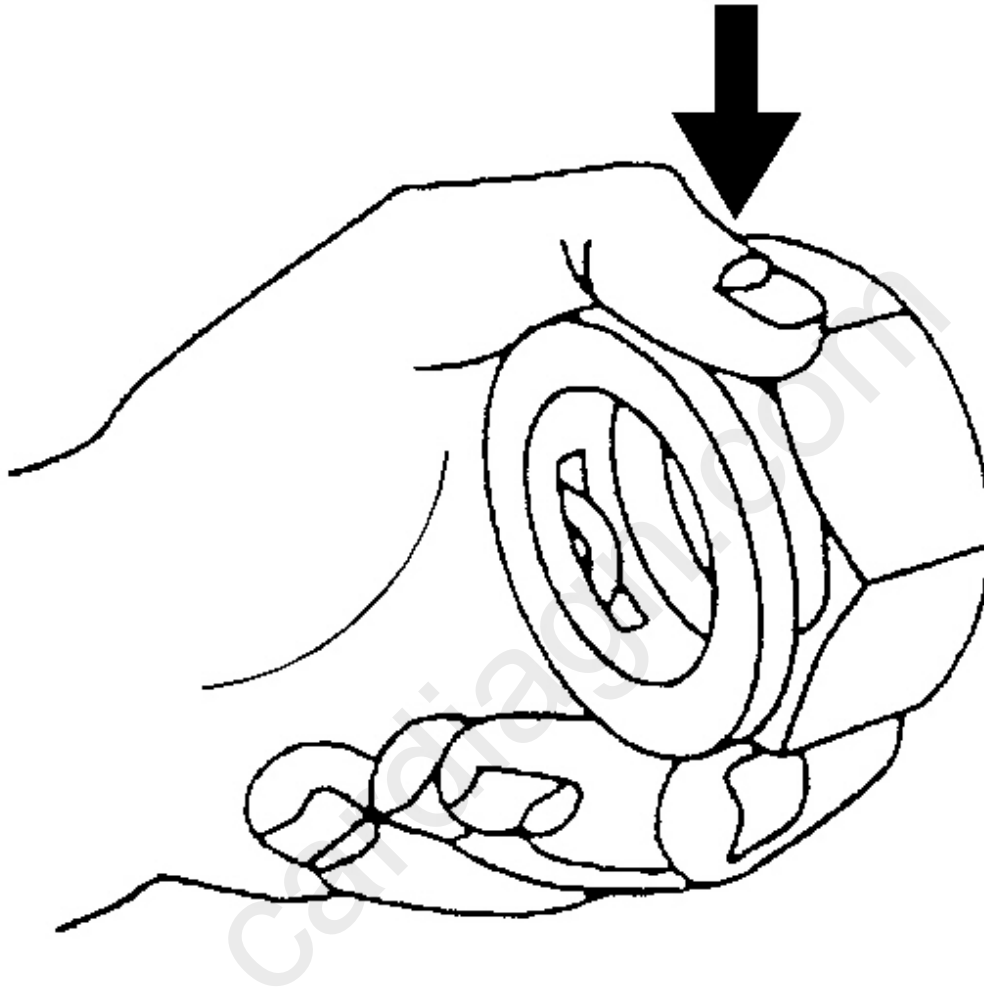


Fig. 47: Ensuring Retaining Ring Is Seated Correctly
Courtesy of GENERAL MOTORS CORP.

5. Ensure that the three retaining ring ears are seen from inside the fitting and that the retaining ring moves freely in the fitting slots.

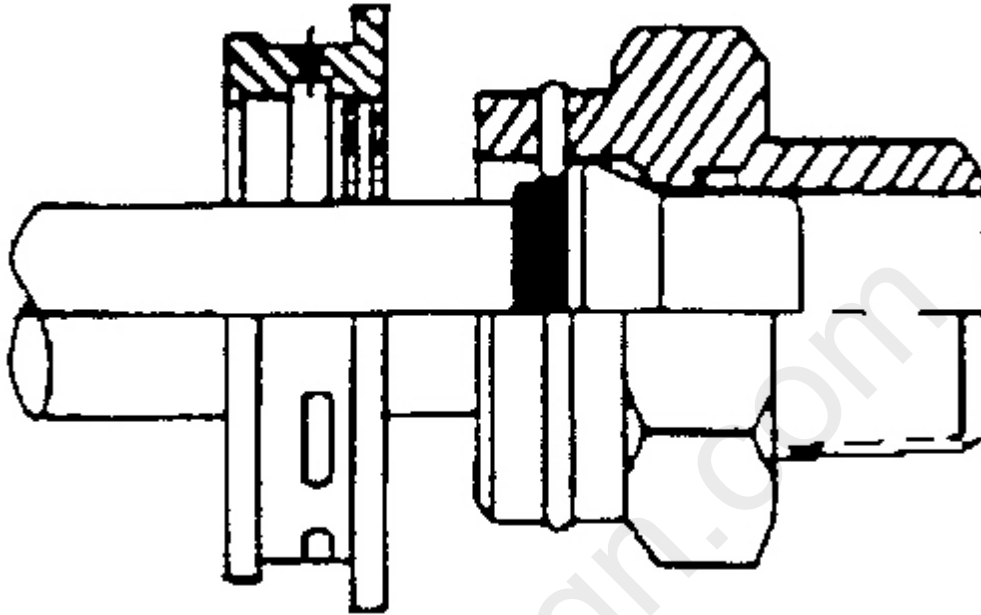


Fig. 4□: View Of Cooler Line Quick Connect Fitting
Courtesy of GENERAL MOTORS CORP.

6. Install the cooler line into the quick connect fitting.
 - Insert the cooler line end into the quick connect fitting until a click is either heard or felt.

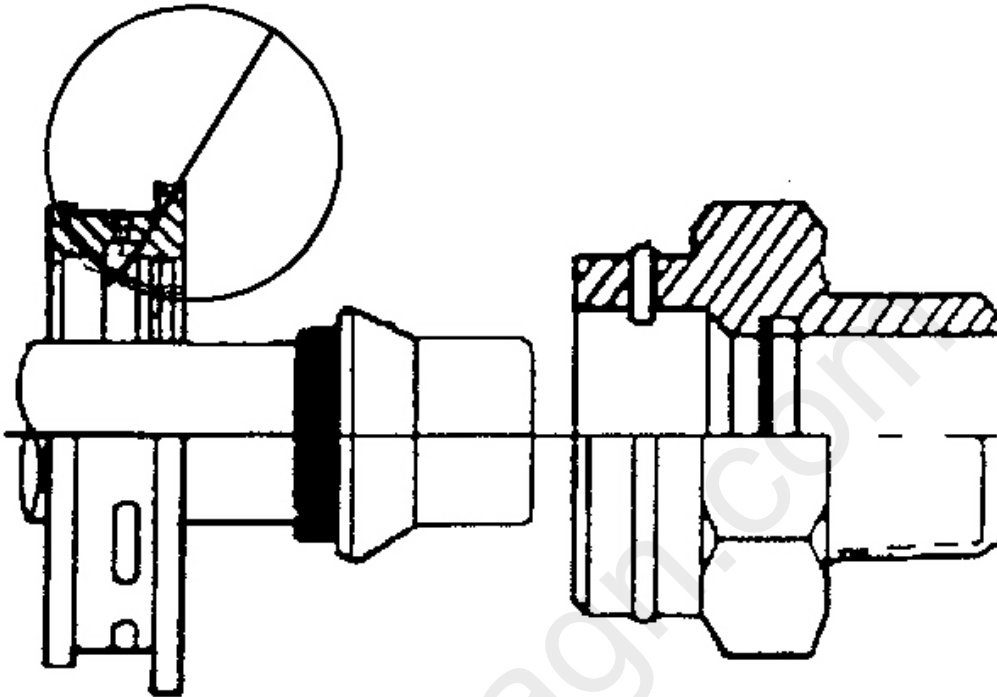


Fig. 4 View Of Plastic Cap IMPROPERLY USED On Cooler Line
Courtesy of GENERAL MOTORS CORP.

8. Do not use the plastic cap on the cooler line in order to install the cooler line into the fitting.
 - ☐ Pull back sharply on the cooler line in order to ensure that the cooler line is fastened into the quick connect fitting.

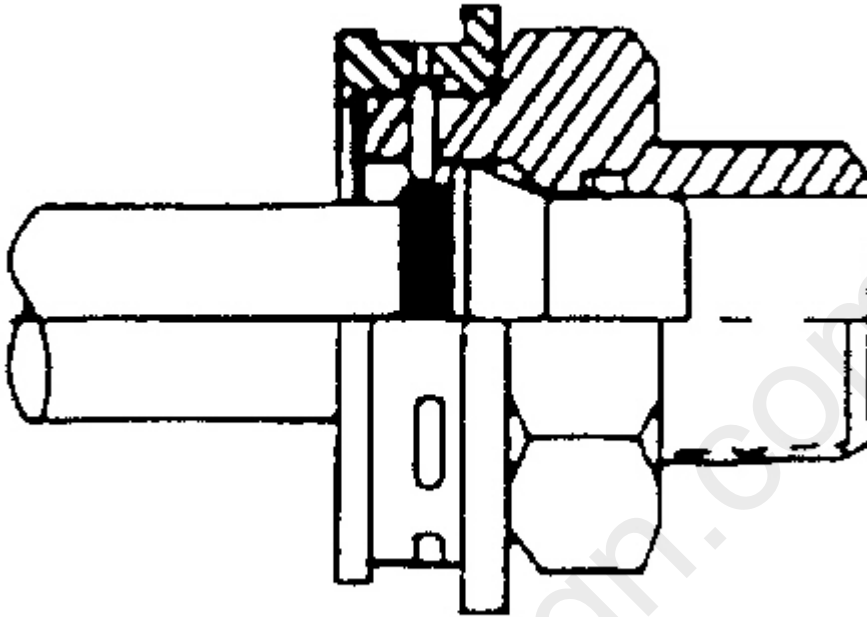


Fig. 5□ View Of Cooler Line & Plastic Cap
Courtesy of GENERAL MOTORS CORP.

IMPORTANT: Do not manually depress the retaining clip when installing the plastic cap.

- 1□ □osition (snap) the plastic cap onto the fitting. Do not manually depress the retaining ring when installing the plastic cap onto the quick connect fitting.
11. Ensure that the plastic cap is fully seated against the fitting.

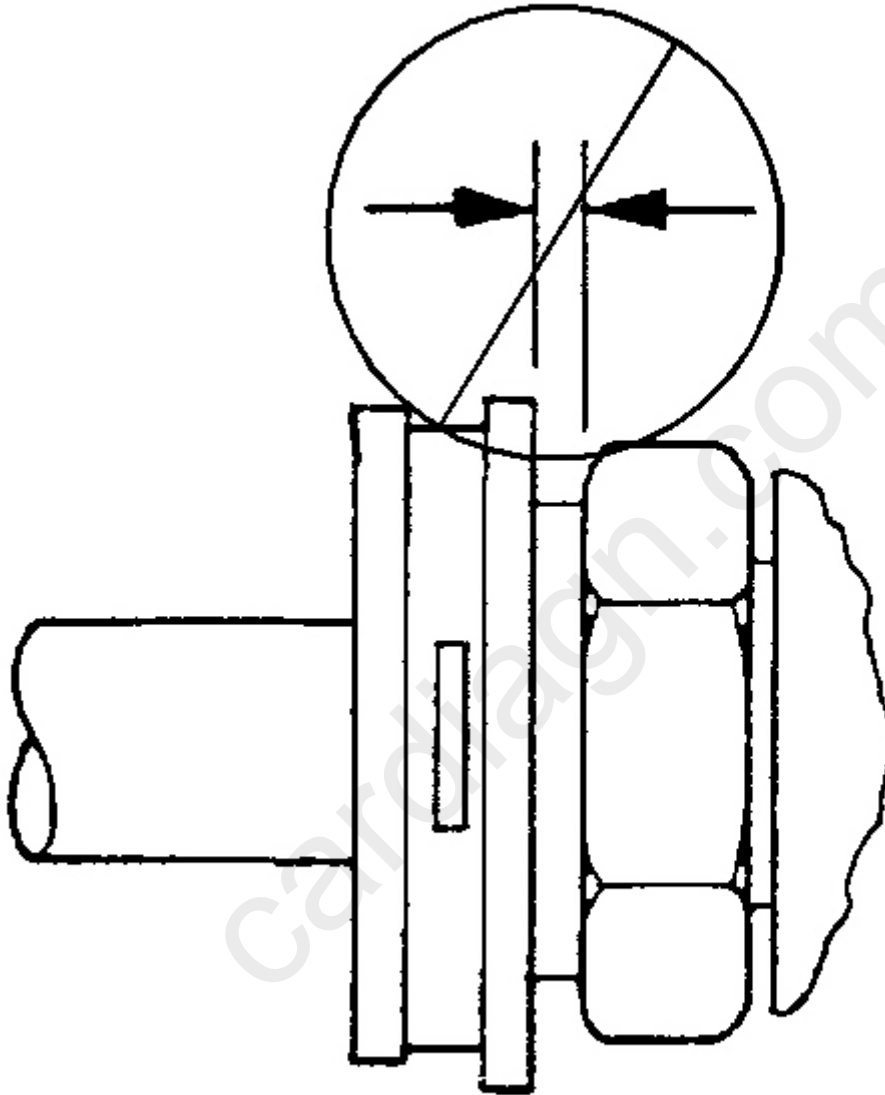


Fig. 51: Checking For Gap Between Cap & Fitting
Courtesy of GENERAL MOTORS CORP.

12. Ensure that no gap is present between the cap and the fitting.

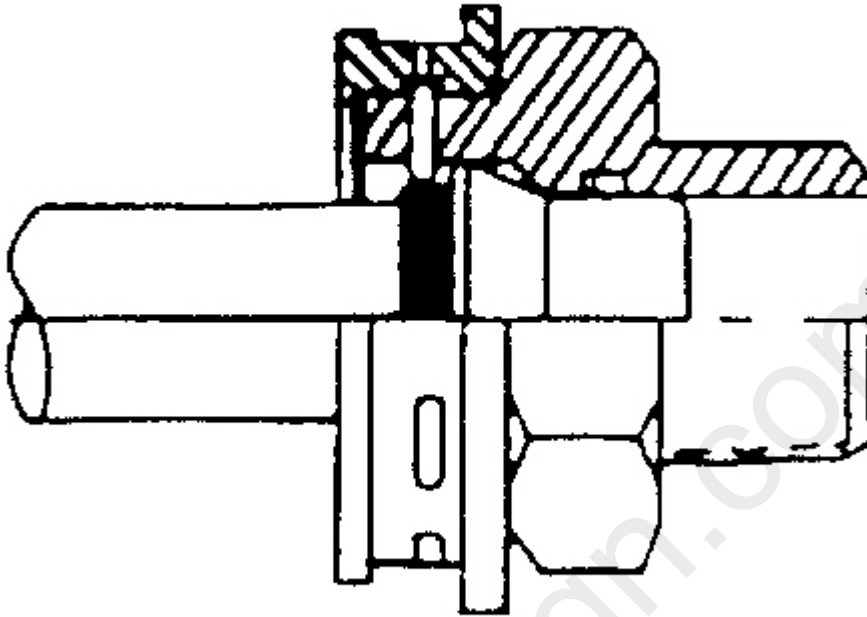


Fig. 52: View Of Cooler Line & Plastic Cap
Courtesy of GENERAL MOTORS CORP.

13. Ensure that the yellow identification band on the tube is hidden within the quick connect fitting.

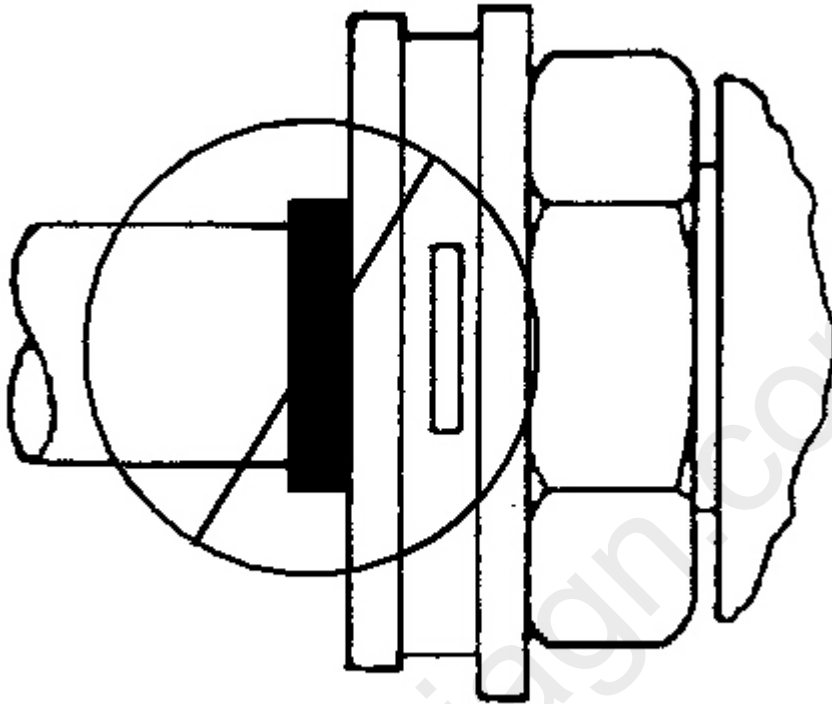


Fig. 53: Identifying Improper Joint Seating
Courtesy of GENERAL MOTORS CORP.

14. A hidden yellow identification band indicates proper joint seating.
15. Fill the transmission to the proper level. Refer to **Adhesives, Fluids, Lubricants, and Sealers** and **Transmission Fluid Level and Condition Check** .

TRANSMISSION FLUID COOLER PIPE CONNECTOR REPLACEMENT - RADIATOR

Removal Procedure

1. Drain the cooling system. Refer to **Cooling System Draining and Filling (Static Fill LF1)** or **Cooling System Draining and Filling - Vac-N-Fill(GE 47716)** or **Cooling System Draining and Filling (Static Fill LAU)** .
2. Remove the transaxle oil cooler hoses from the oil cooler fittings on the radiator. Refer to **Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection** .

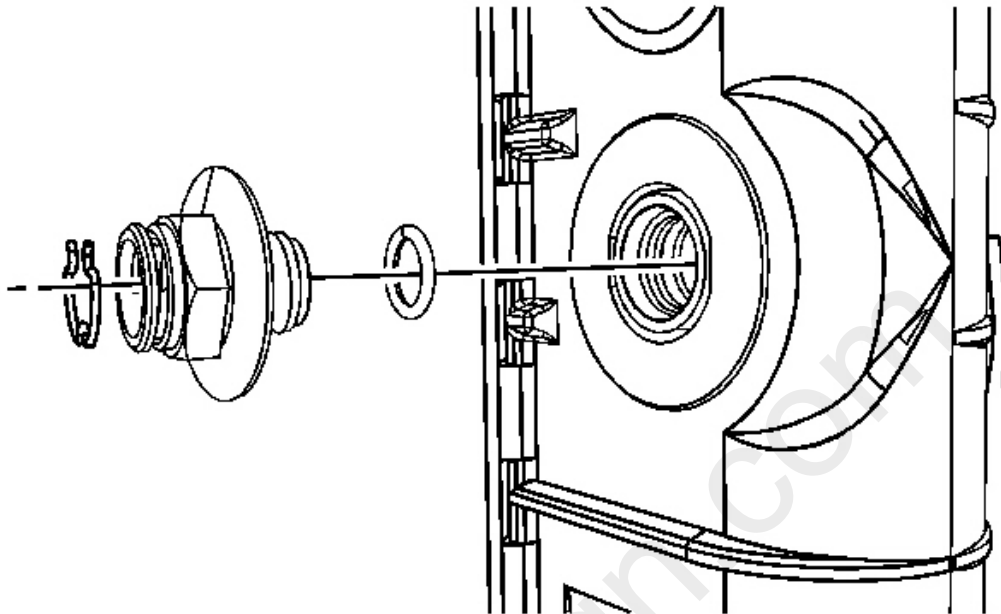


Fig. 54: View Of Oil Cooler Fitting At Radiator
Courtesy of GENERAL MOTORS CORP.

NOTE: Do not remove the upper and lower transaxle oil cooler fittings from the radiator at the same time otherwise the transaxle oil cooler will fall inside the radiator end tank.

3. Remove the oil cooler fitting from the radiator.

Installation Procedure

1. Inspect the new O-ring seals for cracks, cuts or damage. Replace if necessary.

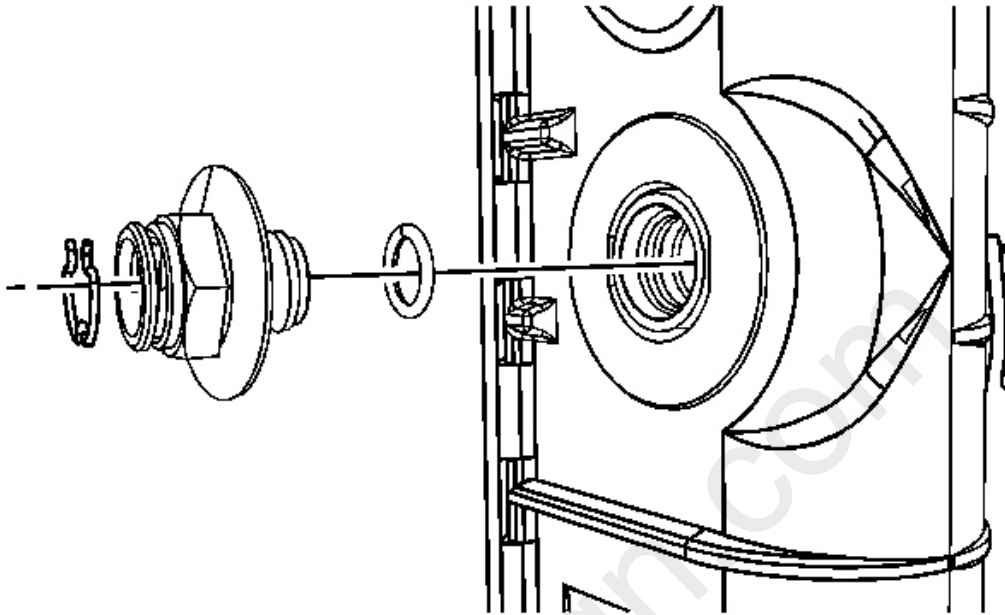


Fig. 55: View Of Oil Cooler Fitting At Radiator
Courtesy of GENERAL MOTORS CORP.

CAUTION: Refer to Fastener Caution .

NOTE: The correct thread engagement is critical. Cross-threaded fittings can achieve proper tightness and still leak.

2. Install the oil cooler fitting to the radiator and tighten to 38 N.m (28 lb ft).
3. Install the transaxle oil cooler hoses to the oil cooler fittings on the radiator. Refer to Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection .
4. Fill the cooling system. Refer to Cooling System Draining and Filling (Static Fill LF1) or Cooling System Draining and Filling - Vac-N-Fill(GE 47716) or Cooling System Draining and Filling (Static Fill LAU) .
5. Adjust the transmission fluid level.
6. Inspect for fluid leaks.

TRANSMISSION FLUID COOLER PIPE SEAL REPLACEMENT

Special Tools

2010 Cadillac SRX

2010 TRANSMISSION Automatic Transmission - AF40-6 - SRX

- **DT-41239-1A:** Cooler Line Seal Installer
- **DT-41201:** Cooler Line Seal Remover

Removal Procedure

1. Raise the vehicle. Refer to **Lifting and Jacking the Vehicle**.

WARNING: Ensure that the vehicle is properly supported and squarely positioned. To help avoid personal injury when a vehicle is on a hoist, provide additional support for the vehicle on the opposite end from which the components are being removed.

2. Place a drain pan or suitable container under the vehicle.

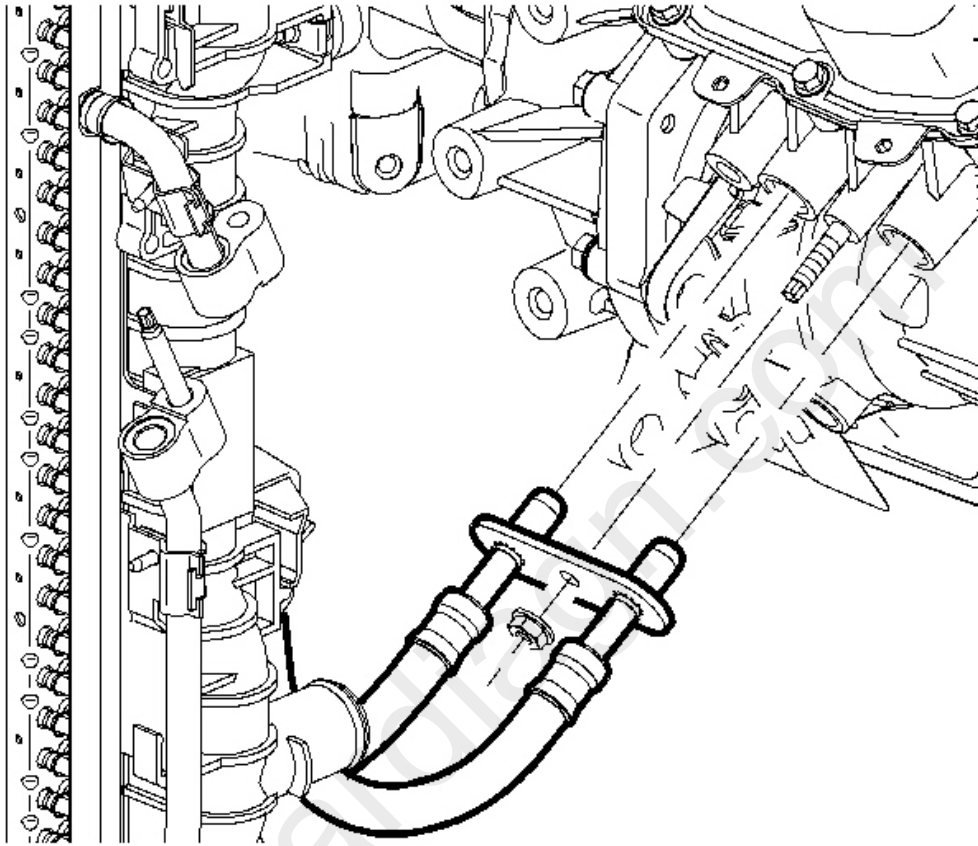


Fig. 6: View Of Transaxle Oil Cooler Line Assembly
Courtesy of GENERAL MOTORS CORP.

3. Remove the transaxle oil cooler line assembly nut from the transaxle.
4. Disconnect the transaxle oil cooler lines from the vehicle.

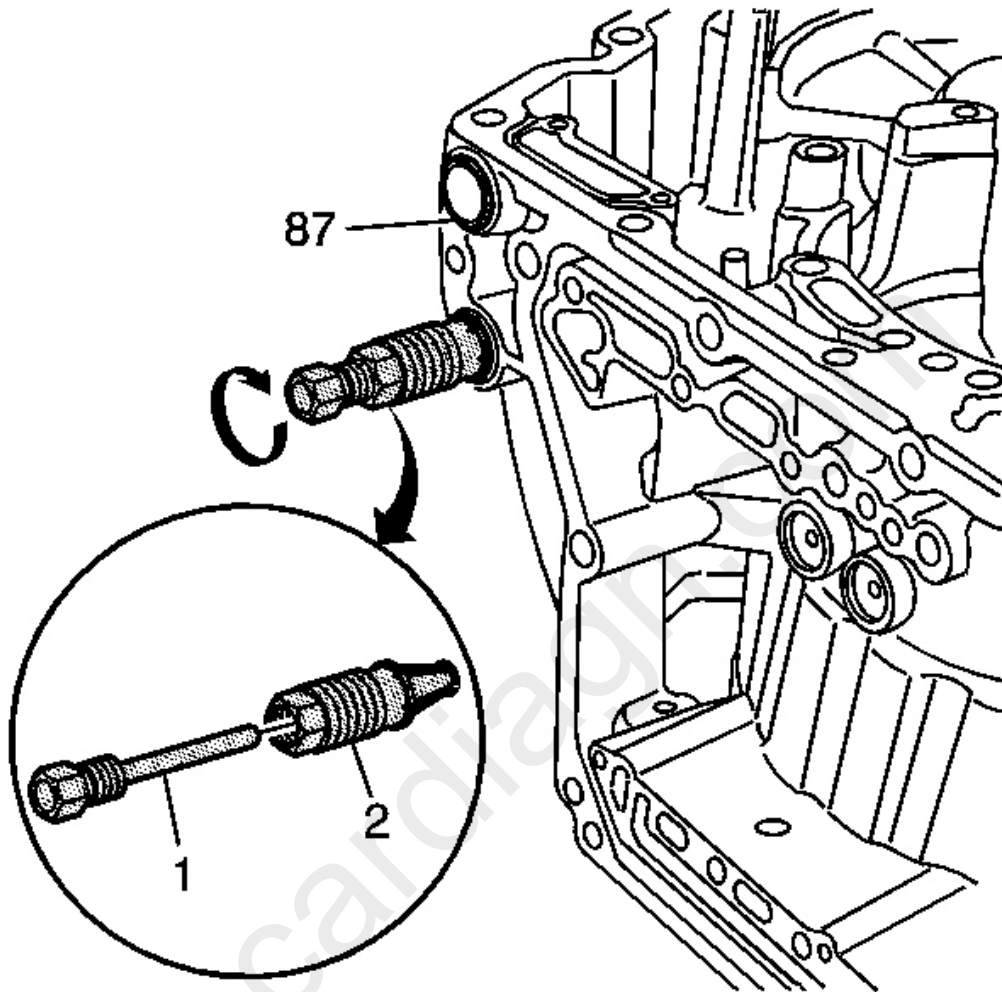


Fig. 11: View Of Special Tool J 4201
 Courtesy of GENERAL MOTORS CORP.

NOTE: Ensure that the J 5201 is fully seated into the transaxle seal bore.

5. Insert the collet piece (2) of the **DT-4201: Cooler Line Seal Remover** into the cooler line seal.
6. Insert the forcing screw piece (1) of the **DT-4201: Cooler Line Seal Remover** into the collet (2).
7. Tighten the forcing screw (1) until snug.

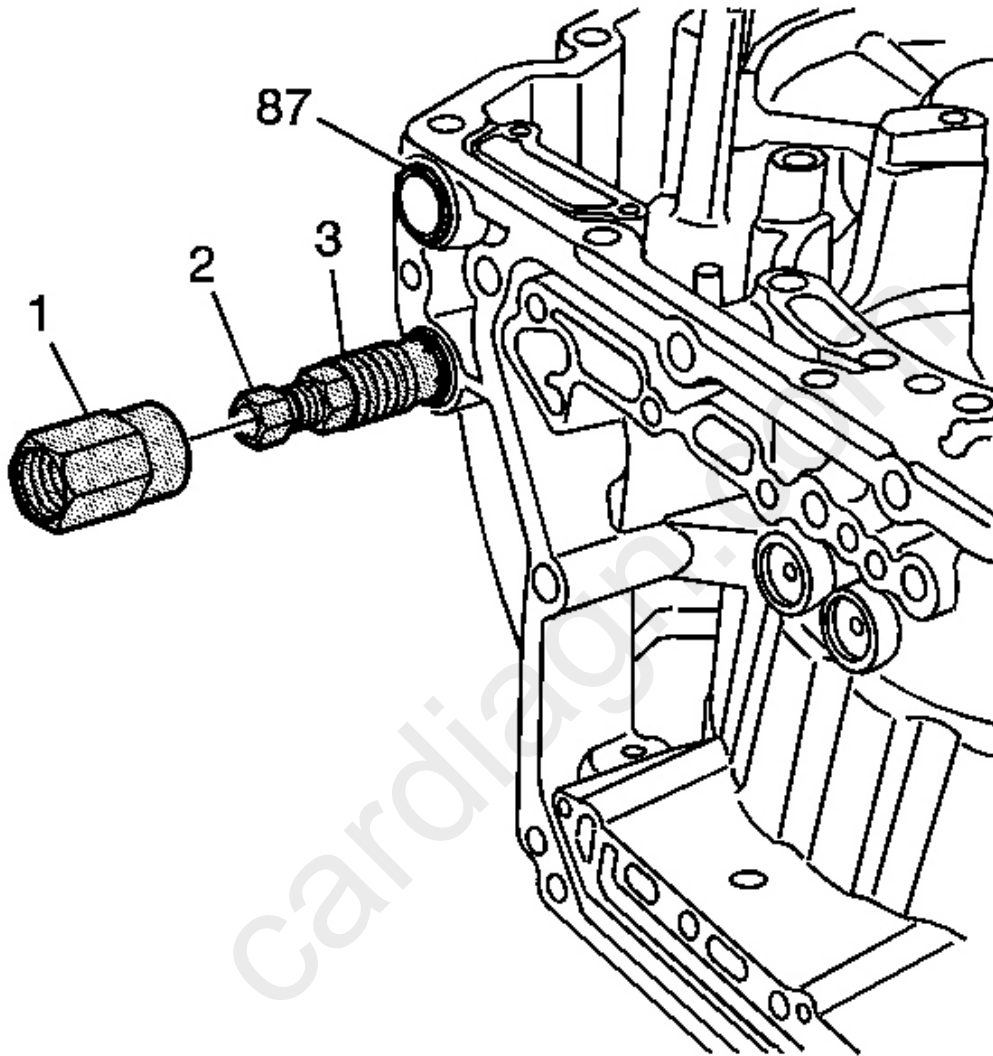


Fig. 1: Identifying Collar & Collet
Courtesy of GENERAL MOTORS CORP.

8. Thread the collar piece (1) of the DT-4201: Cooler Line Seal Remover onto the collet (3) until snug.

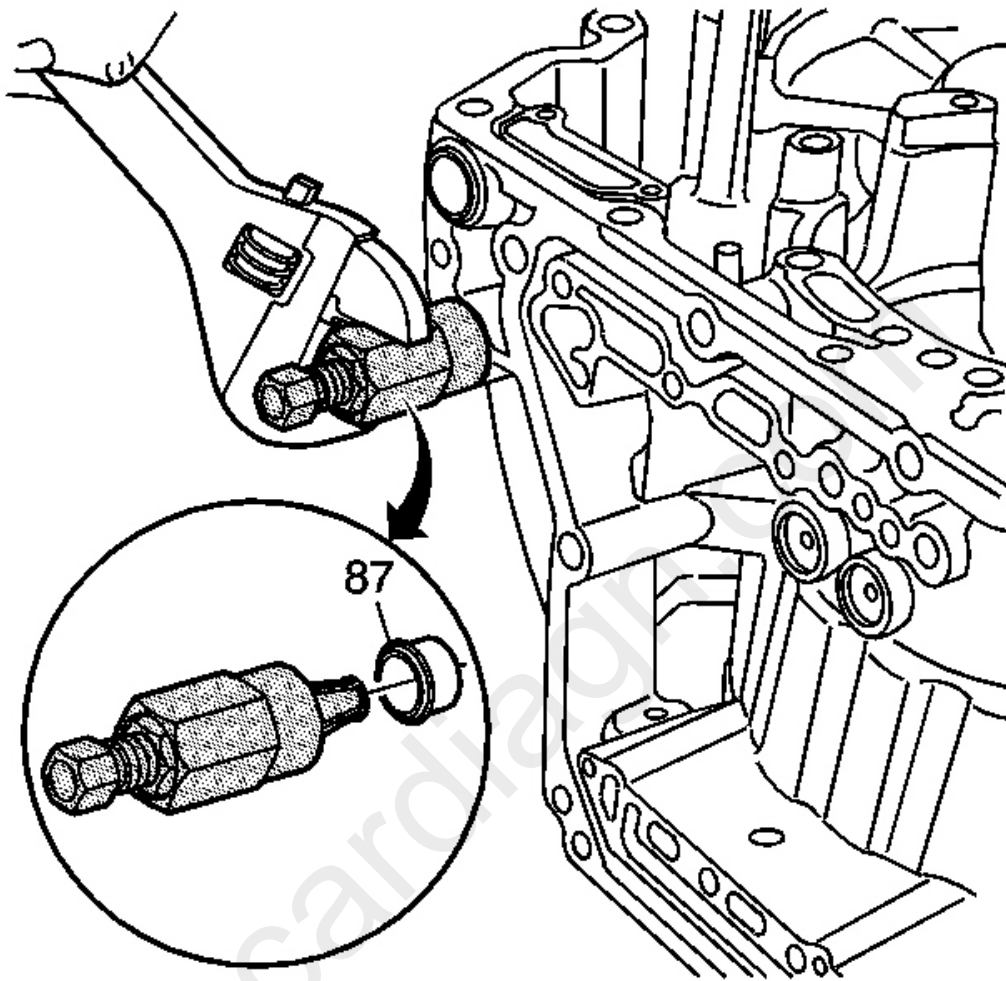


Fig. 9: Illustrating Turning Collar Clockwise To Remove Cooler Line Seal
Courtesy of GENERAL MOTORS CORP.

9. Turn the collar clockwise in order to remove the cooler line seal (87).
10. Discard the seal (87).
11. Clean the case bores for the cooler line seals.

Installation Procedure

1. Insert a new transaxle cooler line seal into the case bore.

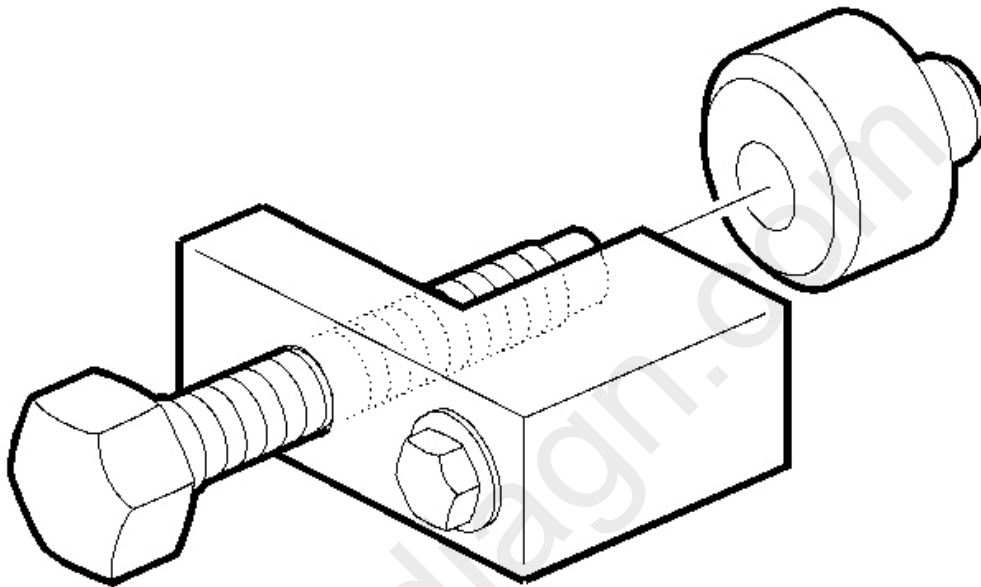


Fig. 60: View Of Nub & Special Tool J 41239-1
Courtesy of GENERAL MOTORS CORP.

2. Remove the nub from the **DT-41239-1A: Cooler Line Seal Installer**.

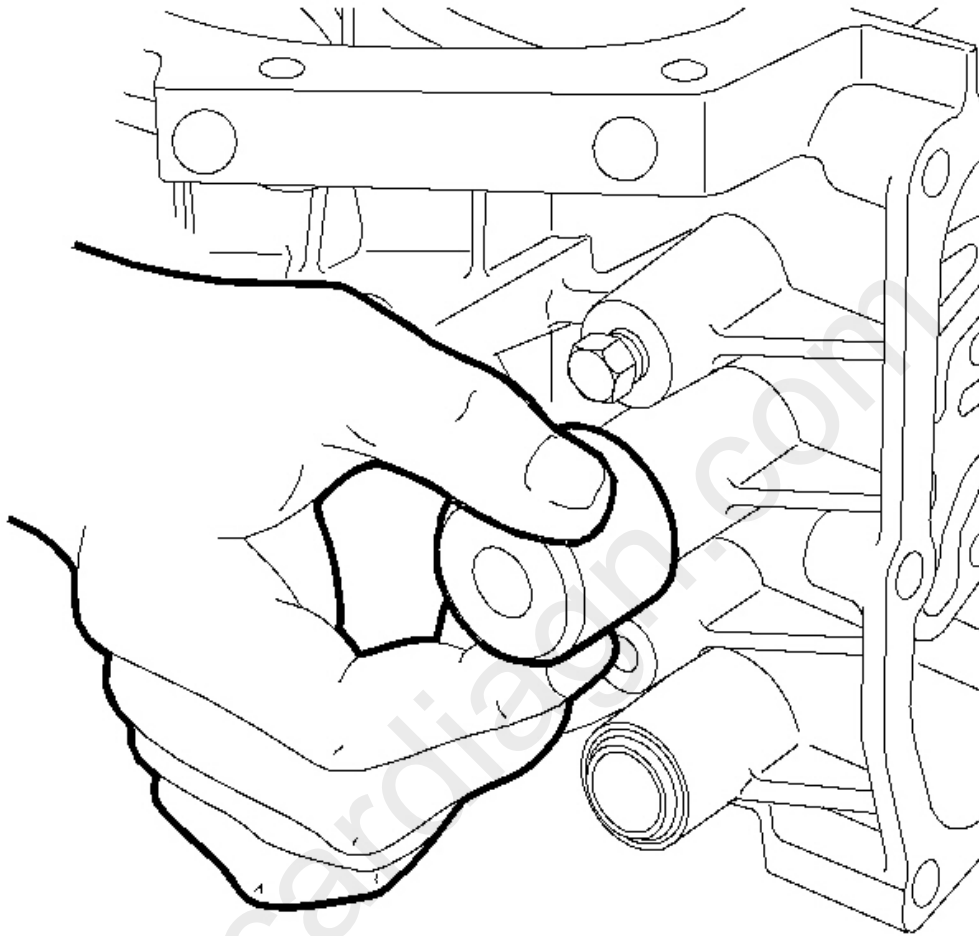


Fig. 61: View Of Nub Of Special Tool J 41239-1 & Transaxle Cooler Line Seal
Courtesy of GENERAL MOTORS CORP.

3. Install the nub of the **DT-41239-1A: Cooler Line Seal Installer** on the transaxle cooler line seal.
4. Tap the new transaxle cooler line seal into the case bore.

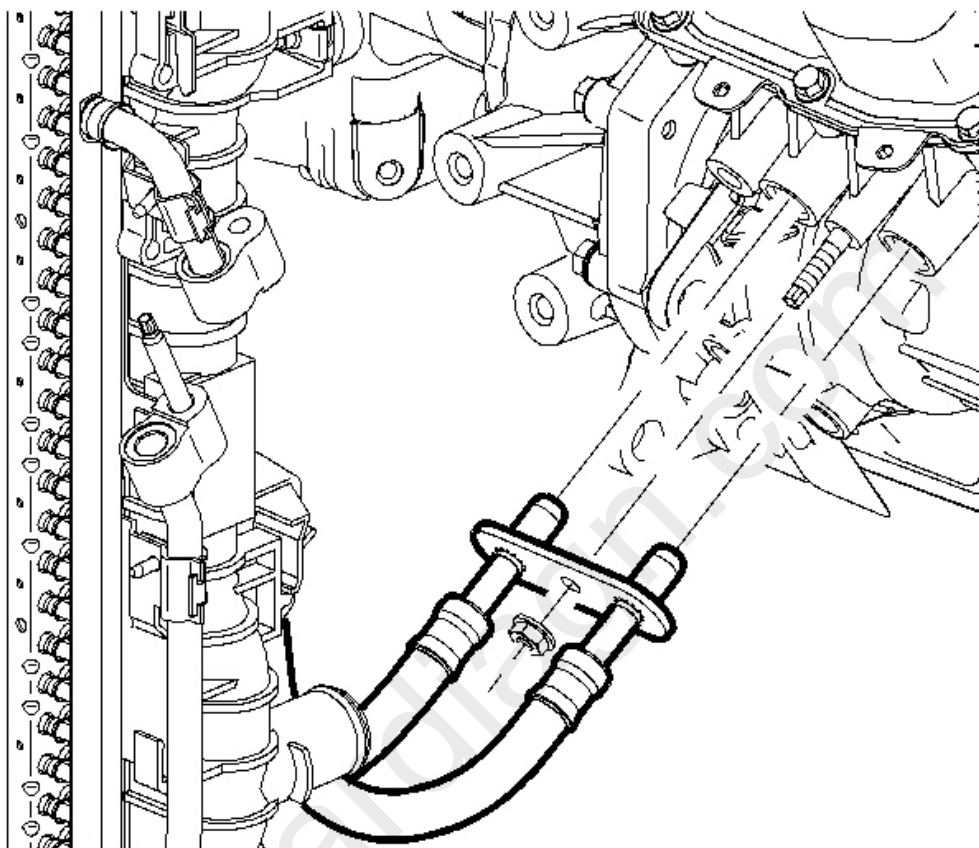


Fig. 62: View Of Transaxle Oil Cooler Line Assembly
Courtesy of GENERAL MOTORS CORP.

5. Install the transaxle oil cooler line assembly to the transaxle.

CAUTION: Refer to Fastener Caution .

6. Install the transaxle oil cooler line assembly nut and tighten to 9 N.m (80 lb in).
7. Lower the vehicle.

NOTE: DEXRON® VI automatic transmission fluid is not compatible with this

transaxle. If DEXRON® VI ATF is used, transaxle failure will result. This transaxle uses GM AW-1 fluid P/N 19256039.

8. Add fluid to the transaxle. Refer to Adhesives, Fluids, Lubricants, and Sealers
9. Start the engine and check for leaks.

TRANSMISSION FLUID COOLER HOSE REPLACEMENT

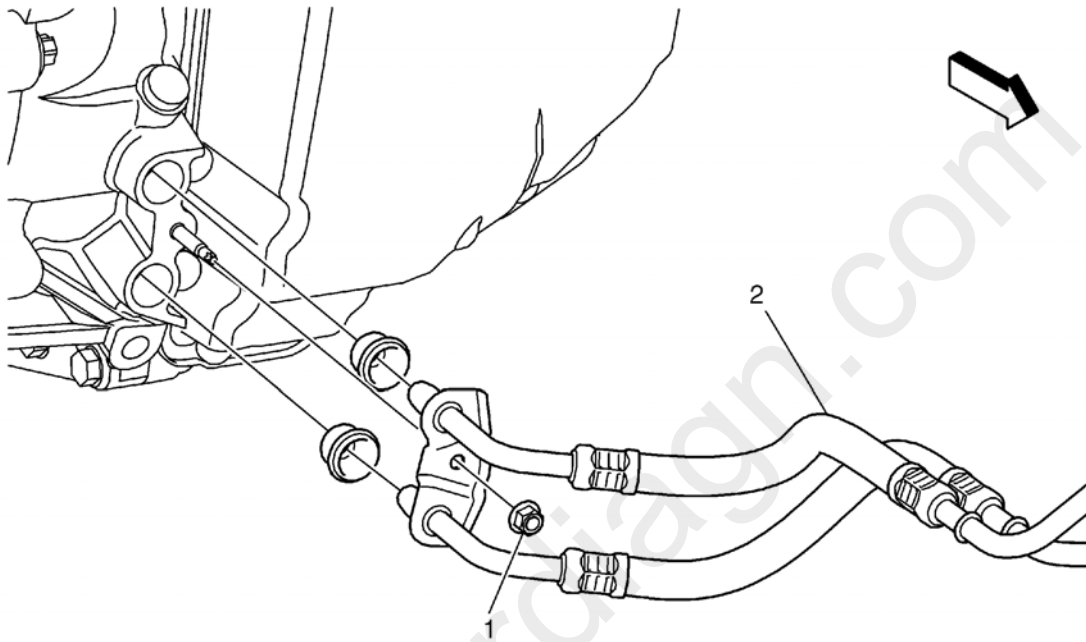
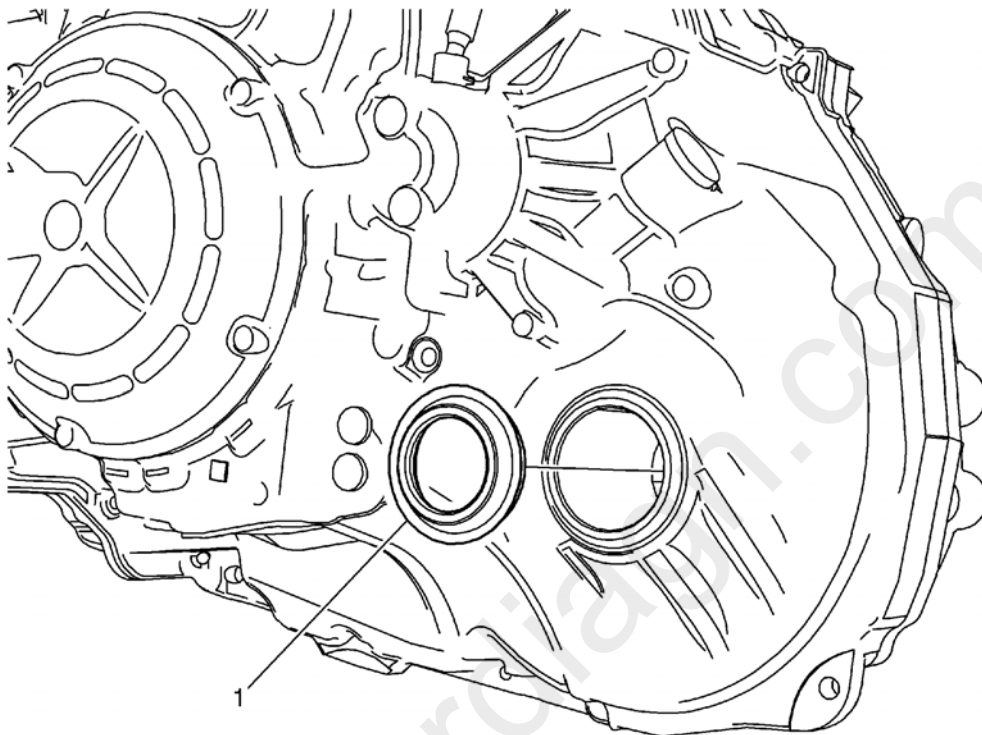


Fig. 63: Identifying Transmission Fluid Cooler Hose

Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
Preliminary Procedure	
1. Raise and support the vehicle. Refer to <u>Lifting and Jacking the Vehicle</u> . 2. Disconnect the transmission lines from the radiator. Refer to <u>Transmission Fluid Cooler Hose/Pipe Quick-Connect Fitting Disconnection and Connection</u>.	
1	Transmission Fluid Cooler Pipe Bracket Nut CAUTION: Refer to <u>Fastener Caution</u> . Tighten: 10 N.m (89 lb in)
	Transmission Fluid Cooler Hose

2

Procedure:Discard the hose and install N $\square\square$ seals prior to installation of the pipe. Refer to**Transmission Fluid Cooler Pipe Seal Replacement****FRONT AXLE SHAFT SEAL REPLACEMENT - LEFT SIDE****Fig. 64: View Of Front Axle Shaft Seal - Left Side**

Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
CAUTION: Always use the proper automatic transmission fluid listed. Using incorrect automatic transmission fluid may damage the vehicle.	
Preliminary Procedure	
1. Raise and support the vehicle. Refer to <u>Lifting and Jacking the Vehicle</u> .	
2. Place a drain pan under the transaxle to catch any spilled transaxle fluid.	
3. Remove the left front wheel drive shaft from the transmission. Refer to <u>Front Wheel Drive Shaft Replacement - Left Side</u> .	
4. Clean the seal bore in the transaxle housing.	
5. Inspect the transaxle fluid level. Refer to <u>Transmission Fluid Level and Condition Check</u> .	
	Front Axle Shaft Seal

Special Tools

1

- **DT-11**: Installer
- **EN-4000**: Seal remover

TRANSMISSION REPLACEMENT**Removal Procedure**

1. Remove the engine intake manifold cover. Refer to **Intake Manifold Cover Replacement**.
2. Remove the battery tray. Refer to **Battery Tray Replacement**.

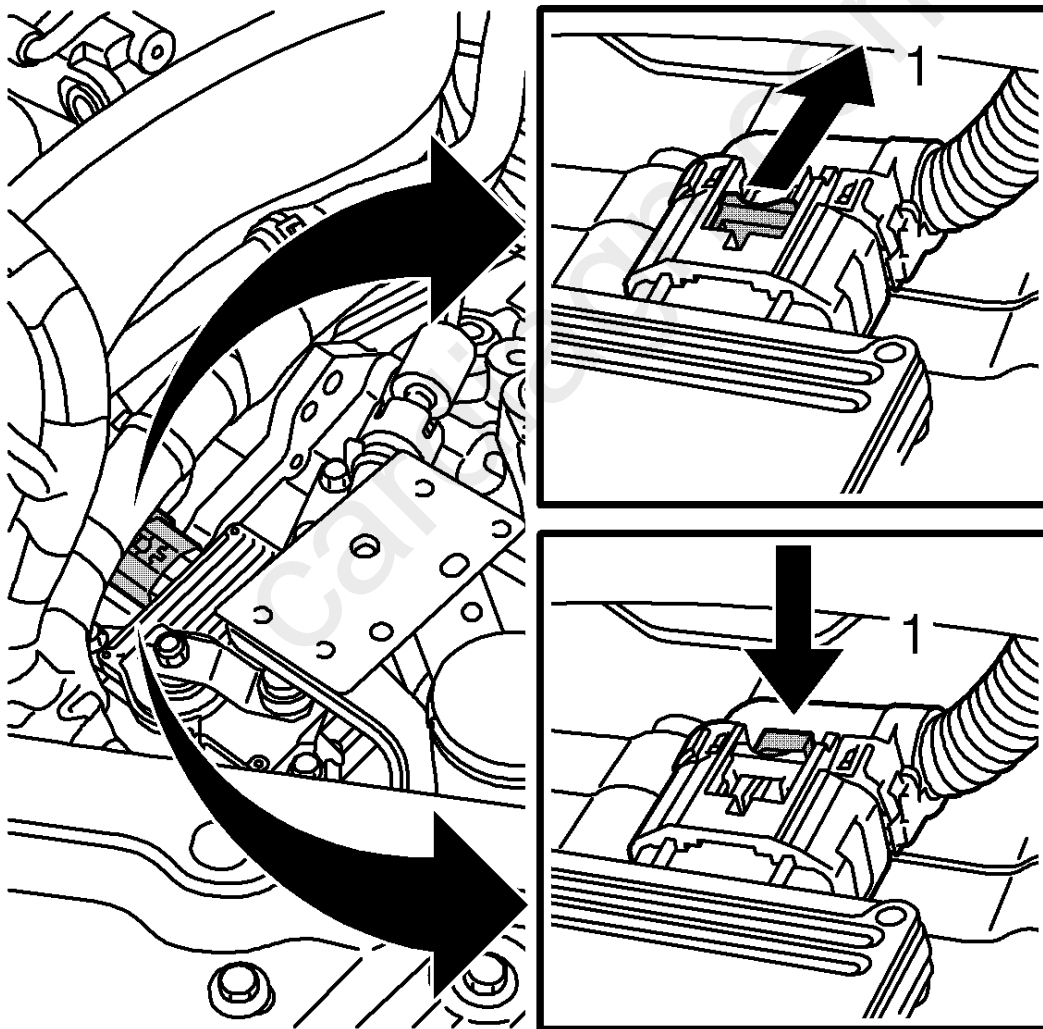


Fig. 11: Identifying Transmission Control Module Connectors
Courtesy of GENERAL MOTORS CORP.

3. Disconnect the connector (1) from the transmission control module.

4. Remove the shift lever cable from the selector on the transmission. Refer to **Range Selector Lever Cable Replacement** .

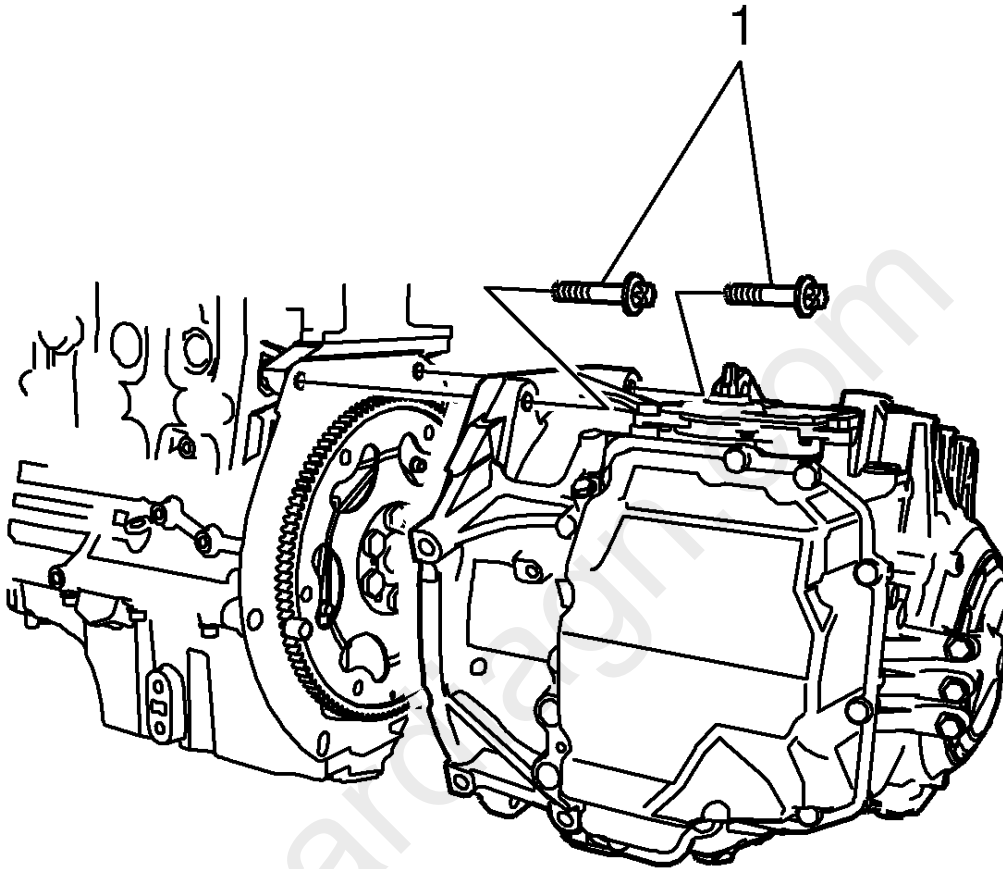


Fig. □: Identifying Upper Transmission Fasteners
Courtesy of GENERAL MOTORS CORP.

5. Remove upper transmission fasteners (1).
6. Install the engine support fixture. Refer to **Engine Support Fixture** .
7. Raise the vehicle.
8. Drain the transmission fluid.
9. Remove the exhaust front pipe. Refer to **Exhaust Flexible Pipe Replacement (LF1- Service)** or **Exhaust Flexible Pipe Replacement (LAU)** .
10. Remove the frame. Refer to **Drivetrain and Front Suspension Frame Replacement** .
11. Remove the transmission front mount. Refer to **Transmission Front Mount Replacement** .
12. Remove the transmission rear mount bracket. Refer to **Transmission Rear Mount Replacement**.

13. Remove the right wheel driveshaft. Refer to Front Wheel Drive Shaft Replacement - Right Side .
14. Remove the left wheel driveshaft. Refer to Front Wheel Drive Shaft Replacement - Left Side .
15. Remove the transfer case from the transmission. Refer to Transfer Case Replacement
16. Remove the starter motor. Refer to Starter Replacement (LF1) or Starter Replacement (LAU) .

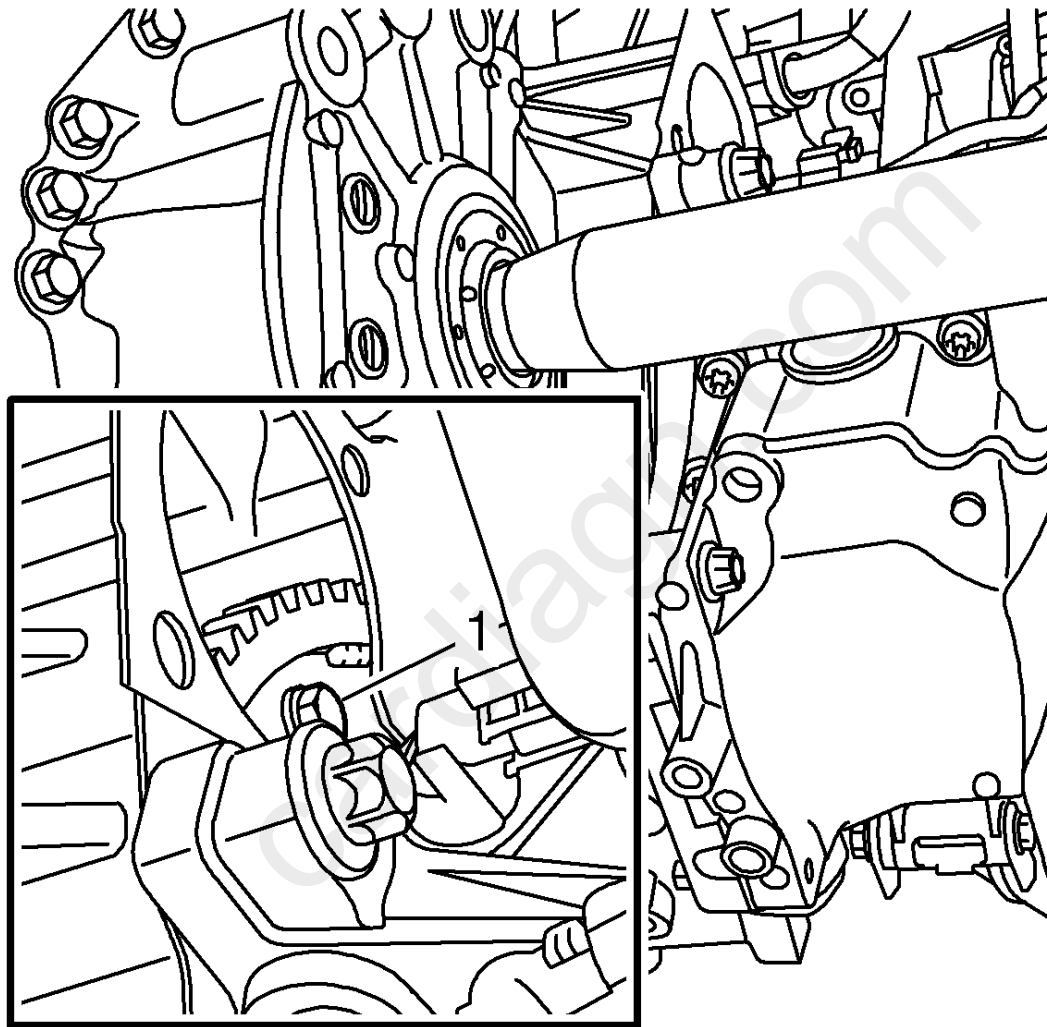


Fig. □7: Identifying Torque Converter Bolts
Courtesy of GENERAL MOTORS CORP.

17. Remove the six fasteners (1) from the flywheel to the torque converter.

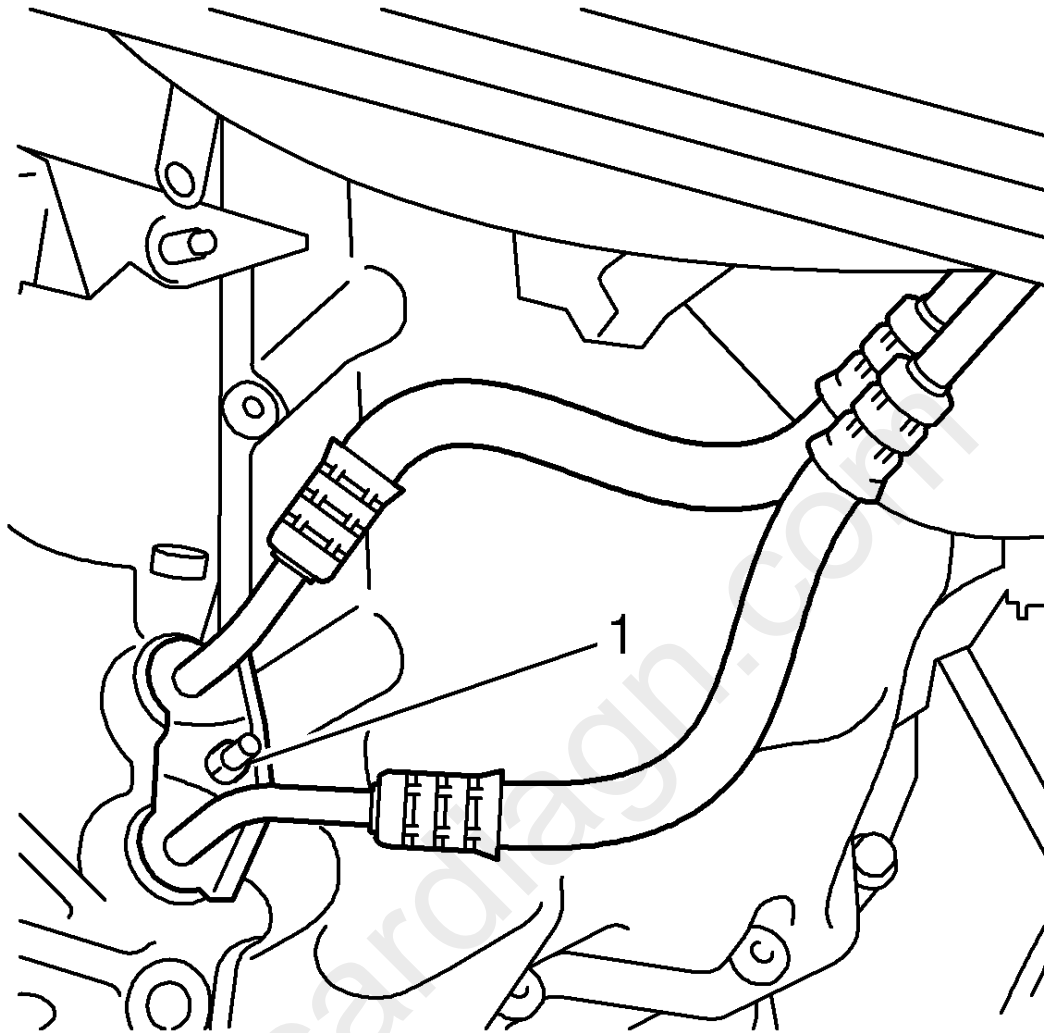


Fig. 1: Identifying Oil Cooler Hose Connection

Courtesy of GENERAL MOTORS CORP.

18. Remove the oil cooler hose connection (1) from the transmission.
19. Remove the fasteners to the transmission mount bracket left side. Refer to **Front Axle Shaft Seal Replacement - Left Side**.
20. Lower the vehicle.
21. Lower the engine enough to access the transmission.
22. Raise the vehicle.
23. Support the transmission with a transmission jack.
24. Remove the lower transmission fasteners.
25. Separate the transmission from the engine.
26. Secure the torque converter in the transmission to prevent it from falling.
27. Lower the transmission.

Installation Procedure

1. Lubricate the centering pin on the converter and the two guiding sleeves.
2. Check torque converter for correct transmission positioning.
3. Position the transmission to the engine.

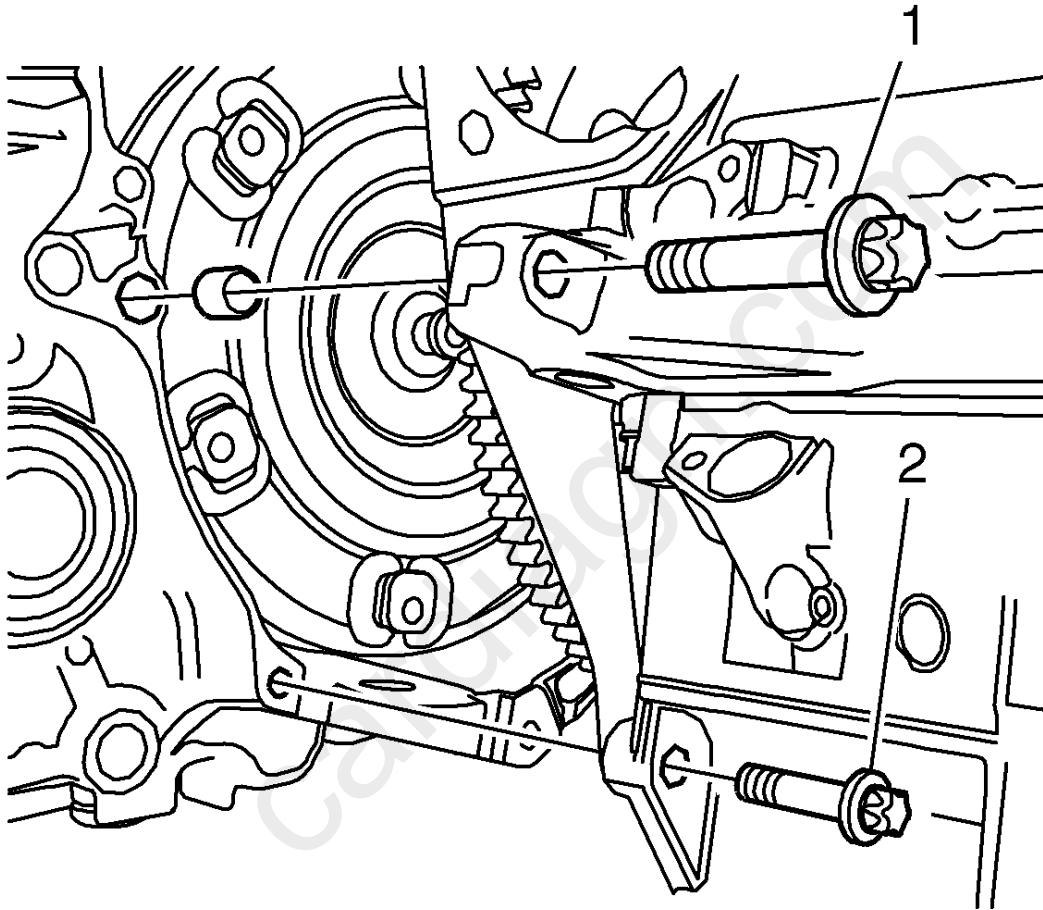


Fig. □□: Identifying Lower Transmission Fastener
Courtesy of GENERAL MOTORS CORP.

CAUTION: Refer to Fastener Caution .

4. Install the one lower transmission fastener (1) and tighten to 60 N.m (44 lb ft).
5. Install the four lower transmission fasteners (2) and tighten to 40 N.m (30 lb ft).
6. Install the transfer case to the transmission. Refer to **Transfer Case Replacement**

- ☐ Remove the transmission rack.
- ☐ Lower the vehicle.
- ☐ Raise the engine to the correct level with the engine support fixture.
- 1 ☐ Install the fasteners to the transmission mount bracket left side. Refer to **Transmission Mount Replacement - Left Side**

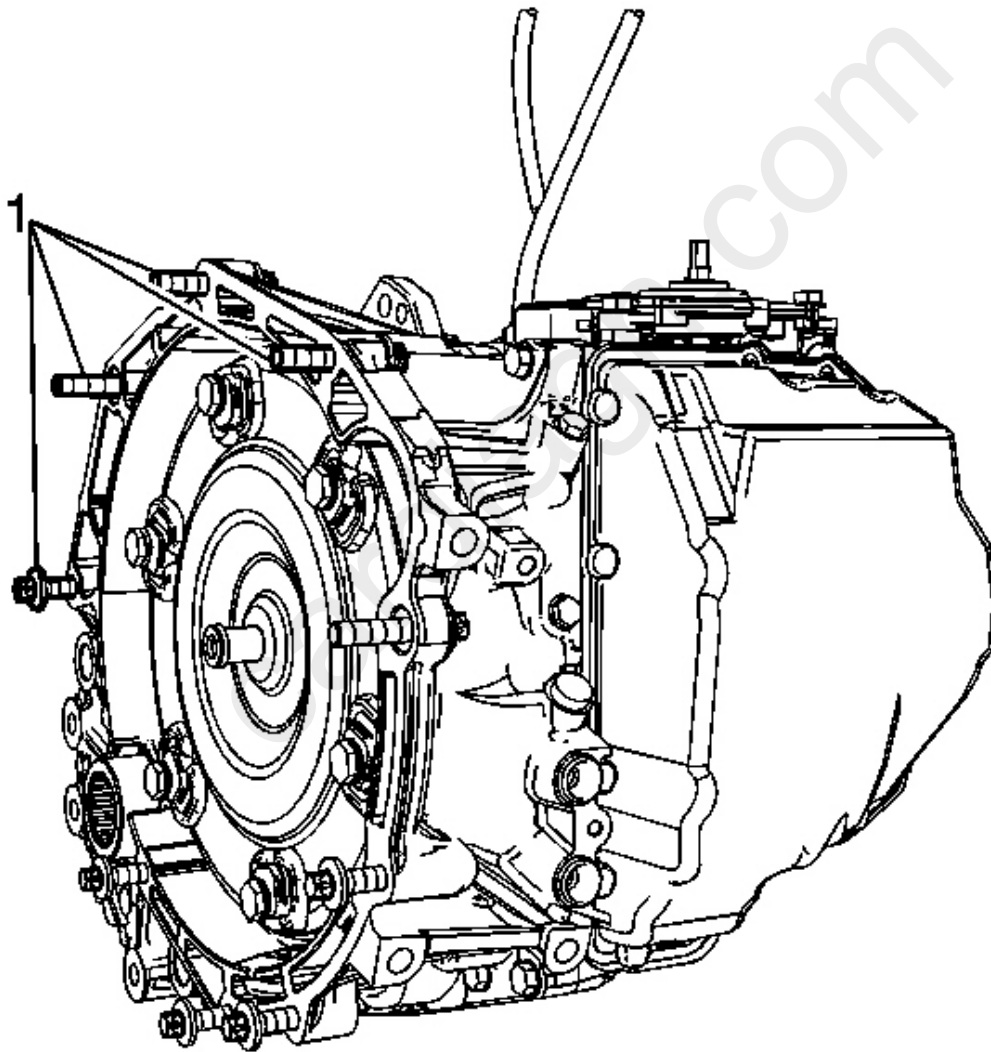


Fig. 70: Identifying Upper Transmission Fasteners
Courtesy of GENERAL MOTORS CORP.

11. Install the upper transmission fasteners (1) and tighten to $\square\square\square$.m (44 lb ft).

12. □ Connect the shift lever cable to the selector lever on the transmission. Refer to **Range Selector Lever Cable Replacement**.
13. □ Connect the electrical connector to the transmission control module.
14. Raise the vehicle.

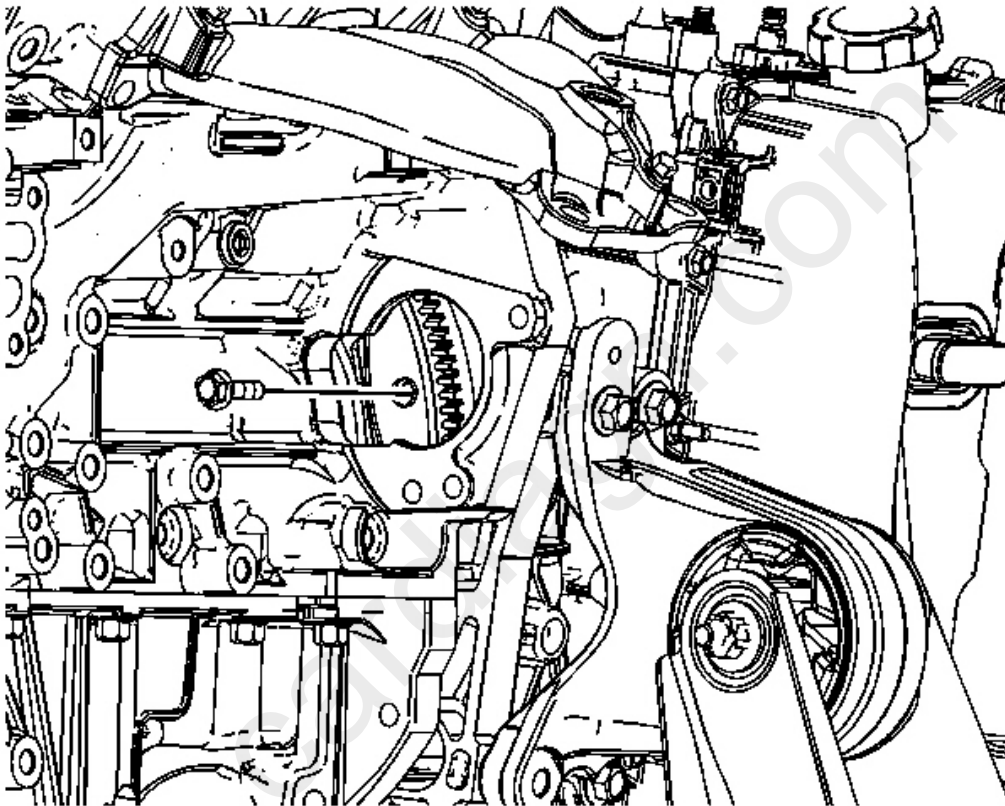


Fig. 71: View Of Torque Converter To Flywheel Bolts
Courtesy of GENERAL MOTORS CORP.

15. □ Install the fasteners to the converter.
□ Apply locking agent on the bolts and tighten to □□□.m (44 lb ft)
- 1□ □ Install the starter motor. Refer to **Starter Replacement (LF1)** or **Starter Replacement (LAU)**.

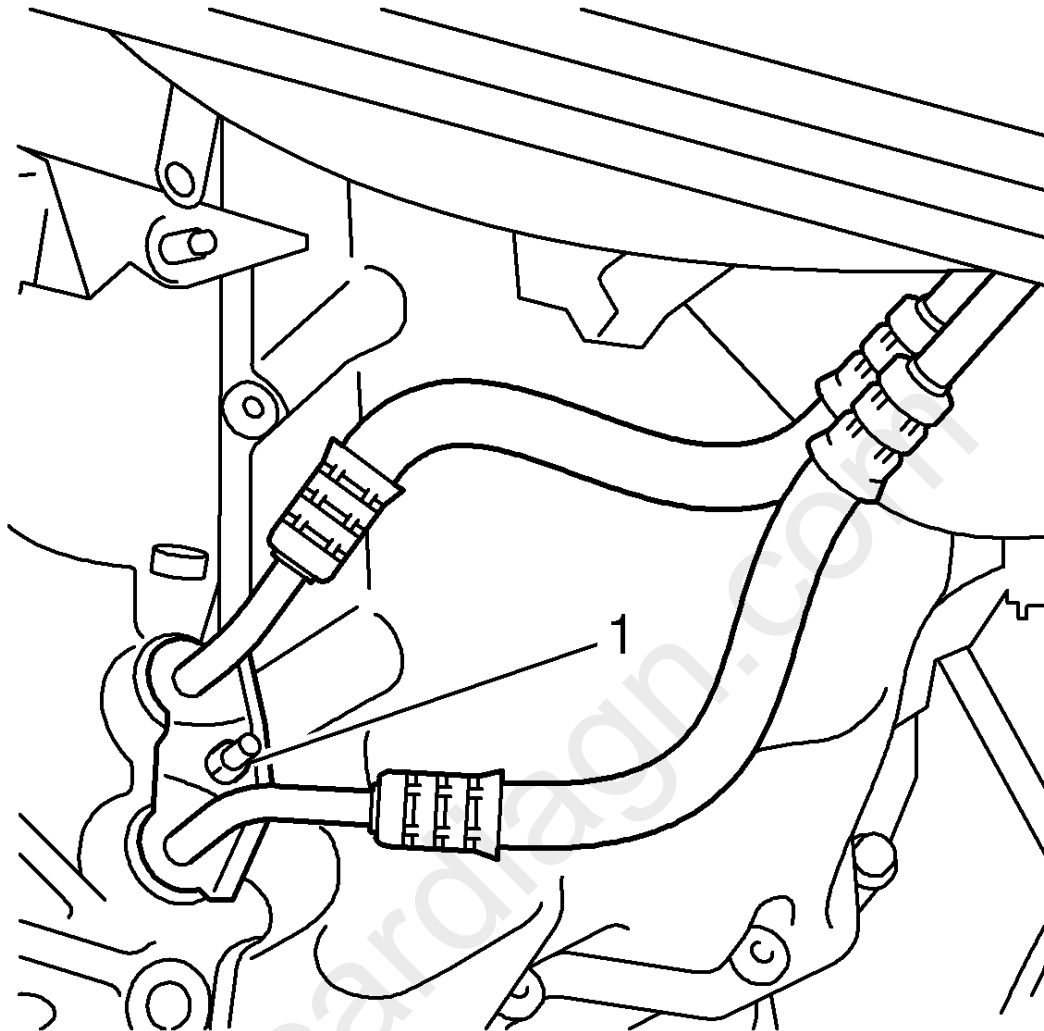


Fig. 72: Identifying Oil Cooler Hose Connection

Courtesy of GENERAL MOTORS CORP.

- 1 □ Install the oil cooler hose connection (1) to the transmission and tighten to 1 □ □ .m (□ □ lb in).
- 1 □ Install the transmission rear mount bracket. Refer to **Transmission Rear Mount Replacement**.
- 1 □ Install the transmission front mount. Refer to **Transmission Front Mount Replacement**.
- 2 □ Install the right driveshaft. Refer to **Front Wheel Drive Shaft Replacement - Right Side**.
21. Install the left driveshaft to the transmission. Refer to **Front Wheel Drive Shaft Replacement - Left Side**.
22. Install the frame. Refer to **Drivetrain and Front Suspension Frame Replacement**.
23. Install the exhaust front pipe. Refer to **Exhaust Flexible Pipe Replacement (LF1- Service)** or **Exhaust Flexible Pipe Replacement (LAU)**.
24. Lower the vehicle.
25. Remove the engine support fixture.
- 2 □ Install the battery tray and battery. Refer to **Battery Tray Replacement**.

- 2□ □check the transmission fluid. Refer to Transmission Fluid Level and Condition Check .
- 2□ □install the engine intake manifold cover. Refer to Intake Manifold Cover Replacement .

AUTOMATIC TRANSMISSION WIRING HARNESS REPLACEMENT

Removal Procedure

1. Remove control valve body cover. Refer to Control Valve Body Cover Replacement.
2. Remove control valve body. Refer to Control Valve Body Replacement.
3. Remove the transmission control module. Refer to Transmission Control Module Replacement.

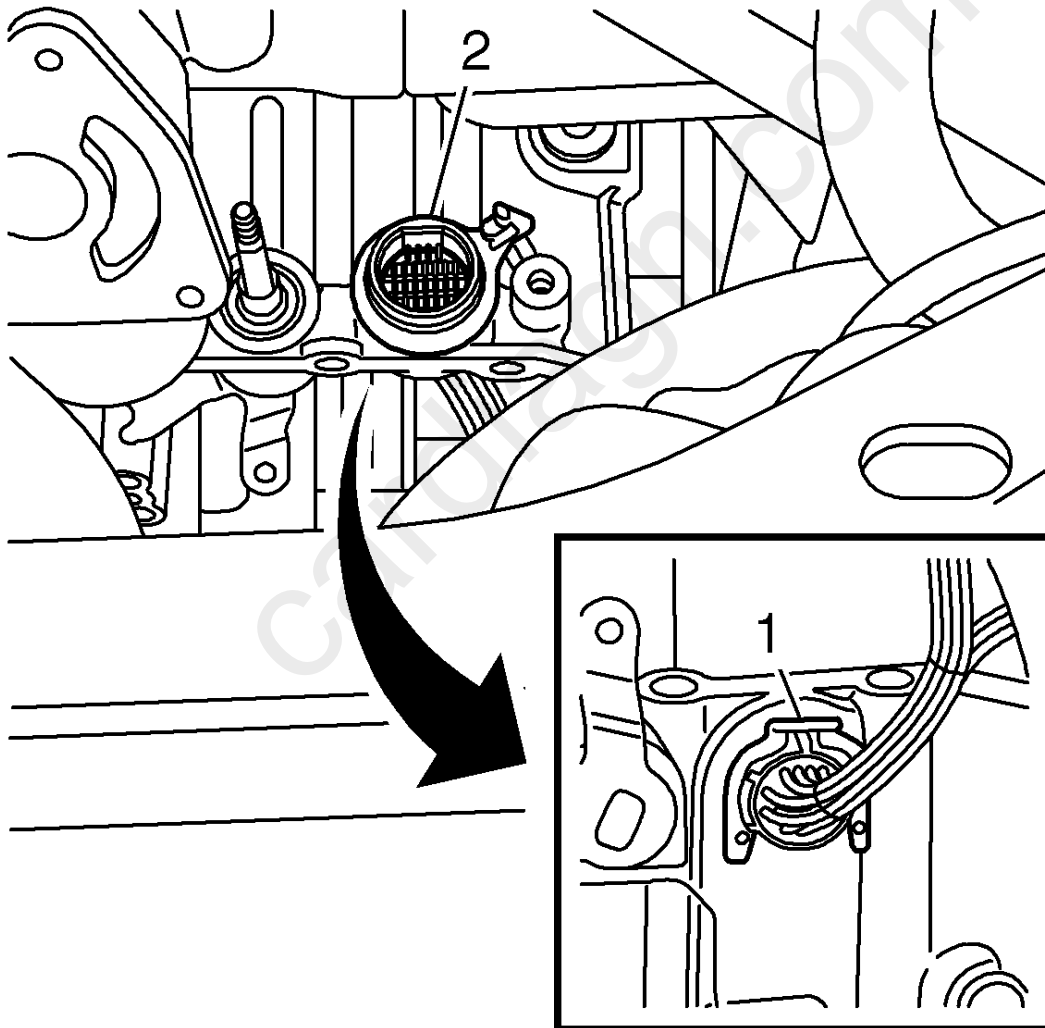


Fig. 73: Identifying Wiring Harness & Clip
Courtesy of GENERAL MOTORS CORP.

4. Remove the wiring harness.
 - Remove the clip (1).

- Lift out the wiring harness (2).

Installation Procedure

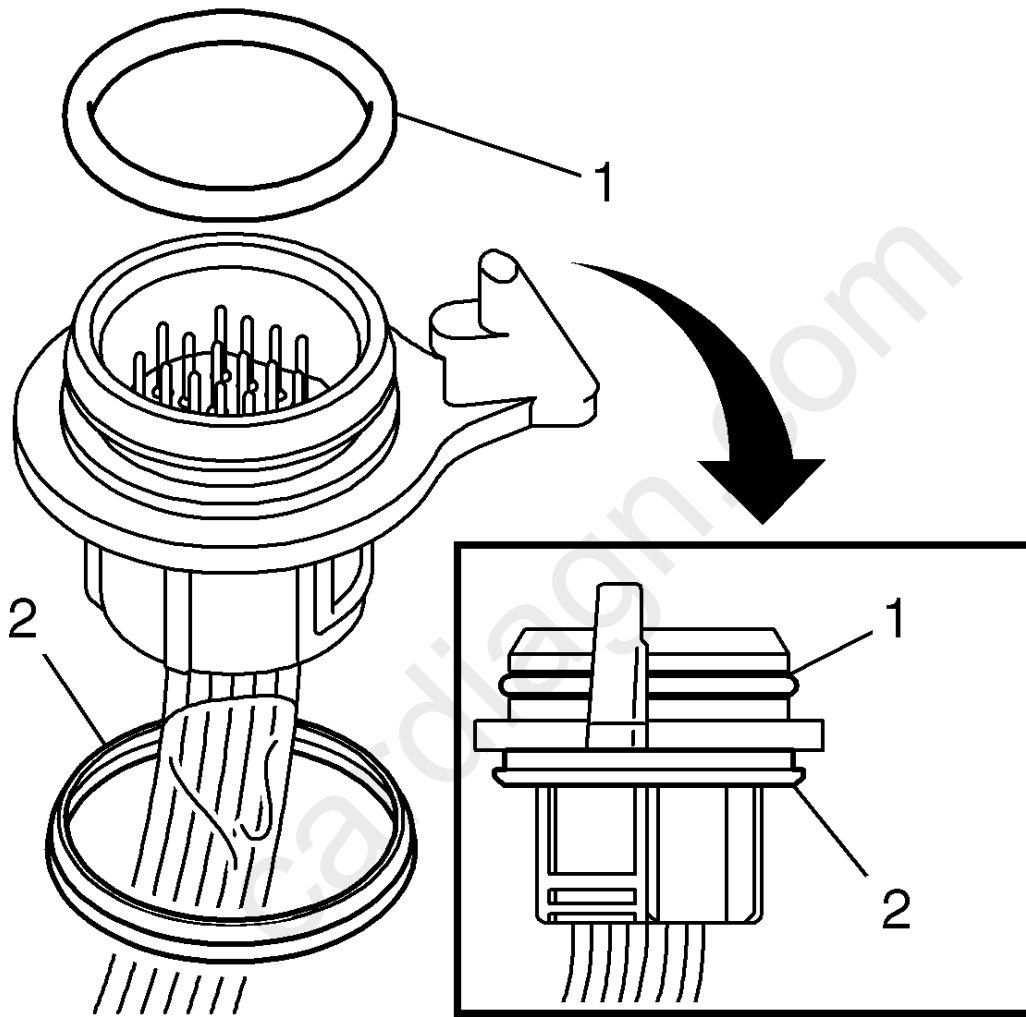


Fig. 74: View Of Wiring Harness & Seal
 Courtesy of GENERAL MOTORS CORP.

1. Fit the wiring harness.

Fit a new seal (2) in the gearcase and an O-ring (1) on the connection.

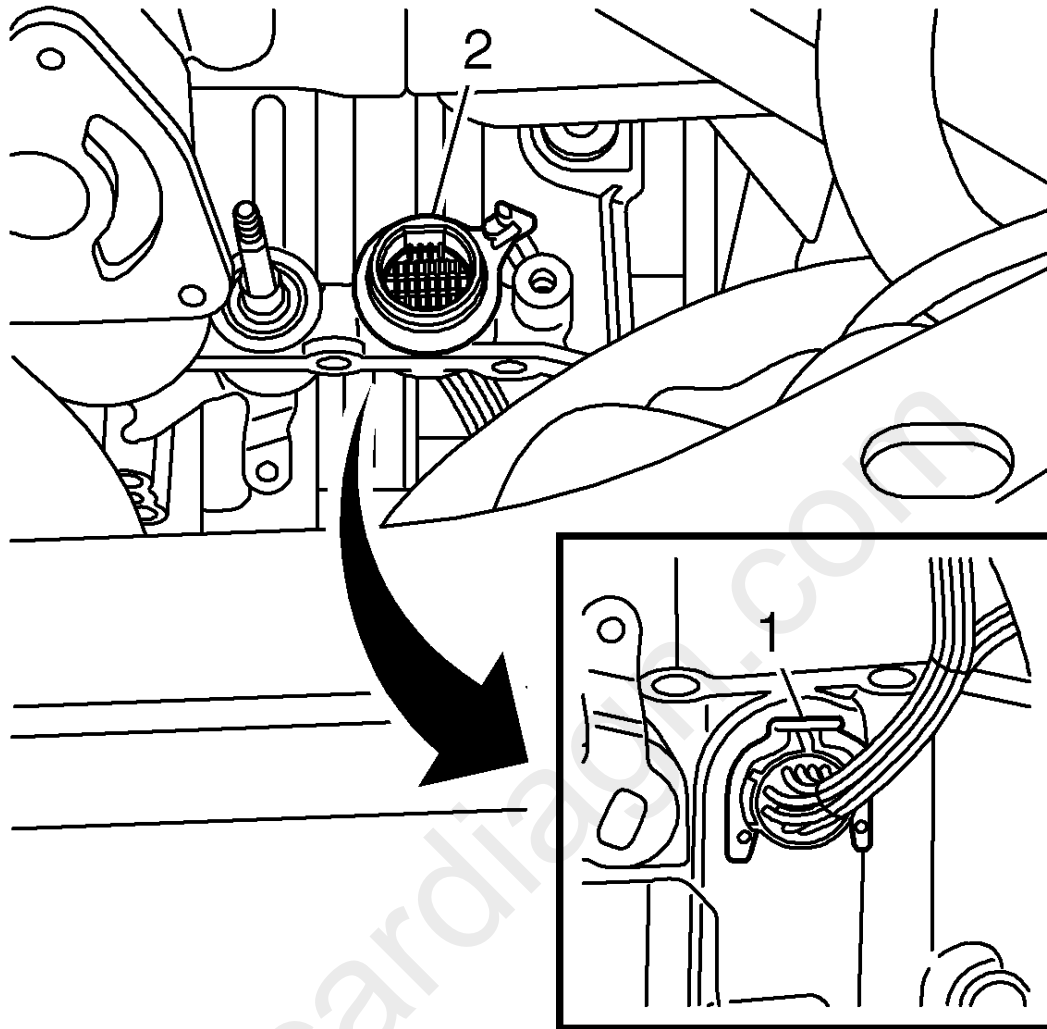


Fig. 75: Identifying Wiring Harness & Clip
Courtesy of GENERAL MOTORS CORP.

2. Fit in the wiring harness (2).

Make sure that the connector's guide pin locates in the groove and fit the clip (1).

3. Fit the transmission control module. Refer to **Transmission Control Module Replacement**.
4. Fit the control valve body. Refer to **Control Valve Body Replacement**.
5. Fit the control valve body cover. Refer to **Control Valve Body Cover Replacement**.