

## 2002 Chevrolet Corvette

2002 TRANSMISSION SERVICING Manual - Camaro, Corvette & Firebird

### 2002 TRANSMISSION SERVICING

Manual - Camaro, Corvette & Firebird

## APPLICATION

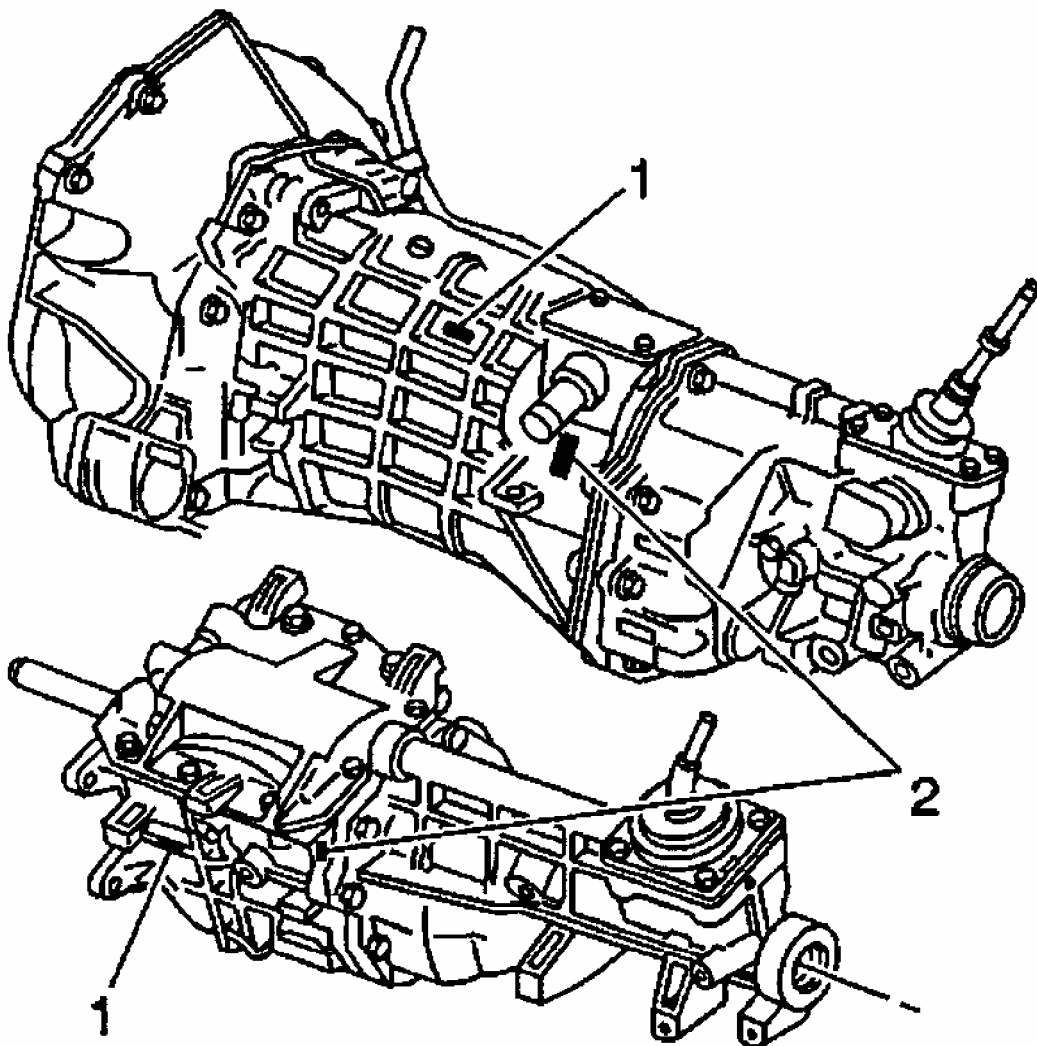
### TRANSMISSION APPLICATION

Application	Transmission Model (RPO Code)
Chevrolet	
Camaro	
3.8L	Borg-Warner T5 5-Speed (M49)
5.7L	Borg-Warner T56 6-Speed (MM6)
Corvette	
Convertible	Borg-Warner T56 6-Speed (MM6)
Z06	Borg-Warner T56 6-Speed (M12)
Pontiac Firebird	
3.8L	Borg-Warner T5 5-Speed (M49)
5.7L	Borg-Warner T56 6-Speed (MM6)

## IDENTIFICATION

### TRANSMISSION

The primary and secondary transmission model identification (1, 2) is located on a label or tag on the transmission case. See **Fig. 1** . If this label is missing or unreadable, use the service parts identification label in order to identify the vehicle's transmission.



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**Fig. 1: Locating Primary & Secondary Transmission Model Identification Tags**  
Courtesy of GENERAL MOTORS CORP.

## **LUBRICATION**

### **SERVICE INTERVALS**

Fluid replacement is not required. Check fluid level at each engine oil change. See **CHECKING FLUID LEVELS** .

### **CHECKING FLUID LEVELS**

1. Raise and suitably support the vehicle. Ensure vehicle is level. Clean any dirt from around the fill plug. Remove the transmission fill plug from the transmission.

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2. Ensure transmission fluid is level with bottom of fill plug hole. Add appropriate fluid, if necessary. See **RECOMMENDED FLUIDS** .
3. Install the transmission fill plug to the transmission. Tighten the transmission fill plug and tighten to specification. See **TORQUE SPECIFICATIONS** . Lower the vehicle.

#### RECOMMENDED FLUIDS

Manufacturer recommends Dexron-III(R) ATF.

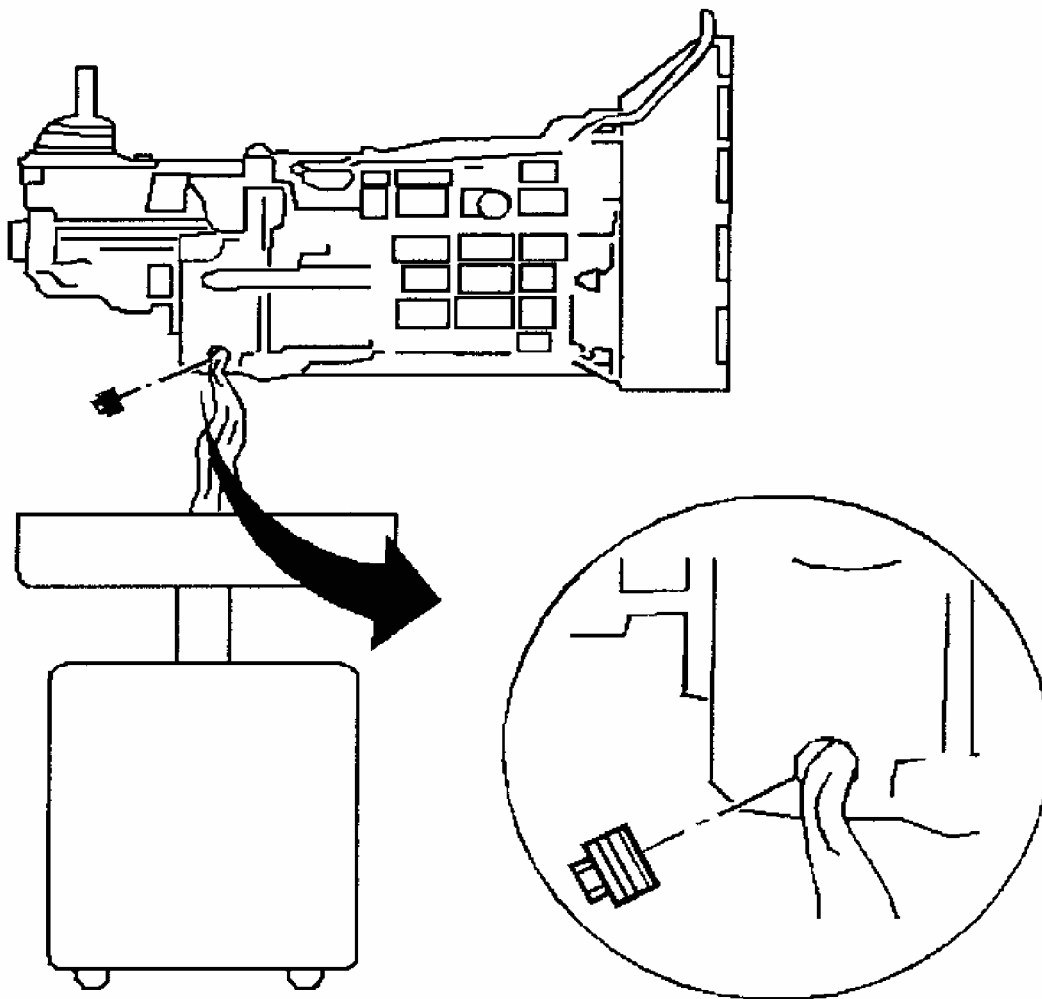
#### FLUID CAPACITIES

##### TRANSMISSION FLUID CAPACITIES

Application	<sup>(1)</sup> Qts. (L)
Camaro, Corvette & Firebird	4.1 (3.9)
(1) Fluid capacities listed are approximate. Always use procedure specified under <b>CHECKING FLUID LEVELS</b> when filling transmission.	

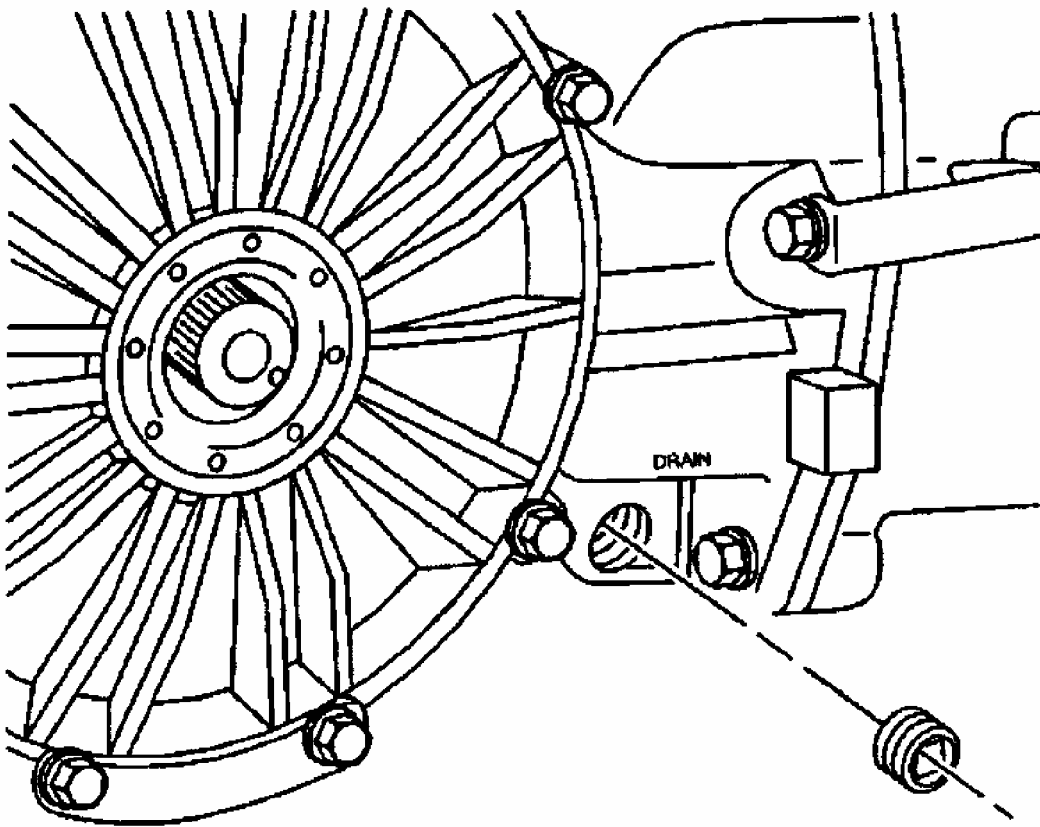
#### DRAINING & FILLING

1. Raise and suitably support the vehicle. Ensure vehicle is level. Clean away all dirt and debris from the transmission fluid drain plug area.
2. Remove the drain plug. See **Fig. 2** or **Fig. 3** . Allow the system to drain. Install the transmission fluid drain plug. Tighten the transmission fluid drain plug to specification. See **TORQUE SPECIFICATIONS** .
3. Clean away all dirt and debris from the transmission fluid fill plug area. Remove the fill plug. Fill transmission with appropriate fluid until level with bottom of fill plug hole. See **CHECKING FLUID LEVELS** .
4. Install the transmission fluid fill plug. Tighten the transmission fluid fill plug to specification. See **TORQUE SPECIFICATIONS** . Lower the vehicle.



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**Fig. 2: Locating Drain Plug (Camaro & Firebird)**  
**Courtesy of GENERAL MOTORS CORP.**



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**Fig. 3: Locating Drain Plug (Corvette)**  
Courtesy of GENERAL MOTORS CORP.

## REMOVAL & INSTALLATION

**WARNING:** Vehicles are equipped with Supplemental Inflatable Restraint (SIR) system. When servicing vehicle, use care to avoid accidental air bag deployment. SIR system-related components are located in various locations throughout interior and exterior of vehicle, depending on application. Do not use electrical test equipment on or near these circuits. If necessary, deactivate SIR system before servicing components. See AIR BAG DEACTIVATION PROCEDURES article in GENERAL INFORMATION.

**CAUTION:** When battery is disconnected, vehicle computer and memory systems may lose memory data. Driveability problems may exist until computer systems have

completed a relearn cycle. See **COMPUTER RELEARN PROCEDURES** article in **GENERAL INFORMATION** before disconnecting battery.

**CAUTION:** Use the correct fastener in the correct location. Replacement fasteners must be the correct part number for that application. Fasteners requiring replacement or fasteners requiring the use of thread locking compound or sealant are identified in the service procedure. Do not use paints, lubricants, or corrosion inhibitors on fasteners or fastener joint surfaces unless specified. These coatings affect fastener torque and joint clamping force, and may damage the fastener. Use the correct tightening sequence and specifications when installing fasteners in order to avoid damage to parts and systems.

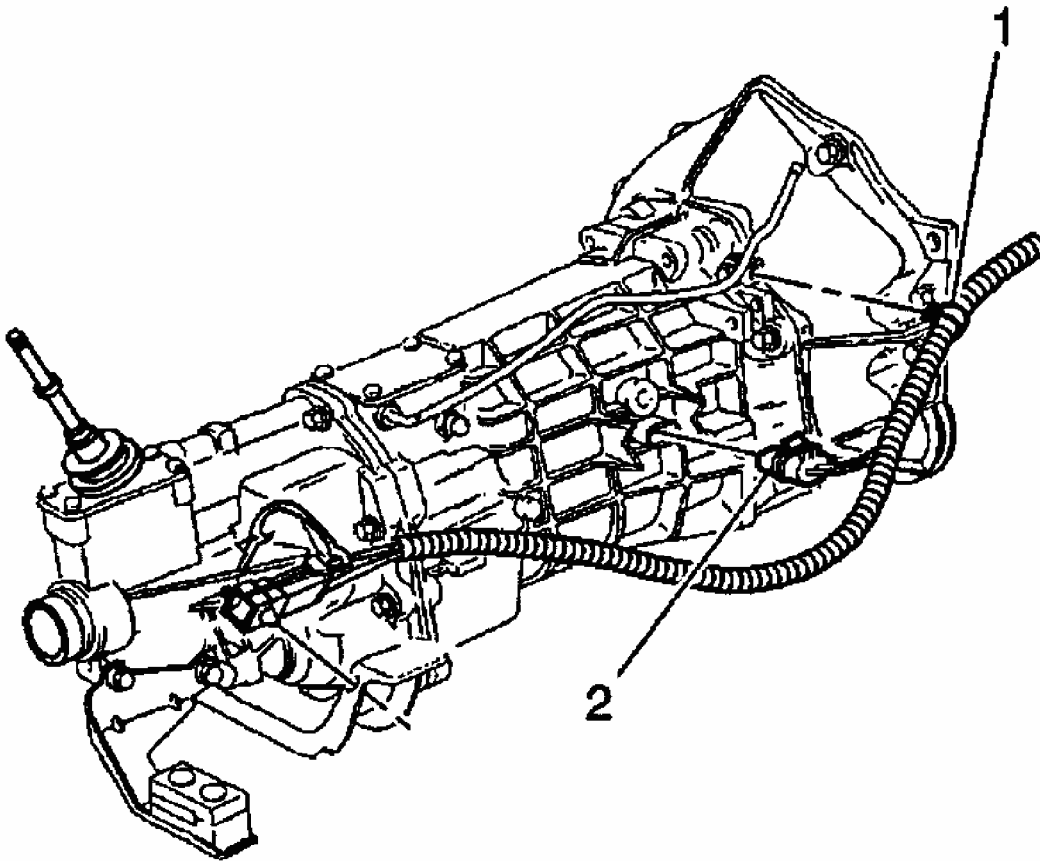
## **BACK-UP LIGHT SWITCH**

### **Removal (Camaro & Firebird)**

Raise and suitably support the vehicle. Disconnect the back-up light switch harness connector (2). See **Fig. 4** . Remove the back-up light switch.

### **Installation**

Apply pipe sealant with Teflon(R) (GM P/N 1052080) or equivalent, to the threads of the back-up light switch. Install the back-up light switch. Tighten the back-up light switch to specification. See **TORQUE SPECIFICATIONS** . Connect the back-up light switch harness connector (2). Ensure wiring harness clip (1) is secure. See **Fig. 4** . Lower the vehicle.



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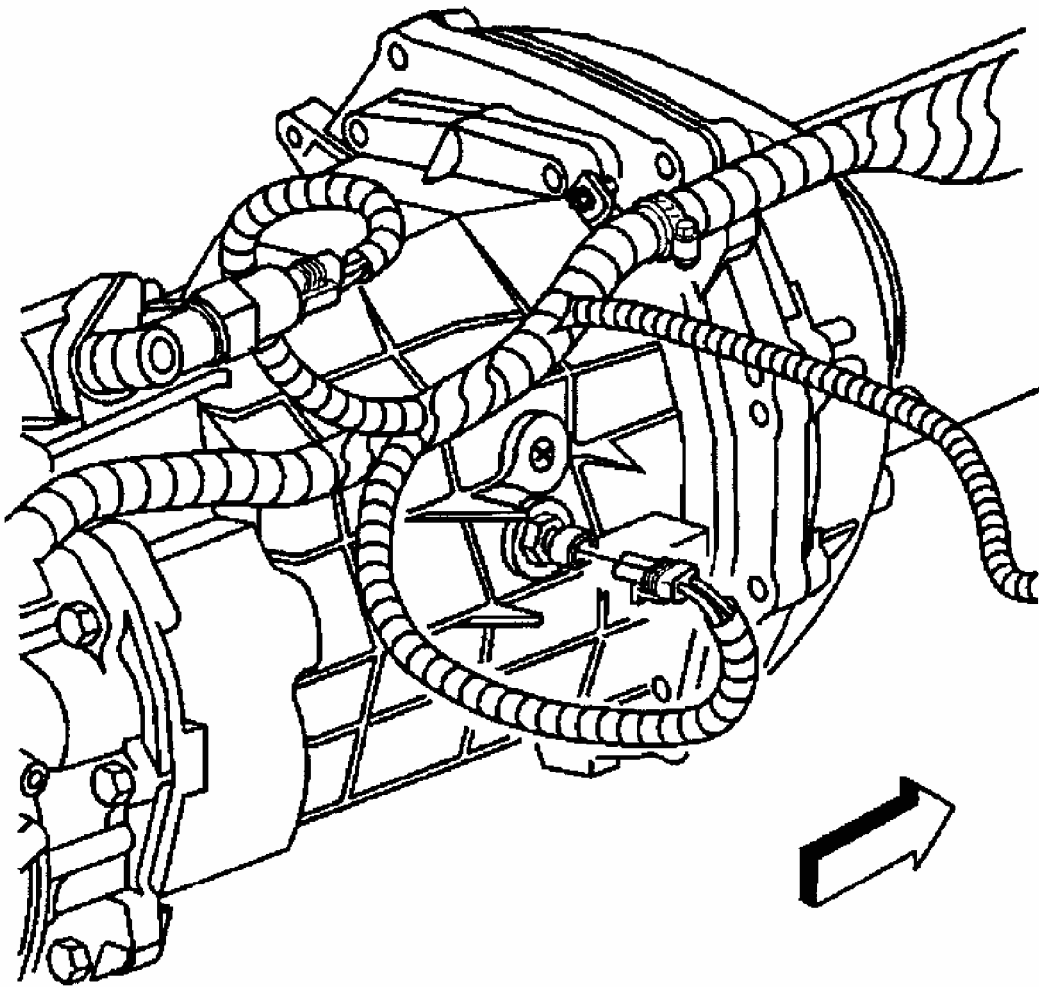
**Fig. 4: Locating Back-Up Light Switch (Camaro & Firebird)**  
Courtesy of GENERAL MOTORS CORP.

**Removal (Corvette)**

Raise and suitably support the vehicle. Remove the catalytic converter. Disconnect the back-up light switch harness connector. See **Fig. 5** . Remove the back-up light switch.

**Installation**

Install the back-up light switch. Tighten the back-up light switch to specification. See **TORQUE SPECIFICATIONS** . Connect the back-up light switch harness connector. See **Fig. 5** . Install the catalytic converter. Lower the vehicle.



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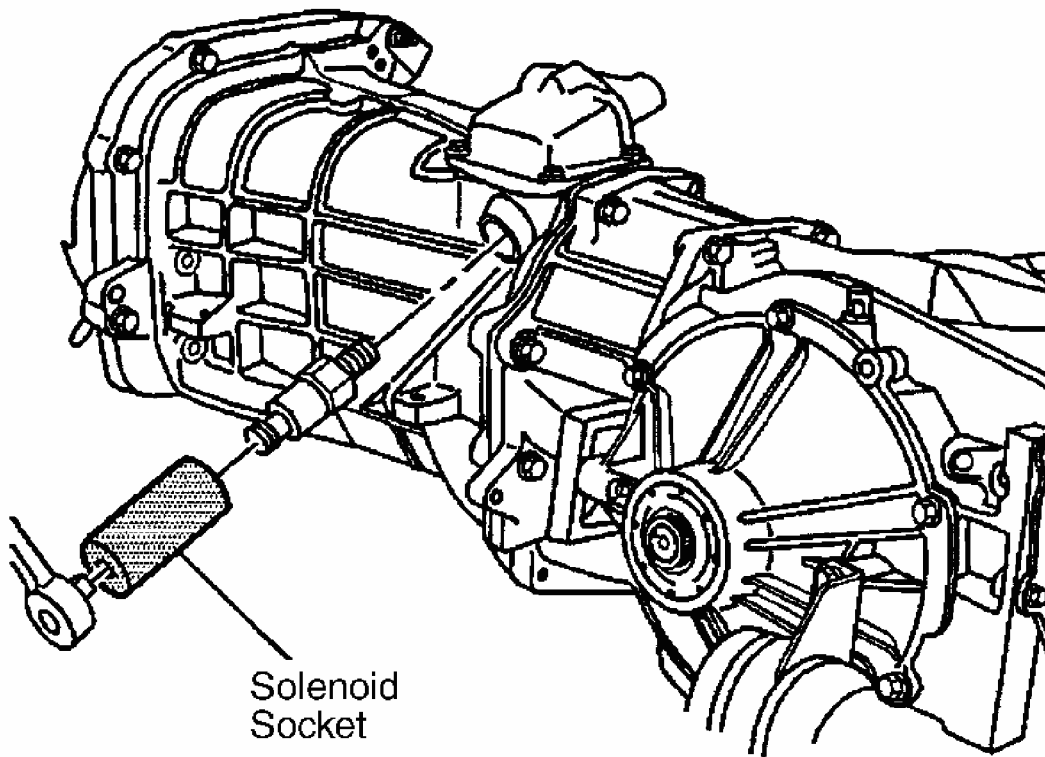
**Fig. 5: Locating Back-Up Light Switch (Corvette)**  
Courtesy of GENERAL MOTORS CORP.

#### **GEAR SELECT/SKIP SHIFT SOLENOID (CORVETTE)**

##### **Removal**

Raise and suitably support the vehicle. Disconnect the gear select solenoid harness connector. Using the Gear Select/Reverse Lock-out Solenoid Socket (J-41099), remove the gear select solenoid. See **Fig. 6** .





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**Fig. 6: Removing & Installing Gear Select/Skip Shift Solenoid**  
Courtesy of GENERAL MOTORS CORP.

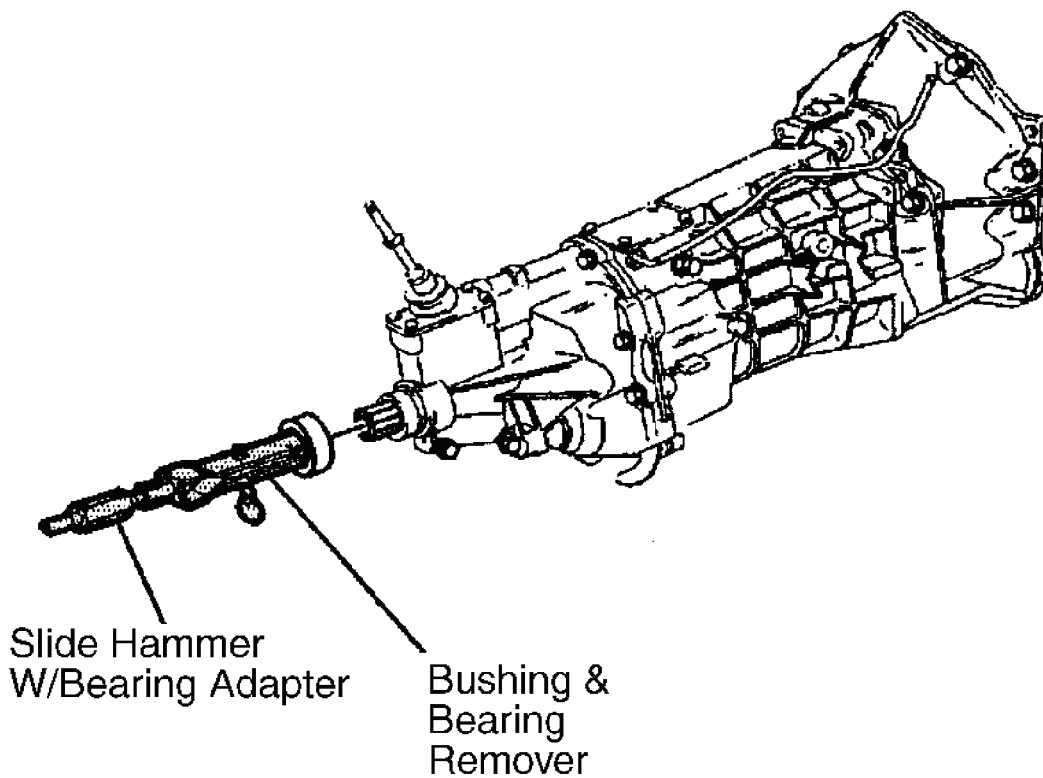
#### Installation

Using the gear select/reverse lock-out solenoid socket, install the gear select/skip shift solenoid. See **Fig. 6** . Tighten the gear select/reverse lock-out solenoid to specification. See **TORQUE SPECIFICATIONS** . Connect the gear select solenoid harness connector. Lower the vehicle.

#### REAR OIL SEAL (CAMARO & FIREBIRD)

##### Removal

Remove the propeller shaft. See appropriate DRIVESHAFT & UNIVERSAL JOINTS article in DRIVE AXLES. Remove the main shaft seal using Slide Hammer with Bearing Adapter (J-23907) and Bushing and Bearing Remover 3-4" (J-26941). See **Fig. 7** .

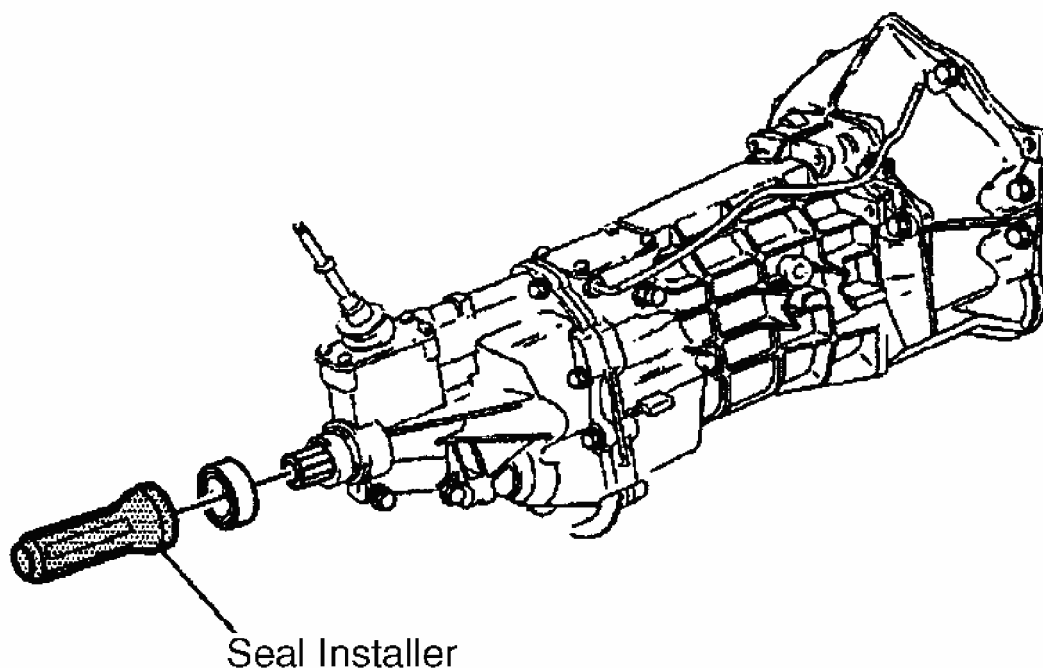


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**Fig. 7: Removing Rear Oil Seal**  
**Courtesy of GENERAL MOTORS CORP.**

**Installation**

Install the main shaft seal using Extension Housing Seal Installer (J-39440). See **Fig. 8** . Lubricate the inside diameter of the seal. Use only Dexron-III(R) ATF. Install the propeller shaft. See appropriate DRIVESHAFT & UNIVERSAL JOINTS article in DRIVE AXLES. Inspect the transmission fluid level. Fill transmission with appropriate fluid to proper level. See **LUBRICATION** .



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**Fig. 8: Installing Rear Oil Seal**  
**Courtesy of GENERAL MOTORS CORP.**

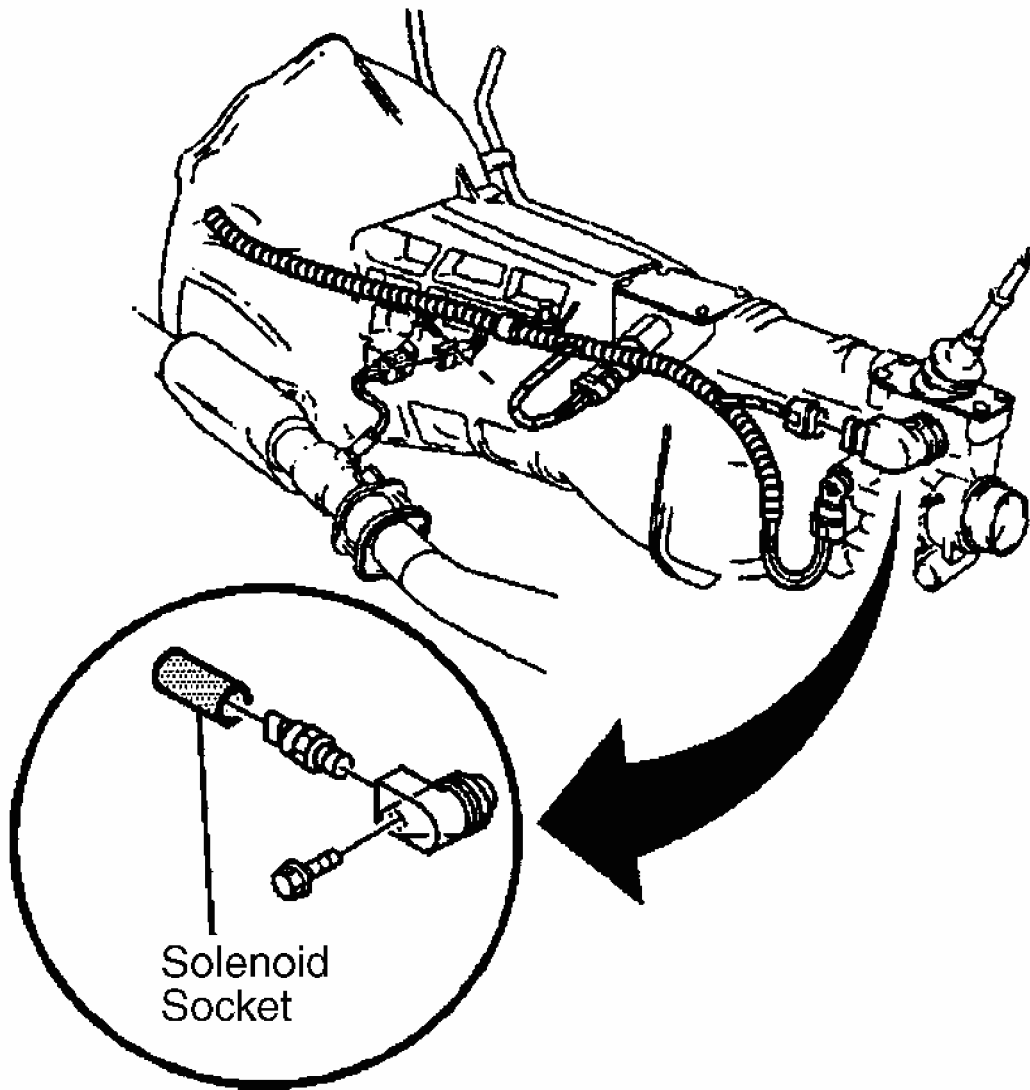
### REVERSE LOCK-OUT SOLENOID

#### Removal (Camaro & Firebird)

Raise and suitably support the vehicle. Remove the reverse lock-out solenoid harness connector. Place a drain pan under the transmission, in case any fluid drips out. Remove the reverse lock-out solenoid using Gear Select/Reverse Lock-out Solenoid Socket (J-41099). See **Fig. 9** . Remove the reverse lock-out assembly bolt. Remove the reverse lock-out assembly.

#### Installation

Install the reverse lock-out assembly. Install the reverse lock-out assembly bolt. Tighten the reverse lock-out assembly bolt to specification. See **TORQUE SPECIFICATIONS** . Install the reverse lock-out solenoid using the gear select/reverse lock-out solenoid socket. Tighten the reverse lock-out solenoid to specification. Remove the drain pan. Connect the reverse lock-out solenoid harness connector. Fill transmission with appropriate fluid to proper level. See **LUBRICATION** . Lower the vehicle.



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**Fig. 9: Removing & Installing Reverse Lock-Out Solenoid (Camaro & Firebird)**  
**Courtesy of GENERAL MOTORS CORP.**

**Removal (Corvette)**

1. Disconnect the negative battery cable. Raise and suitably support the vehicle. Remove the rear tire and wheel assemblies. Remove the intermediate exhaust pipe to muffler bolts.
2. Tie off the mufflers to the underbody to support out of the way. Remove the rear transverse spring. Disconnect the wiring harness and brake pipe clip retainers from the rear suspension crossmember. See appropriate REAR article in SUSPENSION.
3. Position a transmission jack under the rear suspension crossmember and firmly secure

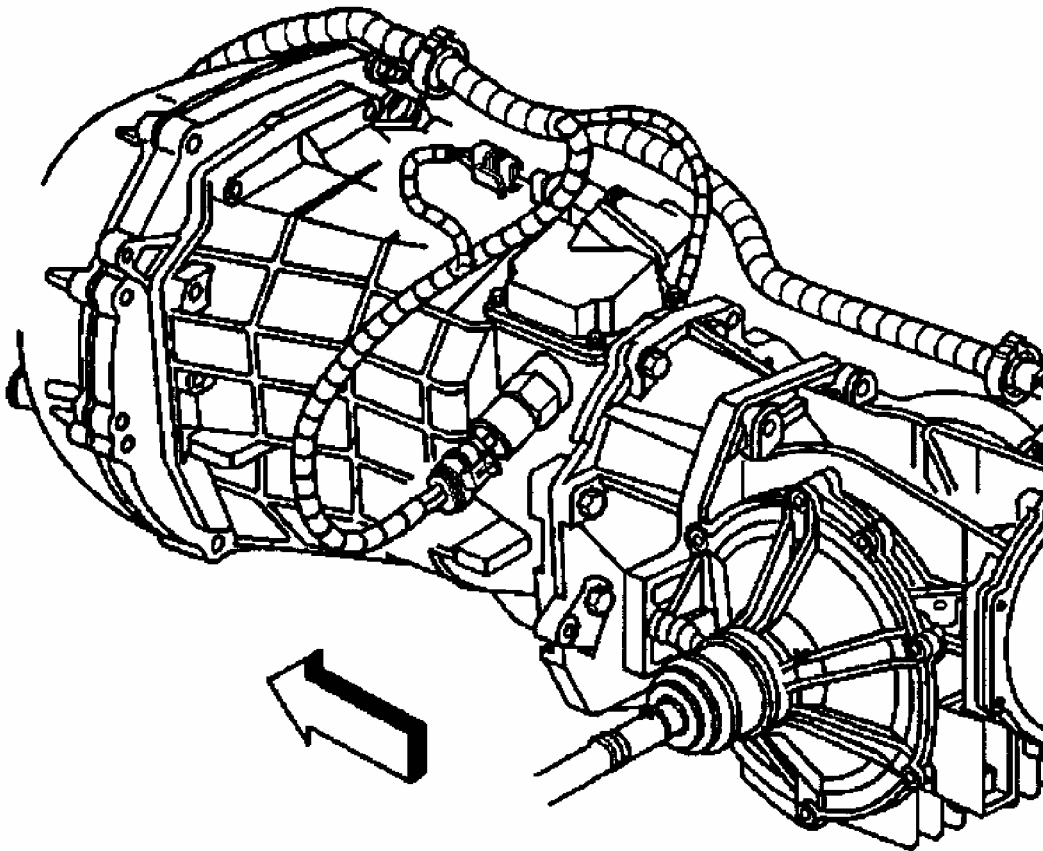
the crossmember to the jack. Using hand tools ONLY, remove the rear suspension crossmember mounting nuts.

**NOTE:**      **Observe the clearance between the driveline and the driveline tunnel closeout panel.**

4. Slowly lower the rear suspension crossmember, along with the attached driveline, approximately 1 1/2". Lower the rear suspension crossmember and driveline for access to the reverse lock-out solenoid.
5. Disconnect the reverse lock-out solenoid harness connector. See **Fig. 10** . Using the Gear Select/Reverse Lockout Solenoid Socket (J-41099), remove the reverse lock-out solenoid. See **Fig. 11** .

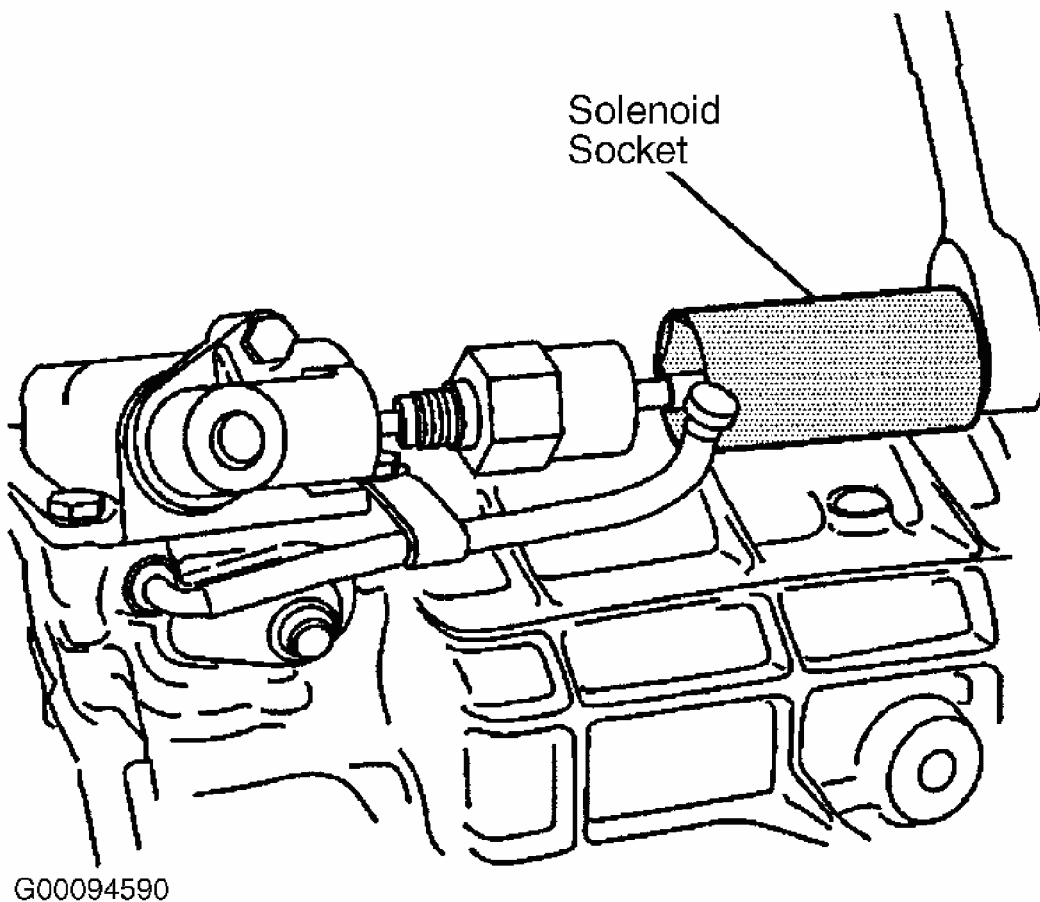
#### Installation

1. Using the gear select/reverse lockout solenoid socket, install the reverse lock-out solenoid. See **Fig. 11** . Tighten the reverse lock-out solenoid to specification. See **TORQUE SPECIFICATIONS** . Connect the reverse lock-out solenoid harness connector. See **Fig. 10** .
2. Slowly raise the rear suspension crossmember to seat to the vehicle frame rails. Using hand tools ONLY, install NEW rear suspension crossmember mounting nuts. See appropriate REAR article in SUSPENSION.
3. Tighten the rear suspension crossmember mounting nuts to specification. See **TORQUE SPECIFICATIONS** . Remove the transmission jack from the rear suspension crossmember.
4. Connect the wiring harness and brake pipe clip retainers to the rear suspension crossmember. Install the rear transverse spring. See appropriate REAR article in SUSPENSION.
5. Remove the tie-off retainers from the muffler assemblies. Install the intermediate exhaust pipe to muffler bolts. Tighten the intermediate exhaust pipe-to-muffler bolts to specification. See **TORQUE SPECIFICATIONS** .
6. Install the rear tire and wheel assemblies. Lower the vehicle. Connect the negative battery cable. Tighten the negative battery cable bolt to specification. See **TORQUE SPECIFICATIONS** . Program the transmitters. See appropriate REMOTE KEYLESS ENTRY SYSTEMS article in ACCESSORIES & EQUIPMENT.



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**Fig. 10: Identifying Reverse Lock-Out Solenoid**  
**Courtesy of GENERAL MOTORS CORP.**



**Fig. 11: Removing & Installing Reverse Lock-Out Solenoid (Corvette)**  
Courtesy of GENERAL MOTORS CORP.

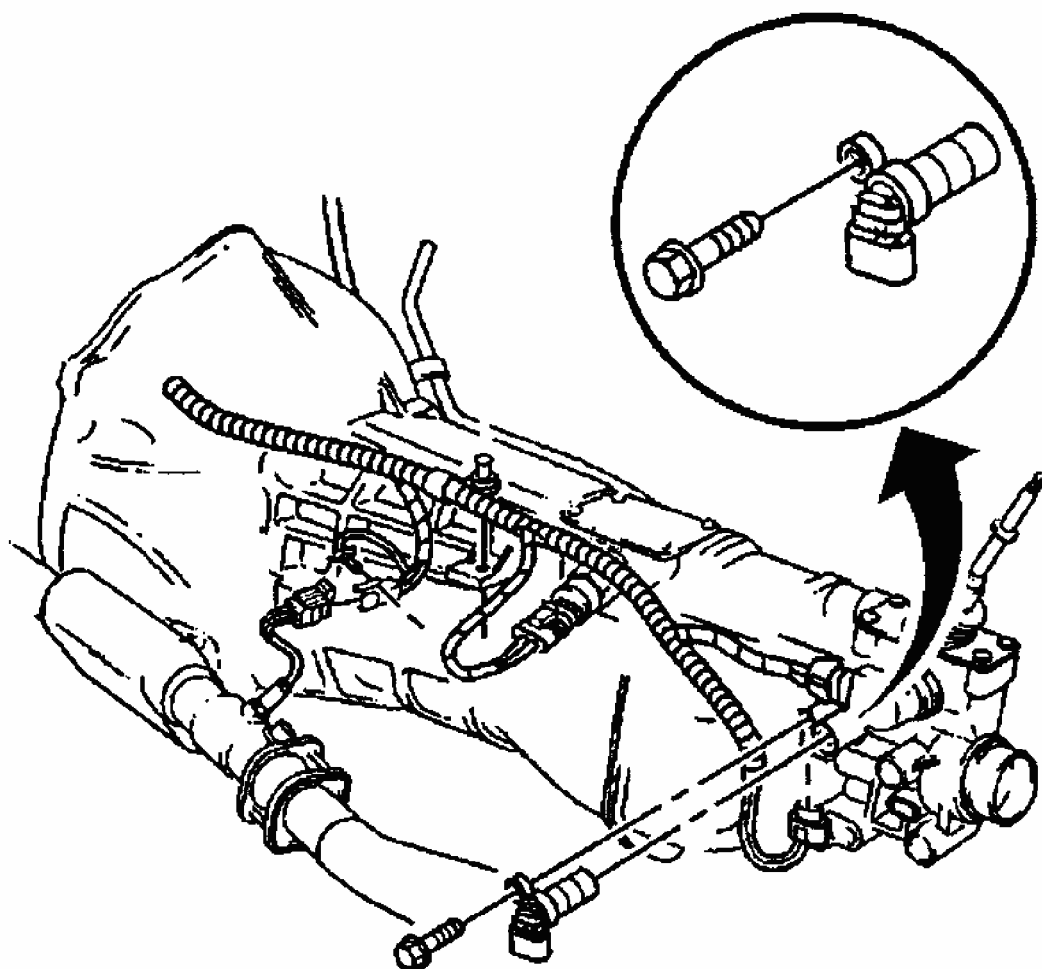
## VEHICLE SPEED SENSOR

### Removal (Camaro & Firebird)

Raise and suitably support the vehicle. Disconnect the vehicle speed sensor harness connector. Remove the attaching bolt and the vehicle speed sensor. Remove the vehicle speed sensor. See **Fig. 12** .

### Installation

Install the vehicle speed sensor. See **Fig. 12** . Install the vehicle speed sensor bolt. Tighten the vehicle speed sensor bolt to specification. See **TORQUE SPECIFICATIONS** . Connect the vehicle speed sensor harness connector. Lower the vehicle.



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**Fig. 12: Removing & Installing Vehicle Speed Sensor**  
Courtesy of GENERAL MOTORS CORP.

#### Removal (Corvette)

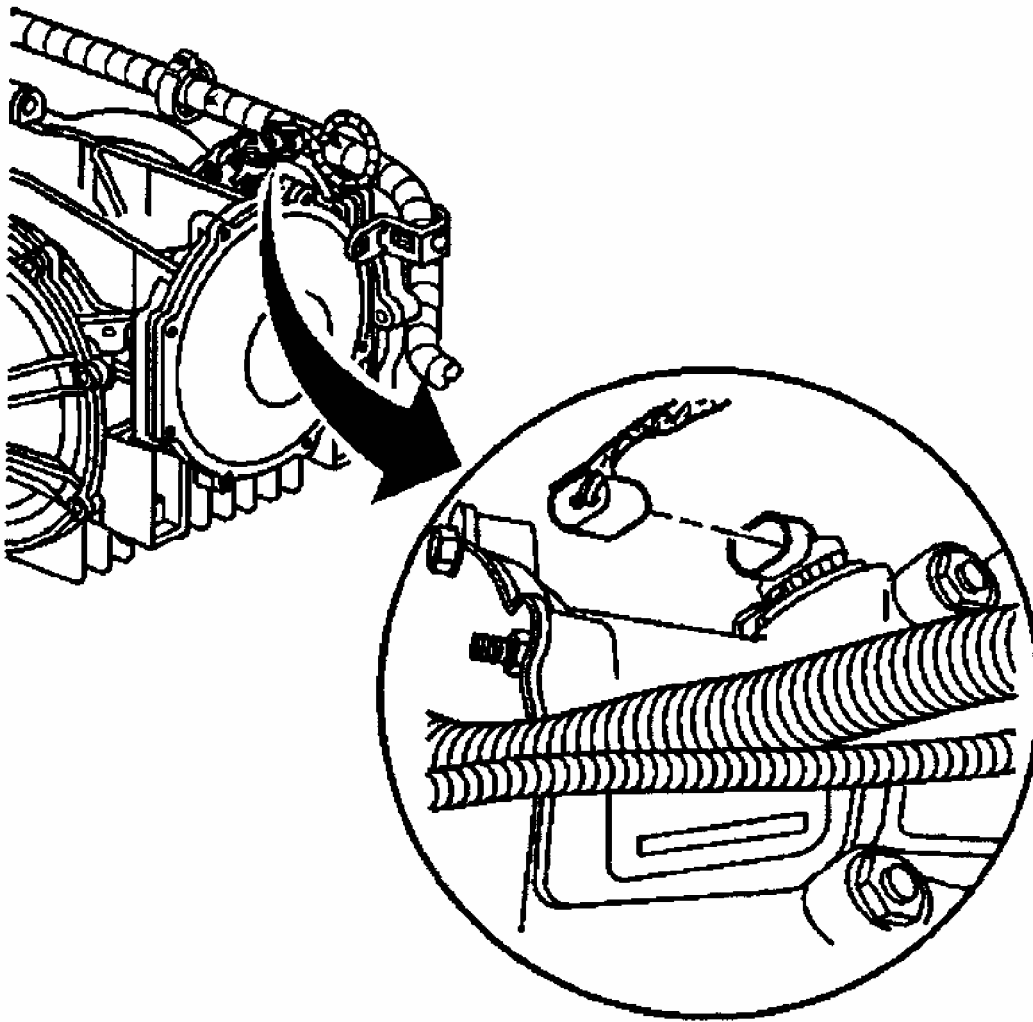
Raise and suitably the vehicle. Remove the right side muffler assembly. Clean any dirt from around the vehicle speed sensor. Disconnect the harness connector from the Vehicle Speed Sensor (VSS). See **Fig. 13** . Remove the bolt retaining the VSS to the rear differential case. See **Fig. 14** . Remove the VSS from the differential case.

#### Installation

Lubricate the O-ring seal of the VSS with clean engine oil. Install the VSS into the hole on the axle case. See **Fig. 14** . Install the VSS retaining bolt the differential. Tighten the vehicle speed sensor retaining bolt to specification. See **TORQUE SPECIFICATIONS** . Connect the harness connector to the sensor. See **Fig. 13** . Install the right side muffler assembly.

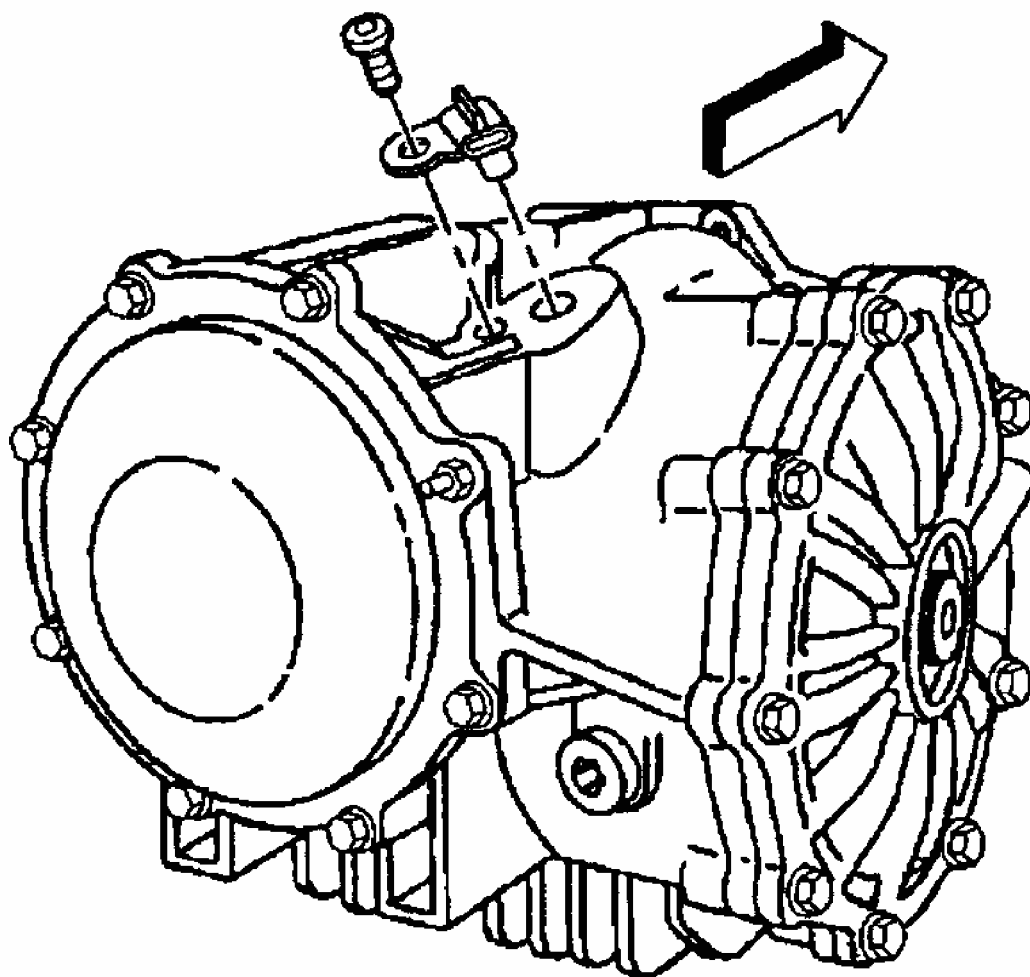


Lower the vehicle.



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**Fig. 13: Locating Vehicle Speed Sensor**  
Courtesy of GENERAL MOTORS CORP.



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**Fig. 14: Removing & Installing Vehicle Speed Sensor**  
 Courtesy of GENERAL MOTORS CORP.

## TORQUE SPECIFICATIONS

### TORQUE SPECIFICATIONS

Application	Ft. Lbs. (N.m)
Back-Up Light Switch	
Camaro & Firebird	20 (27)
Corvette	15 (20)
Drain & Fill Plug	20 (27)
Gear Select/Reverse Lockout Solenoid	30 (40)
Intermediate Exhaust Pipe-To-Muffler Bolt	42 (57)

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Rear Suspension Crossmember Mounting Nut	81 (110)
Reverse Lock-Out Solenoid	30 (40)
Reverse Lock-Out Solenoid Bolt	13 (17)
<b>INCH Lbs. (N.m)</b>	
Vehicle Speed Sensor Bolt	89 (10)