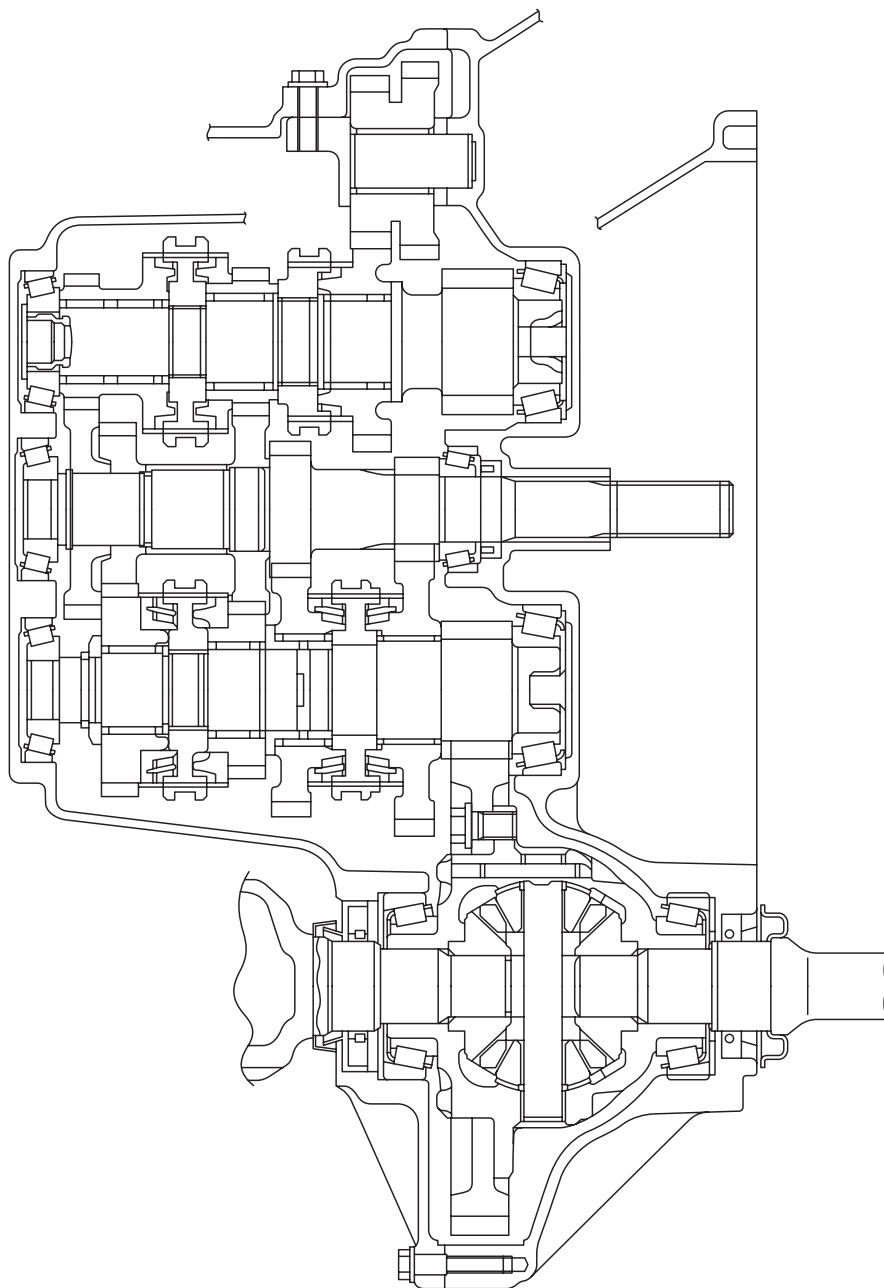


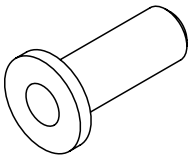
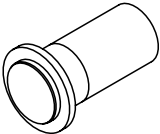
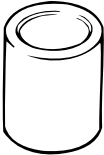
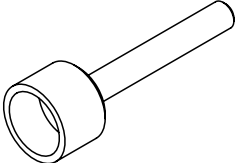
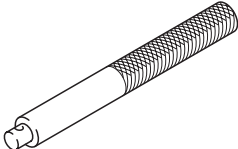
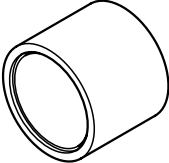
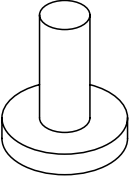
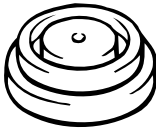
# GENERAL DESCRIPTION

M1222000100294

## TRANSMISSION SECTIONAL VIEW



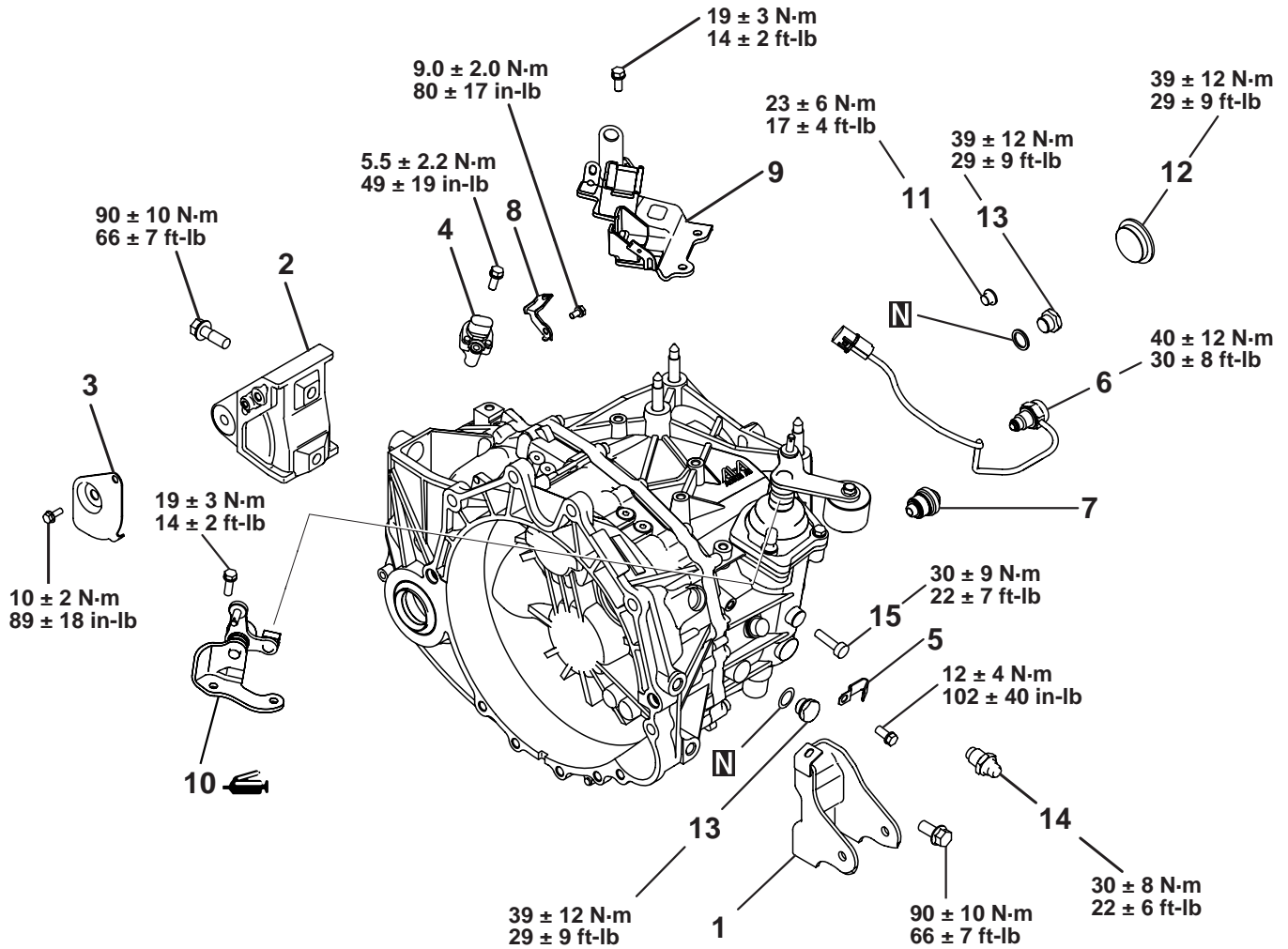
AK402746

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
	MB990699 Differential oil seal installer	–	Installation of cylindrical roller bearing outer race
	MB992037 Input shaft oil seal installer	–	Installation of type T oil seal
	MB991448 Bush remover & installer base	–	Installation of cylindrical roller bearing outer
	MD998550 Extension HSG seal installer	–	Installation of type T oil seal
	MB990938 Installer bar	MB990938-01	<ul style="list-style-type: none"> <li>• Use with bush remover &amp; installer base</li> <li>• Use with knuckle oil seal installer</li> </ul>
	MB991445 Bush remover & installer base	–	Installation of tapered roller bearing
	MB991966 Bearing outer race installer	–	Installation of tapered roller bearing No.1
 <p>MB991015</p>	MB991015 Knuckle oil seal installer	MB991015-01	Installation of tapered roller bearing

# TRANSAXLE

## DISASSEMBLY AND ASSEMBLY

M1222001000405



AK403732 AB

### Disassembly steps

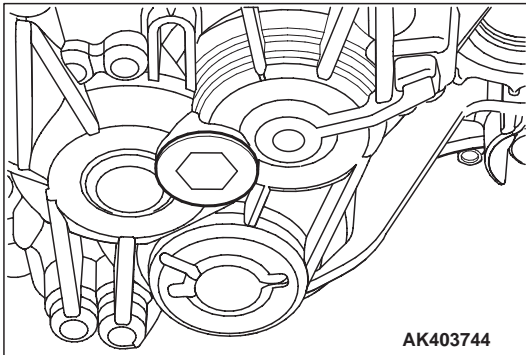
1. ROLL STOPPER BRACKET FRONT
2. ROLL STOPPER BRACKET REAR
3. HEAT PROTECTOR
4. SPEEDOMETER DRIVEN GEAR ASSEMBLY
5. CLAMP
6. BACK UP LAMP SWITCH ASSEMBLY
7. LOCK BALL ASSEMBLY
8. WIRING HARNESS CLAMP BRACKET

### Disassembly steps (Continued)

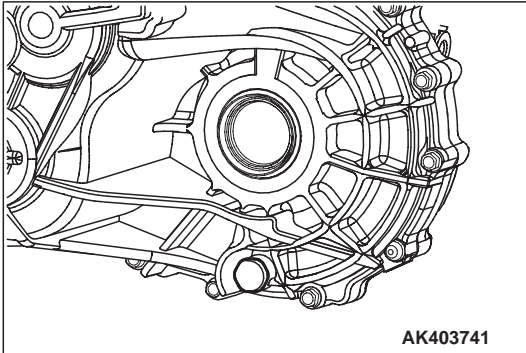
9. CONTROL CABLE BRACKET
10. SELECTING BELL-CRANK ASSEMBLY & CONTROL BELL-CRANK DUST COVER
11. STRAIGHT SCREW PLUG
12. STRAIGHT SCREW PLUG
13. STRAIGHT SCREW PLUG
14. LOCK BALL ASSEMBLY
15. STRAIGHT PIN

### Required Special Tools:

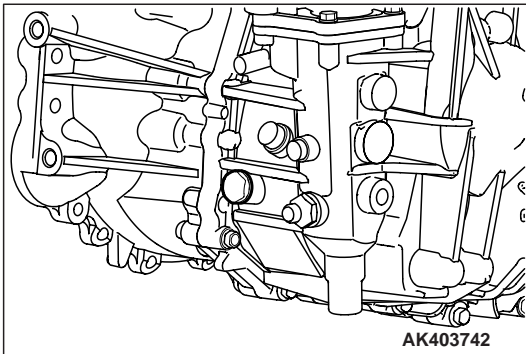
- MB992038: Preload socket



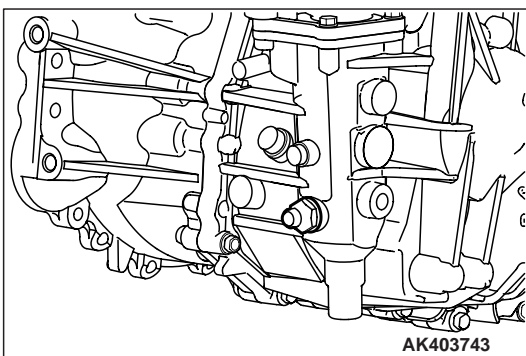
10. Remove the straight screw plug with head.

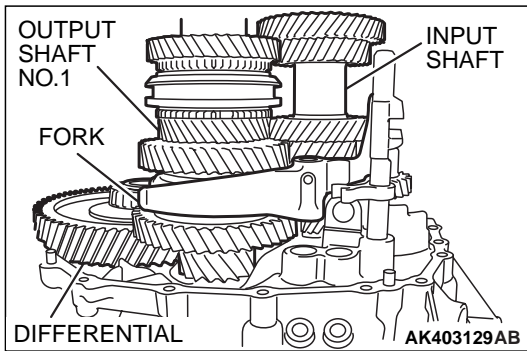


11. Remove the straight screw plug with head and the gasket (two places).

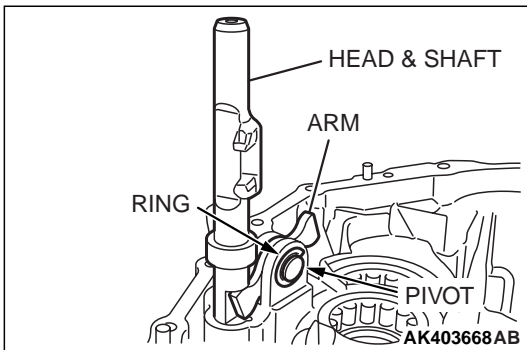


12. Remove the lock ball assembly.





30. Remove the input shaft sub-assembly, output shaft No.1 sub-assembly and gear shift fork assembly No.1.
31. Remove the differential sub-assembly.

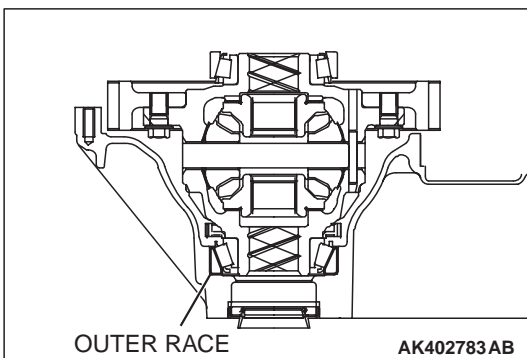
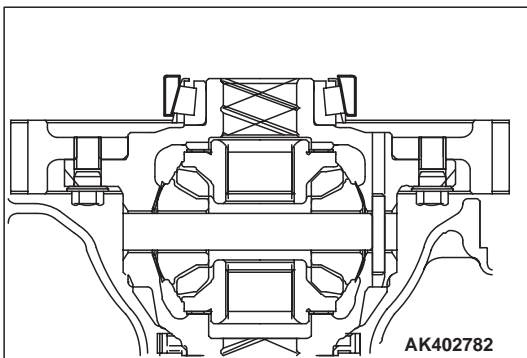


32. Remove the E ring.
33. Remove the shift arm pivot.
34. Remove the gear shift head No.3 and gear shift fork shaft No.5 and shift arm simultaneously.

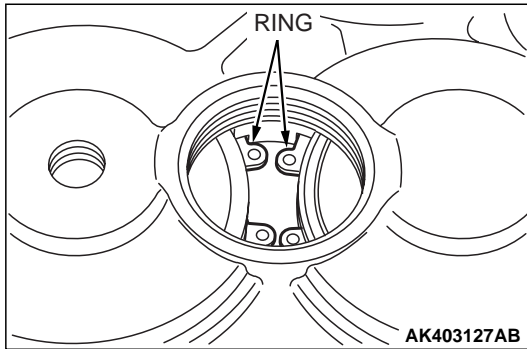
## ADJUSTMENT BEFORE ASSEMBLY

### DIFFERENTIAL SIDE BEARING PRELOAD ADJUSTMENT

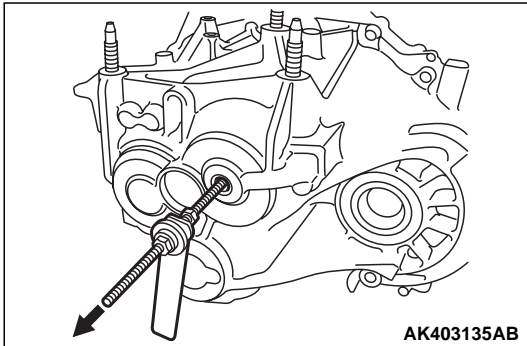
1. Set the differential assembly to the transaxle case.
2. Push and fit the tapered roller bearing outer race by hand.



3. To fit the tapered roller bearing outer race, rotate the differential assembly by hand about 10 times with the special tool MB992038.



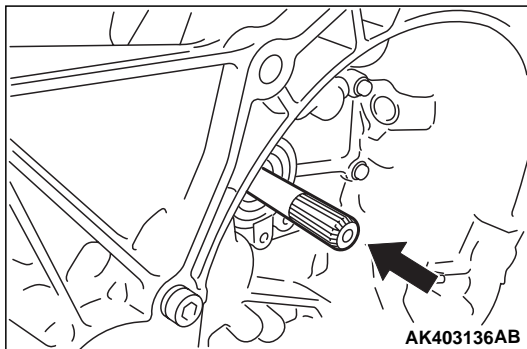
23. Extend the hole snap ring and install it on the radial ball bearing.



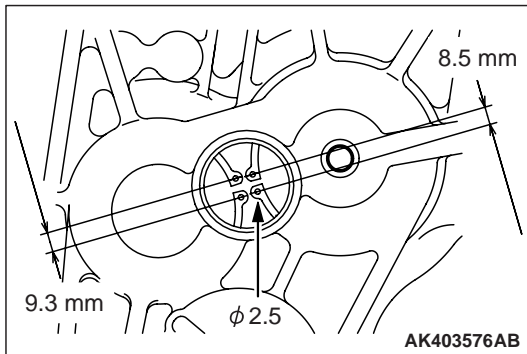
24. Install stud bolt to the output shaft No.2 sub-assembly.

25. Pull the output shaft No.2 sub-assembly in the direction as shown in the illustration and fit the hole snap ring into the bearing groove.

*NOTE: After installation, keep the sealed area away from oil for approximately one hour.*



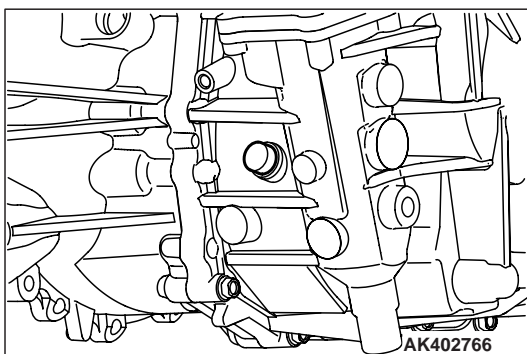
26. Push the input shaft sub-assembly in the direction as shown in the illustration and fit the hole snap ring into the bearing groove.



27. Lift the output No.1 sub-assembly.

28. Confirm that the dimension between the centers of  $\phi 2.5$  holes on the hole snap ring is in accordance with the illustration.

29. Check the hole snap ring fits securely into the bearing groove.



30. Install the flange bolt and gasket to the specified torque of  $50 \pm 10 \text{ N} \cdot \text{m}$  ( $37 \pm 7 \text{ ft} \cdot \text{lb}$ ).

## INPUT SHAFT

### DISASSEMBLY AND ASSEMBLY

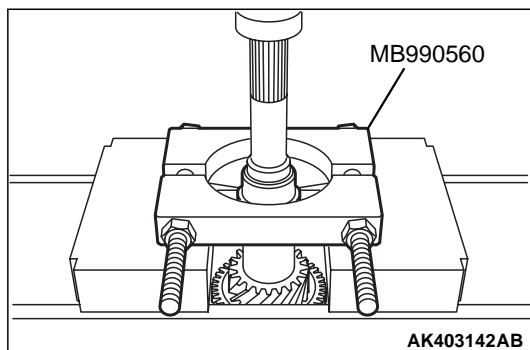
M1222001600300

#### Required Special Tools:

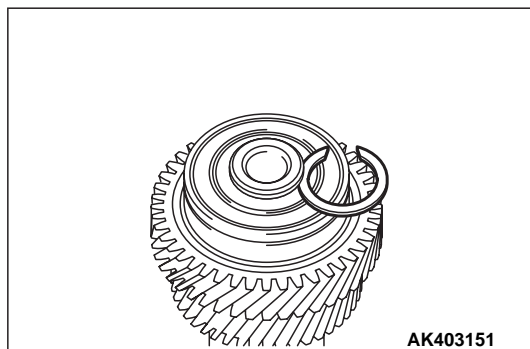
- MB990560: Rear axle shaft bearing remover
- MD998812: Installer cap
- MD998813: Installer 100
- MD998814: Installer 200
- MD998818: Installer adapter
- MD998823: Installer adapter
- MD998917: Bearing remover

### DISASSEMBLY SERVICE POINTS

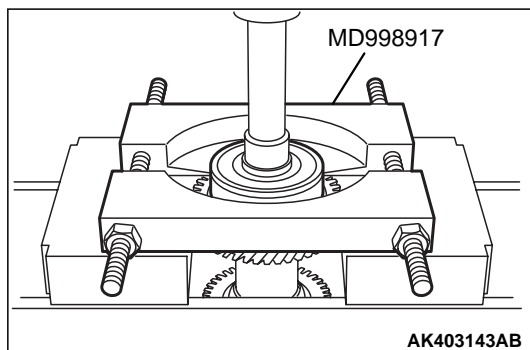
1. Using special tool MB990560, support the cylindrical roller bearing and remove the cylindrical roller bearing.



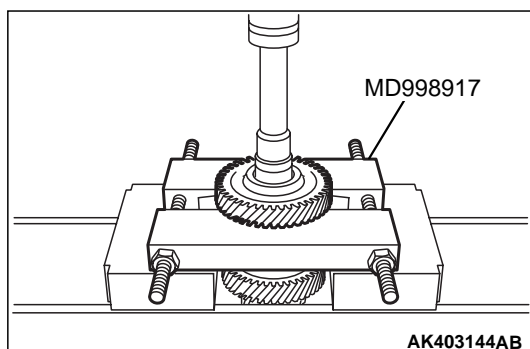
2. Remove the shaft snap ring.

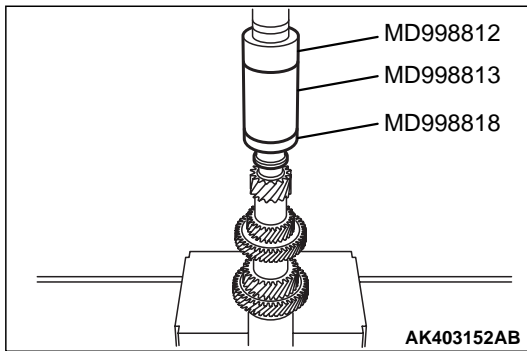


3. Using special tool MD998917, support the radial ball bearing and remove the radial ball bearing.



4. Using special tool MD998917, support the 6th drive gear and remove the 6th drive gear.





9. Using special tools MD998812, MD998813 and MD998818, install the cylindrical roller bearing.

## OUTPUT SHAFT

### DISASSEMBLY AND ASSEMBLY

M1222002200338

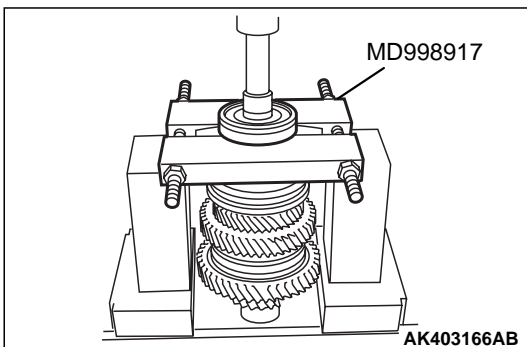
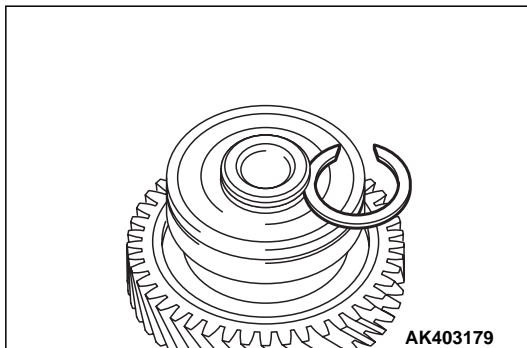
#### <OUTPUT SHAFT No.1>

##### Required Special Tools:

- MB990560: Rear axle shaft bearing remover
- MD998812: Installer cap
- MD998813: Installer 100
- MD998814: Installer 200
- MD998820: Installer adapter
- MD998824: Installer adapter
- MD998917: Bearing remover

### DISASSEMBLY SERVICE POINTS

1. Remove the shaft snap ring.



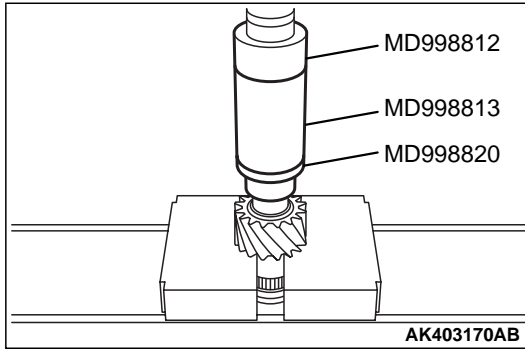
2. Using special tool MD998917, support the radial ball bearing and remove the radial ball bearing.



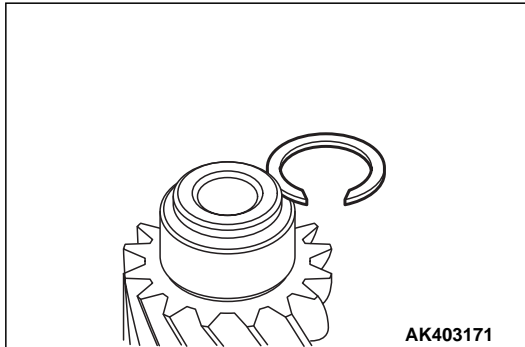
**ASSEMBLY SERVICE POINTS**

1. Using special tools MD998812, MD998813 and MD998820, install the cylindrical roller bearing.

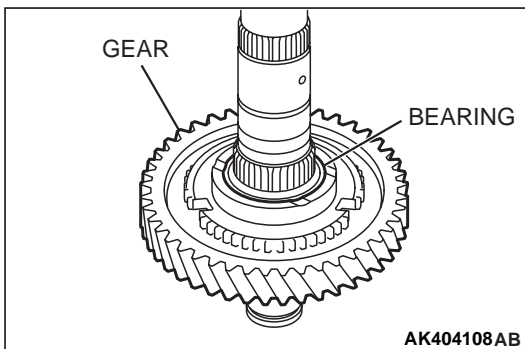
*NOTE: Apply the gear oil sufficiently on the sliding surface.*

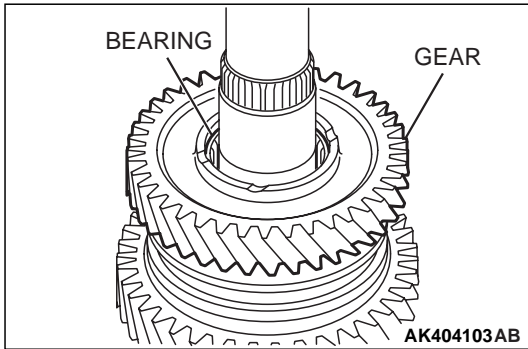


2. Install the shaft snap ring to output shaft No.1.

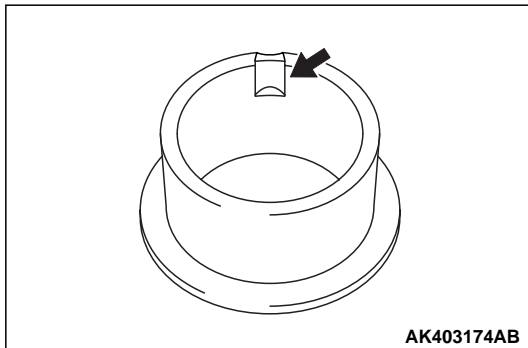


3. Install the 1st gear and needle roller bearing to output shaft No.1.

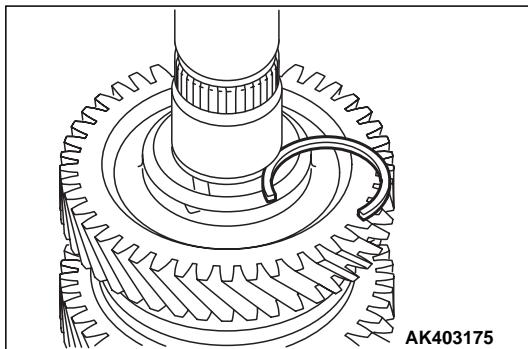




10. Insert the 2nd gear and needle roller bearing to the output shaft No.1.

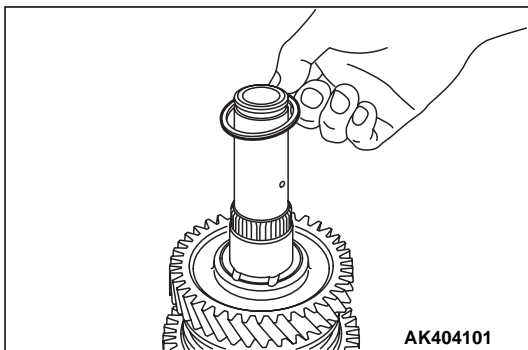


11. Fit the ball into groove as shown in the illustration.

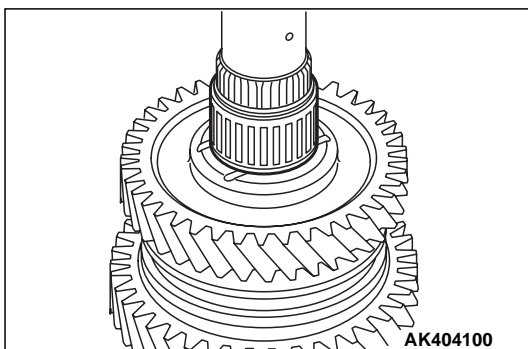


12. Select a shaft snap ring that allows distance of the thrust crevice of 2nd gear bearing inner race to fall within the standard value range.

**Standard value: 0 –0.1 mm (0 –0.0039 inch)**



13. Insert the spacer to the output shaft No.1.



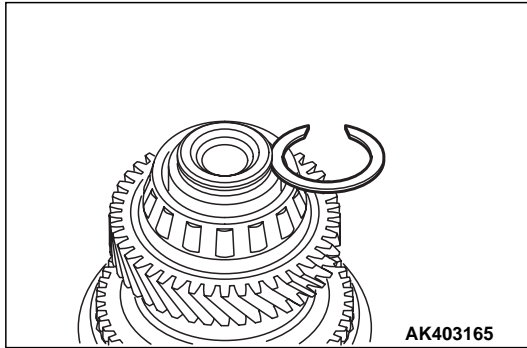
14. Insert the needle roller bearing to the output shaft No.1.

**DISASSEMBLY AND ASSEMBLY****<OUTPUT SHAFT No.2>****Required Special Tools:**

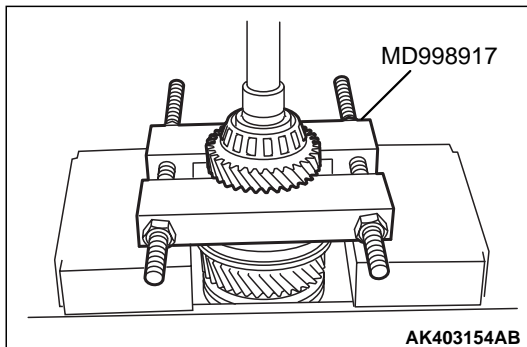
- MD998812: Installer cap
- MD998813: Installer 100
- MD998814: Installer 200
- MD998819: Installer adapter
- MD998827: Installer adapter
- MD998917: Bearing remover

**DISASSEMBLY SERVICE POINTS**

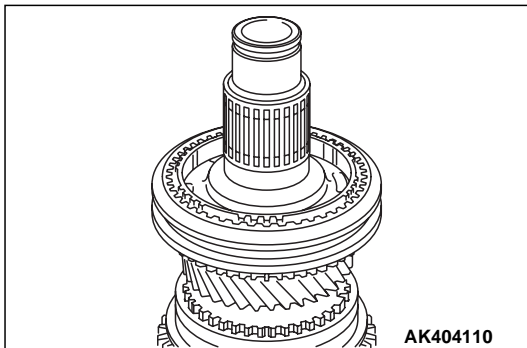
1. Remove the shaft snap ring.



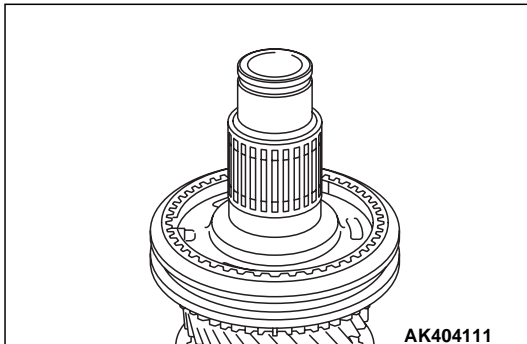
2. Using special tool MD998917, support the 6th gear sub assembly and remove the tapered roller bearing No.2 and 6th gear sub-assembly.

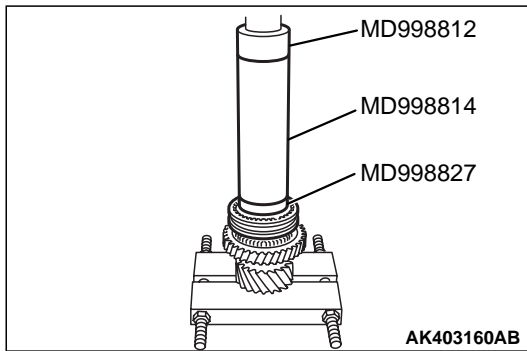


3. Remove the synchronizer outer ring No.3.



4. Remove the needle roller bearing and spacer.

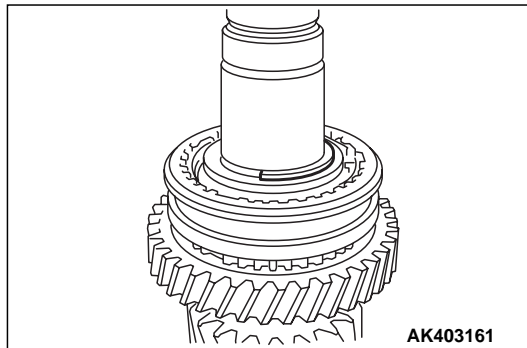




9. Using special tools MD998812, MD998814 and MD998827, install the reverse synchronizer sub-assembly.

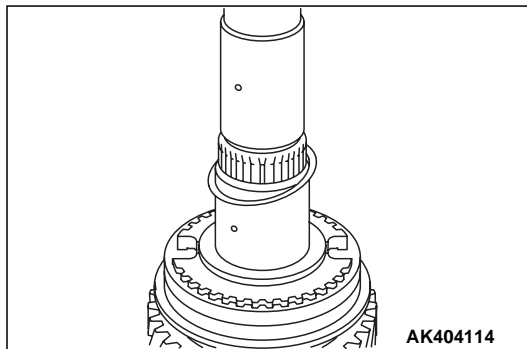
**NOTE:**

- Confirm correct position as shown.
- The synchronizer ring must not bind.

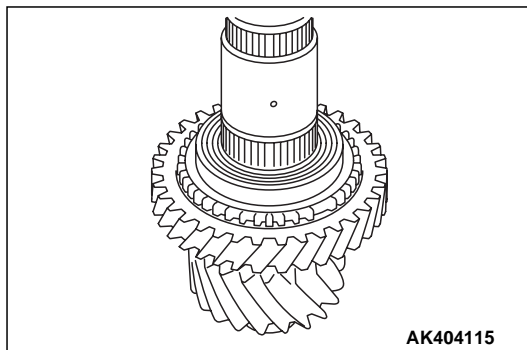


10. Select a shaft snap ring that allows distance of the thrust crevice of reverse hub to fall within the standard value range.

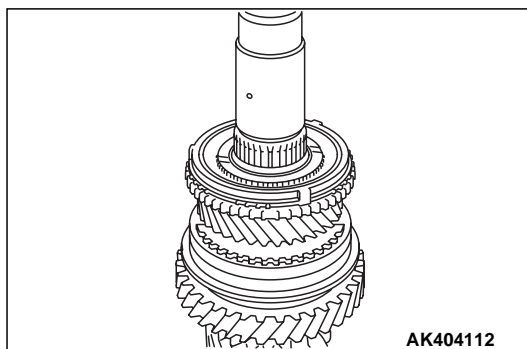
**Standard value: 0 –0.1 mm (0 –0.0039 inch)**



11. Install the spacer to output shaft No.2.



12. Install the needle roller bearing and spacer to output shaft No.2.

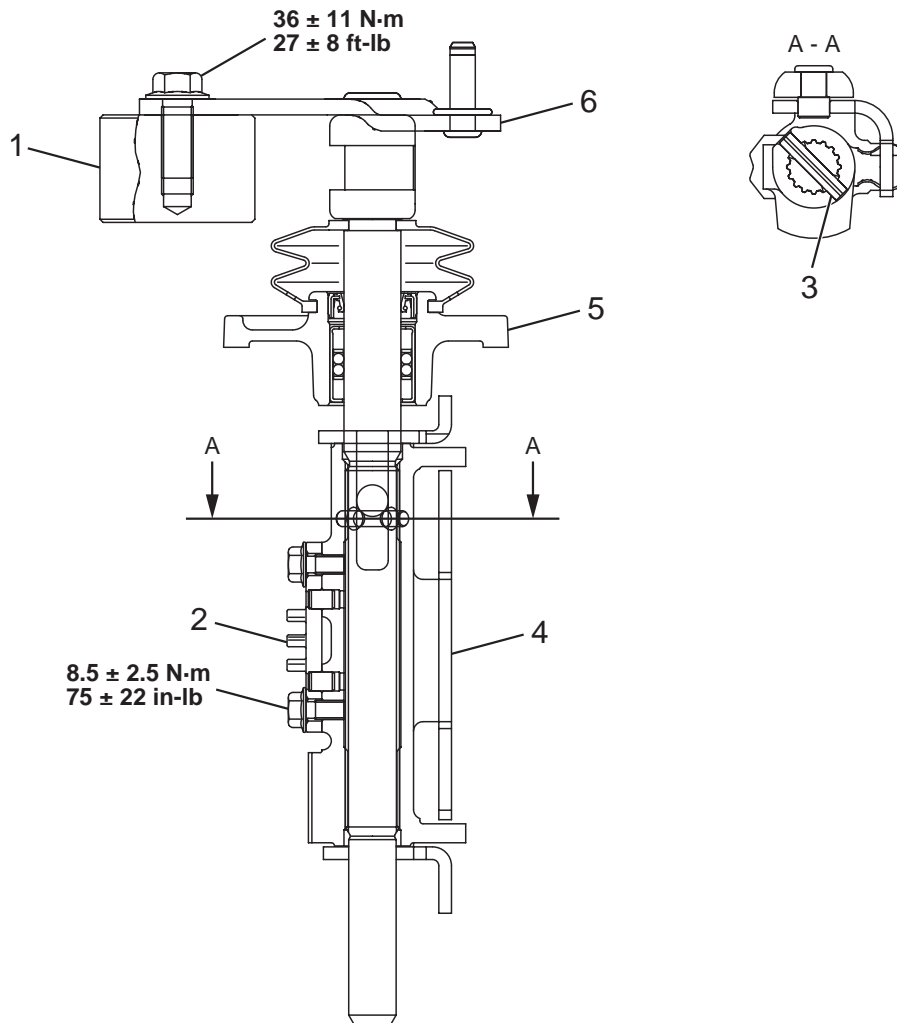


13. Install the 5th gear sub-assembly to output shaft No.2, and synchronizer outer ring No.3 to 5th gear sub-assembly.

# SELECT LEVER

## DISASSEMBLY AND ASSEMBLY

M1222012800171



AK402774AB

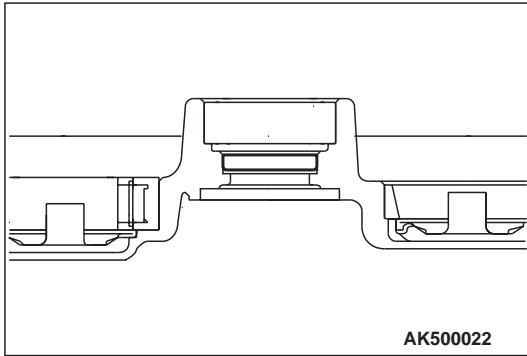
### Disassembly steps

1. SHIFT LEVER DAMPER
2. SHIFT GUIDE PLATE
3. SLOTTED SPRING PIN
4. SHIFT & SELECT LEVER NO.1,  
SHIFT INTERLOCK PLATE NO.1

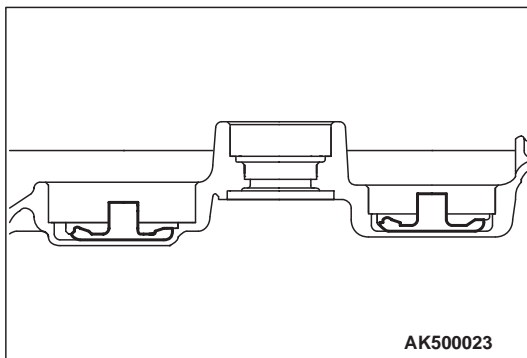
### Disassembly steps (Continued)

5. CONTROL SHAFT COVER  
SUB-ASSEMBLY
6. SHIFT & SELECT LEVER SHAFT

<<A>> >>A<<



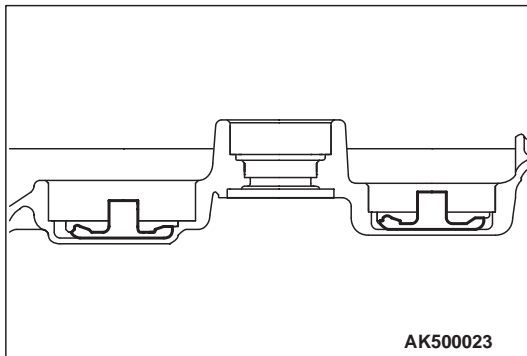
6. Remove the type T oil seal.



7. Using special tools MB990211 and MB992039, remove the cylindrical roller bearing.

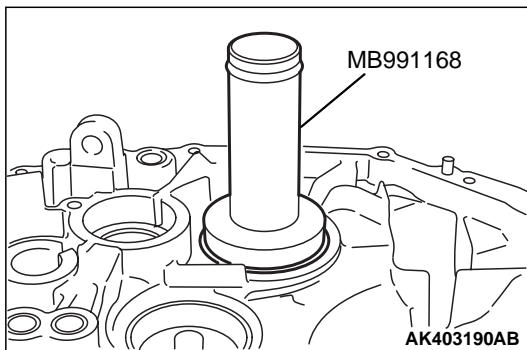
8. Using special tools MB990211 and MB992039, remove the tapered roller bearing No.1.

9. Remove the output shaft cover (two pieces).



### ASSEMBLY SERVICE POINTS

1. Install the output shaft cover (two pieces) in the transaxle case.



2. Using special tool MB991168, install the tapered roller bearing No.1 in the transaxle case.

# DIFFERENTIAL

## DISASSEMBLY AND ASSEMBLY

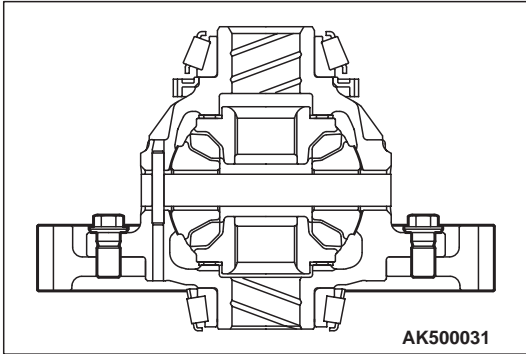
M1222002500210

### Required Special Tools:

- MD998812: Installer cap
- MD998813: Installer 100
- MD998827: Installer adapter
- MD998917: Bearing remover

### DISASSEMBLY SERVICE POINTS

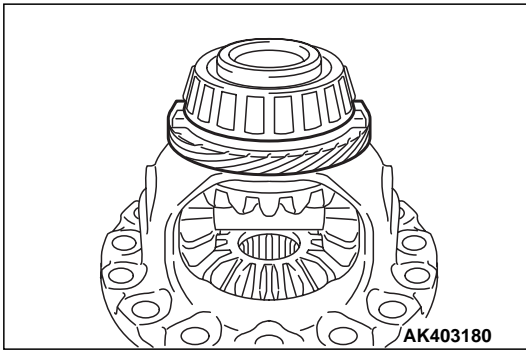
1. Remove the differential ring gear.



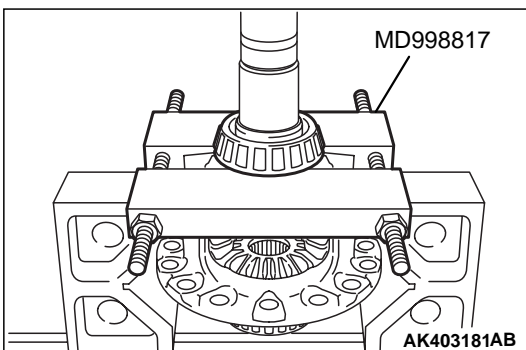
#### **CAUTION**

**Do not damage the case and the gear.**

2. Loosen and remove the speed meter drive gear.



3. Place special tool MD998817 in the speedometer drive gear location, and remove the tapered roller bearing No.2.



#### **CAUTION**

**Do not damage the case and the gear.**

4. Loosen and remove the tapered roller bearing No.2 (roller).

