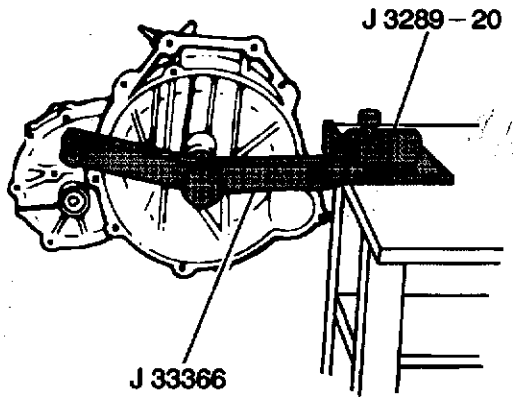
Transmission Case Disassemble

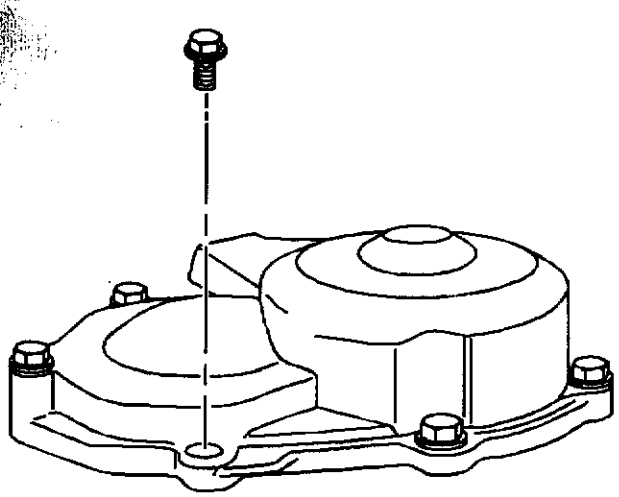
Tools Required

TRANS OVERHAUL PART (1)

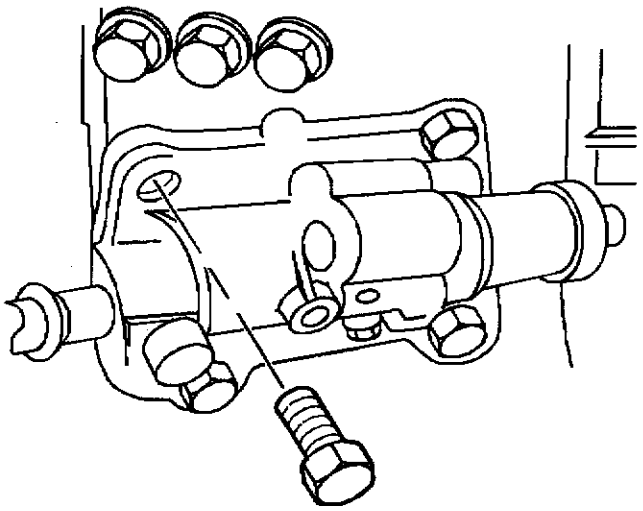
- J 3289-20 Base Plate
- J 33366 Holding Fixture
- J 35274 Gear Puller
- J 22888-30 Puller Legs
- J 22888 Puller
- J 24256-A Bearing Race Remover
- J 8092 Driver Handle
- J 33370 Bearing Race Remover
- J 26941 Puller
- J 33367 Puller Bridge
- J 37245 Bushing Remover
- J 36190 Universal Driver Handle
- J 37158 Bearing Remover



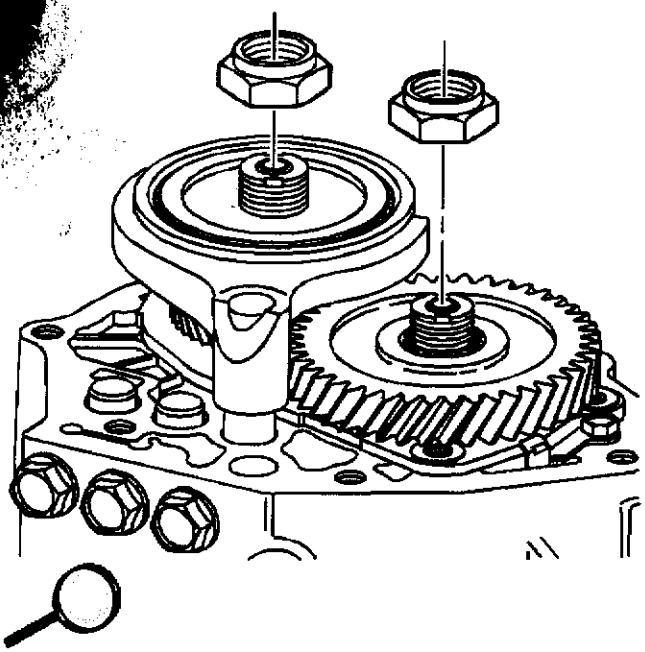
1. Remove the clutch release bearing.
   - Attach the transaxle to the J 33366 .
   - Attach the J 33366 to the J 3289-20 .



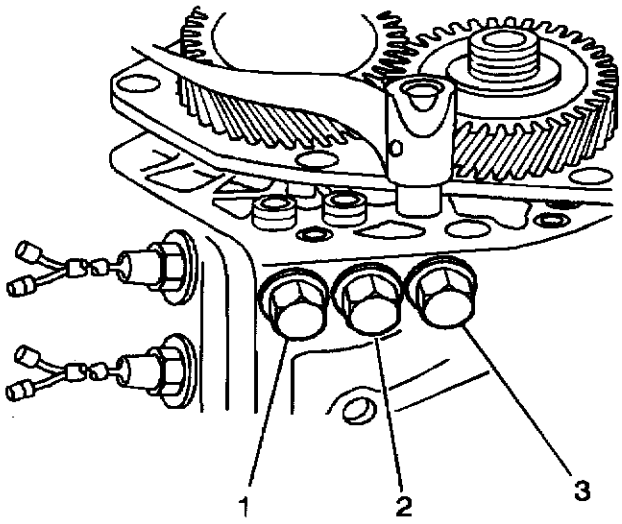
2. Remove the rear cover bolts and the rear cover assembly from the transaxle case.



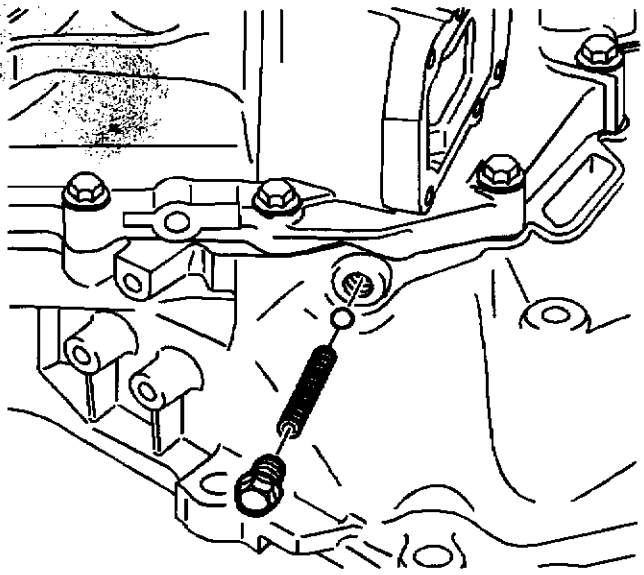
3. Remove the control box bolts and the control box assembly from the transaxle case.
4. Shift the transaxle into gear using a screwdriver.
5. Remove the crimps in the 5th speed drive and driven gear retaining nuts using a hammer and a punch.



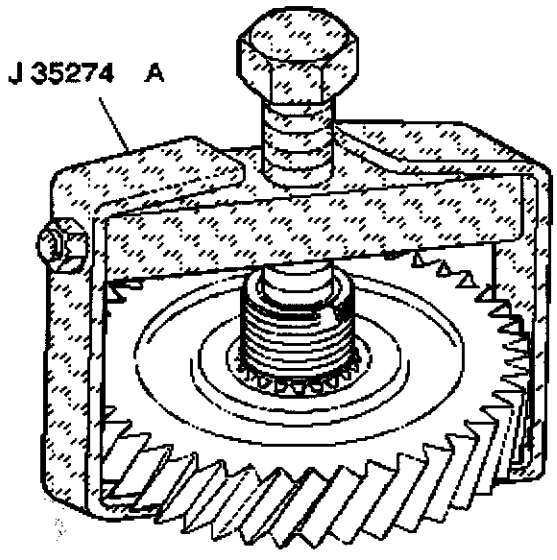
6. Remove the retaining nuts from the input and output shaft.
7. Discard the retaining nuts.
8. Shift the transaxle into neutral.
9. Align the detents on the shift rails.



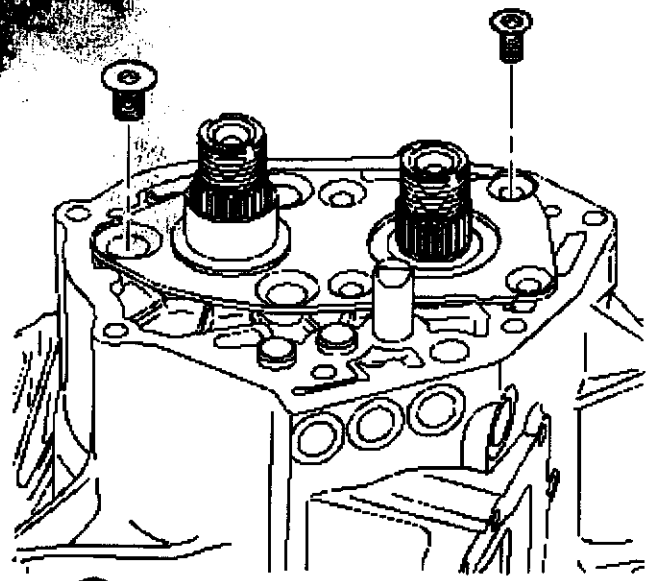
10. Remove the detent spring retaining bolts, the detent springs and the detent balls for the following gears:
    - The 1st/2nd gear (1)
    - The 3rd/4th gear (2)
    - The 5th gear (3)



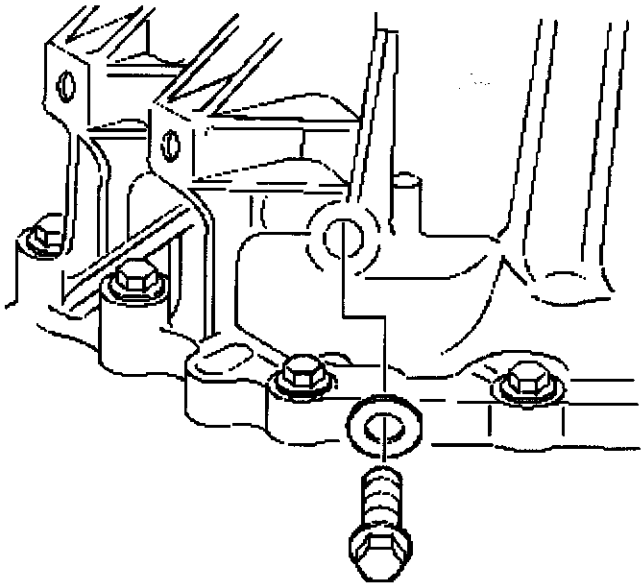
11. Remove the reverse detent spring retaining bolts, the detent spring and the detent ball.
12. Put the 5th gear synchronizer in neutral.
13. Remove the 5th gear shift fork roll pin.
14. Discard the roll pin.
15. Remove the following 5th gear components from the output shaft as an assembly:
    - The synchronizer hub
    - The sleeve
    - The roller bearing
    - The shift fork and gear



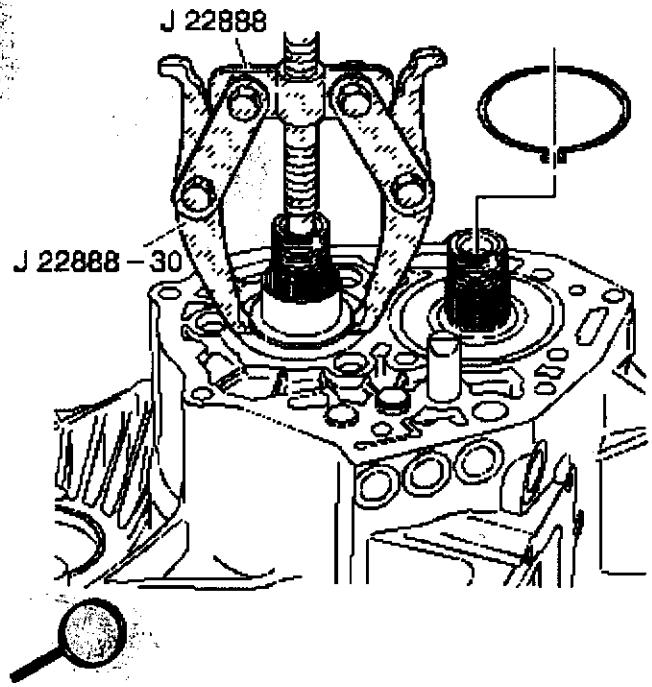
16. Remove the 5th speed gear from the input shaft using the J 35950 and the J 35274-A .



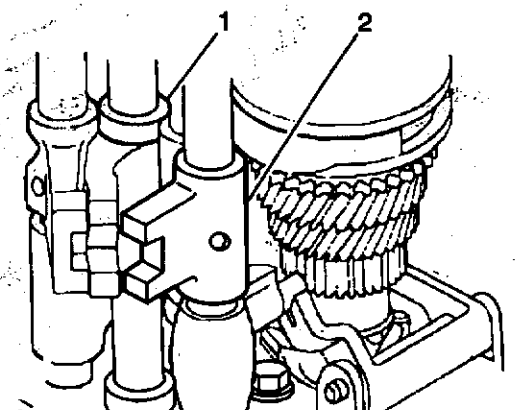
17. Remove the screws with Torx™ (No. 45) from the bearing retainer.
18. Remove the bearing retainer and the snap ring from the output shaft.
19. Remove the shim from the output shaft.



20. Remove the reverse idler shaft bolt at the transaxle case.



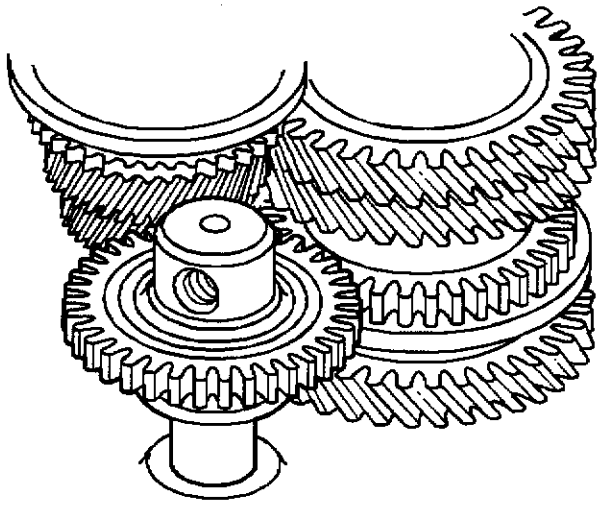
21. Remove the following items from the output shaft using the J 22888 and the J 22888-30 :
    - The collar
    - The thrust washer
22. Remove the snap ring from the input bearing groove.
23. Remove the transaxle case bolts.
24. Separate the transaxle case from the clutch housing.
25. Remove the backup lamp switch.



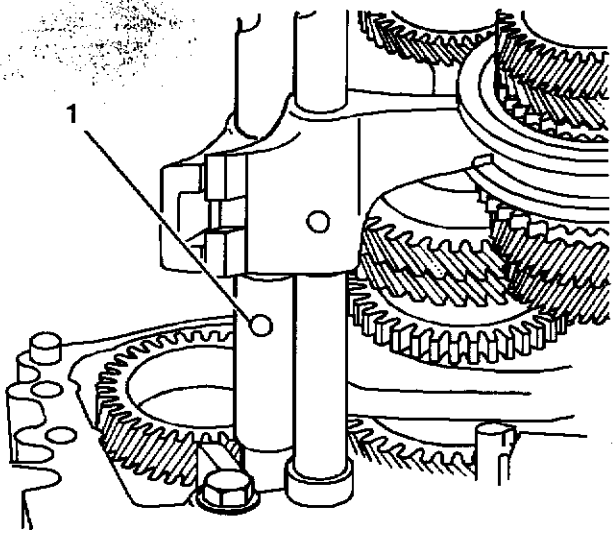
26. Remove the reverse shift shaft snap ring (3).
27. Pull up on the shaft until the interlock pin aligns with the reverse shift shaft detent (approximately ¼-½ inch).

Important: The detent pin is located at the bottom of the 5th shift shaft. The detent pin is specific for the 5th shift shaft, do not lose the detent pin.

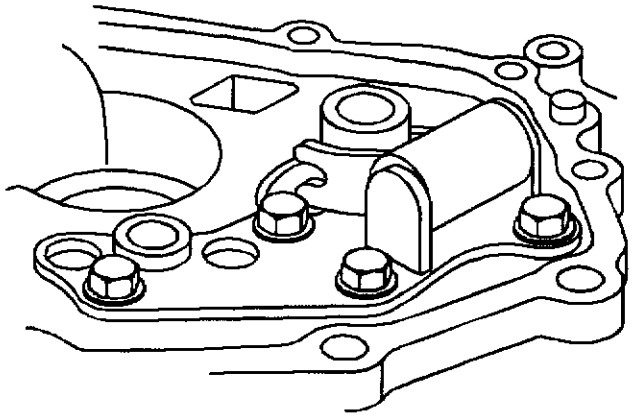
28. Remove the 5th shift shaft (1).
29. Remove the reverse shift shaft (2).



30. Remove the reverse idle gear.
31. Remove the reverse idle shaft indexing pin.



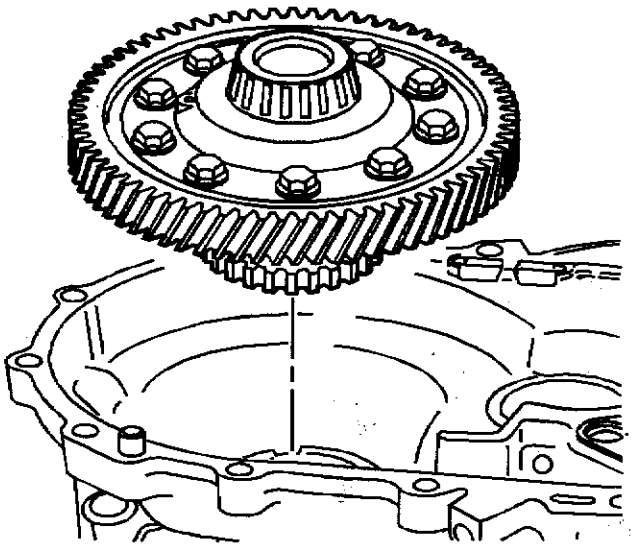
32. Remove the roll pin (1) from the 1st/2nd shift fork using a punch and hammer.
33. Discard the roll pin.
34. Slide the 1st/2nd shaft upward and clear of the housing.
35. Remove the fork and the shaft from the case.



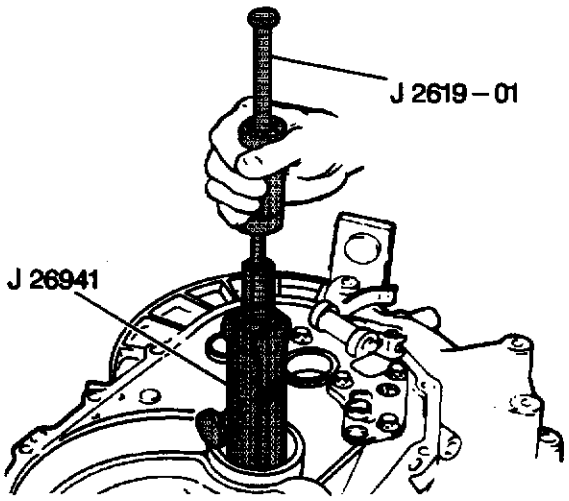
36. Remove the reverse shift lever clevis pin.
37. Remove the reverse shift lever pin.
38. Remove the reverse shift lever.
39. Remove the input and output shafts with the 3rd/4th shift fork and shaft as an assembly.

Important: Do not lose the interlock pin located at the bottom of the 3rd/4th shift shaft. The pins are specific for each shaft.

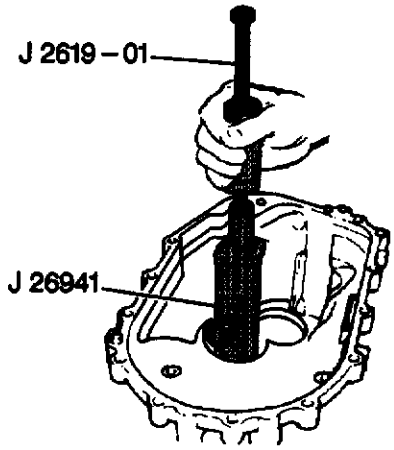
40. Remove the reverse shift bracket together with the four bolts.
41. Remove the three 10 mm interlock pins. The pin lengths are specific for this location.

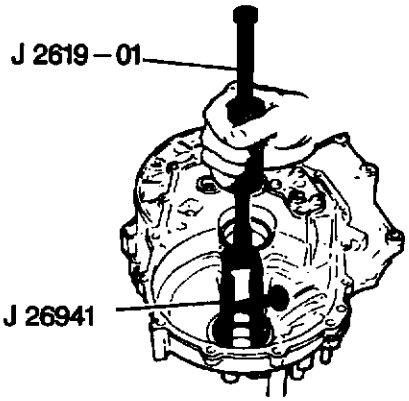


42. Remove the differential case assembly from the clutch housing.



43. Remove the outer races for the output shaft front. Use the J 26941 and the J 2619-01 .

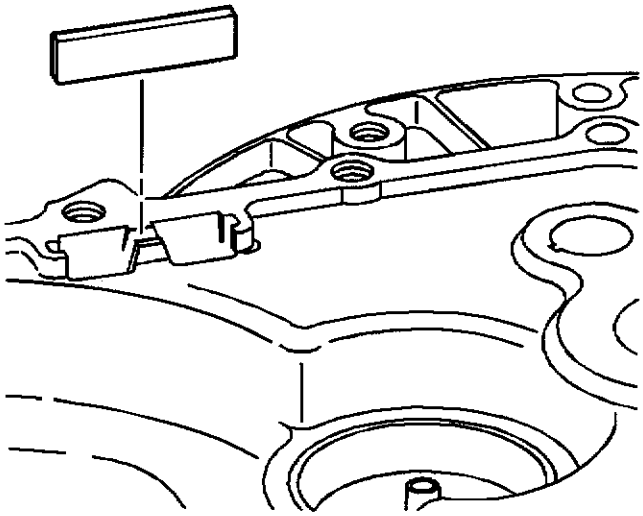




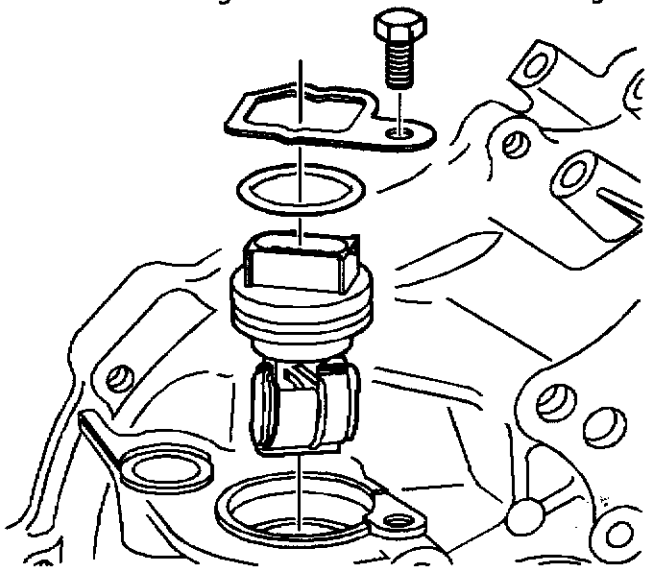
44. Remove the differential side bearing from the clutch housing. Use the J 26941 and the J 2619-01 .
45. Remove the input shaft front bearing from the clutch housing. Use the J 41678 and the J

8092 .

46. Remove the input shaft seal from the housing.



47. Remove the magnet from the clutch housing.



48. Remove the bolt and vehicle speed sensor from the clutch housing.

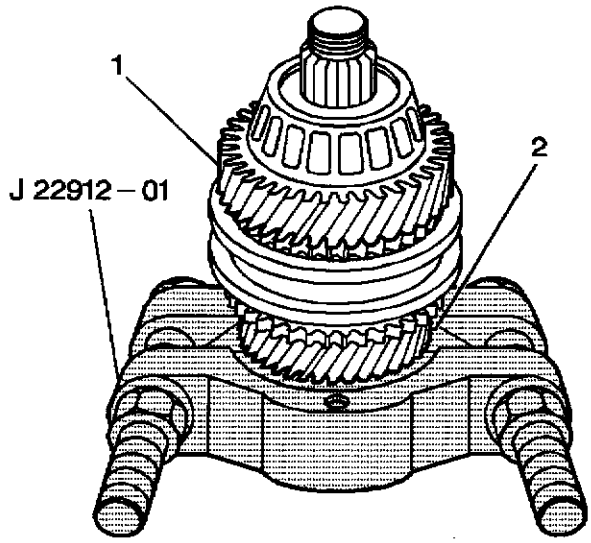
Input Shaft Disassemble

Tools Required

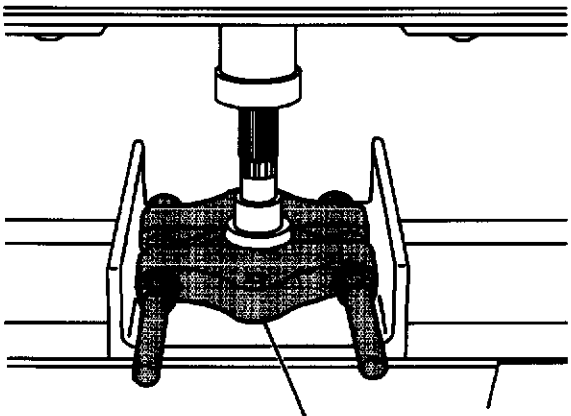
J 22912-01 Split Plate

Caution: When handling parts that have been preheated for installation purposes, always wear leather welding gloves with a minimum amount of handling time. Failure to wear leather gloves may result in severe skin burns or personal injury.

Important: Heat the input shaft, collar and the stopper plate in an approved preheat oven to approximately 95°C (200°F) just prior to removal. DO NOT use an acetylene torch or other open flame. Always allow the preheated parts to cool after removal. DO NOT quench the preheated parts with water. Use compressed air to help cool any preheated parts.



1. Remove the following items as an assembly using the J 22912-01 (inverted) and a press:
   - The rear bearing
   - The thrust washer
   - The 4th gear (1)
   - The needle bearings
   - The 4th gear bearing collar
   - The 4th gear blocking ring
   - The 3rd/4th synchronizer assembly
   - The 3rd gear blocking ring
   - The 3rd gear (2)
   - The needle bearing

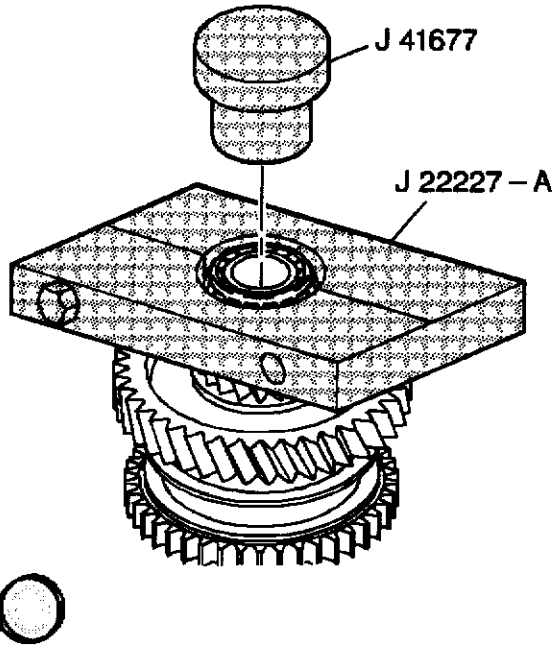


2. Remove the collar and the stopper plate. Use a J 22912-01 (inverted) with a press. Discard the collar and the stopper plate.

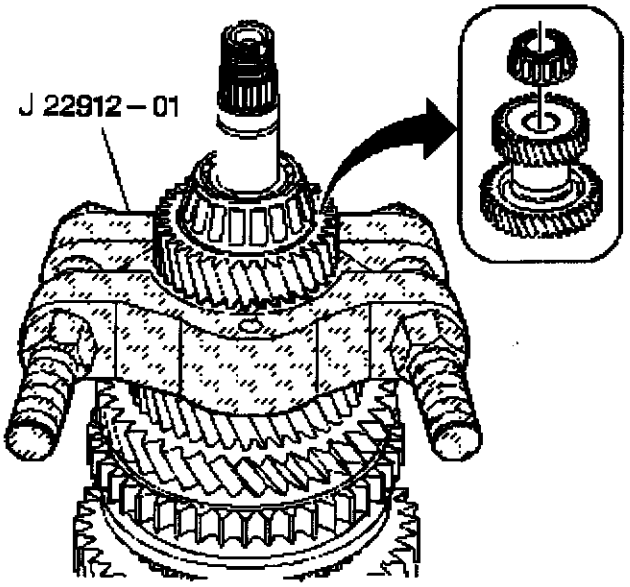
Output Shaft Disassemble

Tools Required

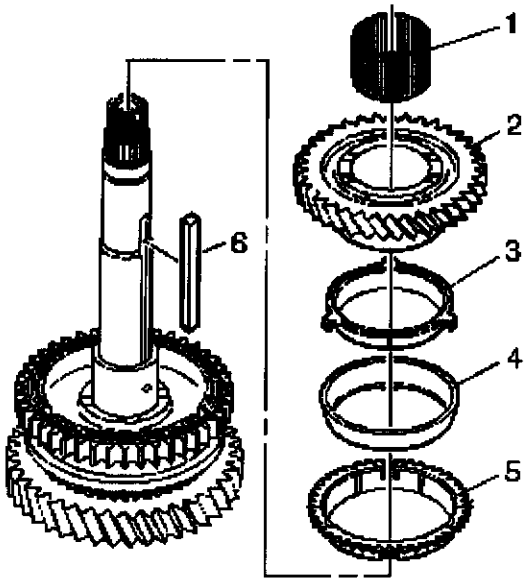
- J 22227-A Bearing Remover
- J 41677 Pilot
- J 22912-01 Split Plate



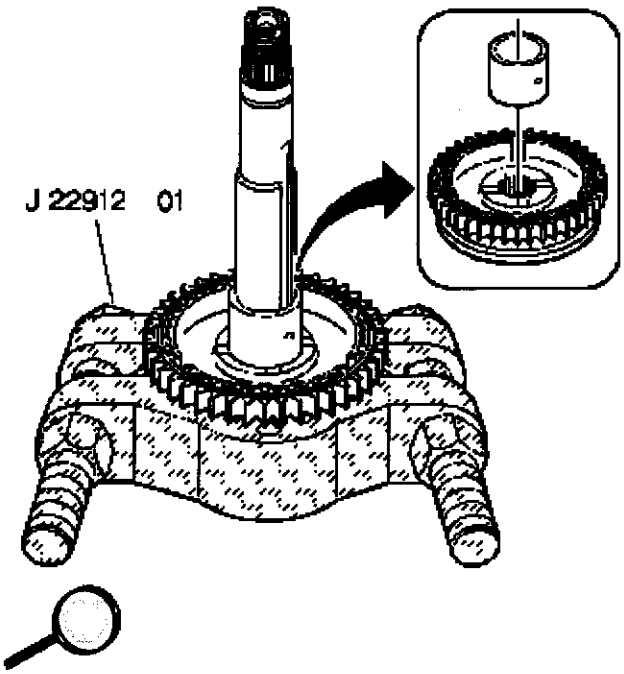
1. Remove the front output bearing using the J 22227-A and the J 41677 and a press.



2. Remove the following in order using the J 22912-01 (inverted) and a press.
   2.1. Output shaft rear bearing
   2.2. 3rd/4th gear



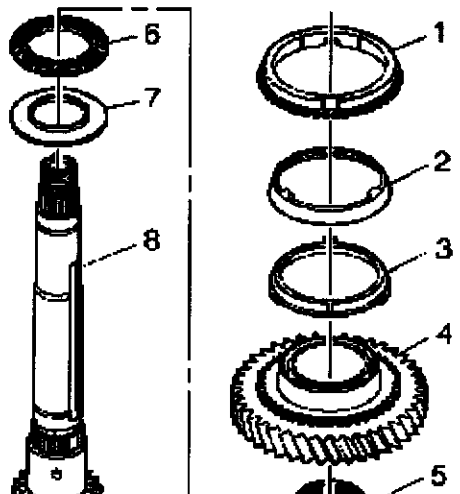
3. Remove the following components as an assembly:
   - The key (6)
   - The 2nd gear (2)
   - The needle bearing (1)
   - The 2nd gear inner cone (3)
   - The 2nd gear outer cone (4)
   - The 2nd gear blocking ring (5)



4. Remove the following components as an assembly using J 22912-01 and a press:

   Note the orientation of the 1st/2nd/reverse gear synchronizer assembly.

   - The collar
   - The 1st/2nd/reverse gear synchronizer assembly



5. Remove the following components as an assembly:
   - The 1st gear blocking ring (1)
   - The 1st gear outer cone (2)
   - The 1st gear inner cone (3)

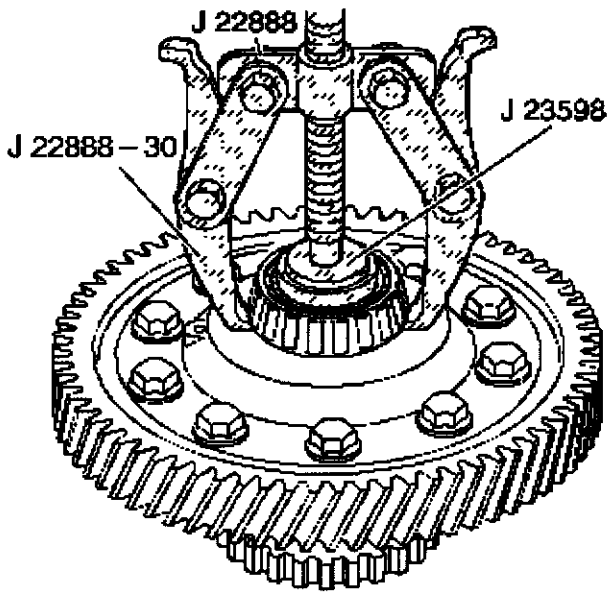
- The 1st gear (4)
- The 1st gear needle bearing (5)

6. Remove the thrust bearing (6).
7. Remove the thrust bearing washer (7).

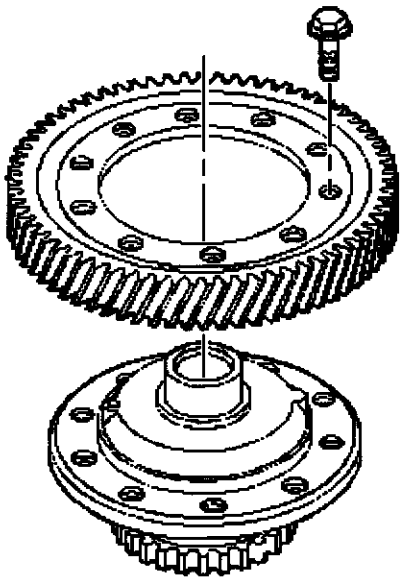
Differential Case Disassemble

Tools Required

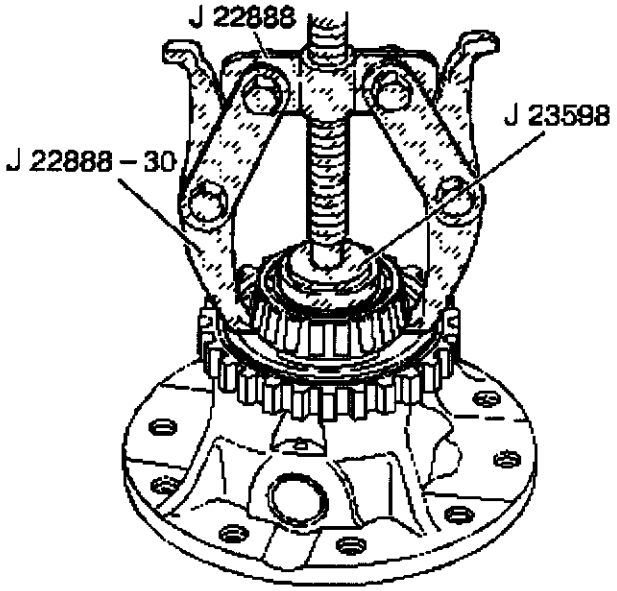
- J 22888 Puller
- J 23598 Pilot
- J 22888-30 Puller Legs



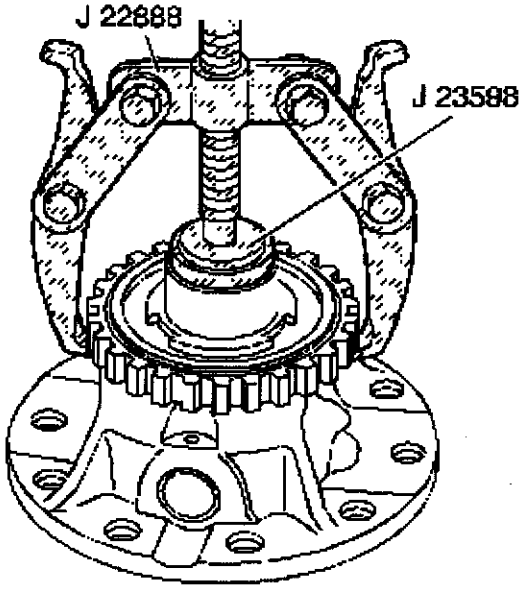
1. Remove the left differential side bearing using the J 22888 , the J 22888-30 and the J 23598 .



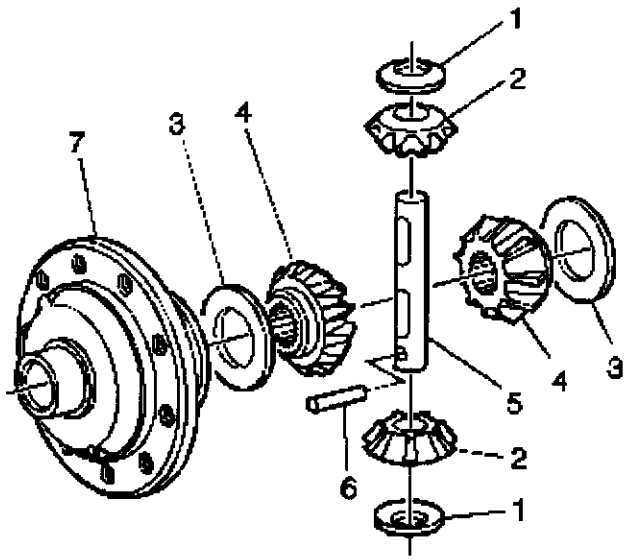
2. Remove the ten differential ring gear bolts from the differential case.
3. Remove the differential ring gear from the differential case.



4. Remove the right differential side bearing from the differential case using the J 22888 ,J 22888-30 and the J 23598 .



5. Remove the vehicle speed sensor (VSS) ring using the J 22888 and the J 23598 .



6. Remove the following parts from the differential case (7).
   - The pinion shaft roll pin (6)
   - The pinion shaft (5)
   - The pinion gears (2)
   - The pinion gear thrust washers (3)
   - The side gears (1)
   - The side gear thrust washers (4)

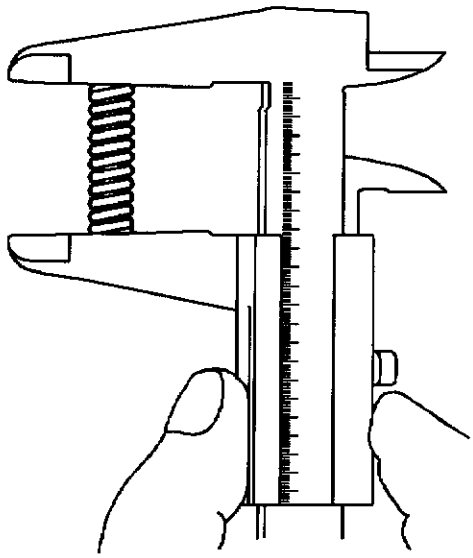
Clutch and Differential Housing Cleaning and Inspection

Inspect the two halves of the clutch case and the two halves of the differential case. Replace any part that exhibits the following conditions:

- Cracks
- Porosity
- Damaged mating surfaces
- Stripped bolt threads
- Distortion

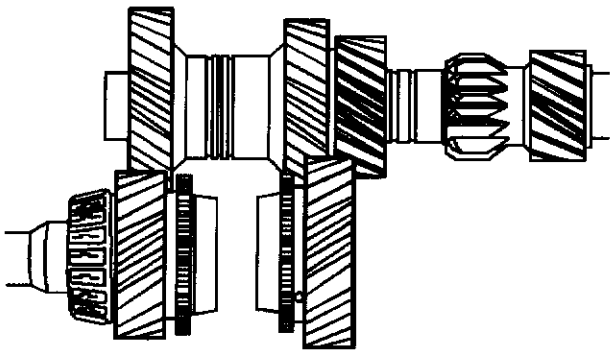
Detent Spring Cleaning and Inspection

Inspect the detent springs for damage or wear. Replace the springs if damage or wear exists. Measure the spring length.



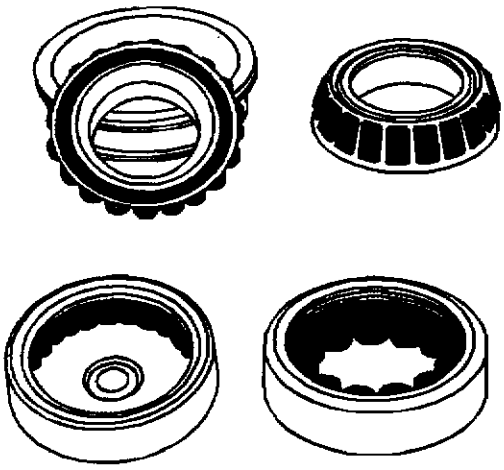
- Replace the reverse detent spring if the overall length is less than 65.6 mm (2.583 in).
- • Replace the detent springs (excluding reverse) if the overall length is less than 26.2 mm (1.031 in).

Gears Cleaning and Inspection



Inspect the gear teeth and the gear splines for excessive wear or damage. Remove minor nicks or scratches with an oil stone. Replace worn or damaged gears.

Thrust Washer and Bearing Cleaning and Inspection



Notice: Do not allow the bearings to spin. Turn the bearings slowly by hand. Spinning bearings may cause damage to the rollers.

Inspect the thrust washers for wear or damage. Replace worn or damaged thrust washers.

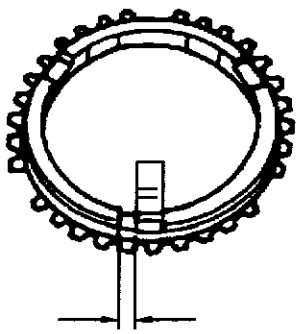
Inspect the condition of all needle bearings, roller bearings and thrust bearings. Wash the bearings thoroughly in a cleaning solvent. Apply compressed air to the bearings.

Lubricate the bearings with a light oil. Check the bearings for roughness by slowly turning the race by hand.

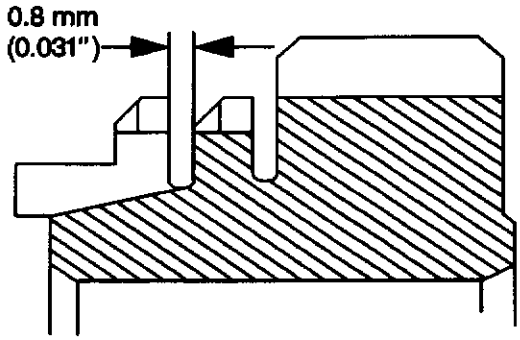
Synchronizers Cleaning and Inspection

Important: The synchronizer hubs and the sliding sleeves are a selected assembly and these should be kept together as originally assembled.

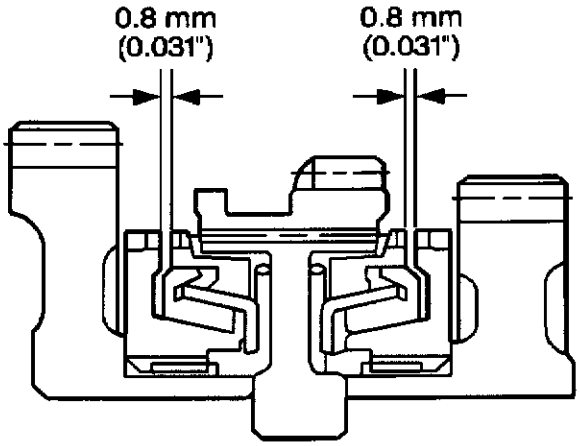
1. Clean the synchronizer components with clean solvent.
2. Air dry the components.
3. Inspect the synchronizer teeth for the following conditions:
   - Wear
   - Scuffing
   - Nicks
   - Burrs
   - Breaking
4. Replace the keys or the springs if the following conditions exist:
   - Wear
   - Cracks
   - Distortion
5. If scuffed, nicked or burred conditions cannot be corrected with a soft stone or crocus cloth, replace the component.



6. Measure the clearance between the blocker ring and the inserts. Replace the components if these are not within the following specifications:
   - 1st/2nd gear--3.9 mm (0.154 in) or less
   - 3rd/4th and 5th gear--3.7 mm (0.146 in) or less

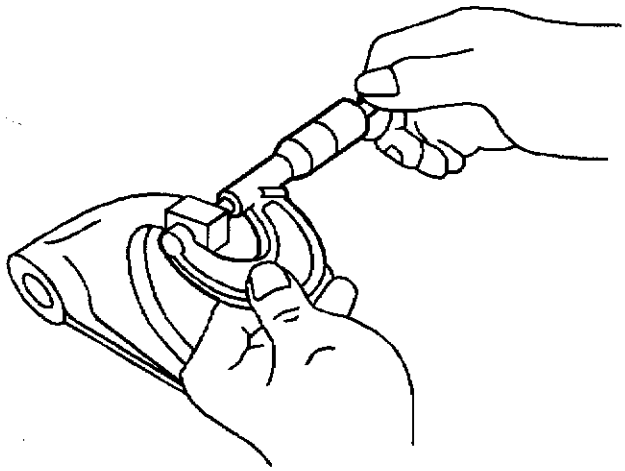


7. Measure the clearance between the blocker ring and the gear. Replace the component if the measurement is less than 0.8 mm (0.031 in).



8. Measure the clearance between the blocker ring and the synchronizer cones. Replace the 1st/2nd synchronizer components if the measurement exceeds 0.8 mm (0.031 in).
9. When assembling the synchronizer assemblies, make sure that each insert spring supports all three of the keys. Also, make sure that each opening portion of the insert spring faces the opposite direction from each other.

Shift Fork Cleaning and Inspection



TRANS OVERHAUL PART (2)

1. Inspect the shift forks, the shafts, and the levers for wear or damage. Replace these if the conditions exist.
2. Measure the shift fork pad thickness. Replace the shift fork pad if the pad is thinner than the following specifications:
   - Reverse--7.4 mm (0.291 in)
   - Except reverse--7.5 mm (0.295 in)

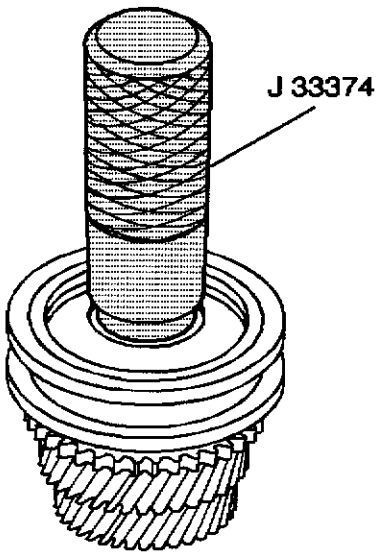
Input Shaft Assemble

Tools Required

J 33374 Collar Installer

Important: Lubricate the thrust surfaces of all gears and washers prior to installation.

1. Assemble the following items for the 3rd gear:
   - The needle bearings
   - The 3rd gear
   - The blocker ring.



2. Align the inserts of the 3rd/4th synchronizer assembly with the grooves in the blocker ring:

   Important: Lubricate the spline and hub interiors prior to installation.

3. Install the 3rd/4th synchronizer assembly using the J 33374 .

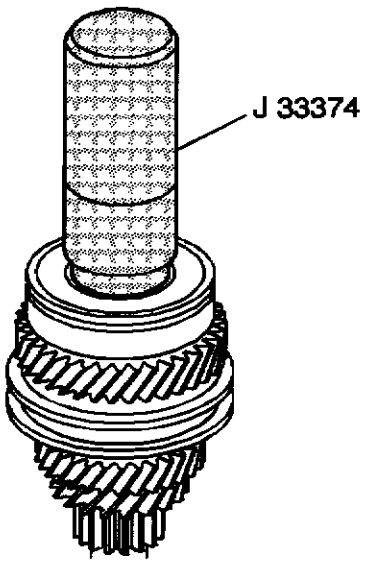
   The groove on the 3rd/4th synchronizer assembly faces the input side.

4. Install the collar using the J 33374 .
5. Lubricate the circumference of the collar.
6. Verify that the insert springs do not interfere with the hub.
7. Assemble the following items for the 4th gear:
   - The needle bearing
   - The blocker ring
   - The 4th gear

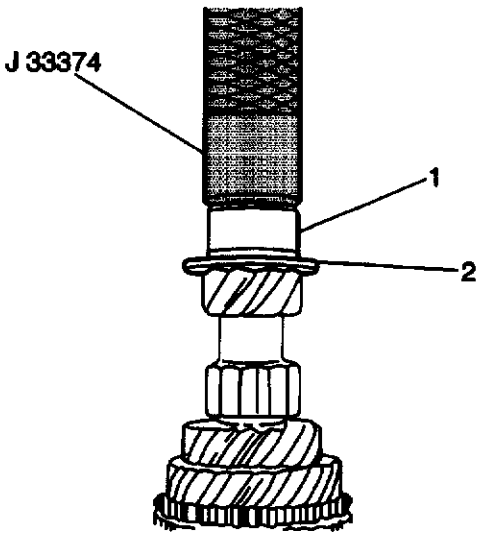
8. Assemble the thrust washer so that the recessed area faces the fourth gear.

   Important: Lubricate the bearing interior and race surfaces prior to installation.

   Important: The retainer ring on the rear bearing must face the rear of the input shaft.



9. Assemble the rear bearing using the J 33374 .



10. Install the collar (1) and the stopper plate (2) using the J 33374 and a press.

Output Shaft Assemble

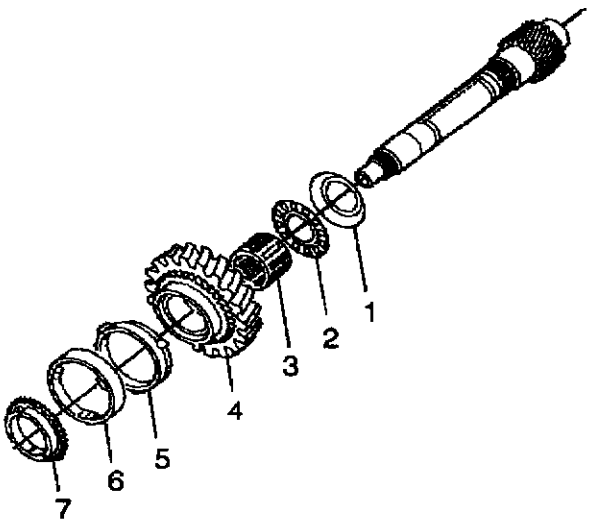
Tools Required

- J 8853-A Collar Installer
- J 33369 Pilot
- J 33374 Bearing Installer
- J 22919 Bearing Installer

Important:

- Apply oil to the following areas before assembly:
  - The thrust surfaces on all of the gears
  - The collar surfaces
  - The race surfaces
  - The hub interior
  - The collar interior
  - The 3rd/4th gear interior
- After assembly, apply oil to the collar exterior.

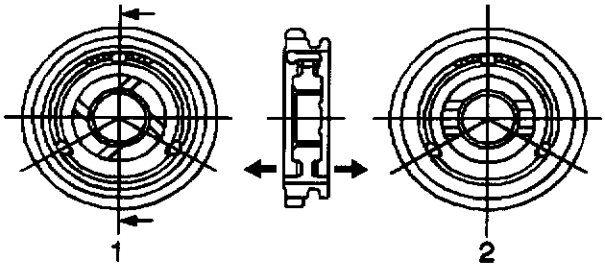
  Check that the insert springs do not interfere with the hub.



1. Install the following parts for the 1st gear:

   The raised lip of the thrust washer faces the thrust bearing.

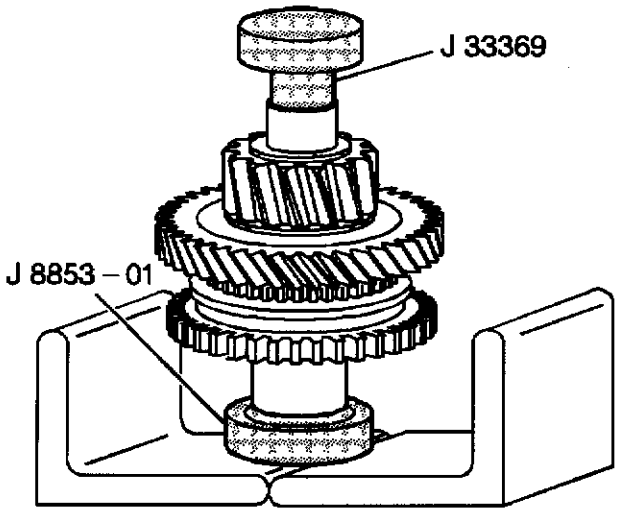
- The thrust washer (1)
- The thrust bearing (2)
- The needle bearing (3)
- The 1st gear (4)
- The inner cone (5)
- The outer cone (6)
- The blocker ring (7)



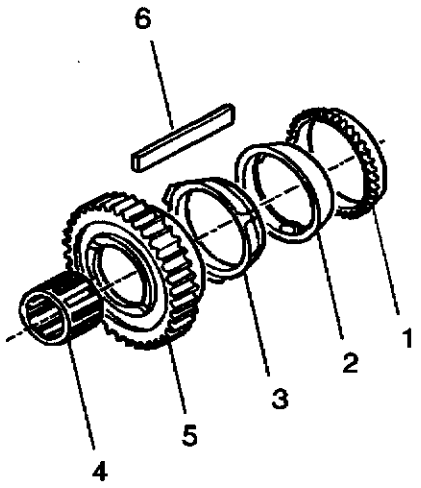
Important: Note the direction of the 1st/2nd/reverse gear synchronizer during installation. The fork groove on the sleeve faces input side.

2. Align the inserts of the sleeve and hub assembly (1) with the grooves on the blocker ring. Ensure that the 1st gear side (2) is facing the 1st gear.

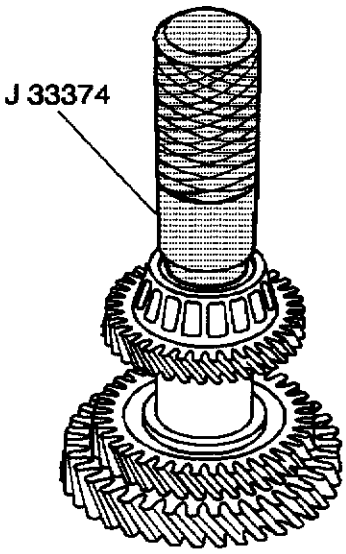
   Important: Line up all of the notches of cones, blocking ring, and synchronizer assembly during press.



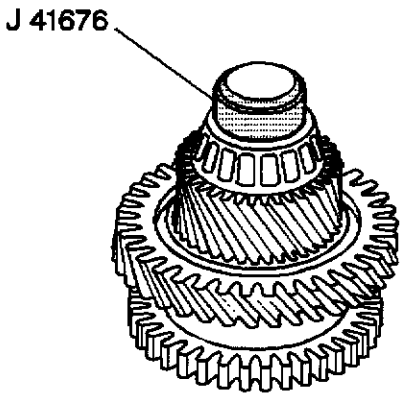
3. Press the 1st/2nd/reverse synchronizer assembly and the collar together using the J 8853-A , J 33369 and a hydraulic press.



4. Install the following 2nd gear parts:
   - The needle bearing (4)
   - The blocker ring (1)
   - The outer cone (2)
   - The inner cone (3)
   - The 2nd gear (5)
   - The key (6)



5. Align the key with the key groove on the 3rd/4th gear.
6. Assemble the key and the 3rd/4th gear.
7. Install the rear bearing on the output shaft using the J 33374 and a hydraulic press.



8. Install the front bearing on the output shaft using the J 41676 and a press.
9. Install as an assembly:

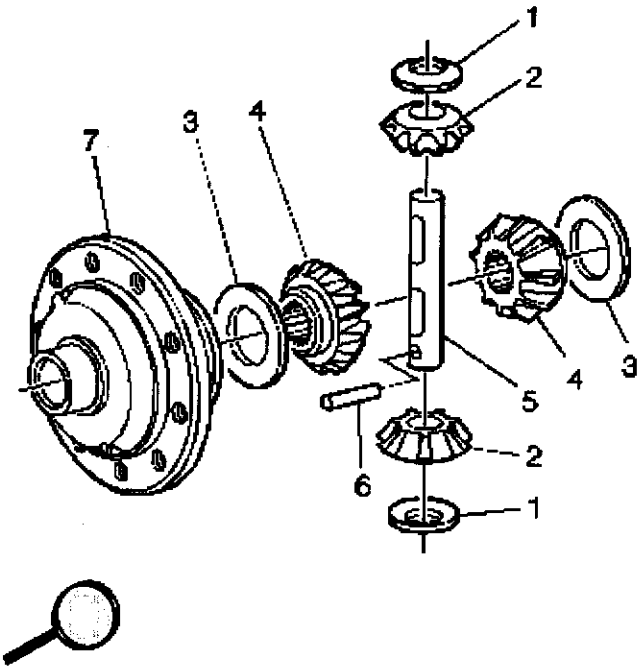
Important: Install the thrust washer with step facing the rear output shaft bearing.

- Thrust washer
- 5th gear bearing collar, use J 33374 and a press.
- Install the 5th gear needle bearing.

Differential Case Assemble

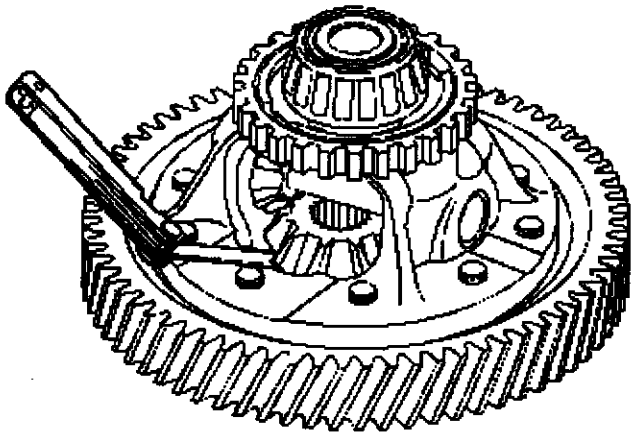
Tools Required

- J 22919 Bearing Installer
- J 33374 Shaft Bearing Installer
- J 8092 Universal Driver Handle

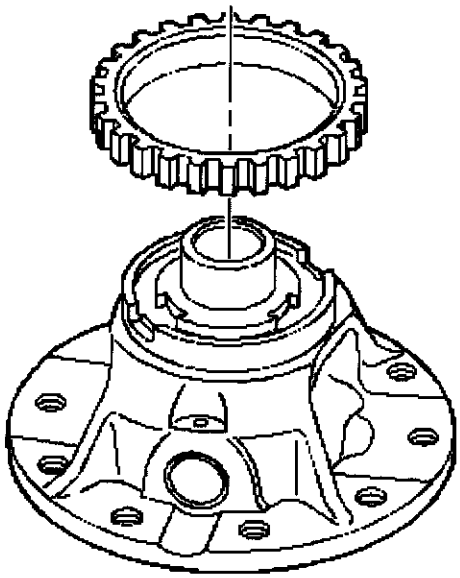


Important: Lubricate the bearing inner and outer race surfaces before assembly.

1. Install the following parts into the differential case (7):
   - The pinion gears (2)
   - The pinion gear thrust washers (1)
   - The side gears (4)
   - The side gear thrust washers (3)
   - The pinion shaft (5)
   - The pinion shaft roll pin (6)



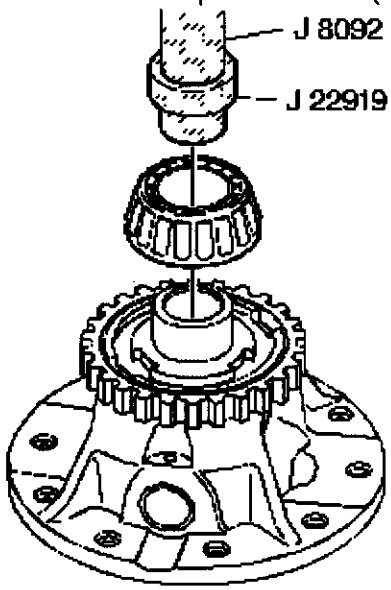
2. Measure the differential side gear backlash using a feeler gauge. The differential side gear backlash should read between 0.03-0.08 mm (0.0012-0.0031 in).
   - If the differential side gear backlash is greater than 0.08 mm (0.0031 in), select larger size side gear thrust washers in order to bring the differential side gear backlash within the specification.
   - If the differential side gear backlash is less than 0.03 mm (0.0012 in), select smaller size side gear thrust washers in order to bring the differential side gear backlash within the specification.



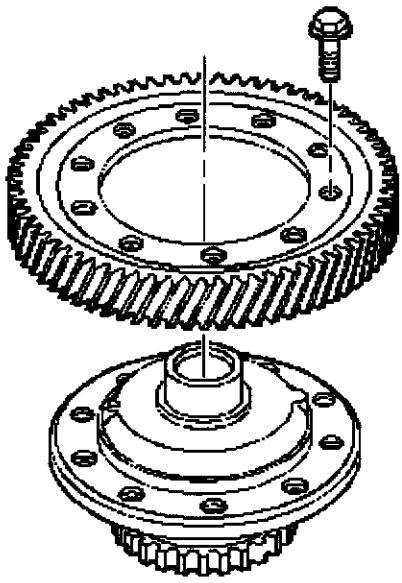
Caution: When handling parts that have been preheated for installation purposes, always wear leather welding gloves with a minimum amount of handling time. Failure to wear leather gloves may result in severe skin burns or personal injury.

Important: Heat the new vehicle speed sensor (VSS) ring in an approved preheat oven just prior to installation. DO NOT use an acetylene torch or other open flame. Always allow preheated parts to cool after installation. DO NOT quench preheated parts with water. Use compressed air in order to help cool any preheated parts.

3. Preheat the vehicle speed sensor (VSS) ring to approximately 95°C (200°F).
4. Install the new vehicle speed sensor (VSS) ring onto the differential case.



5. Install the right differential side bearing onto the differential case using the J 22919 , J 8092 and a press.



Important: Heat the differential ring gear in an approved preheat oven just prior to installation. DO NOT use an acetylene torch or other open flame. Always allow preheated parts to cool after installation. DO NOT quench preheated parts with water. Use compressed

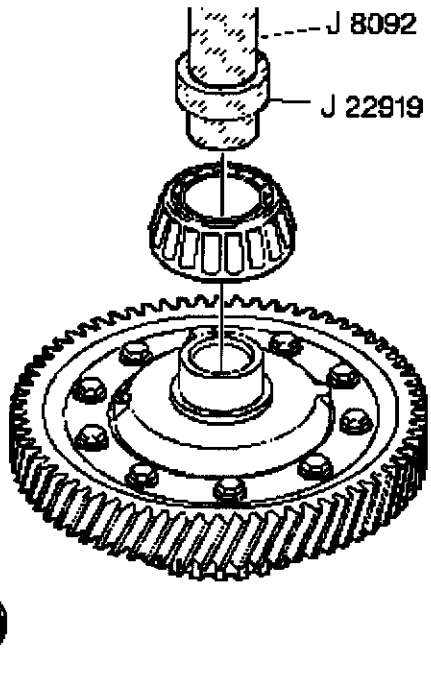
air in order to help cool any preheated parts.

6. Preheat the differential ring gear to approximately 50-100°C (122-212°F).
7. Install the differential ring gear onto the differential case.

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

8. Install the ten differential ring gear bolts.

Tighten
Tighten the ten differential ring gear bolts to 107 N·m (79 lb ft).



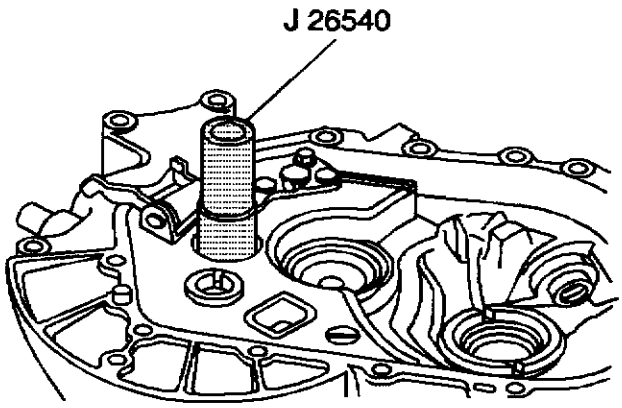
9. Install the left differential side bearing using the J 22919 and a hydraulic press.

Transmission Case Assemble

Tools Required

- J 26540 Input Shaft Seal Installer
- J 8092 Driver Handle
- J 41679 Bearing Race Installer
- J 7817 Bearing Installer
- J 8611-01 Bearing Race Installer
- J 33373 Shim Selector
- J 24256-A Bearing Race Installer
- J 33370 Bearing Race Installer
- J 26938 Drive Axle Seal Installer
- J 33374 Bearing Installer
- J 36037 Outer Bushing Installer
- J 37159 Inner Bearing Installer
- J 36190 Driver Handle

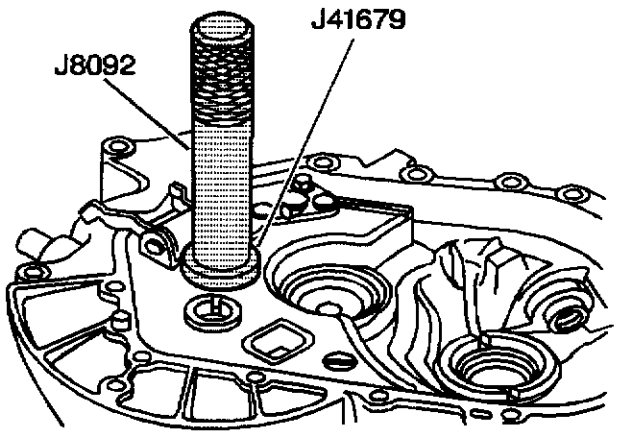
Notice: Attach the clutch housing to the transmission holding fixture if the clutch housing was removed during disassembly.



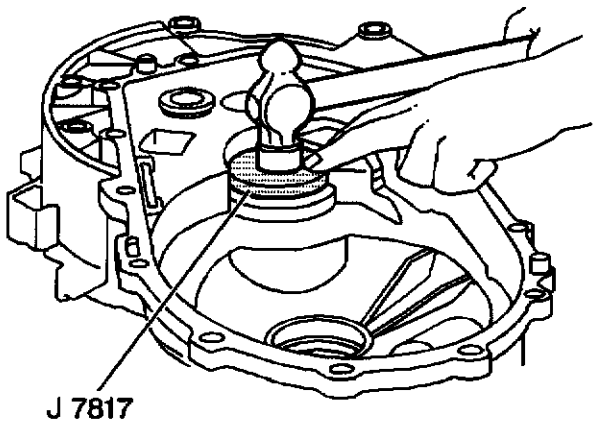
1. Install a new input shaft seal using the J 26540 .

   Notice: Apply oil to the roller bearing before installation.

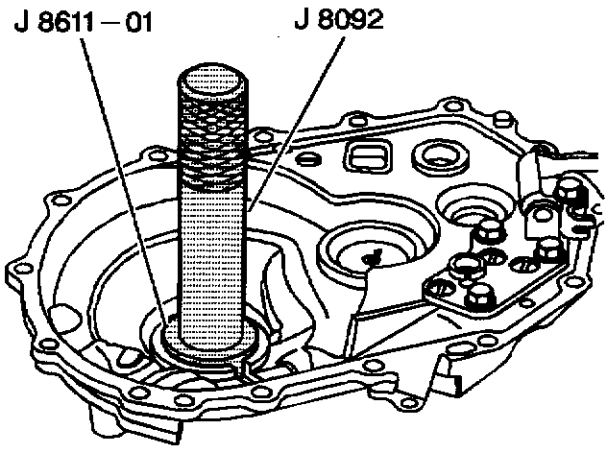
2. Install the input shaft front roller bearing into the clutch housing.



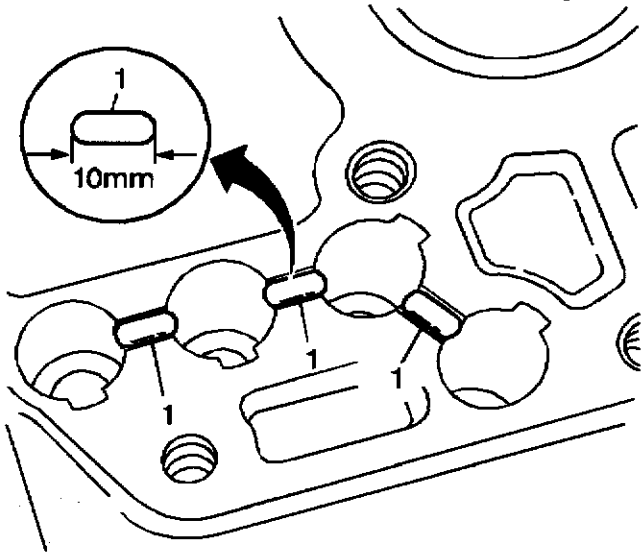
3. Press the input bearing into the housing. Use the J 41679 with the J 8092 .



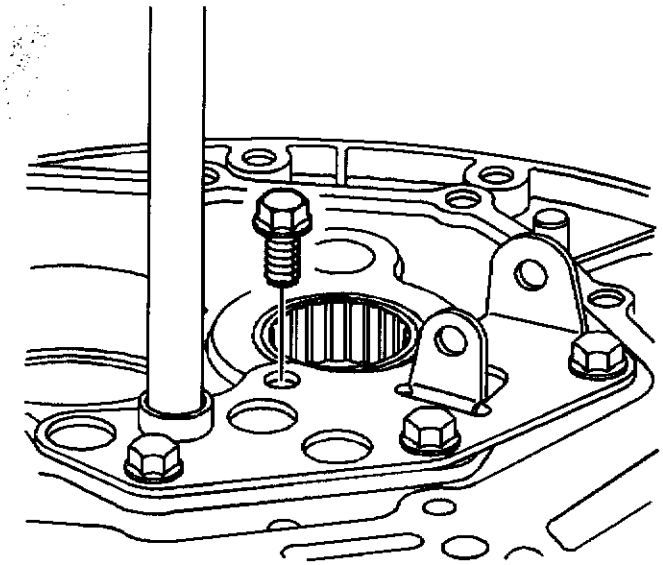
4. Press the output race into the housing. Use the J 7817 with a hammer.



5. Press the differential race into the housing. Use the J 8611-01 with the J 8092 .



6. Apply grease to the three 10 mm interlock pins (1).
7. Install the pins (1) on the clutch housing.



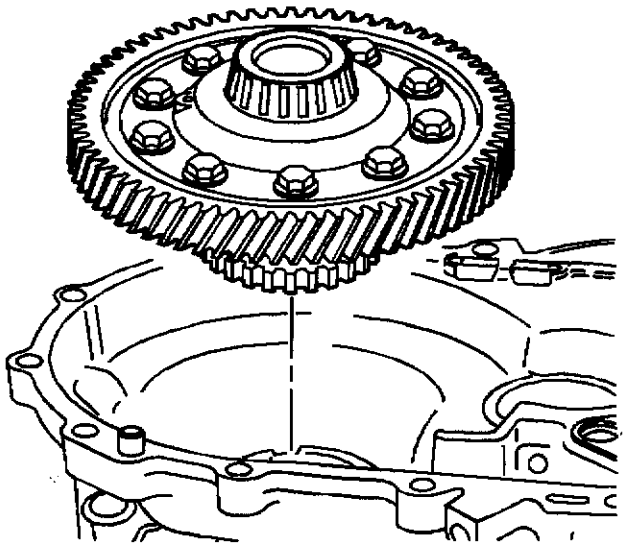
8. Install the reverse shift bracket on the clutch housing. Align the bracket to the housing using the 3rd/4th shift shaft.

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

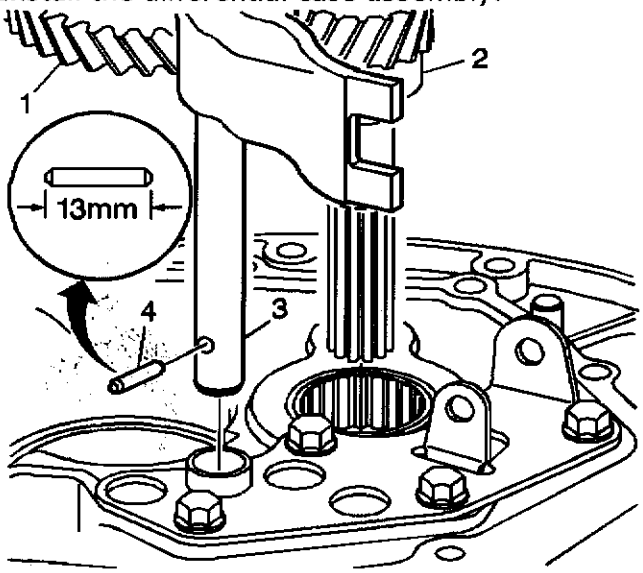
9. Install the retaining bolts.

   Tighten
   Tighten the bolts to 17 N·m (13 lb ft).

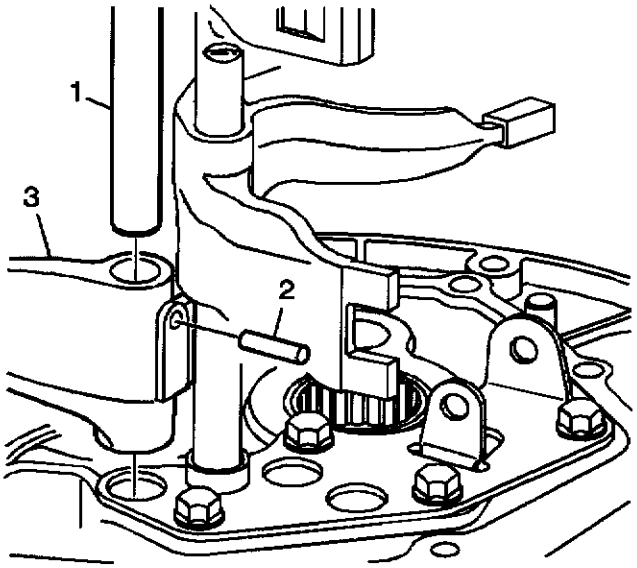
10. Inspect the shift shaft for smooth operation.



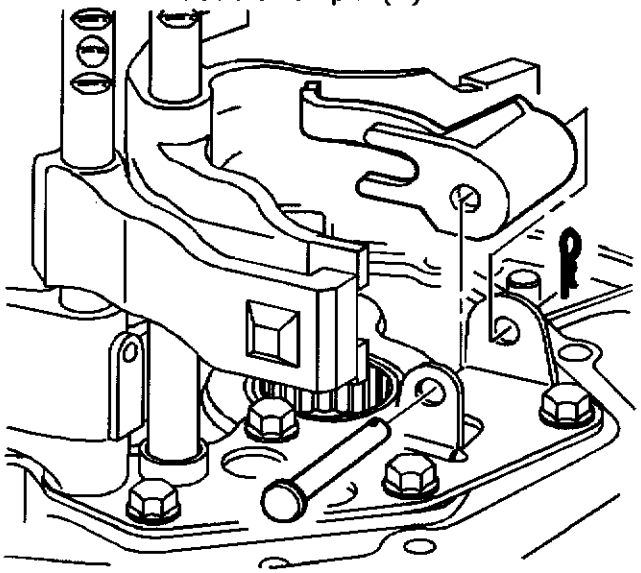
11. Install the differential case assembly.



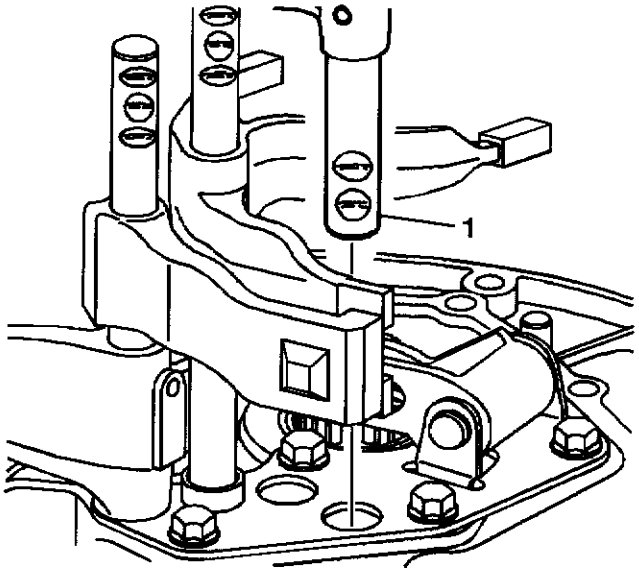
12. Install the 3rd/4th gear shift shaft 13 mm lock pin (4).
13. Install the following items in the clutch housing as one unit:
    - The input shaft (2)
    - The output shaft (1)
    - The 3rd/4th gear shift fork (3)
    - The 3rd/4th gear shift shaft (3)
14. Install the 3rd/4th gear shift shaft (3) in the raised collar of the reverse shift lever bracket.



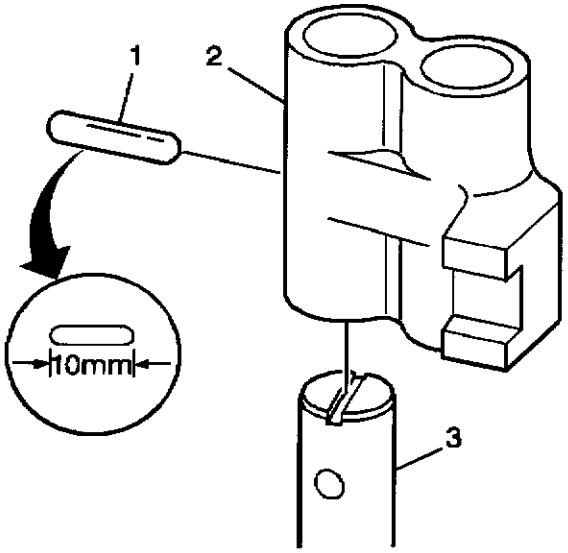
15. Install the 1st/2nd gear shift fork (3) on the synchronizer sleeve.
16. Insert the 1st/2nd gear shift shaft (1) into the reverse shift lever bracket.
17. Align the hole in the 1st/2nd gear shift fork with the hole in the 1st/2nd gear shift shaft.
18. Install a new double roll pin (2).



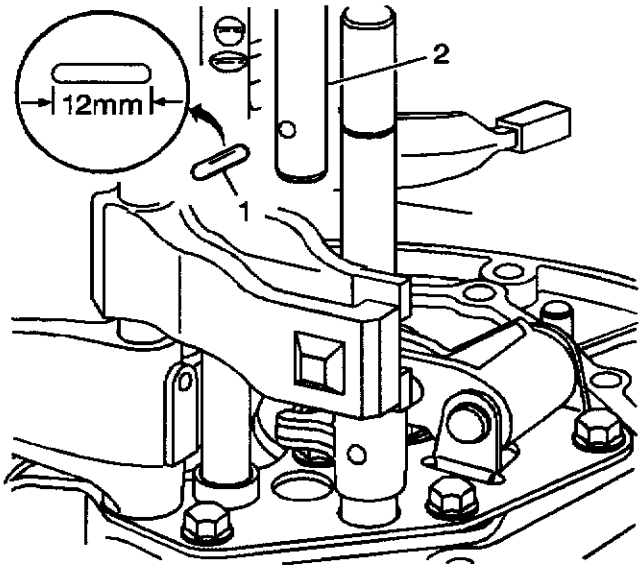
19. Install the reverse shift lever, clevis, and pin on the reverse shift lever bracket.



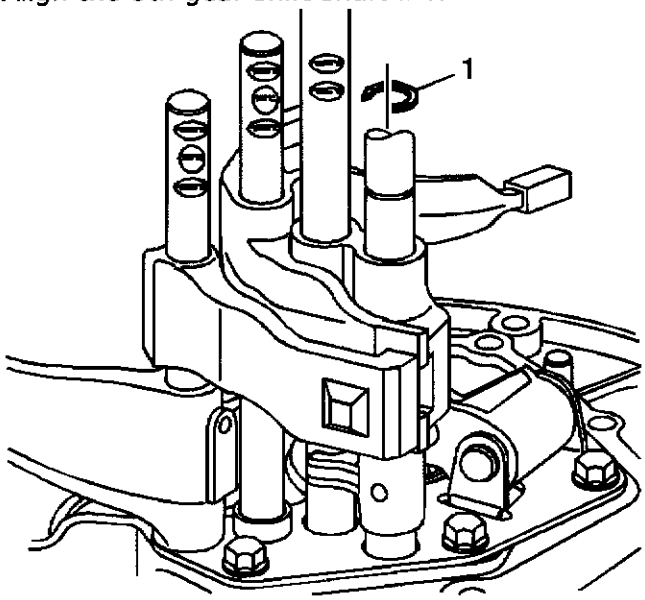
20. Install the reverse shift shaft (1).



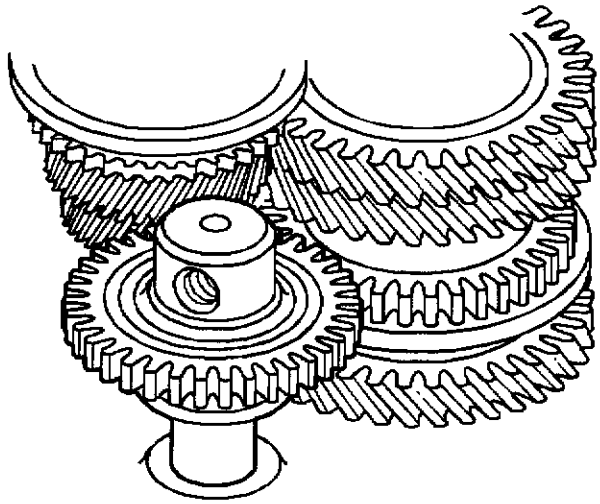
21. Install the 10 mm interlock pin (1) in the reverse/5th shift gear blocker (2).
22. Install the reverse/5th gear shift blocker (2) on the 5th gear shift shaft (3).



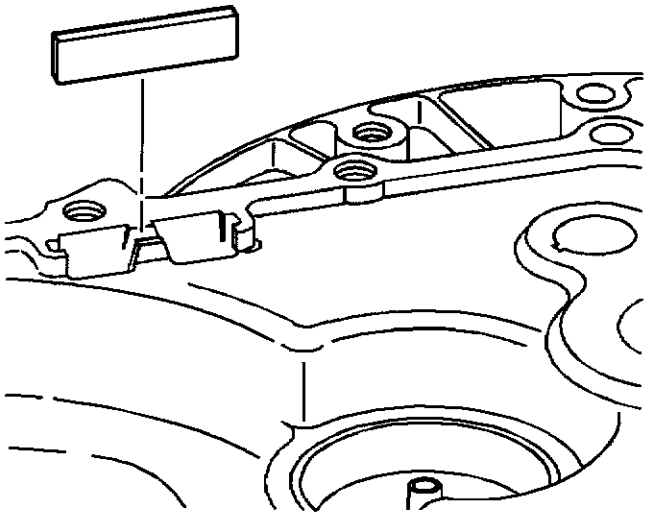
23. Install the 12 mm interlock pin (1) on the 5th gear shift shaft.
24. Install the 5th gear shift shaft (2).
25. Align the 5th gear shift shaft interlock detent.



26. Install the reverse shift shaft snap ring.



27. Install the reverse idle shaft together with the gear into the clutch housing. Ensure that the reverse lever is engaged in the collar of the gear.



28. Install the rear output shaft bearing race and shim using the J 33370 and the J 8092 .

    Refer to *Shimming Procedures* .

29. Lubricate the rear differential case bearing race.
30. Install the rear differential case bearing race and shim using the J 8611-01 and the J 8092 . Press the bearing until sealed in its bore.

    Refer to *Shimming Procedures* .

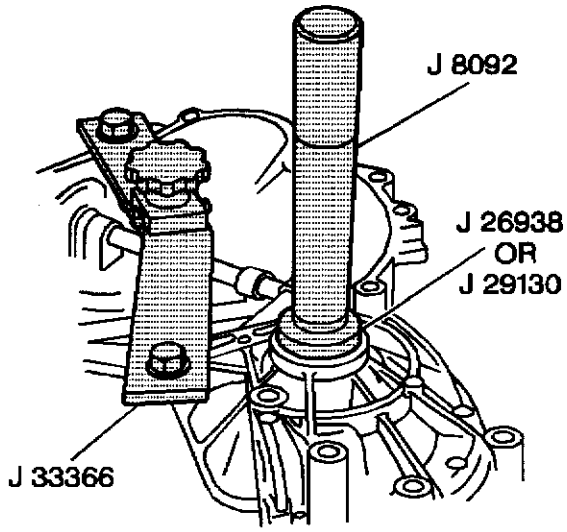
31. Install the magnet in the clutch housing.

32. Clean the clutch housing and transaxle case mating surfaces.
33. Apply a 3.18 mm (0.125 in) bead of RTV silicone sealer GM P/N 1052942 or equivalent to the mating surfaces.
34. Install the transaxle case on the clutch housing.
35. Install the snap ring into the ball bearing groove.
36. Install the reverse idle shaft bolt into the transaxle case.

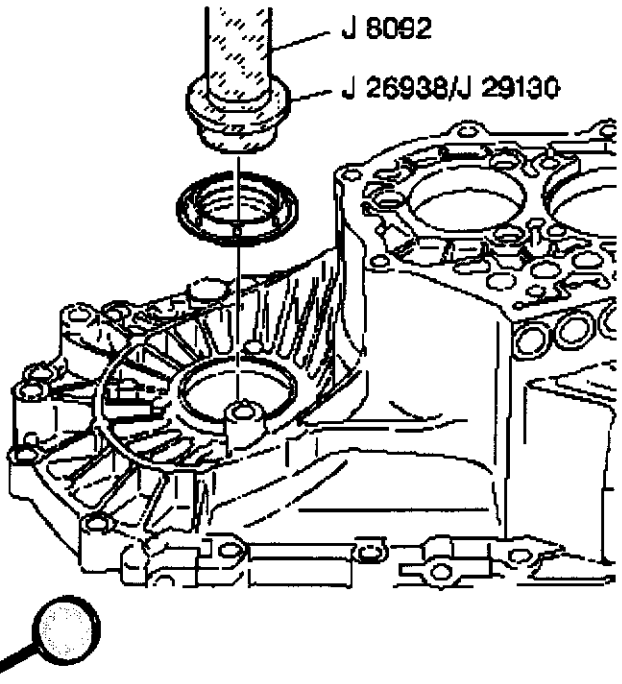
Tighten
Tighten the bolt to 38 N·m (28 lb ft).

37. Install the transaxle case bolts in a diagonal sequence.

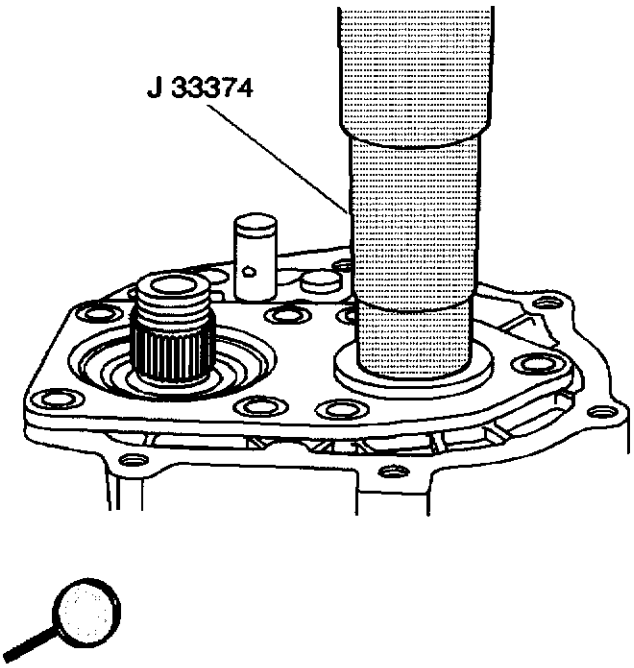
Tighten
Tighten the bolts to 38 N·m (28 lb ft).



38. Install the drive axle seals using the J 26938 with the J 8092 .

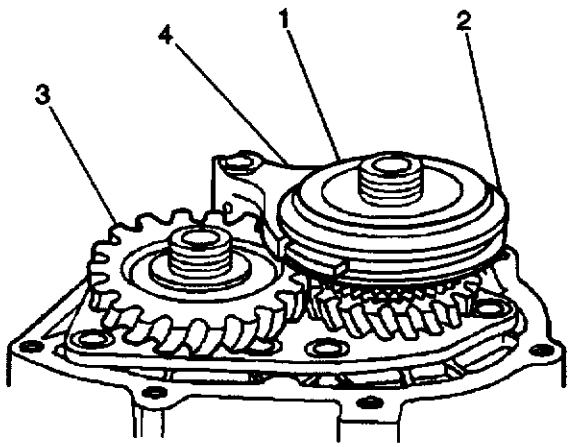


39. Install the drive axle seal into the transaxle case using the J 26938 with the J 8092 .

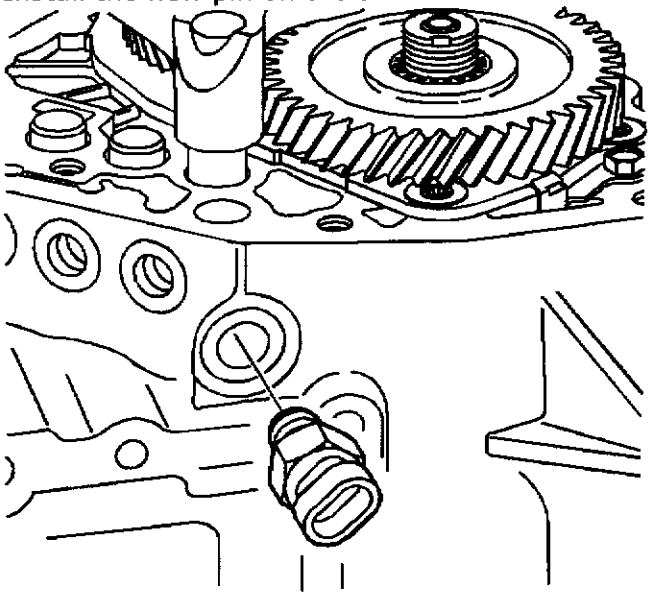


40. Lubricate the output shaft thrust washer and the collar.
41. Install the thrust washer and the collar using the J 33374 .
42. Install the 5th gear on the input shaft.

    The raised machined surface of the 5th gear faces the transmission case.

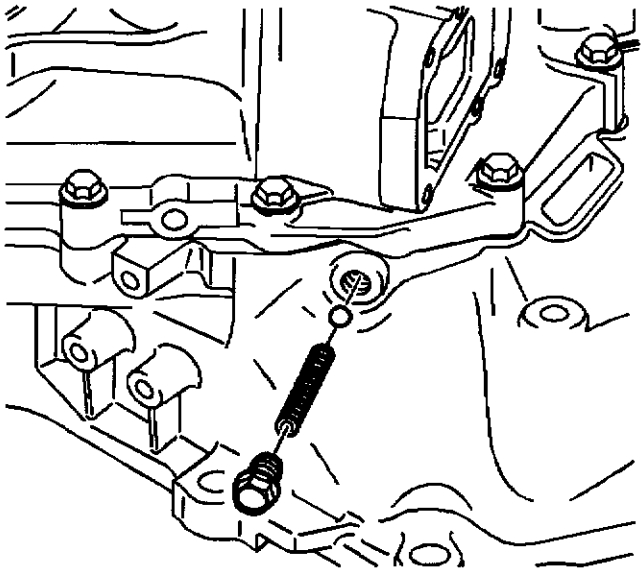


43. Assemble the following items on the hub/sleeve assembly:
    - The shift fork (4)
    - The back plate (1)
44. Install the following items on the output shaft:
    - The needle bearing
    - The 5th gear (3)
    - The blocker ring
    - The hub/sleeve assembly (2)
45. Align the shift fork on the shift shaft.
46. Lubricate the output gear thrust surfaces.
47. Install the new pin on the shift shaft.



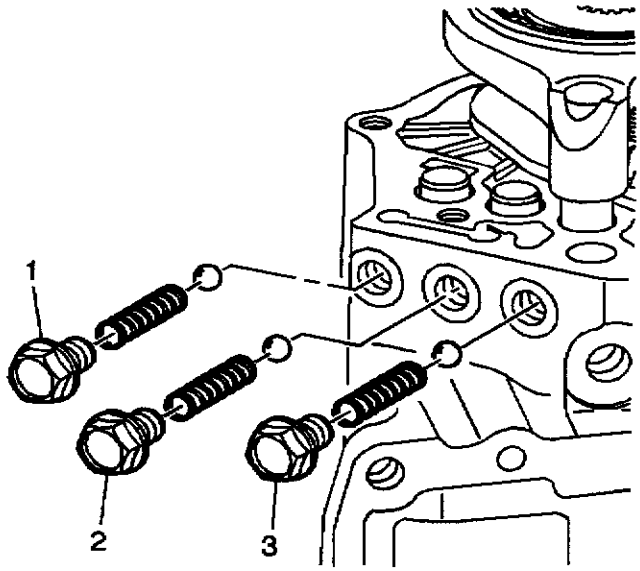
48. Install the backup lamp switch.

Tighten
Backup lamp switch to 33 N·m (24 lb ft)



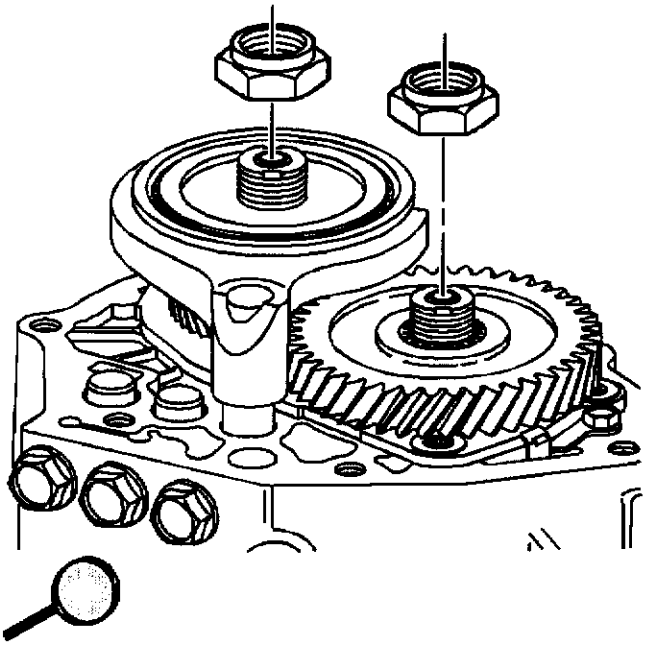
49. Install the reverse detent ball and the reverse detent spring.
50. Install the reverse detent spring retaining bolt.

Tighten
The bolts to 25 N·m (18 lb ft).



51. Install the detent balls and detent springs for the following:
    - The 1st/2nd gear
    - The 3rd/4th gear
    - The 5th gear
52. Install the following detent retaining bolts:
    - The 1st/2nd gear
    - The 3rd/4th gear
    - The 5th gear

Tighten
The bolts to 25 N·m (18 lb ft).



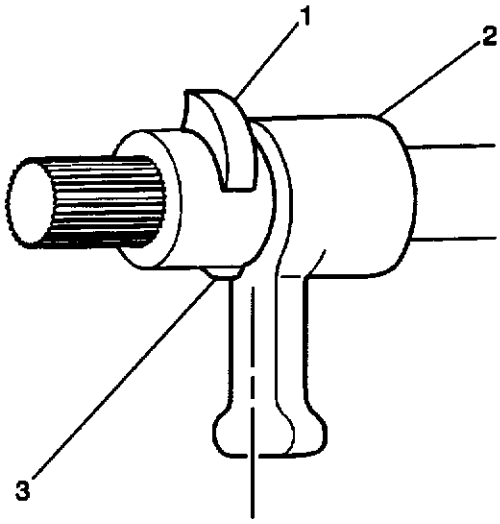
53. Carefully wipe any oil from the threads on the input and output shafts. Apply Loctite™ 414 GM P/N 12345493 or equivalent to the threads of the following parts (Use care not to allow the material to flow into the splines of the 5th gear and input shaft):
54. Install new input shaft retaining nut.

Tighten
Tighten the nut to 128 N·m (94 lb ft).

55. Stake the nut.
56. Install new output shaft retaining nut.

Tighten
Tighten the nut to 128 N·m (94 lb ft).

57. Stake the nut.



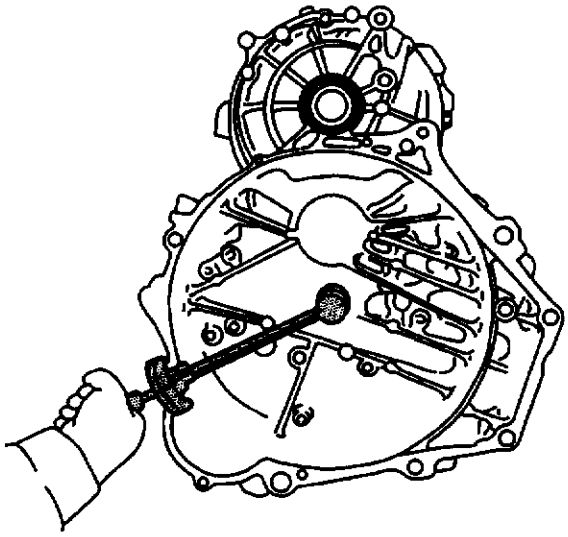
58. Assemble the control box as follows (Make sure that the splines on the stopper cam and the internal lever are aligned):
    58.1. Assemble the stopper cam (1) to the internal lever (2).
    58.2. Install the stopper cam and internal lever on the shift lever assembly.
    58.3. Align the stopper cam alignment mark (3) with the center on the internal lever.
    58.4. Inspect the reverse inhibitor for proper operation.
    58.5. Install a new roll pin on the internal lever.
59. Clean the control box and the transaxle case mating surface. Apply a 1/8 inch bead of RTV Silicone Sealer GM P/N 1052942 or equivalent to the mating surface.
60. Install the control box on the transmission case.
61. Install the control box bolts.

Tighten
Tighten the bolts to 18 N·m (13 lb ft).

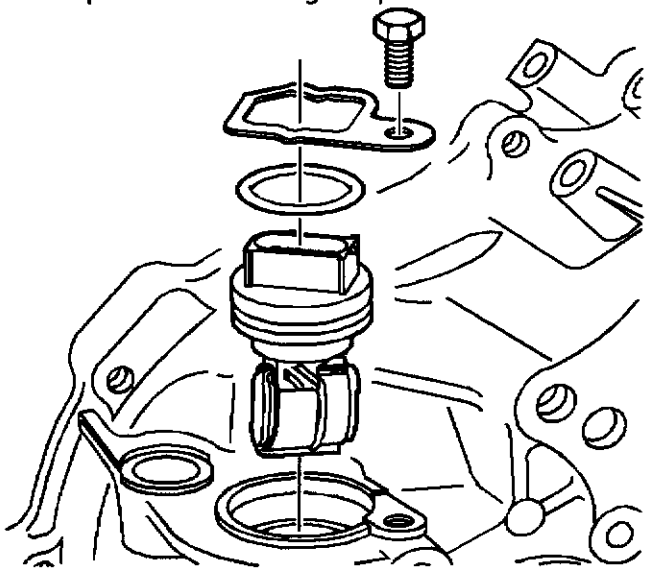
Notice: Make sure that the transaxle shifts properly before installing the rear cover bolts.

62. Install a new gasket on the rear cover.
63. Install the rear cover.
64. Install the rear cover bolts.

Tighten
Tighten the bolts to 18 N·m (13 lb ft).



65. Measure the input shaft rotating torque. When measuring the input shaft rotating torque, the input shaft should be to the upper side and the differential assembly should be to the lower side.
66. The input shaft rotating torque should be less than 0.8 N·m (7 lb in).



67. Install the vehicle speed sensor into the clutch housing.
68. Install the vehicle speed sensor bolt.

Tighten
Tighten the bolt to 9 N·m (80 lb in).

Fastener Tightening Specifications

Application	Specifications	
	Metric	English
Bearing and Shim Retainer Screws	23 N·m	17 lb ft
Control Box to Case Bolts	17 N·m	13 lb ft
Detent Spring Retaining Bolts	25 N·m	18 lb ft
Input/Output Shaft Retaining Nuts	128 N·m	94 lb ft
Rear Cover Bolts	17 N·m	13 lb ft
Reverse Idle Shaft Bolt	38 N·m	28 lb ft
Reverse Shift Bracket Retaining Bolts	17 N·m	13 lb ft
Transaxle Case To Clutch Housing Bolts	38 N·m	28 lb ft
Backup Light Switch	33 N·m	24 lb ft
Clutch Housing Cover Bolt	10 N·m	89 lb in
Shift Cable Cover Bolt	1.4 N·m	12 lb in
Shift Control Box Bolt	17 N·m	13 lb ft
Shift Control Box Nut	24 N·m	18 lb ft
Shift Linkage Retainer Nut	23 N·m	17 lb ft
Shift Retainer Nut	10 N·m	89 lb in
Speedometer/Vehicle Speed Sensor Housing Bolt	9 N·m	80 lb in
Transaxle-to-Engine Mounting Bolts and Stud	90 N·m	66 lb ft
Transaxle Mount Bolt	75 N·m	55 lb ft
Transaxle Mount Through Bolt	60 N·m	44 lb ft
Transaxle Shift Cable Bracket Nut	10 N·m	89 lb in
Transaxle Shift Lever Nut	10 N·m	89 lb in

TRANS INFO
MISC.

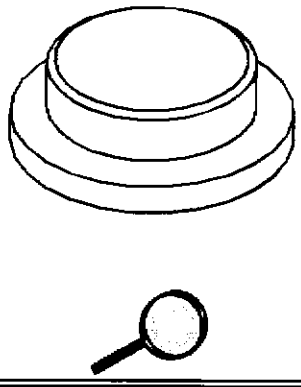
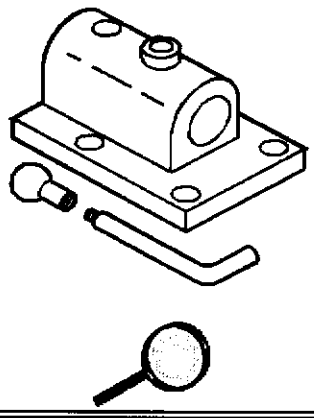
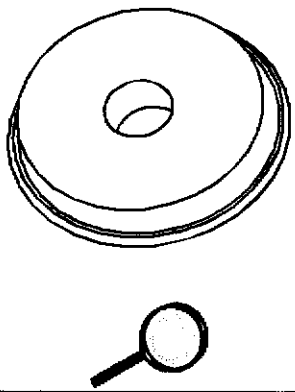
Lubrication Specifications

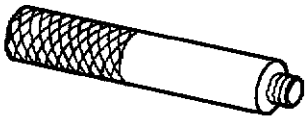
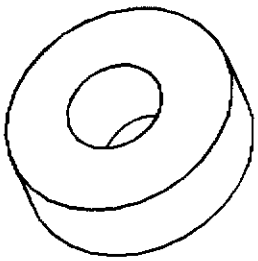
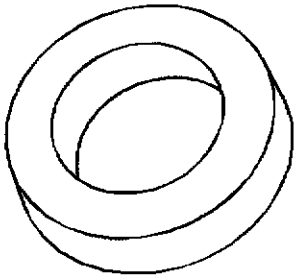
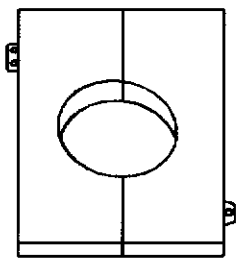
Application	Specification	
	Metric	English
Lube Capacity	1.9 liters	2.01 quarts
Lube Recommended	Manual Transaxle Oil GM P/N 12345349 or Equivalent	

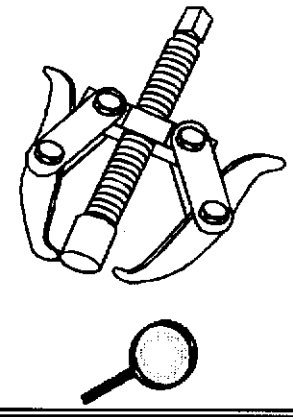
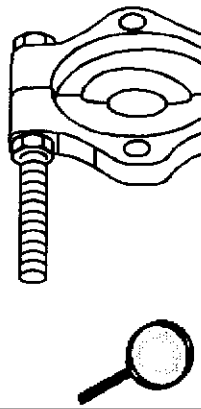
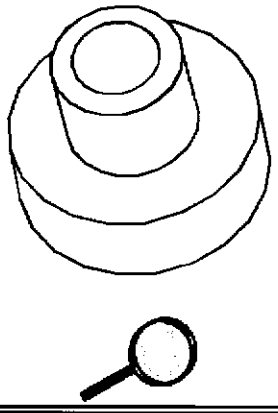
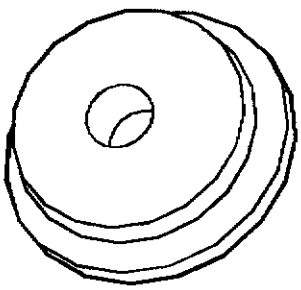
Shim Size Specifications

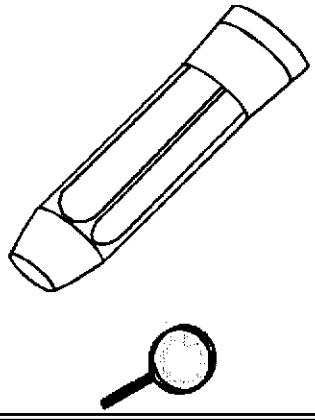
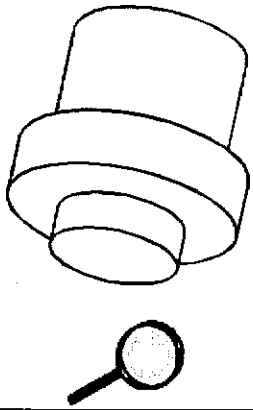
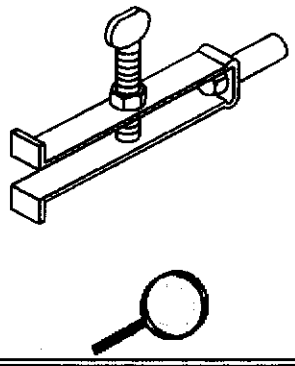
Shim Thickness (mm)	Shim Thickness (in)
1.00	0.0394
1.04	0.0410
1.08	0.0426
1.12	0.0441
1.16	0.0457
1.20	0.0473
1.24	0.0489
1.28	0.0504
1.32	0.0520
1.36	0.0536
1.40	0.0552
1.44	0.0567
1.48	0.0583
1.52	0.0599
1.56	0.0615
1.60	0.0630
1.64	0.0646
1.68	0.0662
1.72	0.0678
1.76	0.0693
1.80	0.0709
1.84	0.0725
1.88	0.0741
1.92	0.0756
1.96	0.0772
2.00	0.0788
2.04	0.0804
2.08	0.0820
2.12	0.0835
2.16	0.0851
2.20	0.0867
2.24	0.0883
2.28	0.0899
2.32	0.0914
2.36	0.0930
2.40	0.0946
2.44	0.0951
2.48	0.0977

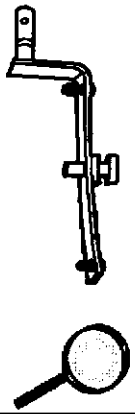
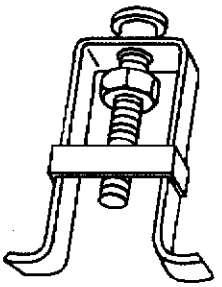
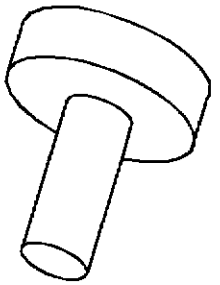
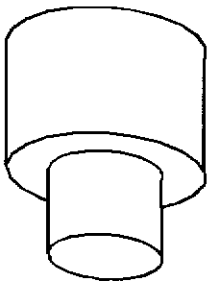
Special Tools

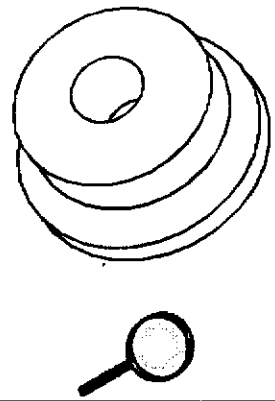
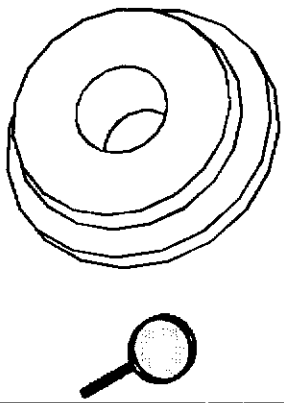
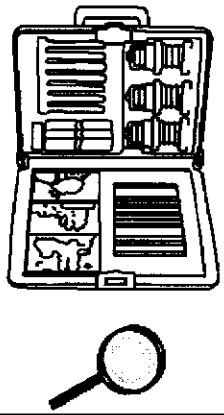
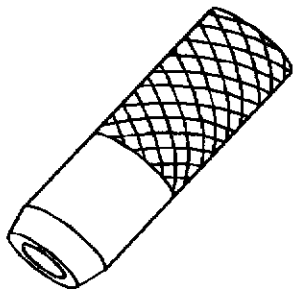
Illustration	Tool Number/ Description
	J 2241-11 Pilot
	J 3289-20 Base Plate
	J 7817 Bearing Installer
	J 8092

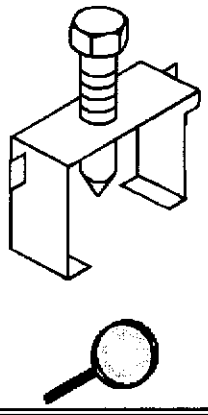
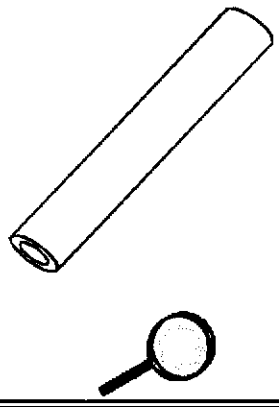
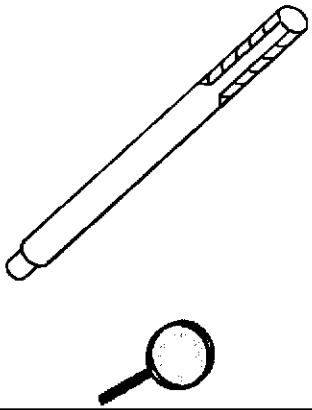
	Driver Handle
	J 8611-01 Bearing Race Installer
	J 8853-01 Collar Installer
	J 22227-A Bearing Remover

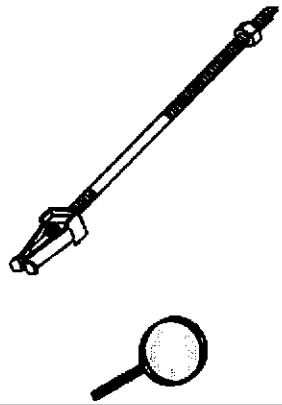
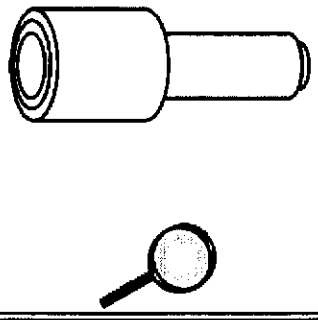
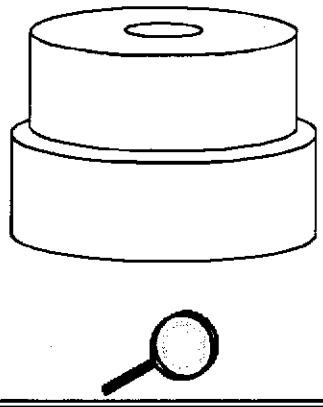
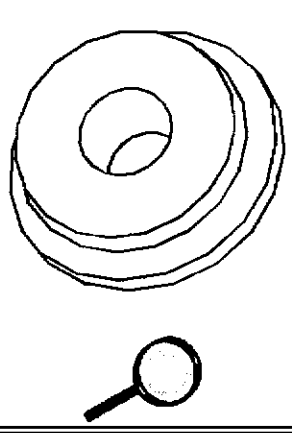
	J 22288 Puller
	J 22912-01 Split Plate
	J 22919 Bearing Installer
	J 24256-A Bearing Race Remover

	
	J 26540 Input Shaft Seal Installer
	J 26938 Drive Axle Oil Seal Installer
	J 26941 Puller
	J 33366 Holding Fixture

	
	J 33367 Puller Bridge
	J 33368 Bearing Installer
	J 33369 Pilot

	J 33370 Bearing Race Remover
	J 33371 Bearing Race Installer
	J 33373 Shim Selector
	J 33374 Bearing Installer

	
	J 35274 Gear Puller
	J 36037 Outer Bushing Installer
	J 36190 Driver Handle
	J 37158 Bearing Remover

	
	J 37159 Inner Bearing Installer
	J 37245 Bushing Remover
	J 41679 Bearing Race Installer