SECTION 7B

MANUAL TRANSMISSION

NOTICE: Always use the correct fastener in the proper location. When you replace a fastener, use ONLY the exact part number for that application. General Motors will call out those fasteners that require a replacement after removal. General Motors will also call out the fasteners that require thread lockers or thread sealant. UNLESS OTHERWISE SPECIFIED, do not use supplemental coatings (paints, greases, or other corrosion inhibitors) on threaded fasteners or fastener joint interfaces. Generally, such coatings adversely affect the fastener torque and joint clamping force, and may damage the fastener. When you install fasteners, use the correct sequence and tightening specifications. Following these instructions can help you avoid damage to parts and systems.

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TRANSMISSION IDENTIFICATION INFORMATION

The manual transmission identification number is located on the top of the upper case directly behind the clutch housing (Figure 1). This seven digit number is stamped into the upper case and refers to model year and serial number sequence. Additional transmission identification can be found on the service parts identification label (Figure 2). This label contains information on regular production options (RPO) as well as standard and mandatory options. This label is

Speedometer Drive Gear
(Two-Wheel Drive Models)7B-23
Gearshift Lever Case Removal
(Two-Wheel Drive Models)
Gearshift Lever Case Disassembly
(Two-Wheel Drive Models)7B-23
Gearshift Lever Case Assembly
(Two-Wheel Drive Models)7B-24
Gearshift Lever Case Installation
(Two-Wheel Drive Models)7B-26
Rear Case, Rear Case Oil Seal and Rear Case
Countershaft Plug (Four-Wheel Drive Models)
/B-26
Gearshift Lever Case Removal
(Four-Wheel Drive Models)7B-29
Gearshift Lever Case Disassembly
(Four-Wheel Drive Models)
Gearshift Lever Case Assembly
(Four-Wheel Drive Models)7B-30
Gearshift Lever Case Installation
(Four-Wheel Drive Models)7B-32
Transmission Assembly
Specifications7B-36
rastener Torques
Oil Capacity (Approximate) 7D 36
Special Tools

affixed to the inside of the glove box door of each vehicle at the assembly plant. For additional information on the service parts identification label, refer to SECTION OA.

GENERAL DESCRIPTION

The Suzuki 5-speed manual transmission assembly is a constant-mesh design that consists of an input shaft, main shaft, countershaft and reverse gear. Gear selection and shifting are accomplished by synchronizers and synchronizer rings which are moved

by shift forks that slide on their respective gearshift shafts. These synchronizers help to mesh the appropriate gears in order to obtain a gearshift. Reverse gear utilizes an idler gear supported on a sliding spindle idler shaft and is non-synchronized (Figures 3 and 4).

This design is available in two-wheel drive models and four-wheel drive models. The two-wheel drive model uses an extension case to house the

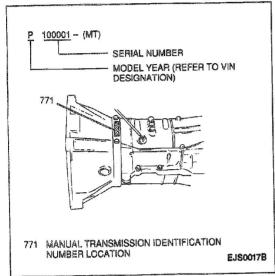


Figure 1-Transmission Identification Number

speedometer drive and driven gears which are driven by the transmission main shaft. The four-wheel drive model uses a rear case mated with the transmission upper and lower cases and the transfer case. The speedometer drive and driven gears on the four-wheel drive model are located in the transfer case.

SYNCHRONIZERS

Figures 5 through 8

The low speed synchronizer is mounted on the main shaft and will engage with either the main shaft 1st or main shaft 2nd gear. The high speed synchronizer is also mounted on the main shaft and will engage with either the main shaft 3rd or input shaft 4th gear. The reverse synchronizer is mounted on the main shaft and engages with the main shaft 5th or main shaft reverse gear. The countershaft meshes with the main shaft to produce the appropriate gear ratio output (Figures 5 through 8).

GEARSHIFT CONTROLS

Figures 9 and 10

Gear selection is transmitted from the gearshift control lever into the gearshift lever case located at the rear of the transmission (Figures 9 and 10). The gearshift lever case contains a gearshift arm, a reverse gearshift limit yoke and a gearshift lever. These three components are attached to the gearshift shaft. The gearshift control lever is fitted into the gearshift arm.

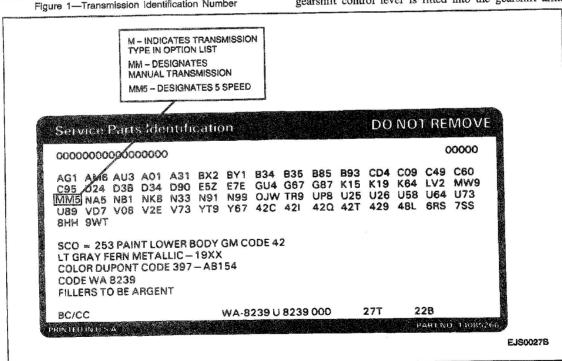


Figure 2-Service Parts Identification Label

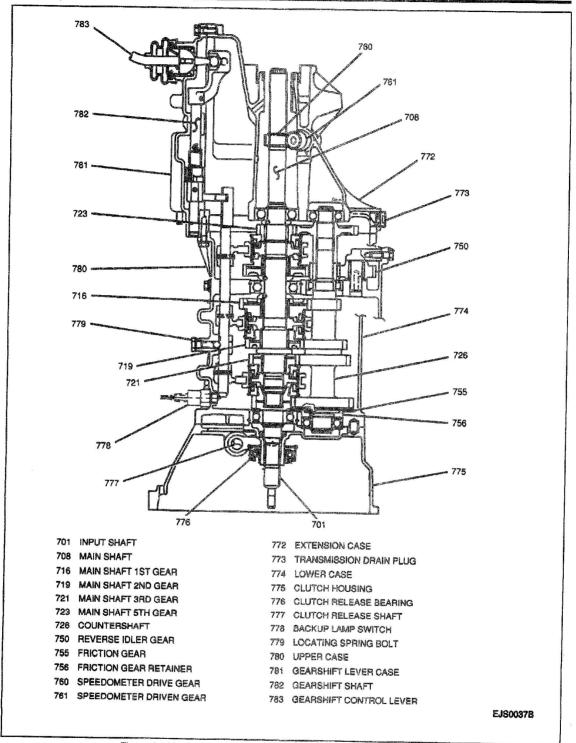


Figure 3—Manual Transmission Construction (Two-Wheel Drive Models)

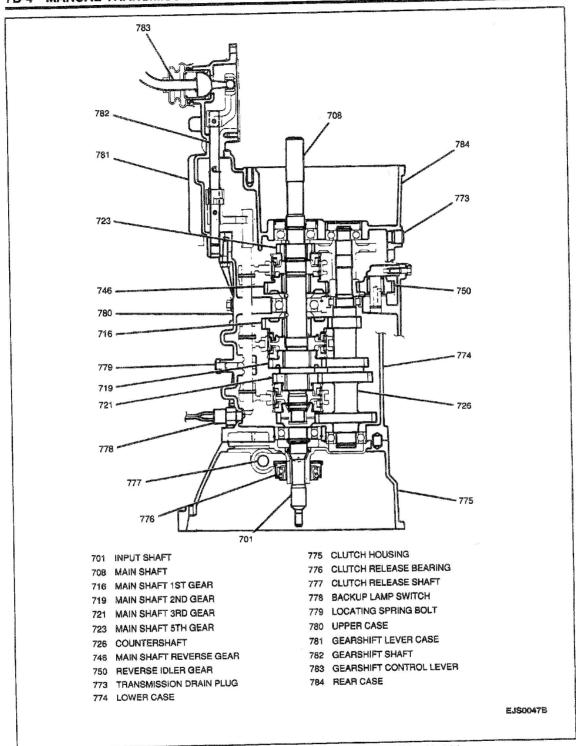


Figure 4—Manual Transmission Construction (Four-Wheel Drive Models)

When the gearshift control lever is moved, the gearshift arm, gearshift shaft and gearshift lever are moved forward, backward, left or right depending upon the gear selected.

Moving the gearshift control lever from side to side will engage the gearshift lever with either the low speed gearshift shaft, the high speed gearshift shaft or the reverse gearshift shaft, depending upon the gearshift control lever position. When the gearshift control lever is moved either forward or backward, the gearshift arm causes the gearshift lever to push or pull the selected gearshift shaft (Figure 10). On the end of each gearshift shaft is a gearshift fork which rides on a synchronizer sleeve. During a gearshift, the gearshift fork moves the synchronizer sleeve forward or backward, engaging or disengaging the gear selection.

REVERSE GEARSHIFT LIMIT YOKE

Figures 10 and 11 through 14

The reverse gearshift limit yoke is located in the gearshift lever case and rides on the gearshift shaft. The reverse gearshift limit yoke prevents the transmission from being shifted directly from 5th to reverse. When the transmission is shifted into 5th gear, the reverse gearshift limit yoke is turned clockwise by the gearshift limit spring causing the reverse gearshift limit yoke to land on the reverse gearshift limit bolt. This action prevents a 5th-to-reverse gearshift (Figure 11).

Shifting from 5th gear to neutral is possible with the reverse gear shift still canceled. This is due to the reverse gearshift limit yoke making contact with the reverse gearshift limit bolt preventing further gearshift control lever rearward movement (Figure 12).

When the gearshift shaft is turned to the neutral position between 3rd and 4th gears, the gearshift limit spring turns the reverse gearshift limit yoke counter-clockwise away from the reverse gearshift limit bolt. This action cancels the limiting mechanism and allows a reverse gearshift (Figure 13). After the reverse gearshift limiting mechanism has been canceled, reverse gear is then available (Figure 14).

DIAGNOSIS

Before attempting to repair the transmission, clutch or related linkages for any reason other than mechanical failure, the condition and probable causes should be identified. Manual transmission and clutch failures are revealed by shifting difficulties such as excessive shifting effort, gear clash or gear grinding.

When any of these conditions occur, the following checks and adjustments should be made before disassembling the transmission and/or clutch for repairs.

CLUTCH SPIN DOWN TIME

- 1. Run the engine at a normal idle with the transmission in neutral and the clutch engaged.
- Disengage the clutch (clutch pedal depressed), wait approximately nine seconds, and shift the transmission into reverse.
- If a grinding noise is heard, check the clutch for engagement.

ISOLATING NOISE

Figures 15 and 16

Many noises believed to be coming from the transmission may be originating from other sources such as tires, road surfaces, wheel bearings, the engine or the exhaust system. These noises may vary according to vehicle size, type, and amount of body insulation used. A thorough and careful check should be made to determine the source of the noise before disassembling the transmission. Transmission gears, like any mechanical device, are not absolutely quiet and will exhibit some normal operating noise. The following is a suggested approach to verify suspected transmission noises.

- Select a smooth, level asphalt road to reduce tire noise.
- 2. Drive the vehicle until engine coolant has reached normal operating temperature.
- Record speed and gear range at which noise, if any, occurs.
- Check for noises with the engine running and vehicle stopped.
- 5. Determine in which of the following drive conditions the noise is occurring:
 - A. Drive-light acceleration or heavy pull.
 - B. Float—maintaining constant vehicle speed at light throttle with transmission in gear.
 - C. Coast—partially or fully closed throttle with transmission in gear.
 - D. All of the above.
- 6. After road testing the vehicle, refer to the Transmission Diagnosis Charts for diagnosis of transmission shift difficulties and noise characteristics under various conditions (Figures 15 and 16).

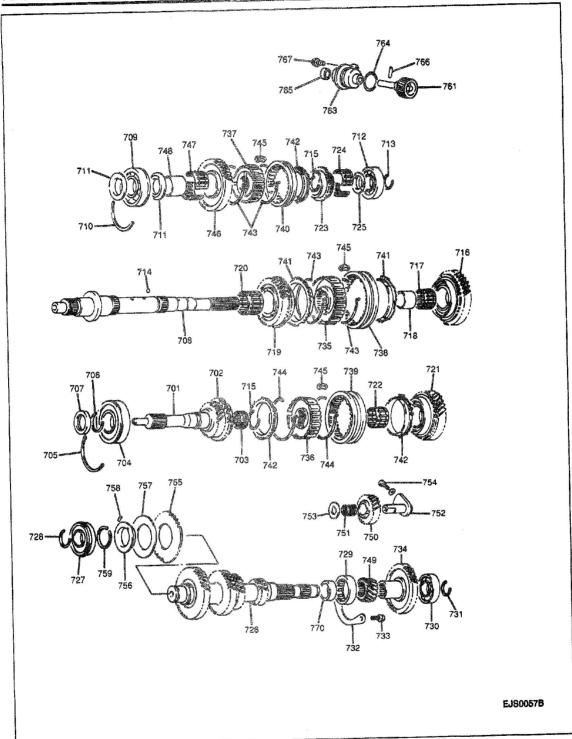


Figure 5—Internal Gear Components (Two-Wheel Drive Models)

701	INPUT SHAFT	735	LOW SPEED SYNCHRONIZER HUB
702	INPUT SHAFT 4TH GEAR	736	HIGH SPEED SYNCHRONIZER HUB
703	INPUT SHAFT NEEDLE BEARING	737	REVERSE SYNCHRONIZER HUB
704	FRONT INPUT SHAFT BEARING	738	LOW SPEED SYNCHRONIZER SLEEVE
705	FRONT INPUT SHAFT BEARING C-RING	739	HIGH SPEED SYNCHRONIZER SLEEVE
706	FRONT INPUT SHAFT BEARING C-CLIP	740	REVERSE SYNCHRONIZER SLEEVE
707	FRONT INPUT SHAFT OIL SEAL	741	LOW SPEED SYNCHRONIZER RING
708	MAIN SHAFT	742	HIGH SPEED SYNCHRONIZER RING
709	MAIN SHAFT CENTER BEARING	743	LOW SPEED SYNCHRONIZER SPRING
710	MAIN SHAFT CENTER BEARING C-RING	744	HIGH SPEED SYNCHRONIZER SPRING
711	MAIN SHAFT BEARING WASHER	745	SYNCHRONIZER KEY
712	MAIN SHAFT REAR BEARING	746	MAIN SHAFT REVERSE GEAR
713	MAIN SHAFT REAR BEARING C-CLIP	747	MAIN SHAFT REVERSE GEAR NEEDLE BEARING
714	MAIN SHAFT WASHER BALL	748	MAIN SHAFT REVERSE GEAR BUSHING
715	HIGH SPEED AND REVERSE HUB C-CLIP	749	COUNTERSHAFT REVERSE GEAR
716	MAIN SHAFT 1ST GEAR	750	REVERSE IDLER GEAR
717	MAIN SHAFT 1ST GEAR NEEDLE BEARING	751	REVERSE IDLER GEAR NEEDLE BEARING
718	MAIN SHAFT 1ST GEAR BUSHING	752	REVERSE IDLER SHAFT
719	MAIN SHAFT 2ND GEAR	753	REVERSE IDLER GEAR THRUST WASHER
720	MAIN SHAFT 2ND GEAR NEEDLE BEARING	754	REVERSE IDLER SHAFT BOLT
721	MAIN SHAFT 3RD GEAR	755	FRICTION GEAR
722	MAIN SHAFT 3RD GEAR NEEDLE BEARING	758	FRICTION GEAR RETAINER
723	MAIN SHAFT 5TH GEAR	757	FRICTION GEAR SPRING
724	MAIN SHAFT 5TH GEAR NEEDLE BEARING	758	FRICTION GEAR RETAINER PIN
725	MAIN SHAFT 5TH GEAR WASHER	759	FRICTION GEAR SNAP RING
726	COUNTERSHAFT	760	SPEEDOMETER DRIVE GEAR
727	FRONT COUNTERSHAFT BEARING	761	SPEEDOMETER DRIVEN GEAR
728	FRONT COUNTERSHAFT BEARING C-CLIP	762	SPEEDOMETER DRIVE GEAR RETAINING RING
729	COUNTERSHAFT CENTER BEARING	763	SPEEDOMETER DRIVEN GEAR CASE
730	REAR COUNTERSHAFT BEARING	764	SPEEDOMETER DRIVEN GEAR CASE O-RING
731	REAR COUNTERSHAFT BEARING C-CLIP	765	SPEEDOMETER DRIVEN GEAR LIP SEAL
732	COUNTERSHAFT CENTER BEARING PLATE	766	SPEEDOMETER DRIVEN GEAR ROLL PIN
733	COUNTERSHAFT CENTER BEARING PLATE BOLT	767	SPEEDOMETER DRIVEN GEAR CASE RETAINING BOLT
734	COUNTERSHAFT 5TH GEAR	770	COUNTERSHAFT CENTER BEARING BUSHING

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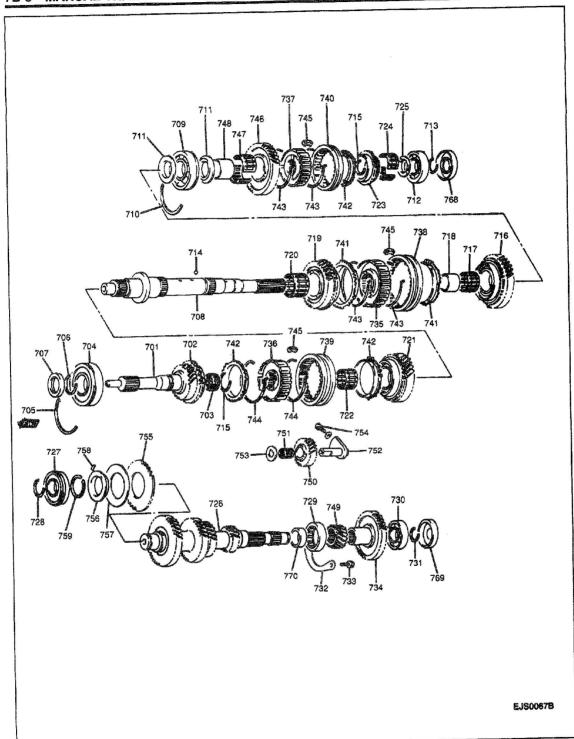


Figure 7—Internal Gear Components (Four-Wheel Drive Models)

701	INPUT SHAFT	735	LOW SPEED SYNCHRONIZER HUB
702	INPUT SHAFT 4TH GEAR	736	HIGH SPEED SYNCHRONIZER HUB
703	INPUT SHAFT NEEDLE BEARING		REVERSE SYNCHRONIZER HUB
704	FRONT INPUT SHAFT BEARING		LOW SPEED SYNCHRONIZER SLEEVE
705	FRONT INPUT SHAFT BEARING C-RING	739	HIGH SPEED SYNCHRONIZER SLEEVE
706	FRONT INPUT SHAFT BEARING C-CLIP	740	REVERSE SYNCHRONIZER SLEEVE
707	FRONT INPUT SHAFT OIL SEAL	741	
708	MAIN SHAFT	742	HIGH SPEED SYNCHRONIZER RING
709	MAIN SHAFT CENTER BEARING	743	LOW SPEED SYNCHRONIZER SPRING
710	MAIN SHAFT CENTER BEARING C-RING	744	HIGH SPEED SYNCHRONIZER SPRING
711	MAIN SHAFT BEARING WASHER	745	SYNCHRONIZER KEY
712	MAIN SHAFT REAR BEARING	746	MAIN SHAFT REVERSE GEAR
713	MAIN SHAFT REAR BEARING C-CLIP	747	MAIN SHAFT REVERSE GEAR NEEDLE BEARING
714	MAIN SHAFT WASHER BALL	748	MAIN SHAFT REVERSE GEAR BUSHING
715	HIGH SPEED AND REVERSE HUB C-CLIP	749	COUNTERSHAFT REVERSE GEAR
716	MAIN SHAFT 1ST GEAR	750	REVERSE IDLER GEAR
717	MAIN SHAFT 1ST GEAR NEEDLE BEARING	751	REVERSE IDLER GEAR NEEDLE BEARING
718	MAIN SHAFT 1ST GEAR BUSHING	752	REVERSE IDLER SHAFT
719	MAIN SHAFT 2ND GEAR	753	REVERSE IDLER GEAR THRUST WASHER
720	MAIN SHAFT 2ND GEAR NEEDLE BEARING	754	REVERSE IDLER SHAFT BOLT
721	MAIN SHAFT 3RD GEAR	755	FRICTION GEAR
722	MAIN SHAFT 3RD GEAR NEEDLE BEARING	756	FRICTION GEAR RETAINER
723	MAIN SHAFT 5TH GEAR	757	FRICTION GEAR SPRING
724	MAIN SHAFT 5TH GEAR NEEDLE BEARING	758	FRICTION GEAR RETAINER PIN
725	MAIN SHAFT 5TH GEAR WASHER	759	FRICTION GEAR SNAP RING
726	COUNTERSHAFT	760	SPEEDOMETER DRIVE GEAR
727	FRONT COUNTERSHAFT BEARING	761	SPEEDOMETER DRIVEN GEAR
728	FRONT COUNTERSHAFT BEARING C-CLIP	762	SPEEDOMETER DRIVE GEAR RETAINING RING
729	COUNTERSHAFT CENTER BEARING	763	SPEEDOMETER DRIVEN GEAR CASE
730	REAR COUNTERSHAFT BEARING	764	SPEEDOMETER DRIVEN GEAR CASE O-RING
731	REAR COUNTERSHAFT BEARING C-CLIP	765	SPEEDOMETER DRIVEN GEAR LIP SEAL
732	COUNTERSHAFT CENTER BEARING PLATE	766	SPEEDOMETER DRIVEN GEAR ROLL PIN
733	COUNTERSHAFT CENTER BEARING PLATE BOLT	767	SPEEDOMETER DRIVEN GEAR CASE RETAINING BOLT
734	COUNTERSHAFT 5TH GEAR	770	COUNTERSHAFT CENTER BEARING BUSHING

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7B-10 MANUAL TRANSMISSION

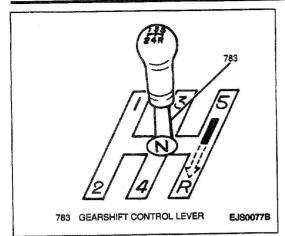


Figure 9-Gearshift Control Lever Pattern

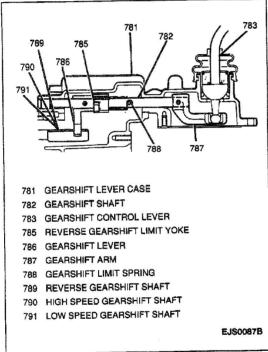


Figure 10—Gearshift Lever Case Components

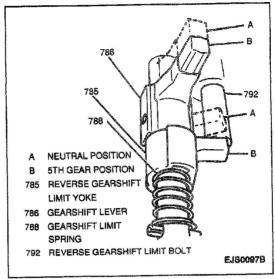


Figure 11—Shifting From "N" (Neutral) Position to 5th Gear Position

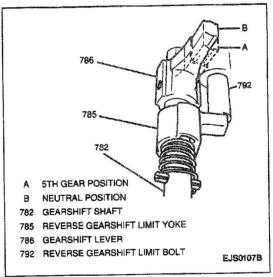


Figure 12—Shifting From 5th Gear Position to "N" (Neutral) Position

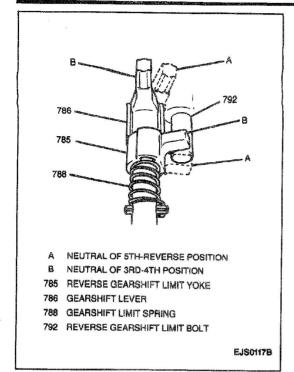


Figure 13—Gearshift Limiting Mechanism Canceled

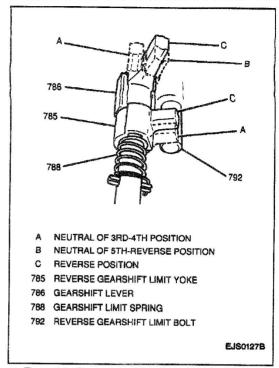


Figure 14—Gearshift Limiting Mechanism in Reverse Position

7B-12 MANUAL TRANSMISSION

CONDITION	INSPECT COMPONENT	FOR PROBABLE CAUSE
NOISY IN ALL GEARS	TRANSMISSION OIL LEVEL	LOW OIL LEVEL
	MAIN SHAFT BEARINGS	WEAR OR DAMAGE
	COUNTERSHAFT BEARINGS	WEAR OR DAMAGE
NOISY IN NEUTRAL WITH ENGINE RUNNING	INPUT SHAFT BEARING	WEAR OR DAMAGE
	CLUTCH RELEASE BEARING	WEAR OR DAMAGE
NOISY IN 1ST GEAR ONLY	MAIN SHAFT 1ST GEAR OR NEEDLE BEARING	WEAR OR DAMAGE
	LOW SPEED SYNCHRONIZER ASSEMBLY	WEAR OR DAMAGE
NOISY IN 2ND GEAR ONLY	MAIN SHAFT 2ND GEAR OR NEEDLE BEARING	WEAR OR DAMAGE
	LOW SPEED SYNCHRONIZER ASSEMBLY	WEAR OR DAMAGE
NOISY IN 3RD GEAR ONLY	MAIN SHAFT 3RD GEAR OR NEEDLE BEARING	WEAR OR DAMAGE
	HIGH SPEED SYNCHRONIZER ASSEMBLY	WEAR OR DAMAGE
NOISY IN 4TH GEAR ONLY	INPUT SHAFT 4TH GEAR OR NEEDLE BEARING	WEAR OR DAMAGE
	HIGH SPEED SYNCHRONIZER ASSEMBLY	WEAR OR DAMAGE
NOISY IN 5TH GEAR ONLY	MAIN SHAFT 5TH GEAR OR NEEDLE BEARING	WEAR OR DAMAGE
	REVERSE SYNCHRONIZER ASSEMBLY	WEAR OR DAMAGE
NOISY IN REVERSE ONLY	REVERSE IDLER GEAR OR NEEDLE BEARING	WEAR OR DAMAGE
	MAIN SHAFT REVERSE GEAR OR NEEDLE BEARING	WEAR OR DAMAGE
	REVERSE SYNCHRONIZER ASSEMBLY	WEAR OR DAMAGE
TRANSMISSION SLIPS OUT OR GEAR	GEARSHIFT SHAFTS OR FORKS	WEAR OR DISTORTION
	SYNCHRONIZER SLEEVES	WEAR OR MISALIGNMENT
	LOCATING SPRINGS	DISTORTION OR WEAKNESS
	MAIN SHAFT OR COUNTERSHAFT BEARINGS	WEAR OR DAMAGE

Figure 15-Transmission Diagnosis Chart 1 of 2

FOR PROBABLE CAUSE INSPECT COMPONENT CONDITION WEAK OR BROKEN SYNCHRONIZER SPRINGS GEARS WILL NOT DISENGAGE DISTORTION OR DAMAGE GEARSHIFT SHAFTS OR FORKS MISADJUSTED CLUTCH PEDAL FREE TRAVEL HARD SHIFTING EFFORT WEAR OR DISTORTION CLUTCH DISC BROKEN DIAPHRAGM SPRING OR CLUTCH PRESSURE PLATE WEAR WEAR OR DAMAGE SYNCHRONIZER RINGS

Figure 16-Transmission Diagnosis Chart 2 of 2

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OIL LEAK DIAGNOSIS

Figure 17

The cause of transmission oil leaks can usually be located with the transmission in the vehicle. The transmission case components are constructed of aluminum and are separated into six pieces: the clutch housing, input shaft bearing retainer, upper case, lower case, extension case (two-wheel drive models), rear case (four-wheel drive models) and the gearshift lever case. If a leak exists between the upper case, lower case or input shaft bearing retainer, the transmission must be removed from the vehicle for repair. Refer to SECTION 7B-4B(Two-Wheel Drive Models) and SECTION 7B-11 (Four-Wheel Drive Models) in the 1996 Transmission/Transaxle/Transfer Case Unit Repair Manual. If a leak exists at the extension case (Two-Wheel Drive Models), rear case (Four-Wheel Drive Models) or the gearshift lever case, the leak can be repaired without removing the transmission assembly from the vehicle. There are three methods for locating manual transmission oil leaks.

General Method

- 1. Verify that the leak is transmission oil.
- 2. Thoroughly clean the suspected leak area.
- Drive the vehicle for 24 km (15 miles) or until normal operating temperatures are reached.
- 4. Park the vehicle over clean paper or cardboard.
- Turn the ignition switch to the "OFF" position and wait approximately 30 minutes.
- Inspect paper for spots in relation to its position under the transmission assembly.
- 7. Make the necessary repairs.

Powder Method

- Thoroughly clean the suspected leak area with solvent.
- Apply an aerosol powder or baby powder to the suspected leak area.
- Drive the vehicle for 24 km (15 miles) or until normal operating temperatures are reached.
- 4. Turn the ignition switch to the "OFF" position.
- Inspect the suspected leak area and trace the leak path through the powder to find the source.
- 6. Make the necessary repairs.

Dye and Black Light Method

Tools Required:

J 28428-D High Intensity Black Light J 28431-6 Fluorescent Oil Additive

- Raise and suitably support vehicle. Refer to SECTION 0A.
- Add 30 ml (1 oz.) of J 28431-6 into the transmission oil level/filler plug.
- 3. Lower vehicle.
- Drive vehicle for 24 km (15 miles) or until normal operating temperatures are reached.
- 5. Turn the ignition switch to the "OFF" position.

- Raise and suitably support vehicle. Refer to SECTION 0A.
- 7. Using a J 28428-D, locate the source of the leak.
- 8. Make the necessary repairs.

TRANSMISSION OIL LEAK REPAIR

Once the leak has been pinpointed and traced to its source, the cause of the leak must be determined for it to be properly repaired. For example, if a case component is resealed but the mating surface is damaged, resealing will not repair the leak. The damaged mating surface must be repaired or replaced. Before attempting to repair a leak, certain conditions should be checked for and corrected if necessary. The following conditions may cause a transmission oil leak.

? Important

- The Suzuki 5-speed manual transmission does not use gaskets to seal major case components. RTV silicone sealer GM P/N 1052917, or equivalent, should be used where applicable.
- · Oil level is too high.
- · Plugged breather vent.
- Improperly torqued fasteners, dirty or damaged threads.
- · Warped flanges or mating surfaces.
- Scratches, burrs or other damage to mating surfaces.
- · Insufficient or excessive amounts of sealer.
- · Cracking or porosity of the cases.
- · Improper sealant used where applicable.
- · Damaged seal bore.
- Damaged or worn seal.
- Scratched, nicked or damaged propeller shaft surfaces.
- Loose or worn bearing causing excessive seal wear.

CASE POROSITY REPAIR

If the cause of the leak is found to be case porosity, use the following repair procedure:

- Drive the vehicle for 24 km (15 miles) or until normal operating temperatures are reached.
- 2. Turn the ignition switch to the "OFF" position.
- 3. Clean the leak area with solvent and air dry.

CAUTION: Epoxy cement may cause skin irritations and eye damage. Read and follow all information on the container label as provided by the manufacturer.

- Mix a sufficient amount of epoxy cement GM P/N 1052533, or equivalent, following the manufacturer's recommendations.
- 5. While the transmission case is hot, apply epoxy cement with a clean, dry soldering acid brush.
- Allow the epoxy to cure for three hours before starting the engine.
- Repeat the fluid leak diagnosis procedure to verify the repair.

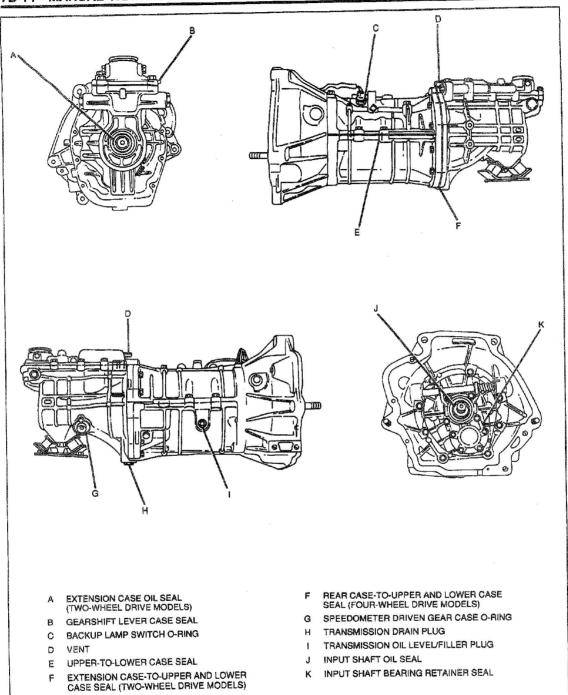


Figure 17-Possible Points of Oil Leaks

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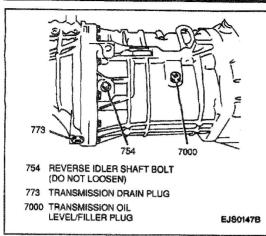


Figure 18—Transmission Oil Level/Filler and Drain Piug Location (Two-Wheel Drive Models)

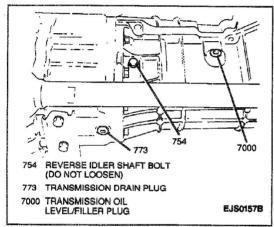


Figure 19—Transmission Oil Level/Filler and Drain Plug Location (Four-Wheel Drive Models)

ON-VEHICLE SERVICE

CHECKING TRANSMISSION OIL LEVEL

Figures 18 and 19

- Raise and suitably support vehicle. Refer to SECTION 0A.
- 2. Remove transmission oil level/filler plug from transmission (Figures 18 and 19).

Inspect

- Transmission oil level. Oil level should be even with the bottom of the transmission oil level/filler plug hole. If oil level is low, adjust oil level accordingly with synthetic 75W-85 GL4 lubricant GM P/N 12346190, or equivalent.
- 3. Apply Loctite® pipe sealant GM P/N 1052080, or equivalent, to the threaded portion of the transmission oil level/filler plug.

4. Install transmission oil level/filler plug into transmission (Figures 18 and 19).

1 Tighten

- Transmission oil level/filler plug to 28 N·m (20 lb. ft.).
- 5. Lower vehicle.

TRANSMISSION OIL CHANGE PROCEDURE

Figures 18 and 19

- Raise and suitably support vehicle. Refer to SECTION 0A.
- Place a drain pan or suitable container underneath transmission.
- 3. Remove transmission oil level/filler plug from transmission (Figures 18 and 19).
- Remove transmission drain plug from transmission and drain transmission oil (Figures 18 and 19).
- Apply Loctite® pipe sealant GM P/N 1052080, or equivalent, to the threaded portion of the transmission drain plug.
- 6. Install transmission drain plug into transmission.

হ্ম Tighten

- Transmission drain plug to 28 N·m (20 lb. ft.).
- 7. Add approximately 1.5 liters (1.6 qts.) of synthetic 75W-85 GL4 lubricant GM P/N 12346190, or equivalent, into the transmission oil level/filler plug hole. Oil level should be even with the bottom of the transmission oil level/filler plug hole.
- 8. Apply Loctite® pipe sealant GM P/N 1052080, or equivalent, to the threaded portion of the transmission oil level/filler plug.
- 9. Install transmission oil level/filler plug into transmission (Figures 18 and 19).

Tighten

- Transmission oil level/filler plug to 28 N·m (20 lb. ft.).
- 10. Remove drain pan from underneath transmission. 11. Lower vehicle.

REAR TRANSMISSION MOUNT (Two-Wheel Drive Models)

Figures 20 and 21

Remove or Disconnect

- 1. Raise and suitably support vehicle. Refer to SECTION 0A.
- Support transmission with a suitable hydraulic jack.
- One bolt and ground wire from speedometer driven gear case.

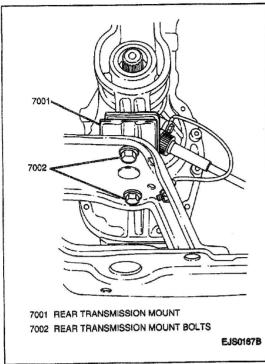


Figure 20—Rear Transmission Mount Bolts (Two-Wheel Drive Models)

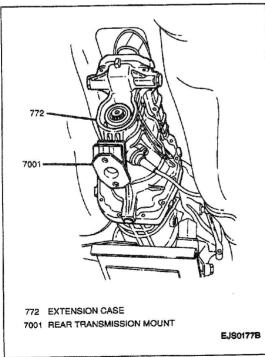


Figure 21—Rear Transmission Mount (Two-Wheel Drive Models)

- 4. Temporarily install the speedometer driven gear case retaining bolt.
- 5. Two bolts from rear transmission mount (Figure 20).
- Four bolts and rear transmission crossmember from vehicle.
- 7. One bolt and rear transmission mount from extension case (Figure 21).

++ Install or Connect

1. Rear transmission mount to extension case; secure with one bolt (Figure 21).

1 Tighten

- Rear transmission mount bolt to 60 N·m (44 lb. ft.).
- 2. Rear transmission crossmember to vehicle; secure with four bolts.

Q Tighten

- Rear transmission crossmember bolts to 60 N.m (44 lb. ft.).
- 3. Two bolts to rear transmission mount (Figure 20).

Tighten

- Rear transmission mount bolts to 60 N.m (44 lb. ft.).
- 4. Remove the speedometer driven gear case retaining bolt.
- Ground wire to speedometer driven gear case; secure with one bolt.

1 Tighten

- Speedometer driven gear case retaining bolt to 12 N·m (106 lb. in.).
- 6. Remove hydraulic jack from underneath transmission.
- 7. Lower vehicle.

GEARSHIFT CONTROL LEVER

Figures 22 through 25

+→ Remove or Disconnect

- 1. Two screws, two plastic retainers and console box from floor (Figure 22).
- 2. Gearshift control lever knob from gearshift control lever by unscrewing counterclockwise.
- 3. Gearshift control lever upper boot from gearshift control lever (Figure 23).
- 4. Four bolts, boot plate, console box bracket and gearshift control lever lower boot from gearshift control lever (Figure 23).
- 5. Clamp and gearshift lever case boot from gearshift lever case (Figure 23).

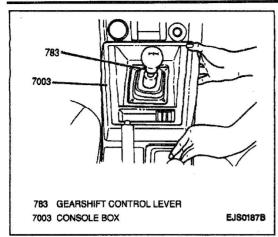


Figure 22-Removing Console Box

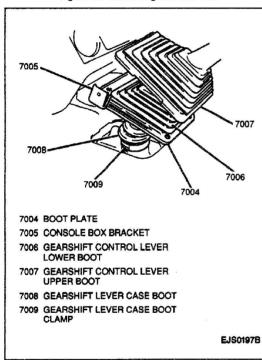


Figure 23—Removing Gearshift Control Lever Upper Boot, Boot Plate, Bracket and Gearshift Control Lever Lower Boot

 Gearshift control lever from gearshift lever case by pushing down on the gearshift control lever pivot and turning counterclockwise 90 degrees (1/4 turn) and lifting up (Figure 24).

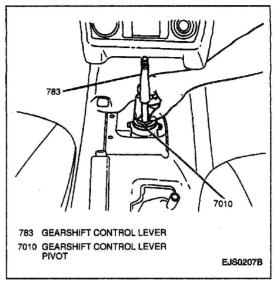


Figure 24—Removing Gearshift Control Lever

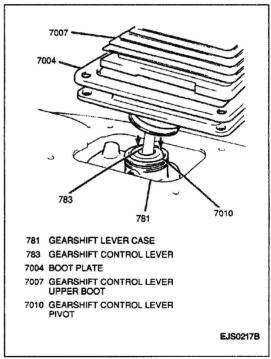


Figure 25-Installing Gearshift Control Lever



- Gearshift control lever for distortion or damage. Replace as necessary.
- Gearshift control lever spring for distortion or damage. Replace as necessary.
- Gearshift lever case boot for tears or damage. Replace as necessary.

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->4-

Install or Connect

- 1. Gearshift control lever into gearshift lever case and pushing down on the shift control lever pivot and turning clockwise 90 degrees (1/4 turn) and releasing (Figure 25).
- Gearshift lever case boot to gearshift lever case; secure with clamp.
- Gearshift control lever lower boot, boot plate and console box bracket onto gearshift control lever; secure with four bolts (Figure 22).

(Tighten

- Gearshift control lever lower boot plate bolts to 7 N·m (62 lb. in.).
- Gearshift control lever upper boot onto gearshift control lever.
- Gearshift control knob onto gearshift control lever by screwing clockwise.
- Console box to floor; secure with two plastic retainers and two screws.

EXTENSION CASE OIL SEAL (Two-Wheel Drive Models)

Figures 26 and 27



Remove or Disconnect

Tools Required:

- J 6125-B Slide Hammer
- J 23129 Converter Housing Seal and Extension Housing Oil Seal Remover
- 1. Raise and suitably support vehicle. Refer to SECTION 0A.
- 2. Place index marks on the propeller shaft pinion flange yoke and differential pinion flange to ensure correct installation.

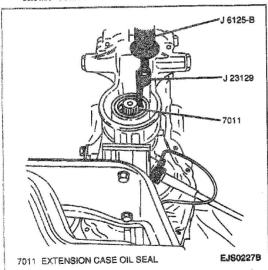


Figure 26—Removing Extension Case Oil Seal (Two-Wheel Drive Models)

- 3. Four bolts, four nuts and rear propeller shaft from vehicle.
- 4. Extension case oil seal from extension case using a J 23129 with a J 6125-B (Figure 26).

12

Inspect

 Seal surface of extension case for cracks or porosity. If cracks or porosity exist, replace extension case.

→4

Install or Connect

Tools Required:

- J 37750 Oil Seal Installer
- J 36850 Transjel® Transmission Assembly Lubricant
- 1. New extension case oil seal into extension case using a J 37750 and a hammer (Figure 27).
- 2. Apply J 36850 to the new extension case oil seal lip.
- Rear propeller shaft into vehicle aligning index marks made during removal; secure with four bolts and four nuts.

Q

Tighten

- Rear propeller shaft bolts and nuts to 50 N·m (37 lb. ft.).
- 4. Lower vehicle.

BACKUP LAMP SWITCH

Flaures 28 and 29

4+

Remove or Disconnect

- 1. Negative (-) battery cable.
- Raise and suitably support vehicle. Refer to SECTION 0A.

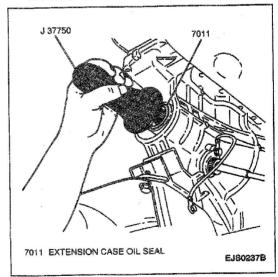


Figure 27—Installing Extension Case Oil Seal (Two-Wheel Drive Models)

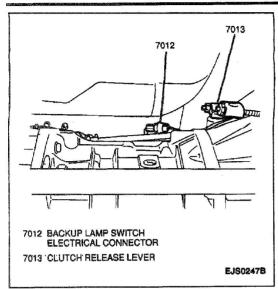


Figure 28-Backup Lamp Switch Electrical Connector

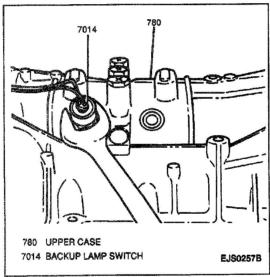


Figure 29-Removing Backup Lamp Switch

- 3. Backup lamp switch electrical connector from backup lamp switch (Figure 28).
- 4. Backup lamp switch from upper case (Figure 29).

Inspect

- 1. For backup lamp switch diagnosis, refer to SECTION 8A.
- 2. Backup lamp switch O-ring for cuts or damage. Replace as necessary.

→ Install or Connect

1. Backup lamp switch into upper case (Figure 29).

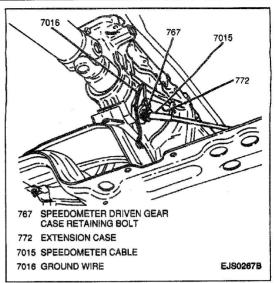


Figure 30—Speedometer Cable and Driven Gear Case Retaining Bolt (Two-Wheel Drive Models)



- Backup lamp switch to 23 N·m (17 lb. ft.).
- 2. Backup lamp switch electrical connector to backup lamp switch (Figure 28).
- 3. Lower vehicle.
- 4. Negative (-) battery cable.

2 Tighten

• Negative (-) battery cable-to-negative (-) battery terminal retainer to 15 N·m (11 lb. ft.).

SPEEDOMETER DRIVEN GEAR (Two-Wheel Drive Models)

Figures 30 through 33

←→ Remove or Disconnect

- Raise and suitably support vehicle. Refer to SECTION 0A.
- 2. Speedometer cable from speedometer driven gear case (Figure 30).
- 3. One bolt, ground wire and speedometer driven gear case from extension case (Figure 30).
- 4. One roll pin and speedometer driven gear from speedometer driven gear case (Figure 31).
- 5. Speedometer driven gear lip seal from speedometer driven gear case (Figure 32).

Inspect

 Speedometer driven gear for excessive wear or damage. Replace as necessary.

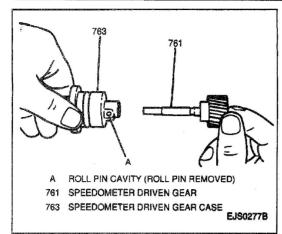


Figure 31-Removing Speedometer Driven Gear (Two-Wheel Drive Models)

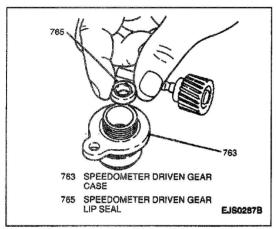


Figure 32-Removing Speedometer Driven Gear Case Lip Seal (Two-Wheel Drive Models)



Install or Connect

Tools Required:

- J 34833 Valve Guide Remover
- J 36850 Transjel® Transmission Assembly Lubricant
- 1. Apply J 36850 to the new speedometer driven gear lip seal.
- 2. New speedometer driven gear lip seal into speedometer driven gear case using a J 34833 (Figure 33).
- 3. Speedometer driven gear into speedometer driven gear case; secure with one roll pin (Figure 33).
- 4. Speedometer driven gear case and ground wire to extension case; secure with one bolt (Figure 30).

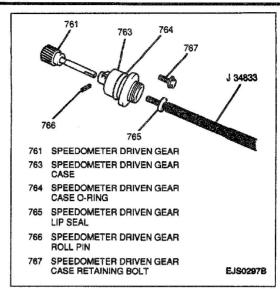


Figure 33—Installing Speedometer Driven Gear Lip Seal (Two-Wheel Drive Models)

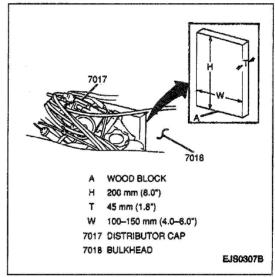


Figure 34-Wood Block Support Installation



Q Tighten

- · Speedometer driven gear case retaining bolt to 12 N·m (106 lb. in.).
- 5. Speedometer cable to speedometer driven gear case.
- 6. Lower vehicle.

Speedometer Cable

For speedometer cable service procedures, refer to SECTION 8C.

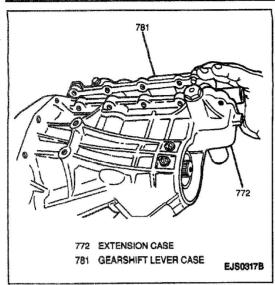


Figure 35-Removing Gearshift Lever Case From Extension Case (Two-Wheel Drive Models)

EXTENSION CASE (Two-Wheel Drive Models)

Figures 18, 20, 30, 34, 35, 36 and 37

Remove or Disconnect

- 1. Gearshift control lever from gearshift lever case. Refer to "Gearshift Control Lever" earlier in this section.
- 2. Four bolts from fan shroud at radiator.
- 3. Raise and suitably support vehicle. Refer to SECTION 0A.
- 4. Place a drain pan or suitable container underneath transmission.
- 5. Transmission oil level/filler plug from transmission (Figure 18).
- 6. Transmission drain plug from transmission and drain transmission oil (Figure 18).
- 7. Place index marks on the propeller shaft pinion flange yoke and differential pinion flange to ensure correct installation.
- 8. Four bolts, four nuts and rear propeller shaft from vehicle.
- 9. Speedometer cable from speedometer driven gear case.
- 10. One bolt, ground wire and speedometer driven gear case from extension case (Figure 30).
- 11. Three Way Catalytic Converter (TWC) and muffler /tail pipe assembly from vehicle. Refer to SECTION 6F.
- 12. Remove drain pan from underneath transmission.
- 13. Support transmission with a suitable hydraulic jack.
- 14. Two bolts from rear transmission mount (Figure 20).

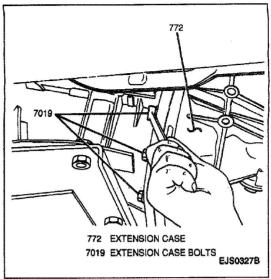


Figure 36—Removing Extension Case Bolts (Two-Wheel Drive Models)

- 15. Four bolts and rear transmission crossmember from vehicle.
- 16. One bolt and rear transmission mount from extension case.
- 17. Place a wood block with the dimensions shown in Figure 34 between the distributor gear housing and and the bulkhead to prevent the distributor and other components from being damaged when the transmission is lowered.
- 18. Lower transmission slowly until the engine contacts its support point on the wood block.
- 19. One clamp and breather hose from gearshift lever case.
- 20. Ten bolts and gearshift lever case from extension case (Figure 35).
- 21. Twelve bolts and extension case from transmission (Figure 36).
- 22. Two select return spring bolts, two select return springs and two select guide pins from extension case (Figure 37).

Clean

- 1. Extension case-to-transmission mating surfaces.
- 2. Gearshift lever case-to-extension case mating surfaces.

Inspect

· Extension case for cracks or porosity. If cracks or porosity exist, replace extension case.

Install or Connect

1. Two select guide pins, two select return springs and two select return spring bolts into extension case (Figure 37).

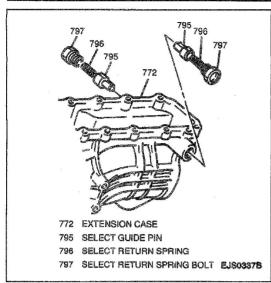


Figure 37—Select Return Components (Two-Wheel Drive Models)

Tighten

- Select return spring bolts to 20 N.m (15 lb. ft.).
- Apply Loctite® 599 RTV silicone sealer, or equivalent, to the transmission extension case mating surface.
- Extension case to transmission; secure with twelve bolts.

Tighten

- Extension case bolts to 28 N·m (20 lb. ft.).
- Apply Loctite® 599 RTV silicone sealer, or equivalent, to the extension case gearshift lever case mating surface.
- Gearshift lever case to extension case; secure with ten bolts.

Tighten

- Gearshift lever case bolts to 17 N·m (12 lb. ft.).
- 6. Breather hose to gearshift lever case; secure with one clamp.
- Raise transmission slowly until engine is no longer in contact with the wood block between the bulkhead and the distributor gear housing (Figure 34).
- 8. Remove wood block.
- Rear transmission mount to extension case; secure with one bolt.

হি Tighten

• Rear transmission mount bolt to 60 N·m (44 lb. ft.).

 Rear transmission crossmember into vehicle; secure with four bolts.

Tighten

- Rear transmission crossmember bolts to 60 N·m (44 lb. ft.).
- 11. Two bolts to rear transmission mount (Figure 20).

Tighten

- Rear transmission mount bolts to 60 N·m (44 lb. ft.).
- Remove hydraulic jack from underneath transmission.
- Three Way Catalytic Converter (TWC) and muffler /tail pipe assembly to vehicle. Refer to SECTION 6F.
- 14. Speedometer driven gear case and ground wire to extension case; secure with one bolt (Figure 30).

Tighten

- Speedometer driven gear case retaining bolt to 12 N·m (106 lb. in.).
- Speedometer cable to speedometer driven gear case (Figure 30).
- Rear propeller shaft into vehicle aligning index marks made during removal; secure with four bolts and four nuts.

(2) Tighten

- Rear propeller shaft bolts and nuts to 50 N-m (37 lb. ft.).
- Apply Loctite® pipe sealant GM P/N 1052080, or equivalent, to the threaded portion of the transmission drain plug.
- 18. Transmission drain plug into transmission (Figure 18).

(1) Tighten

- Transmission drain plug to 28 N·m (20 lb. ft.).
- 19. Add approximately 1.5 liters (1.6 qts.) of synthetic 75W-85 GL4 lubricant GM P/N 12346190, or equivalent, into the transmission oil level/filler plug hole. Oil level should be even with the bottom of the transmission oil level/filler plug hole.
- 20. Apply Loctite® pipe sealant GM P/N 1052080, or equivalent, to the threaded portion of the transmission oil level/filler plug.
- Transmission oil level/filler plug into transmission (Figure 18).

হি Tighten

- Transmission oil level/filler plug to 28 N-m (20 lb. ft.).
- 22. Lower vehicle.
- 23. Four bolts to fan shroud at radiator.

(1) Tighten

- Fan shroud bolts to 10 N.m (89 lb. in.).
- Gearshift control lever into gearshift lever case.
 Refer to "Gearshift Control Lever" earlier in this section.

SPEEDOMETER DRIVE GEAR (Two-Wheel Drive Models)

Figure 38

Remove or Disconnect

- Gearshift control lever from gearshift lever case. Refer to "Gearshift Control Lever" earlier in this section.
- Extension case from transmission. Refer to "Extension Case" earlier in this section.
- Speedometer drive gear retaining ring and speedometer drive gear from main shaft (Figure 38).



 Speedometer drive gear for excessive wear or damage. Replace as necessary.

→← Install or Connect

- 1. Speedometer drive gear onto main shaft; secure with speedometer drive gear retaining ring (Figure 38).
- Extension case to transmission. Refer to "Extension Case" earlier in this section.
- Gearshift control lever into gearshift lever case.
 Refer to "Gearshift Control Lever" earlier in this section.

GEARSHIFT LEVER CASE REMOVAL (Two-Wheel Drive Models)

Figures 18, 20, 30, 34 and 35

Remove or Disconnect

- Gearshift control lever from gearshift lever case. Refer to "Gearshift Control Lever" earlier in this section.
- 2. Four bolts from fan shroud at radiator.
- Raise and suitably support vehicle. Refer to SECTION 0A.
- Place a drain pan or suitable container underneath transmission.
- Transmission oil level/filler plug from transmission (Figure 18).
- Transmission drain plug from transmission and drain transmission oil (Figure 18).
- Place index marks on the propeller shaft pinion flange yoke and differential pinion flange to ensure correct installation.
- Four bolts, four nuts and rear propeller shaft from vehicle.

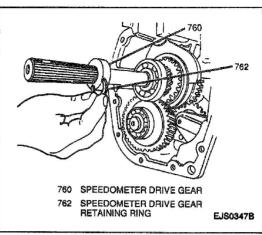


Figure 38—Removing Speedometer Drive Gear Retaining Ring (Two-Wheel Drive Models)

- Speedometer cable from speedometer driven gear case (Figure 30).
- One bolt and ground wire from speedometer driven gear case (Figure 30).
- 11. Temporarily install speedometer driven gear case retaining bolt.
- Three Way Catalytic Converter (TWC) and muffler/tail pipe assembly from vehicle. Refer to SECTION 6F.
- 13. Remove drain pan from underneath transmission.
- Support transmission with a suitable hydraulic jack.
- 15. Two bolts from rear transmission mount (Figure 20).
- Four bolts and rear transmission crossmember from vehicle.
- 17. Place a wood block with the dimensions shown in Figure 34 between the distributor gear housing and the bulkhead to prevent the distributor and other components from being damaged when the transmission is lowered.
- Lower transmission slowly until the engine contacts its support point on the wood block.
- One clamp and breather hose from gearshift lever case.
- 20. Ten bolts and gearshift lever case from extension case (Figure 35).

Gearshift Lever Case Disassembly (Two-Wheel Drive Models)

Flaure 38

←→ Remove or Disconnect

- 1. One inner and outer roll pin and gearshift arm from gearshift shaft (Figure 39).
- Gearshift control lever bushing from gearshift arm (Figure 39).
- One roll pin from gearshift shaft releasing tension on gearshift limit spring.

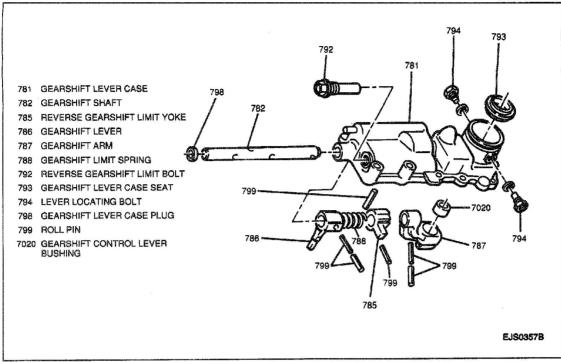


Figure 39—Gearshift Lever Case Components (Two-Wheel Drive Models)

- One inner and outer roll pin from gearshift lever (Figure 39).
- One roll pin from reverse gearshift limit yoke (Figure 39).
- 6. Unstake gearshift lever case plug.
- 7. Gearshift lever case plug from gearshift lever case (Figure 39).
- Gearshift shaft from gearshift lever case while simultaneously removing the gearshift lever, reverse gearshift limit yoke and gearshift limit spring from gearshift shaft (Figure 39).
- 9. Reverse gearshift limit bolt from gearshift lever case (Figure 39).
- Two select return spring bolts, two select return springs and two select guide pins from extension case (Figure 37).
- 11. Two lever locating bolts and washers from gearshift lever case (Figure 38).
- 12. Gearshift lever case seat from gearshift lever case.

Clean

 All components thoroughly with solvent and air dry.

Inspect

1. Gearshift shaft by inserting into gearshift lever case and working back and forth while feeling for any binding. If gearshift shaft does not move freely in and out of the gearshift lever case, replace the gearshift lever case and gearshift shaft.

- 2. Gearshift lever, reverse gearshift limit yoke and gearshift arm for smooth fit and movement on gearshift shaft. If any of the above components bind on the gearshift shaft, replace the gearshift shaft, gearshift lever, reverse gearshift limit yoke and gearshift arm.
- Gearshift limit spring for weakness or distortion. Replace as necessary.
- Gearshift control lever bushing for excessive wear.
 Replace as necessary.
- Gearshift lever case seat for excessive wear.
 Replace as necessary.

Gearshift Lever Case Assembly (Two-Wheel Drive Models)

Figures 39, 40 and 41

++ Install or Connect

Tool Required:
J 36850 Transjel® Transmission Assembly
Lubricant

- 1. Apply a thin coat of J 36850 to all components prior to assembly.
- Gearshift lever case seat into gearshift lever case (Figure 38).
- 3. Two lever locating bolts and washers into gearshift lever case (Figure 39).

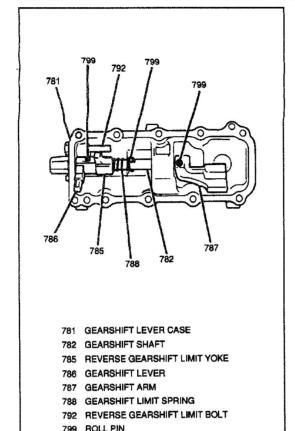


Figure 40-Gearshift Lever Case Assembly (Two-Wheel Drive Models)

EJS0367B

Ð Tighten

- Lever locating bolts to 20 N·m (15 lb. ft.).
- 4. Two select guide pins, two select return springs and two select return spring bolts into extension case (Figure 37).

12 Tighten

- · Select return spring bolts to 32 N.m (24 lb. ft.).
- 5. Apply a thin coat of Loctite® 414 GM P/N 12345493, or equivalent, to the threaded portion of the reverse gearshift limit bolt.
- 6. Reverse gearshift limit bolt into gearshift lever case (Figure 39).

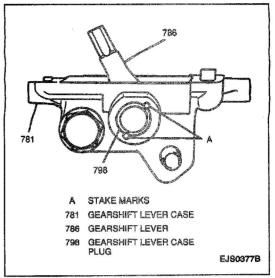


Figure 41-Gearshift Lever Case Plug Stake Marks (Two-Wheel Drive Models)

Tighten

• Reverse gearshift limit bolt to 35 N·m (26 lb. ft.).

Important

- · The portion of the gearshift shaft which has been machined flat must be facing downward toward the inside of the gearshift lever case for correct installation.
- 7. Gearshift shaft into gearshift lever case while simultaneously installing the gearshift lever, reverse gearshift limit yoke and gearshift limit spring onto the gearshift shaft (Figure 40).
- 8. Gearshift lever case plug into gearshift lever case.
- 9. Stake gearshift lever case plug in two places (Figure 41).
- 10. One roll pin into reverse gearshift limit yoke (Figure 40).
- 11. One inner and outer roll pin into gearshift lever (Figure 40).
- 12. One roll pin into gearshift shaft for gearshift limit spring (Figure 40).
- 13. Gearshift control lever bushing into gearshift arm (Figure 39).
- 14. One inner and outer roll pin and gearshift arm onto gearshift shaft.
- 15. Attach the hooked end of the gearshift limit spring around the roll pin shown in Figure 40. Then, wind the gearshift limit spring until the straight end can be fitted onto groove on the reverse gearshift limit yoke.

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GEARSHIFT LEVER CASE INSTALLATION (Two-Wheel Drive Models)

Figures 18, 20, 30, 34 and 35

install or Connect

- Apply Loctite® 599 RTV silicone sealer, or equivalent, to the extension case gearshift lever case mating surface.
- Gearshift lever case to extension case; secure with ten bolts (Figure 35).

(2) Tighten

- Gearshift lever case bolts to 17 N·m (12 lb. ft.).
- Breather hose to gearshift lever case; secure with one clamp.
- 4. Raise transmission slowly until engine is no longer in contact with the wood block between the bulkhead and the distributor gear housing (Figure 34).
- 5. Remove wood block.
- Rear transmission crossmember into vehicle; secure with four bolts.

হ্ম Tighten

- Rear transmission crossmember bolts to 60 N.m (44 lb. ft.).
- 7. Two bolts to rear transmission mount (Figure 20).

হ্ম Tighten

- Rear transmission mount bolts to 60 N·m (44 lb. ft.).
- 8. Remove hydraulic jack from underneath transmission.
- Three Way Catalytic Converter (TWC) and muffler/tail pipe assembly to vehicle. Refer to SECTION 6F.
- 10. Remove the speedometer driven gear case retaining bolt.
- 11. Ground wire to speedometer driven gear case; secure with one bolt (Figure 30).

হ্ম Tighten

- Speedometer driven gear case retaining bolt to 12 N·m (106 lb. in.).
- 12. Speedometer cable to speedometer driven gear case (Figure 30).
- Rear propeller shaft into vehicle aligning index marks made during removal; secure with four bolts and four nuts.

(1) Tighten

• Rear propeller shaft bolts and nuts to 50 N·m (37 lb, ft.).

- Apply Loctite® pipe sealant GM P/N 1052080, or equivalent, to the threaded portion of the transmission drain plug.
- 15. Transmission drain plug into transmission (Figure 18).

হ্মি Tighten

- Transmission drain plug to 28 N.m (20 lb. ft.).
- 16. Add approximately 1.5 liters (1.6 qts.) of synthetic 75W-85 GL4 lubricant GM P/N 12346190, or equivalent, into the transmission oil level/filler plug hole. Oil level should be even with the bottom of the transmission oil level/filler plug hole.
- 17. Apply Loctite® pipe sealant GM P/N 1052080, or equivalent, to the threaded portion of the transmission oil level/filler plug.
- 18. Transmission oil level/filler plug into transmission (Figure 18).

(1) Tighten

- Transmission oil level/filler plug to 28 N-m (20 lb. ft.).
- 19. Lower vehicle.
- 20. Four bolts to fan shroud at radiator.

হি Tighten

- Fan shroud bolts to 10 N.m (89 lb. in.).
- Gearshift control lever into gearshift lever case.
 Refer to "Gearshift Control Lever" earlier in this section.

REAR CASE, REAR CASE OIL SEAL AND REAR CASE COUNTERSHAFT PLUG (Four-Wheel Drive Models)

Figures 19, 34 and 42 through 46

Remove or Disconnect

Tools Required:

J 29369-1 Output Shaft Bearing Remover

J 23907 Slide Hammer

J 35664 Bearing Installer

 Gearshift control lever from gearshift lever case. Refer to "Gearshift Control Lever" earlier in this section.

[7] Important

- After removing the gearshift control lever, remove the bolt directly behind the gearshift lever case. This bolt attaches the gearshift lever case to the transfer case and must be removed before transfer case removal can be performed.
- 2. One bolt from rear of gearshift lever case (Figure 42).
- Transfer case gearshift control lever from transfer case. Refer to SECTION 7D.

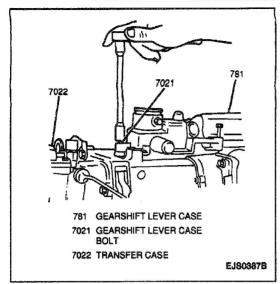


Figure 42—Removing Gearshift Lever Case Bolt From Transfer Case (Four-Wheel Drive Models)

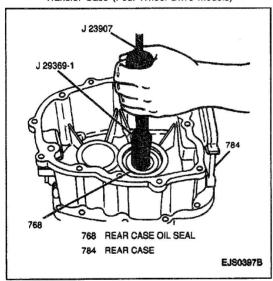


Figure 43—Removing Rear Case Oil Seal (Four-Wheel Drive Models)

- 4. Four bolts from fan shroud at radiator.
- Raise and suitably support vehicle. Refer to SECTION 0A.
- 6. Place a drain pan or suitable container underneath transmission.
- 7. Transmission oil level/filler plug from transmission (Figure 19).
- 8. Transmission drain plug from transmission and drain transmission oil (Figure 19).
- Three Way Catalytic Converter (TWC) and muffler /tail pipe assembly from vehicle. Refer to SECTION 6F.

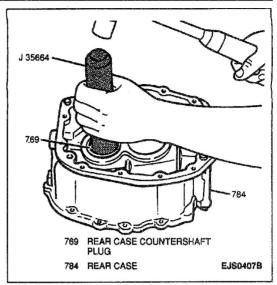


Figure 44—Removing Rear Case Countershaft Plug (Four-Wheel Drive Models)

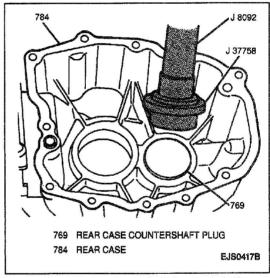


Figure 45—Installing Rear Case Countershaft Plug (Four-Wheel Drive Models)

- 10. Remove drain pan from underneath transmission.
- 11. Support transmission with a suitable hydraulic jack.
- 12. Transfer case from vehicle. Refer to SECTION 7D.
- 13. Place a wood block with the dimensions shown in Figure 34 between the distributor gear housing and and the bulkhead to prevent the distributor and other components from being damaged when the transmission is lowered.
- 14. Lower transmission slowly until the engine contacts its support point on the wood block.

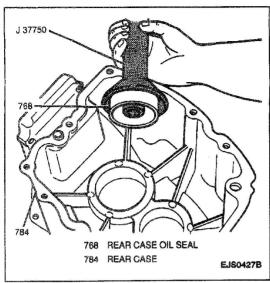


Figure 46—Installing Rear Case Oil Seal (Four-Wheel Drive Models)

- One clamp and breather hose from gearshift lever case.
- 16. Four bolts and gearshift lever case from rear case.
- 17. Twelve bolts and rear case from transmission.
- Rear case oil seal from the rear case using a J 29369-1 with a J 23907 (Figure 43).
- 19. Rear case countershaft plug from the rear case using a J 35664 and a hammer (Figure 44).

Clea

- 1. Rear case and transmission mating surfaces.
- 2. Gearshift lever case and rear case mating surfaces.

inspect

 Rear case for cracks or porosity. If cracks or porosity exist, replace rear case.

++ Install or Connect

Tools Required:

- J 37758 Countershaft Rear Plug Installer
- J 8092 Driver Handle
- J 37750 Oil Seal Installer
- J 36850 Transjel® Transmission Assembly
- 1. Rear case countershaft plug into the rear case using a J 37758 with a J 8092 and a hammer (Figure 45).
- 2. New rear case oil seal into the rear case using a J 37750 and a hammer (Figure 46).
- 3. Apply J 36850 to the new rear case oil seal lip.
- Apply Loctite® 599 RTV silicone sealer, or equivalent, to the transmission rear case mating surface.
- Rear case to transmission; secure with twelve bolts.

Tighten

- Rear case bolts to 28 N.m (20 lb. ft.).
- Apply Loctite® 599 RTV silicone sealer, or equivalent, to the gearshift lever case mating surface.
- Gearshift lever case to rear case; secure with four bolts.

Tighten

- Gearshift lever case bolts to 17 N-m (12 lb. ft.).
- 8. Breather hose to gearshift lever case; secure with one clamp.
- Raise transmission slowly until engine is no longer in contact with the wood block between the bulkhead and the distributor gear housing (Figure 34).
- 10. Remove wood block.
- 11. Transfer case into vehicle. Refer to SECTION 7D.
- 12. Remove hydraulic jack from underneath transmission.
- Three Way Catalytic Converter (TWC) and muffler /tail pipe assembly to vehicle. Refer to SECTION 6F.
- Apply Loctite® pipe sealant GM P/N 1052080, or equivalent, to the threaded portion of the transmission drain plug.
- 15. Transmission drain plug into transmission (Figure 19).

(1) Tighten

- Transmission drain plug to 28 N·m (20 lb. ft.).
- 16. Add approximately 1.5 liters (1.6 qts.) of synthetic 75W-85 GL4 lubricant GM P/N 12346190, or equivalent, into the transmission oil level/filler plug hole. Oil level should be even with the bottom of the transmission oil level/filler plug hole.
- 17. Apply Loctite® pipe sealant GM P/N 1052080, or equivalent, to the threaded portion of the transmission oil level/filler plug.
- 18. Transmission oil level/filler plug into transmission (Figure 19).

হি Tighten

- Transmission oil level/filler plug to 28 N·m (20 lb. ft.).
- 19. Lower vehicle.
- 20. Four bolts to fan shroud at radiator.

(1) Tighten

- Fan shroud bolts to 10 N·m (89 lb. in.).
- 21. Transfer case gearshift control lever into transfer case, Refer to SECTION 7D.
- 22. One bolt into rear of gearshift lever case (Figure 42).

Tighten

Gearshift lever case bolt to 17 N·m (12 lb. ft.).
 23. Gearshift control lever into gearshift lever case.
 Refer to "Gearshift Control Lever" earlier in this section.

GEARSHIFT LEVER CASE REMOVAL (FOUR-WHEEL DRIVE MODELS)

Figures 19, 34 and 42

(* c)

Remove or Disconnect

Gearshift control lever from gearshift lever case.
 Refer to "Gearshift Control Lever" earlier in this section.

- After removing the gearshift control lever, remove the bolt directly behind the gearshift lever case. This bolt attaches the gearshift lever case to the transfer case and must be removed before transfer case removal can be performed.
- 2. One bolt from rear of gearshift lever case (Figure 42).
- Transfer case gearshift control lever from transfer case. Refer to SECTION 7D.
- 4. Four bolts from fan shroud at radiator.
- 5. Raise and suitably support vehicle. Refer to SECTION 0A.
- Place a drain pan or suitable container underneath transmission.
- 7. Transmission oil level/filler plug from transmission (Figure 19).
- Transmission drain plug from transmission and drain transmission oil (Figure 19).
- Three Way Catalytic Converter (TWC) and muffler /tail pipe assembly from vehicle. Refer to SECTION 6F.
- 10. Remove drain pan from underneath transmission.
- 11. Support transmission with a suitable hydraulic jack.
- Transfer case from vehicle. Refer to SECTION 7D.
- 13. Place a wood block with the dimensions shown in Figure 34 between the distributor gear housing and and the bulkhead to prevent the distributor and other components from being damaged when the transmission is lowered.
- 14. Lower transmission slowly until the engine contacts its support point on the wood block.
- One clamp and breather hose from gearshift lever case.
- 16. Four bolts and gearshift lever case from rear case.

Gearshift Lever Case Disassembly (Four-Wheel Drive Models)

Figures 47, 48 and 49

++

Remove or Disconnect

- 1. Four screws and gearshift lever case plate from bottom of gearshift lever case (Figure 47).
- 2. One inner and outer roll pin and gearshift arm from gearshift shaft (Figure 48).
- Gearshift control lever bushing from gearshift arm (Figure 48).
- One roll pin from gearshift shaft releasing tension on the gearshift limit spring.
- 5. One inner and outer roll pin from gearshift lever (Figure 48).
- 6. One roll pin from reverse gearshift limit yoke.
- 7. Unstake gearshift lever case plug.
- 8. Gearshift lever case plug from gearshift lever case (Figure 49).
- Gearshift shaft from gearshift lever case while simultaneously removing the gearshift lever, reverse gearshift limit yoke and gearshift limit spring from gearshift shaft.
- 10. Reverse gearshift limit bolt from gearshift lever case (Figure 48).

? Important

- The gearshift lever case contains an inner and outer select return spring on the left side only. The right side contains a single select return spring. Note the location of these springs to ensure correct assembly (Figure 48).
- 11. Two select return spring bolts, three select return springs and two select guide pins from gearshift lever case (Figure 48).

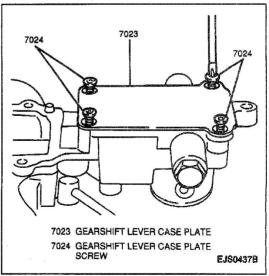


Figure 47—Removing Gearshift Lever Case Plate (Four-Wheel Drive Models)

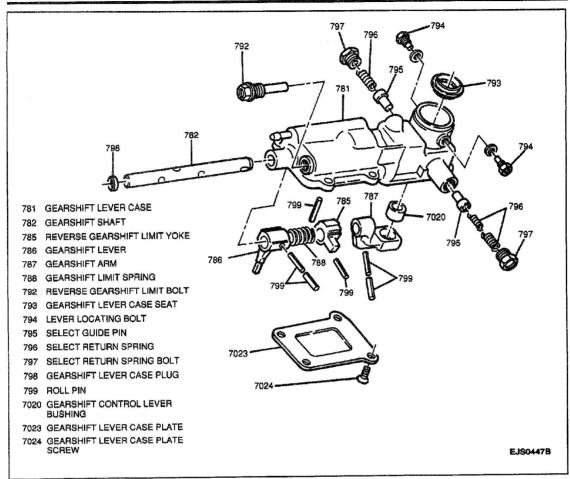


Figure 48—Gearshift Lever Case Components (Four-Wheel Drive Models)

- 12. Two lever locating bolts and washers from gearshift lever case (Figure 48).
- 13. Gearshift lever case seat from gearshift lever case (Figure 48).

Clean

 All components thoroughly with solvent and air dry.

Inspect

- Gearshift shaft by inserting into gearshift lever case and working back and forth while feeling for any binding. If gearshift shaft does not move freely in and out of the gearshift lever case, replace the gearshift lever case and gearshift shaft.
- 2. Gearshift lever, reverse gearshift limit yoke and gearshift arm for smooth fit and movement on gearshift shaft. If any of the above components bind on the gearshift shaft, replace the gearshift shaft, gearshift lever, reverse gearshift limit yoke and gearshift arm.

- Gearshift limit spring for weakness or distortion. Replace as necessary.
- Gearshift control lever bushing for excessive wear.
 Replace as necessary.
- Gearshift lever case seat for excessive wear. Replace as necessary.

Gearshift Lever Case Assembly (Four-Wheel Drive Models)

Figures 47, 48, 50 and 51

++ Install or Connect

Tool Required:

- J 36850 Transjel® Transmission Assembly Lubricant
- 1. Apply a thin coat of J 36850 to all components prior to assembly.
- 2. Gearshift lever case seat into gearshift lever case (Figure 48).
- 3. Two lever locating bolts and washers into gearshift lever case (Figure 48).

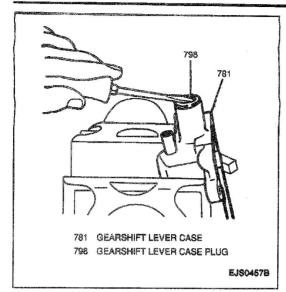


Figure 49-Removing Gearshift Lever Case Plug (Four-Wheel Drive Models)

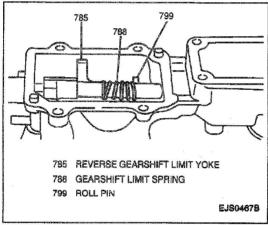


Figure 50-Gearshift Limit Spring and Roll Pin (Four-Wheel Drive Models)

Tighten

- Lever locating bolts to 20 N·m (15 lb. ft.).
- 4. Two select guide pins, three select return springs and two select return spring bolts into gearshift lever case (Figure 48).

Tighten

- Select return spring bolts to 32 N.m. (24 lb. ft.).
- 5. Apply a thin coat of Loctite® 414 GM P/N 12345493, or equivalent, to the threaded portion of the reverse gearshift limit bolt
- 6. Reverse gearshift limit bolt into gearshift lever

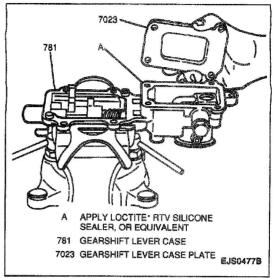


Figure 51-Installing Gearshift Lever Case Plate (Four-Wheel Drive Models)

Tighten

• Reverse gearshift limit bolt to 35 N.m. (26 lb. ft.).

Important

- · The portion of the gearshift shaft which has been machined flat must be facing downward toward the inside of the gearshift lever case for correct installation.
- 7. Gearshift shaft into gearshift lever case while simultaneously installing the gearshift lever, reverse gearshift limit yoke and gearshift limit spring onto the gearshift shaft.
- 8. Gearshift lever case plug into gearshift lever case.
- 9. Stake gearshift lever case plug in two places.
- 10. One roll pin into reverse gearshift limit yoke.
- 11. Two roll pins into gearshift lever.
- 12. One roll pin into gearshift shaft for gearshift limit spring.
- 13. Gearshift control lever bushing into gearshift arm.
- 14. Two roll pins and gearshift arm onto gearshift shaft.
- 15. Attach the hooked end of the gearshift limit spring around the gearshift limit spring roll pin. Then, wind the gearshift limit spring until the straight end can be fitted onto groove on the reverse gearshift limit yoke (Figure 50).
- 16. Apply Loctite® 599 RTV silicone sealer, or equivalent, to the gearshift lever plate mating surface (Figure 51).
- 17. Gearshift lever case plate onto bottom of gearshift lever case; secure with four screws (Figure 47).

Gearshift Lever Case Installation (Four-Wheel Drive Models)

Figures 18, 34 and 42

++ Install or Connect

- Apply Loctite® 599 RTV silicone sealer, or equivalent, to the gearshift lever case mating surface.
- Gearshift lever case to rear case; secure with four bolts.

Tighten

- Gearshift lever case bolts to 17 N.m (12 lb. ft.).
- Breather hose to gearshift lever case; secure with one clamp.
- 4. Raise transmission slowly until engine is no longer in contact with the wood block between the bulkhead and the distributor gear housing (Figure 34).
- 5. Remove wood block.
- 6. Transfer case into vehicle. Refer to SECTION 7D.
- 7. Remove hydraulic jack from underneath transmission.
- Three Way Catalytic Converter (TWC) and muffler /tail pipe assembly to vehicle. Refer to SECTION 6F.
- Apply Loctite® pipe sealant GM P/N 1052080, or equivalent, to the threaded portion of the transmission drain plug.
- 10. Transmission drain plug into transmission (Figure 19).

(1) Tighten

- Transmission drain plug to 28 N.m (20 lb. ft.).
- 11. Add approximately 1.5 liters (1.6 qts.) of synthetic 75W-85 GL4 lubricant GM P/N 12346190, or equivalent, into the transmission oil level/filler plug hole. Oil level should be even with the bottom of the transmission oil level/filler plug hole.
- Apply Loctite® pipe sealant GM P/N 1052080, or equivalent, to the threaded portion of the transmission oil level/filler plug.
- 13. Transmission oil level/filler plug into transmission (Figure 19).

হ্ম Tighten

- Transmission oil level/filler plug to 28 N·m (20 lb. ft.).
- 14. Lower vehicle.
- 15. Four bolts to fan shroud at radiator.

(1) Tighten

• Fan shroud bolts to 10 N·m (89 lb. in.).

- Transfer case gearshift control lever into transfer case. Refer to SECTION 7D.
- 17. One bolt into rear of gearshift lever case (Figure 41).

(1) Tighten

- Gearshift lever case bolt to 17 N·m (12 lb. ft.).
- 18. Gearshift control lever into gearshift lever case. Refer to "Gearshift Control Lever" earlier in this section.

TRANSMISSION ASSEMBLY

Figures 18, 19, 20, 28, 30, 34, 42 and 52 through 56

←→ Remove or Disconnect

- 1. Negative (-) battery cable.
- Gearshift control lever from gearshift lever case. Refer to "Gearshift Control Lever" earlier in this section.

? Important

- After removing the gearshift control lever, remove the bolt directly behind the gearshift lever case. This bolt attaches the gearshift lever case to the transfer case and must be removed before transfer case removal can be performed.
- 3. One bolt from rear of gearshift lever case (Four-Wheel Drive Models) (Figure 42).
- Transfer case gearshift control lever from transfer case (Four-Wheel Drive Models). Refer to SECTION 7D.
- 5. Four bolts from fan shroud at radiator.
- 6. Two upper transmission-to-engine bolts from transmission.
- 7. Raise and suitably support vehicle. Refer to SECTION 0A.

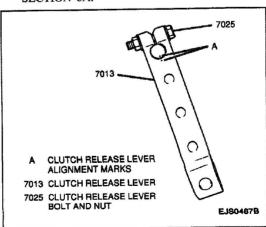


Figure 52—Clutch Release Lever Alignment Marks

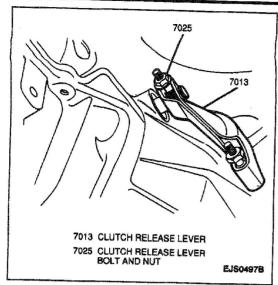


Figure 53-Clutch Release Lever Bolt and Nut

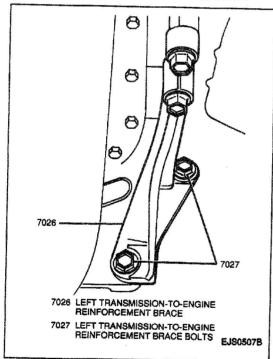


Figure 54-Left Transmission-to-Engine Reinforcement Brace Bolts

- 8. Place a drain pan or suitable container underneath transmission.
- 9. Transmission oil level/filler plug from transmission (Figures 18 and 19).
- 10. Transmission drain plug from transmission and drain transmission oil (Figures 18 and 19).

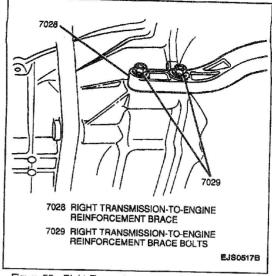


Figure 55—Right Transmission-to-Engine Reinforcement Brace Bolts

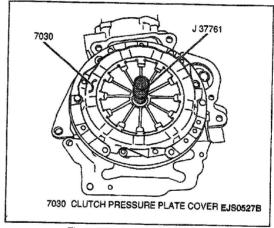


Figure 56—Aligning Clutch Disc

- 11. Backup lamp switch electrical connector from backup lamp switch (Figure 28).
- 12. Starter motor electrical connections from starter motor.
- 13. Two bolts, one nut and starter motor from transmission.
- 14. Transfer case from vehicle (Four-Wheel Drive Models). Refer to SECTION 7D.
- 15. Place index marks on the propeller shaft pinion flange yoke and differential pinion flange to ensure correct installation (Two-Wheel Drive Models).
- 16. Four bolts, four nuts and rear propeller shaft from vehicle (Two-Wheel Drive Models).
- 17. Four bolts and front skid plate from vehicle (if equipped).

7B-34 MANUAL TRANSMISSION

- 18. Speedometer cable from speedometer driven gear case (Two-Wheel Drive Models) (Figure 30).
- 19. One bolt and ground wire from speedometer driven gear case (Two-Wheel Drive Models) (Figure 30).
- Temporarily install the speedometer driven gear case retaining bolt.
- 21. Three Way Catalytic Converter (TWC) and muffler /tail pipe assembly from vehicle. Refer to SECTION 6F.
- 22. Remove drain pan from underneath transmission.
- 23. Support transmission with a suitable hydraulic iack.
- 24. Two bolts from rear transmission mount (Two-Wheel Drive Models) (Figure 20).
- Four bolts and rear transmission crossmember from vehicle (Two-Wheel Drive Models).

Important

- Observe the alignment marks on the clutch release lever and clutch release shaft. Make sure the clutch release shaft and the clutch release lever are properly aligned during installation to ensure correct clutch adjustment (Figure 52).
- One bolt, one nut and clutch release lever from clutch release shaft (Figure 53).
- 27. Two bolts from flywheel inspection cover.
- 28. Place a wood block with the dimensions shown in Figure 34 between the distributor gear housing and the bulkhead to prevent the distributor and other components from being damaged when the transmission is lowered.
- 29. Lower transmission slowly until engine contacts its support point on the wood block.
- One clamp and breather hose from gearshift lever case.
- 31. Two bolts and flywheel inspection cover from left transmission-to-engine reinforcement brace (Figure 54).
- 32. Two bolts from right transmission-to-engine reinforcement brace (Figure 55).
- 33. Two lower transmission-to-engine nuts from transmission. 34 Transmission from vehicle by carefully moving the transmission away from the engine toward the rear of the vehicle until the input shaft is clear of the clutch pressure plate cover. Then, very slowly lower the transmission jack making sure there are no obstructions.

Inspect

• For disassembly and inspection procedures. Refer to SECTION 7B-4B (Two-Wheel Drive Models), or SECTION 7B-11 (Four-Wheel Drive Models) in the 1996 Transmission/Transaxle/Transfer Case Unit Repair Manual.

→← II

Install or Connect

10

Inspect

Tool Required: J 37761 Clutch Alignment Arbor

- Clutch alignment by inserting a J 37761 through the clutch disc and into the crankshaft pilot bearing (Figure 56). If the J 37761 does not fit through the clutch disc and into the pilot bearing smoothly, the clutch disc may be misaligned. For clutch disassembly and inspection procedures, refer to SECTION 7C and align if necessary.
- Transmission to engine by raising the transmission into position and moving the transmission toward the engine while simultaneously inserting the transmission input shaft through the pressure plate cover and clutch disc into the crankshaft pilot bearing.
- Two lower transmission-to-engine nuts into transmission.

হ্ম Tighten

- Lower transmission-to-engine nuts to 100 N-m (72 lb. ft.).
- Two bolts into right transmission-to-engine reinforcement brace (Figure 55).

(1) Tighten

- Right transmission-to-engine reinforcement brace bolts to 100 N·m (72 lb. ft.).
- Flywheel inspection cover and two bolts into left transmission-to-engine reinforcement brace (Figure 53).

হি Tighten

- Left transmission-to-engine reinforcement brace bolts to 100 N·m (72 lb. ft.).
- Breather hose to gearshift lever case; secure with one clamp.
- Raise transmission slowly until engine is no longer in contact with the wood block between the bulkhead and the distributor gear housing (Figure 34).
- 7. Remove wood block.
- 8. Two bolts into flywheel inspection cover.

হি Tighten

- Flywheel inspection cover bolts to 10 N-m (89 lb. in.).
- One bolt, one nut and clutch release lever onto clutch release shaft making sure to match alignment marks on both, secure with one bolt and one nut (Figures 52 and 53).

Tighten

- Clutch release lever bolt and nut to 24 N.m (17 lb. ft.).
- Rear transmission crossmember to vehicle; secure with four bolts (Two-Wheel Drive Models).

Tighten

- Rear transmission crossmember bolts to 60 N·m (44 lb. ft.).
- 11. Two bolts into rear transmission mount (Two-Wheel Drive Models) (Figure 20).

(1) Tighten

- Rear transmission mount bolts to 60 N·m (44 lb. ft.).
- 12. Remove hydraulic jack from underneath transmission.
- Three Way Catalytic Converter (TWC) and muffler /tail pipe assembly to vehicle. Refer to SECTION 6F.
- Remove speedometer driven gear case retaining bolt.
- 15. Ground wire to speedometer driven gear case; secure with one bolt (Figure 30).

হি Tighten

- Speedometer driven gear case retaining bolt to 12 N·m (106 lb. in.).
- 16. Speedometer cable from speedometer driven gear case (Two-Wheel Drive Models)(Figure 30).
- Front skid plate to vehicle; secure with four bolts (if equipped).

হি Tighten

- Front skid plate bolts to 54 N-m (40 lb. ft.).
- 18. Rear propeller shaft into vehicle aligning index marks made during removal; secure with four nuts and four bolts (Two-Wheel Drive Models).

হি Tighten

- Rear propeller shaft nuts and bolts to 50 N·m (37 lb. ft.).
- Transfer case into vehicle (Four-Wheel Drive Models). Refer to SECTION 7D.
- Starter motor to transmission; secure with two bolts and one nut.

Tighten

- Starter motor bolts and nut to 30 N.m (22 lb. ft.).
- 21. Starter motor electrical connections to starter motor.
- Backup lamp switch electrical connector to backup lamp switch (Figure 28).

- Apply Loctite® pipe sealant GM P/N 1052080, or equivalent, to the threaded portion of the transmission drain plug.
- 24. Transmission drain plug into transmission (Figures 18 and 19).

(1) Tighten

- Transmission drain plug to 28 N.m (20 lb. ft.).
- 25. Add approximately 1.5 liters (1.6 qts.) of synthetic 75W-85 GL4 lubricant GM P/N 12346190, or equivalent, into the transmission oil level/filler plug hole. Oil level should be even with the bottom of the transmission oil level/filler plug hole.
- Apply Loctite® pipe sealant GM P/N 1052080, or equivalent, to the threaded portion of the transmission oil level/filler plug.
- Transmission oil level/filler plug into transmission (Figures 18 and 19).

Tighten

- Transmission oil level/filler plug to 28 N.m (20 lb. ft.).
- 28. Lower vehicle.
- Two upper transmission-to-engine bolts into transmission.

Tighten

- Upper transmission-to-engine bolts to 100 N·m (72 lb. ft.).
- 30. Four bolts from fan shroud at radiator.

হ্মি Tighten

- Fan shroud bolts to 10 N·m (89 lb. in.).
- Transfer case gearshift control lever into transfer case (Four-Wheel Drive Models). Refer to SECTION 7D.
- 32. One bolt into rear of gearshift lever case (Four-Wheel Drive Models) (Figure 42).

হি Tighten

- Gearshift lever case bolt to 17 N.m (12 lb. ft.).
- Gearshift control lever into gearshift lever case. Refer to "Gearshift Control Lever" earlier in this section.
- 34. Negative (-) battery cable.

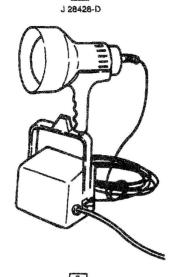
Tighten

• Negative (-) battery cable-to-negative (-) battery terminal retainer to 15 N.m (11 lb. ft.).

SPECIFICATIONS

FASTENER TORQUES					
Transmission Oil Level/Filler Plug	28	N⋅m	(20	lb.	ft.)
Transmission Drain Plus	40	T.4 . T.1.1	(20	w.	14.
Daw Transmission Mount Rolls (Two-Wheel Drive Models)	UV	T4-711	(ıv.	200)
Poor Transmission Crossmember Rolts (Four-Wheel Drive Models)	60	N.m	(44	ID.	11.)
Speedameter Driven Gear Case Rolf	12 F	4.III ()	LVU .	LU.	111./
Complify Control Lover Lover Boot Plate Rolfs	1	IN-III	OZ.	w.	111. /
Book Propoller Shoft Rolts and Nuts (Two-Wheel Drive Models)	50	$N \cdot m$	(3/	10.	π.)
Dackun Lama Switch	23	$M \cdot M$	(1/	ID.	11.)
Extension Case Rolts	40	7.A - 111	(20	10.	11.,
Goarshift Laver Case Rolts	1	N·m	(12	10.	11.)
Fan Shroud Rolts	10	$N \cdot m$	(89	10.	m.)
Lover Locating Rolts	20	$1A \cdot 111$	(1)	ID.	11.)
Salast Datum Spring Rolts	34	IA-III	(24	10.	11.)
Payarca Carchift Limit Bolt		14.111	(20	$1U_{\bullet}$	16./
Page Coop Polts (Four-Wheel Drive Models)	.,., 28	N·m	(20	ID.	11.)
Front Clrid Diata Rolts	54	N·m	(40	ID.	11.)
Lower Transmission to Engine Nuts	100	IN-m	(12	10.	11.)
Pight Transmission-to-Engine Reinforcement Brace Bolts	100	IN-III	(12	io.	11.,
Left Transmission to Engine Reinforcement Brace Bolts.	100	1N-111	1/2	10.	11.,
Elemphoal Ingraction Cover Rolts	IV	14-TI	(07	w.	111.
Clutch Pologo I ever Polt and Nut	24	14.111	(17	w.	14.)
Starter Motor Polts and Nut	30	14-111	122	w.	11.,
Negative (-) Battery Cable-to-Negative (-) Battery Terminal Retainer	13	N·m	(11	ID.	п.)
OIL CAPACITY (Approximate)					
Manual Transmission Drain and Refill	1.5	Liter	S (1	.O (IS.)
Oil Recommended	cant Gi	AI LIL	4 12.	540	130

SPECIAL TOOLS



1

2 J 28431-6



3 J 6125-B

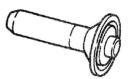


- 1 HIGH INTENSITY BLACK LIGHT
- 2 FLUORESCENT OIL ADDITIVE
- 3 SLIDE HAMMER
- 4 CONVERTER HOUSING SEAL AND EXTENSION HOUSING OIL SEAL REMOVER
- 5 OIL SEAL INSTALLER
- 6 TRANSJEL TRANSMISSION ASSEMBLY LUBRICANT

4 J 23129



5 J 37750



6



EJS0537B

7B-38 MANUAL TRANSMISSION

