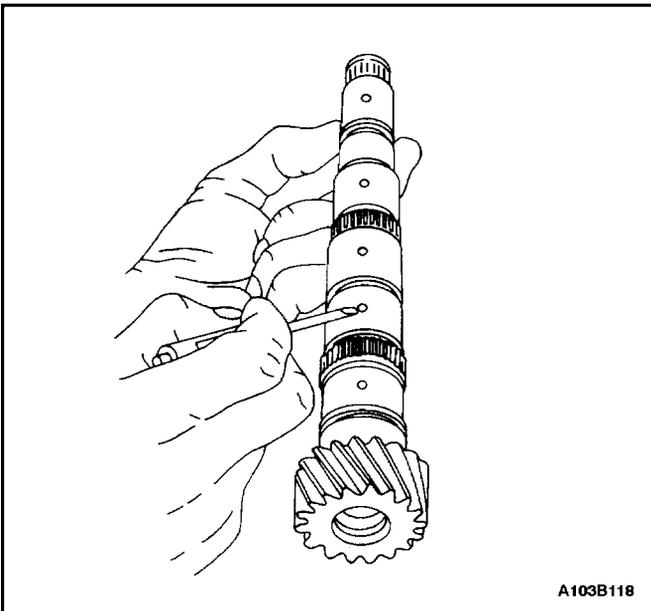
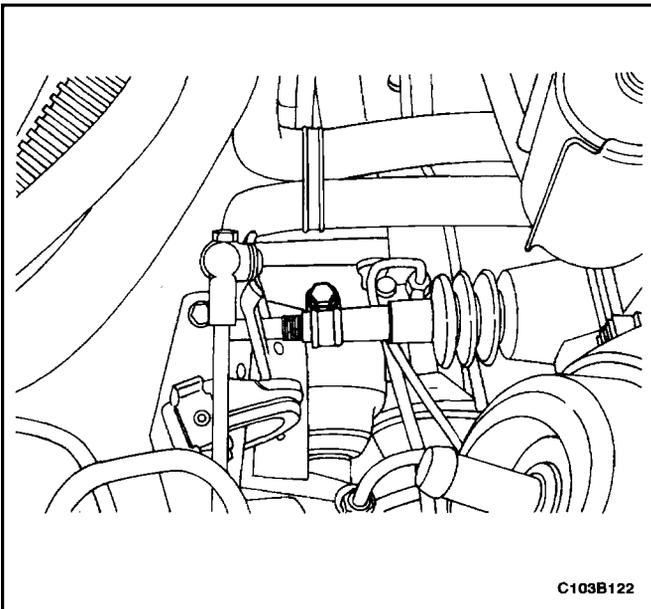


A103B030



A103B118



C103B122

## MAINTENANCE AND REPAIR

### ON-VEHICLE SERVICE

#### CHECKING FLUID LEVEL

1. With the vehicle on a level surface and the fluid in the transaxle cold, remove the filler plug and check the fluid level. The fluid should come to the bottom edge of the plug hole.
2. If the level is low, add SAE 80 manual transaxle fluid through the filler plug hole until the fluid begins to run out.
3. Reinstall the filler plug and tighten it securely.

**Important :** The speed gears and the synchronizer parts on this vehicle receive lubrication through specific passages in the mainshaft.

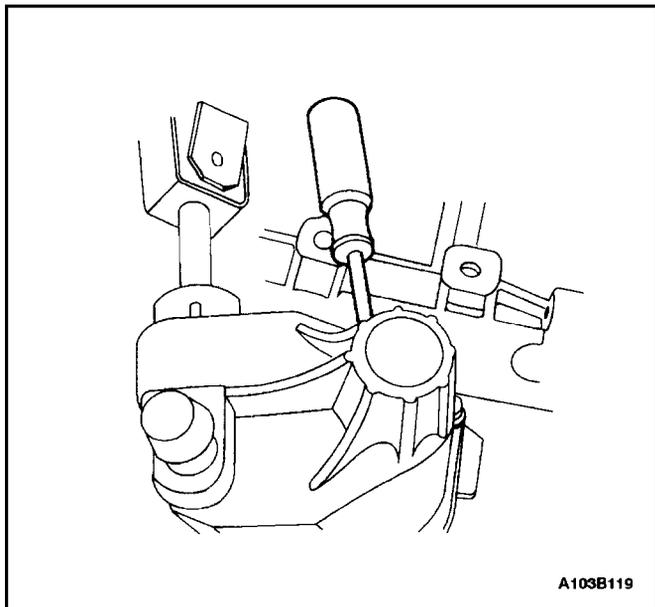
It takes 1.8 liters (1.90 quarts) to fill the transaxle completely.

#### SHIFT LINKAGE ADJUSTMENT

1. Disconnect the negative battery cable.
2. Position the gearshift lever into NEUTRAL.

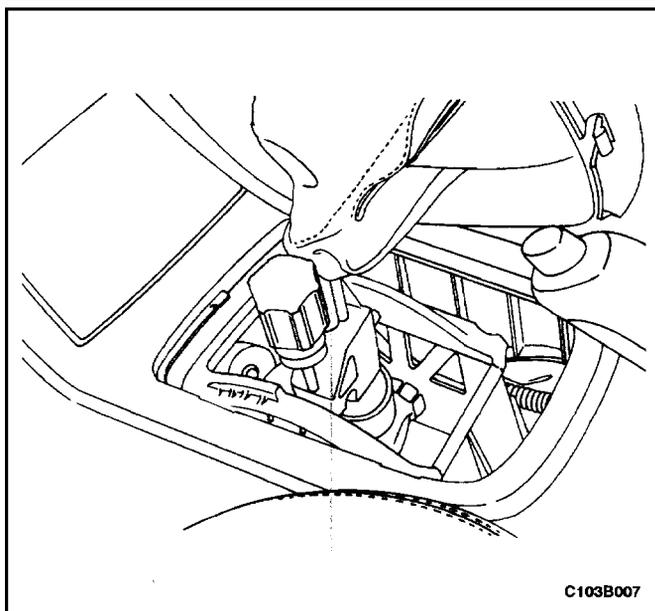
**Important :** All the gears must be easy to engage when the vehicle is stationary, the engine is running, and the clutch is disengaged.

3. Loosen the rod clamp bolt.



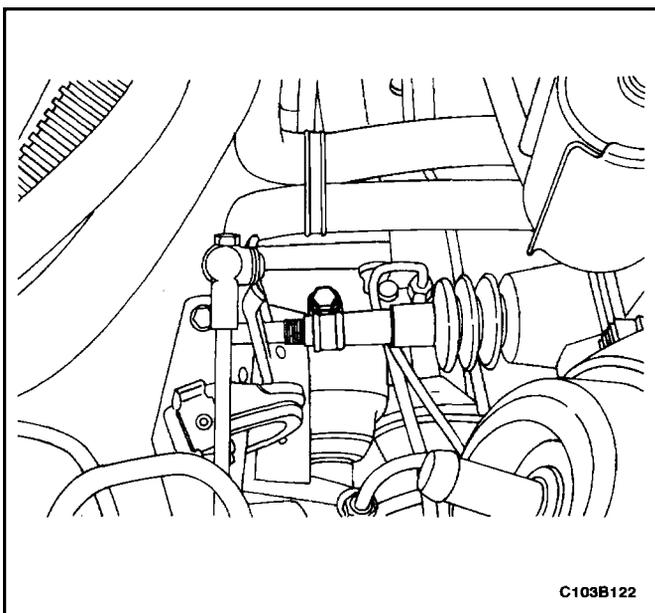
A103B119

4. Remove the adjustment hole plug from the shift lever cover.
5. Turn the gearshift rod and fully insert a 5 mm (0.2 inch) gauge pin into the adjustment hole.



C103B007

6. Remove the boot from the console.
7. Pull the boot upward to expose the shift control lever mechanism.
8. Position the gearshift lever close to the left side of the NEUTRAL position.
9. Insert a 5 mm (0.2 inch) gauge pin into the holes to align the gearshift lever with the gearshift lever housing.

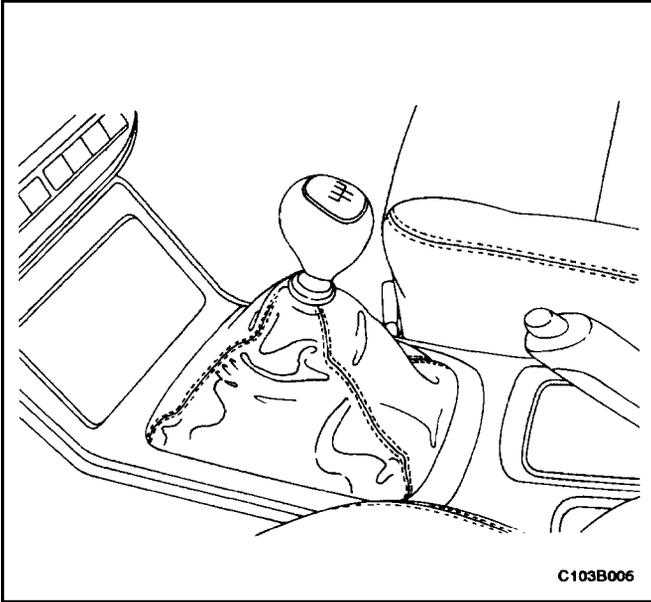


C103B122

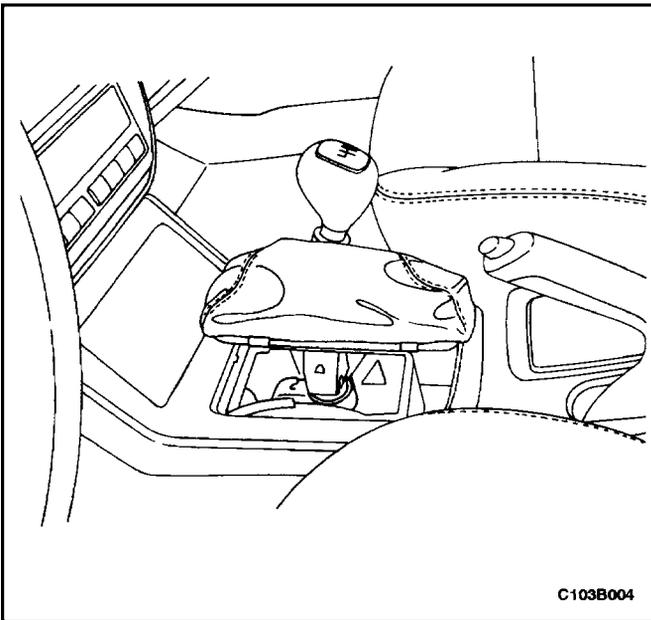
10. Tighten the rod clamp bolt.

**Tighten**

Tighten the rod clamp bolt to 14N•m (124 lb-in).



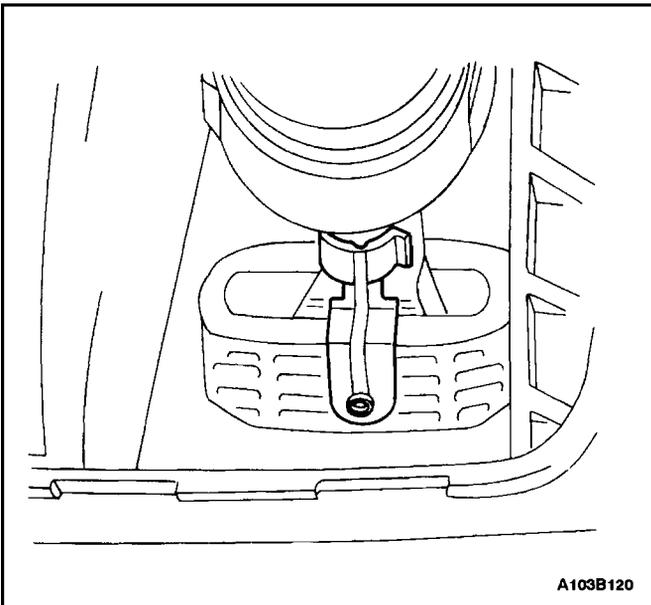
11. Remove the 5 mm (0.2 inch) gauge pin from the adjustment hole.
12. Install the adjustment hole plug.
13. Remove the 5 mm (0.2 inch) gauge pin from the gearshift lever.
14. Install the boot to the console.
15. Connect the negative battery cable.

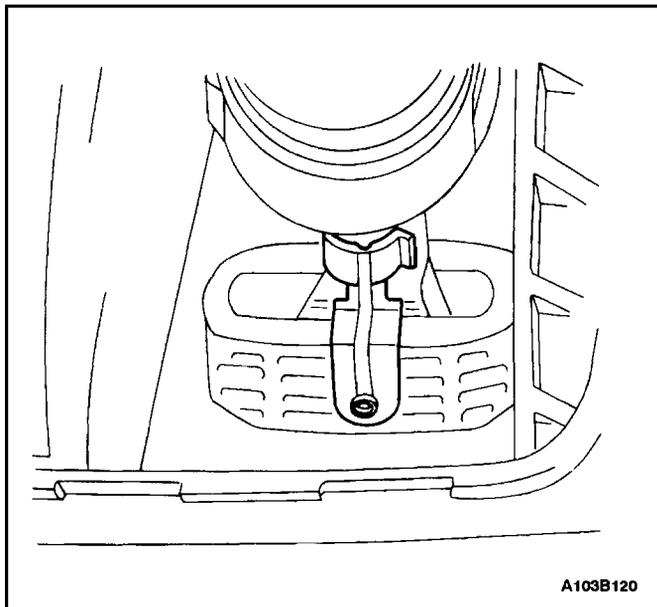


## GEARSHIFT LEVER

### Removal Procedure

1. Disconnect the negative battery cable.
2. Position the gearshift lever into NEUTRAL.
3. Disconnect the boot from the console cover.
4. Lift the console cover upward to expose the shift control lever mechanism.
5. Rotate the gearshift lever stop clamp and remove it.
6. Remove the gearshift lever from the gearshift lever shaft.

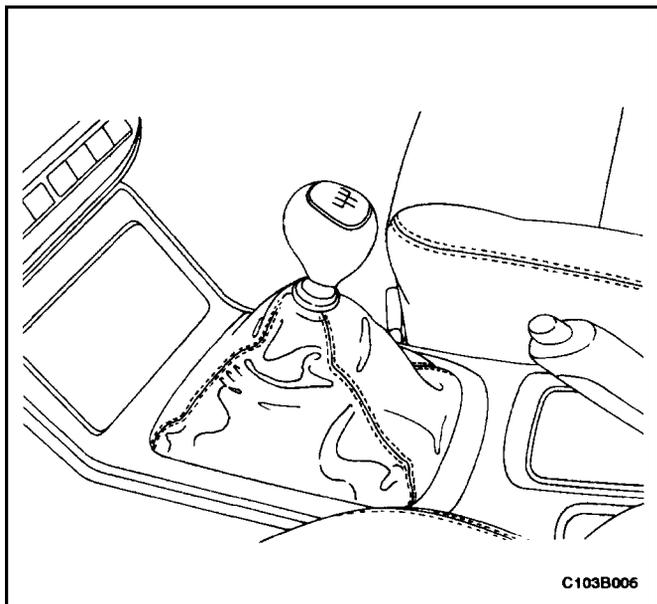




A103B120

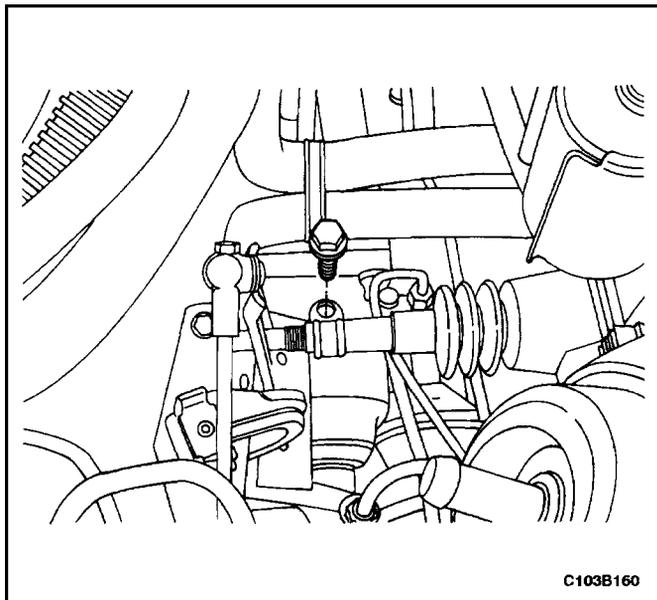
### Installation Procedure

1. Install the gearshift lever into the gearshift lever shaft.
2. Install the gearshift lever stop clamp.
3. Rotate the gearshift lever stop clamp to secure it.



C103B006

4. Lower the boot and connect it to the console cover.
5. Connect the negative battery cable.

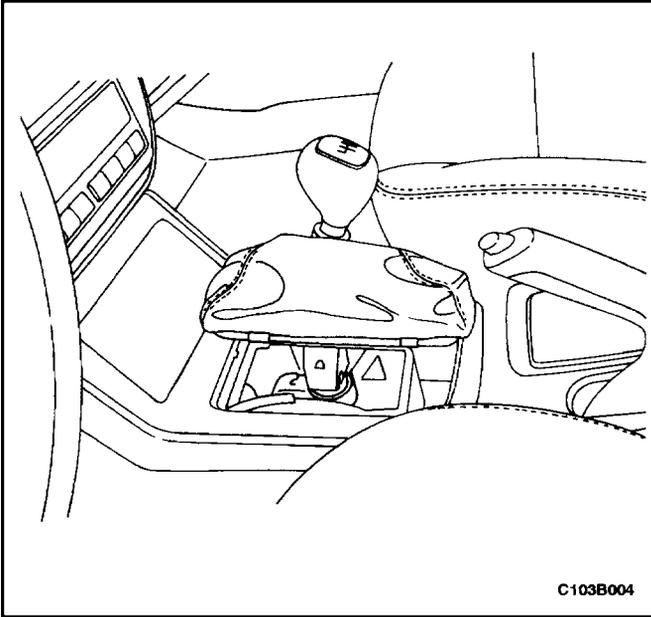


C103B160

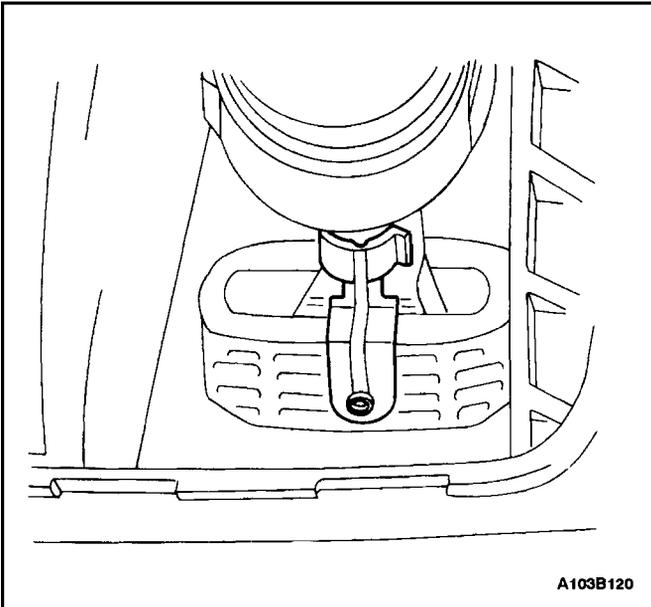
### GEARSHIFT TUBE, BOOT, BUSHING AND/OR BEARING RING

#### Removal Procedure

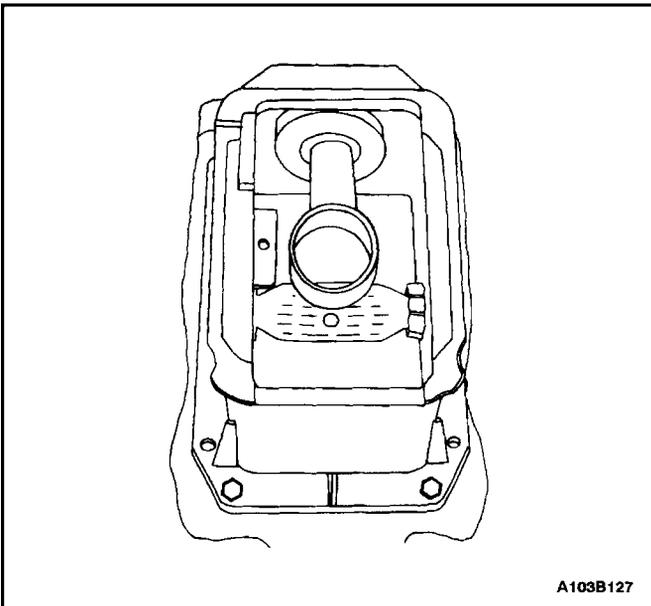
1. Disconnect the negative battery cable.
2. Remove the rod clamp bolt.
3. Separate the linkage bolt from the gearshift tube.
4. Remove the rod clamp from the gearshift tube.



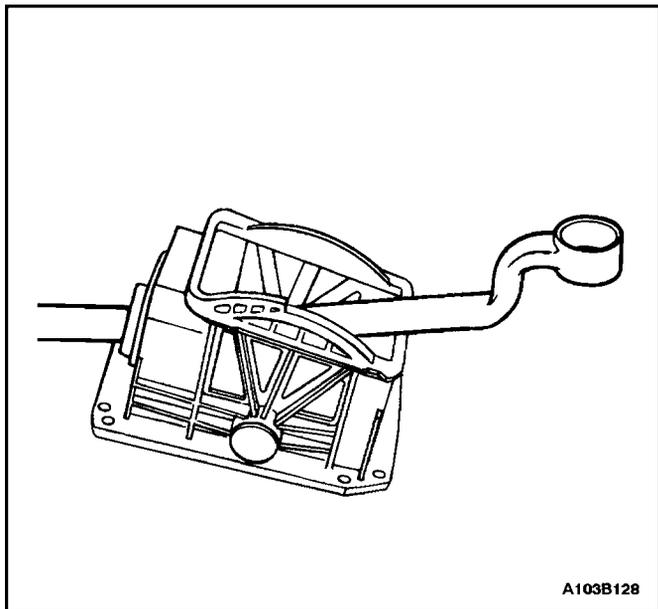
5. Position the shift lever into NEUTRAL.
6. Disconnect the gearshift boot from the front portion of the floor console and lift upward to expose the shift control lever mechanism.



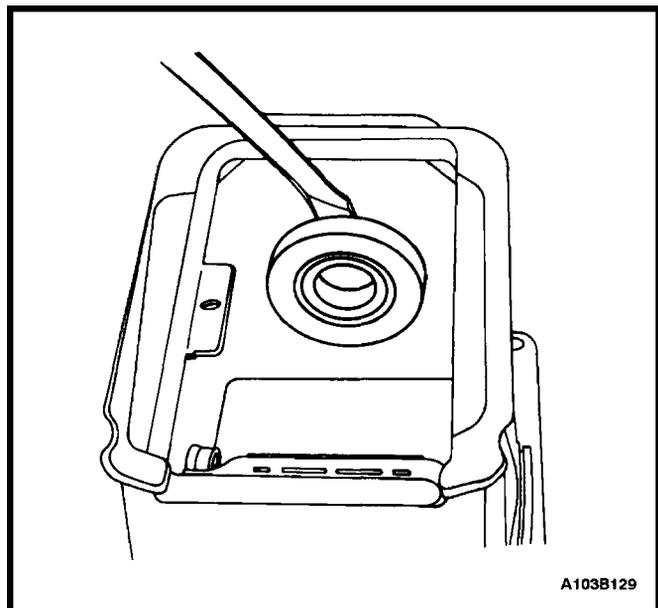
7. Rotate the gearshift lever stop clamp and remove it.
8. Remove the gearshift lever and the boot.
9. Remove the center console. Refer to *Section 9G, Interior Trim*.



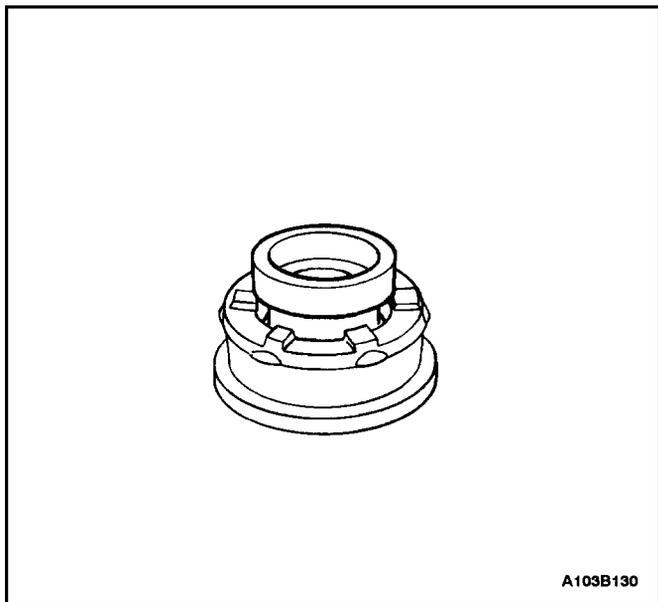
10. Remove the gearshift housing bolts.
11. Remove the gearshift tube with the gearshift housing from the vehicle.



12. Remove the gearshift tube from the gearshift housing.



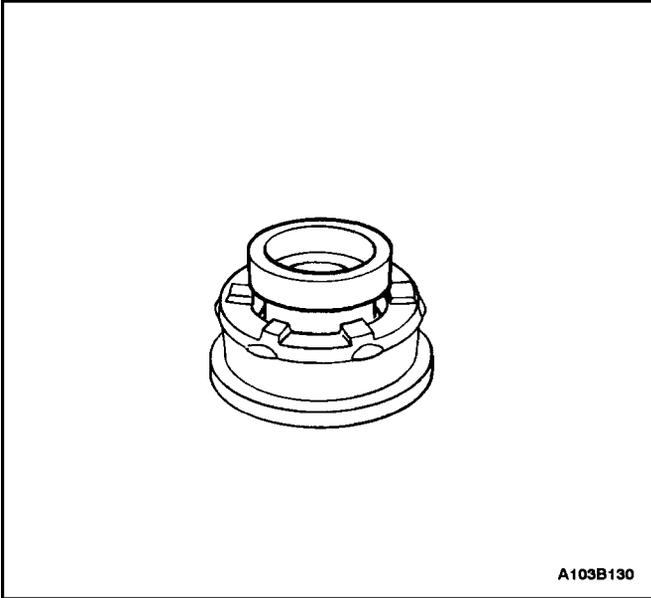
13. Remove the bushing and the gearshift tube bearing from the gearshift housing.



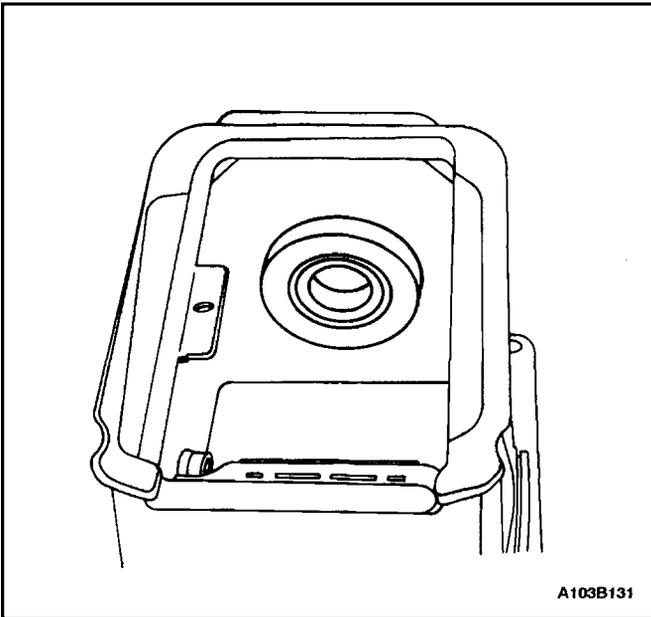
14. Remove the bushing from the gearshift tube bearing.

### Installation Procedure

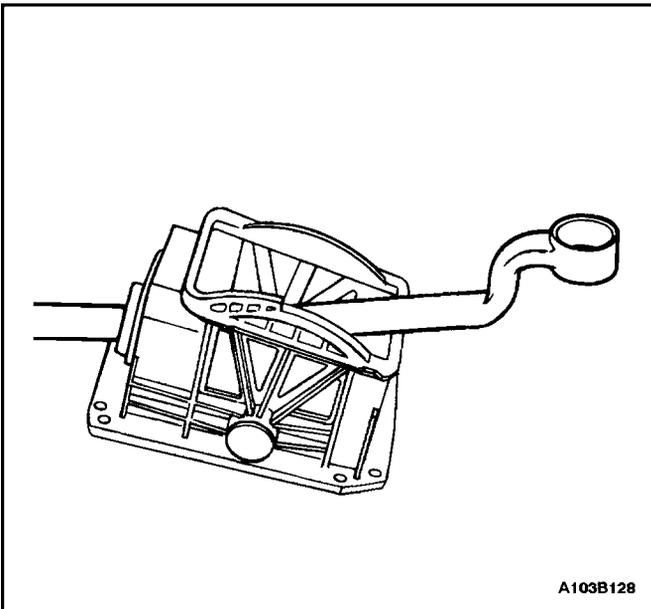
1. Install the bushing into the gearshift tube bearing.

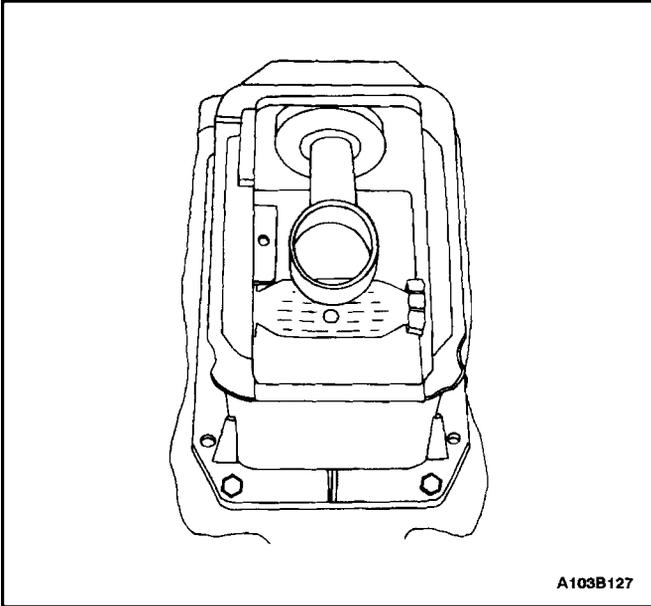


2. Fill the grooves of the bushing with silicone grease.
3. Press the bearing ring into the gearshift housing from the inside.



4. Install the gearshift tube through the bushing into the gearshift housing.





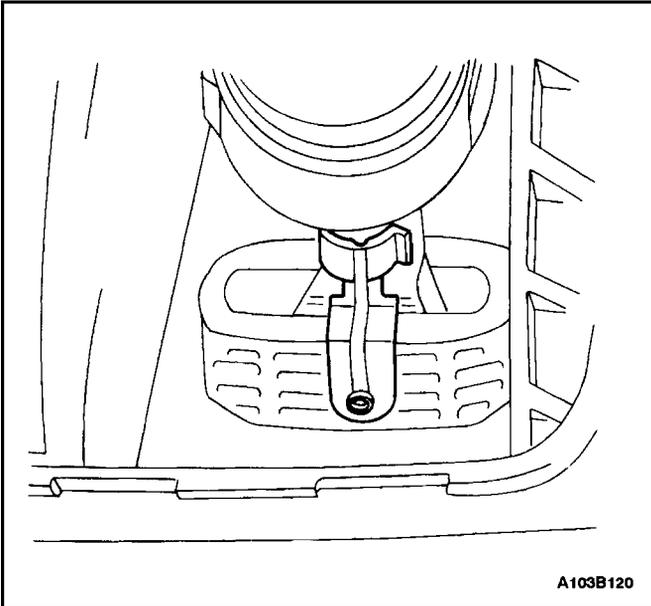
A103B127

5. Install the gearshift housing and the gearshift tube into the vehicle.
6. Install the gearshift housing bolts.

**Tighten**

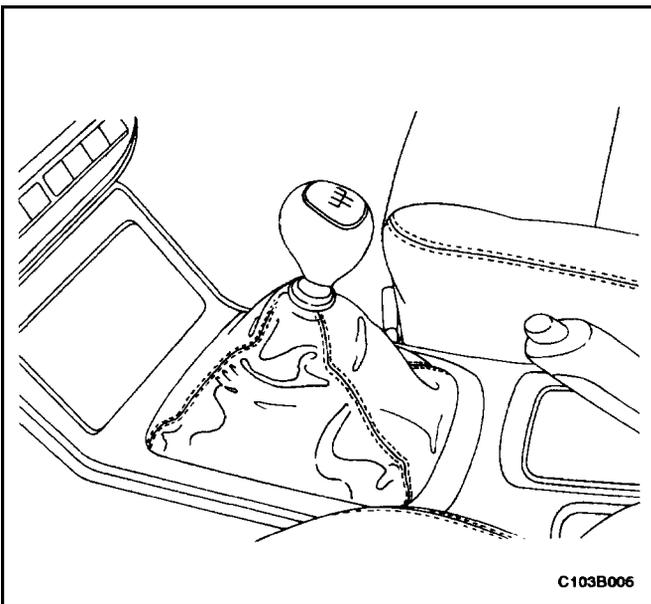
Tighten the gearshift housing bolts to 6 N•m (53 lb-in).

7. Install the center console. Refer to *Section 9G, Interior Trim*.



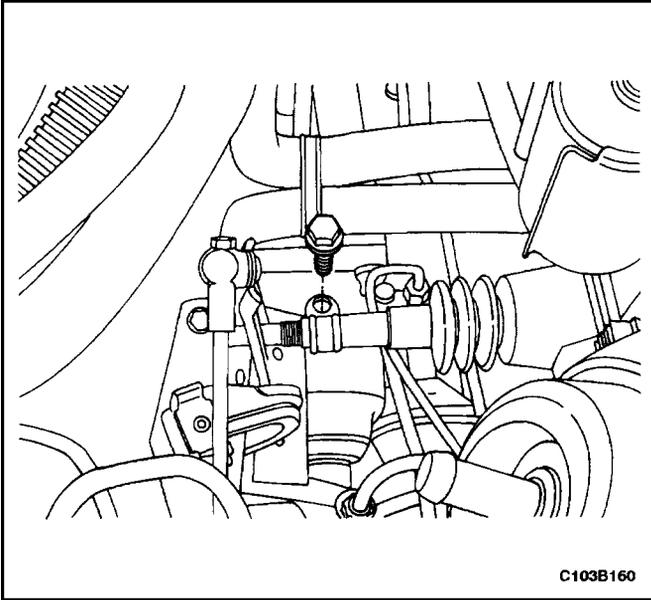
A103B120

8. Install the shift lever into the shaft.
9. Install the gearshift lever stop clamp and rotate it into position.



C103B006

10. Install the gearshift boot.



11. Install the rod clamp onto the gearshift tube.
12. Connect the linkage bolt to the gearshift tube.
13. Install the rod clamp bolt.
14. Adjust the shift linkage. Refer to "Shift Linkage Adjustment" in this section.
15. Tighten the rod clamp bolt.

**Tighten**

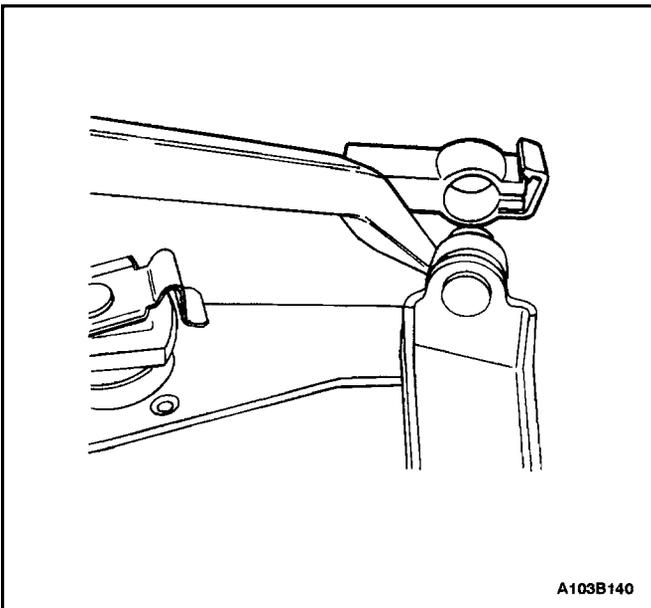
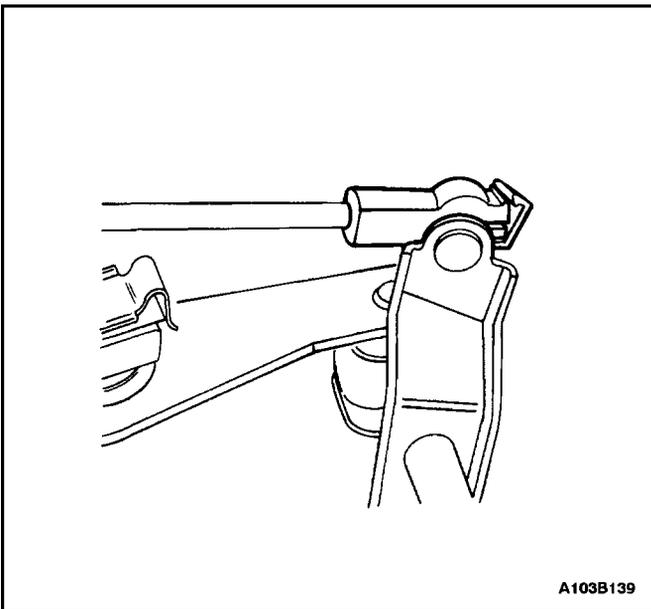
Tighten the rod clamp bolt to 14 N•m (124 lb-in).

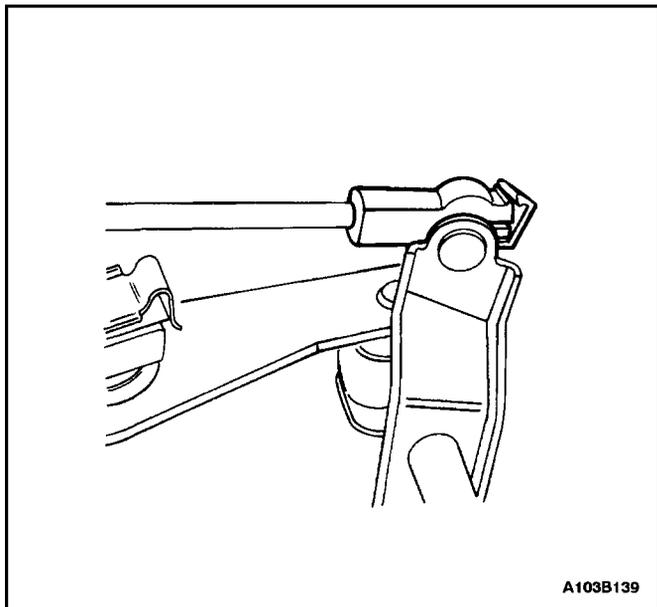
16. Connect the negative battery cable.

## CONTROL SHIFT ROD

### Removal Procedure

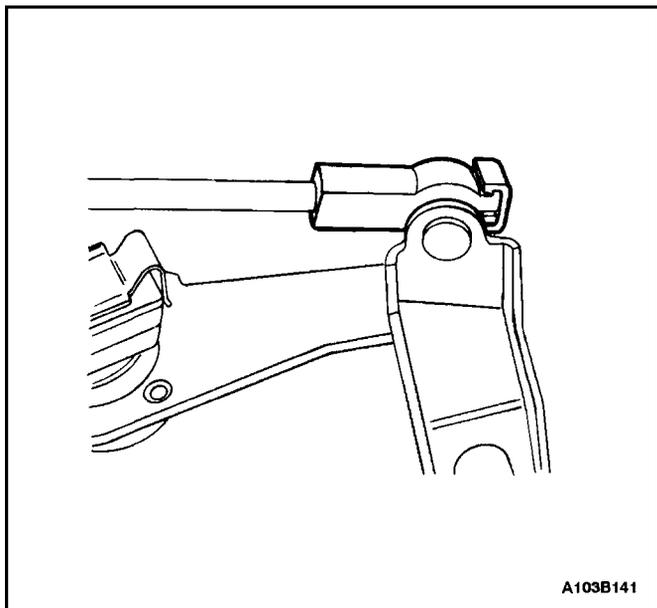
1. Disconnect the negative battery cable.
2. Separate the plastic clip from the end of each ball socket.
3. Separate the ball sockets from the ball studs on the linkage bolts using a pry bar.
4. Remove the control shift rod from the vehicle.



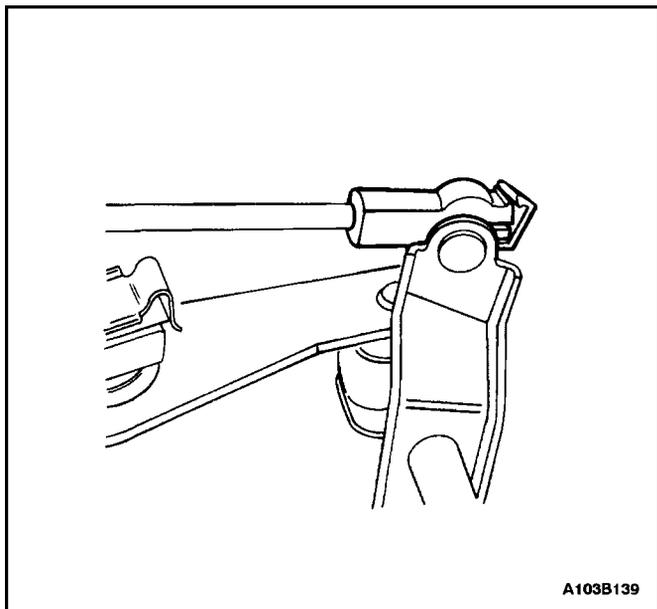


### Installation Procedure

1. Install the control shift rod into the vehicle.
2. Press the ball sockets onto the ball studs on the linkage bolts.



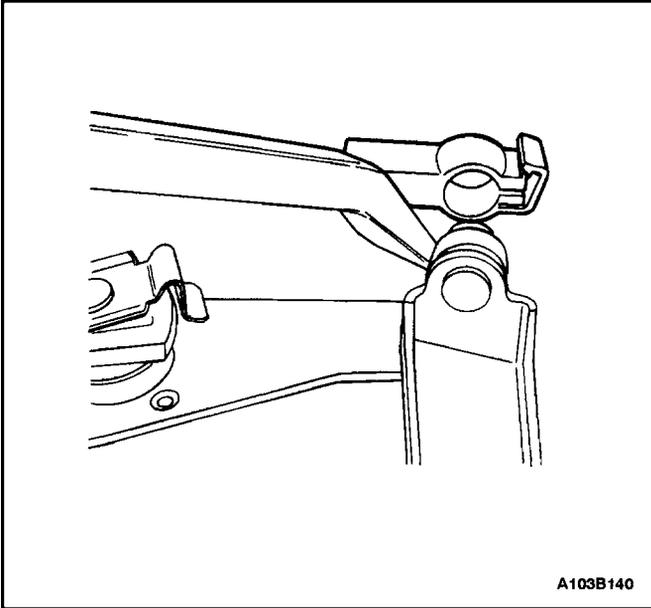
3. Connect the plastic clip on the end of each ball socket.
4. Connect the negative battery cable.



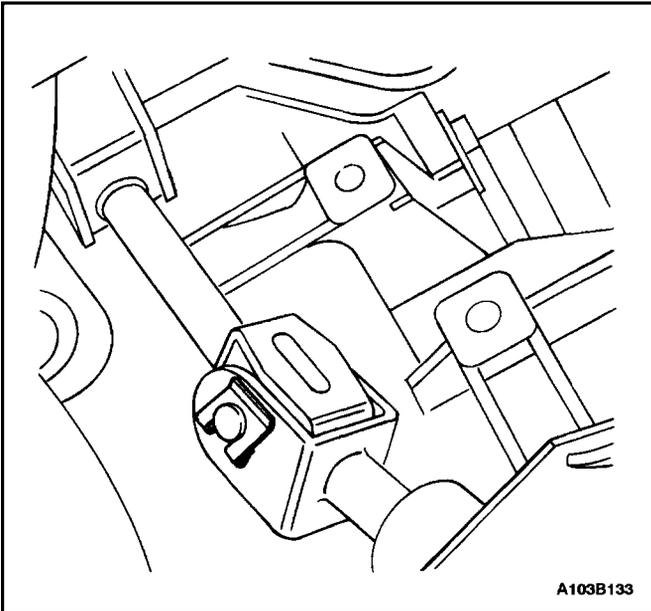
### LINKAGE LEVER AND/OR BUSHINGS

#### Removal Procedure

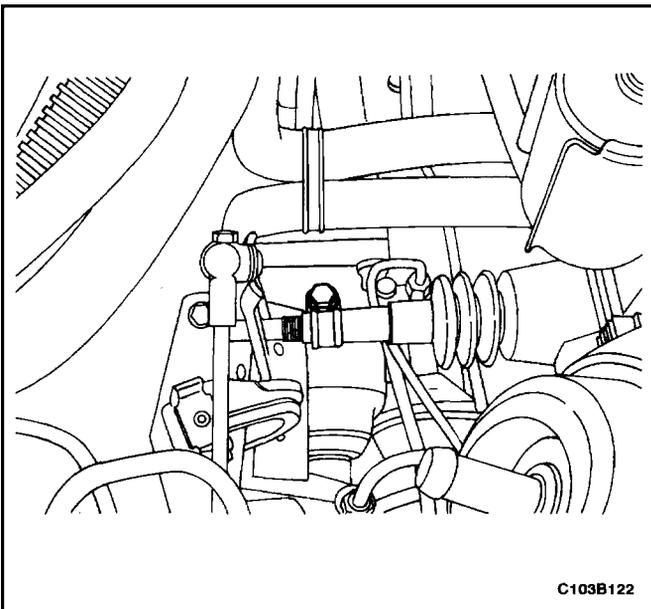
1. Disconnect the negative battery cable.
2. Separate the plastic clip from the end of each ball socket.



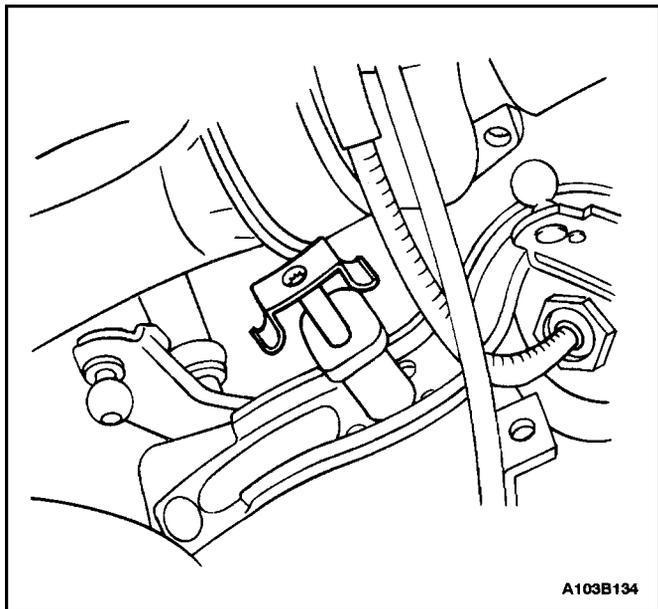
3. Separate the ball sockets from the ball studs on the linkage bolts using a pry bar.
4. Remove the control shift rod.



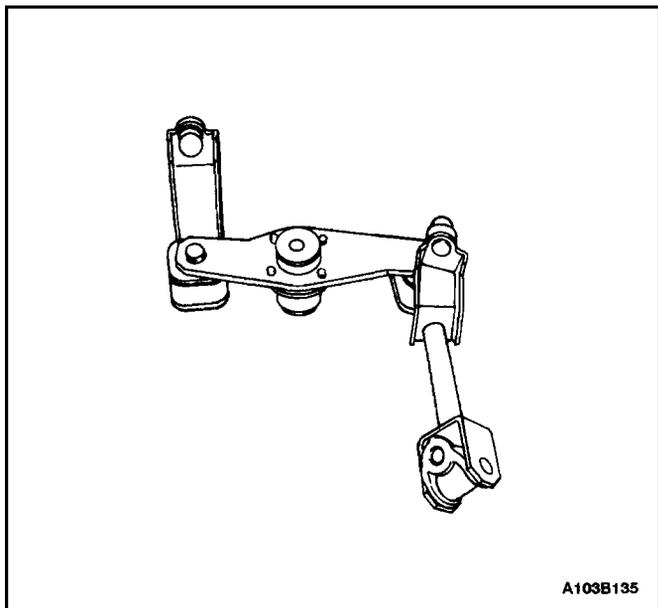
5. Remove the clip and the bolt from the universal joint.



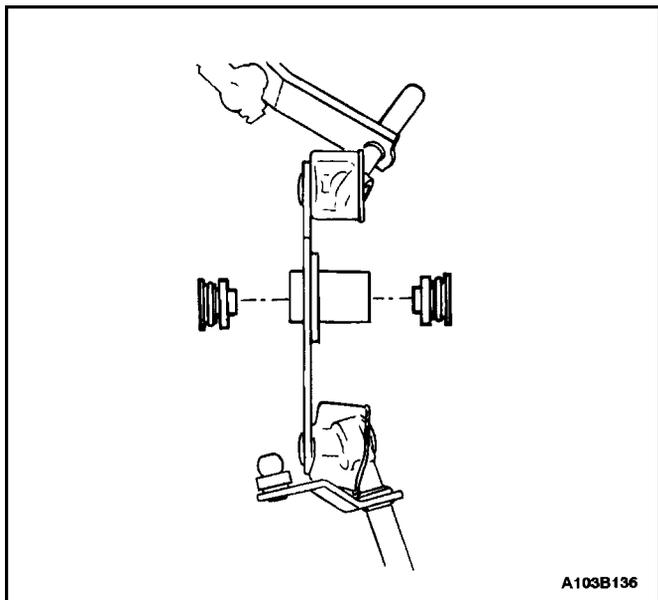
6. Loosen the rod clamp bolt.
7. Separate the linkage bolt from the shift tube.



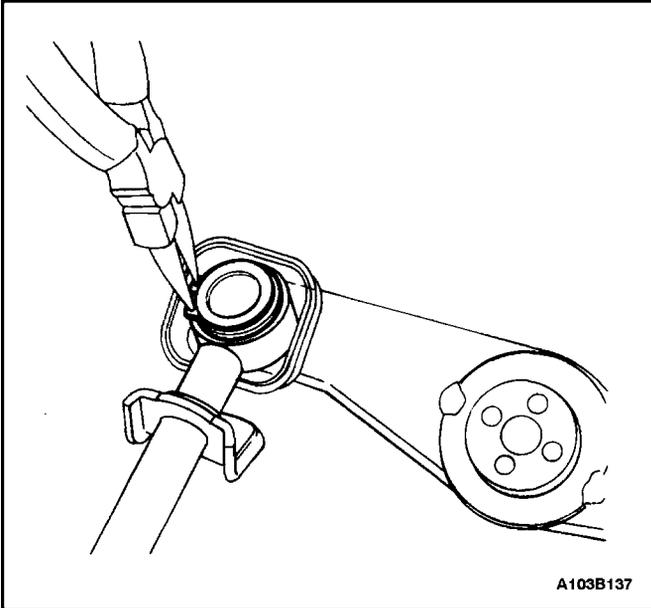
8. Loosen the spring clips and remove the pivot bolt.



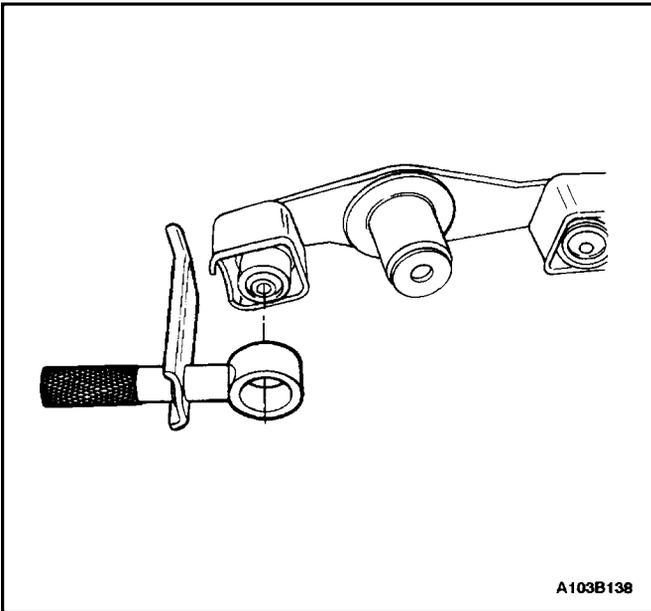
9. Remove the linkage lever assembly from the vehicle.



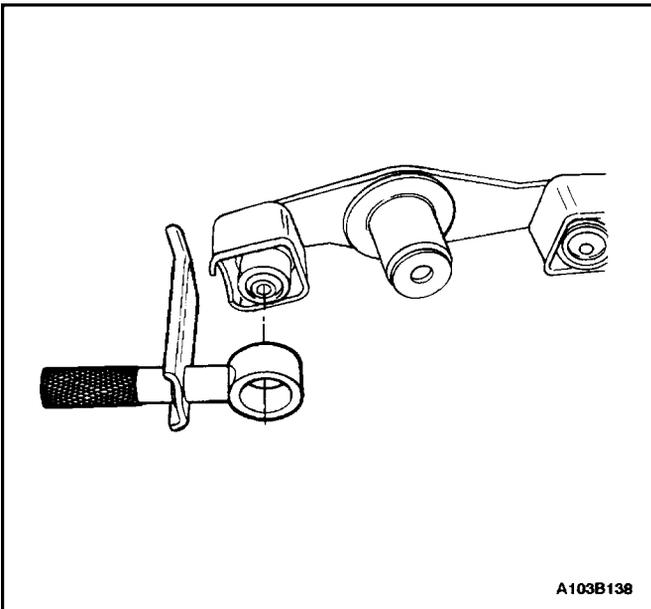
10. Remove both linkage lever bushings from the linkage lever assembly.



11. Remove the snap rings retaining the linkage bolts to the linkage lever assembly.

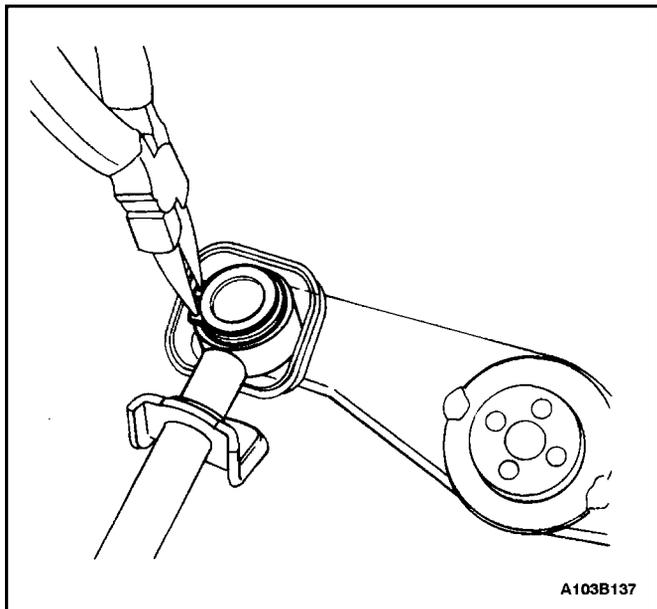


12. Disconnect the linkage bolts from the linkage lever.

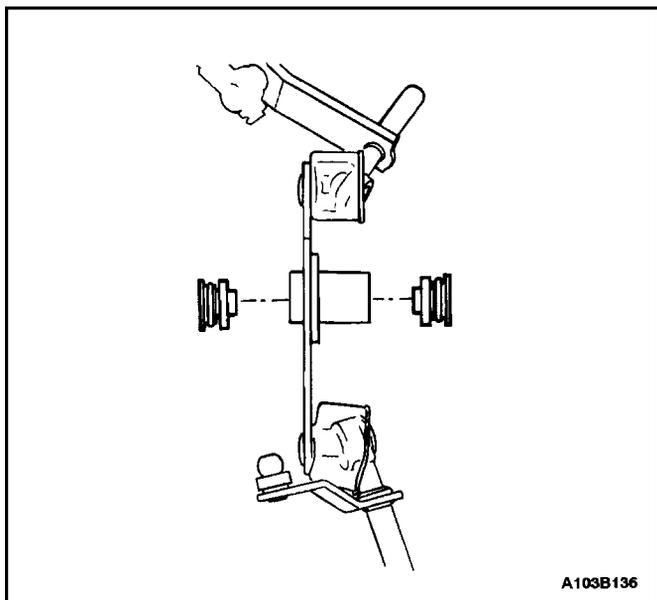


### Installation Procedure

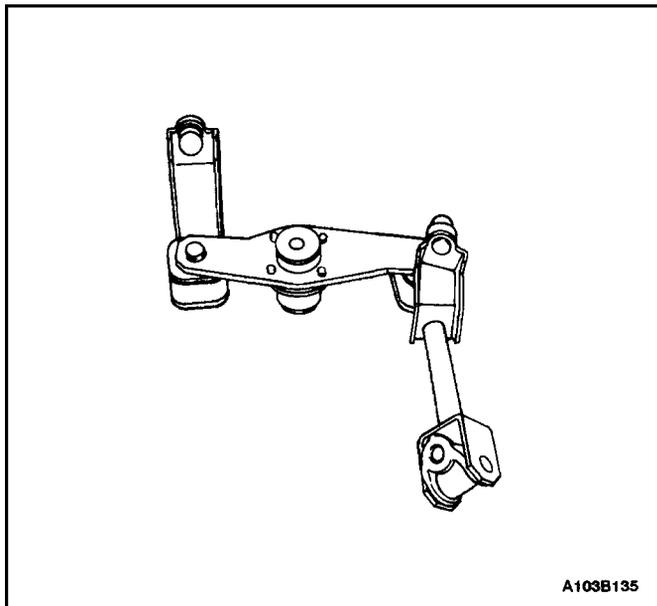
1. Connect the linkage bolts to the linkage lever.



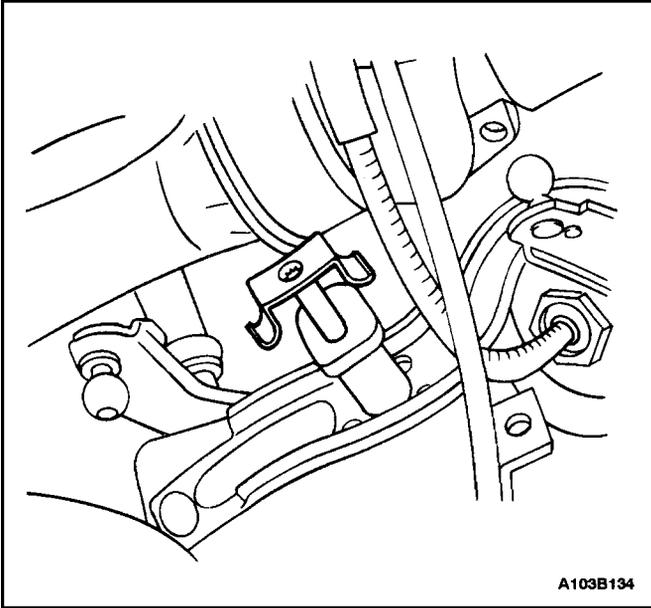
2. Install the snap rings to retain the linkage bolts to the linkage lever assembly.



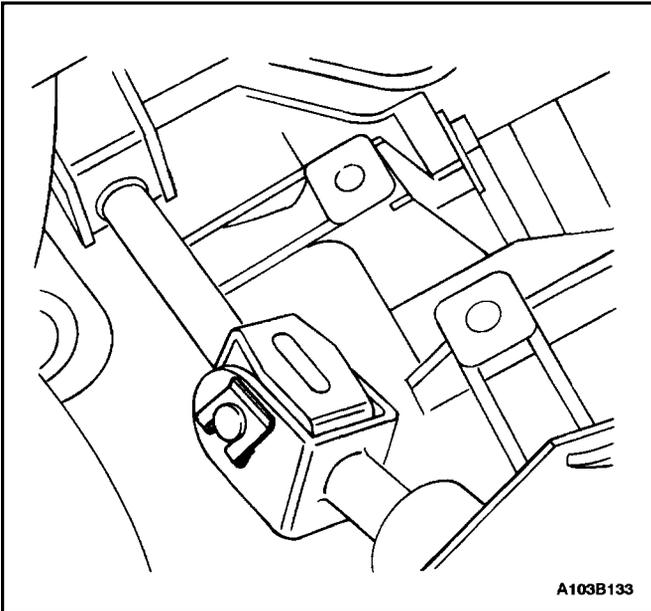
3. Coat the linkage lever bushings with silicone grease.
4. Install both of the linkage lever bushings into the linkage lever assembly.



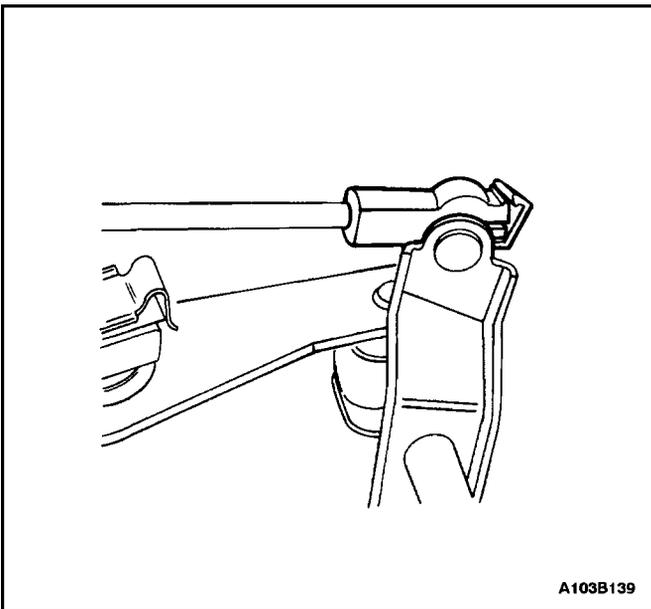
5. Install the linkage lever assembly into the vehicle.



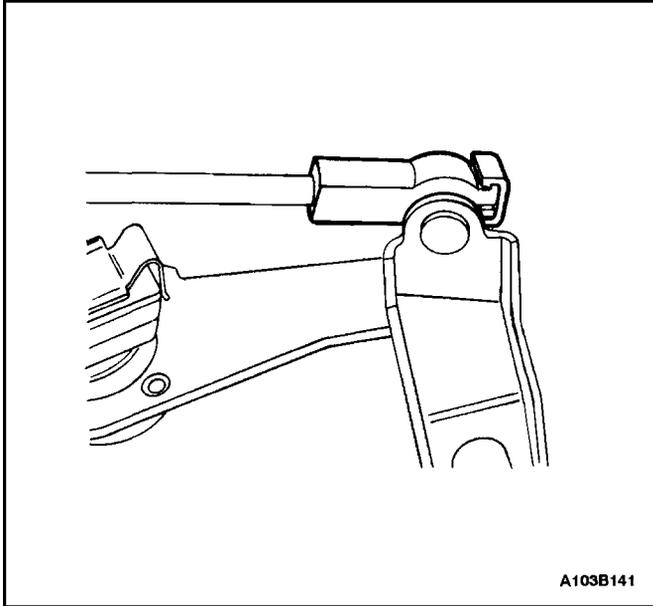
6. Install the pivot bolt. Make sure the spring clips are engaged.



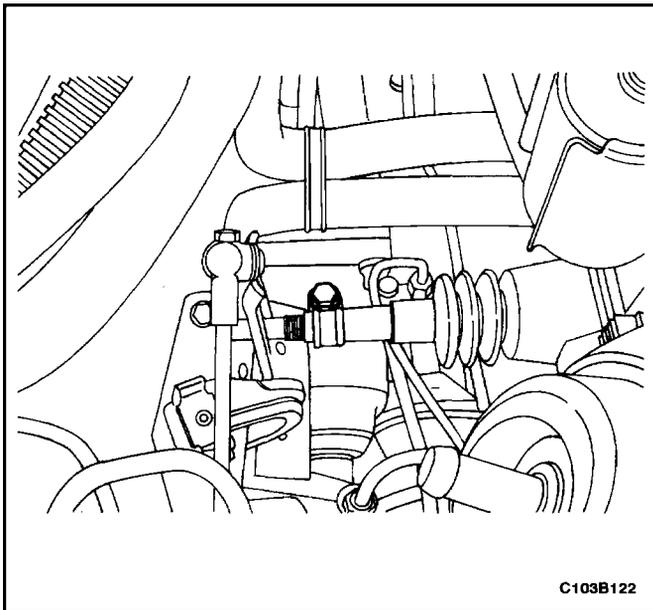
7. Coat the universal joint bolt with silicone grease.
8. Install the universal joint bolt and the clip onto the universal joint.



9. Install the control shift rod.
10. Press the ball sockets onto the ball studs on the linkage bolts.



11. Connect the plastic clips on the end of each ball socket.

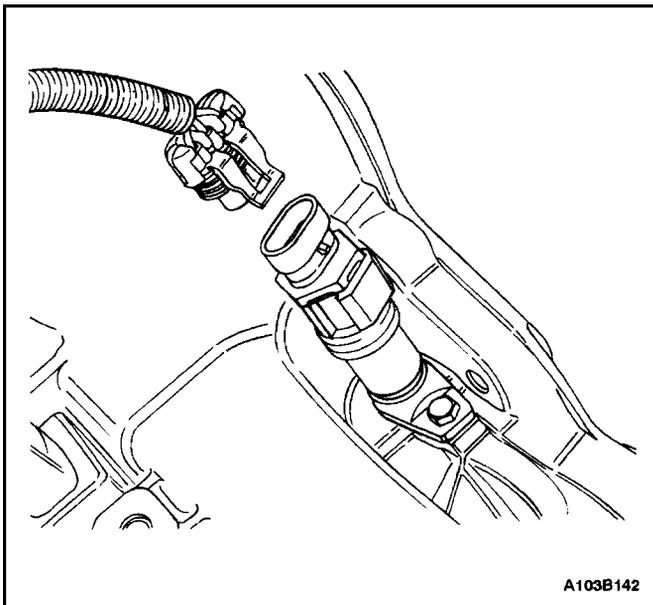


12. Connect the linkage bolt to the shift tube.
13. Adjust the shift linkage. Refer to "Shift Linkage Adjustment" in this section.
14. Tighten the rod clamp bolt.

**Tighten**

Tighten the rod clamp bolt to 14 N•m (124 lb-in).

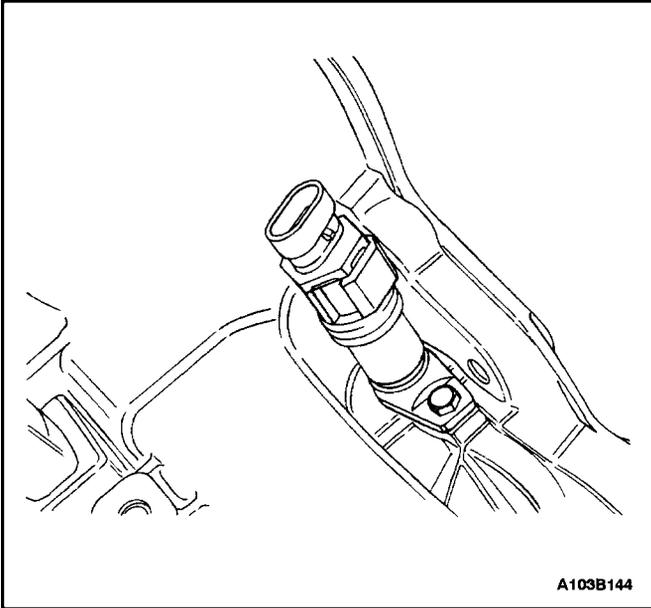
15. Connect the negative battery cable.



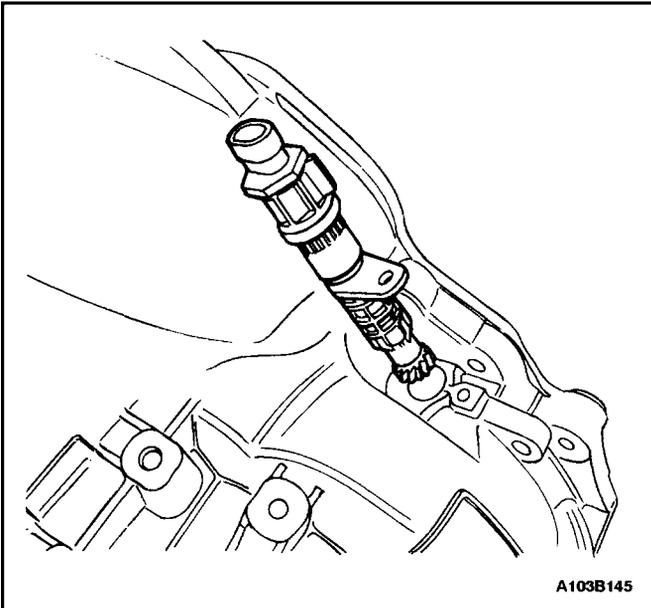
**SPEEDOMETER DRIVEN GEAR**

**Removal Procedure**

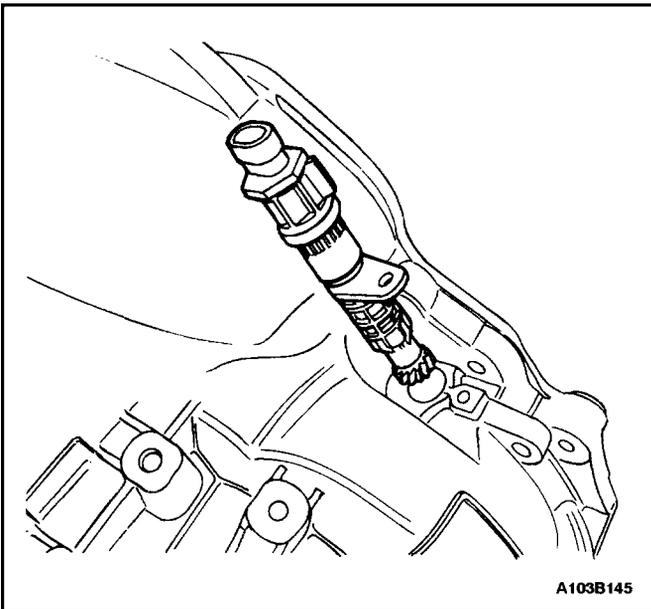
1. Disconnect the speedometer speed sensor electrical connector.



2. Remove the speedometer housing retaining bolt.

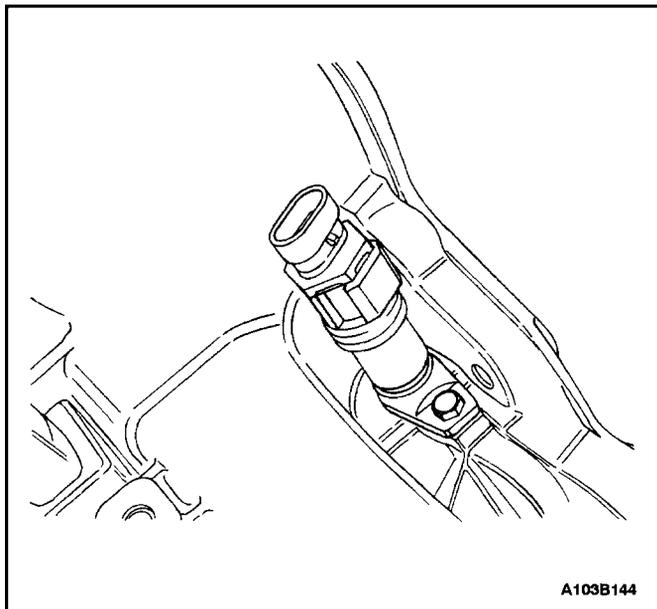


3. Remove the speedometer-driven gear and the speedometer housing.



### Installation Procedure

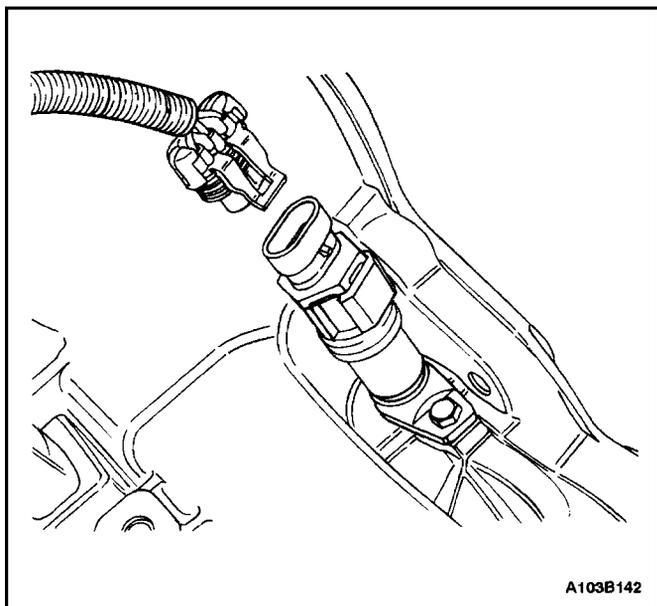
1. Coat the O-ring with petroleum jelly.
2. Install the speedometer-driven gear and the speedometer housing.



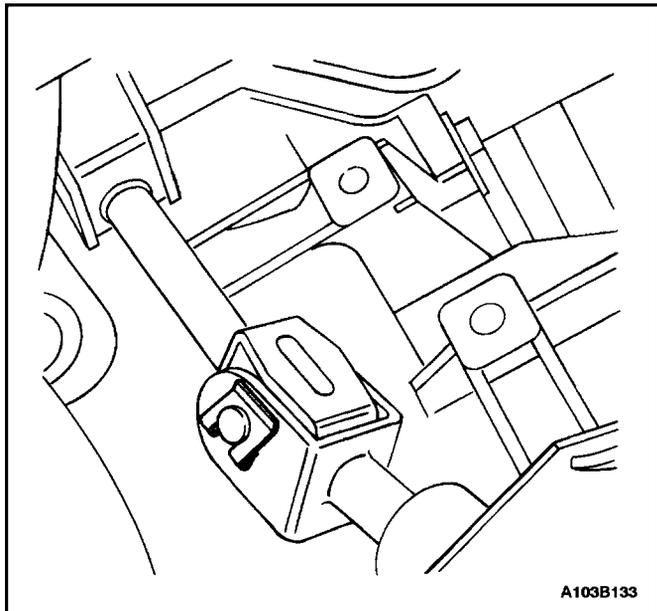
3. Install the speedometer housing retaining bolt.

**Tighten**

Tighten the speedometer housing retaining bolt to 4 N•m (35 lb-in).



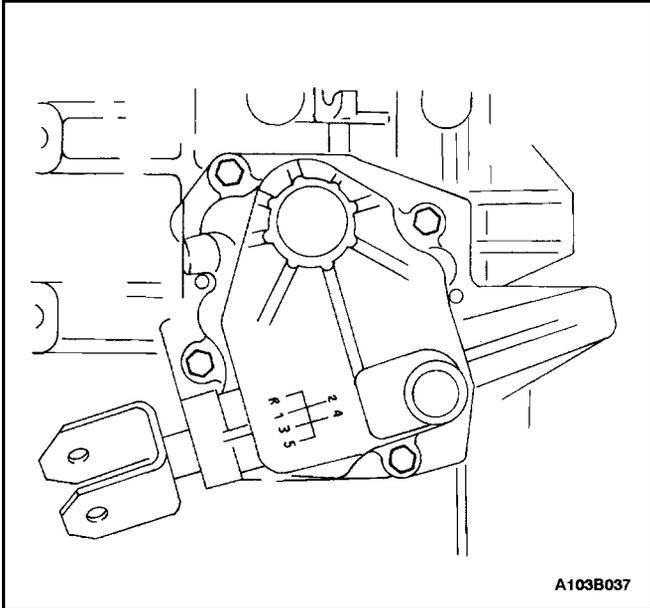
4. Connect the speedometer speed sensor electrical connector.



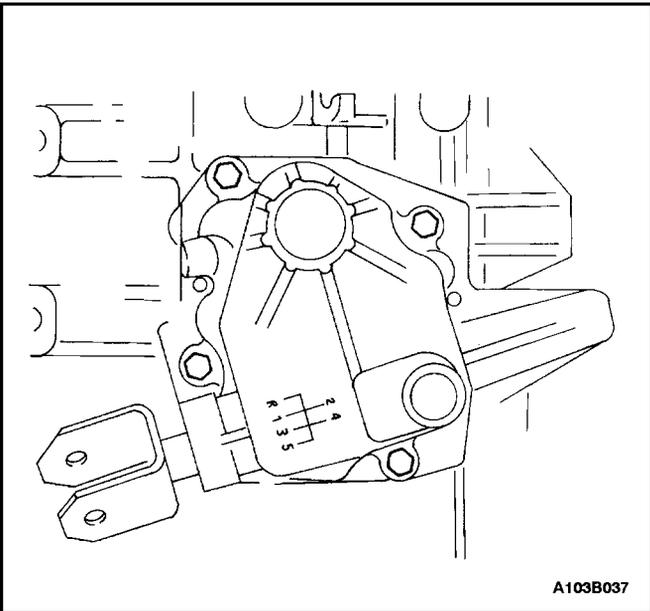
**SHIFT LEVER COVER**

**Removal Procedure**

1. Remove the clip and the bolt at the universal joint.



2. Remove the gearshift lever cover bolts.
3. Separate the gearshift lever cover and the gasket from the case.

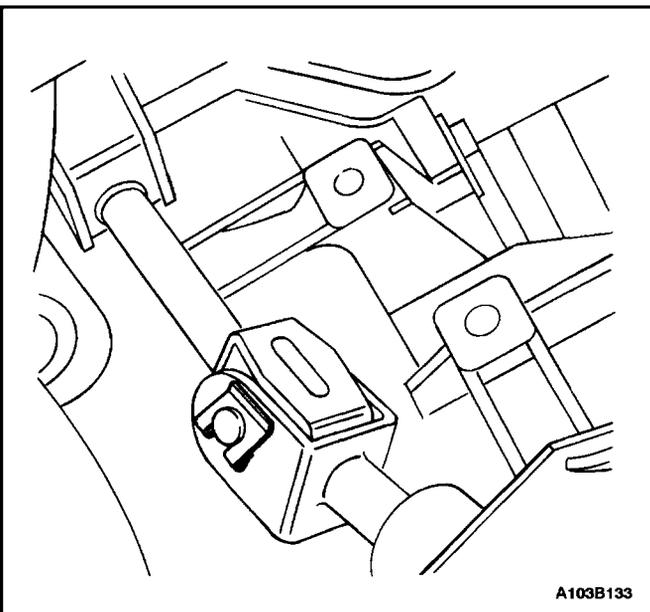


### Installation Procedure

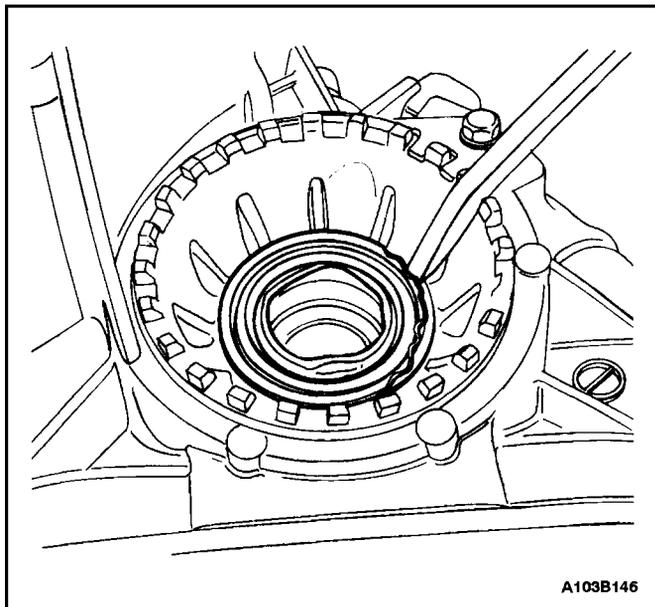
1. Position the gearshift lever cover and the gasket onto the case.
2. Install the gearshift lever cover bolts.

#### **Tighten**

Tighten the gearshift lever cover bolts to 22 N•m (16 lb–ft).



3. Install the bolt and the clip at the universal joint.
4. Check and adjust the fluid level. Refer to "Checking Fluid Level" in this section.



## DRIVE AXLE SEAL

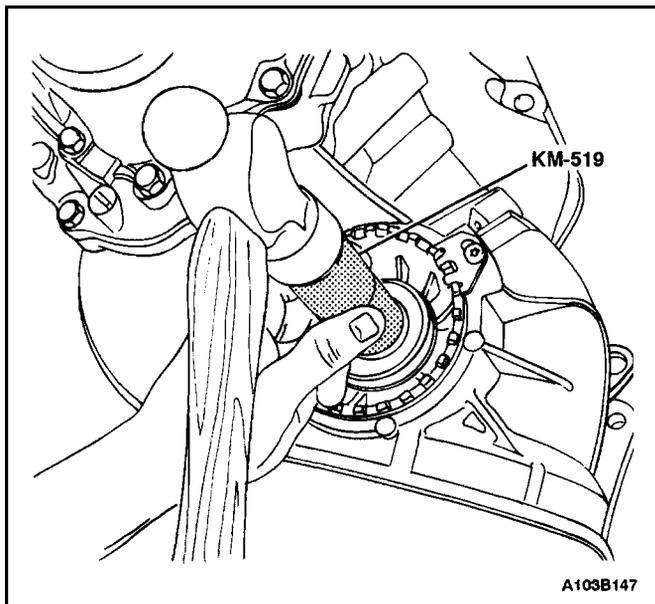
### Tools Required

KM-519 Ring Installer

### Removal Procedure

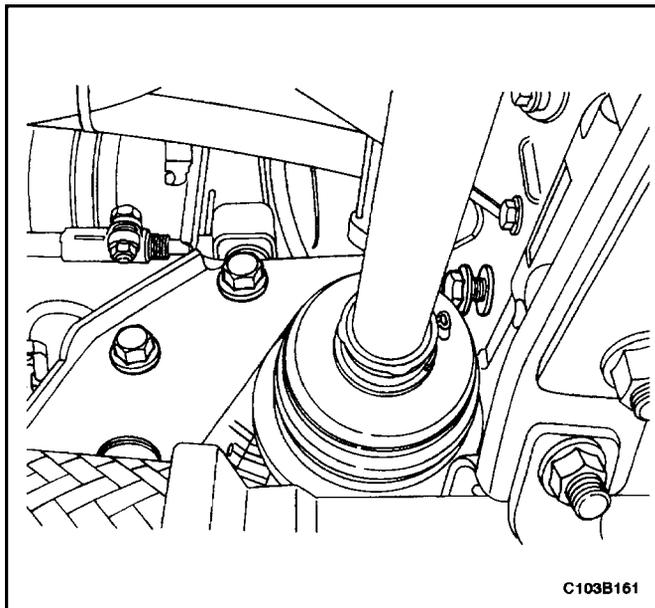
**Notice :** Do not damage the bearing adjusting ring with the pry bar.

1. Remove the drive axle from the transaxle. Refer to *Section 3B, Manual Transaxle Drive Axle*.
2. Remove the drive axle seal by lifting the outer lip of the seal with a pry bar.



### Installation Procedure

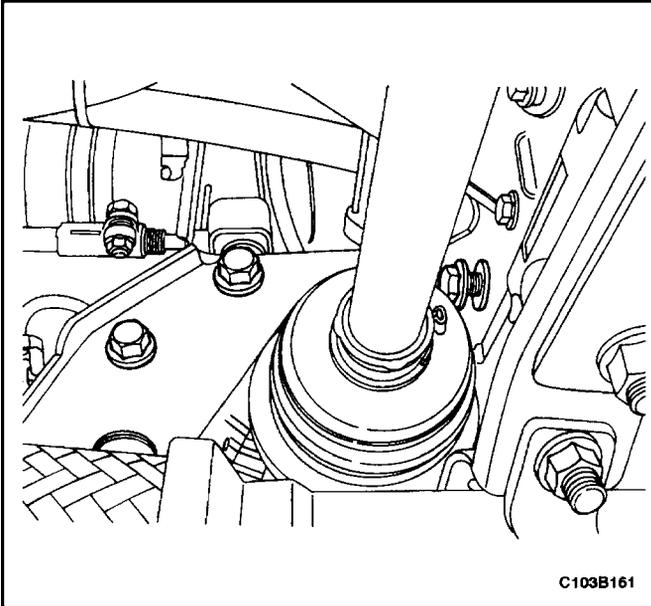
1. Install the new drive axle seal using the ring installer KM-519 and a hammer.
2. Coat the seal lip with the transaxle fluid.
3. Install the drive axle. Refer to *Section 3B, Manual Transaxle Drive Axle*.



## TRANSAXLE BRACKET

### Removal Procedure

1. Remove the center member from the vehicle. Refer to *Section 9N, Frame and Underbody*.
2. Disconnect the linkage lever from the transaxle bracket. Refer to "Linkage Lever and/or Bushings" in this section.
3. Remove the bolts connecting the transaxle bracket to the transaxle and the bolt connecting the transaxle bracket to the engine.
4. Remove the transaxle bracket.



### Installation Procedure

1. Install the transaxle bracket.
2. Install the bolts connecting the transaxle bracket to the transaxle and the bolt connecting the transaxle bracket to the engine.

### Tighten

Tighten the transaxle bracket-to-transaxle bolts to 90 N•m (66 lb-ft).

Tighten the transaxle bracket-to-engine bolt to 90 N•m (66 lb-ft).

3. Connect the linkage lever to the transaxle bracket. Refer to "Linkage Lever, and/or Bushings" in this section.
4. Install the center member into the vehicle. Refer to *Section 9N, Frame and Underbody*.

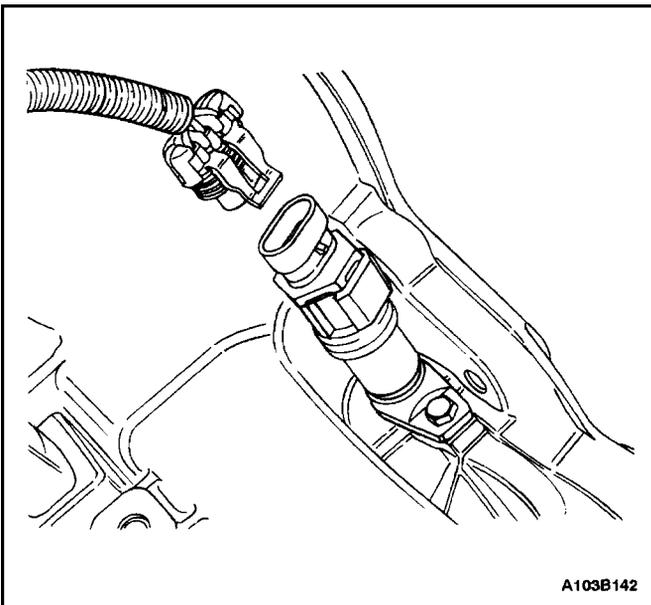
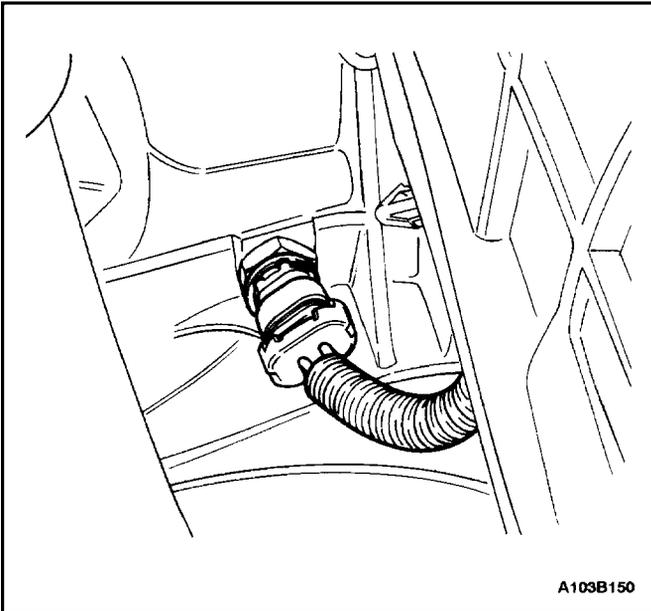
## TRANSAXLE ASSEMBLY

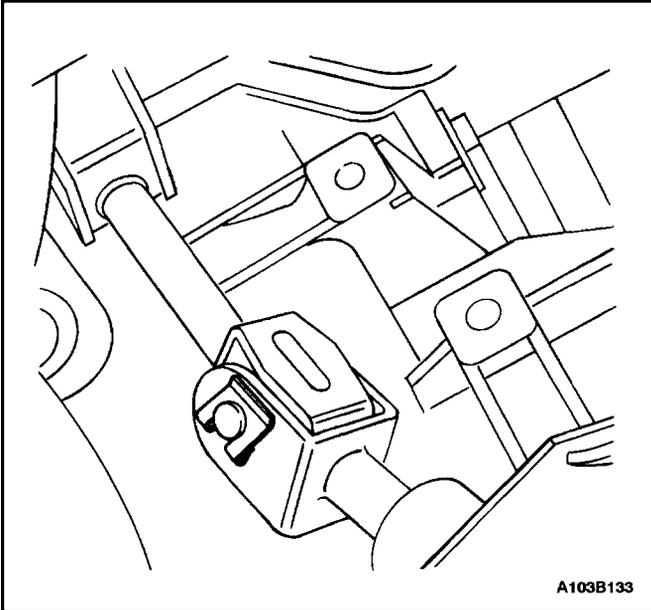
### Tools Required

J-28467-B Engine Support Fixture

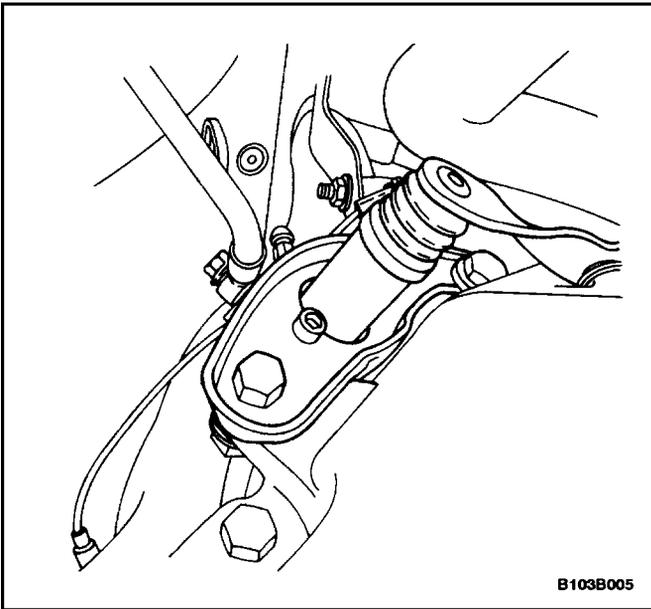
### Removal Procedure

1. Disconnect the backup lamp switch electrical connector.
2. Disconnect the speedometer speed sensor electrical connector.

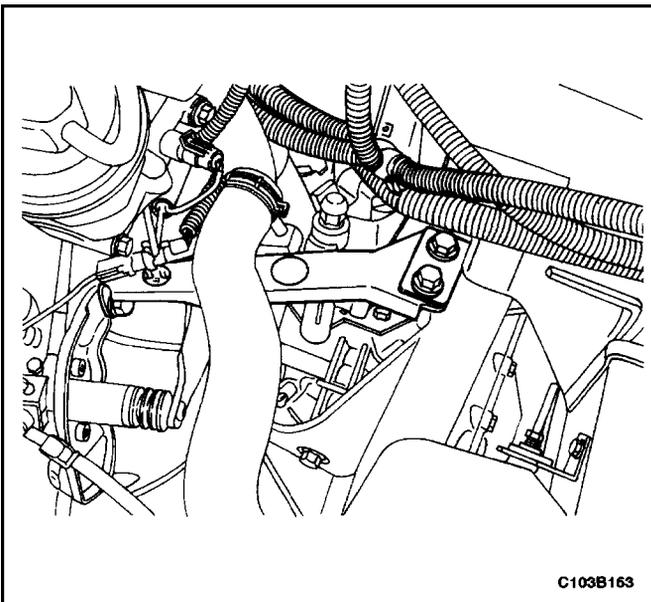




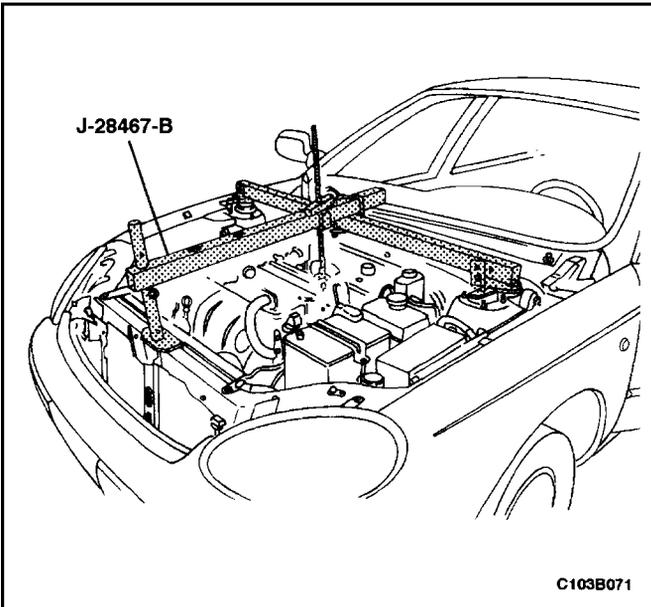
3. Remove the clip and the bolt from the universal joint.



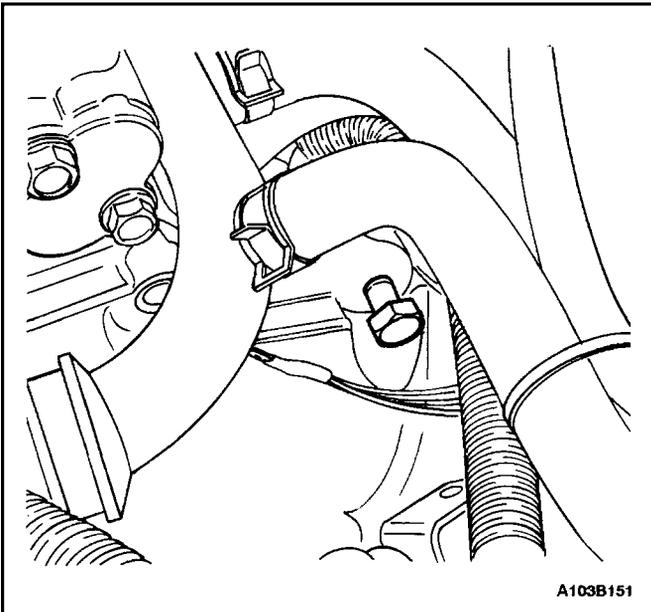
4. Remove the clutch release cylinder bracket bolts and the clutch release cylinder bracket.



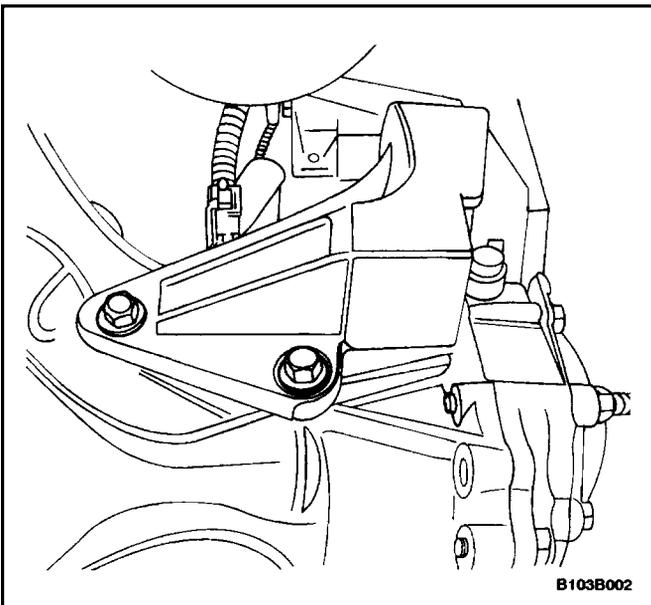
5. Remove the bolts and the transaxle upper brace.



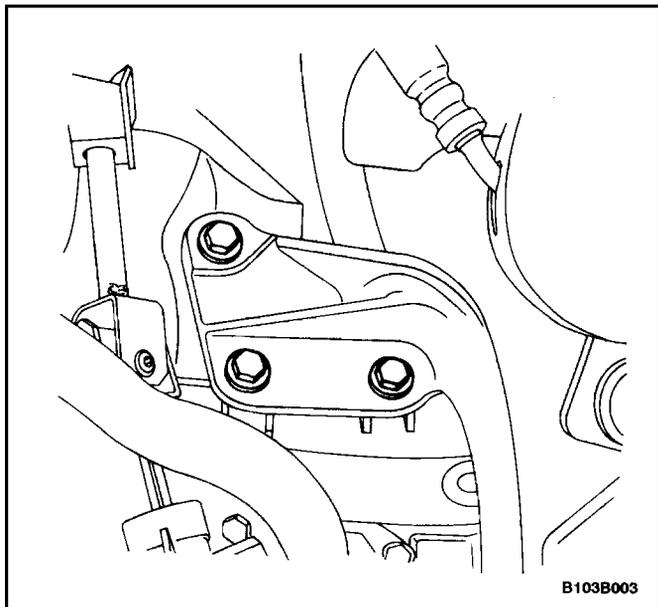
6. Install the engine support fixture J-28467-B.



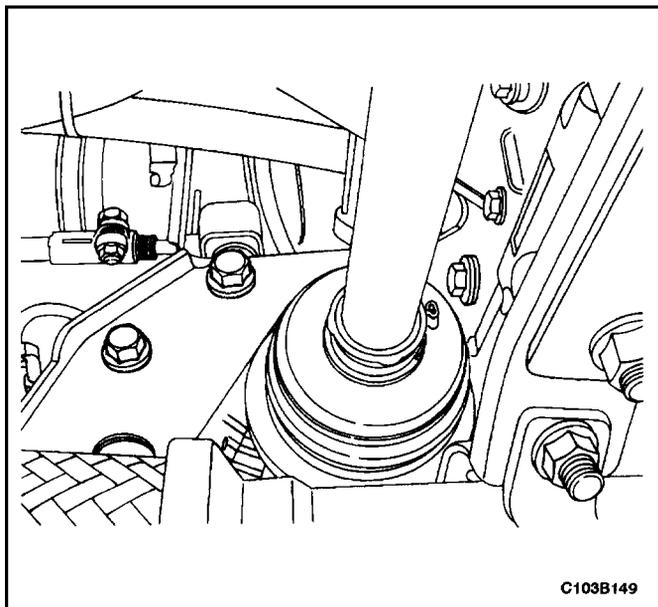
7. Remove the transaxle-to-engine upper bolts.
8. Raise and suitably support the vehicle.
9. Remove both of the drive axle shafts. Refer to Section 3B, Manual Transaxle Drive Axle.



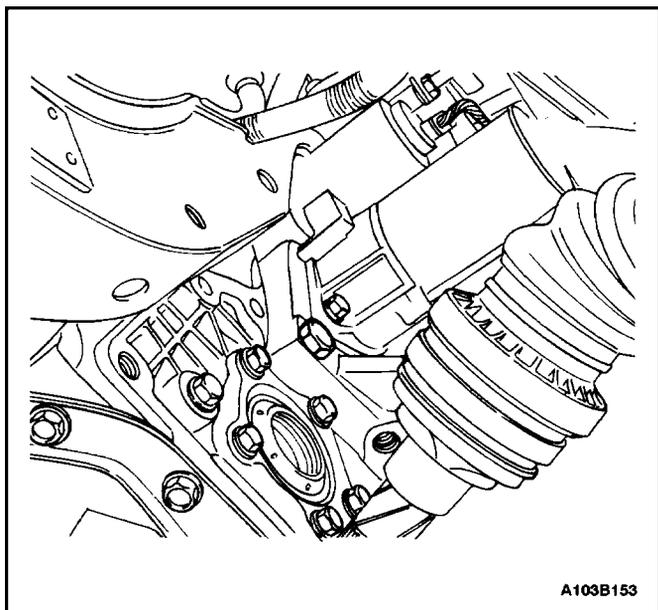
10. Support the transaxle with a transaxle support jack.
11. Remove the left front transaxle support bracket bolts and the left front transaxle support bracket



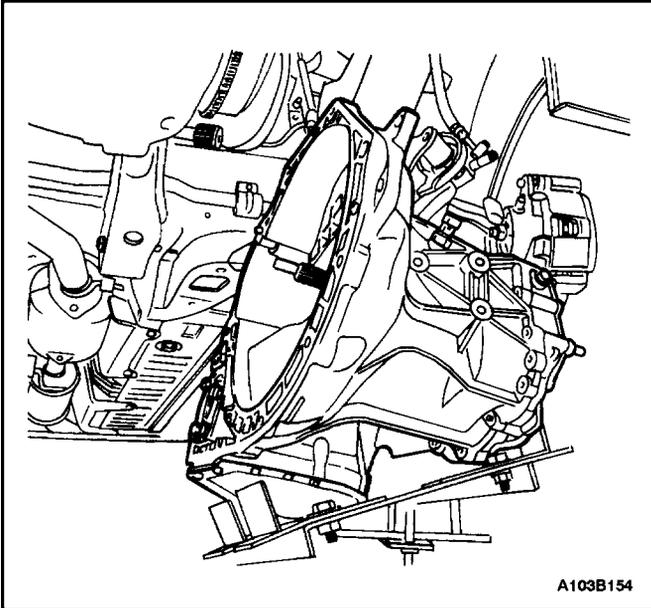
12. Remove the left rear transaxle support bracket bolts and the left rear transaxle support bracket.



13. Remove the center rear transaxle support bracket bolts.



14. Remove the transaxle-to-engine lower bolts.

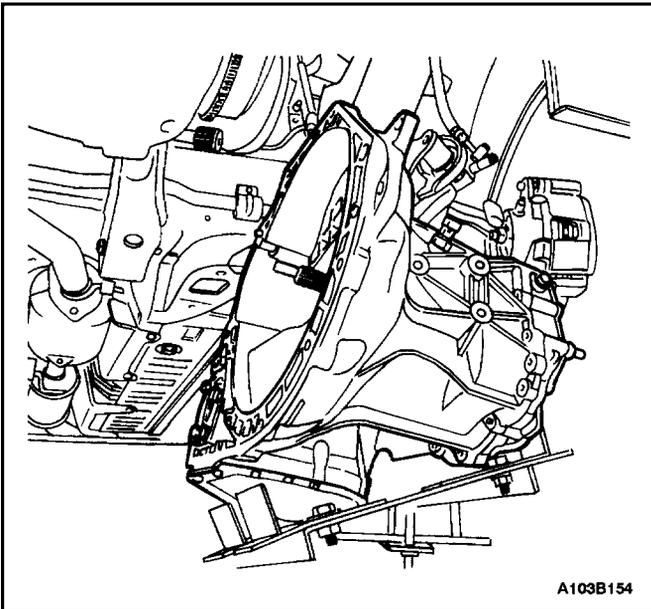


15. Disconnect the transaxle.

**Notice :** Rest the transaxle only in an upright position.

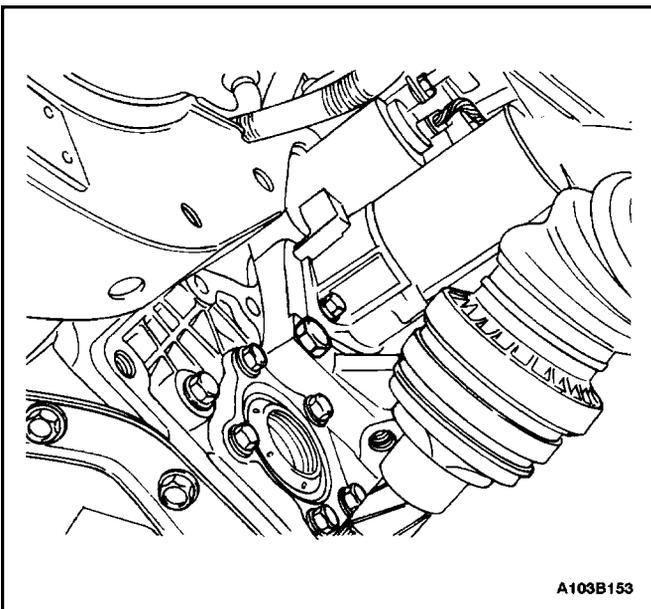
16. Slide the transaxle sideways away from the engine block.

17. Lower the transaxle.



### Installation Procedure

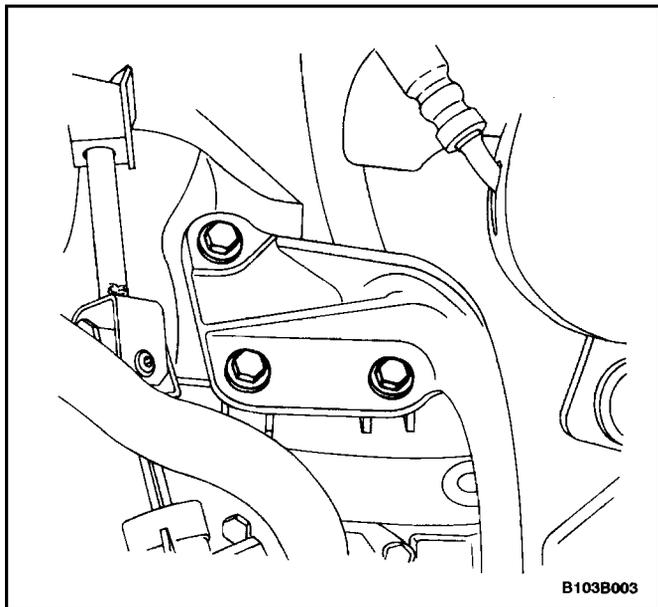
1. Support the transaxle with a transaxle support jack.
2. Install the transaxle by inserting the transaxle input shaft into the clutch disc and sliding the transaxle sideways into the engine block.



3. Install the transaxle-to-engine lower bolts.

### Tighten

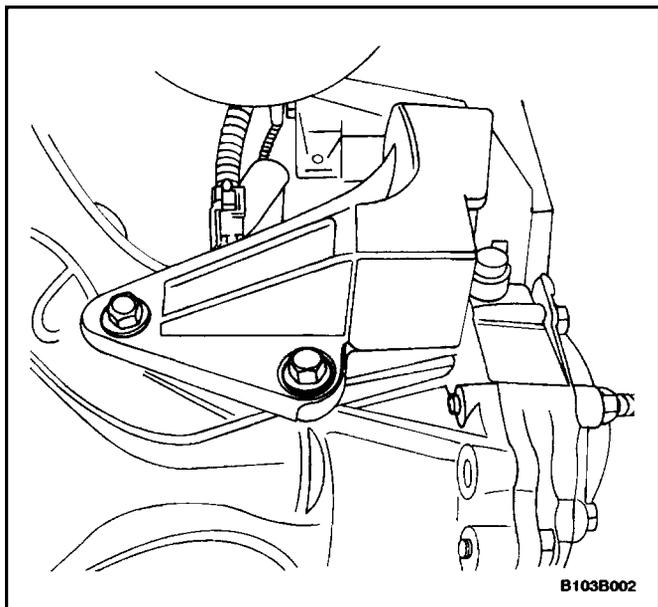
Tighten the transaxle-to-engine lower bolts to 75 N•m (55 lb-ft).



4. Install the left rear transaxle support bracket and the bolts.

**Tighten**

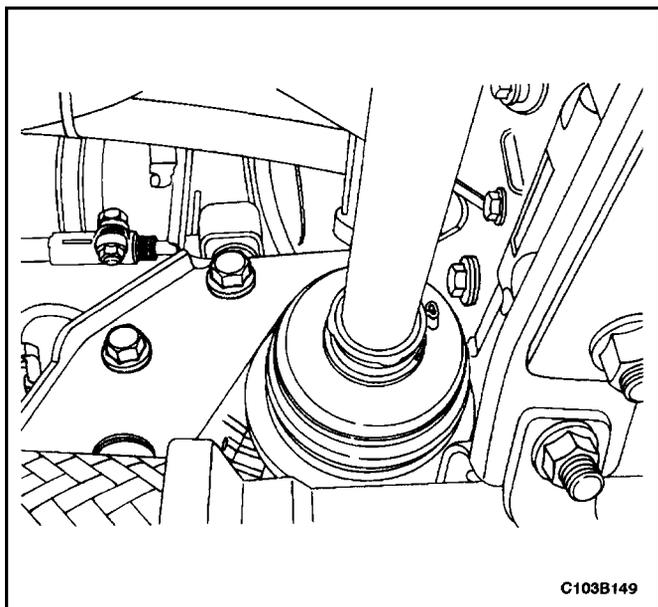
Tighten the left rear transaxle support bracket bolts to 60 N•m (44 lb–ft).



5. Install the left front transaxle support bracket and the bolts.

**Tighten**

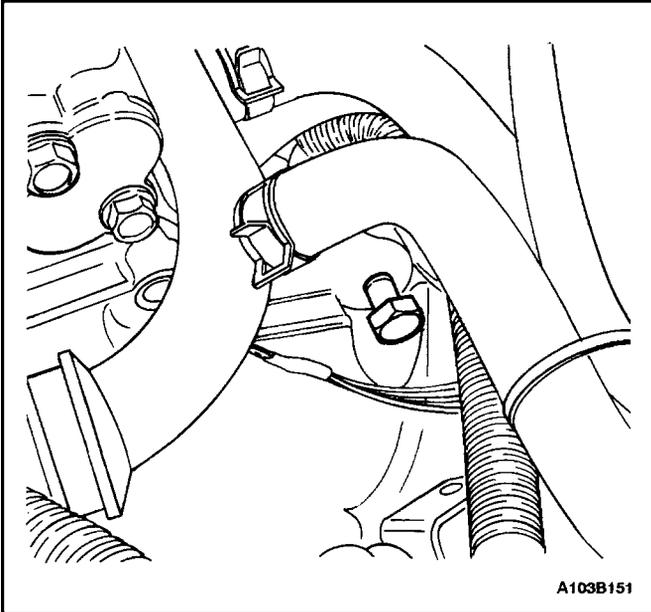
Tighten the left front transaxle support bracket bolts to 60 N•m (44 lb–ft).



6. Install the center rear transaxle support bracket and the transaxle support bracket bolts.

**Tighten**

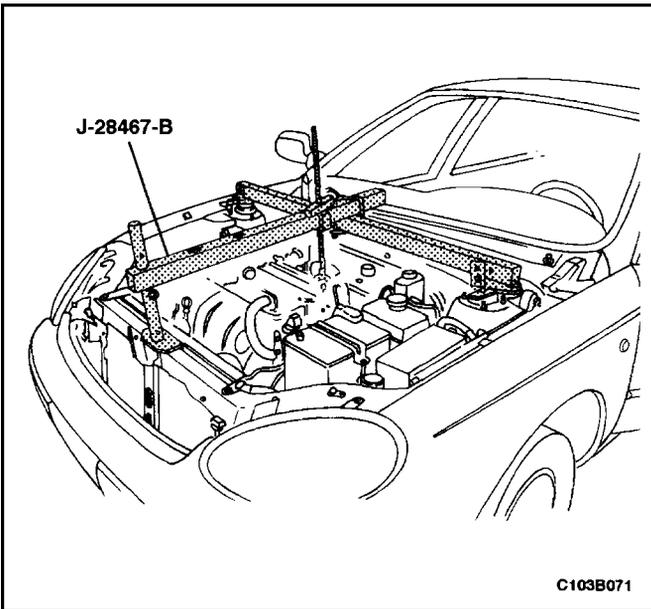
Tighten the center rear transaxle support bracket bolts to 90 N•m (66 lb–ft).



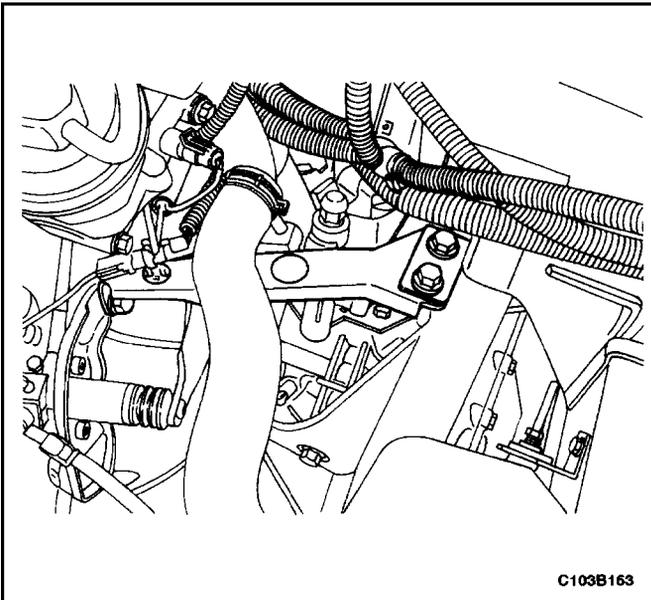
7. Install both of the drive axle shafts. Refer to *Section 3B, Manual Transaxle Drive Axle*.
8. Lower the vehicle.
9. Install the upper transaxle-to-engine bolts.

**Tighten**

Tighten the transaxle-to-engine upper bolts to 75 N•m (55 lb-ft).



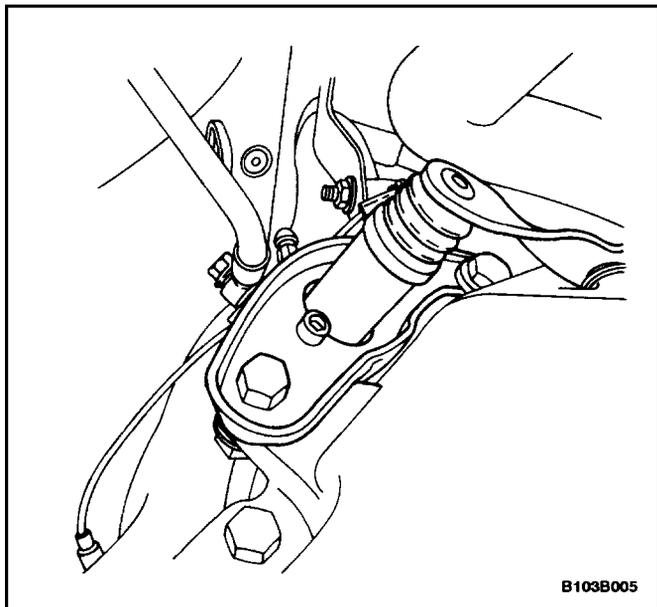
10. Remove the engine support fixture J-28467-B.



11. Install the transaxle upper brace with the bolts.

**Tighten**

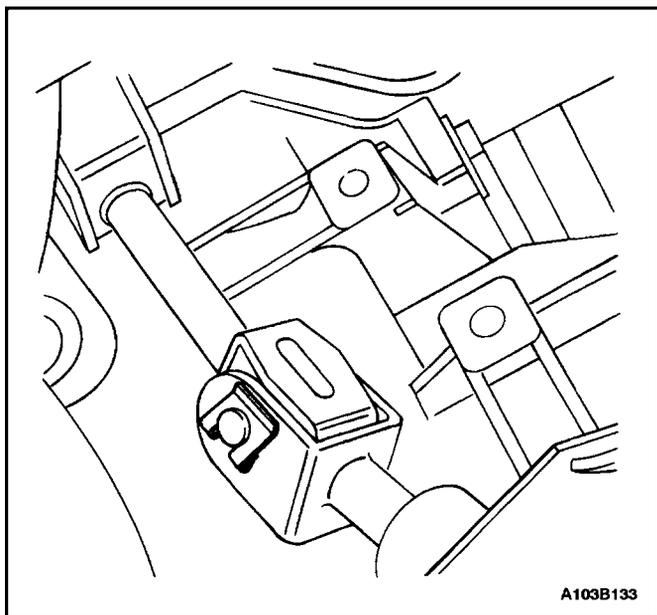
Tighten the transaxle upper brace bolts to 75 N•m (55 lb-ft).



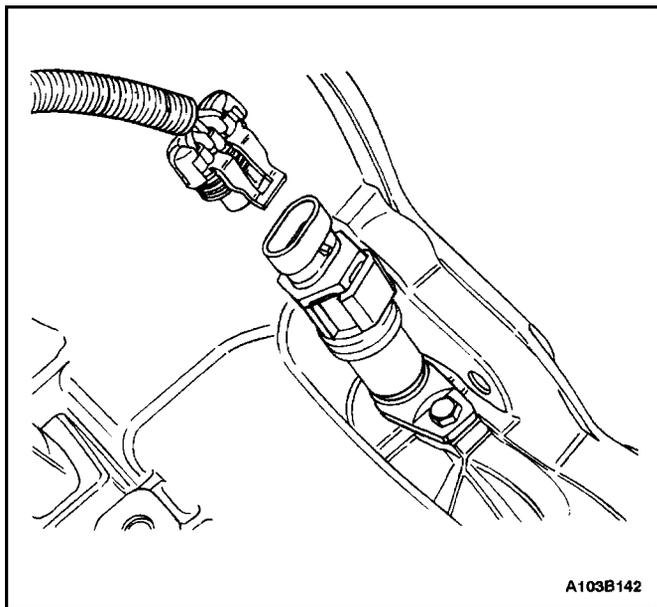
12. Install the clutch release cylinder bracket and the clutch release cylinder bracket bolts.

**Tighten**

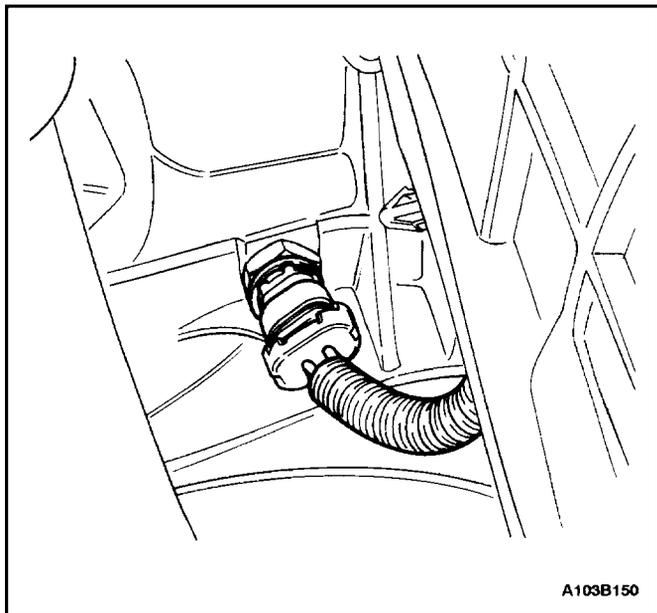
Tighten the clutch release cylinder bracket bolts to 75 N•m (55 lb-ft).



13. Install the bolt and the clip onto the universal joint.



14. Connect the speedometer speed sensor electrical connector.



15. Connect the backup lamp switch electrical connector.
16. Inspect the fluid level. Refer to "Checking Fluid Level" in this section.