GROUP 23B

AUTOMATIC TRANSMISSION OVERHAUL

CONTENTS

Continued on next page

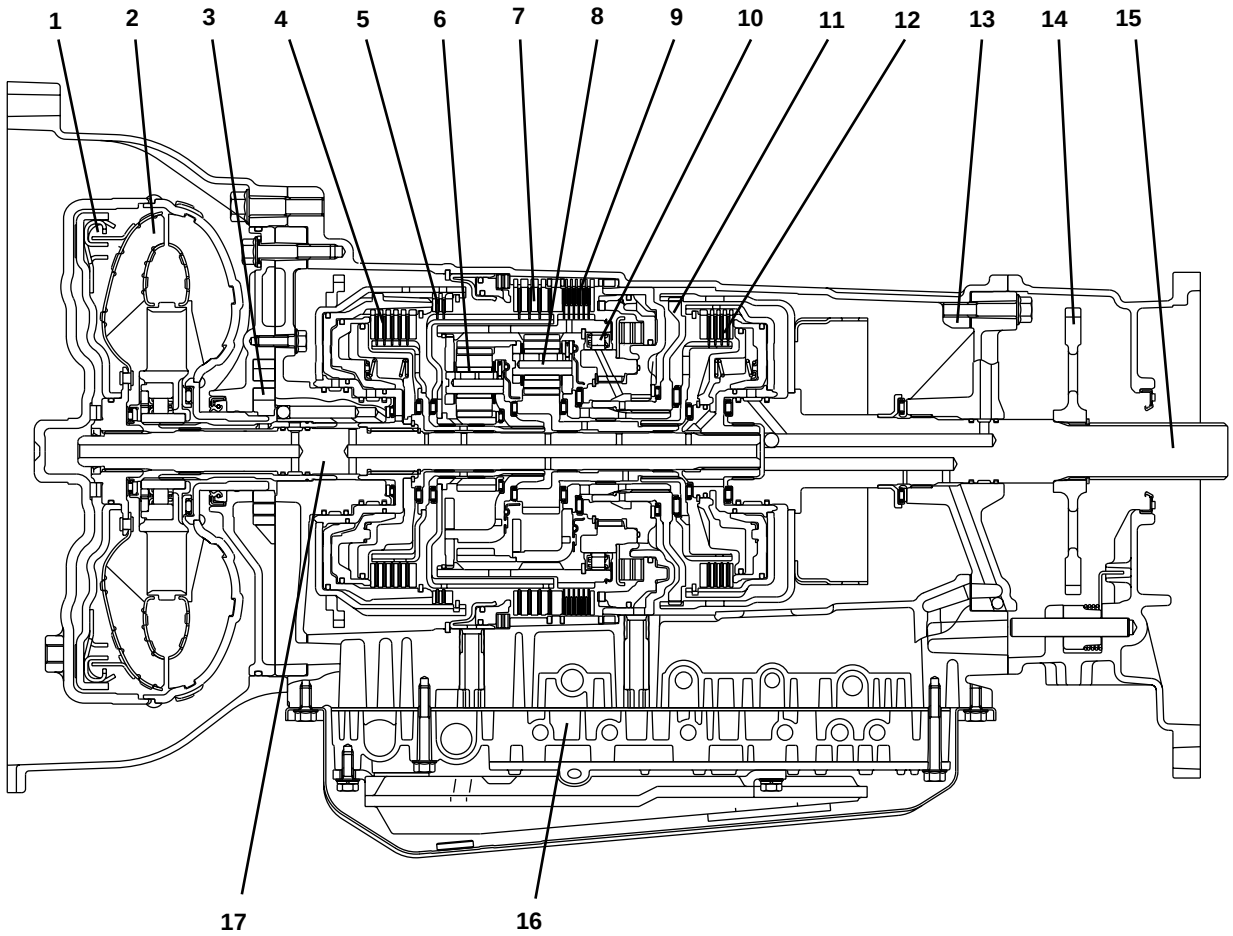
GENERAL INFORMATION

M1233000100027

This transmissions is the newly developed 4-speed and 5-speed automatic transmission that merges advanced electronic technology and mechanical technology.

A hydraulic balance mechanism is incorporated for the transmission clutch, allowing for ultra-high speed gear changes.
The weight has been reduced by using precision sheet metal pressing of the clutch retainer, etc., and using aluminum die cast for the oil pump housing.

SECTIONAL VIEW <V4A51>

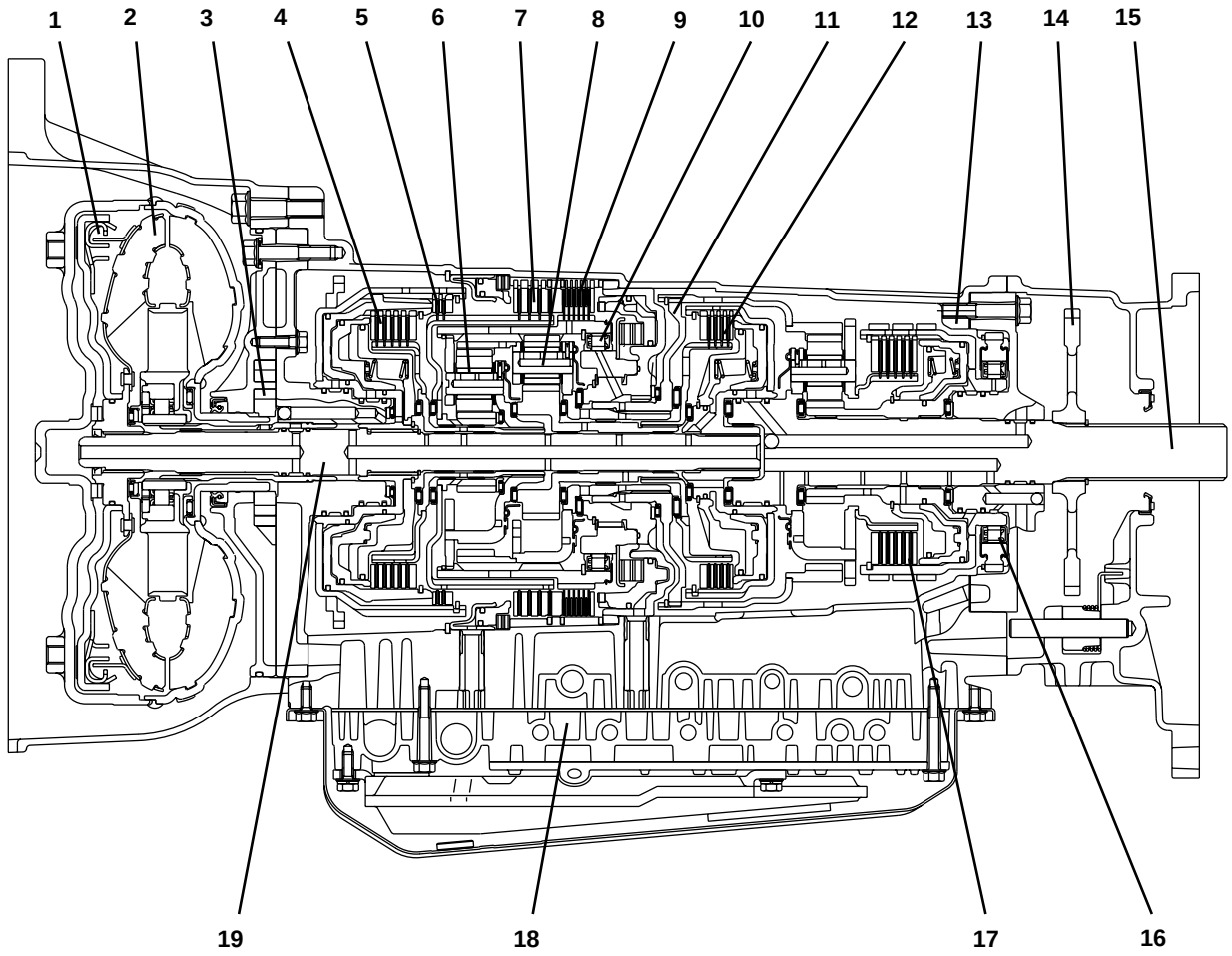


AKX00268AB

1. TORQUE CONVERTER CLUTCH
2. TORQUE CONVERTER
3. OIL PUMP
4. OVERDRIVE CLUTCH
5. REVERSE CLUTCH
6. OVERDRIVE PLANETARY CARRIER
7. SECOND BRAKE
8. OUTPUT PLANETARY CARRIER
9. LOW/REVERSE BRAKE
10. ONE-WAY CLUTCH
11. CENTER SUPPORT
12. UNDERDRIVE CLUTCH
13. OUTPUT SHAFT SUPPORT
14. PARKING GEAR
15. OUTPUT SHAFT
16. VALVE BODY
17. INPUT SHAFT

TSB Revision

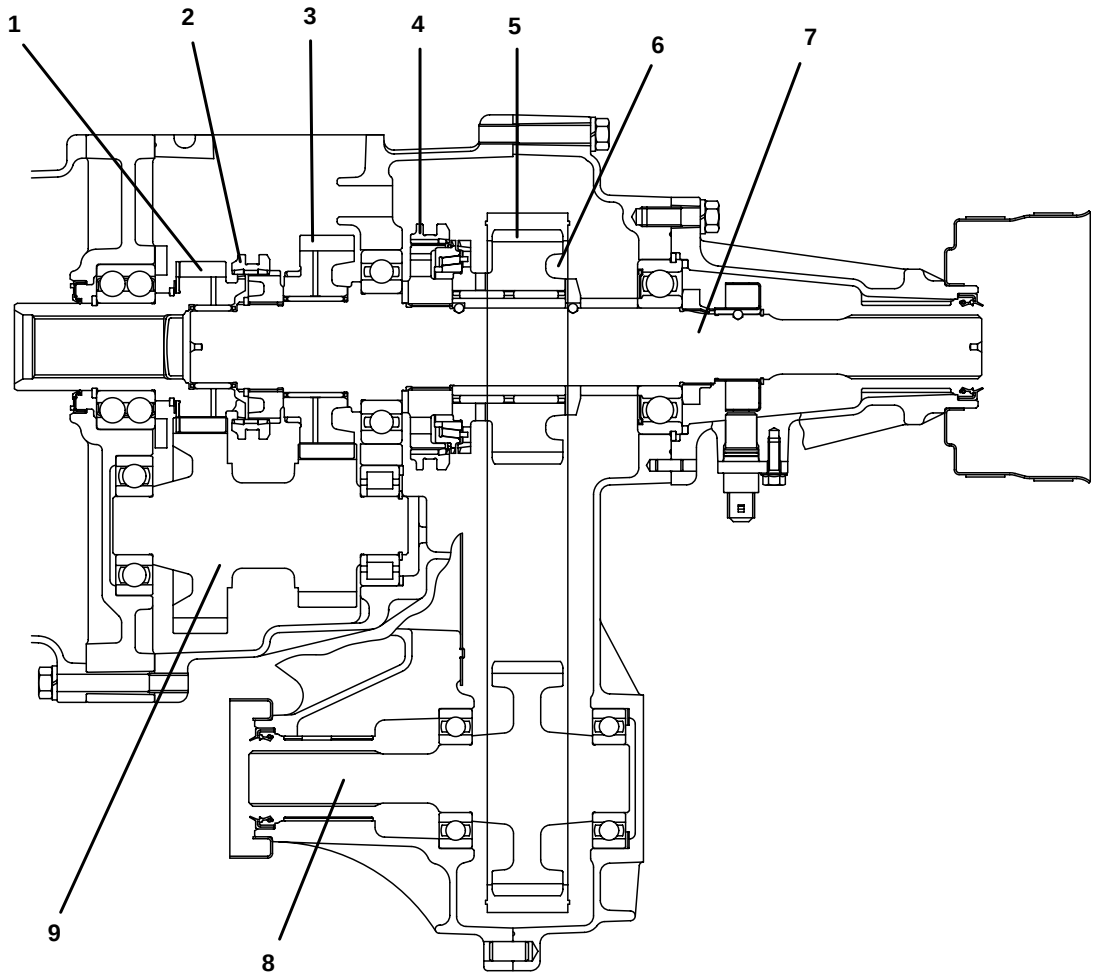
SECTIONAL VIEW <V5A51>



AKX00269AB

1. TORQUE CONVERTER CLUTCH
2. TORQUE CONVERTER
3. OIL PUMP
4. OVERDRIVE CLUTCH
5. REVERSE CLUTCH
6. OVERDRIVE PLANETARY CARRIER
7. SECOND BRAKE
8. OUTPUT PLANETARY CARRIER
9. LOW/REVERSE BRAKE
10. ONE-WAY CLUTCH
11. CENTER SUPPORT
12. UNDERDRIVE CLUTCH
13. OUTPUT SHAFT SUPPORT
14. PARKING GEAR
15. OUTPUT SHAFT
16. ONE-WAY CLUTCH
17. DIRECT CLUTCH
18. VALVE BODY
19. INPUT SHAFT

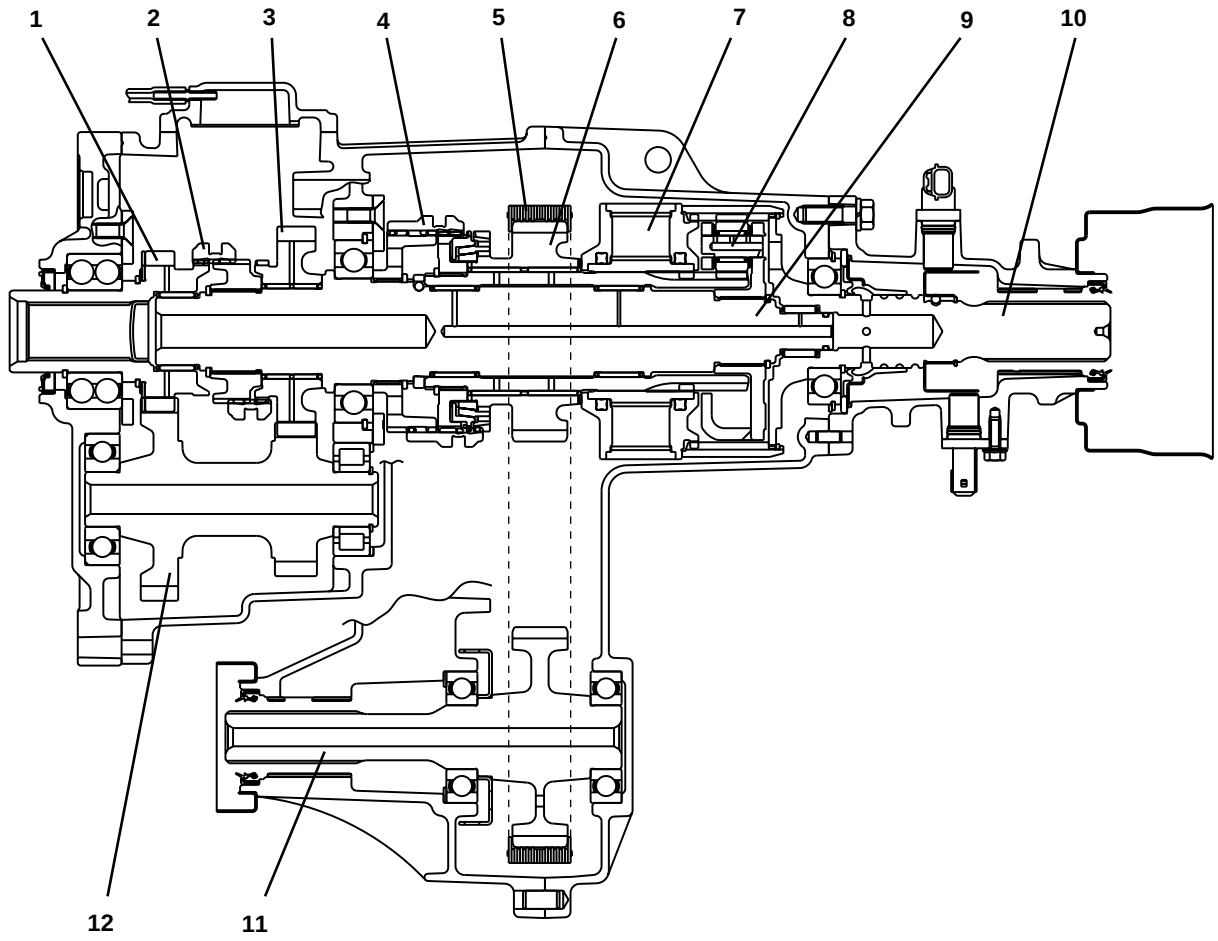
SECTIONAL VIEW <TRANSFER-PART TIME 4WD>



AKX01370 AB

1. TRANSFER INPUT GEAR
2. H-L CLUTCH
3. LOW SPEED GEAR
4. 2-4WD SYNCHRONIZER SLEEVE
5. DRIVE SPROCKET
6. CHAIN
7. REAR OUTPUT SHAFT
8. FRONT OUTPUT SHAFT
9. TRANSFER COUNTER GEAR

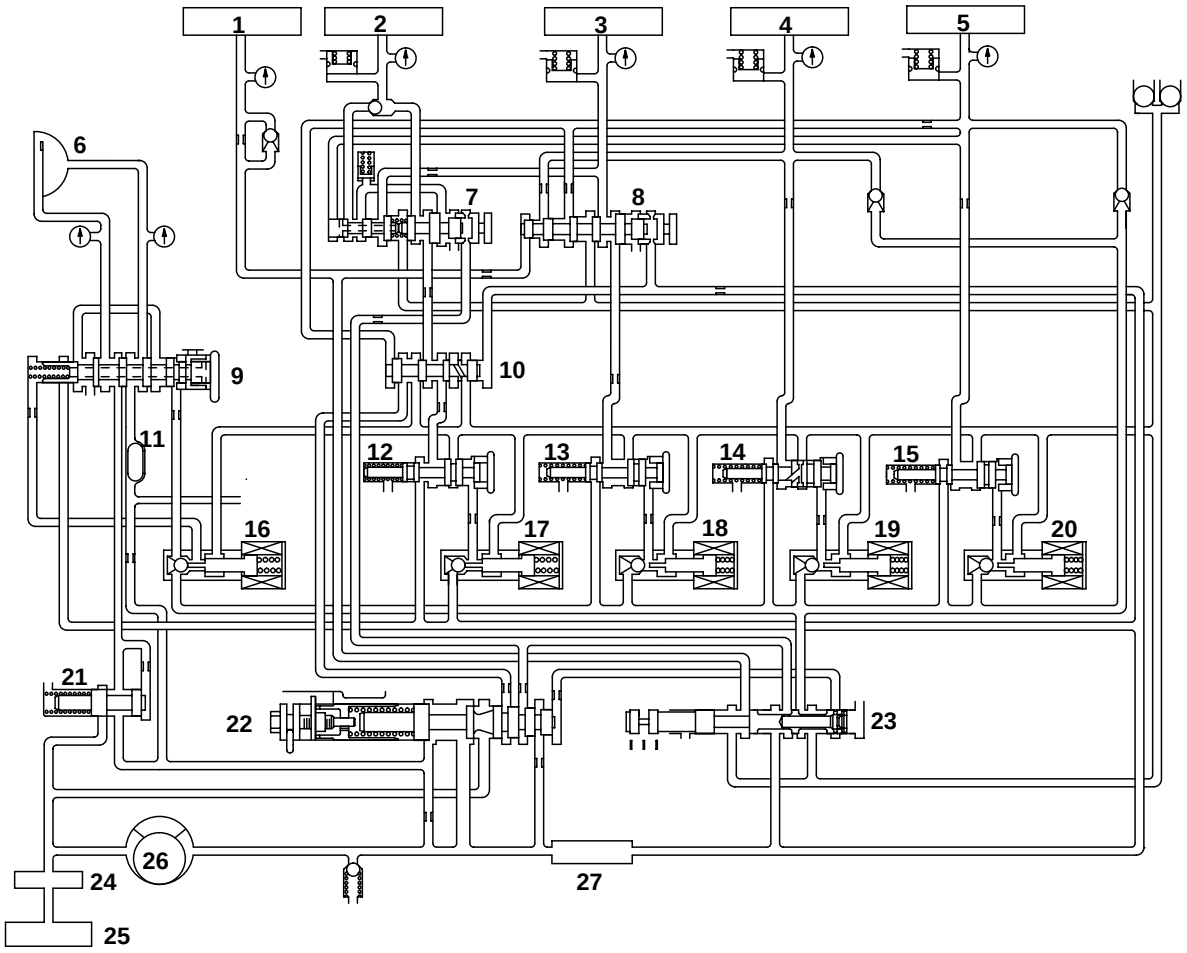
SECTIONAL VIEW <TRANSFER-SUPER SELECT 4WD>



AKX00270AB

1. TRANSFER INPUT GEAR
2. H-L CLUTCH
3. LOW SPEED GEAR
4. 2-4WD SYNCHRONIZER SLEEVE
5. DRIVE SPROCKET
6. CHAIN
7. VISCOUS COUPLING
8. CENTER DIFFERENTIAL PLANETARY CARRIER
9. TRANSFER DRIVE SHAFT
10. REAR OUTPUT SHAFT
11. FRONT OUTPUT SHAFT
12. TRANSFER COUNTER GEAR

HYDRAULIC CONTROL SYSTEM <4-speed model>

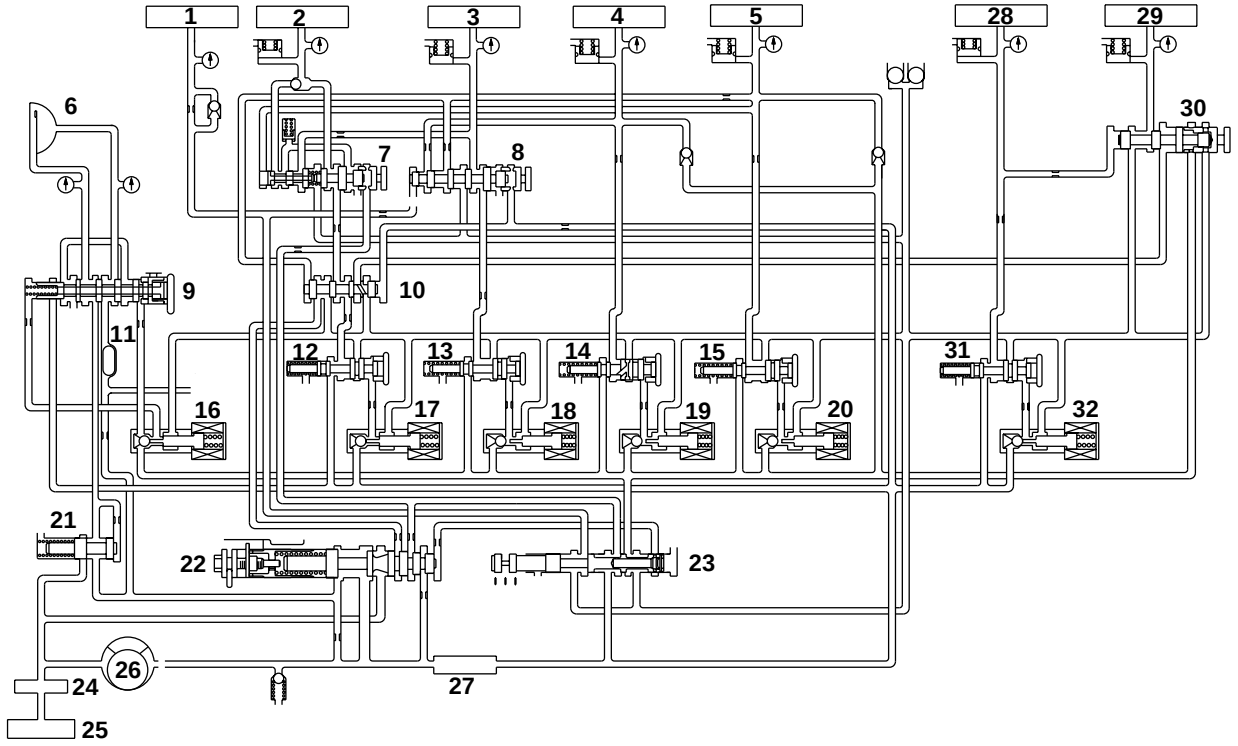


AKX00004AB

1. REVERSE CLUTCH
2. LOW/REVERSE BRAKE
3. SECOND BRAKE
4. UNDERDRIVE CLUTCH
5. OVERDRIVE CLUTCH
6. TORQUE CONVERTER CLUTCH
7. FAIL-SAFE VALVE A
8. FAIL-SAFE VALVE B
9. TORQUE CONVERTER CLUTCH CONTROL VALVE
10. SWITCHING VALVE
11. COOLER
12. LOW-REVERSE BRAKE PRESSURE
13. SECOND BRAKE PRESSURE CONTROL VALVE
14. UNDERDRIVE CLUTCH PRESSURE CONTROL VALVE
15. OVERDRIVE CLUTCH PRESSURE CONTROL VALVE
16. TORQUE CONVERTER CLUTCH CONTROL SOLENOID VALVE
17. LOW-REVERSE BRAKE SOLENOID VALVE
18. SECOND BRAKE SOLENOID VALVE
19. UNDERDRIVE CLUTCH SOLENOID VALVE
20. OVERDRIVE CLUTCH SOLENOID VALVE
21. TORQUE CONVERTER PRESSURE CONTROL VALVE
22. REGULATOR VALVE
23. MANUAL VALVE
24. OIL FILTER
25. OIL PAN
26. OIL PUMP
27. OIL STRAINER

TSB Revision

HYDRAULIC CONTROL SYSTEM <5-speed model>



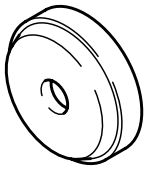
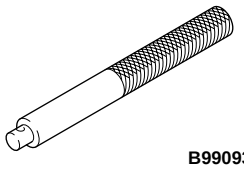
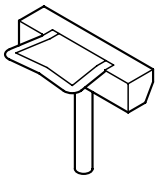
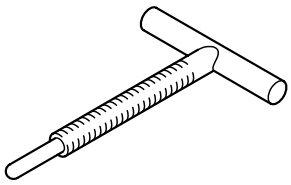
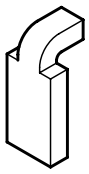
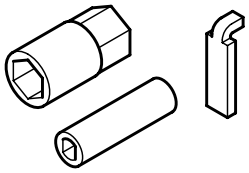
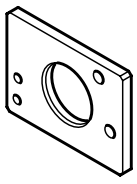
AKX00271AB

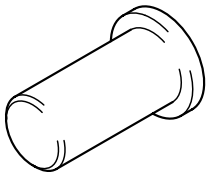
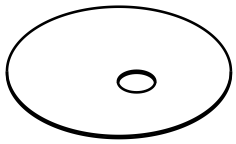
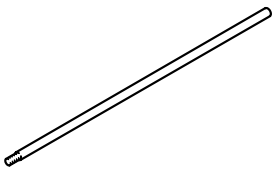
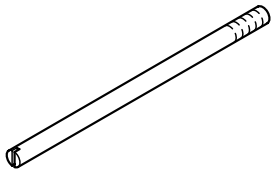
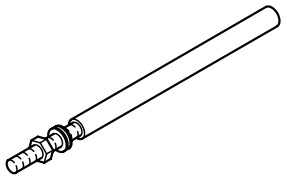
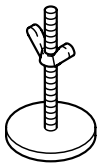
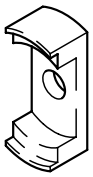
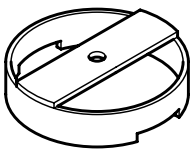
1. REVERSE CLUTCH
2. LOW/REVERSE BRAKE
3. SECOND BRAKE
4. UNDERDRIVE CLUTCH
5. OVERDRIVE CLUTCH
6. TORQUE CONVERTER CLUTCH
7. FAIL-SAFE VALVE A
8. FAIL-SAFE VALVE B
9. TORQUE CONVERTER CLUTCH CONTROL VALVE
10. SWITCHING VALVE
11. COOLER
12. LOW-REVERSE BRAKE PRESSURE
13. SECOND BRAKE PRESSURE CONTROL VALVE
14. UNDERDRIVE CLUTCH PRESSURE CONTROL VALVE
15. OVERDRIVE CLUTCH PRESSURE CONTROL VALVE
16. TORQUE CONVERTER CLUTCH CONTROL SOLENOID VALVE
17. LOW-REVERSE BRAKE SOLENOID VALVE
18. SECOND BRAKE SOLENOID VALVE
19. UNDERDRIVE CLUTCH SOLENOID VALVE
20. OVERDRIVE CLUTCH SOLENOID VALVE
21. TORQUE CONVERTER PRESSURE CONTROL VALVE
22. REGULATOR VALVE
23. MANUAL VALVE
24. OIL FILTER
25. OIL PAN
26. OIL PUMP
27. OIL STRAINER
28. REDUCTION BRAKE
29. DIRECT CLUTCH
30. FAIL-SAFE VALVE C
31. REDUCTION BRAKE PRESSURE CONTROL VALVE
32. REDUCTION BRAKE SOLENOID VALVE

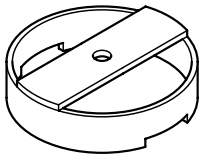
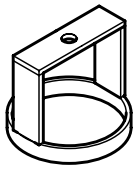
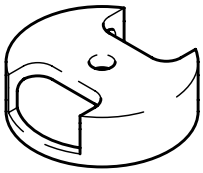
SPECIAL TOOLS

M1233000600022

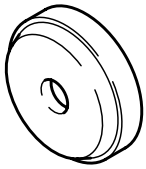
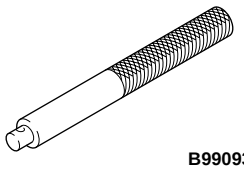
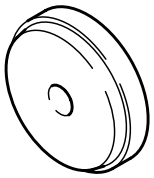
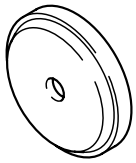
TRANSMISSION

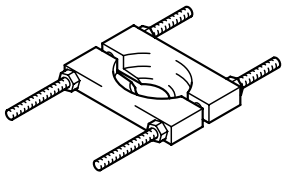
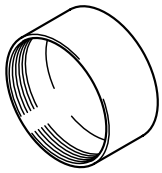
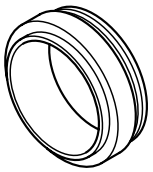
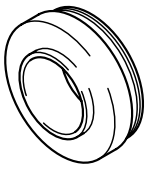
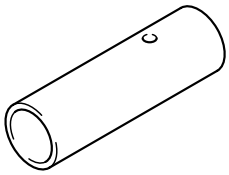
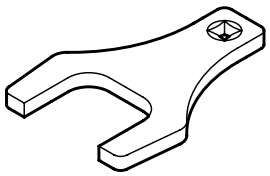
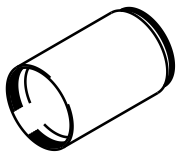
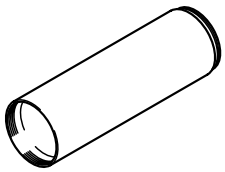
TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
	MB990929 Installer adapter	MB990929	Installation of oil seal
 B990938	MB990938 Handle	MB990938-01	Use with installer adapter
 D998727	MD998727 Oil pan remover	–	Removal of oil pan
	MD998333 Oil pump remover	MD998333-01	Removal of oil pump
	MB991693 Reduction brake stopper	–	Adjustment reduction brake piston
	MB991633 Reduction brake wrench set	–	Adjustment reduction brake piston
	MB991603 Bearing installer stopper	–	Measurement of output shaft and center support end plays

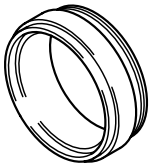
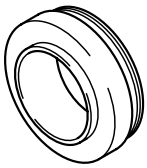
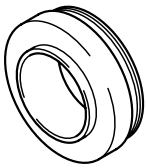
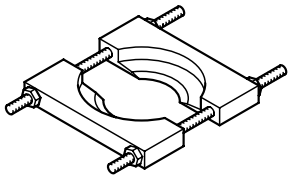
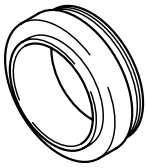
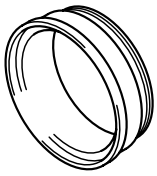
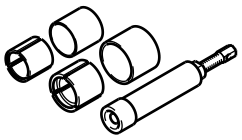
TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
	MD998304 Oil seal installer	MD998304-01	Measurement of output shaft end play
	MB991632 Clearance dummy plate	–	Measurement of brake reaction plate, second brake and low/reverse brake end plays
	MD998913 Dial gauge extension	MD998913-01	Measurement of brake reaction plate, second brake and low/reverse brake end plays
	MD998412 Guide	MD998412	Installation of oil pump
	MD998316 Dial gauge support	MIT209038	Measurement of input shaft end play
	MD998924 Spring compressor retainer	–	Use with spring compressor
	MD999590 Spring compressor	–	Removal and installation of reverse and overdrive clutch spring retainer snap ring
	MB991629 Spring compressor	–	Measurement of overdrive clutch and underdrive clutch end plays

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
	MB991789 Spring compressor	–	Adjustment reverse clutch end plays
	MB991630 Spring compressor	–	Removal and installation of center support snap ring
	MD998907 Spring compressor	MD998907-01	Removal and installation of underdrive clutch spring retainer snap ring

TRANSFER

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
	MB990929 Installer adapter	MB990929	Installation of oil seal
	MB990938 Handle	MB990938-01	Use with installer adapter
	MB990932 Installer adapter	–	Installation of oil seal
	MB990936 Installer adapter	–	Installation of oil seal

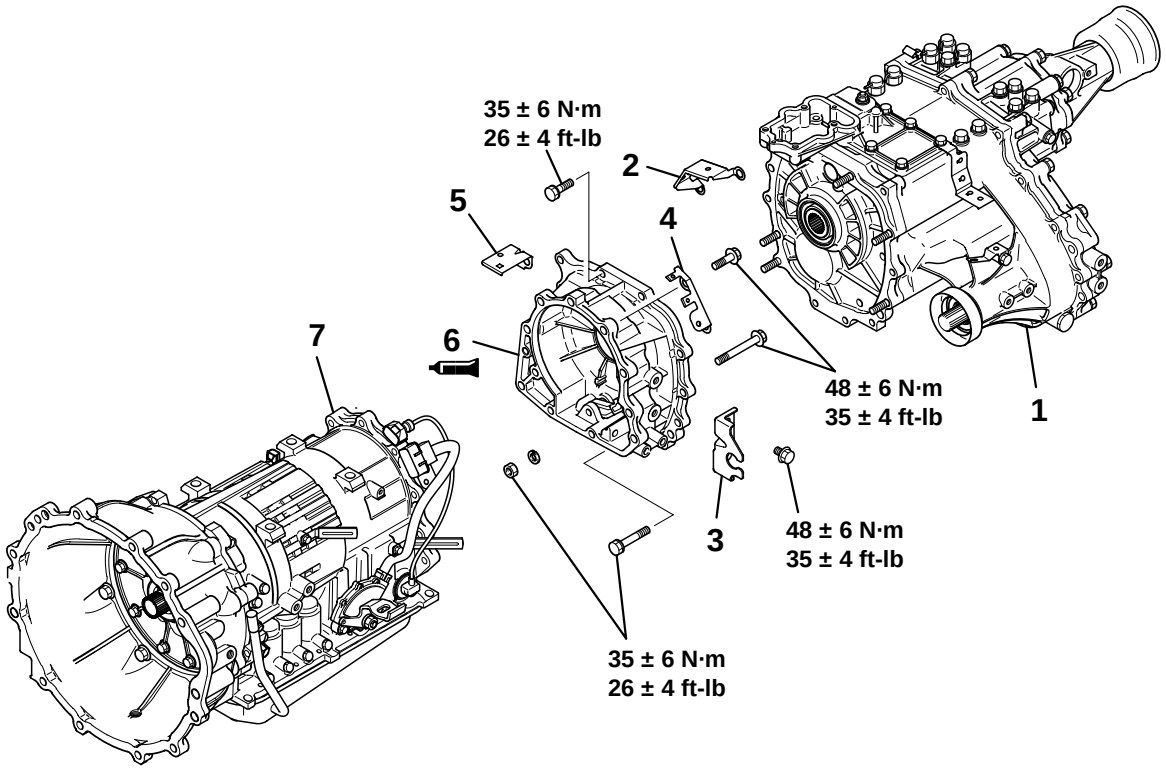
TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
	MD998801 Bearing remover	MD998348-01	Removal and installation of bearing
	MD998812 Installer cap	General service tool	Use with installer and installer adapter
	MD998826 Installer adapter (52)	General service tool	Installation of transfer input gear bearing
	MD998818 Installer adapter (38)	MD998818	Installation of countershaft gear bearing, front output shaft bearing
	MD998368 Bearing Installer	General service tool	Installation of countershaft gear bearing
	MB991013 Special spanner	–	Removal and installation of rear output shaft jam nut
	MD998813 Installer-100	General service tool	Use with installer cap and installer adapter
	MD998814 Installer-200	MIT304180	Use with installer cap and installer adapter

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
	MD998829 Installer adapter (60)	MD998829-01	Installation of rear output shaft ball bearing
	MD998821 Installer adapter (44)	–	Installation of clutch hub for 2-4WD and H-L
	MD998820 Installer adapter (42)	MIT215013	Installation of rear output shaft bearing
	MD998917 Bearing remover	General service tool	Removal and installation of bearing
	MD998824 Installer adapter (50)	General service tool	Installation of rear output shaft bearing
	MD998830 Installer adapter (66)	–	Installation of transfer drive shaft bearing
	MD998192 Bearing Puller	General service tool	Installation of transfer drive shaft bearing

TRANSMISSION AND TRANSFER

DISASSEMBLY AND ASSEMBLY

M1233023300022



AKX00008AB

DISASSEMBLY STEPS

1. TRANSFER
2. HARNESS BRACKET
3. CABLE END BRACKET
4. HARNESS BRACKET
5. HARNESS BRACKET

>>A<< 6. TRANSFER CASE ADAPTER

7. TRANSMISSION

TSB Revision

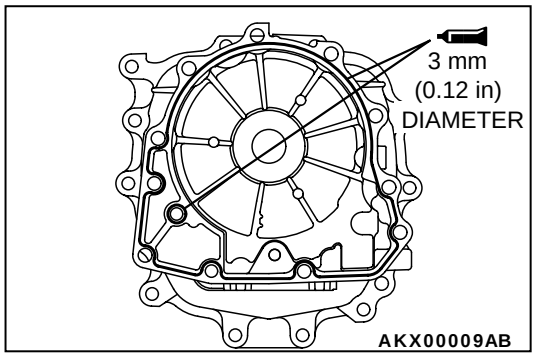
ASSEMBLY SERVICE POINT

>>A<< TRANSFER CASE ADAPTER INSTALLATION

⚠ CAUTION

Evenly squeeze out and apply the sealant so that it is not excessive and does not ooze out.

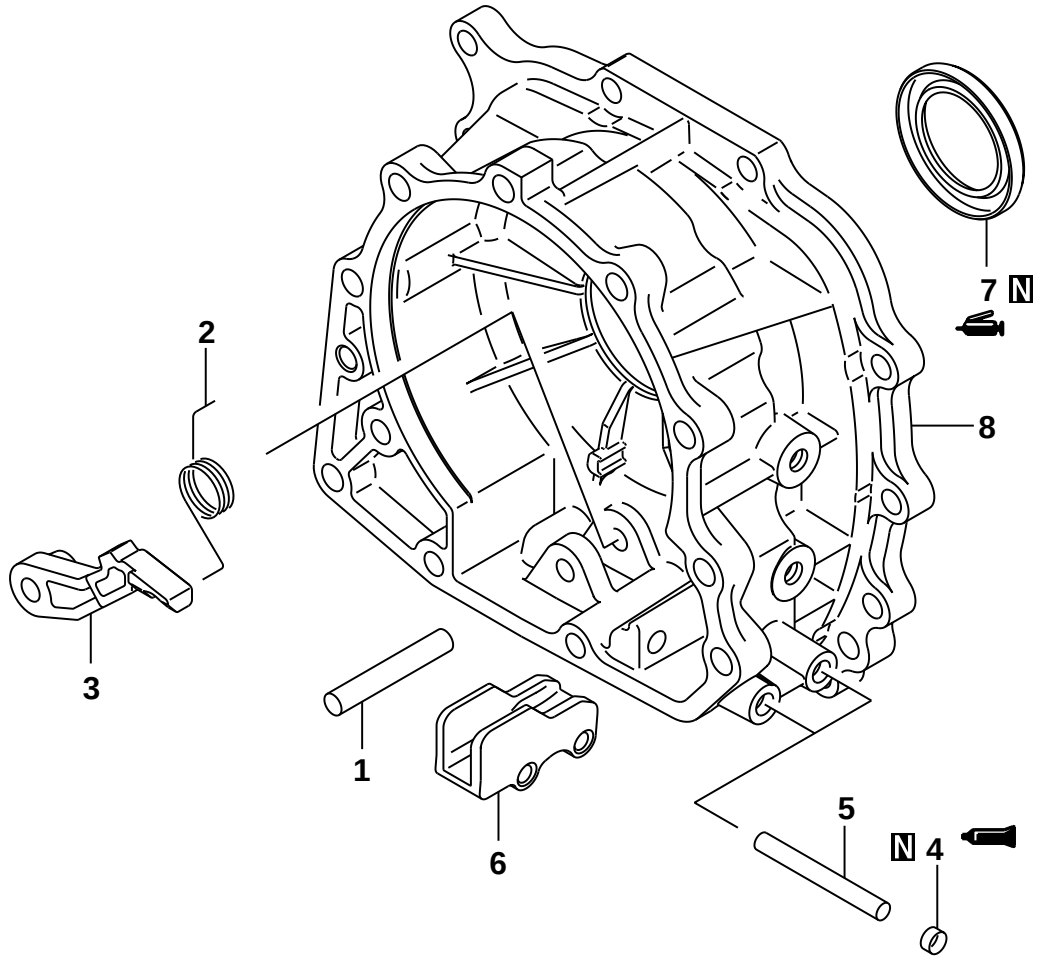
After squeezing out and applying the sealant (MITSUBISHI genuine sealant part number MR166584 or equivalent) on the transfer case adapter at the section indicated in the illustration, install onto the transmission case.



TRANSFER CASE ADAPTER

DISASSEMBLY AND ASSEMBLY

M1233007000021



AKX00014AB

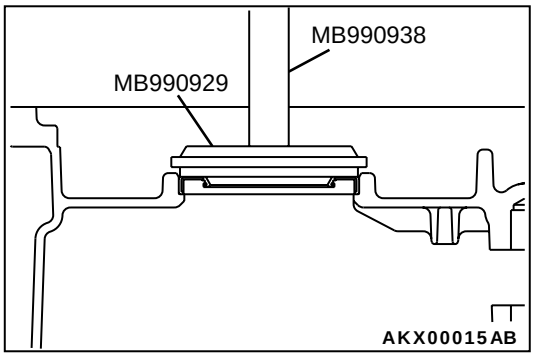
	DISASSEMBLY STEPS	
	1.	PARKING SPRAG SHAFT
>>C<<	2.	PARKING SPRAG SPRING
	3.	PARKING SPRAG
>>B<<	4.	SEALING CAP
	5.	PARKING ROLLER SUPPORT SHAFT
	6.	PARKING ROLLER SUPPORT
>>A<<	7.	OIL SEAL
	8.	EXTENSION HOUSING

Required Special Tools:

- MB990929: Installer Adapter
- MB990938: Handle

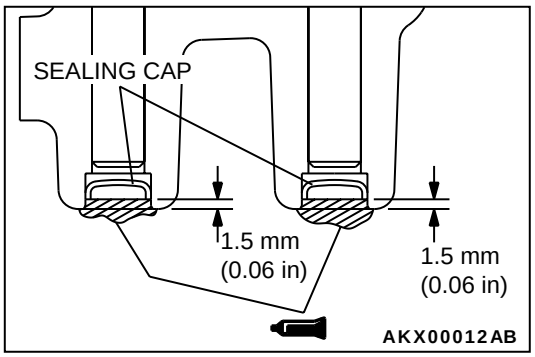
TSB Revision

ASSEMBLY SERVICE POINTS



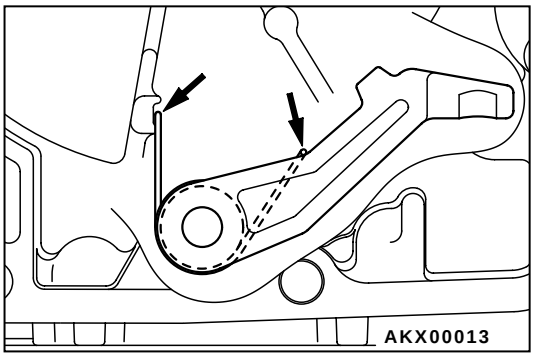
>>A<< OIL SEAL INSTALLATION

Use special tools MB990929 and MB990938 to install the oil seal.



>>B<< SEALING CAP INSTALLATION

1. Press into the dimensions shown in the illustration so that it is not slanted.
2. Apply the sealant (3M™ AAD part number 8672 or equivalent) as shown in the illustration.



>>C<< PARKING SPRAG SPRING INSTALLATION

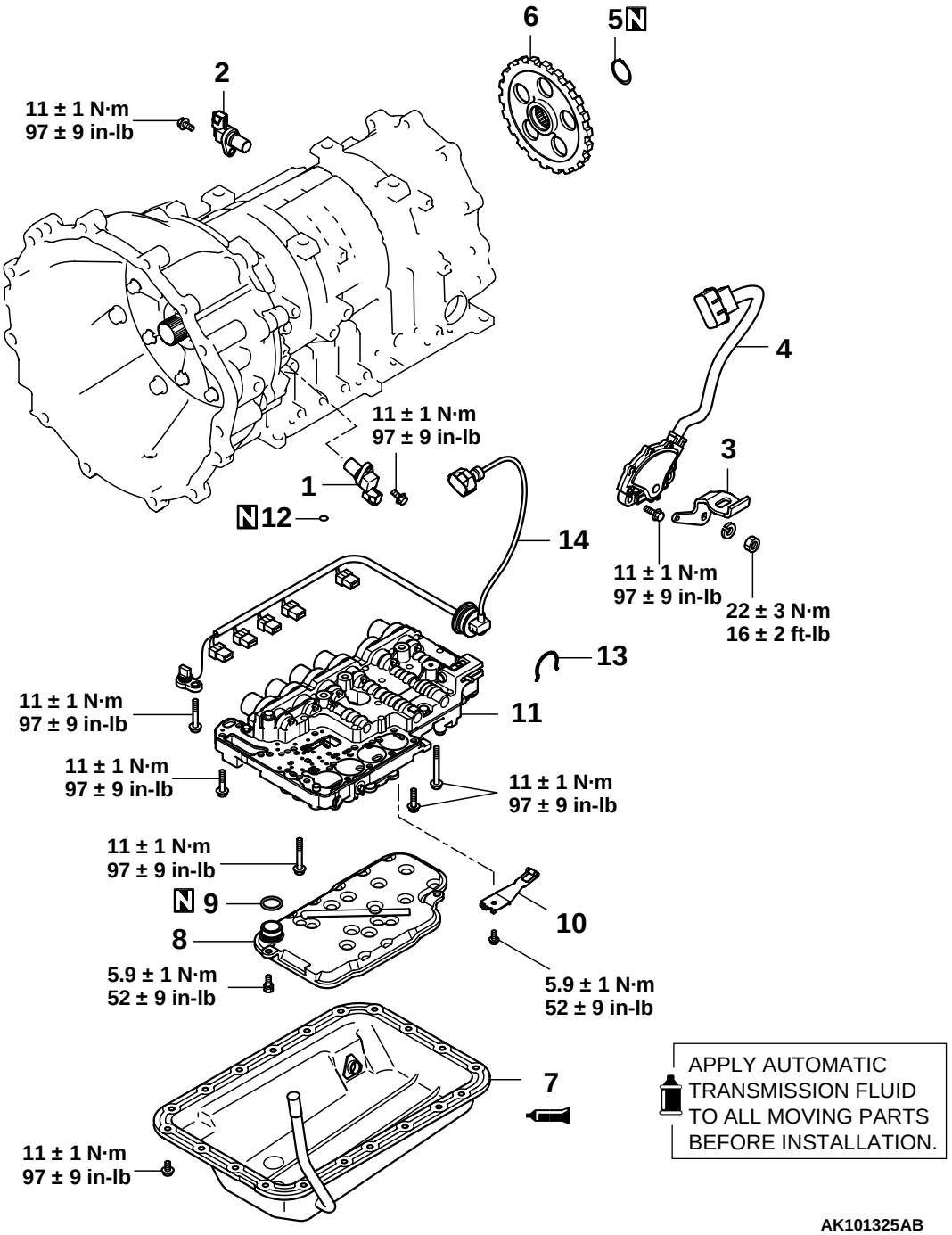
Attach the end of the spring to the position shown in the illustration.

TRANSMISSION

DISASSEMBLY AND ASSEMBLY

M1233008200158

<V4A51>



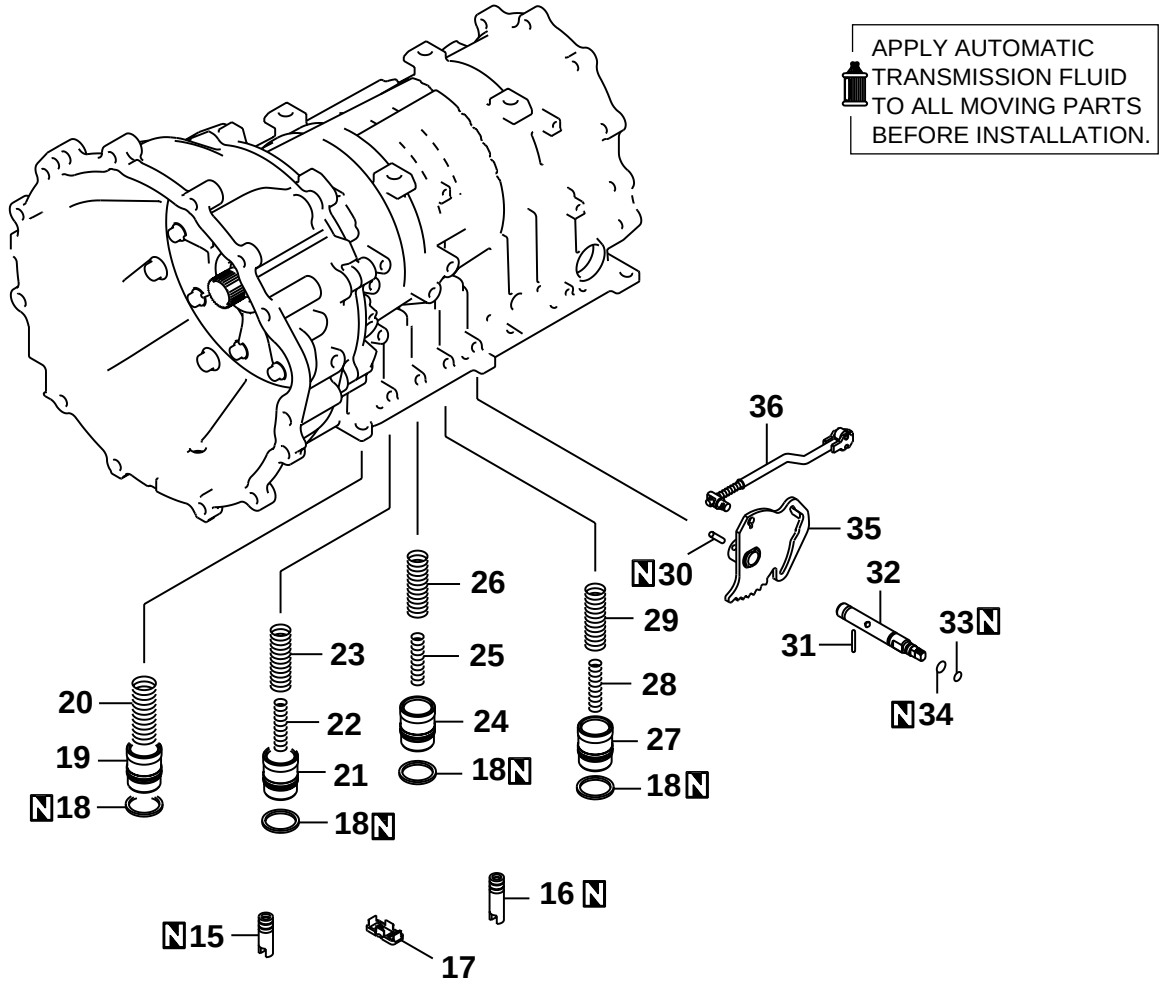
DISASSEMBLY STEPS

1. INPUT SHAFT SPEED SENSOR
2. OUTPUT SHAFT SPEED SENSOR
3. MANUAL CONTROL LEVER
4. PARK/NEUTRAL POSITION SWITCH
5. SNAP RING
6. PARKING GEAR

DISASSEMBLY STEPS

7. OIL PAN
8. OIL FILTER
9. O-RING
10. DETENT SPRING
11. VALVE BODY
12. O-RING
13 SNAP RING
14. SOLENOID VALVE HARNESS

TSB Revision



AKX00017 AC

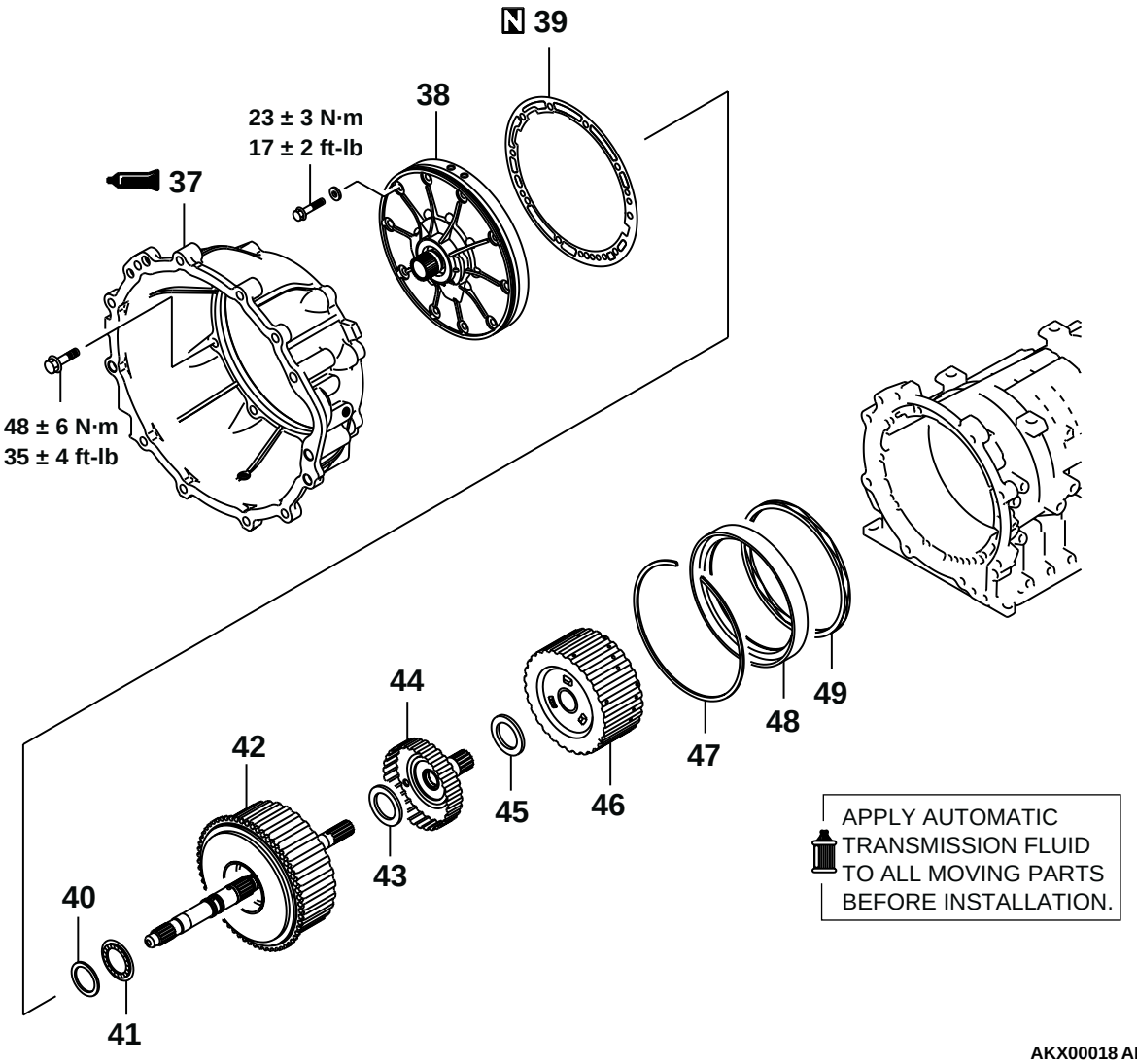
DISASSEMBLY STEPS

15. OIL SEAL
16. OIL SEAL
17. OIL STRAINER
18. SEAL RING
19. ACCUMULATOR PISTON (FOR OVERDRIVE CLUTCH)
20. ACCUMULATOR SPRING
21. ACCUMULATOR PISTON (FOR SECOND BRAKE)
22. INNER SPRING
23. OUTER SPRING
24. ACCUMULATOR PISTON (FOR LOW/REVERSE BRAKE)
25. INNER SPRING

DISASSEMBLY STEPS

26. OUTER SPRING
27. ACCUMULATOR PISTON (FOR UNDERDRIVE CLUTCH)
28. INNER SPRING
29. OUTER SPRING
30. SPRING PIN
31. PIN
32. MANUAL CONTROL SHAFT
33. O-RING
34. O-RING
35. DETENT LEVER
36. PARKING ROLLER ROD

TSB Revision



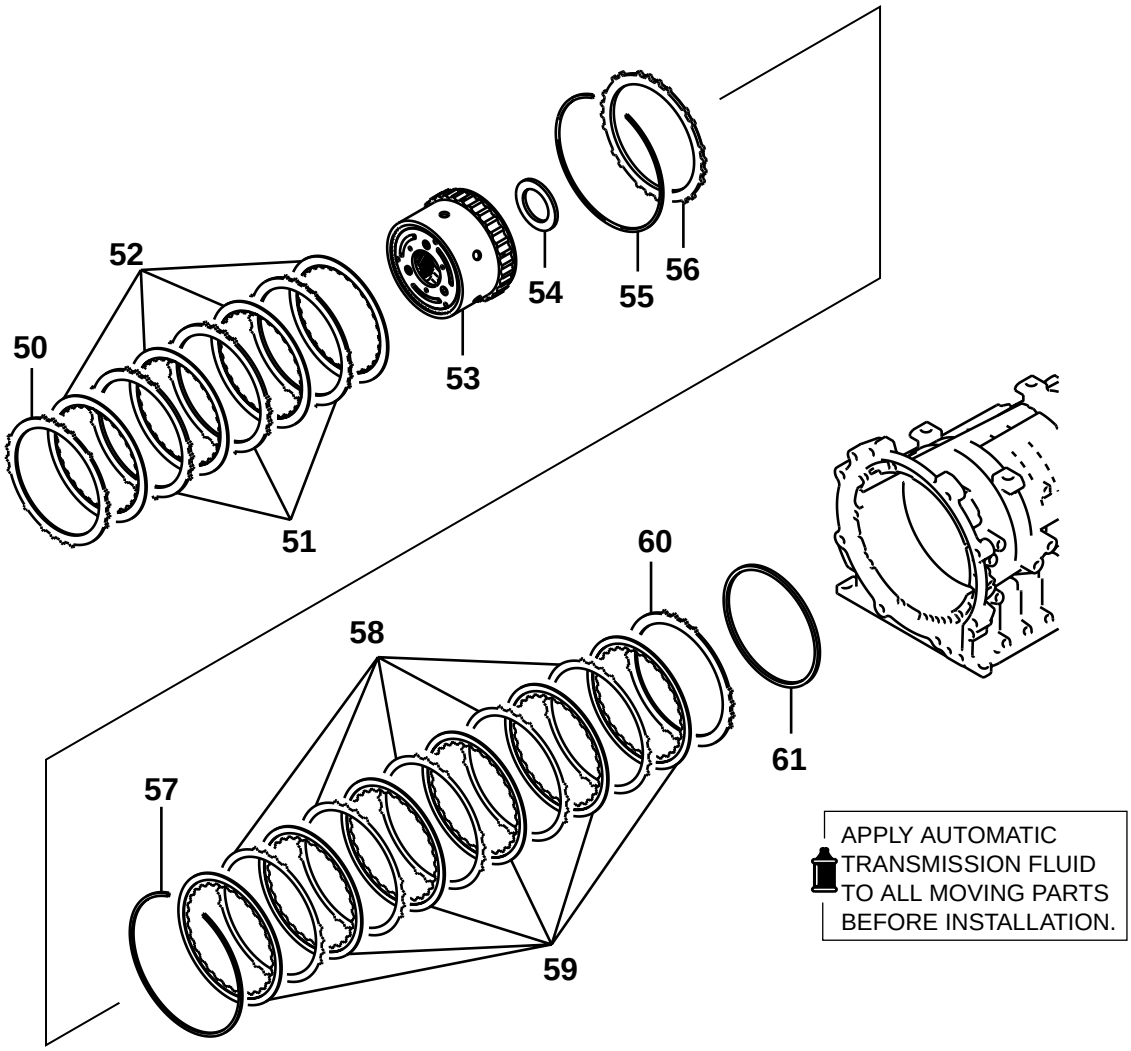
DISASSEMBLY STEPS

37. CONVERTER HOUSING
38. OIL PUMP
39. OIL PUMP GASKET
40. THRUST RACE NO.1
41. THRUST BEARING NO.2
42. REVERSE AND OVERDRIVE CLUTCH
43. THRUST BEARING NO.3

DISASSEMBLY STEPS

44. OVERDRIVE CLUTCH HUB
45. THRUST BEARING NO.4
46. REVERSE SUN GEAR
47. SNAP RING
48. SECOND BRAKE
49. RETURN SPRING

TSB Revision



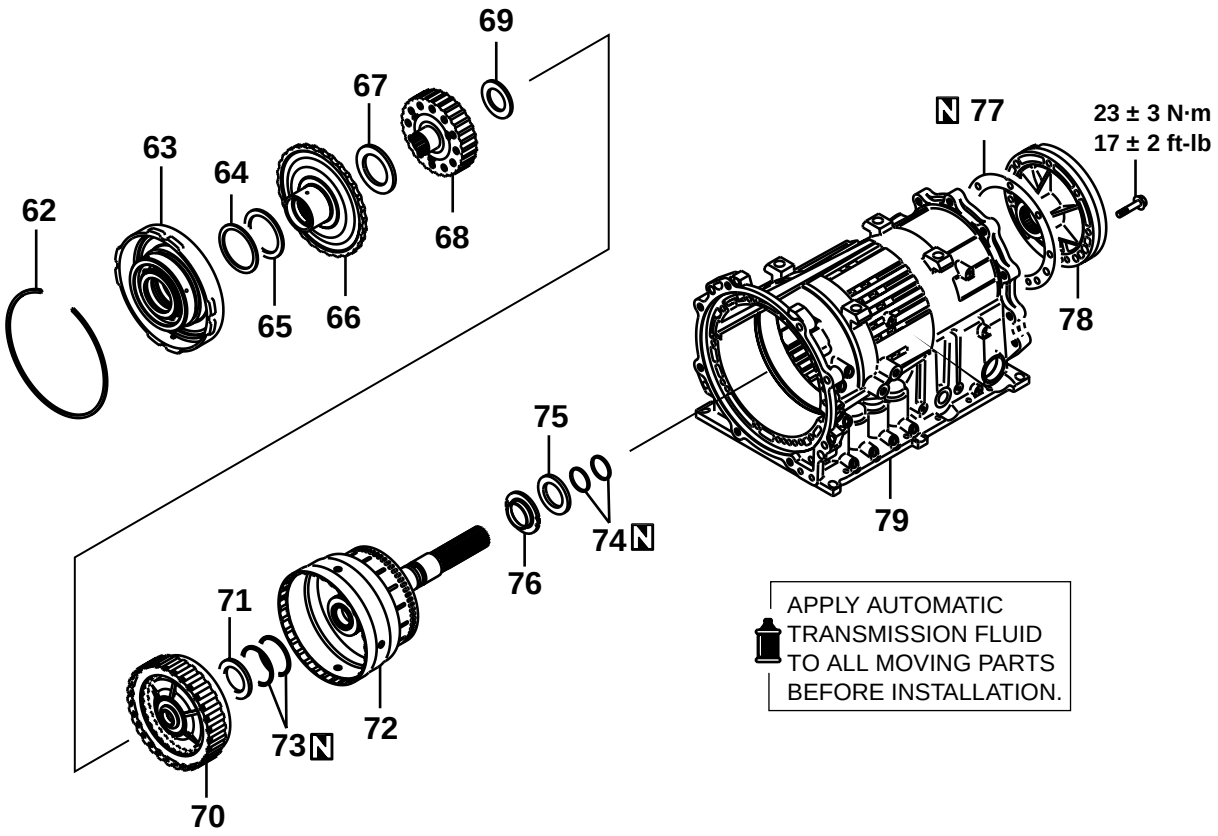
AKX00019AD

DISASSEMBLY STEPS

50. PRESSURE PLATE
51. BRAKE PLATE
52. BRAKE DISC
53. LOW/REVERSE ANNULUS GEAR
54. THRUST BEARING NO.7
55. SNAP RING

DISASSEMBLY STEPS

56. REACTION PLATE
57. SNAP RING
58. BRAKE PLATE
59. BRAKE DISC
60. PRESSURE PLATE
61. WAVE SPRING



AKX00020AC

DISASSEMBLY STEPS

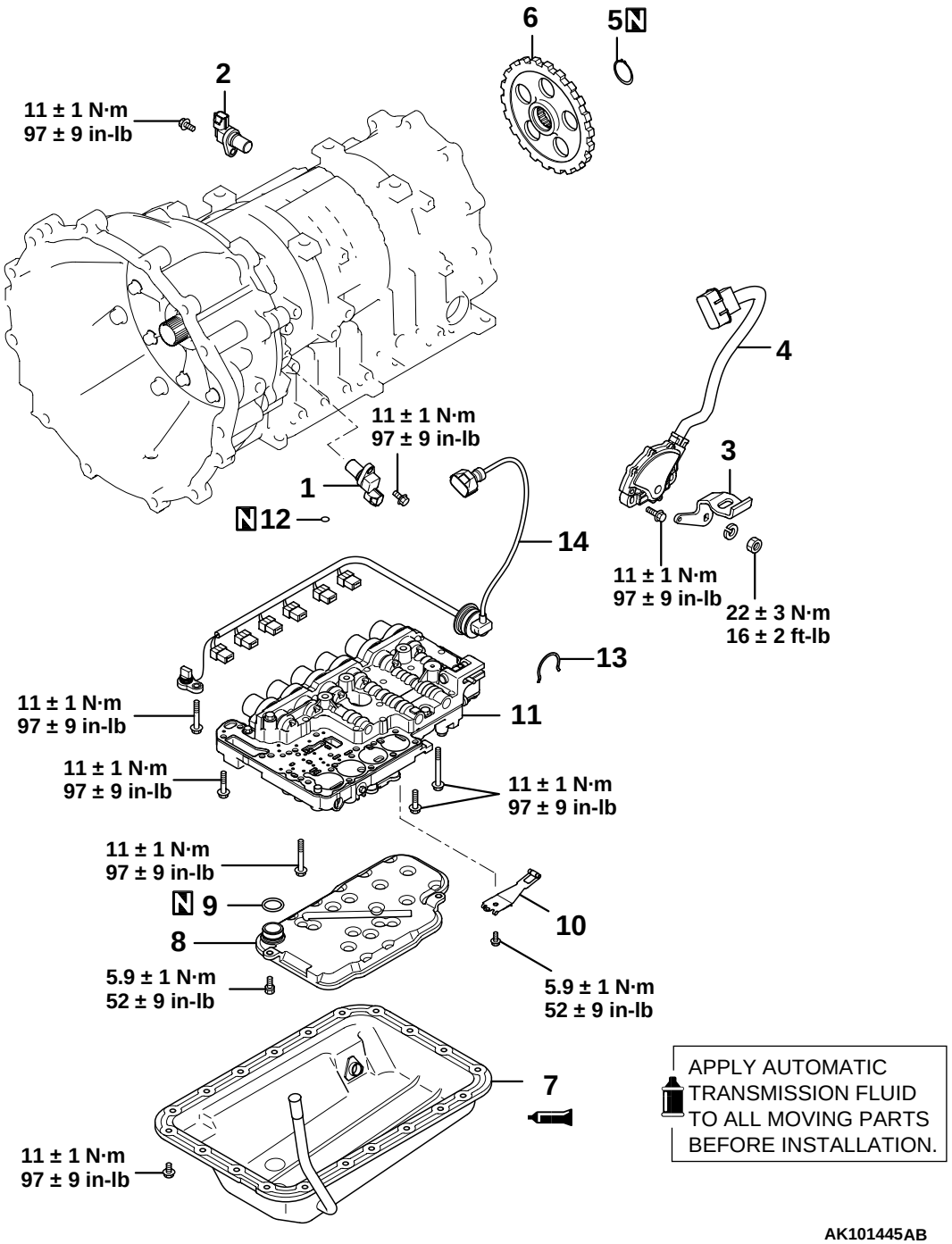
62. SNAP RING
63. CENTER SUPPORT
64. THRUST RACE NO.8
65. THRUST BEARING NO.9
66. OUTPUT FLANGE
67. THRUST BEARING NO.10
68. UNDERDRIVE CLUTCH HUB
69. THRUST BEARING NO.11
70. UNDERDRIVE CLUTCH
71. THRUST BEARING NO.12

DISASSEMBLY STEPS

72. OUTPUT SHAFT
73. SEAL RING
74. SEAL RING
75. THRUST BEARING NO.13
76. BEARING RETAINER
77. OUTPUT SHAFT SUPPORT
78. OUTPUT SHAFT SUPPORT GASKET
79. TRANSMISSION CASE

TSB Revision

<V5A51>



AK101445AB

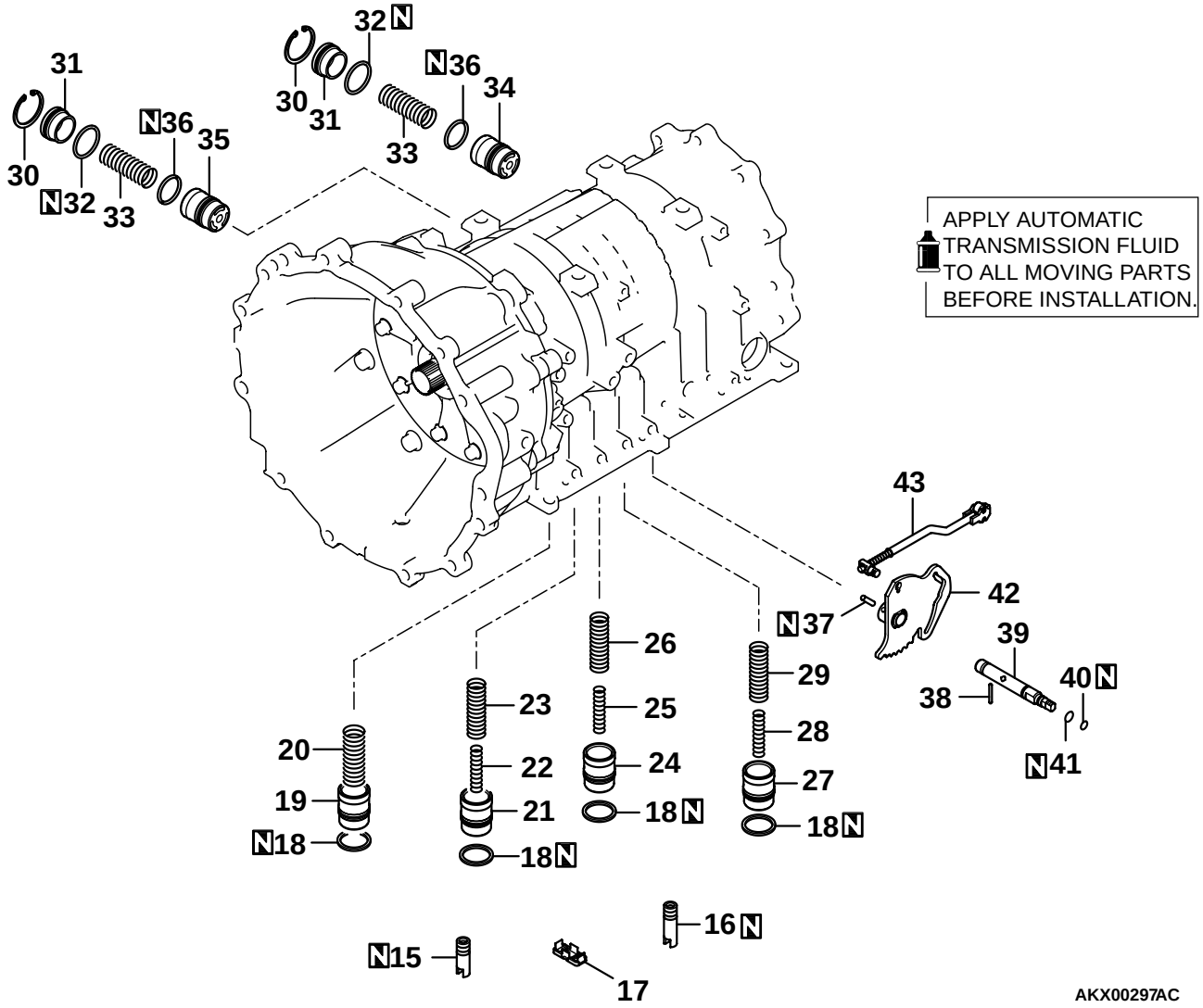
DISASSEMBLY STEPS

1. INPUT SHAFT SPEED SENSOR
2. OUTPUT SHAFT SPEED SENSOR
3. MANUAL CONTROL LEVER
4. PARK/NEUTRAL POSITION SWITCH
5. SNAP RING
6. PARKING GEAR

DISASSEMBLY STEPS

7. OIL PAN
8. OIL FILTER
9. O-RING
10. DETENT SPRING
11. VALVE BODY
12. O-RING
13 SNAP RING
14. SOLENOID VALVE HARNESS

TSB Revision



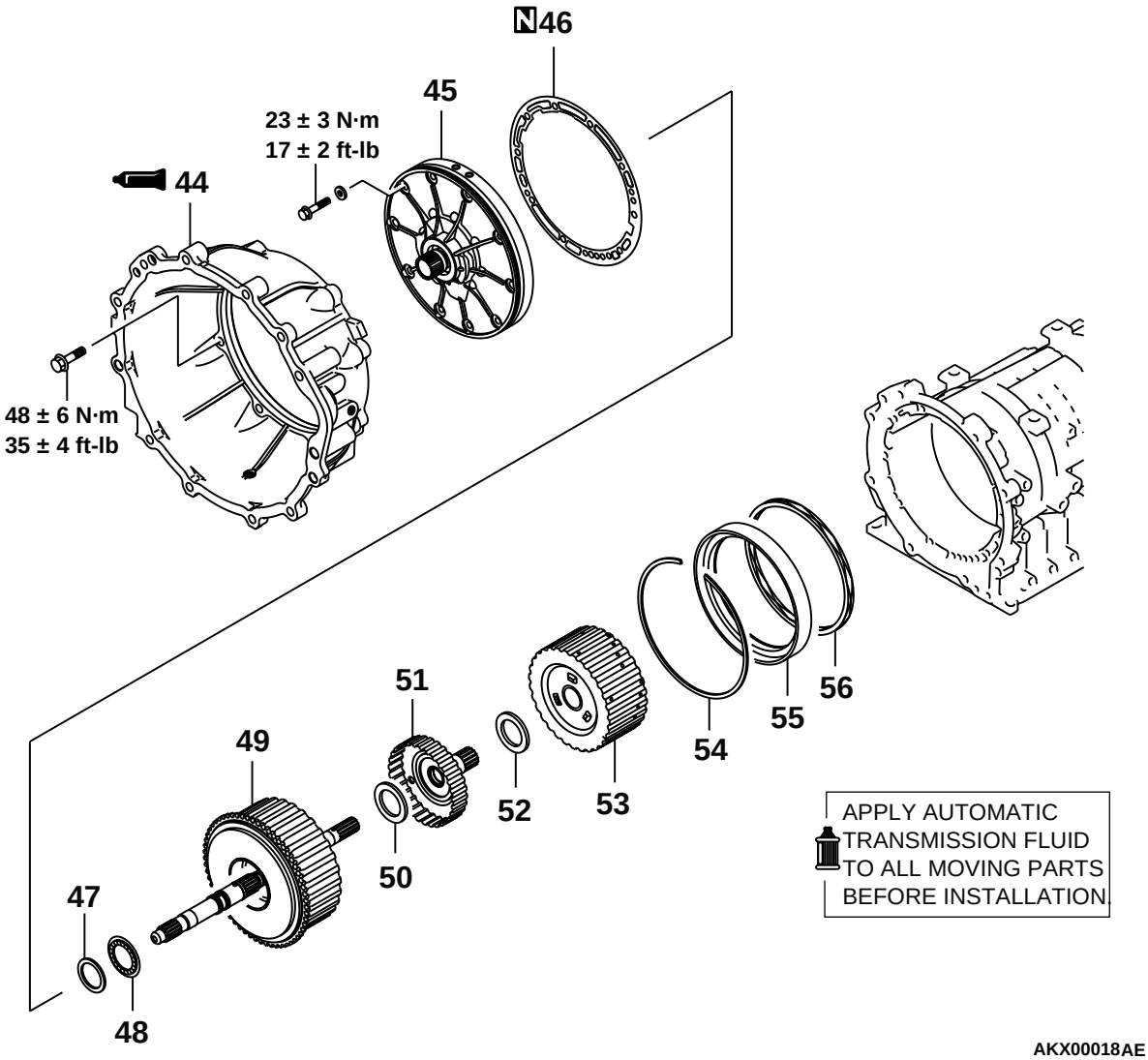
DISASSEMBLY STEPS

15. OIL SEAL
16. OIL SEAL
17. OIL STRAINER
18. SEAL RING
19. ACCUMULATOR PISTON (FOR OVERDRIVE CLUTCH)
20. ACCUMULATOR SPRING
21. ACCUMULATOR PISTON (FOR SECOND BRAKE)
22. INNER SPRING
23. OUTER SPRING
24. ACCUMULATOR PISTON (FOR LOW/REVERSE BRAKE)
25. INNER SPRING
26. OUTER SPRING
27. ACCUMULATOR PISTON (FOR UNDERDRIVE CLUTCH)
28. INNER SPRING

DISASSEMBLY STEPS

29. OUTER SPRING
30. SNAP RING
31. ACCUMULATOR COVER
32. O-RING
33. ACCUMULATOR SPRING
34. ACCUMULATOR PISTON (FOR REDUCTION BRAKE)
35. ACCUMULATOR PISTON (FOR DIRECT CLUTCH)
36. SEAL RING
37. SPRING PIN
38. PIN
39. MANUAL CONTROL SHAFT
40. O-RING
41. O-RING
42. DETENT LEVER
43. PARKING ROLLER ROD

TSB Revision



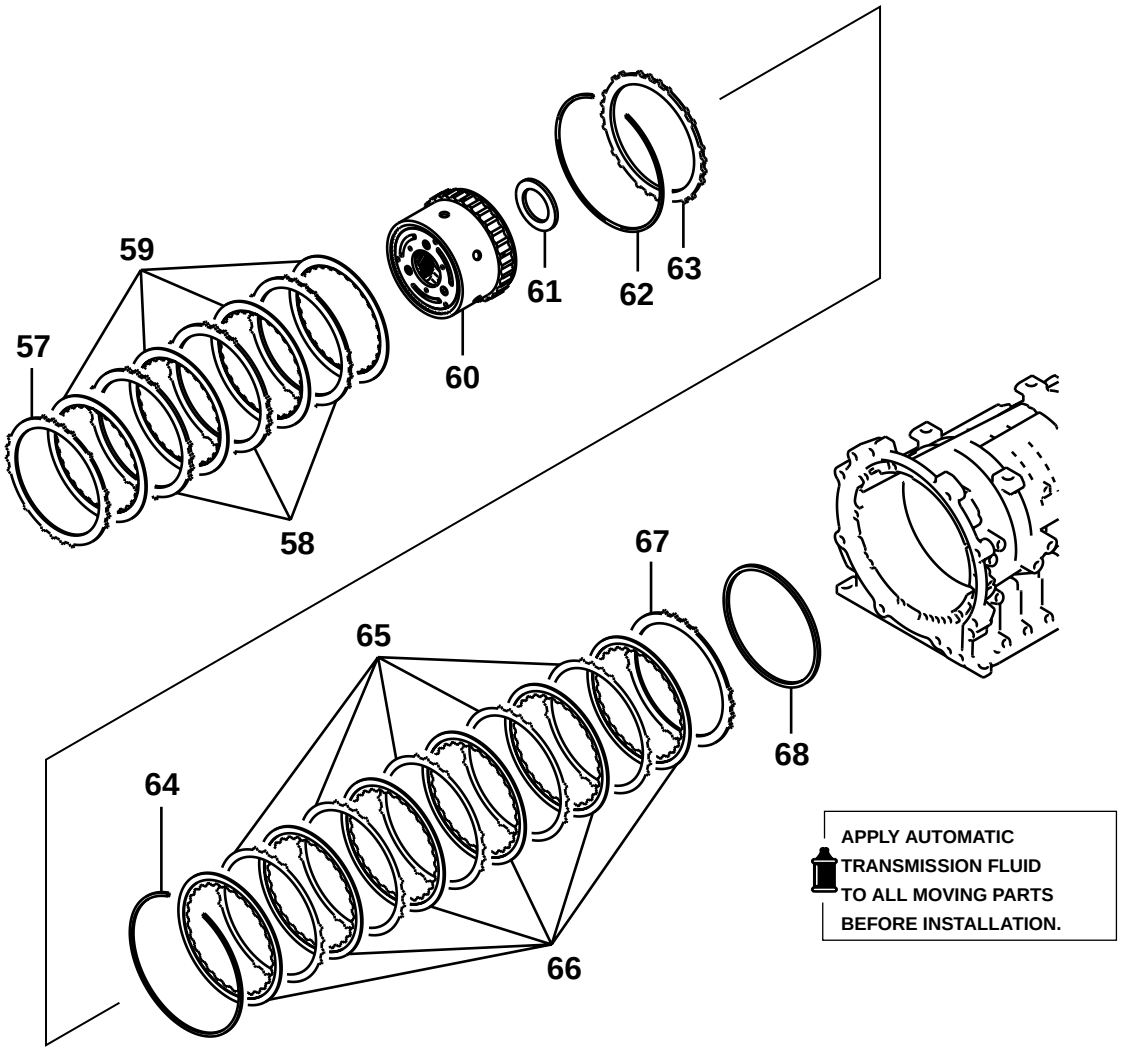
AKX00018AE

DISASSEMBLY STEPS

44. CONVERTER HOUSING
45. OIL PUMP
46. OIL PUMP GASKET
47. THRUST RACE NO.1
48. THRUST BEARING NO.2
49. REVERSE AND OVERDRIVE CLUTCH
50. THRUST BEARING NO.3

DISASSEMBLY STEPS

51. OVERDRIVE CLUTCH HUB
52. THRUST BEARING NO.4
53. REVERSE SUN GEAR
54. SNAP RING
55. SECOND BRAKE
56. RETURN SPRING



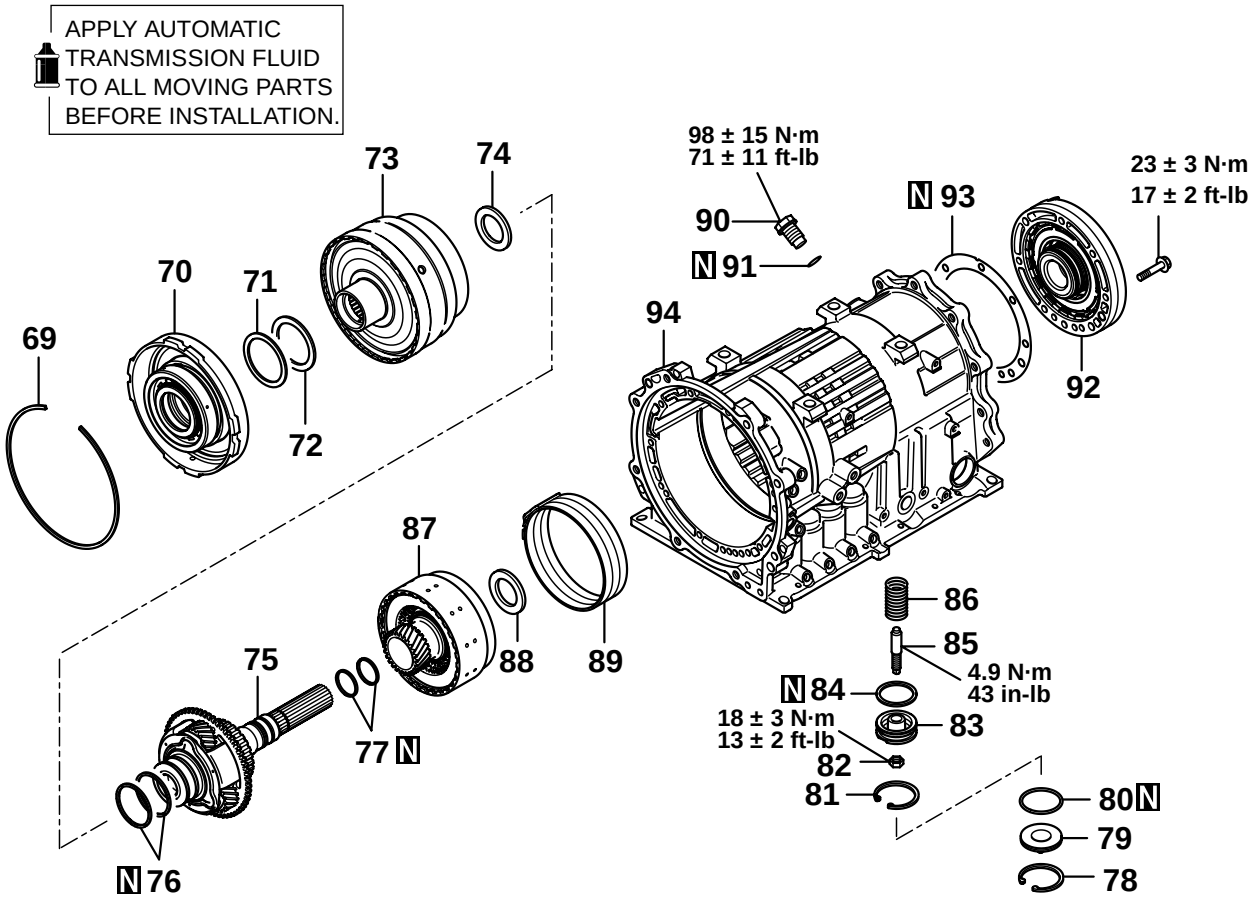
AKX00019AE

DISASSEMBLY STEPS

57. PRESSURE PLATE
58. BRAKE PLATE
59. BRAKE DISC
60. LOW/REVERSE ANNULUS GEAR
61. THRUST BEARING NO.7
62. SNAP RING

DISASSEMBLY STEPS

63. REACTION PLATE
64. SNAP RING
65. BRAKE PLATE
66. BRAKE DISC
67. PRESSURE PLATE
68. WAVE SPRING



AKX00298 AC

DISASSEMBLY STEPS

69. SNAP RING
70. CENTER SUPPORT
71. THRUST RACE NO.8
72. THRUST BEARING NO.9
73. DIRECT ANNULUS GEAR
74. THRUST BEARING NO.12
75. DIRECT PLANETARY CARRIER
76. SEAL RING
77. SEAL RING
78. SNAP RING
79. REDUCTION BRAKE COVER
80. O-RING
81. SNAP RING
82. REDUCTION BRAKE PISTON NUT

DISASSEMBLY STEPS

83. REDUCTION BRAKE PISTON
84. SEAL RING
85. REDUCTION BRAKE PISTON ADJUST ROD
86. REDUCTION BRAKE SPRING
87. DIRECT CLUTCH
88. THRUST BEARING NO.13
89. REDUCTION BRAKE BAND
90. ANCHOR PLUG
91. O-RING
92. OUTPUT SHAFT SUPPORT
93. OUTPUT SHAFT SUPPORT GASKET
94. TRANSMISSION CASE

Required Special Tools:

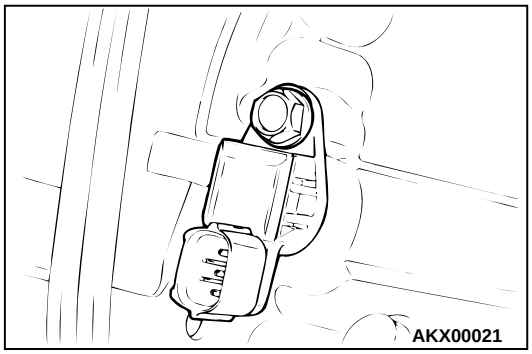
- MB991603: Bearing Installer Stopper
- MB991632: Clearance Dummy Plate
- MB991633: Reduction Brake Wrench Set
- MB991693: Reduction Brake Stopper
- MD998304: Oil Seal Installer
- MD998316: Dial Gauge Support
- MD998333: Oil Pump Remover
- MD998412: Guide
- MD998727: Oil Pan Remover
- MD998913: Dial Gauge Extension

TSB Revision

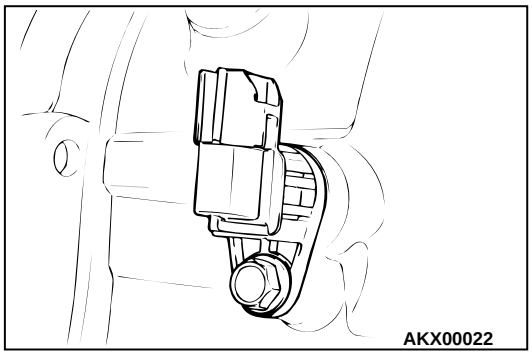
DISASSEMBLY

⚠ CAUTION

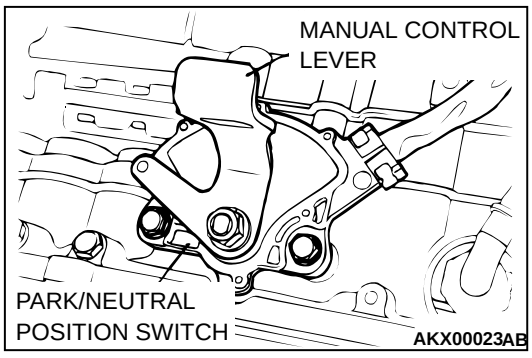
- **Because the automatic transmission is manufactured from high-precision parts, sufficient care must be taken not to scratch or damage these parts during disassembly and reassembly.**
- **During the work, always use bare hands or vinyl gloves. Do not use cotton gloves. Use nylon cloth or paper towels when necessary. Do not use shop towels.**
- **Parts which have been disassembled should be cleaned. Metal parts can be cleaned with normal detergent, but they should be dried completely using compressed air.**
- **Clutch discs, plastic thrust race and rubber parts should be cleaned with ATF automatic transmission fluid so that they do not become dirty.**
- **If the transmission body has been damaged, disassemble and clean the cooler system also.**



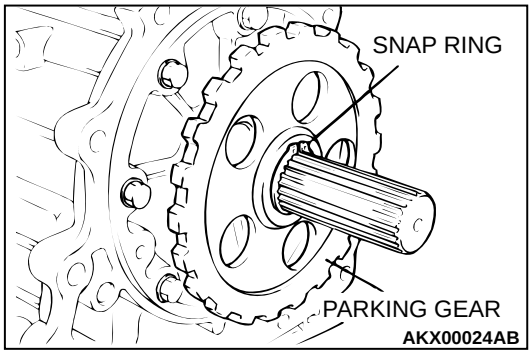
1. Remove the input shaft speed sensor.



2. Remove the output shaft speed sensor.

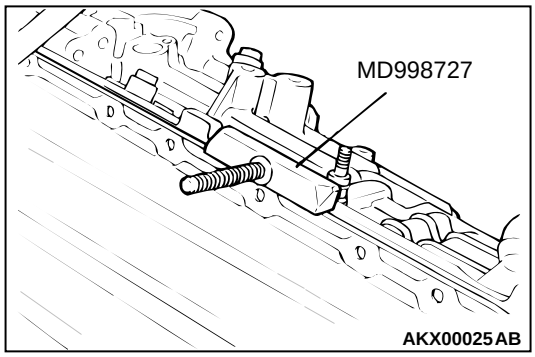


3. Remove the manual control lever, and then remove the park/neutral position switch.



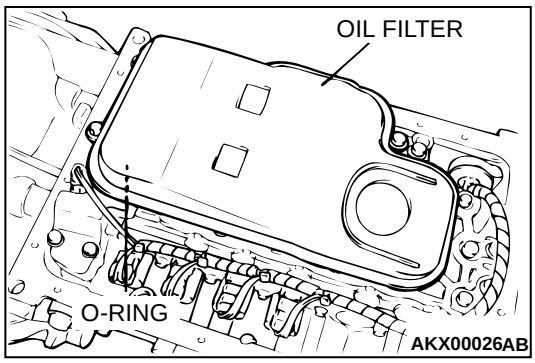
4. Remove the snap ring, and remove the parking gear using a puller [corresponding load approximately 9,800 N (2,200 pounds)].

   NOTE: Some parking gear may be removed without using a puller.

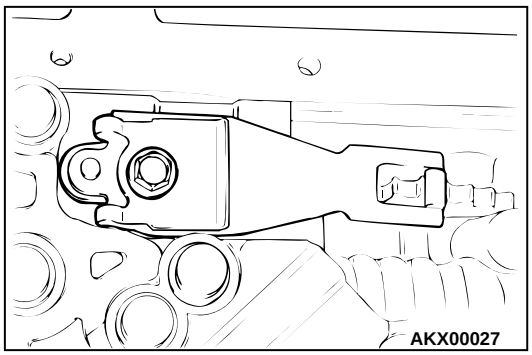


⚠ CAUTION
Carefully hammer the special tool so that the oil pan mounting surface is not damaged.

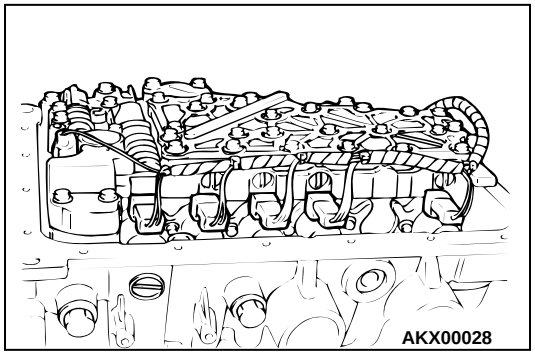
5. Remove the twenty oil pan mounting bolts and then using the special tool MD998727 to remove the oil pan.



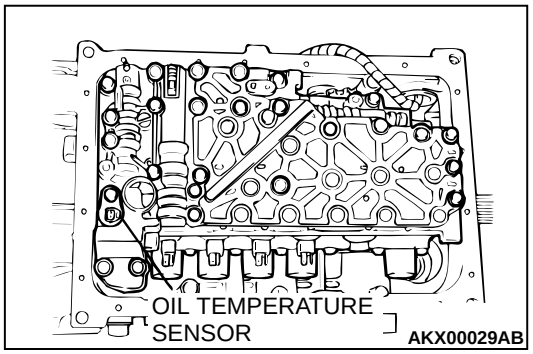
6. Remove the oil filter and O-ring.



7. Remove the detent spring.



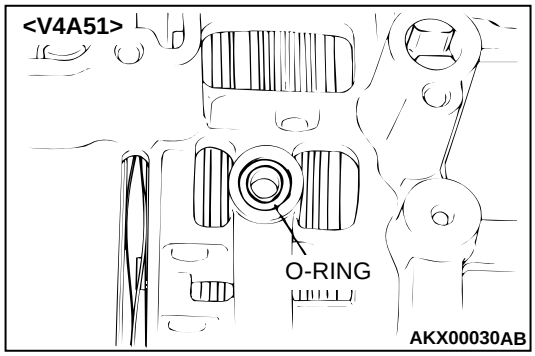
8. Disconnect the valve body harness connectors.

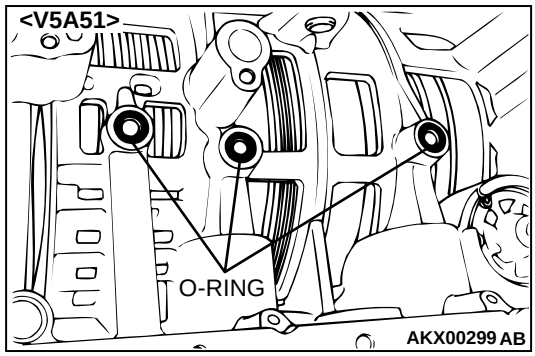


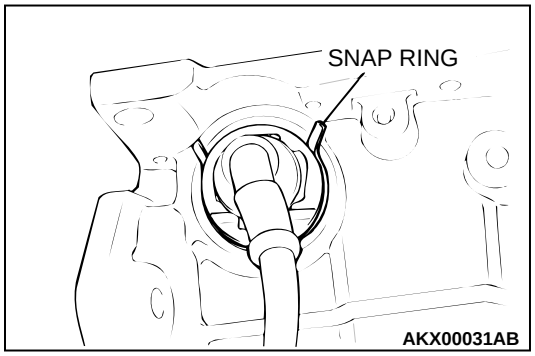
9. Remove the twenty valve body mounting bolts and then remove the valve body, O-ring and oil temperature sensor.

   NOTE: The twenty valve body mounting bolts are plated bolts.

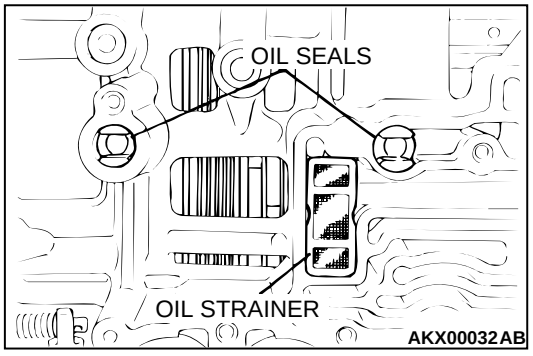
   NOTE: The O-ring is mounted on the transmission case side as shown in the illustration. However there may be cases when it will come off with the valve body.



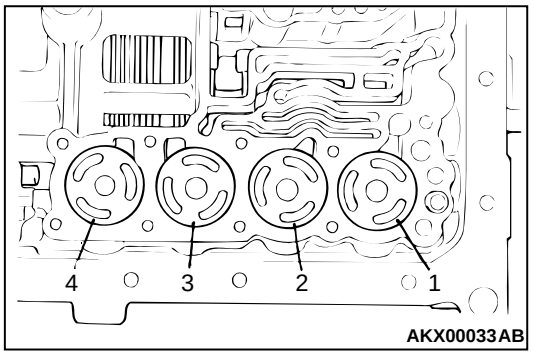




10. Remove the snap ring and disconnect the solenoid valve harness.



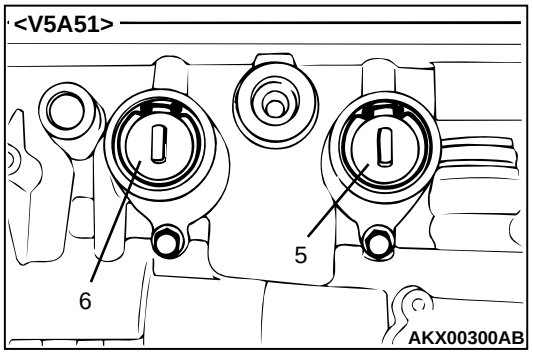
11. Remove the oil strainer and two oil seals.



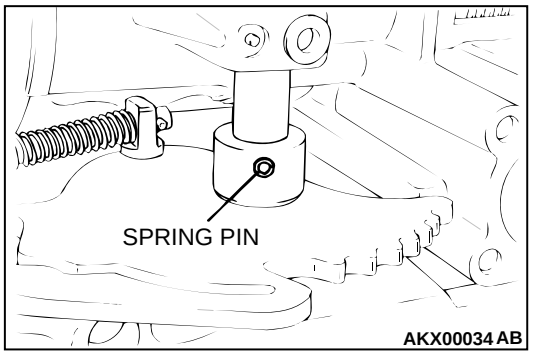
12.Remover each accumulator piston, seal ring, spring, snap ring <V5A51>, accumulator cover <V5A51>, O-ring <V5A51>.

NO.	NAME
1	FOR OVERDRIVE CLUTCH
2	FOR SECOND BRAKE
3	FOR LOW/REVERSE BRAKE
4	FOR UNDERDRIVE CLUTCH
5	FOR REDUCTION BRAKE <V5A51>
6	FOR DIRECT CLUTCH <V5A51>

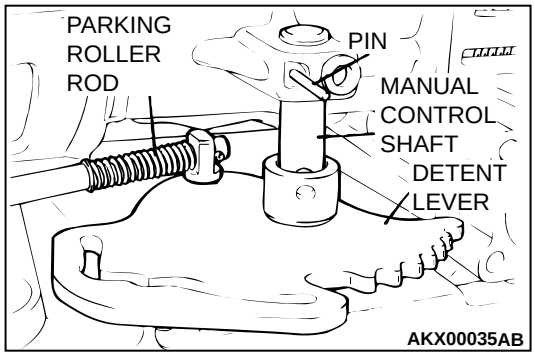
NOTE: To make assembly easier, attach an identification tag on the removed accumulator piston.



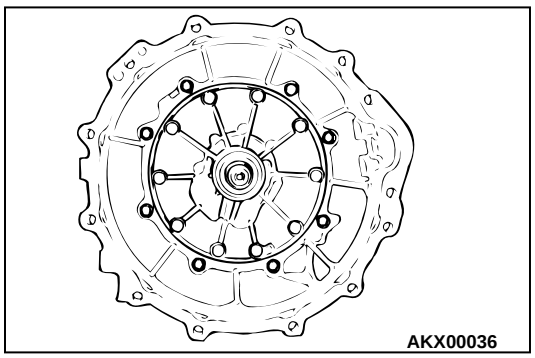
13.Remove the detent lever spring pin.

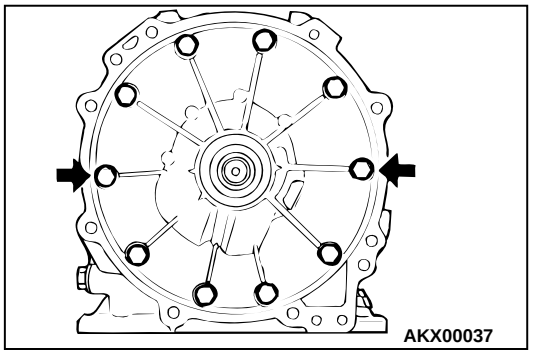


14.Remove the pin, and then remove the manual control shaft, two O-rings, detent lever and parking roller rod.

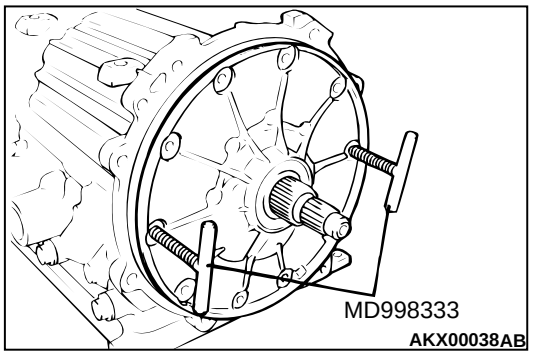


15.Remove the eight converter housing mounting bolts, and then the converter housing.

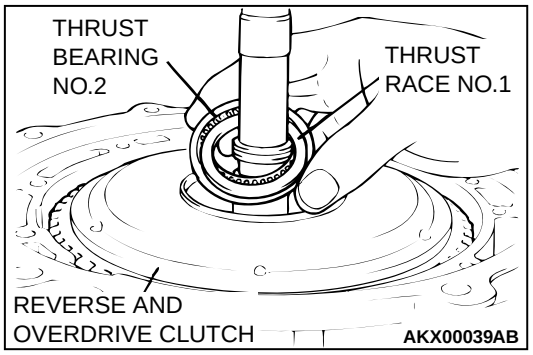




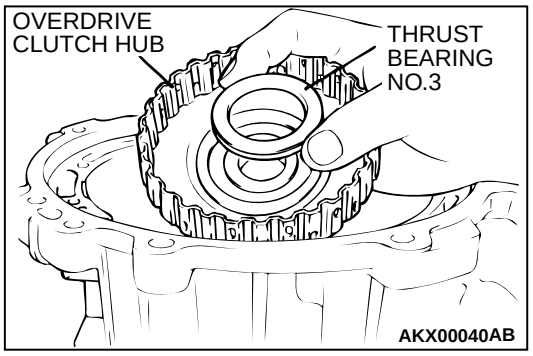
16.Remove the ten oil pump mounting bolts.
17.Install special tool MD998333 into the bolt hole shown in the illustration.



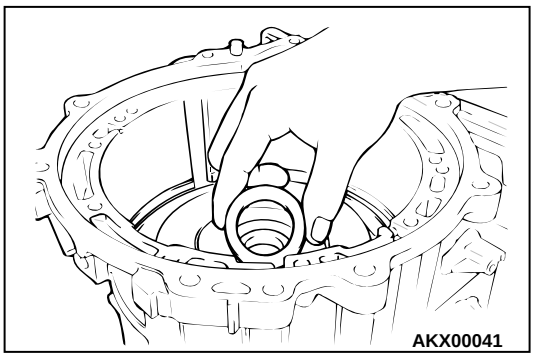
18.While screwing in special tool MD998333 evenly, remove the oil pump.
19.Remove the oil pump gasket.



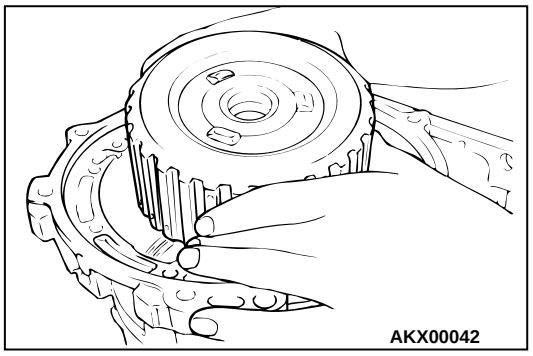
20.Remove the reverse and overdrive clutch, thrust race number 1 and thrust bearing number 2.
NOTE: The thrust race number 1 may be attached to the oil pump.



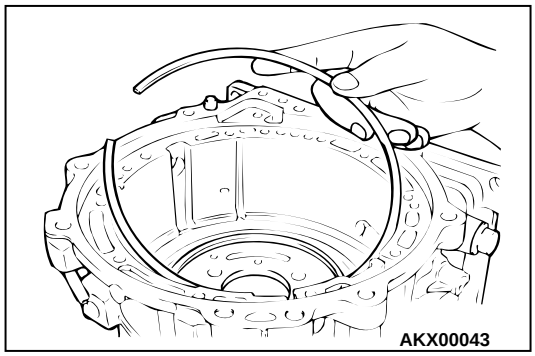
21.Remove the overdrive clutch hub and thrust bearing number 3.



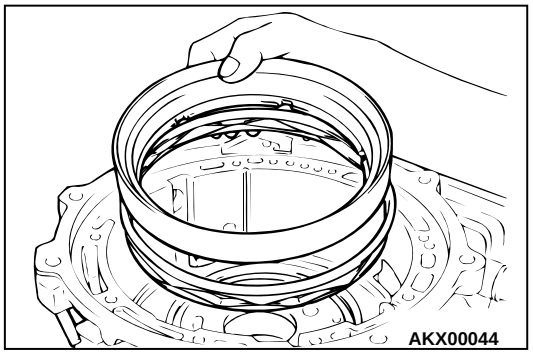
22.Remove the thrust bearing number 4.
NOTE: The thrust bearing number 4 may be attached to the overdrive clutch hub.


AKX00042

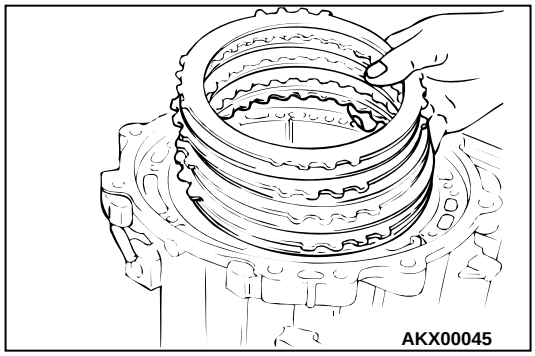
23.Remove the reverse sun gear.


AKX00043

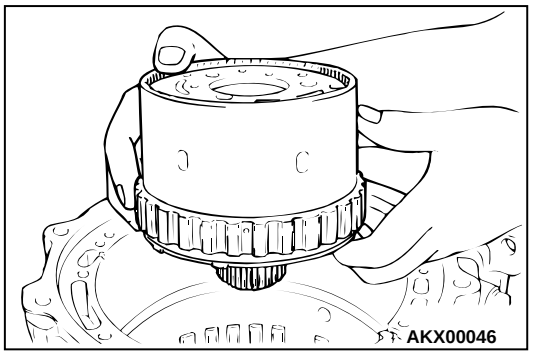
24.Remove the snap ring.


AKX00044

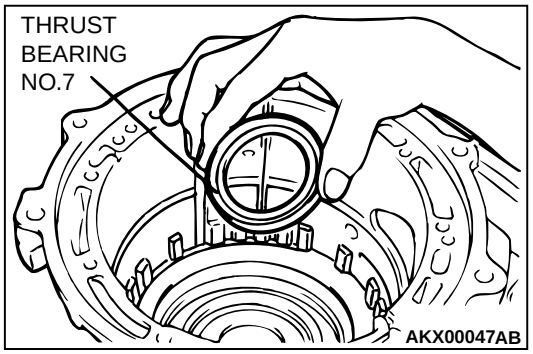
25.Remove the second brake and return spring.


AKX00045

26.Remove the pressure plate, brake plate and brake disc.

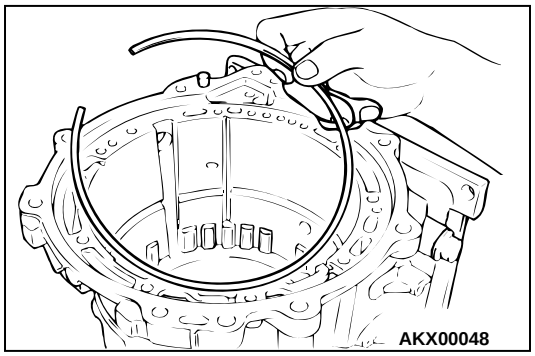

AKX00046

27.Remove the low/reverse annulus gear.

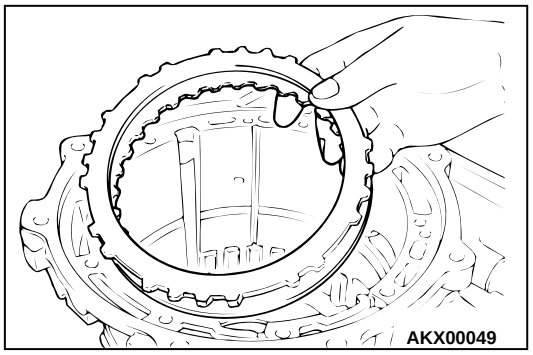


28.Remove the thrust bearing number 7.

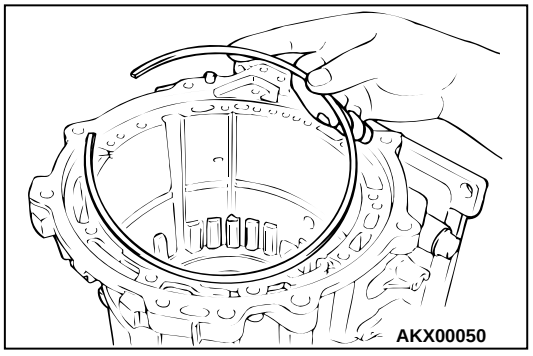
NOTE: The thrust bearing number 7 may be attached to the low/reverse annulus gear.



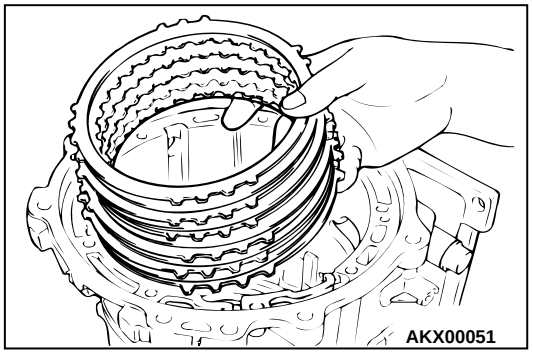
29.Remove the snap ring.



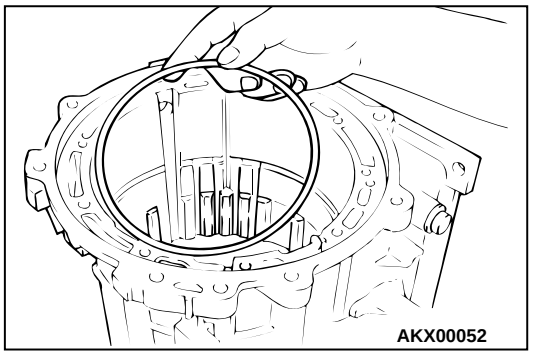
30.Remove the reaction plate and one brake disc.



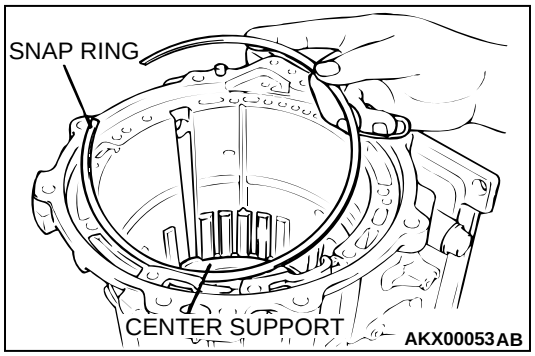
31.Remove the snap ring.



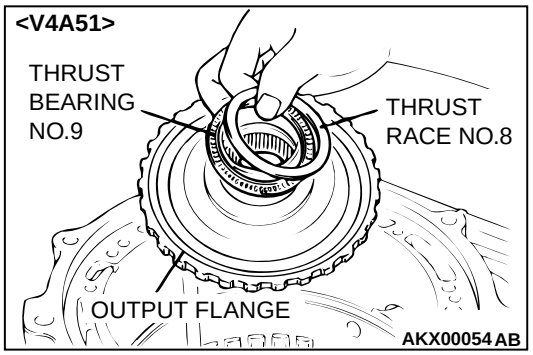
32.Remove the brake plate, brake disc, and pressure plate.



33.Remove the wave spring.

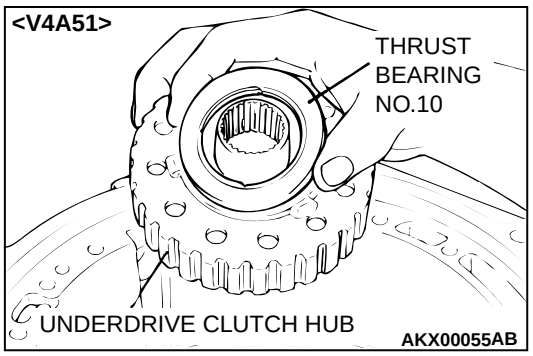


34.Remove the snap ring and center support.

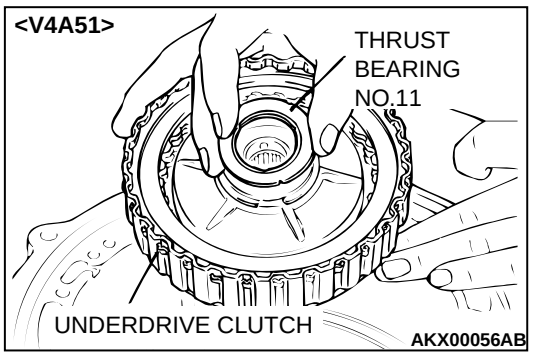


35.Remove the thrust race number 8, thrust bearing number 9 and output flange. <V4A51>

NOTE: The thrust race number 8 may be attached to the center support.

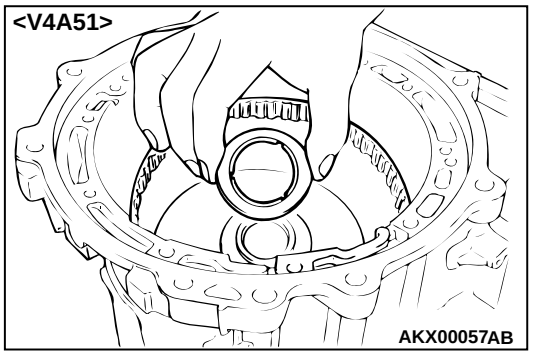


36.Remove the thrust bearing number 10 and underdrive clutch hub. <V4A51>



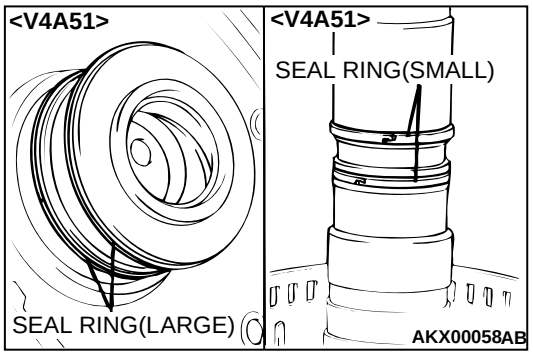
37.Remove the thrust bearing number 11 and underdrive clutch. <V4A51>

NOTE: The thrust bearing number 11 may be attached to the underdrive clutch hub.

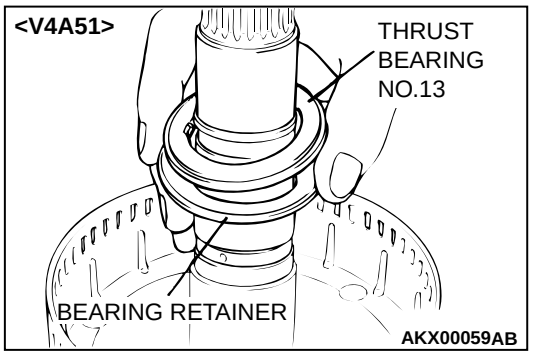


38.Remove the thrust bearing number 12 and output shaft. <V4A51>

NOTE: The thrust bearing number 12 may be attached to the underdrive clutch.

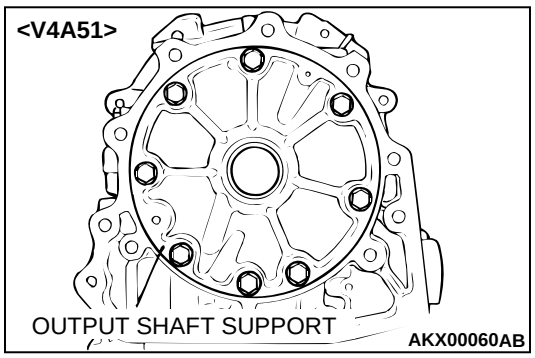


39.Remove the two large and two small seal rings from the output shaft. <V4A51>

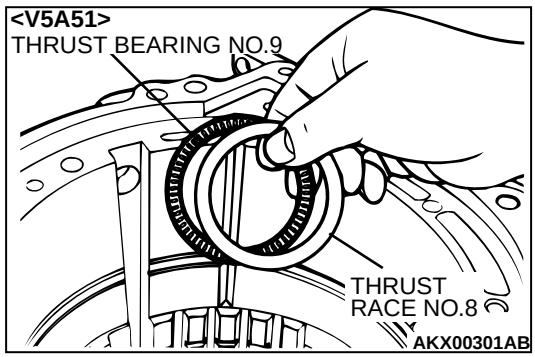


40.Remove the thrust bearing number 13 and bearing retainer. <V4A51>

NOTE: The thrust bearing number 13 may be attached to the output shaft support.

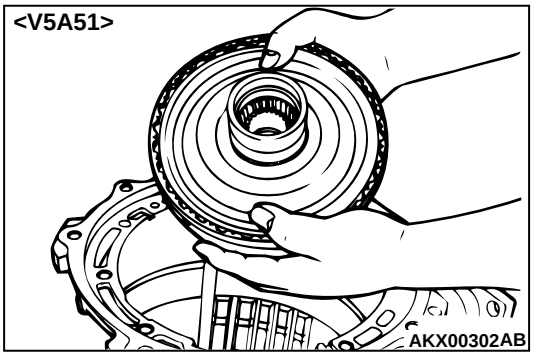


41.Remove the eight output shaft support mounting bolts, and then remove the output shaft support and gasket. <V4A51>

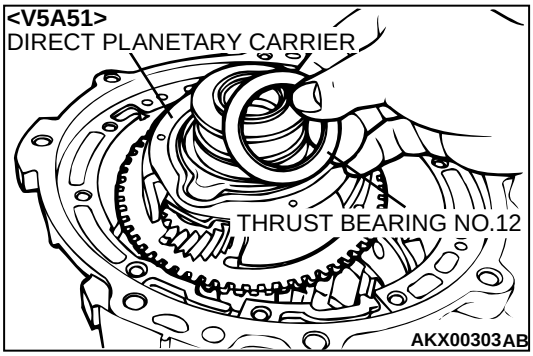


42.Remove the thrust race number 8 and thrust bearing number 9. <V5A51>

NOTE: The thrust race number 8 may be attached to the center support.

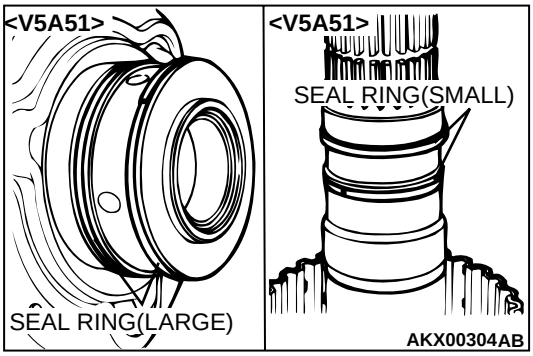


43.Remove the direct annulus gear. <V5A51>

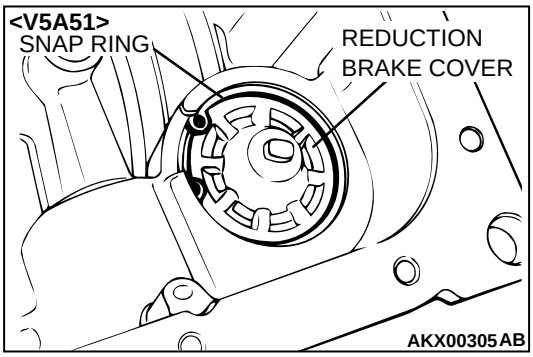


44.Remove the thrust bearing number 12 and direct planetary carrier. <V5A51>

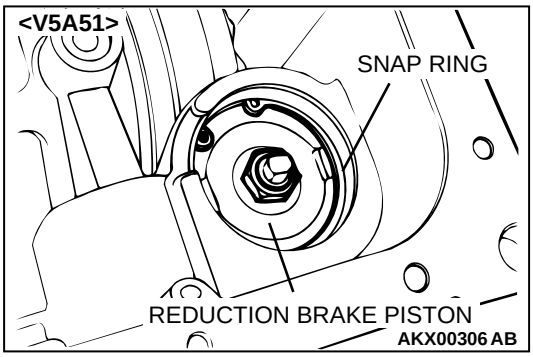
NOTE: The thrust bearing number 12 may be attached to the direct annulus gear.



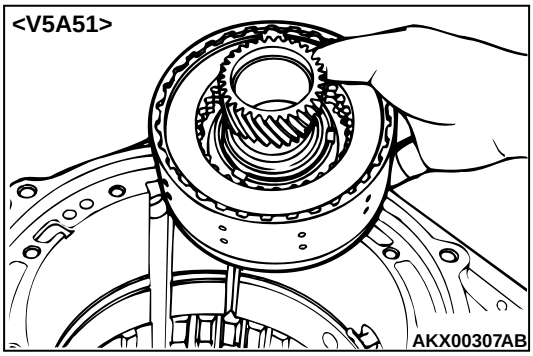
45.Remove the two large and two small seal rings from the direct planetary carrier. <V5A51>



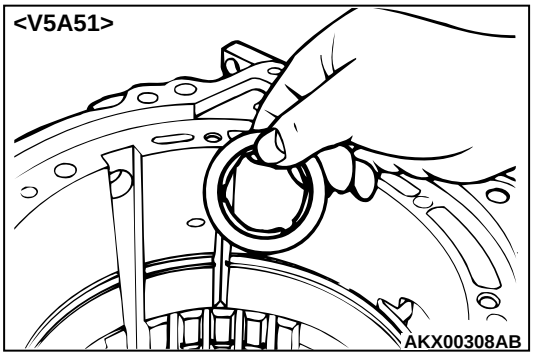
46.Remove the snap ring and then the reduction brake piston cover and O-ring. <V5A51>



47.Remove the snap ring and then the nut, reduction brake piston, seal ring. Adjust rod and spring. <V5A51>

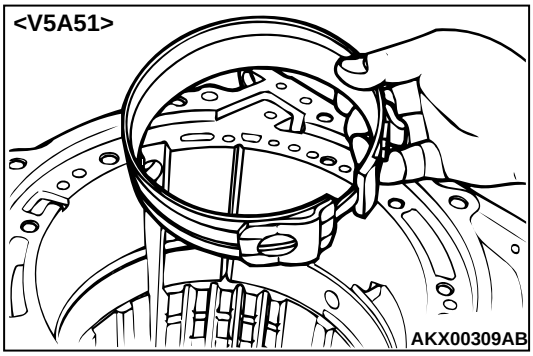


48.Remove the direct clutch. <V5A51>

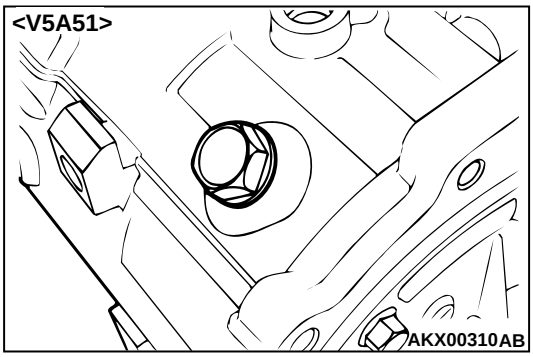


49.Remove the thrust bearing number 13. <V5A51>

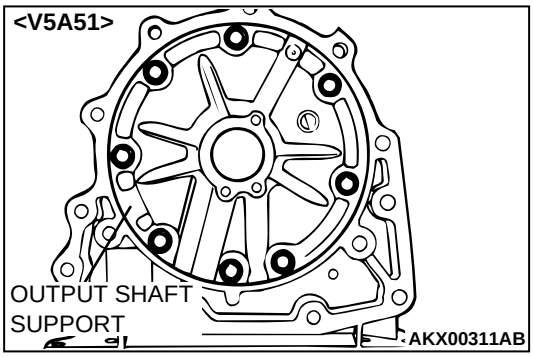
NOTE: The thrust bearing number 13 may be attached to the direct clutch.



50.Remove the reduction brake band. <V5A51>



51.Remove the anchor plug and the O-ring. <V5A51>



52.Remove the eight output shaft support mounting bolts, and then remove the output shaft support and gasket. <V5A51>

ASSEMBLY

⚠ CAUTION

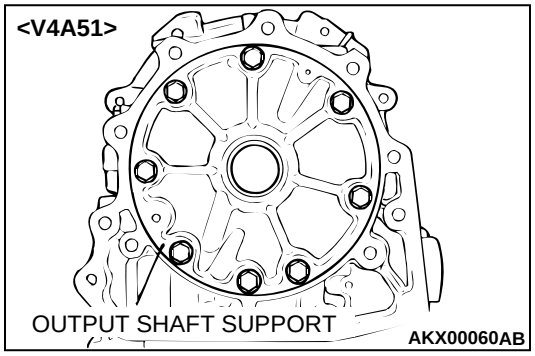
- **Never reuse the gasket, O-rings, oil seals, etc. Always replace with new ones when assembling.**
- **Never use grease other than blue petroleum jelly and white Vaseline.**
- **Apply ATF to friction components, rotating parts, and sliding parts before installation. Immerse a new clutch disc or brake disc in ATF for at least two hours before assembling them.**
- **Never apply sealant or adhesive to gaskets.**
- **When replacing a bushing, replace the assembly which it belongs to.**
- **During the work, always use bare hands or vinyl gloves. Do not use cotton gloves. Use nylon cloth or paper towels when necessary. Do not use shop towels.**
- **Change the oil in the cooler system.**

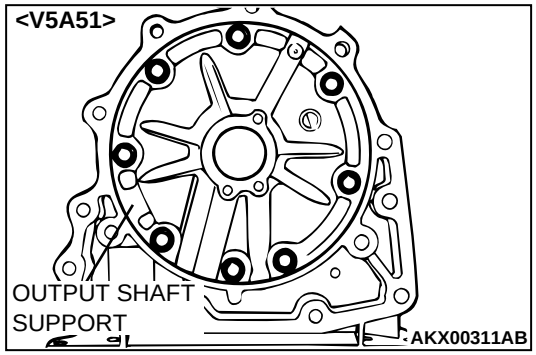
⚠ CAUTION

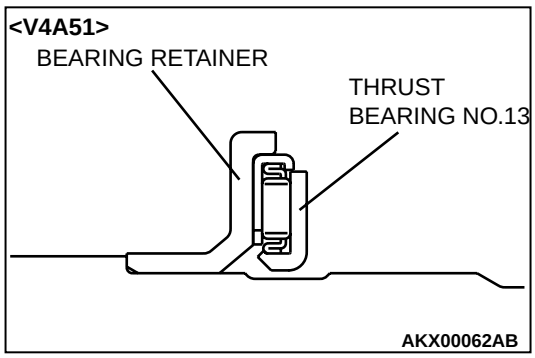
Never reuse a gasket.

1. Install a new gasket and output shaft support.
2. Tighten the eight output shaft support mounting bolts to the specified torque.

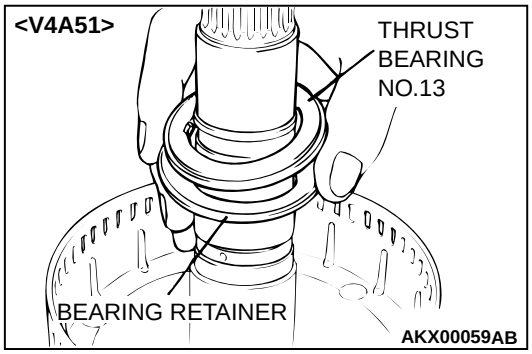
   Specified torque: 23 ± 3 N·m (17 ± 2 ft-lb)







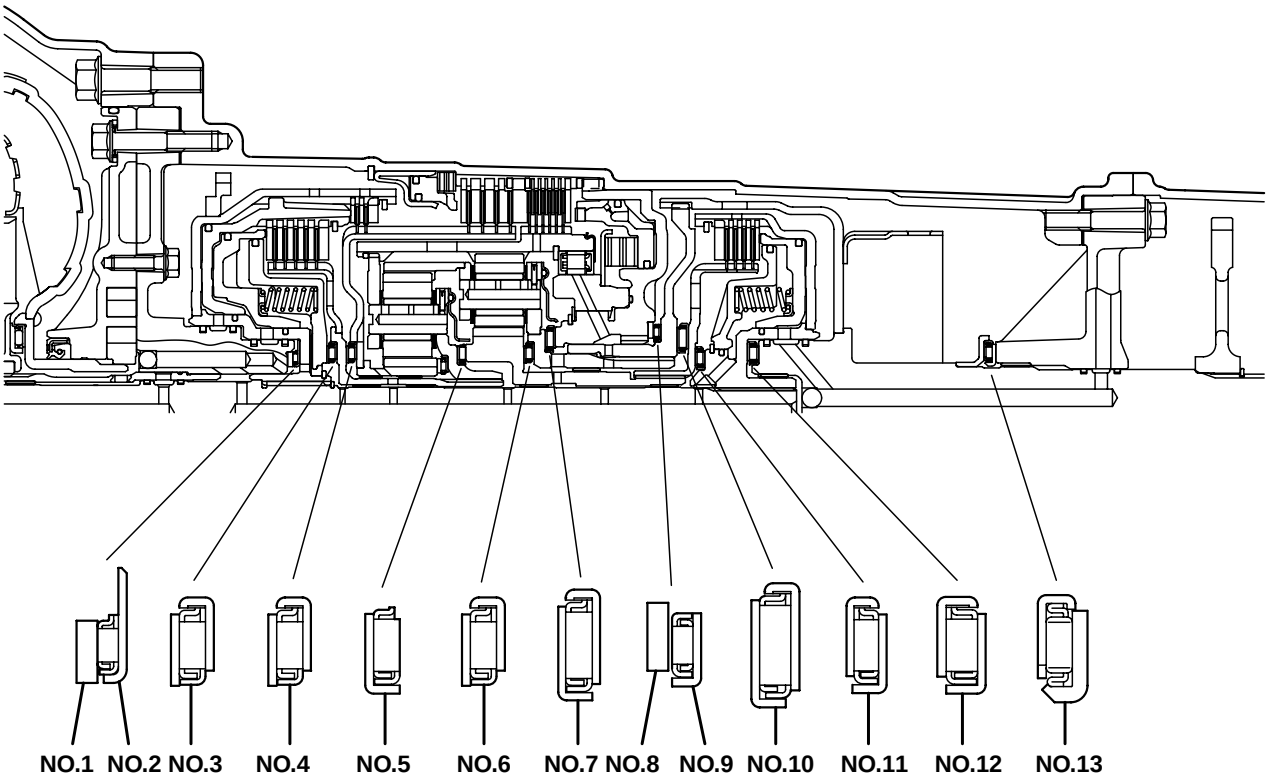
⚠ CAUTION
Make sure the thrust bearing is mounted in the correct direction.



3. Install the bearing retainer and thrust bearing number 13 onto the output shaft. <V4A51>

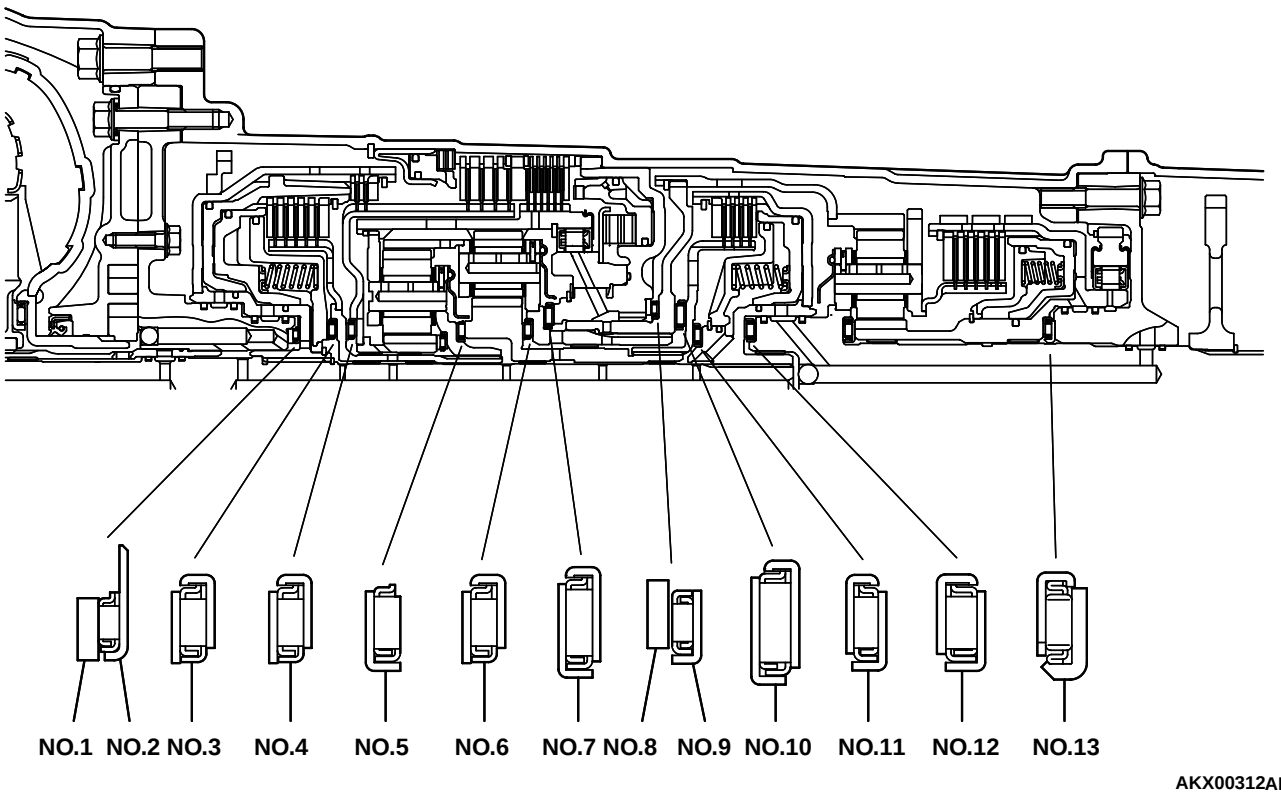
IDENTIFICATION OF THRUST BEARING AND THRUST RACE

<V4A51>



AKX00061AB

<V5A51>

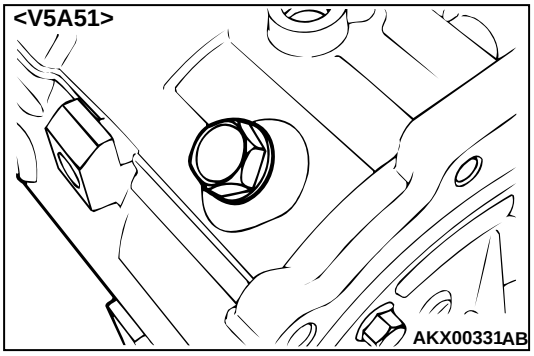


AKX00312AB

TSB Revision

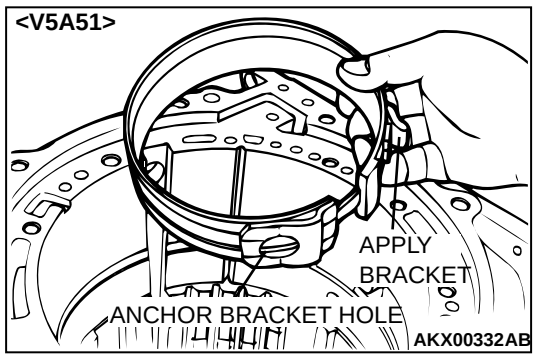
SYMBOL	OD mm (in)	ID mm (in)	THICKNESS mm (in	PART NUMBER
NO.1	48.9 (1.93)	37 (1.46)	1.4 (0.055)	MD723063
			1.6 (0.063)	MD707267
			1.8 (0.071)	MD723064
			2.0 (0.079)	MD707268
			2.2 (0.087)	MD723065
			2.4 (0.094)	MD724358
			2.6 (0.102)	MD754798
NO.2	59 (2.32)	37 (1.46)	2.8 (0.110)	MR305718
NO.3	57 (2.24)	38.5 (1.52)	4.12 (0.162)	MD758556
NO.4	57 (2.24)	38.5 (1.52)	4.12 (0.162)	MD758556
NO.5	55.4 (2.18)	38.5 (1.52)	3.3 (0.130)	MD761683
NO.6	57 (2.24)	38.5 (1.52)	4.12 (0.162)	MD758556
NO.7	70 (2.76)	48.8 (1.92)	4.0 (0.157)	MR222902
NO.8	73 (2.87)	60 (2.36)	1.6 (0.063)	MR276705
			1.8 (0.071)	MR276706
			2.0 (0.079)	MR276707
			2.2 (0.087)	MR276708
			2.4 (0.094)	MR276709
NO.9	71.4 (2.81)	57 (2.24)	2.78 (0.109)	MR276587
NO.10	71.9 (2.83)	48 (1.89)	4.6 (0.181)	MR263281
NO.11	54.1 (2.13)	34.7 (1.47)	3.98 (0.157)	MR967353
NO.12	57 (2.24)	38.5 (1.52)	4.12 (0.162)	MR967354
NO.13	58 (2.28)	37.5 (1.48)	4.8 (0.189)	MD758555

<V5A51>



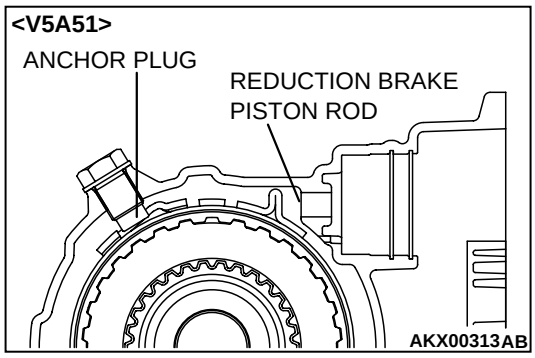
4. Install new O-ring on the anchor plug and tighten the anchor plug by specified torque. <V5A51>

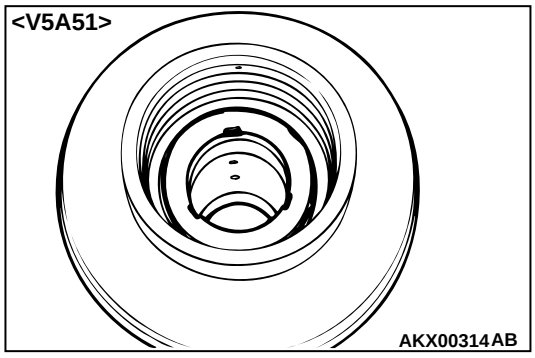
   Specified torque: 98 N·m (71 ft-lb)



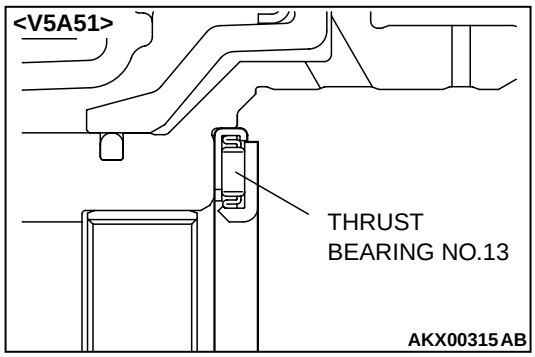
⚠ CAUTION
Insert the anchor bracket hole of the brake band to the anchor plug tip, and then mount the apply bracket part to the hole of reduction brake piston adjust rod.

5. Install the reduction brake band. <V5A51>

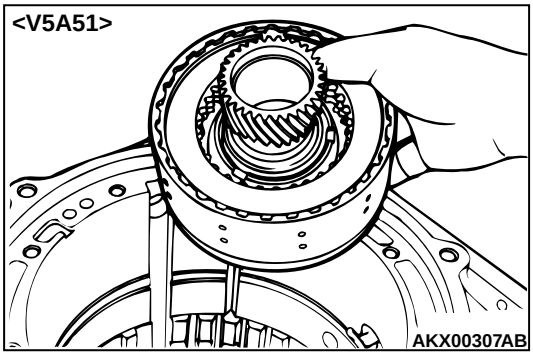




6. Install the thrust bearing number 13. <V5A51>

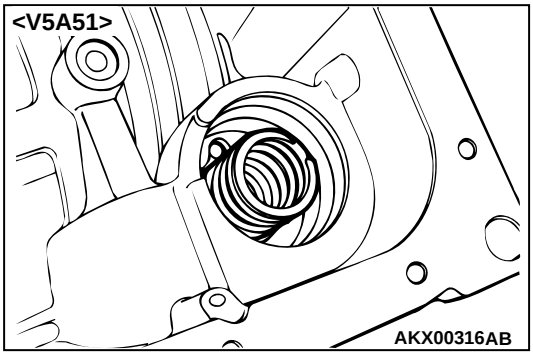


⚠ CAUTION
Make sure the thrust bearing number 13 is mounted in the correct direction.

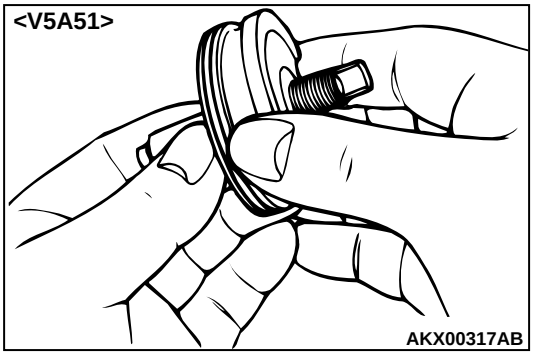


⚠ CAUTION
Take care that the reduction brake band does not come off the anchor rod and the hole of the reduction brake piston adjust rod.

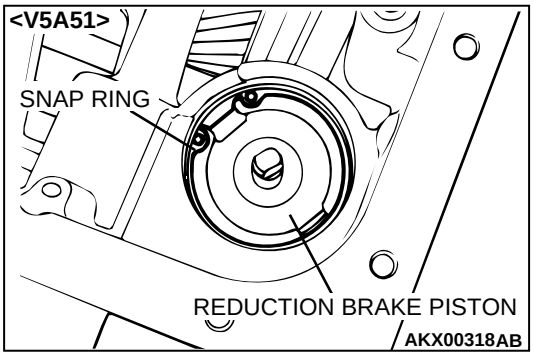
7. Install the direct clutch. <V5A51>



8. Install the reduction brake spring. <V5A51>

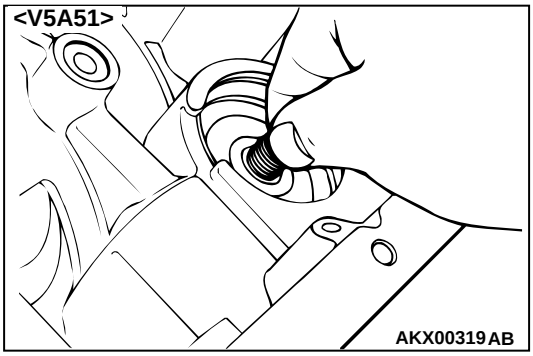


9. Tighten the reduction brake piston adjust rod into the reduction brake piston manually to the full. <V5A51>
10. Install new seal ring on the piston. <V5A51>

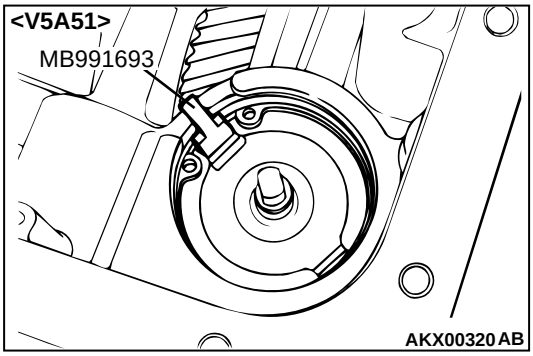


11.Press the reduction brake piston into the transmission case, and then install the snap ring. <V5A51>

NOTE: Set the open end of the snap ring at indicated location.

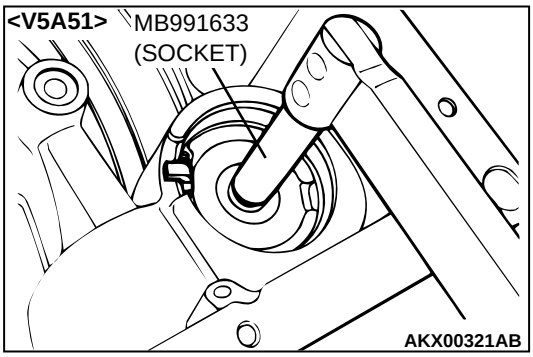


12.Fully tighten the reduction brake piston adjust rod manually. <V5A51>

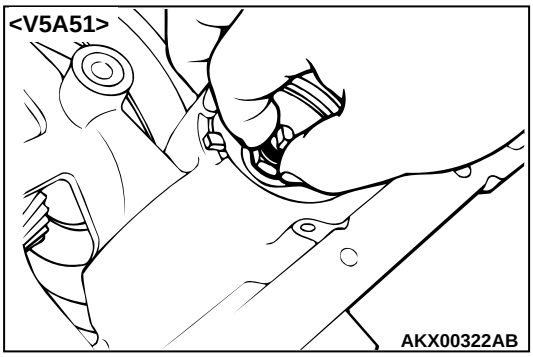


13.Adjust the reduction brake piston by following procedure. <V5A51>

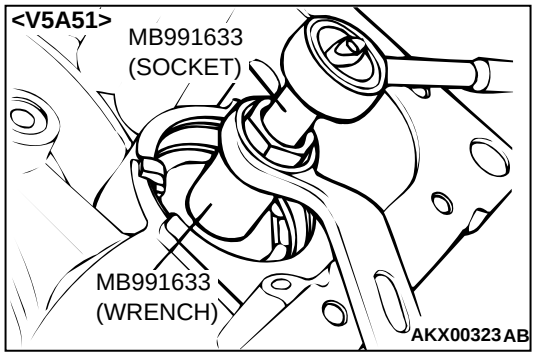
(1) Mount the special tool so that the reduction brake piston does not rotate.



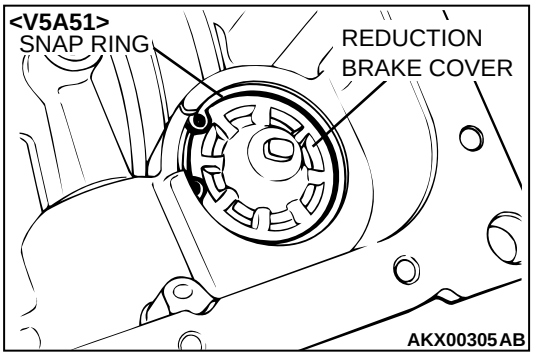
(2) Mount the torque wrench to the special tool (Socket), and after repeatedly tightening and turning back with the torque of 9.8 N·m (87 in - lb) twice, tighten the reduction brake piston adjust rod by the specified torque of 4.9 N·m (44 in - lb). Then turn the reduction brake piston adjust rod 5 1/2 to 5 3/4 turns backwards.



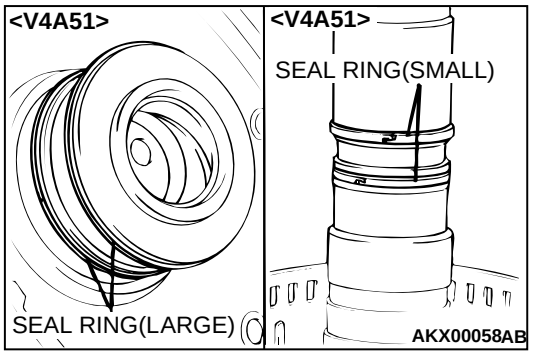
(3) Remove the special tool and tighten the reduction brake piston nut manually.



(4) Tighten the reduction brake piston nut to the specified torque using the special tool (wrench) with the special tool (Socket) so it does not rotate.

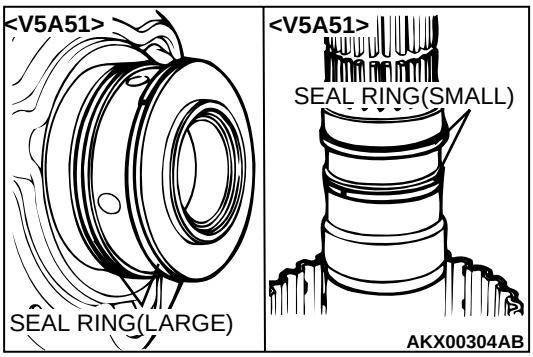


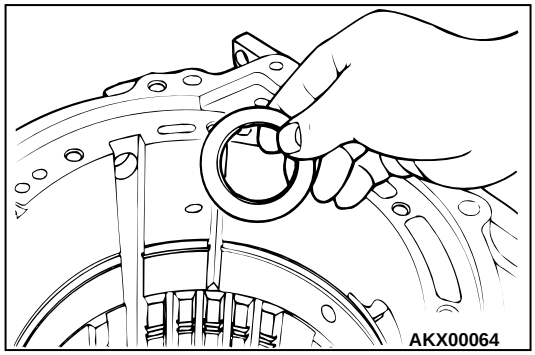
14.Install a new O-ring on the reduction brake piston cover, and then install the cover and the snap ring on the transmission case. <V5A51>



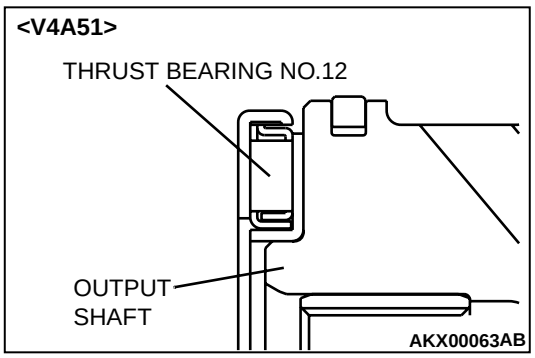
15.Install new seal rings (two large pieces and two small pieces) onto the output shaft <V4A51> or direct planetary carrier <V5A51>.

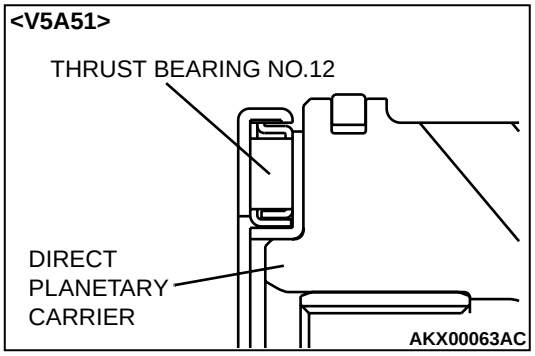
16.Install the output shaft <V4A51> or direct planetary carrier <V5A51> into the output shaft support.



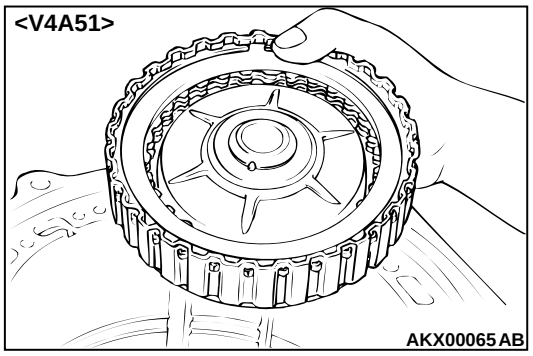


17.Apply vase line or petroleum jelly on the thrust bearing number 12, and then install on the front end of the output shaft <V4A51> or direct planetary carrier <V5A51>.

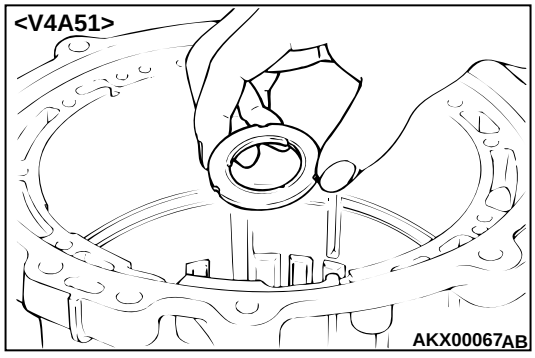




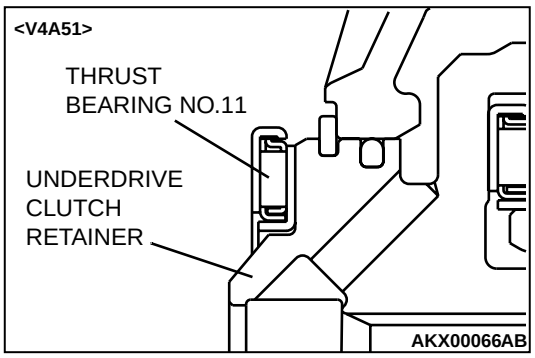
⚠ CAUTION
Make sure thrust bearing number 12 is mounted in the correct direction.



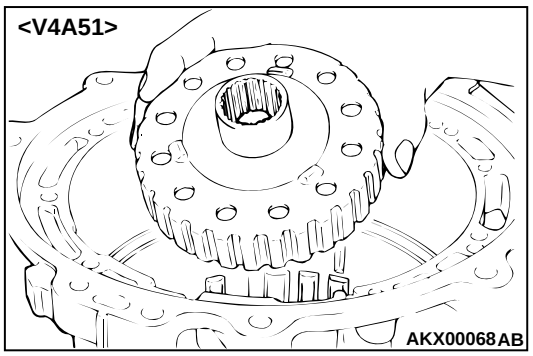
18.Install the underdrive clutch. <V4A51>



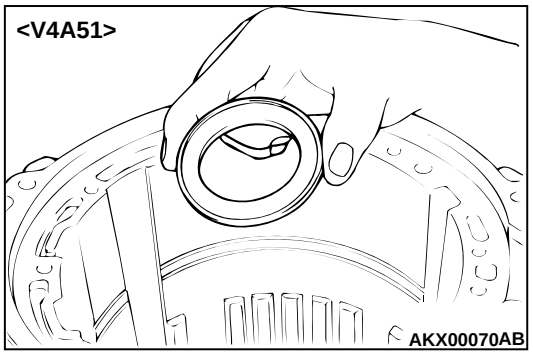
19.Apply Vaseline or petroleum jelly on the thrust bearing number 11, and then install on the front end of the underdrive clutch retainer. <V4A51>



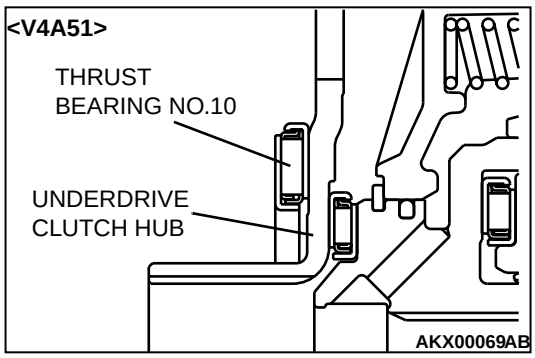
⚠ CAUTION
Make sure thrust bearing number 11 is mounted in the correct direction.



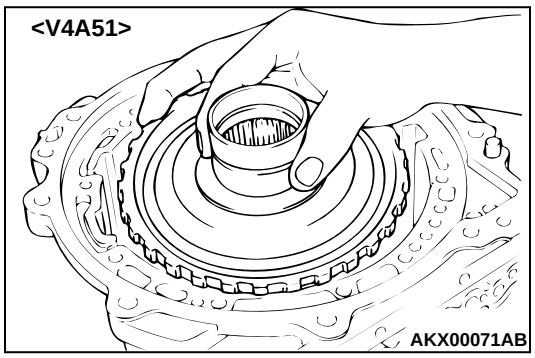
20.Install the underdrive clutch hub. <V4A51>



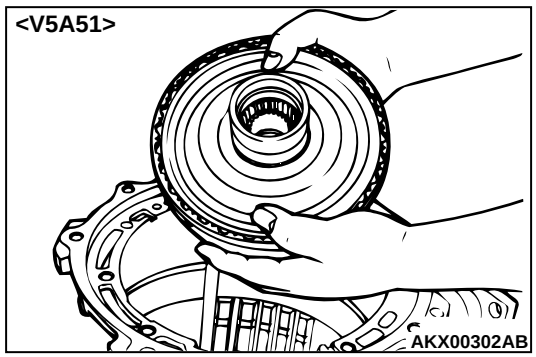
21.Apply Vaseline or petroleum jelly on the thrust bearing number 10, and then install it on the underdrive clutch hub. <V4A51>



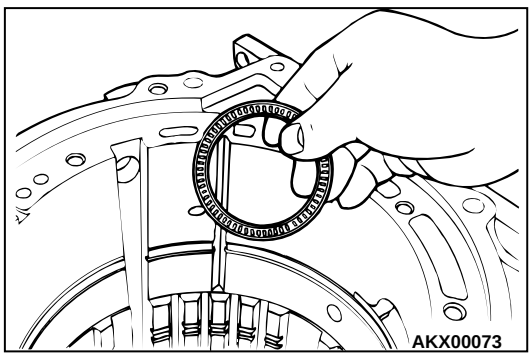
⚠ CAUTION
Make sure thrust bearing number 10 is mounted in the correct direction.



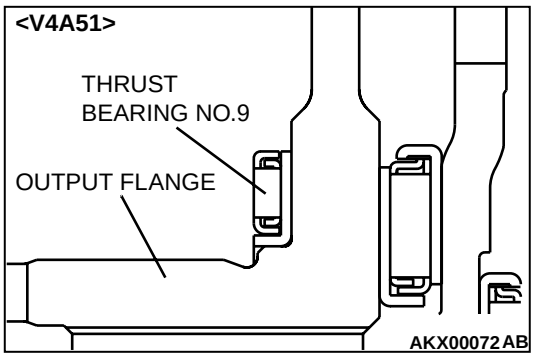
22.Install the output flange. <V4A51>

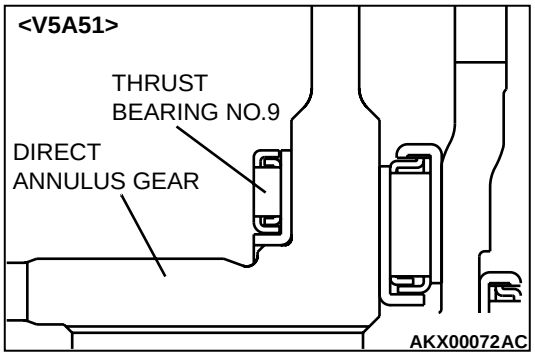


⚠ CAUTION
Confirm that the thrust bearing number 10 in the direct annulus gear is still at specified location.
23.Insert the direct annulus gear. <V5A51>



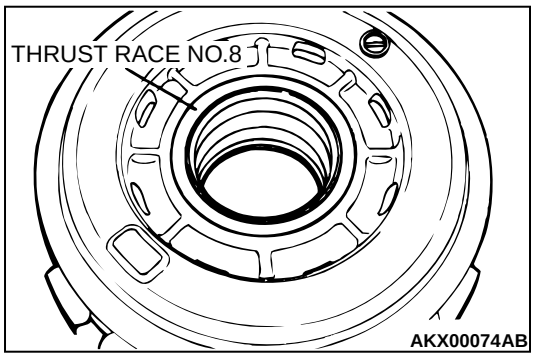
24.Apply Vaseline or petroleum jelly on the thrust bearing number 9, and then install on the output flange <V4A51> or direct annulus gear <V5A51>.





⚠ CAUTION

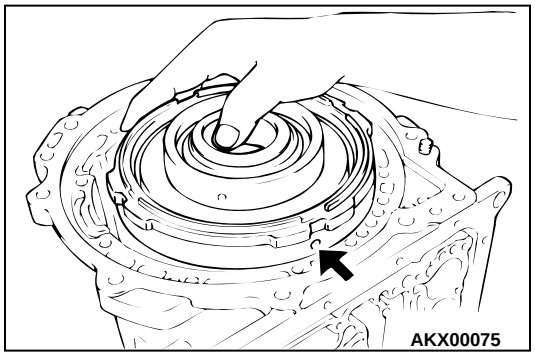
Make sure thrust bearing number 9 is mounted in the correct direction.



⚠ CAUTION

Measure and record the thickness of the thrust race number 8 to be assembled.

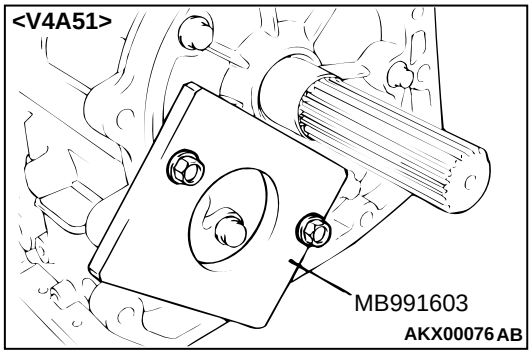
25.Apply Vaseline or blue petroleum jelly on the thrust race number 8 being used, and then install it on the rear side of the center support.



⚠ CAUTION

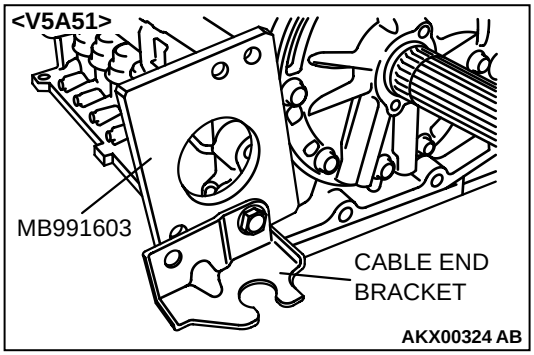
- **Install the center support so that the oil holes shown in the illustration face the lower side of the transmission case.**
- **Make sure that the thrust race number 8 attached to the rear side of the center support does not fall off.**

26.Install the center support.



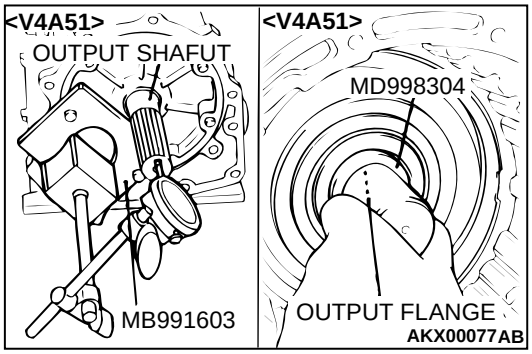
27.Remove the two output shaft support mounting bolts. <V4A51>

28.Using the two removed bolts, install special tool MB991603 to the specified torque. <V5A51>



⚠ CAUTION
Install the cable bracket together with special tool.

29.Using the Transfer case adapter bolt, install special tool MB991603.



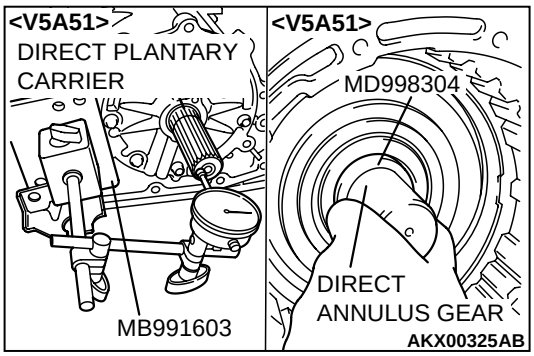
30.Select the thrust race number 8 with the following procedure:

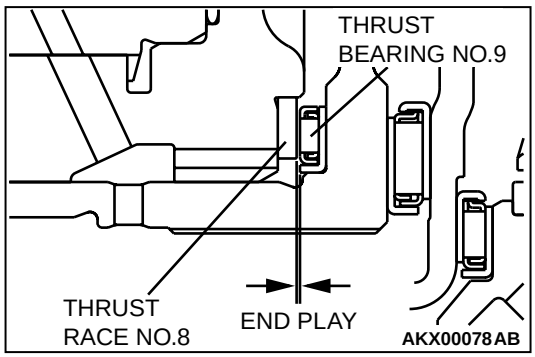
(1) Fix a dial gauge to special tool MB991603.

(2) Push the output shaft <V4A51> or direct planetary carrier <V5A51>,and the output flange <V4A51> or direct annulus gear <V5A51> in alternately, and then measure the end play of output shaft <V4A51> or direct planetary carrier <V5A51>.

NOTE: When pushing the output shaft <V4A51> or direct planetary carrier <V5A51> in, take care that the center support does not move.

NOTE: When pushing the output flange <V4A51> or direct annulus gear <V5A51> in, use the special tool MB998304.





(3) Reinstall by selecting the thrust race number 8 installed by the procedure (25) so that the end play of output shaft<V4A51> or direct planetary carrier <V5A51> becomes the standard value.

NOTE: Refer to the thickness recorded in step 13.

Standard value: 0.25 – 0.55 mm (0.0098 – 0.0217 inch)

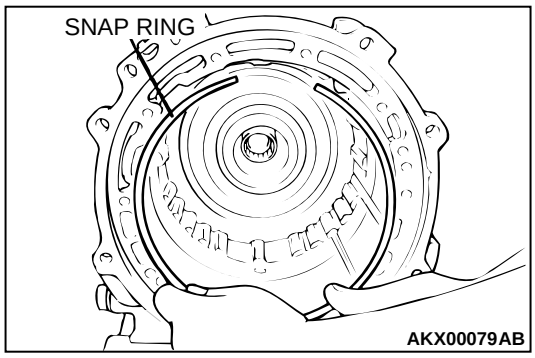
(4) Measure the end play again, and confirm that it is within the standard value.

NOTE: Carry this step out with special tool MB991603 and dial gauge installed.

TSB Revision

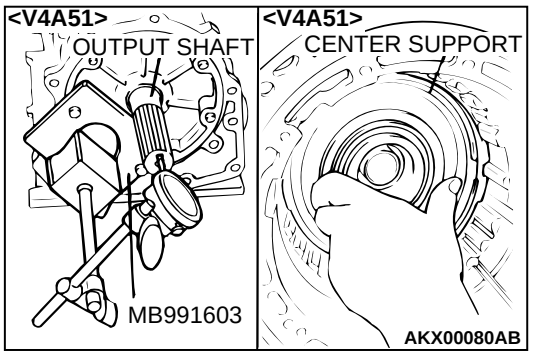
31.Using the following steps, select the snap ring for fixing the center support.

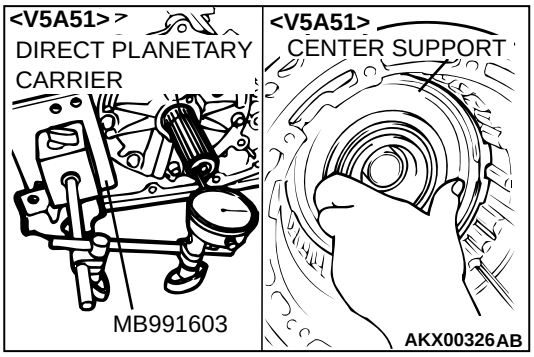
(1) Install the snap ring used for fixing the center support used.



(2) After pushing the output shaft <V4A51> or direct planetary carrier <V5A51>,and the center support in alternately, and then measure the end play of center support.

NOTE: When pushing the output shaft <V4A51> or direct planetary carrier <V5A51> in, be sure to push them in to the point where the center support touches the snap ring.

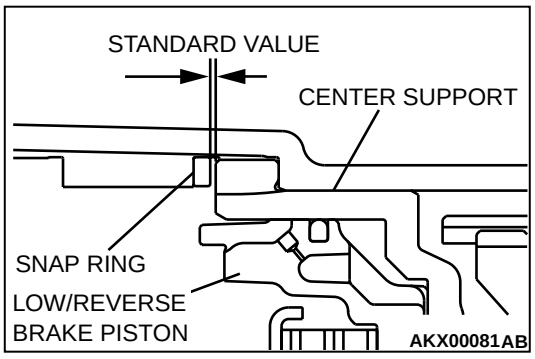




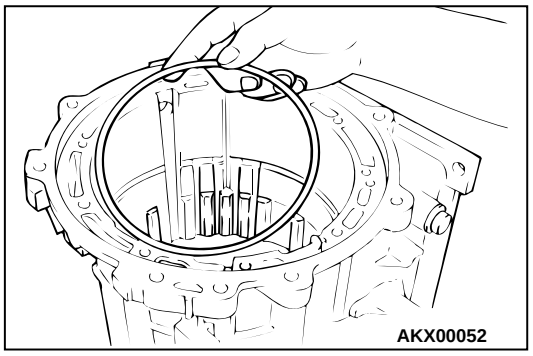
(3) Select the snap ring for fixing the center support installed in step 31 (1) so that the end play of the center support is at the standard value. Then, reassemble.

Standard value: 0 – 0.16 mm (0 – 0.0063 inch)

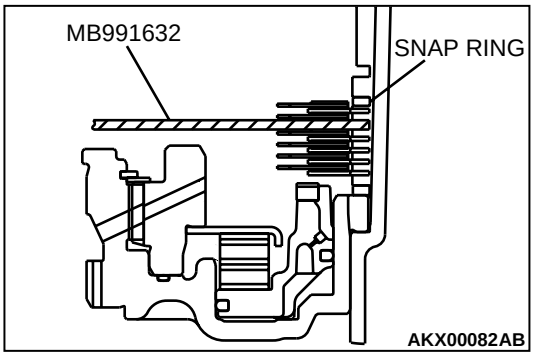
(4) Measure the end play again, and confirm that it is within the standard value.



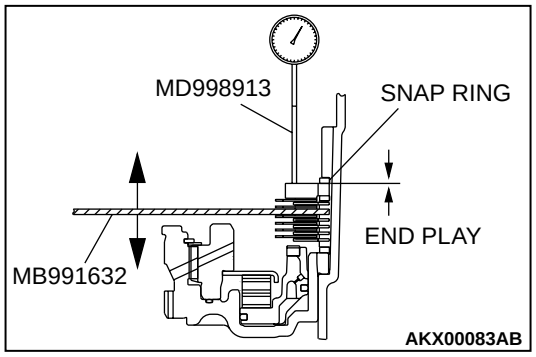
32.Using the following steps, select the snap ring for adjusting the brake reaction plate end play and second brake end play, and the pressure plate for adjusting the low/reverse brake end play.



(1) Install the wave spring onto the low/reverse brake piston.



(2) Install special tool MB991632 onto the position shown in the illustration instead of the pressure plate for the low/reverse brake. Install the brake disc, brake plate and snap ring.

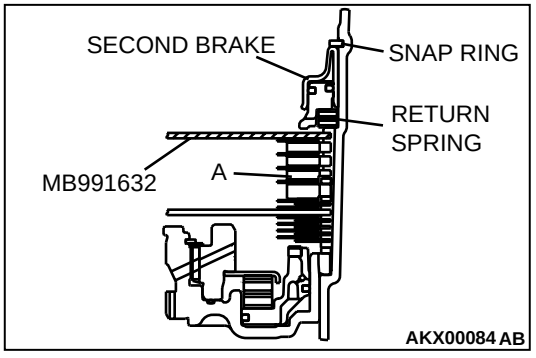


⚠ CAUTION
Pay close attention to the assembly direction of the reaction plate.

(3) Install the reaction plate and snap ring that was used.
(4) Install a dial gauge onto special tool (MD998913) so that the end contacts the brake reaction plate. Measure the end play by moving special tool MB991632.
(5) Select the snap ring installed in step 32 (3) so that the end play is within the standard value. Then, reassemble.

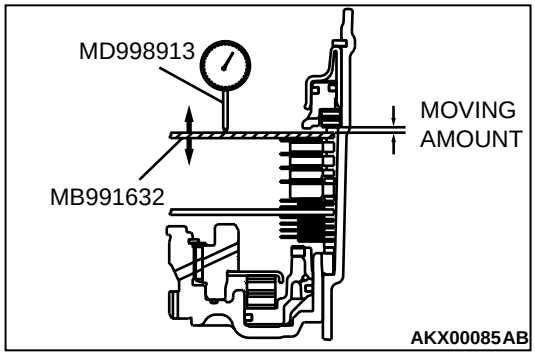
Standard value: 0 – 0.16 mm (0 – 0.0063 inch)

(6) Measure the end play again, and confirm that it is within the standard value.



⚠ CAUTION
Pay close attention to the shape and assembly direction of the brake plate A installation.

(7) Next, install special tool MB991632 instead of the pressure plate for the second brake. Install the four brake discs and three brake plates.
(8) Install the return spring, second brake and snap ring.



(9) Install a dial gauge onto special tool MD998913 so the end contacts the special tool. Move special tool MB991632 and measure the moving amount. Select a pressure plate with a thickness that corresponds to the measured moving amount from the following table.

Standard value: 1.49 – 1.95 mm (0.0587 – 0.0768 inch)

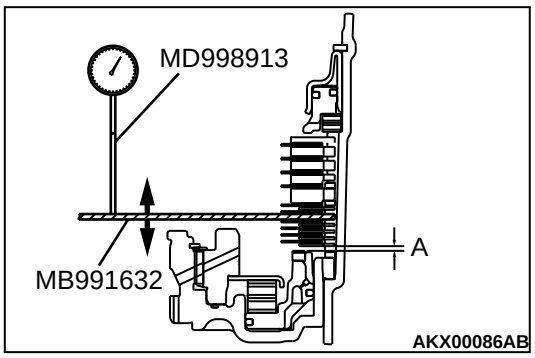
MOVING AMOUNT mm (in)	PRESSURE PLATE		
	THICKNESS mm (in)	ID SYMBOL	ID SYMBOL
1.2 or more – less than 1.4 (0.047 or more – less than 0.055)	1.6 (0.063)	F	MR336390
1.4 or more – less than 1.6 (0.055 or more – less than 0.063)	1.8 (0.071)	E	MR336391
1.6 or more – less than 1.8 (0.063 or more – less than 0.071)	2.0 (0.079)	D	MR336392
1.8 or more – less than 2.0 (0.071 or more – less than 0.079)	2.2 (0.087)	C	MR336393
2.0 or more – less than 2.2 (0.079 or more – less than 0.087)	2.4 (0.094)	B	MR336394
2.2 or more – less than 2.4 (0.087 or more – less than 0.094)	2.6 (0.102)	A	MR336395
2.4 or more – less than 2.6 (0.094 or more – less than 0.102)	2.8 (0.110)	0	MR336396
2.6 or more – less than 2.8 (0.102 or more – less than 0.110)	3.0 (0.118)	1	MR336397

(10) Remove the snap ring, second brake, return spring and special tool MB991632 installed in step (8).

(11) Install the pressure plate selected in step (9), and install the return spring, second brake and snap ring again.

(12) Install a dial gauge onto special tool MD998913 so the end contacts the special tool. Move special tool MB991632 and measure the moving amount. Select a pressure plate with a thickness that corresponds to the measured moving amount from the following table.

End play standard value (reference)
: 1.65 – 2.11 mm (0.0650 – 0.0831 inch)

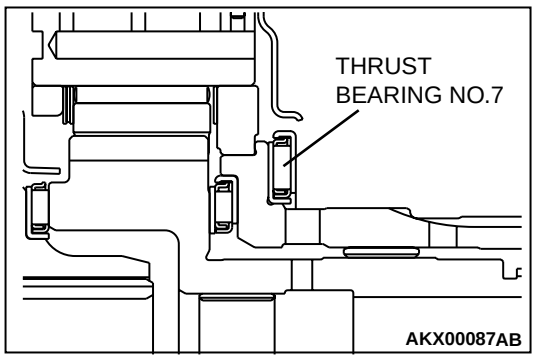


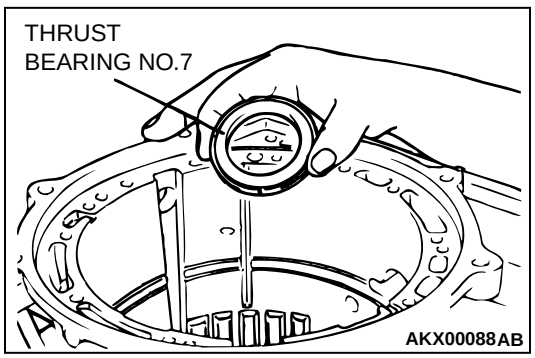
MOVING AMOUNT mm (in)	PRESSURE PLATE		
	THICKNESS mm (in)	ID SYMBOL	ID SYMBOL
1.5 or more – less than 1.7 (0.059 or more – less than 0.067)	1.8 (0.071)	E	MD759425
1.7 or more – less than 1.9 (0.067 or more – less than 0.075)	2.0(0.079)	D	MD759426
1.9 or more – less than 2.1 (0.075 or more – less than 0.083)	2.2 (0.087)	C	MD759427
2.1 or more – less than 2.3 (0.083 or more – less than 0.091)	2.4 (0.094)	B	MD759428
2.3 or more – less than 2.5 (0.091 or more – less than 0.098)	2.6 (0.102)	A	MD759429
2.5 or more – less than 2.7 (0.098 or more – less than 0.106)	2.8 (0.110)	0	MD759430
2.7 or more – less than 2.9 (0.106 or more – less than 0.114)	3.0 (0.118)	1	MD759431

(13)Remove the parts installed in steps 32 (1) to (12).

⚠ CAUTION
Make sure thrust bearing number 7 is mounted in the correct direction.

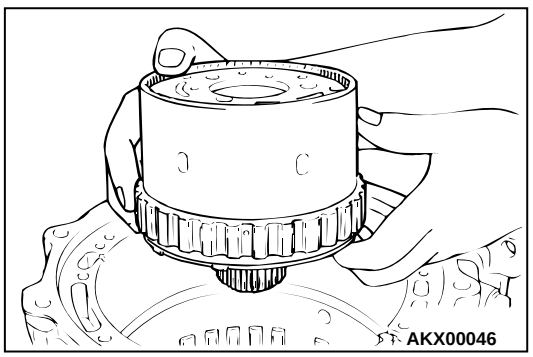
33.Apply Vaseline or petroleum jelly on the thrust bearing number 7, and then install on the rear side of the low/reverse annulus gear.

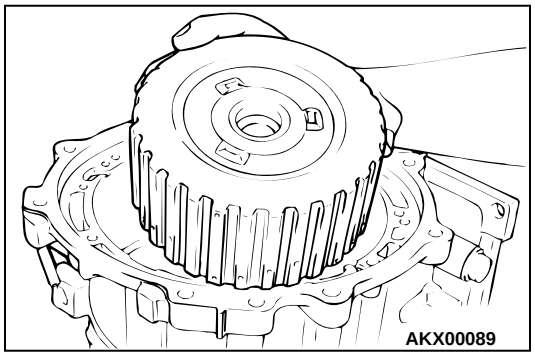




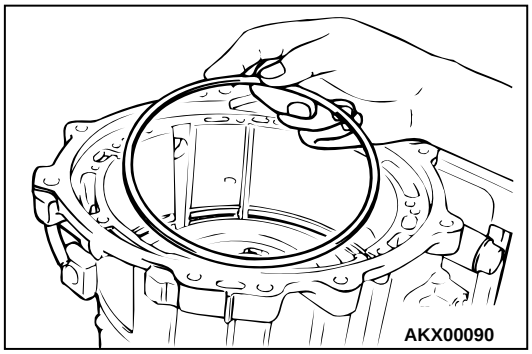
⚠ CAUTION
Make sure that thrust bearing number 7 attached to the rear side of the low/reverse annulus gear does not fall off.

34.Install the low/reverse annulus gear.

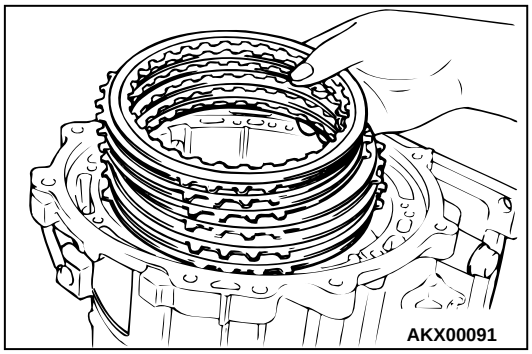



AKX00089

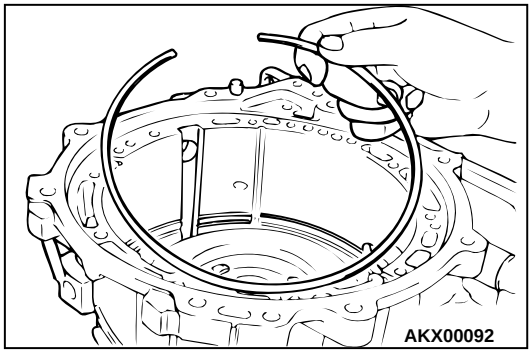
35.Install the reverse sun gear.


AKX00090

36.Install the wave spring to the low/reverse brake piston.

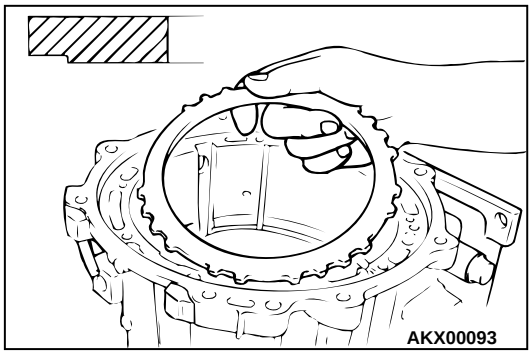

AKX00091

37.Install the pressure plate, brake disc and brake plate selected in step 32 (12).

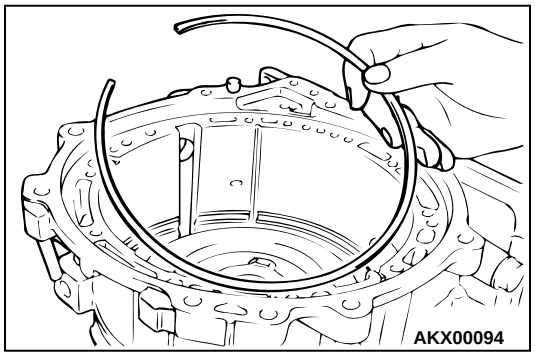

AKX00092

38.Install the snap ring.

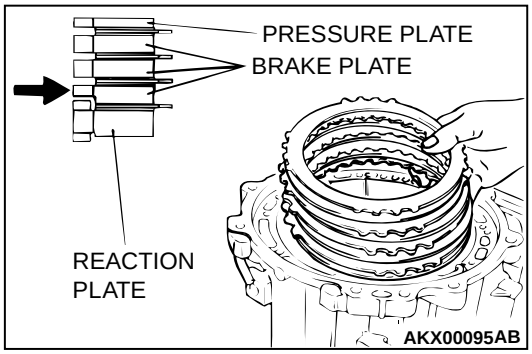
⚠ CAUTION
Make sure the reaction plate in the proper direction.


AKX00093

39.Install the reaction plate.

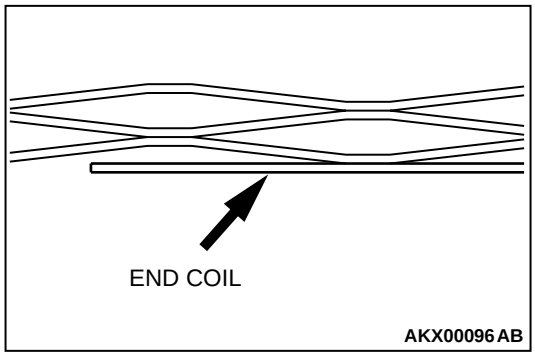


40.Install the snap ring selected in step 32 (5).

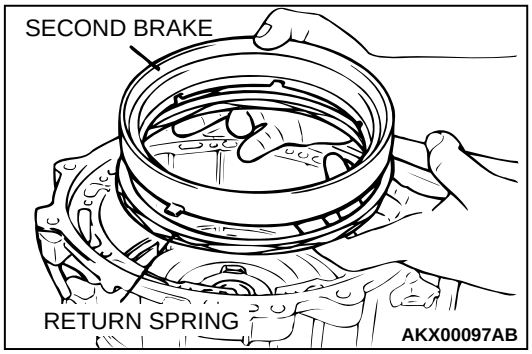


⚠ CAUTION
Make sure the brake plate (reaction plate side) is installed in the proper direction.

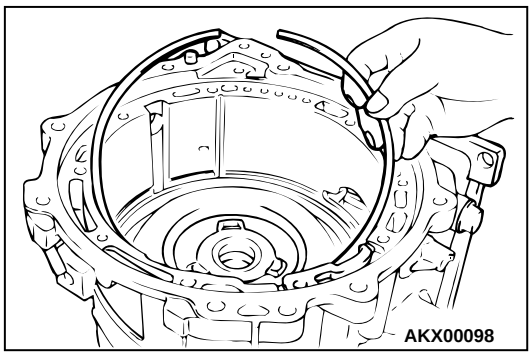
41.Install the brake disc, brake plate and pressure plate selected in step 32 (9).



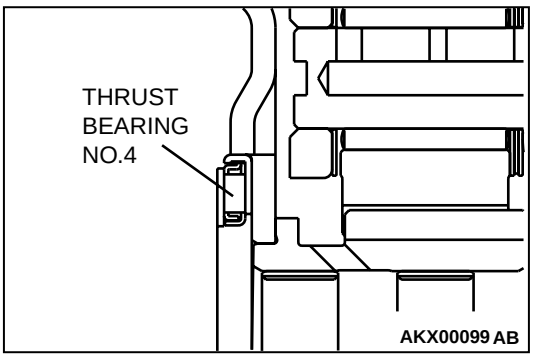
⚠ CAUTION
Install the return spring end coil side so that it faces the back of the transmission. (Only for one side end coil type)



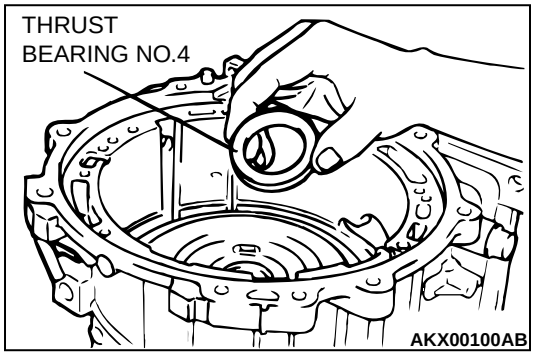
42.Install the return spring and second brake.



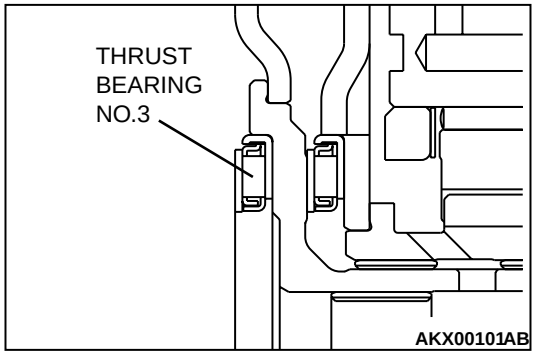
43.Install the snap ring.



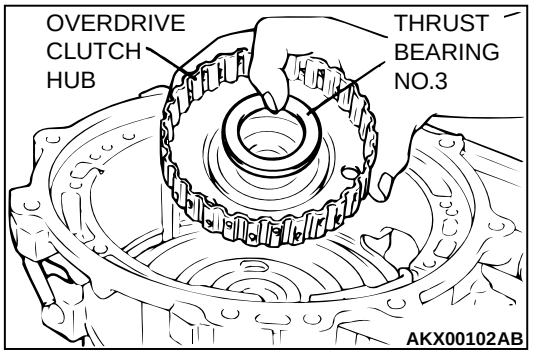
⚠ CAUTION
Make sure thrust bearing number 4 is installed in the proper direction.



44.Apply Vaseline or petroleum jelly on the thrust bearing number 4, and then install on the reverse sun gear.

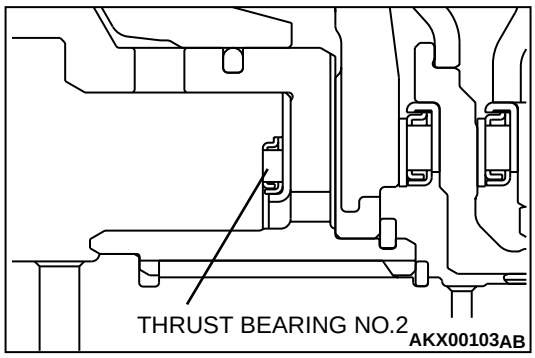


⚠ CAUTION
Make sure thrust bearing number 3 is mounted in the correct direction.

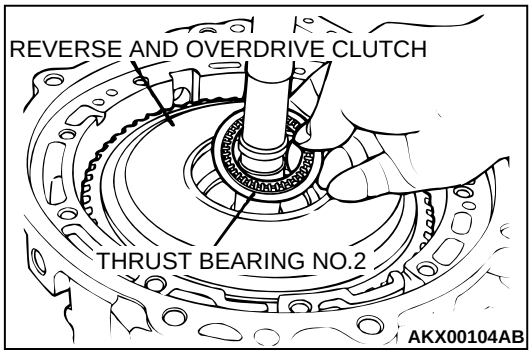


45.Apply Vaseline or petroleum jelly on the thrust bearing number 3, and then install on the overdrive clutch hub.

46.Install the overdrive clutch hub.

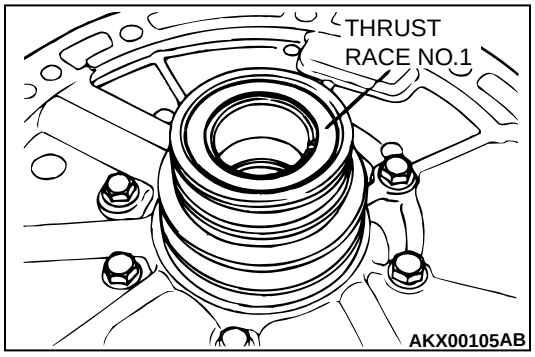


⚠ CAUTION
Make sure thrust bearing number 2 is mounted in the correct direction.

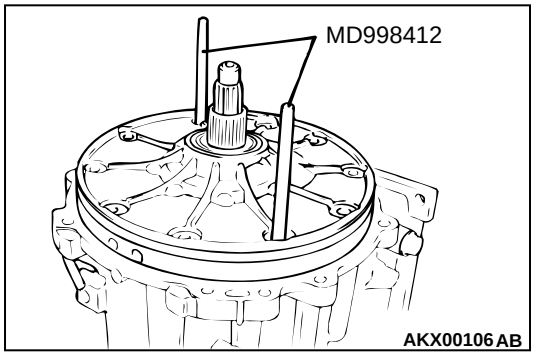


47.Install the reverse and overdrive clutch.

48.Apply Vaseline or petroleum jelly on the thrust bearing number 2, and then install on the reverse and overdrive clutch.



49.Apply Vaseline or petroleum jelly on the thrust race number 1 being used, and then install on the oil pump.

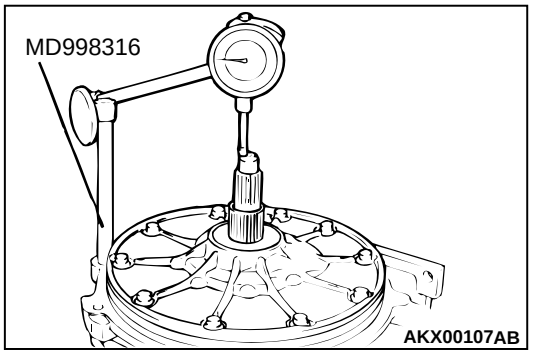


⚠ CAUTION
Never reuse a gasket.

50.Install special tool MD998412 at the position shown in the illustration, and using this as a guide, install the oil pump and gasket.

51.Tighten the ten oil pump mounting bolts to the specified torque.

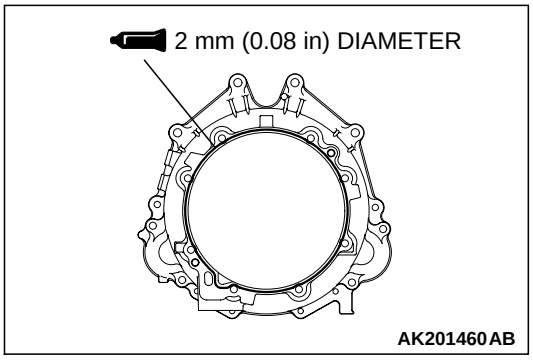
Specified torque: 23 ± 3 N·m (17 ± 2 ft-lb)



52.Using special tool MD998316, set a dial gauge as shown in the illustration. Measure the end play of the input shaft, and select the thrust race installed in step 36 so that the end play is at the standard value. Then, reassemble.

Standard value: 0.25 – 0.81 mm (0.0098 – 0.0319 inch)

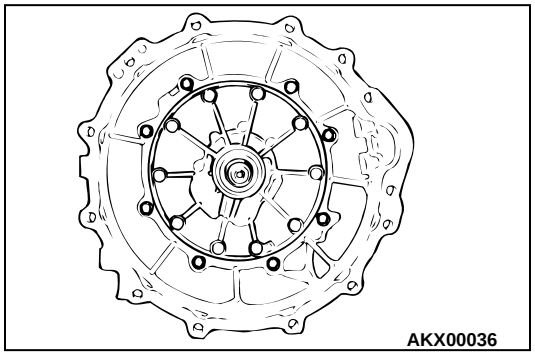
53.Measure the end play again, and confirm that it is within the standard value.



⚠ CAUTION

Evenly squeeze out the sealant so that it is not insufficient or excessive.

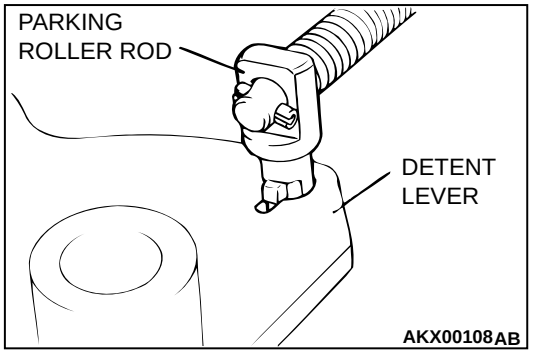
54.Apply the sealant MITSUBISHI genuine sealant part number MR166584 or equivalent on the converter housing.



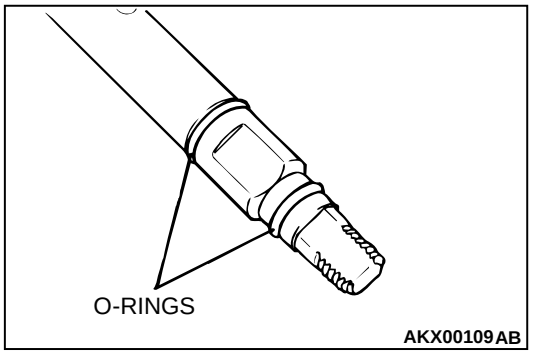
55.Install the converter housing.

56.Tighten the eight converter housing mounting bolts to the specified torque.

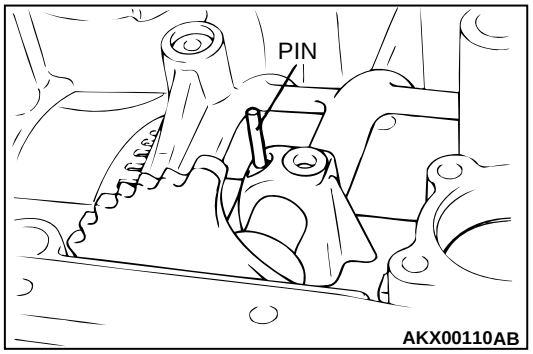
Specified torque: 48 ± 6 N·m (35 ± 4 ft-lb)



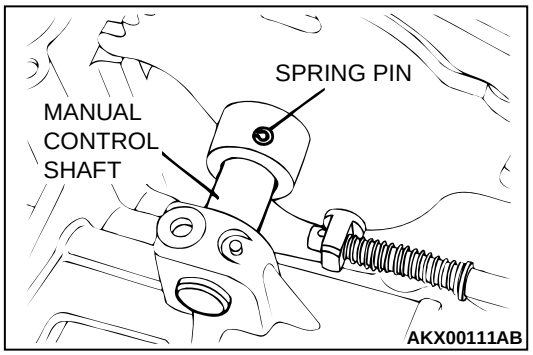
57.Install the parking roller rod to the detent lever.



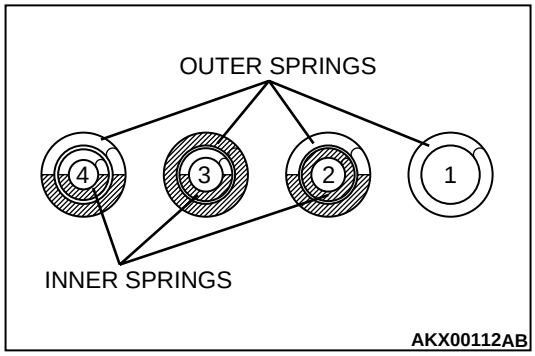
58.Install two new O-rings to the manual control shaft, and assemble onto the transmission case together with the detent lever and parking roller rod.



59.Install the pin.



60.Hammer in so that the slit section of the spring valve is perpendicular to the axial direction of the manual control shaft.

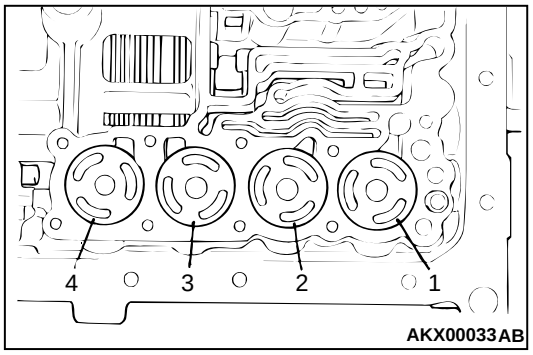


61.Install a new seal ring onto each accumulator piston.

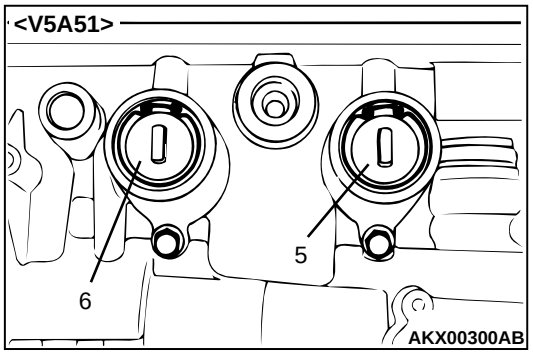
62.Install each accumulator piston, spring and snap ring <V5A51>, accumulator cover <V5A51>, and O-ring <V5A51>.

NOTE: Identification colors are applied on the spring as shown below. Assemble following this table.

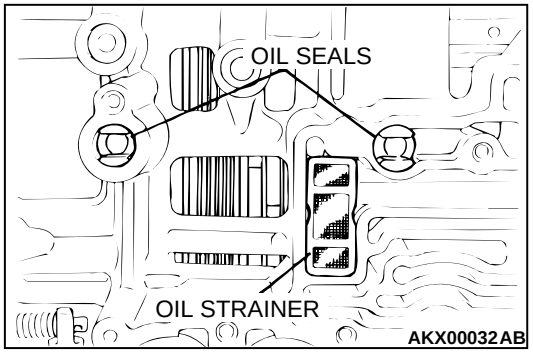
NOTE: Install the accumulator pistons to the original positions following the identification tags attached when removed.



NO.	NAME	IDENTIFICATION PAINT APPLICATION POSITION	
1	For overdrive clutch	None	
2	For second brake	Inner	Applied on all surfaces including both ends
		Outer	Applied on half of surface including both ends
3	For low/reverse brake	Inner	Applied on half of surface including both ends
		Outer	Applied on entire surface of one side

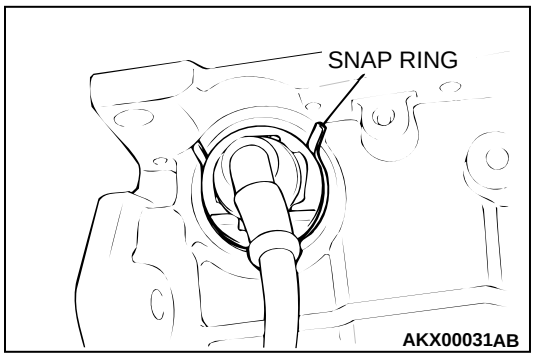


NO.	NAME	IDENTIFICATION PAINT APPLICATION POSITION	
4	For underdrive clutch	Inner	Applied on half of surface including both ends
		Outer	Applied on half of surface including both ends
5	For reduction brake	None	
6	For direct clutch	None	



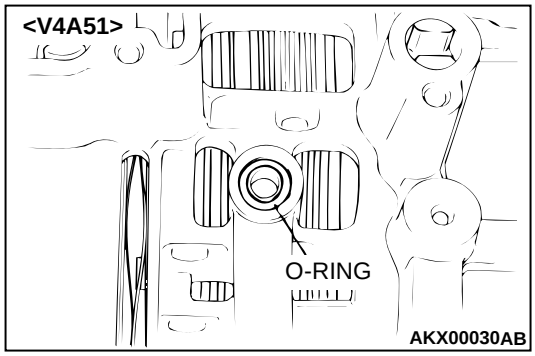
⚠ CAUTION
Pay close attention to the installation direction of the oil seal.

63. Install the oil strainer and two new oil seals. Install the oil seals so that the notched section is oriented as shown in the illustration.

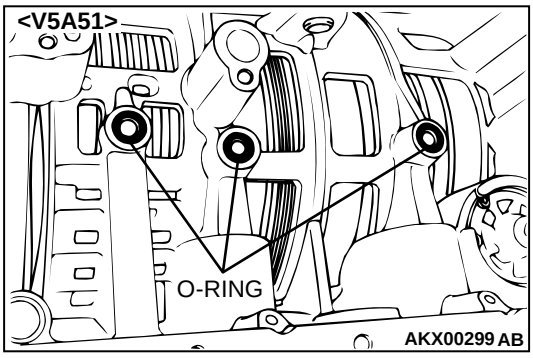


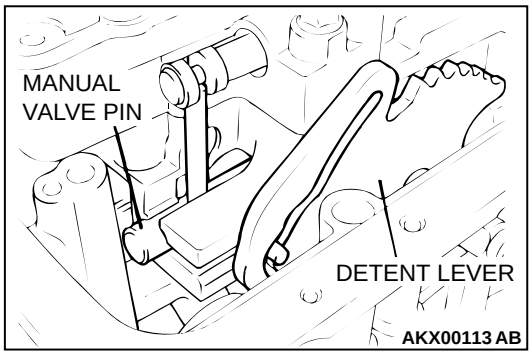
64. Install the solenoid valve harness, and then secure the snap ring into connector groove.

NOTE: Install the harness so that it is oriented as shown in the illustration.

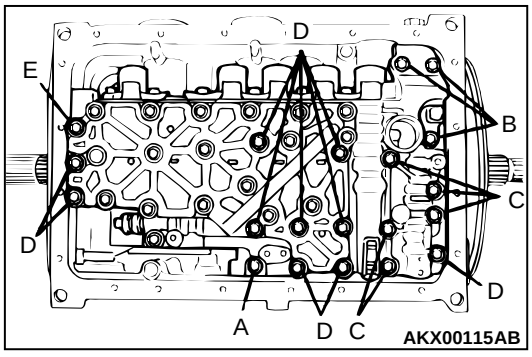


65.Install the new O-ring into the transmission case at the position shown in the illustration.





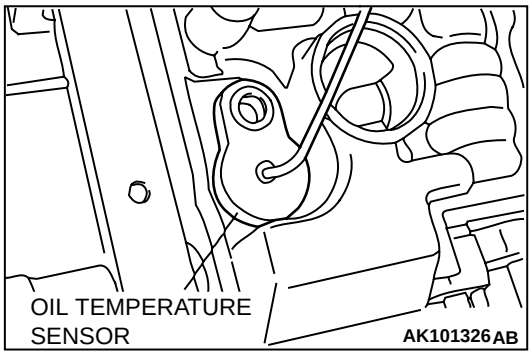
66.Install the valve body while inserting the manual valve pin into the detent lever groove.



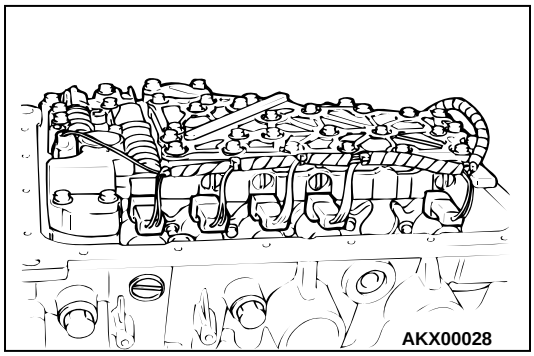
67.Tighten the twenty valve body mounting bolts to the specified torque.

BOLT	LENGTH mm (in)
A	25 (1.0)
B	30 (1.2)
C	40 (1.6)
D	45 (1.8)
E	55 (2.2)

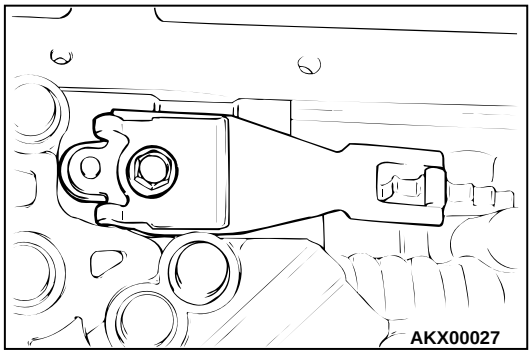
Specified torque: 11 ± 1 N·m (97 ± 9 in-lb)



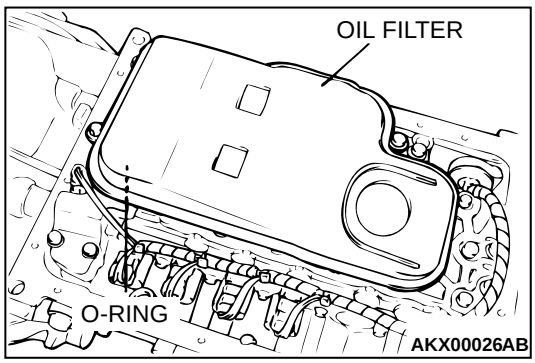
68.Install the oil temperature sensor.



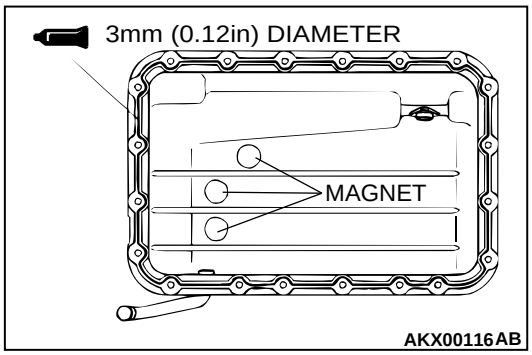
69.Connect the connector to the valve body.



70.Install the detent spring.
71.Tighten the detent spring mounting bolt to the specified torque.



72.Install the oil filter and a new O-ring.



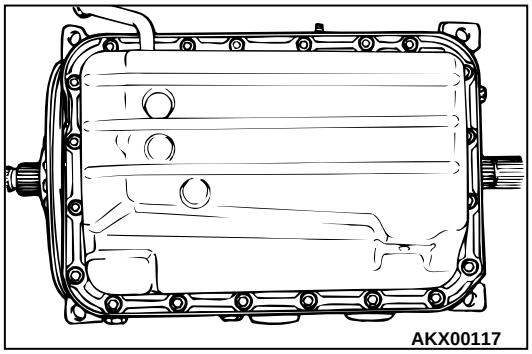
73.Install the magnet.

⚠ CAUTION

Evenly squeeze out the sealant so that it is not insufficient or excessive.

74.Apply the sealant MITSUBISHI genuine sealant part number MR166584 or equivalent on the oil pan.

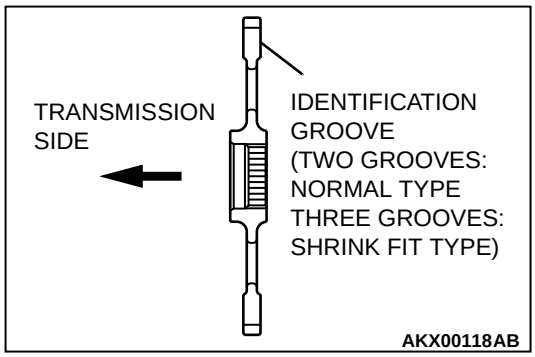
TSB Revision


AKX00117

75.Install the oil pan.

76.Tighten the oil pan mounting bolts to the specified torque.

Specified torque: 11 ± 1 N·m (97 ± 9 in-lb)

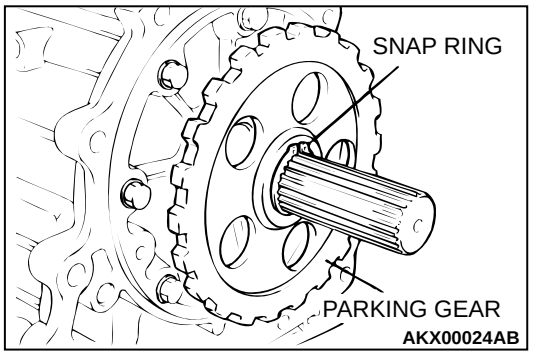


AKX00118AB

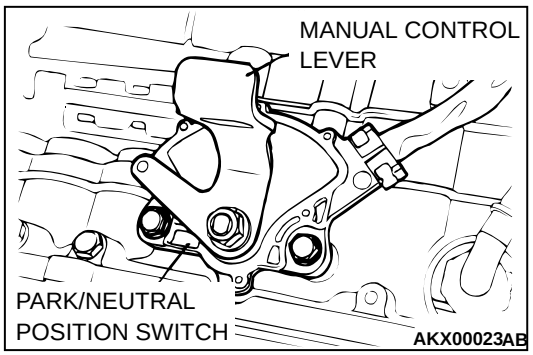
⚠ CAUTION

- **Install the parking gear so that the side without the spline cut faces the transmission side.**
- **Heat the parking gear to 160 – 180°C (320 – 356°F) and shrink fit up to the stepped section of the output shaft. (Only the type with three identification grooves.) Do not heat for longer than necessary at this time.**

77.Install the parking gear and snap ring.

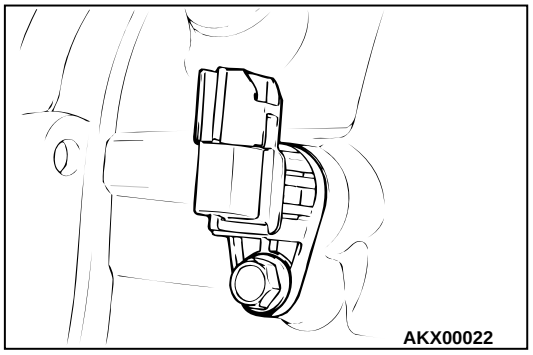


AKX00024AB

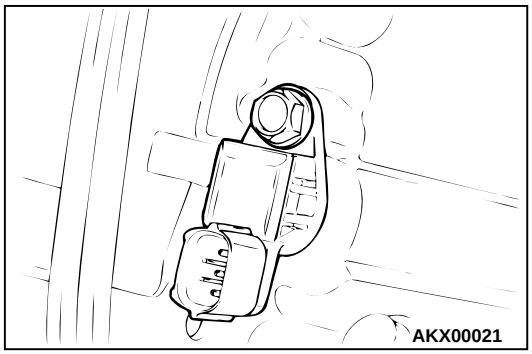


AKX00023AB

78.Install the park/neutral position switch and manual control lever.


AKX00022

79.Install the output shaft speed sensor.

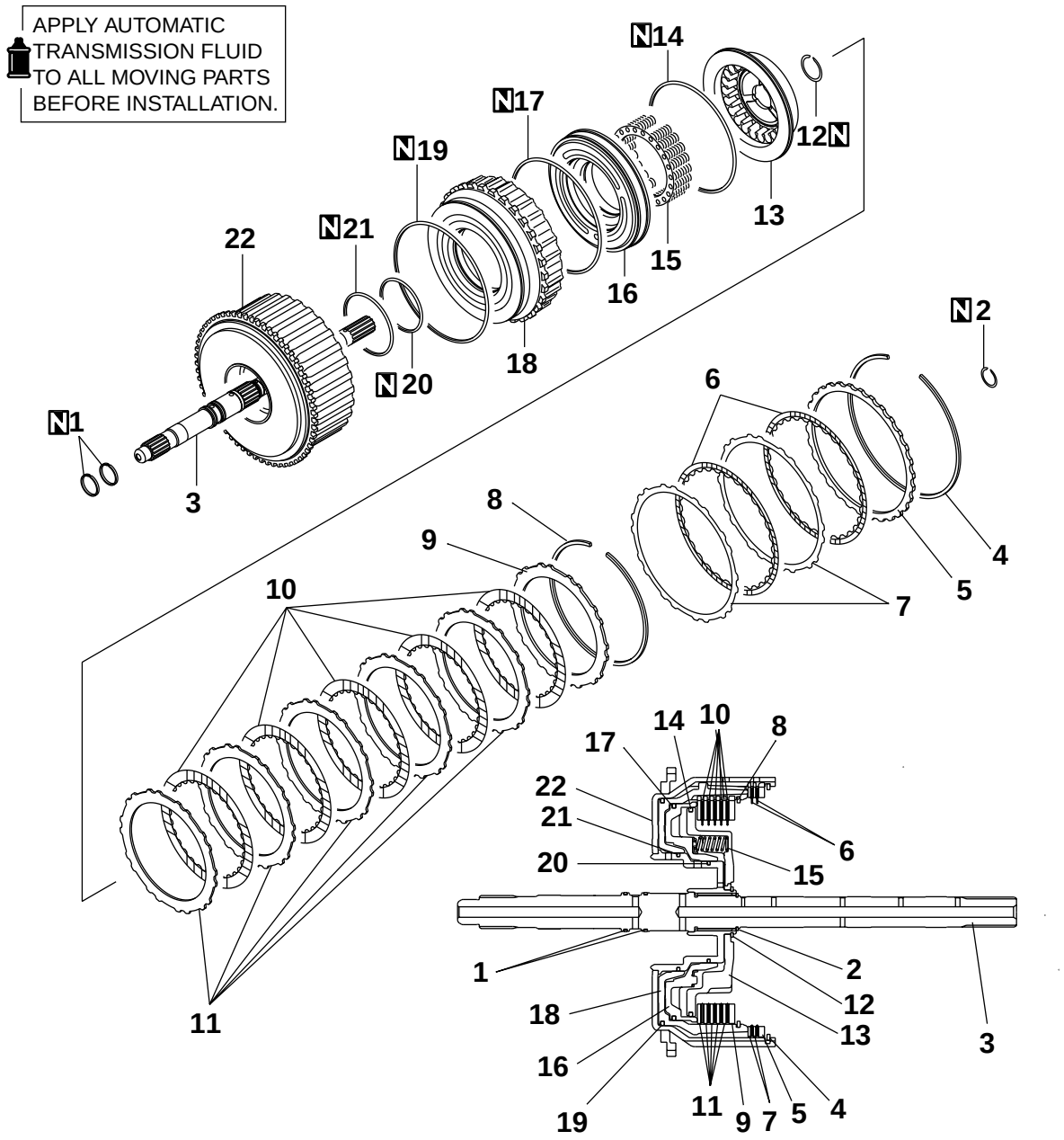


80.Install the input shaft speed sensor.

REVERSE AND OVERDRIVE CLUTCHES

DISASSEMBLY AND ASSEMBLY

M1233021200029



AKX00121AB

		DISASSEMBLY STEPS
	1.	SEAL RING
	2.	SNAP RING
	3.	INPUT SHAFT
>>H<<	4.	SNAP RING
>>G<<	5.	REACTION PLATE
>>G<<	6.	CLUTCH DISC
>>G<<	7.	CLUTCH PLATE

		DISASSEMBLY STEPS
>>F<<	8.	SNAP RING
>>E<<	9.	REACTION PLATE
>>E<<	10.	CLUTCH DISC
>>E<<	11.	CLUTCH PLATE
<<A>> >>D<<	12.	SNAP RING
	13.	SPRING RETAINER
>>A<<	14.	D-RING

TSB Revision

DISASSEMBLY STEPS

>>C<< 15. RETURN SPRING
16. OVERDRIVE CLUTCH PISTON
>>A<< 17. D-RING
>>B<< 18. REVERSE CLUTCH PISTON
>>A<< 19. D-RING
>>A<< 20. D-RING
>>A<< 21. D-RING
22. REVERSE CLUTCH RETAINER

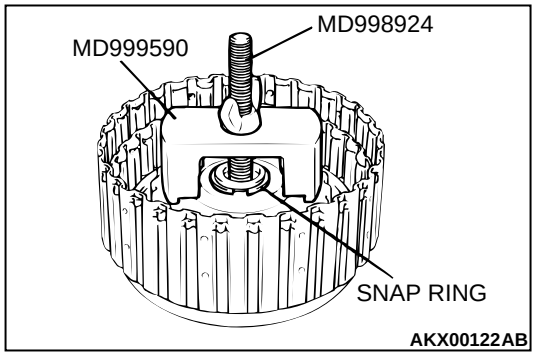
Required Special Tools:

- MB991629: Spring Compressor
- MB991789: Spring Compressor
- MD998924: Spring Compressor Retainer
- MD999590: Spring Compressor

DISASSEMBLY SERVICE POINT

<<A>> SNAP RING REMOVAL

1. Set special tools MD999590 and MD998924 as shown in the illustration.
2. Compress the return spring, and remove the snap ring.



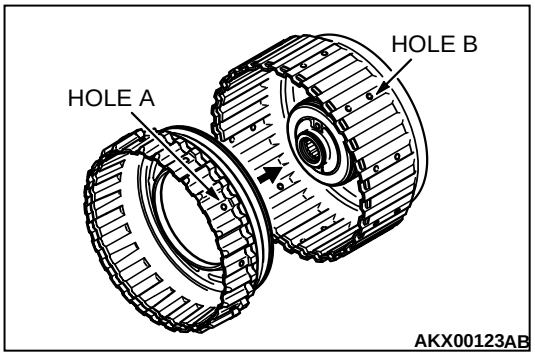
ASSEMBLY SERVICE POINTS

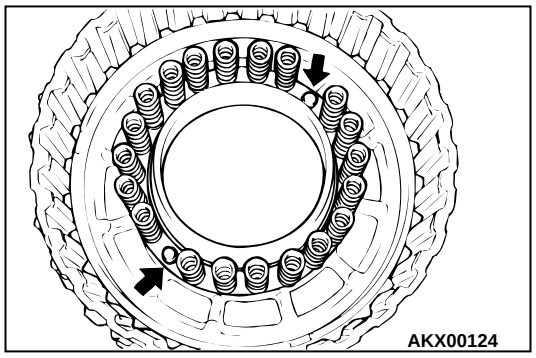
>>A<< D-RING INSTALLATION

1. Apply ATF to the D-ring.
2. Install the D-ring in the reverse clutch retainer, piston, overdrive clutch piston and spring retainer grooves. Make sure that the D-ring is not twisted or damaged when installing.

>>B<< REVERSE CLUTCH PISTON INSTALLATION

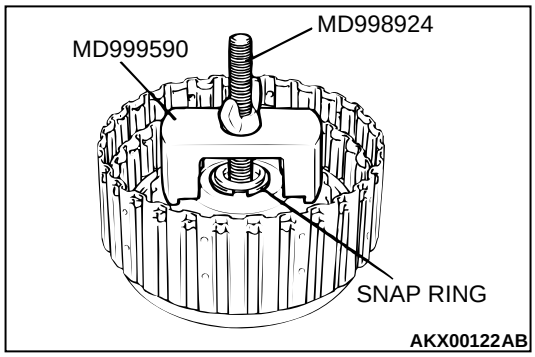
Align the reverse clutch piston and reverse clutch retainer holes (A and B), and then assemble.




AKX00124

>>C<< RETURN SPRING INSTALLATION

Align the two return spring holes with the two projections on the override clutch piston, and then assemble.

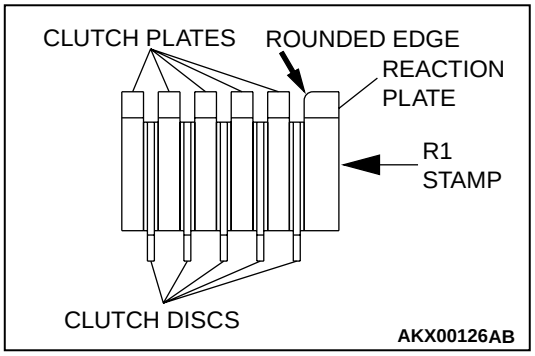


AKX00122AB

>>D<< SNAP RING INSTALLATION

1. Set special tools MD999590 and MD998924 as shown in the illustration.
2. Tighten the special tool nut, and press the spring retainer against the reverse clutch retainer.
3. Install the thickest snap ring that can be fitted in the snap ring groove of reverse clutch retainer.
4. Confirm that clearance between the snap ring and spring retainer is the standard value.

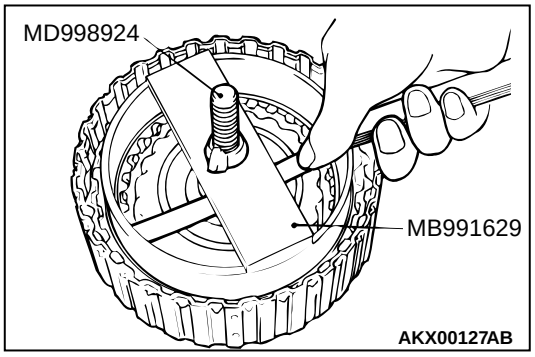
   Standard value: 0 – 0.09 mm (0 – 0.004 inch)



AKX00126AB

>>E<< CLUTCH PLATE/CLUTCH DISC/REACTION PLATE INSTALLATION

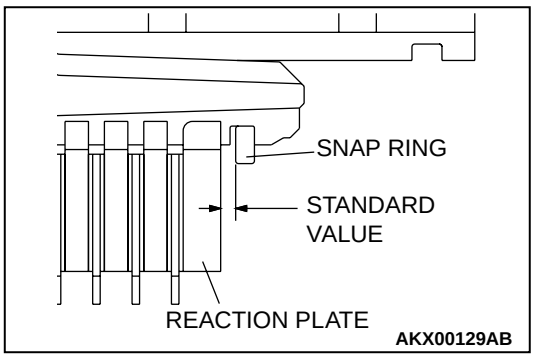
1. Alternately assemble the clutch disc and clutch plate in the reverse clutch piston.
2. Install the reaction plate so that it is oriented as shown in the illustration.



AKX00127AB

>>F<< SNAP RING INSTALLATION

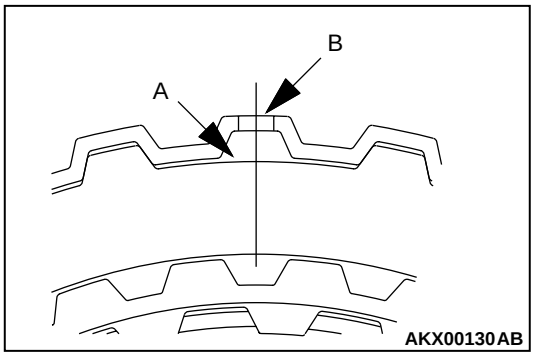
1. Install the snap ring in the reverse clutch piston groove.
2. Set special tools MB991629 and MD998924 as shown in the illustration, and compress the clutch element



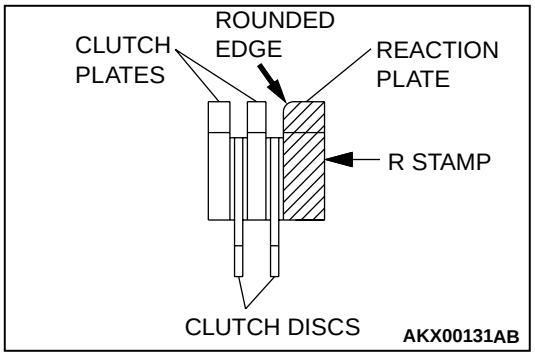
3. Confirm that the clearance (overdrive clutch end play) of the snap ring and reaction plate is the standard value. If the clearance is not at the standard value, select the snap ring and adjust so that the clearance is within the standard value.

   Standard value: 2.0 – 2.2 mm (0.079 – 0.087 inch)

>>G<< CLUTCH PLATE/CLUTCH DISC/REACTION PLATE INSTALLATION

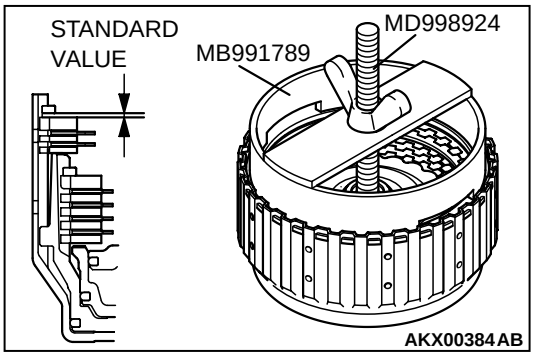


1. Alternately assemble the clutch plate and clutch disc in the reverse clutch retainer. Align and assemble both clutch plates (where there are no teeth) (A in the illustration) with the reverse clutch retainer hole (B in the illustration).



2. Install the reaction plate so that it is oriented as shown in the illustration. Assemble in the same manner as the clutch plate so the section with no teeth (A in the illustration) matches the retainer hole (B in the illustration).

>>H<< SNAP RING INSTALLATION



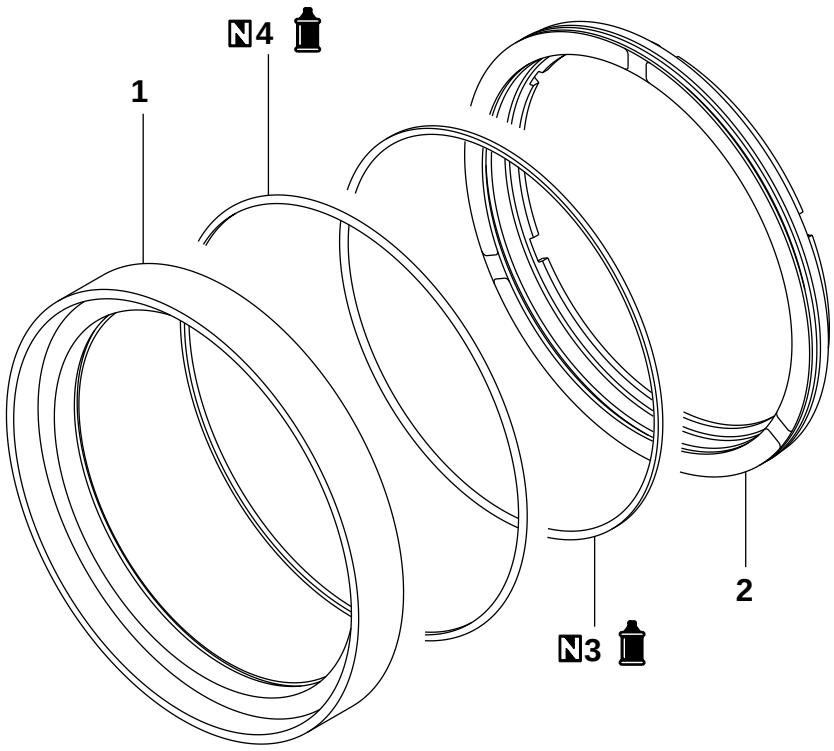
1. Install the snap ring in the reverse clutch retainer groove.
2. Set special tools MB991789 and MD998924 as shown in the illustration, and compress the clutch element.
3. Check that the clearance between the snap ring and the clutch reaction plate is within the standard valus.if not within the standard value, select a snap ring to adjust.

   Standard value: 1.5 – 1.7 mm (0.059 – 0.067 inch)

SECOND BRAKE

DISASSEMBLY AND ASSEMBLY

M1233021800021



AKX00134AB

DISASSEMBLY STEPS		
1.	SECOND BRAKE RETAINER	
2.	SECOND BRAKE PISTON	
>>A<<	3.	D-RING
>>A<<	4.	D-RING

ASSEMBLY SERVICE POINT

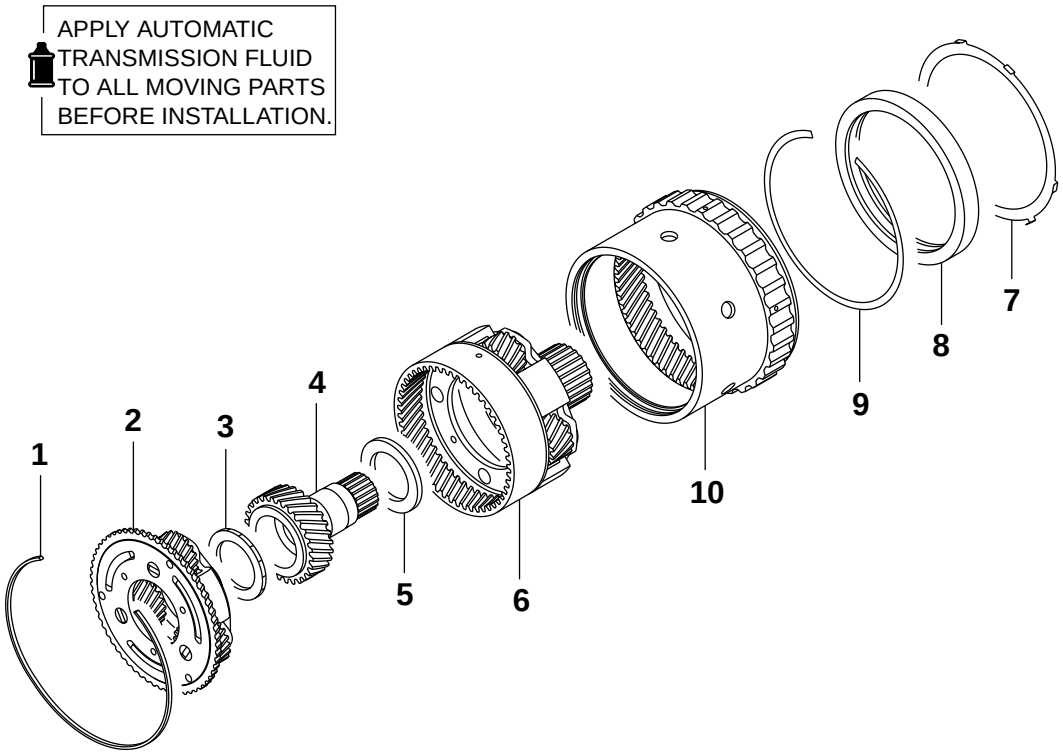
>>A<<D-RING INSTALLATION

1. Apply ATF to the D-ring.
2. Install the D-ring in the grooves on the outer and inner periphery of the piston. Make sure that the D-ring is not twisted or damaged when installing.

LOW REVERSE ANNULUS GEAR

DISASSEMBLY AND ASSEMBLY

M1233027100020



AKX00135AB

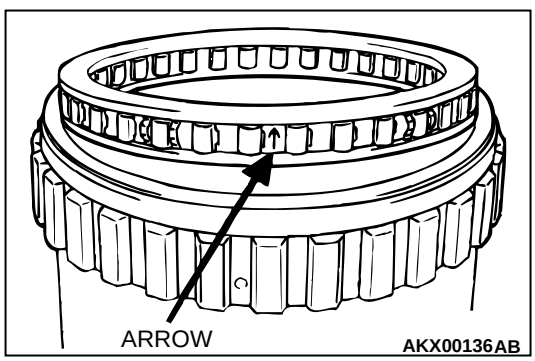
	DISASSEMBLY STEPS
	1. SNAP RING
	2. OVERDRIVE PLANETARY CARRIER
>>D<<	3. THRUST BEARING NO.5
	4. UNDERDRIVE SUN GEAR
>>C<<	5. THRUST BEARING NO.6

	DISASSEMBLY STEPS
	6. OUTPUT PLANETARY CARRIER
>>B<<	7. STOPPER PLATE
>>A<<	8. ONE-WAY CLUTCH
	9. SNAP RING
	10. LOW/REVERSE ANNULUS GEAR

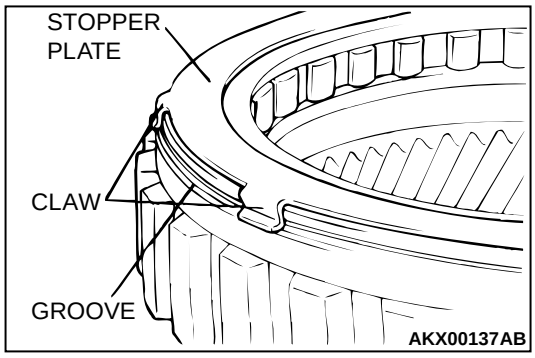
ASSEMBLY SERVICE POINTS

>>A<< ONE-WAY CLUTCH INSTALLATION

Install the one-way clutch so that the arrow stamp is oriented as shown in the illustration.

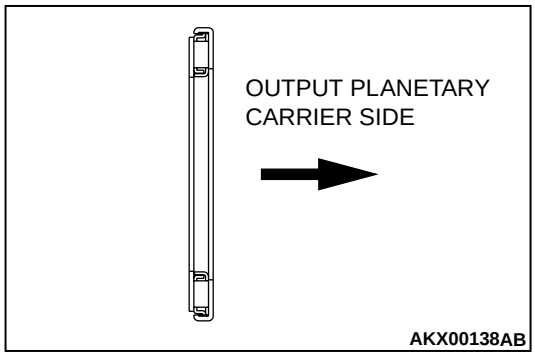


TSB Revision



>>B<< STOPPER PLATE INSTALLATION

Install the stopper plate onto the low/reverse annulus gear. Make sure that the stopper plate claw is securely engaged in the annulus gear groove.

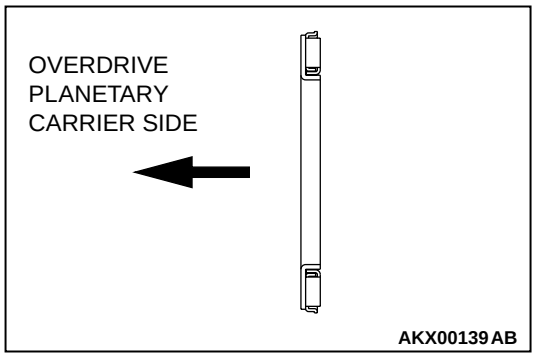


>>C<< THRUST BEARING NUMBER 6 INSTALLATION

⚠ CAUTION

Make sure thrust bearing number 6 is mounted in the correct direction.

Apply Vaseline or petroleum jelly on the thrust bearing number 6, and then install onto the output planetary carrier.



>>D<< THRUST BEARING NUMBER 5 INSTALLATION

⚠ CAUTION

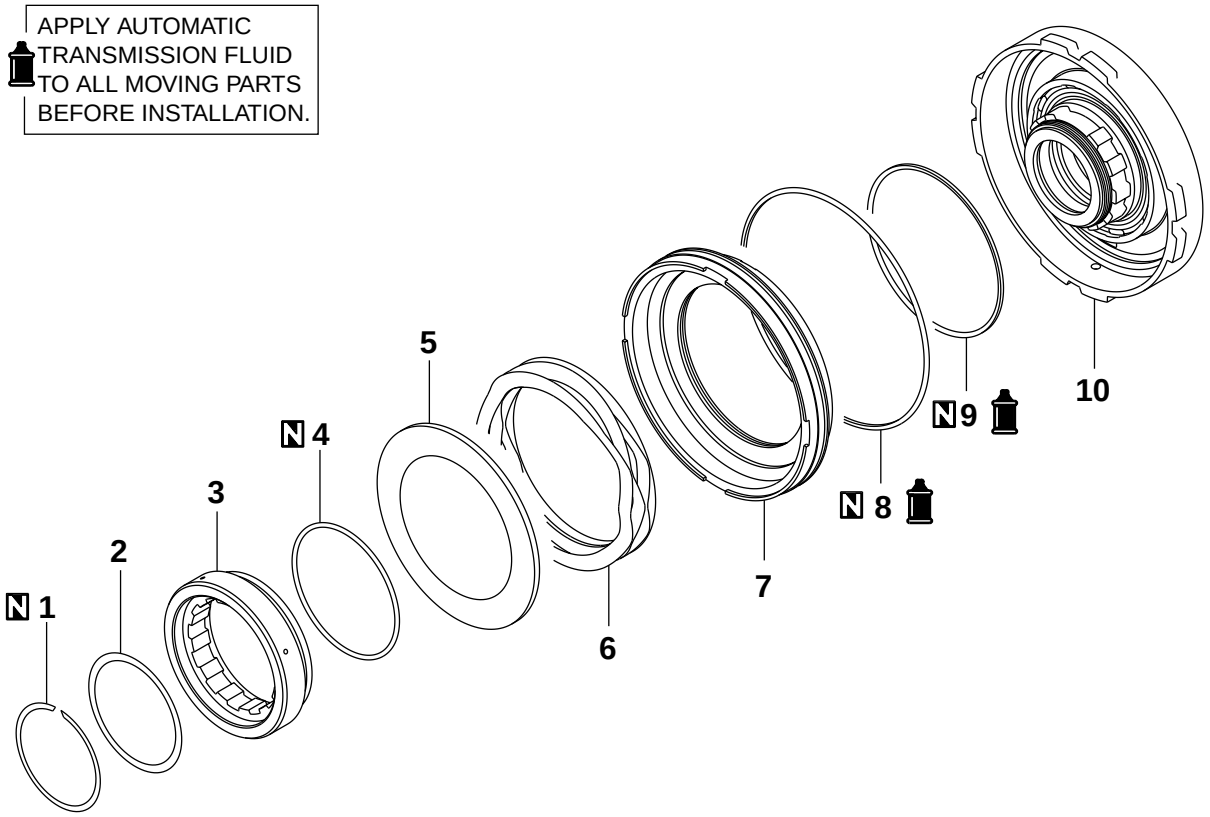
Make sure thrust bearing number 5 is mounted in the correct direction.

Apply Vaseline or petroleum jelly on the thrust bearing number 5, and then install on the overdrive planetary carrier.

CENTER SUPPORT

DISASSEMBLY AND ASSEMBLY

M1233010000021

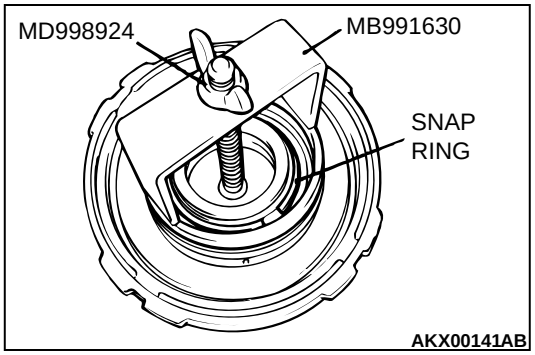


AKX00140AB

		DISASSEMBLY STEPS
<<A>>	>>C<<	1. SNAP RING
		2. PLATE
		3. ONE-WAY CLUTCH INNER RACE
	>>B<<	4. O-RING
		5. SPRING RETAINER
		6. RETURN SPRING
		7. LOW/REVERSE BRAKE PISTON
	>>A<<	8. D-RING
	>>A<<	9. D-RING
		10. CENTER SUPPORT

Required Special Tools:

- MB991630: Spring Compressor
- MD998924: Spring Compressor Retainer



AKX00141AB

DISASSEMBLY SERVICE POINT

<<A>> SNAP RING REMOVAL

1. Set special tools MD998924 and MB991630 as shown in the illustration so that they are pressed against the inner race of the one-way clutch.
2. Screw in the special tool nut, and lightly press against the inner race of the one-way clutch.
3. Remove the snap ring.

TSB Revision

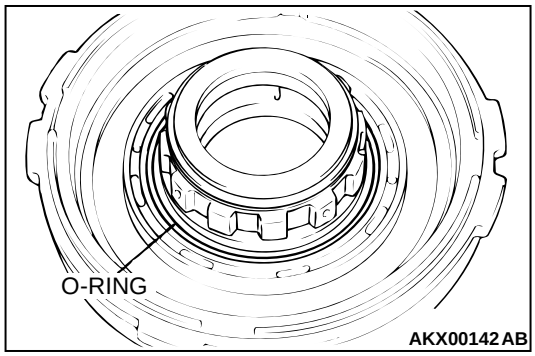
ASSEMBLY SERVICE POINTS

>>A<< D-RING INSTALLATION

1. Apply ATF to the D-ring.
2. Install the D-ring in the grooves on the outer and inner periphery of the piston. Make sure that the D-ring is not twisted or damaged when installing.

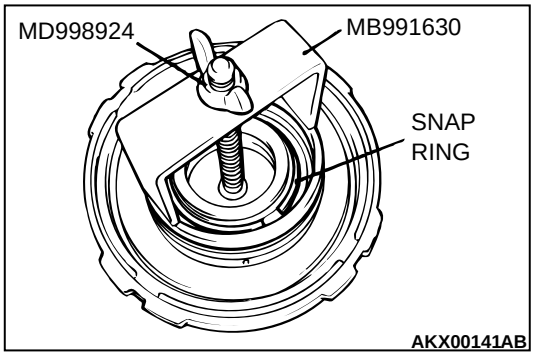
>>B<< O-RING INSTALLATION

Install the O-ring onto the center support at the position shown in the illustration.



>>C<< SNAP RING INSTALLATION

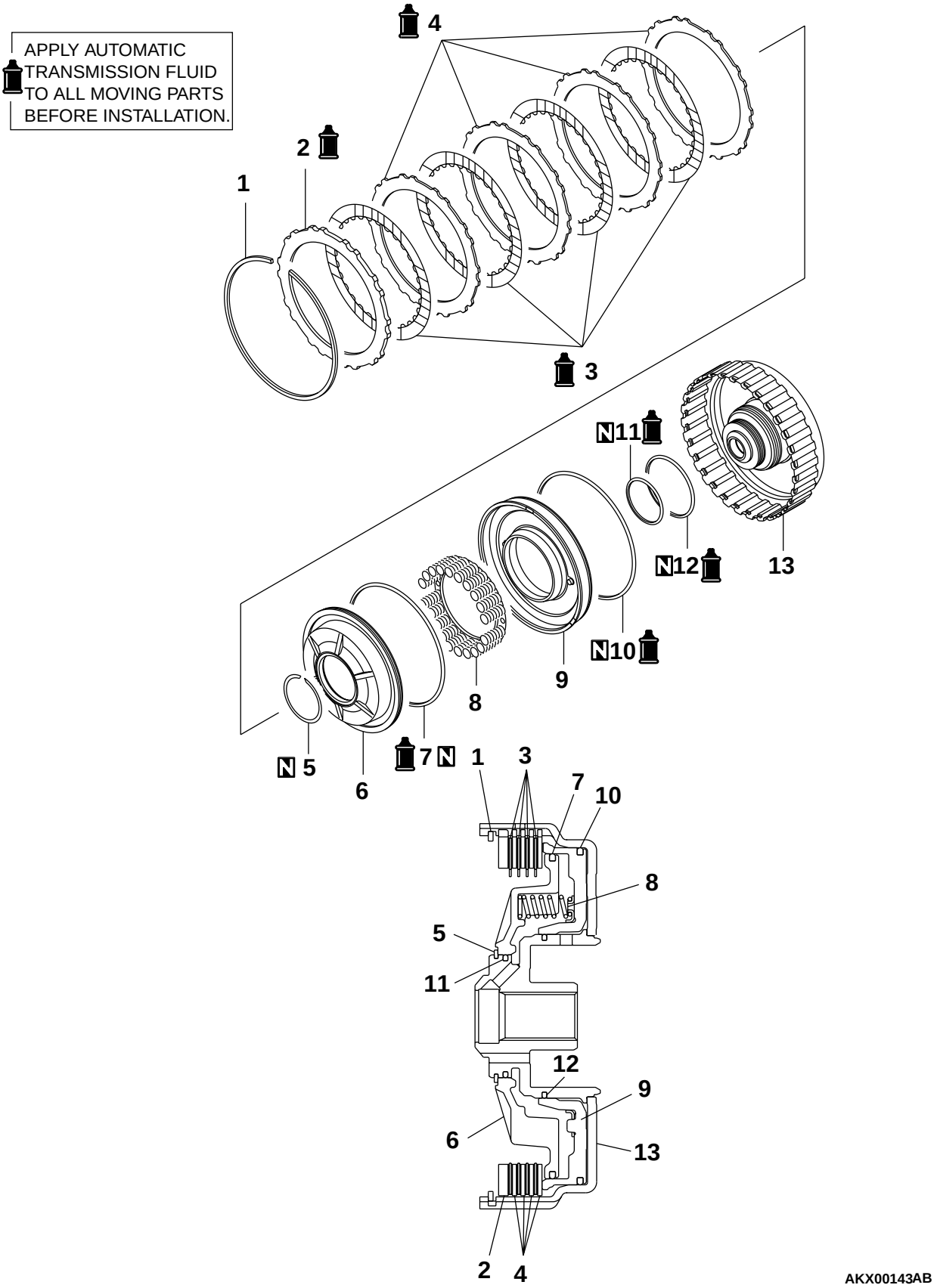
1. Set special tools MD998924 and MB991630 as shown in the illustration.
2. Screw in the special tool nut, and lightly press against the inner race of the one-way clutch.
3. Install the snap ring.



UNDERDRIVE CLUTCH

DISASSEMBLY AND ASSEMBLY

M1233027300024



AKX00143AB

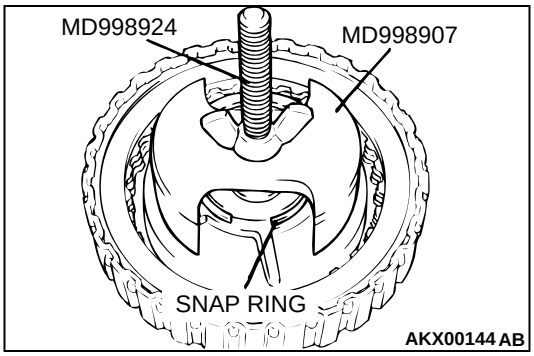
TSB Revision

		DISASSEMBLY STEPS
>>E<<	1.	SNAP RING
>>D<<	2.	REACTION PLATE
>>D<<	3.	CLUTCH DISC
>>D<<	4.	CLUTCH PLATE
<<A>> >>C<<	5.	SNAP RING
	6.	SPRING RETAINER
>>A<<	7.	D-RING
>>B<<	8.	RETURN SPRING
	9.	UNDERDRIVE CLUTCH PISTON
>>A<<	10.	D-RING
>>A<<	11.	D-RING
>>A<<	12.	D-RING
	13.	UNDERDRIVE CLUTCH RETAINER

Required Special Tools:

- MB991629: Spring Compressor
- MD998907: Spring Compressor
- MD998924: Spring Compressor Retainer

DISASSEMBLY SERVICE POINT



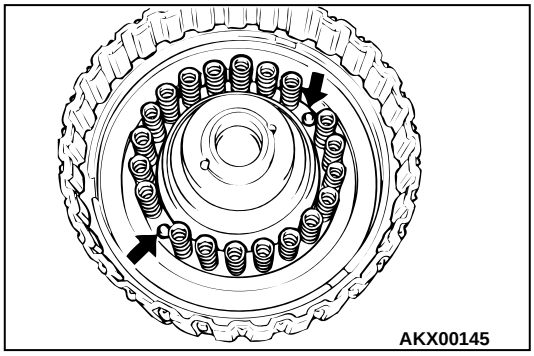
<<A>> SNAP RING REMOVAL

1. Set special tools MD998924 and MD998907 as shown in the illustration.
2. Compress the return spring, and remove the snap ring.

ASSEMBLY SERVICE POINTS

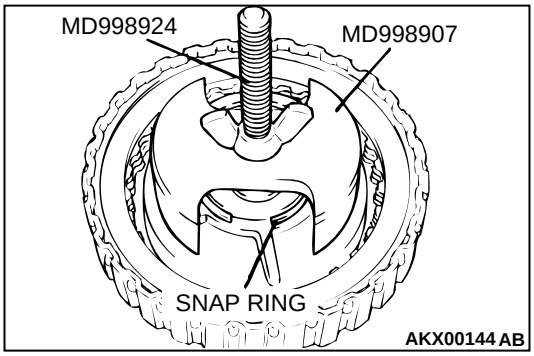
>>A<< D-RING INSTALLATION

1. Apply ATF to the D-ring.
2. Install the D-ring in the grooves of the underdrive clutch retainer and spring retainer. Make sure that the D-ring is not twisted or damaged when installing.



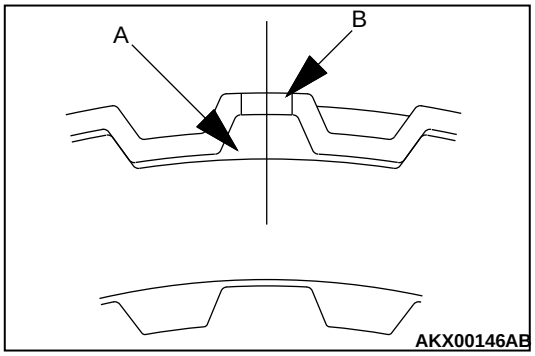
>>B<< RETURN SPRING INSTALLATION

Align the two return spring holes with the two projections on the underdrive clutch piston, and then assemble.



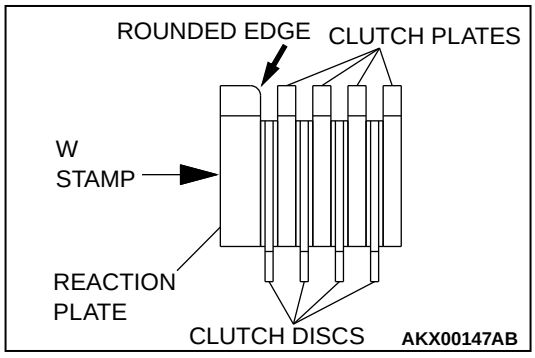
>>C<< SNAP RING INSTALLATION

1. Set special tools MD998924 and MD998907 as shown in the illustration.
2. Compress the return spring, and install the snap ring.



>>D<< CLUTCH PLATE/CLUTCH DISC/REACTION PLATE INSTALLATION

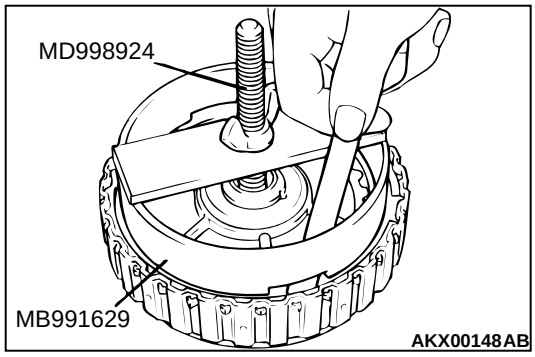
1. Alternately assemble the clutch plate and clutch disc in the underdrive clutch retainer. Align and assemble the four clutch plates (where there are no teeth) (A in the illustration) with the underdrive clutch retainer hole (B in the illustration).

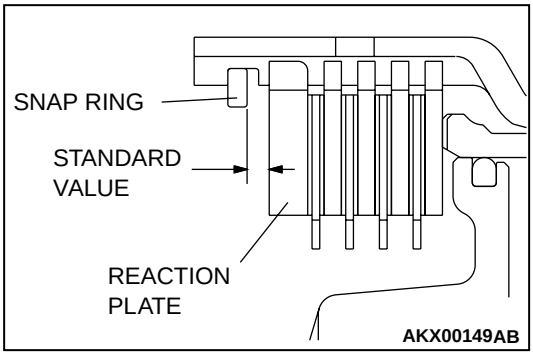


2. Install the reaction plate so that it is oriented as shown in the illustration. Assemble in the same manner as the clutch plate so that the section with no teeth (A in the illustration) matches the retainer hole (B in the illustration).

>>E<< SNAP RING INSTALLATION

1. Install the snap ring in the groove of the underdrive clutch retainer.
2. Set special tools MB991629 and MD998924 as shown in the illustration, and compress the clutch element.





3. Confirm that the clearance (underdrive clutch end play) between the snap ring and reaction plate is the standard value. If the clearance is not at the standard value, select the snap ring and adjust so that the clearance is within the standard value.

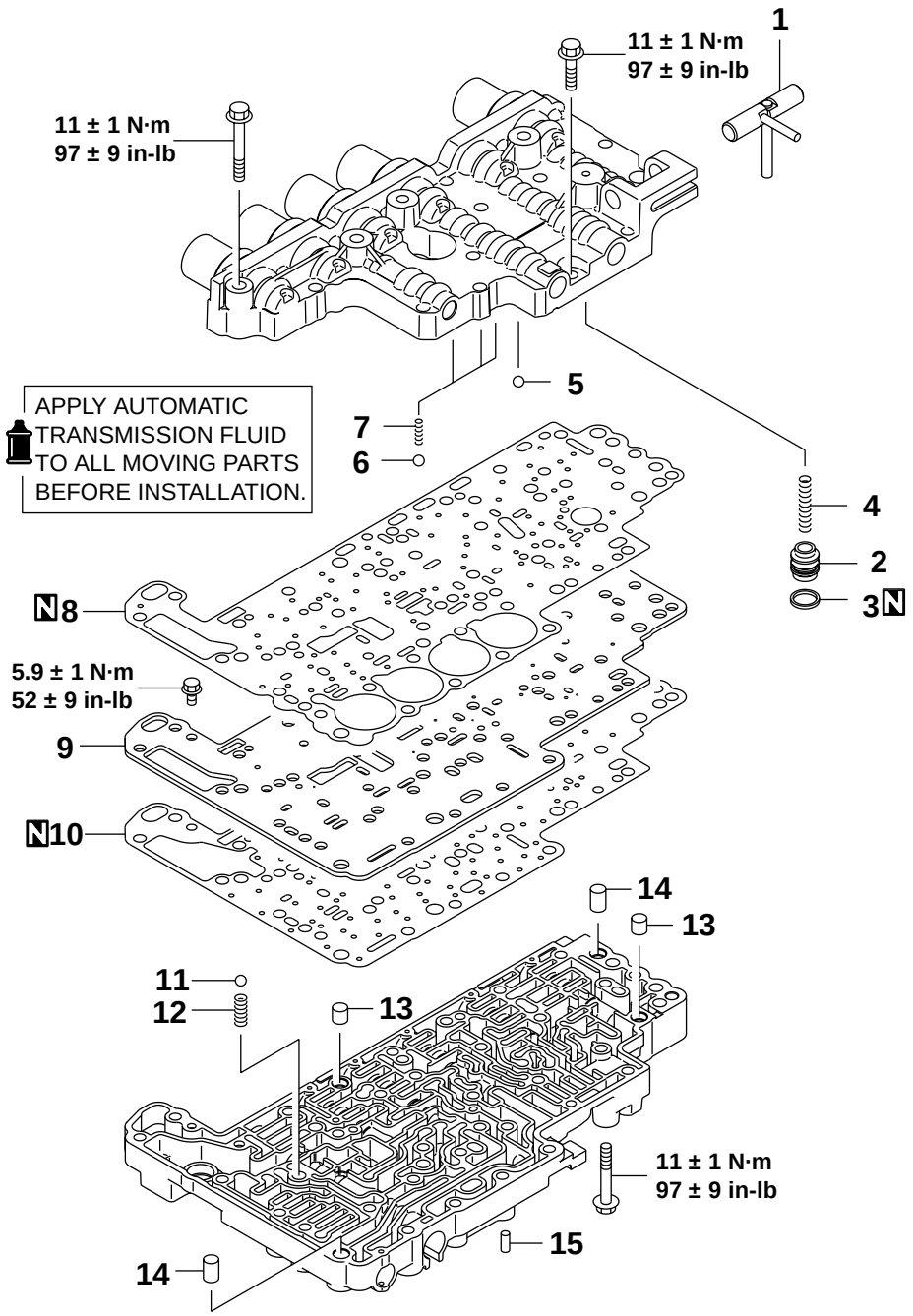
   Standard value: 1.6 – 1.8 mm (0.063 – 0.071 inch)

VALVE BODY

DISASSEMBLY AND ASSEMBLY

M1233012100024

<V4A51>



AKX00150 AB

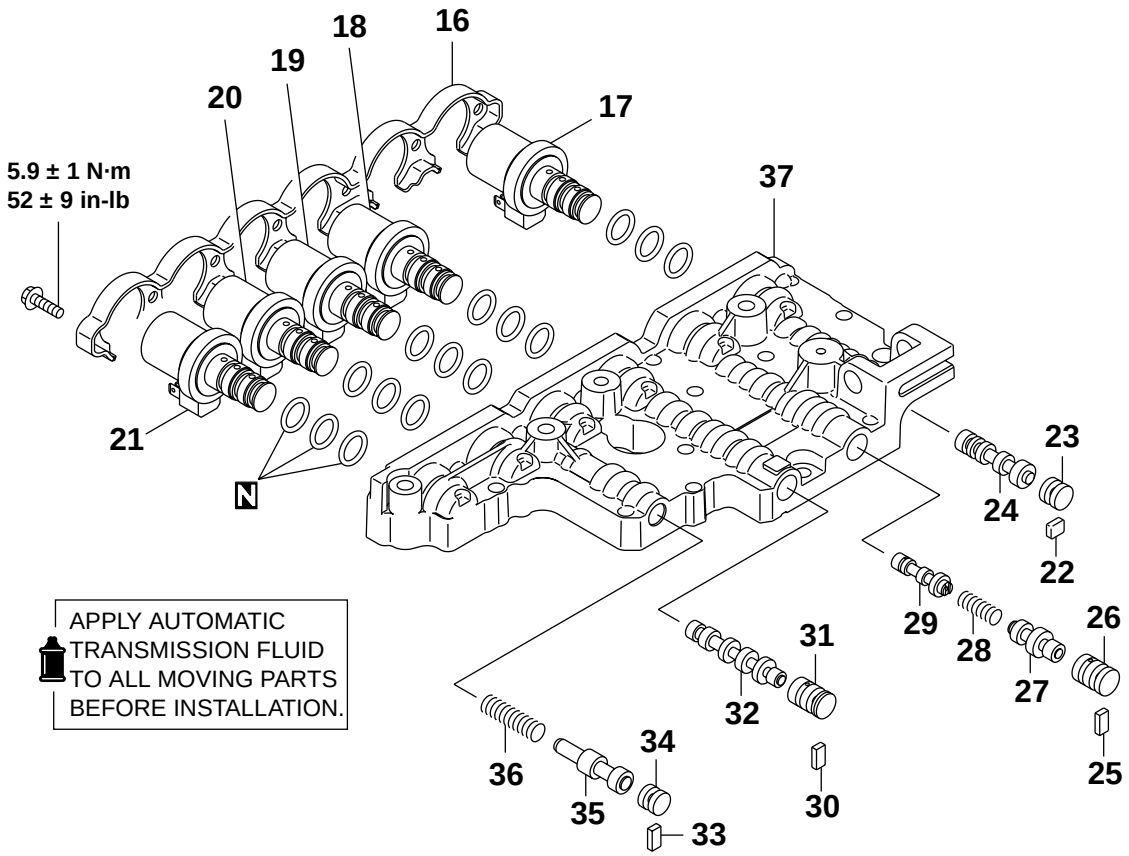
DISASSEMBLY STEPS

- >>G<< 1. MANUAL VALVE PIN
- >>F<< 2. DAMPING VALVE
- >>F<< 3. SEAL RING
- >>F<< 4. DAMPING VALVE SPRING
- >>F<< 5. BALL (ORIFICE CHECK BALL)
- >>F<< 6. STEEL BALL (ORIFICE CHECK BALL)
- >>F<< 7. SPRING

DISASSEMBLY STEPS

- 8. UPPER VALVE BODY GASKET
- 9. SEPARATING PLATE
- 10. LOWER VALVE BODY GASKET
- >>E<< 11. STEEL BALL (LINE RELIEF)
- >>E<< 12. SPRING
- >>D<< 13. KNOCK BUSHING
- >>C<< 14. KNOCK BUSHING
- >>B<< 15. DOWEL PIN

TSB Revision



AKX00151AB

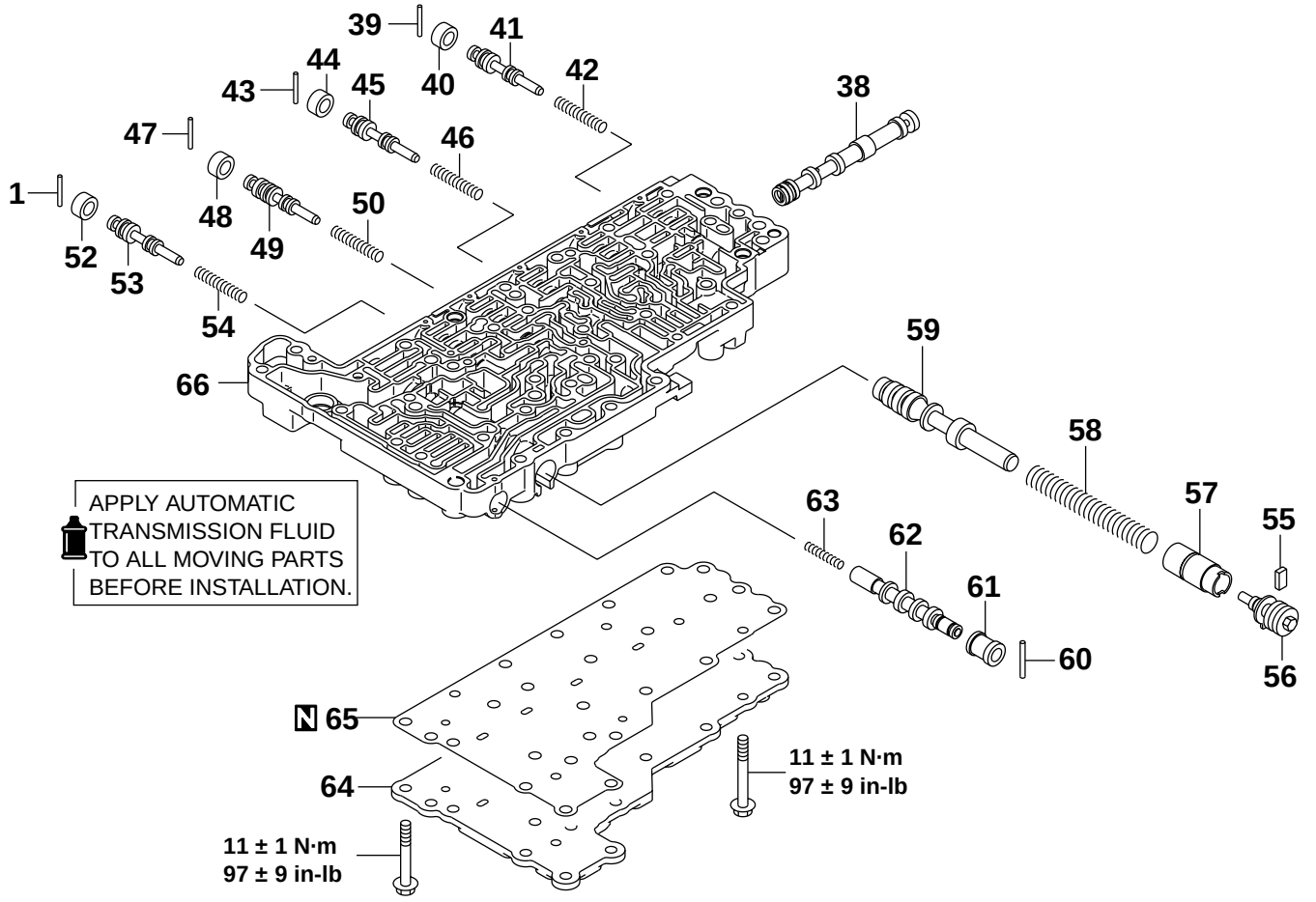
DISASSEMBLY STEPS

- 16. SOLENOID SUPPORT
- **<<A>> >>A<<** 17. LOW/REVERSE BRAKE SOLENOID VALVE
- **<<A>> >>A<<** 18. SECOND BRAKE SOLENOID VALVE
- **<<A>> >>A<<** 19. UNDERDRIVE CLUTCH SOLENOID VALVE
- **<<A>> >>A<<** 20. OVERDRIVE CLUTCH SOLENOID VALVE
- **<<A>> >>A<<** 21. TORQUE CONVERTER CLUTCH CONTROL SOLENOID VALVE
- 22. STOPPER PLATE
- 23. STOPPER PLUG
- 24. SWITCHING VALVE
- 25. STOPPER PLATE

DISASSEMBLY STEPS

- 26. FAIL-SAFE VALVE A SLEEVE
- 27. FAIL-SAFE VALVE A2
- 28. FAIL-SAFE VALVE A SPRING
- 29. FAIL-SAFE VALVE A1
- 30. STOPPER PLATE
- 31. FAIL-SAFE VALVE B SLEEVE
- 32. FAIL-SAFE VALVE B
- 33. STOPPER PLATE
- 34. STOPPER PLUG
- 35. TORQUE CONVERTER PRESSURE CONTROL VALVE
- 36. TORQUE CONVERTER PRESSURE CONTROL VALVE SPRING
- 37. UPPER VALVE BODY

TSB Revision



AKX00152AB

DISASSEMBLY STEPS

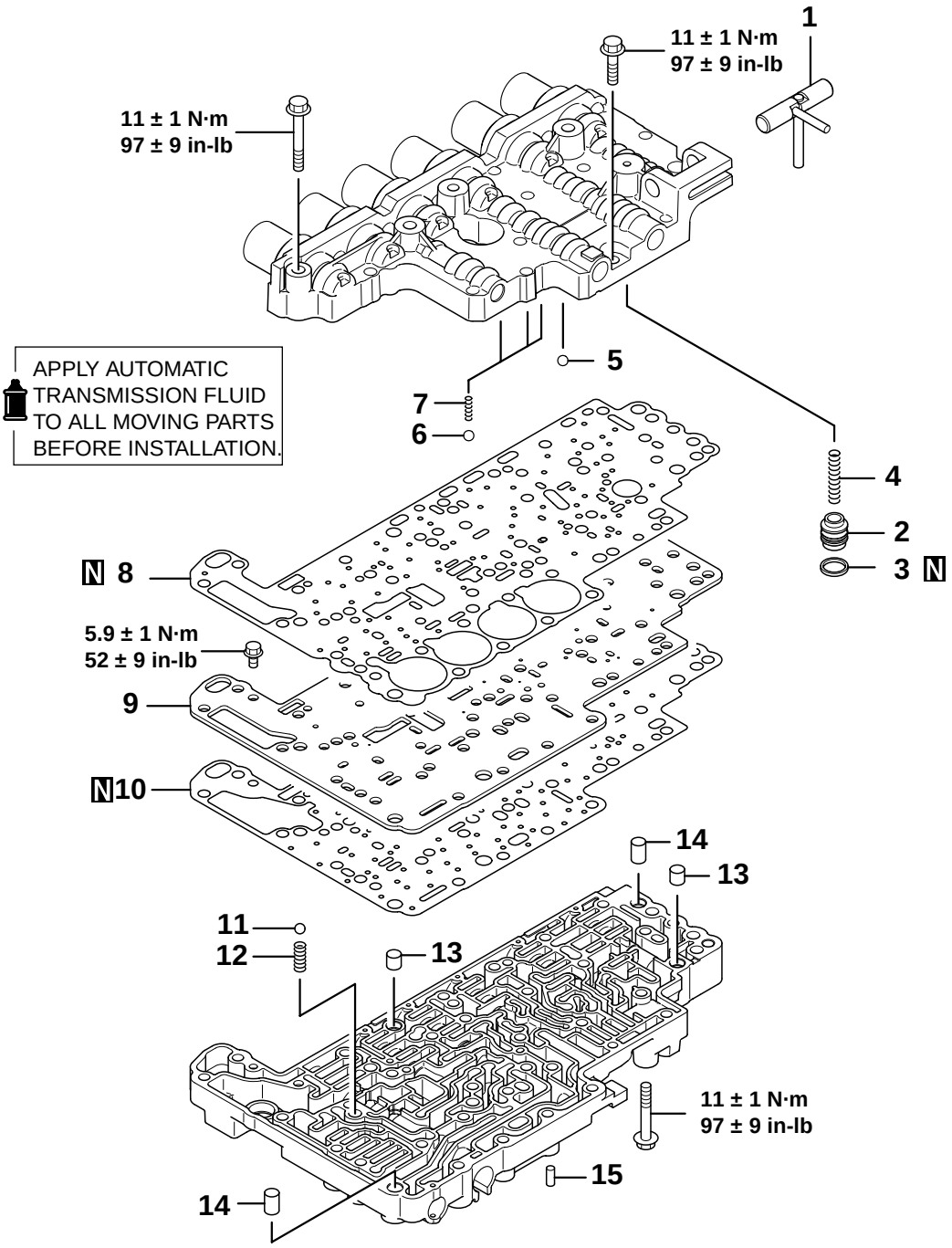
38. MANUAL VALVE
39. ROLLER
40. SECOND BRAKE PRESSURE CONTROL VALVE SLEEVE
41. SECOND BRAKE PRESSURE CONTROL VALVE
42. LOW/REVERSE BRAKE PRESSURE CONTROL VALVE SPRING
43. ROLLER
44. SECOND BRAKE PRESSURE CONTROL VALVE SLEEVE
45. SECOND BRAKE PRESSURE CONTROL VALVE
46. SECOND BRAKE PRESSURE CONTROL VALVE SPRING
47. ROLLER
48. UNDERDRIVE CLUTCH PRESSURE CONTROL VALVE SLEEVE
49. UNDERDRIVE CLUTCH PRESSURE CONTROL VALVE
50. UNDERDRIVE CLUTCH PRESSURE CONTROL VALVE SPRING
51. ROLLER

DISASSEMBLY STEPS

52. OVERDRIVE CLUTCH PRESSURE CONTROL VALVE SLEEVE
53. OVERDRIVE CLUTCH PRESSURE CONTROL VALVE
54. OVERDRIVE CLUTCH PRESSURE CONTROL VALVE SPRING
55. STOPPER PLATE
56. REGULATOR VALVE ADJUSTING SCREW
57. REGULATOR VALVE SLEEVE
58. REGULATOR VALVE SPRING
59. REGULATOR VALVE
60. ROLLER
61. TORQUE CONVERTER CLUTCH CONTROL VALVE SLEEVE
62. TORQUE CONVERTER CLUTCH CONTROL VALVE
63. TORQUE CONVERTER CLUTCH CONTROL VALVE SPRING
64. COVER
65. COVER GASKET
66. LOWER VALVE BODY

TSB Revision

<V5A51>



AKX00386AB

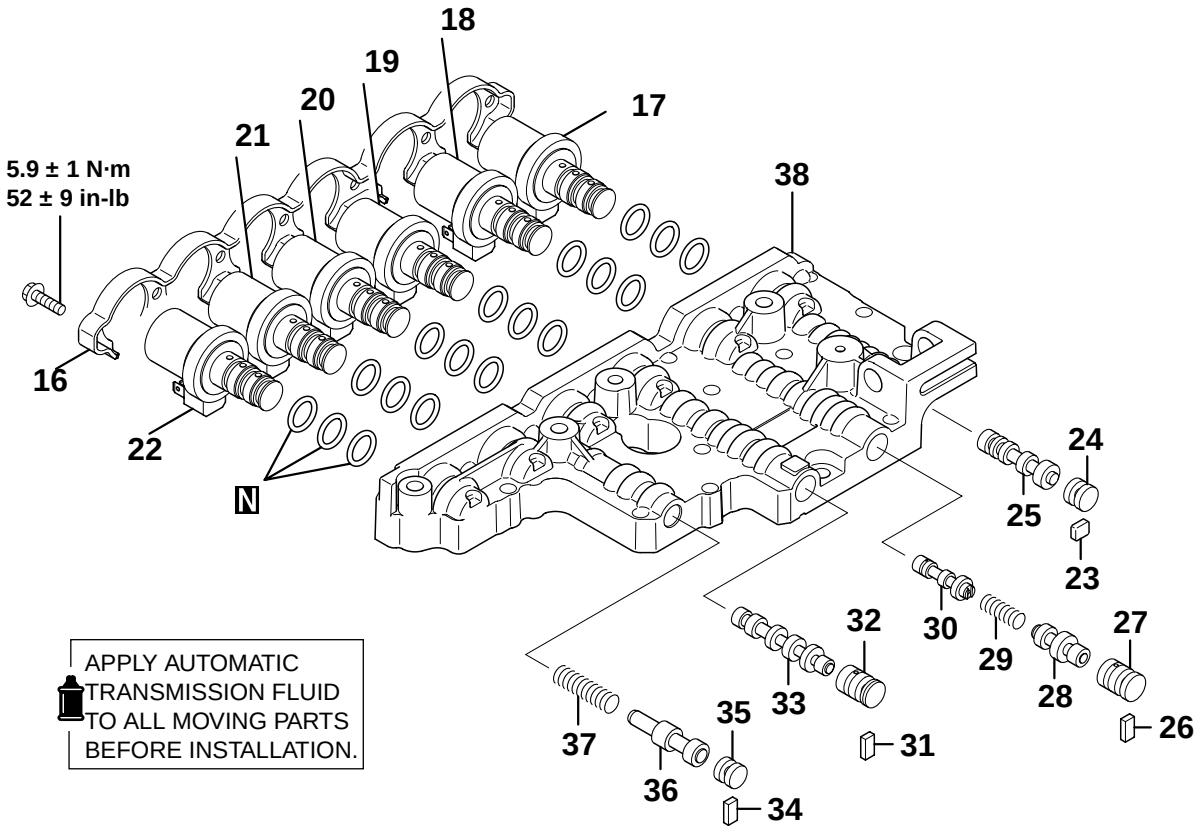
DISASSEMBLY STEPS

- **>>G<<** 1. MANUAL VALVE PIN
- **>>F<<** 2. DAMPING VALVE
- **>>F<<** 3. SEAL RING
- **>>F<<** 4. DAMPING VALVE SPRING
- **>>F<<** 5. BALL (ORIFICE CHECK BALL)
- **>>F<<** 6. STEEL BALL (ORIFICE CHECK BALL)
- **>>F<<** 7. SPRING

DISASSEMBLY STEPS

- 8. UPPER VALVE BODY GASKET
- 9. SEPARATING PLATE
- 10. LOWER VALVE BODY GASKET
- **>>E<<** 11. STEEL BALL (LINE RELIEF)
- **>>E<<** 12. SPRING
- **>>D<<** 13. KNOCK BUSHING
- **>>C<<** 14. KNOCK BUSHING
- **>>B<<** 15. DOWEL PIN

TSB Revision



AKX00387AB

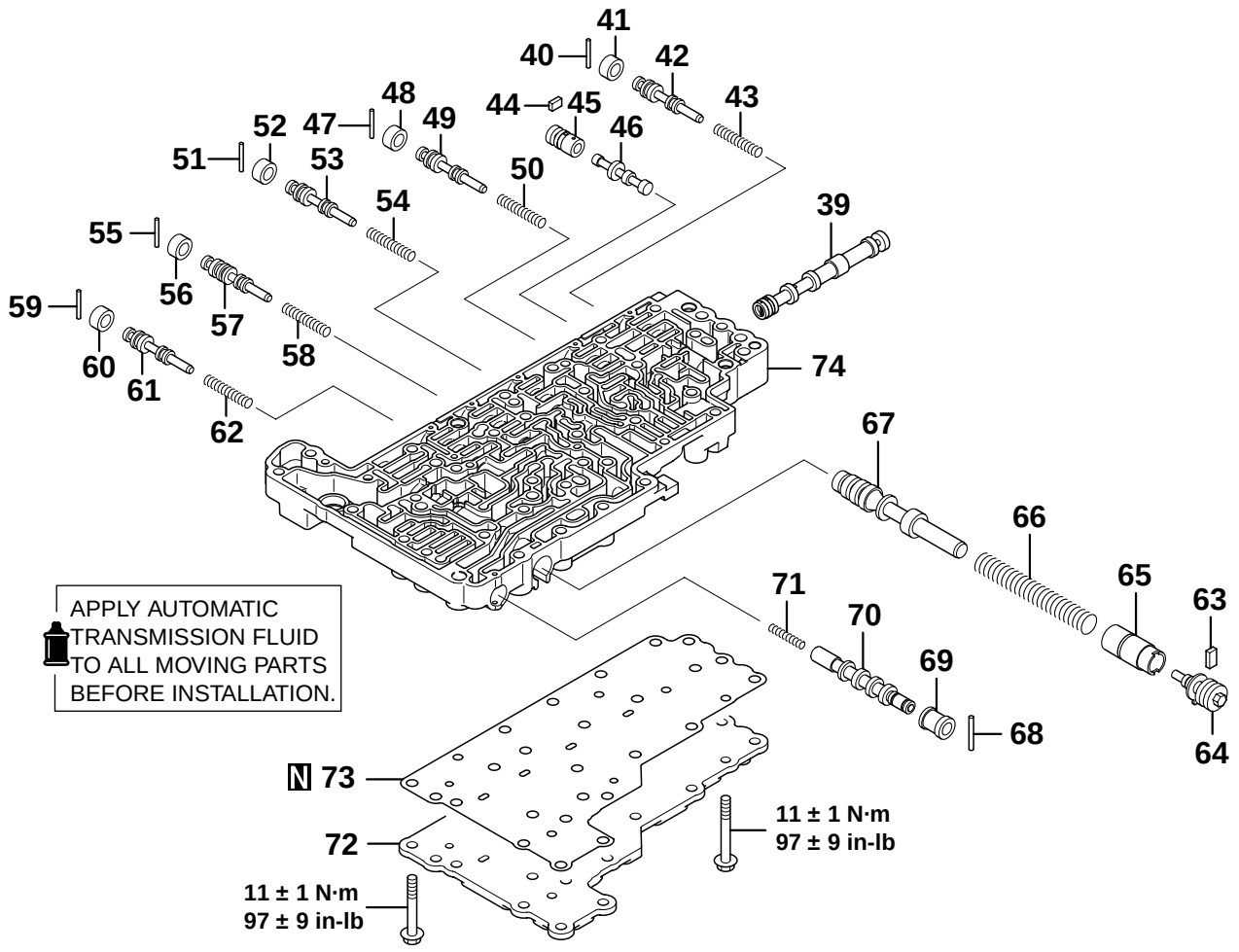
DISASSEMBLY STEPS

- 16. SOLENOID SUPPORT
- **<<A>> >>A<<** 17. LOW/REVERSE BRAKE SOLENOID VALVE
- **<<A>> >>A<<** 18. REDUCTION BRAKE SOLENOID VALVE
- **<<A>> >>A<<** 19. SECOND BRAKE SOLENOID VALVE
- **<<A>> >>A<<** 20. UNDERDRIVE CLUTCH SOLENOID VALVE
- **<<A>> >>A<<** 21. OVERDRIVE CLUTCH SOLENOID VALVE
- **<<A>> >>A<<** 22. TORQUE CONVERTER CLUTCH CONTROL SOLENOID VALVE
- 23. STOPPER PLATE
- 24. STOPPER PLUG
- 25. SWITCHING VALVE

DISASSEMBLY STEPS

- 26. STOPPER PLATE
- 27. FAIL-SAFE VALVE A SLEEVE
- 28. FAIL-SAFE VALVE A2
- 29. FAIL-SAFE VALVE A SPRING
- 30. FAIL-SAFE VALVE A1
- 31. STOPPER PLATE
- 32. FAIL-SAFE VALVE B SLEEVE
- 33. FAIL-SAFE VALVE B
- 34. STOPPER PLATE
- 35. STOPPER PLUG
- 36. TORQUE CONVERTER PRESSURE CONTROL VALVE
- 37. TORQUE CONVERTER PRESSURE CONTROL VALVE SPRING
- 38. UPPER VALVE BODY

TSB Revision



AKX00388AB

DISASSEMBLY STEPS

39. MANUAL VALVE
40. ROLLER
41. LOW/REVERSE BRAKE PRESSURE CONTROL VALVE SLEEVE
42. LOW/REVERSE BRAKE PRESSURE CONTROL VALVE
43. LOW/REVERSE BRAKE PRESSURE CONTROL VALVE SPRING
44. STOPPER PLATE
45. FAIL-SAFE VALVE C SLEEVE
46. FAIL-SAFE VALVE C
47. ROLLER
48. REDUCTION BRAKE PRESSURE CONTROL VALVE SLEEVE
49. REDUCTION BRAKE PRESSURE CONTROL VALVE
50. REDUCTION BRAKE PRESSURE CONTROL VALVE SPRING
51. ROLLER

DISASSEMBLY STEPS

52. SECOND BRAKE PRESSURE CONTROL VALVE SLEEVE
53. SECOND BRAKE PRESSURE CONTROL VALVE
54. SECOND BRAKE PRESSURE CONTROL VALVE SPRING
55. ROLLER
56. UNDERDRIVE CLUTCH PRESSURE CONTROL VALVE SLEEVE
57. UNDERDRIVE CLUTCH PRESSURE CONTROL VALVE
58. UNDERDRIVE CLUTCH PRESSURE CONTROL VALVE SPRING
59. ROLLER
60. OVERDRIVE CLUTCH PRESSURE CONTROL VALVE SLEEVE
61. OVERDRIVE CLUTCH PRESSURE CONTROL VALVE

TSB Revision

DISASSEMBLY STEPS

62. OVERDRIVE CLUTCH PRESSURE CONTROL VALVE SPRING
63. STOPPER PLATE
64. REGULATOR VALVE ADJUSTING SCREW
65. REGULATOR VALVE SLEEVE
66. REGULATOR VALVE SPRING
67. REGULATOR VALVE
68. ROLLER
69. TORQUE CONVERTER CLUTCH CONTROL VALVE SLEEVE
70. TORQUE CONVERTER CLUTCH CONTROL VALVE
71. TORQUE CONVERTER CLUTCH CONTROL VALVE SPRING
72. COVER
73. COVER GASKET
74. LOWER VALVE BODY

DISASSEMBLY SERVICE POINT

<<A>> SOLENOID VALVE REMOVAL

Before removing the solenoid valves, make marks with white paint, etc., so that the these valves can be reinstalled in the original positions.

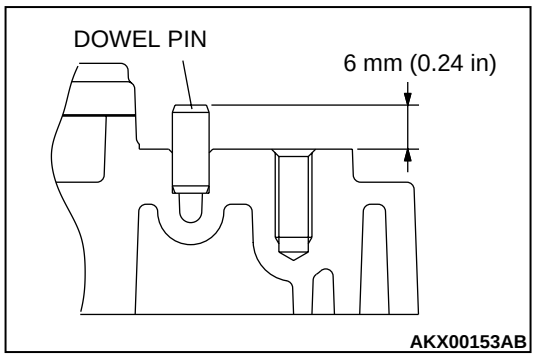
ASSEMBLY SERVICE POINTS

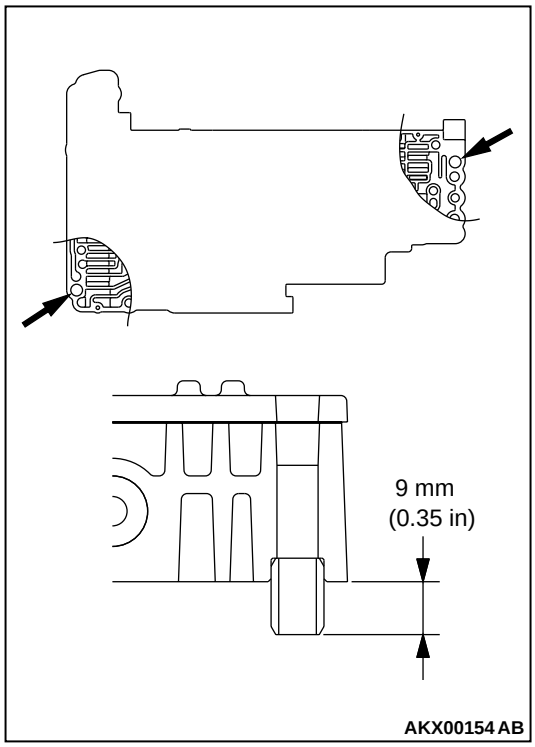
>>A<< SOLENOID VALVE INSTALLATION

1. Apply ATF, petroleum jelly or Vaseline to O-ring, and install it to solenoid valves.
2. Following the marks made when removing, install each solenoid valve in its proper position.

>>B<< DOWEL PIN INSTALLATION

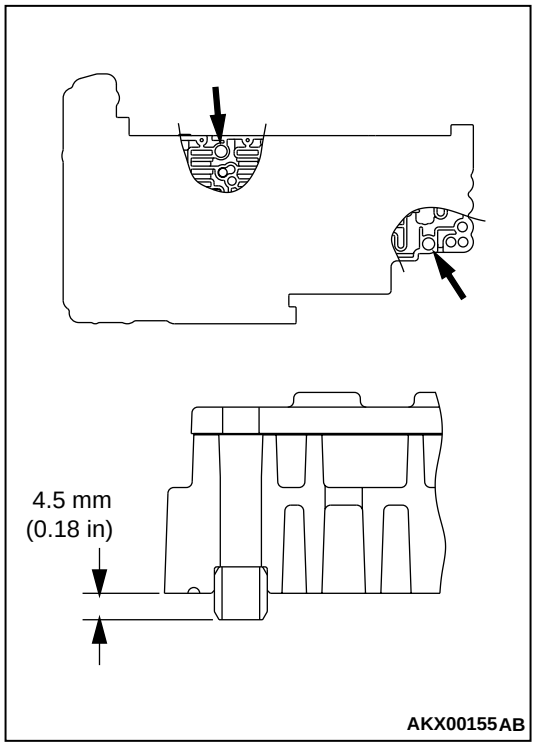
Install the dowel pin at the specified position on the lower valve body.





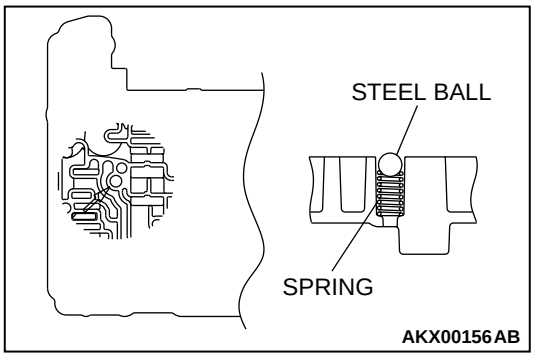
>>C<< KNOCK BUSHING INSTALLATION

Install the knock bushing onto the lower valve body position shown in the illustration.



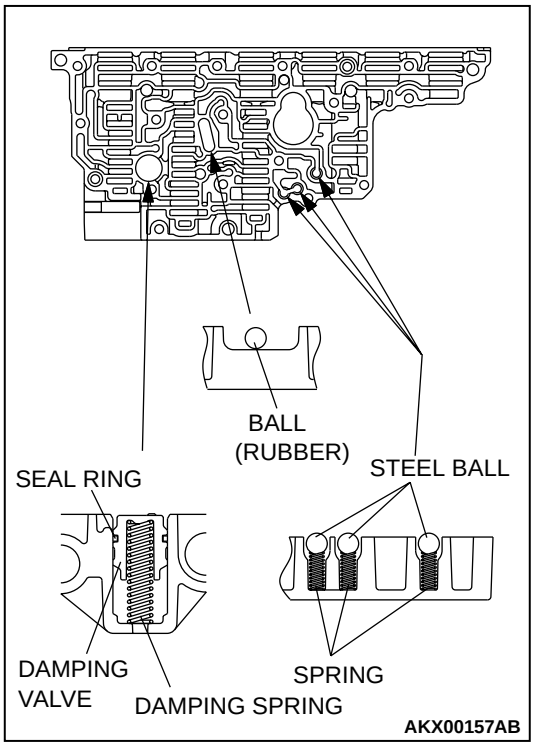
>>D<< KNOCK BUSHING INSTALLATION

Install the knock bushing onto the lower valve body position shown in the illustration.



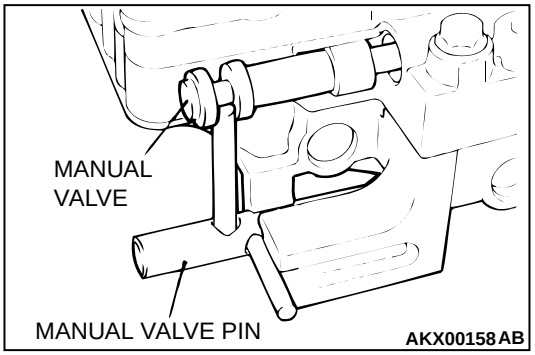
>>E<< SPRING/STEEL BALL (LINE RELIEF) INSTALLATION

Install the spring [7 mm (0.276 inch) diameter, 17.3 mm (0.681 inch) length] and the steel ball [6.4 mm (0.25 inch) diameter] onto the lower valve body position shown in the illustration.



>>F<< SPRING/STEEL BALL (ORIFICE CHECK BALL)/ BALL (ORIFICE CHECK BALL)/DAMPING VALVE SPRING/ SEAL RING/DAMPING VALVE INSTALLATION

1. Install the spring [4.5 mm (0.177 inch) diameter, 15.4 mm (0.606 inch) length] and the steel ball [6.4 mm (0.25 inch) diameter] onto the upper valve body position shown in the illustration.
2. Install the ball (rubber) [6.4 mm (0.25 inch) diameter] onto the upper valve body position shown in the illustration.
3. After installing the seal ring onto the damping valve, install together with the damping valve spring [7.7 mm (0.303 inch) diameter, 35.8 mm (1.409 inch) length] onto the upper valve body position shown in the illustration.



>>G<< MANUAL VALVE INSTALLATION

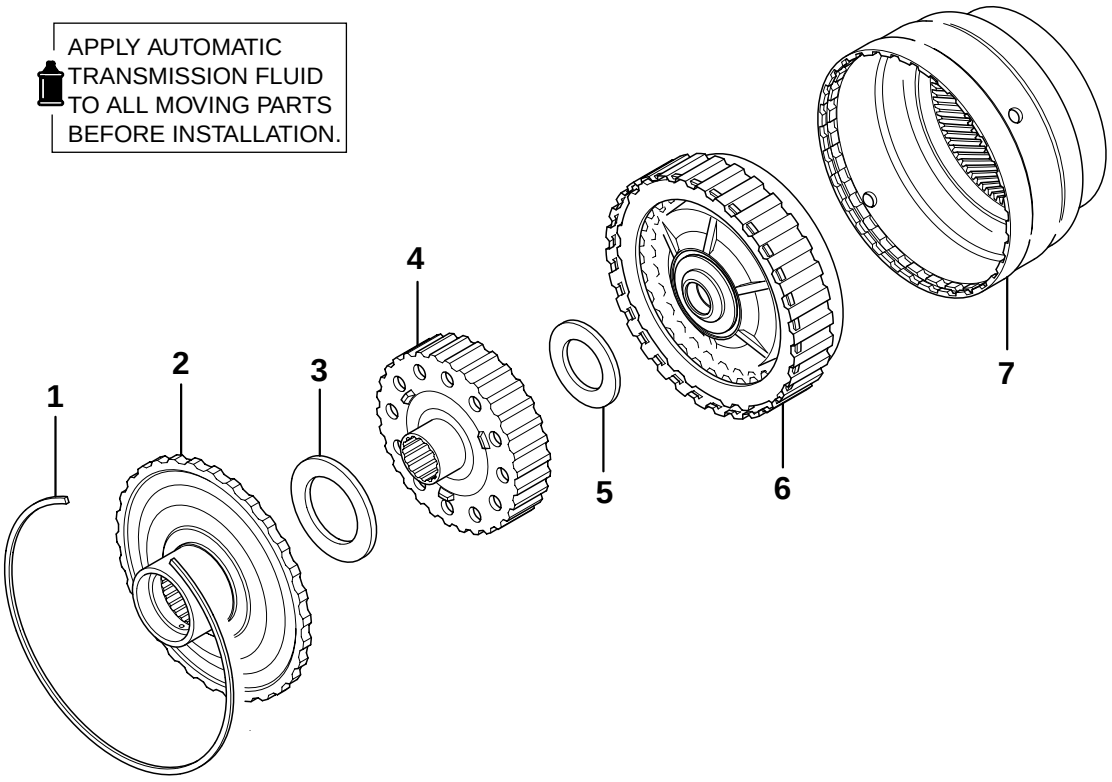
Fit and install the manual valve pin into the groove of the manual valve.

DIRECT ANNURAS GEAR

DISASSEMBLY AND ASSEMBLY

M1233028000015

<V5A51>



AKX00389AB

	DISASSEMBLY STEPS		DISASSEMBLY STEPS
	1. SNAP RING	>>A<<	5. THRUST BEARING NUMBER 11
	2. OUTPUT FLANGE		6. UNDERDRIVE CLUTCH
>>B<<	3. THRUST BEARING NUMBER 10		7. DIRECT ANNULUS GEAR
	4. UNDERDRIVE CLUTCH HUB		

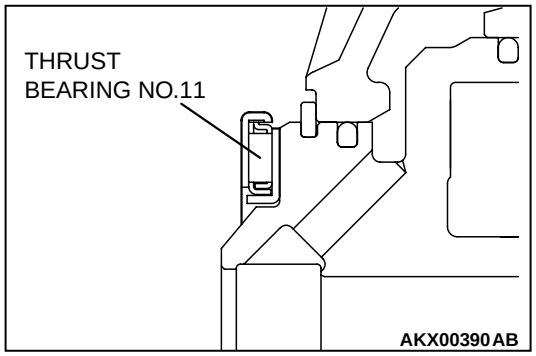
ASSEMBLY SERVICE POINTS

>>A<< THRUST BEARING NUMBER 11 INSTALLATION

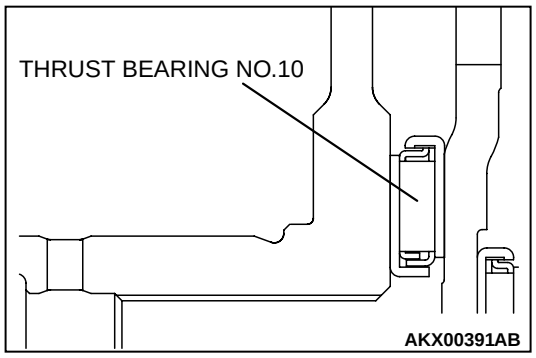
⚠ CAUTION

Make sure thrust bearing number 11 is mounted in the correct direction.

Apply Vaseline or petroleum jelly on the thrust bearing number 11, and then install on the underdrive clutch.



TSB Revision



>>B<< THRUST BEARING NUMBER 10 INSTALLATION

⚠ CAUTION

Make sure thrust bearing number 10 is mounted in the correct direction.

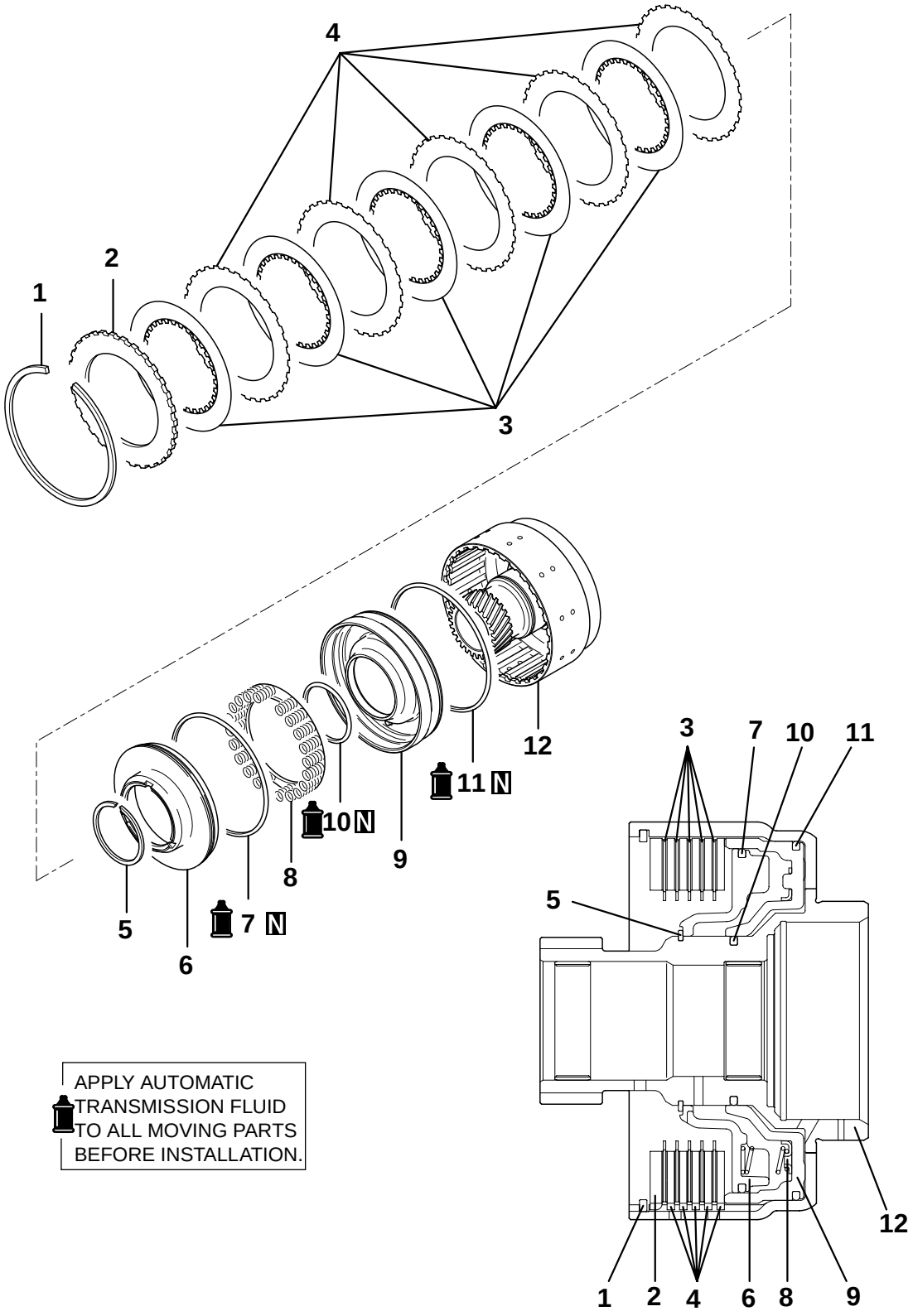
Apply Vaseline or petrolatum jelly on the thrust bearing number 10, and then install on the underdrive clutch hub.

DIRECT CLUTCH

DISASSEMBLY AND ASSEMBLY

M1233009700026

<V5A51>



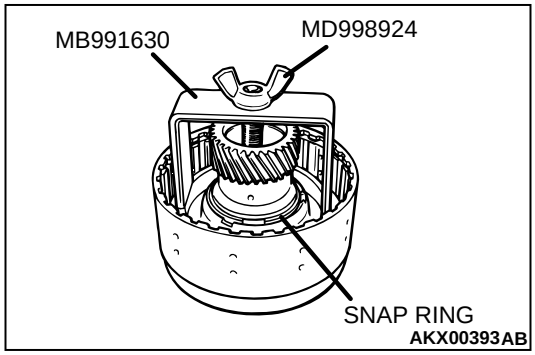
AKX00392AB

TSB Revision

		DISASSEMBLY STEPS
	>>D<< 1.	SNAP RING
	>>C<< 2.	REACTION PLATE
	>>C<< 3.	CLUTCH DISC
	>>C<< 4.	CLUTCH PLATE
<<A>>	>>B<< 5.	SNAP RING
	6.	SPRING RETAINER
	>>A<< 7.	D-RING
	8.	RETURN SPRING
	9.	DIRECT CLUTCH PISTON
	>>A<< 10.	D-RING
	>>A<< 11.	D-RING
	12.	DIRECT CLUTCH RETAINER

Required Special Tools:

- MB991630: Spring Compressor
- MD998924: Spring Compressor Retainer



DISASSEMBLY SERVICE POINT

<<A>> SNAP RING REMOVAL

1. Set special tools MB991630 and MD998924 as shown in the illustration.
2. Compress the return spring, and remove the snap ring.

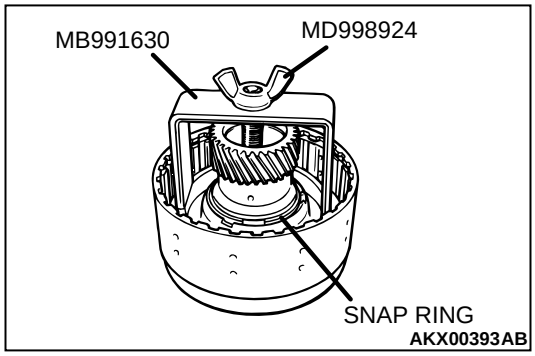
ASSEMBLY SERVICE POINTS

>>A<< D-RING INSTALLATION

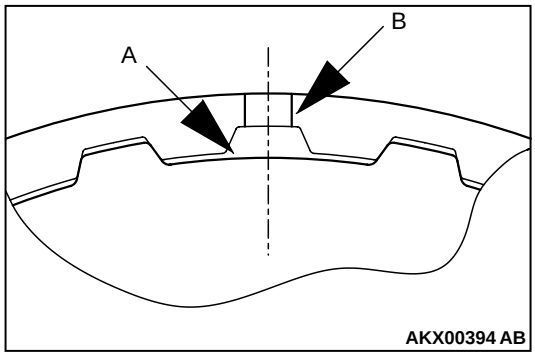
1. Apply ATF to the D-ring.
2. Install the D-ring in the direct clutch piston and spring retainer groove. Make sure that the D-ring is not twisted or damaged when installing.

>>B<< SNAP RING INSTALLATION

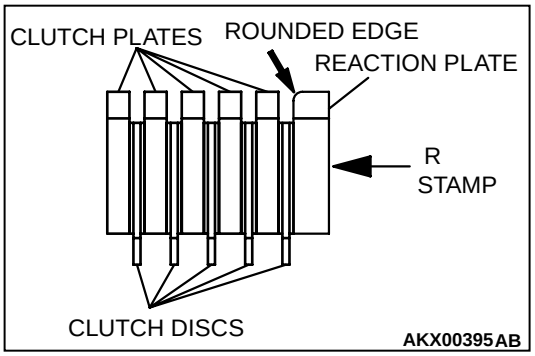
1. Set special tools MB991630 and MD998924 as shown in the illustration.
2. Compress the return spring, and install the snap ring.



>>C<< CLUTCH PLATE/CLUTCH DISC/REACTION PLATE INSTALLATION



1. Alternately assemble the clutch plate and clutch disc in the reverse clutch retainer. Align and assemble both clutch plates (where there are no teeth) (A in the illustration) with the reverse clutch retainer hole (B in the illustration).

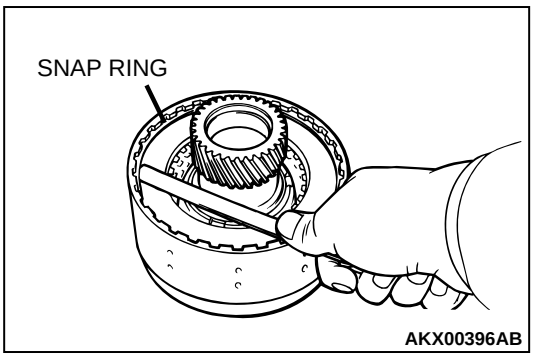


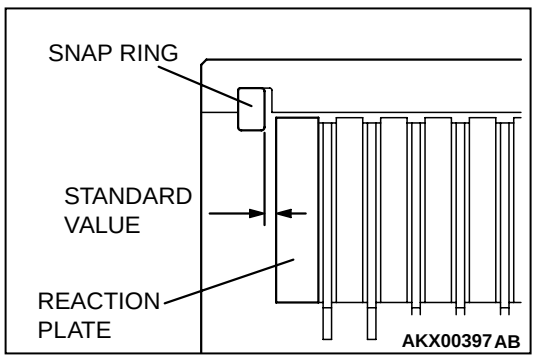
2. Install the reaction plate so that it is oriented as shown in the illustration. Assemble in the same manner as the clutch plate so that the section with no teeth (A in the illustration) matches the retainer hole (B in the illustration).

>>D<< SNAP RING INSTALLATION

1. Install the snap ring in the direct clutch retainer groove.
2. Press the entire periphery of the reaction plate with a force of 49 N (11 pound), and confirm that the clearance (direct clutch end play) between the snap ring and reaction plate is the standard value. If the clearance is not at the standard value, select the snap ring and adjust so that the clearance is within the standard value.

   standard value: 1.0 – 1.2 mm (0.037 – 0.047 inch)



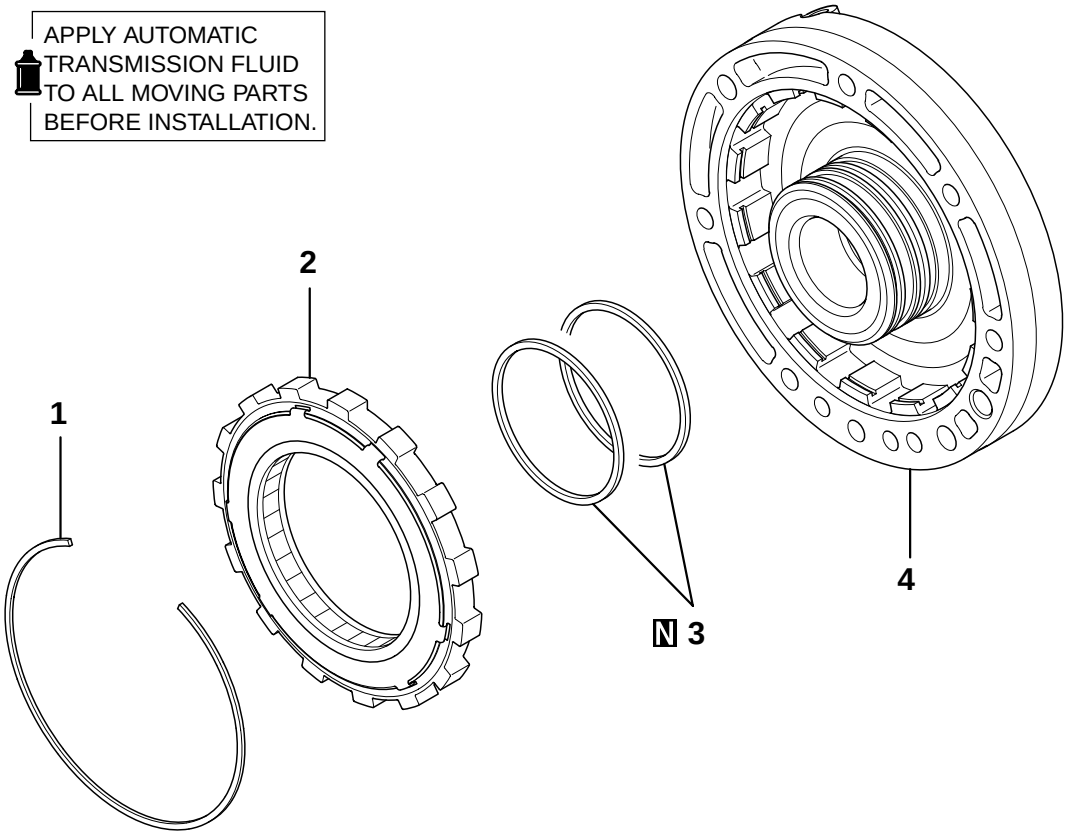


OUTPUTSHAFT SUPPORT

DISASSEMBLY AND ASSEMBLY

M1233029000018

<V5A51>



AKX00398AB

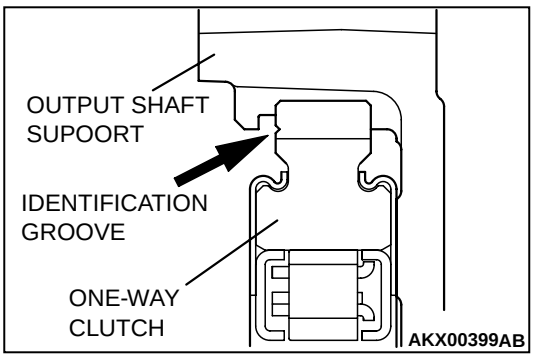
DISASSEMBLY STEPS

1. SNAP RING
>>A<< 2. ONE-WAY CLUTCH
3. SEAL RING
4. OUTPUT SHAFT SUPPORT

ASSEMBLY SERVICE POINT

>>A<< ONE-WAY CLUTCH INSTALLATION

Install the one-way clutch in such a way that it will be oriented in the direction shown.



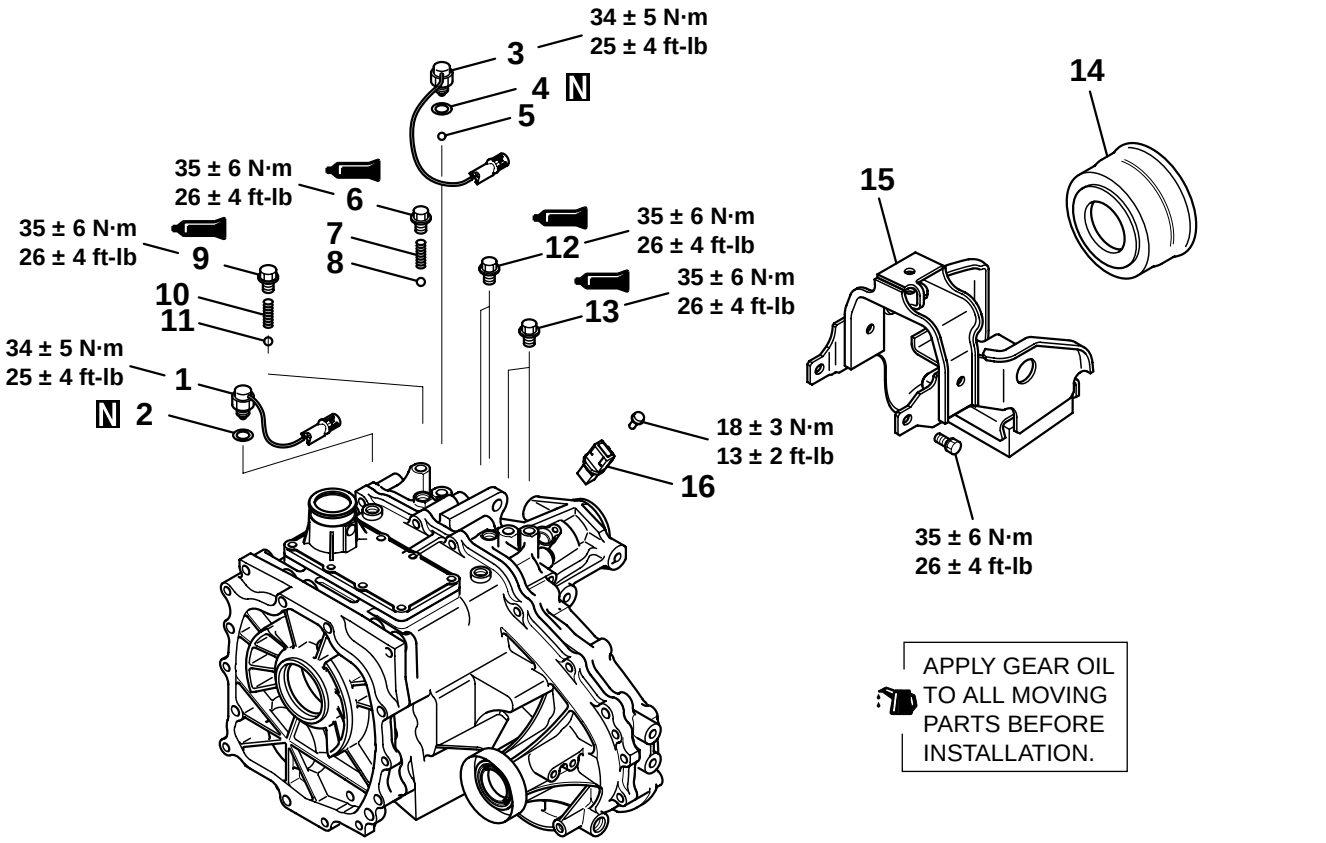
TSB Revision

TRANSFER

DISASSEMBLY AND ASSEMBLY

M1233013300021

<PART TIME 4WD>



AK201404AB

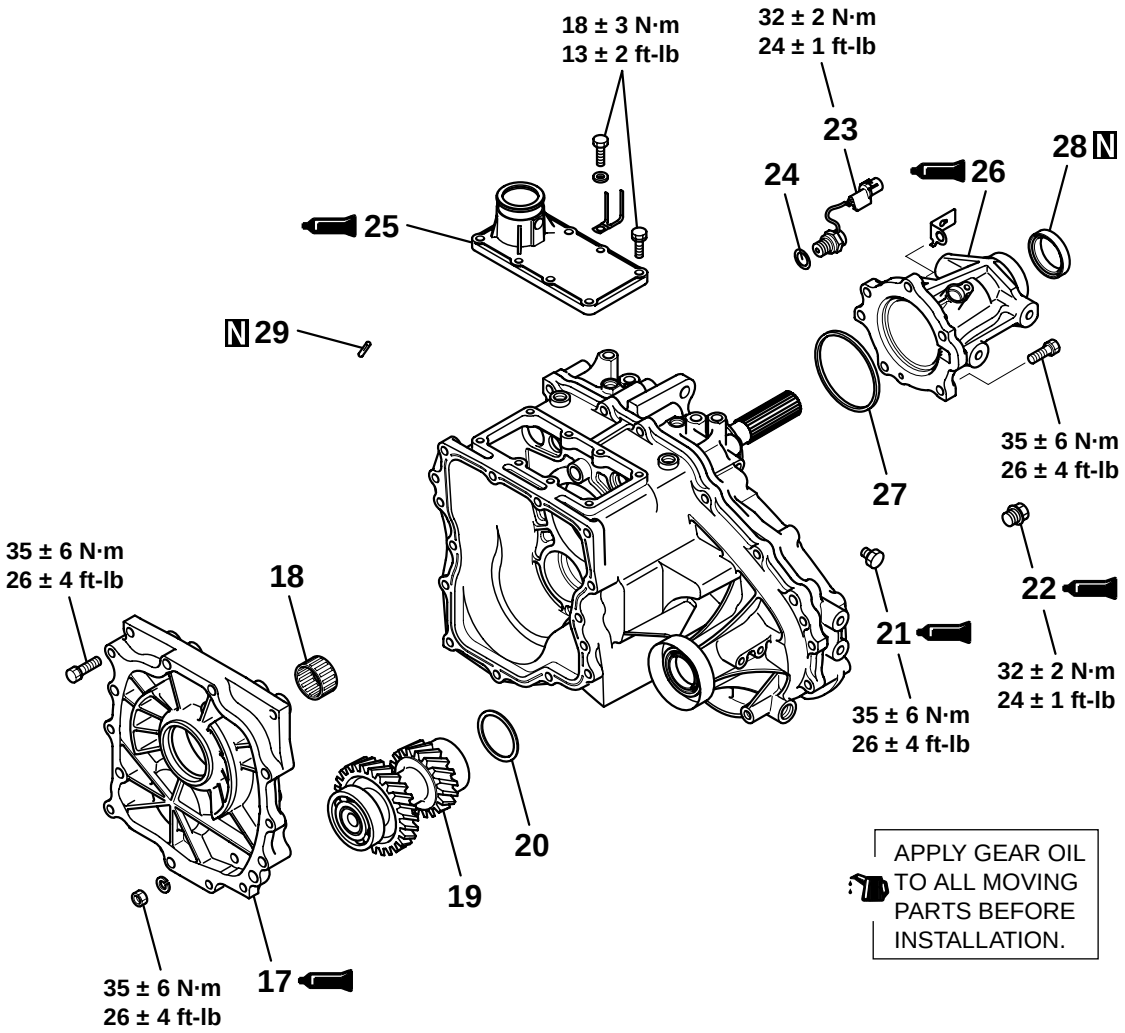
DISASSEMBLY STEPS

1. 2-4WD DETECTION SWITCH
2. GASKET
3. H-L DETECTION SWITCH
4. GASKET
5. STEEL BALL
- >>K<< 6. PLUG
- >>N<< 7. SPRING
8. STEEL BALL

DISASSEMBLY STEPS

- >>K<< 9. PLUG
- >>N<< 10. SPRING
11. STEEL BALL
- >>K<< 12. PLUG
- >>K<< 13. PLUG
14. DUST SEAL GUARD
15. DYNAMIC DAMPER
16. VEHICLE SPEED SENSOR

TSB Revision



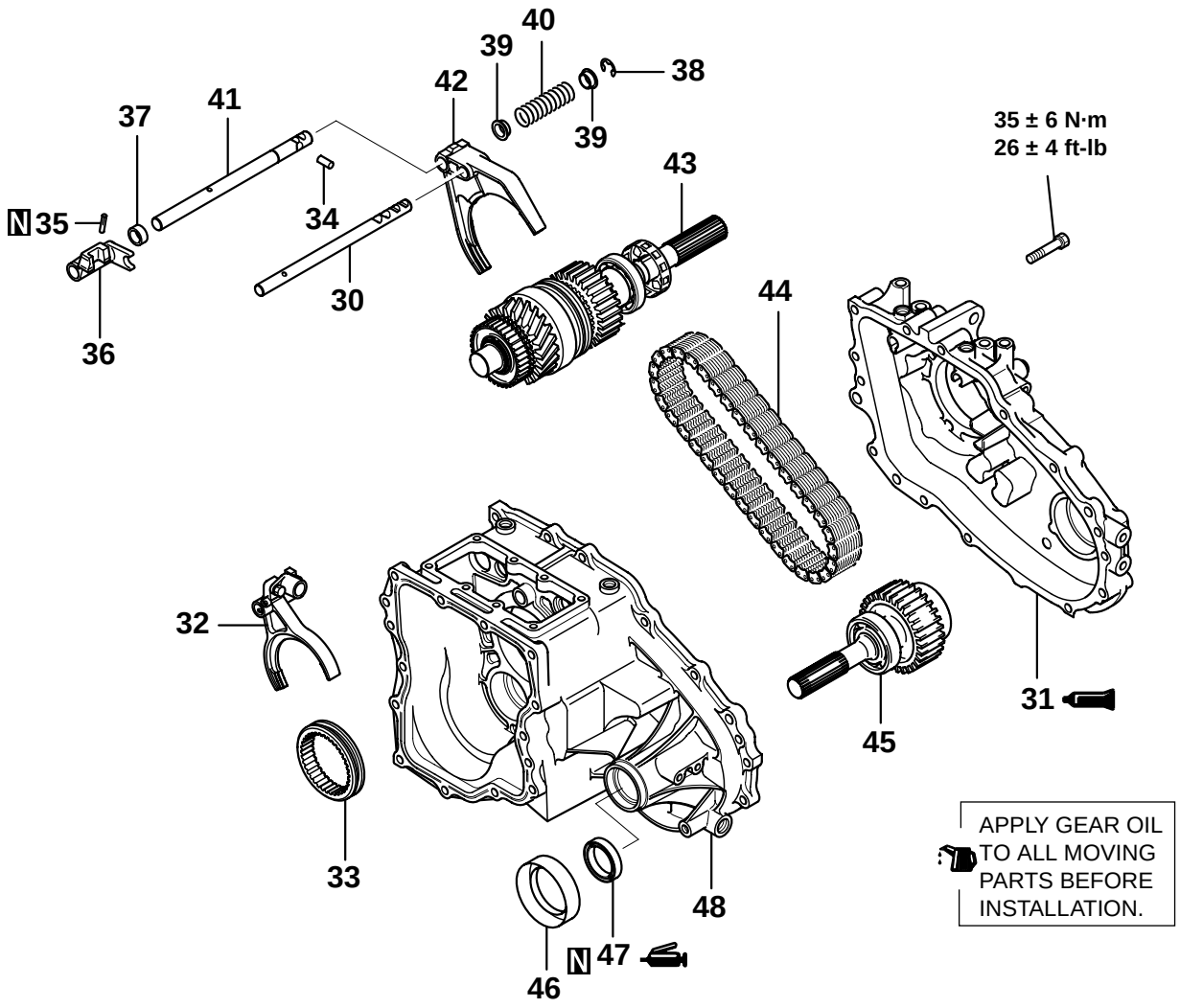
AK201405AB

DISASSEMBLY STEPS

- >>M<< 17. TRANSFER CASE PLATE
- 18. NEEDLE BEARING
- 19. COUNTERSHAFT GEAR
- >>L<< 20. SPACER
- >>K<< 21. PLUG
- >>J<< 22. H-L SHIFT RAIL PLUG
- 23. LOW SWITCH

DISASSEMBLY STEPS

- 24. GASKET
- >>I<< 25. CONTROL HOUSING
- >>H<< 26. REAR COVER
- >>G<< 27. SPACER
- >>F<< 28. OIL SEAL
- >>E<< 29. SPRING PIN (H-L SHIFT FORK)



AK000016AB

		DISASSEMBLY STEPS
<<A>>	>>E<<	30. H-L SHIFT RAIL
<<A>>	>>D<<	31. CHAIN COVER
		32. H-L SHIFT FORK
		33. H-L CLUTCH SLEEVE
	>>D<<	34. INTERLOCK PLUNGER
	>>C<<	35. SPRING PIN
		36. 2-4WD SHIFT LUG
		37. DISTANCE PIECE
		38. E-CLIP
		39. SPRING SEAT

		DISASSEMBLY STEPS
		40. SPRING
		41. 2-4WD SHIFT RAIL
		42. 2-4WD SHIFT FORK
<<B>>	>>B<<	43. REAR OUTPUT SHAFT
<<B>>	>>B<<	44. CHAIN
<<B>>	>>B<<	45. FRONT OUTPUT SHAFT
		47. DUST SEAL GUARD
	>>A<<	48. OIL SEAL
		49. TRANSFER CASE

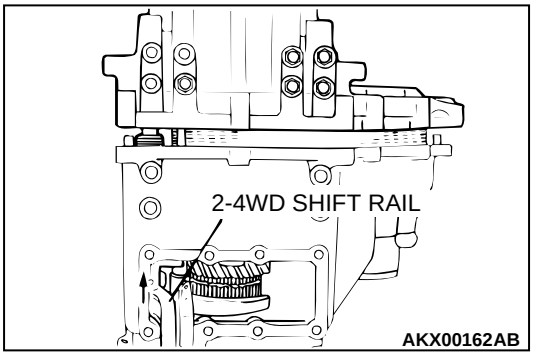
Required Special Tools:

- MB990929: Installer Adapter
- MB990938: Handle

TSB Revision

DISASSEMBLY SERVICE POINT

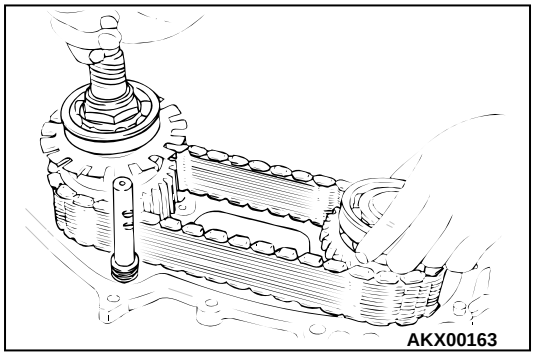
<<A>> H-L SHIFT RAIL/CHAIN COVER REMOVAL



NOTE: If the 2-4WD shift rail is at the 2WD position, the chain cover cannot be removed because interlock is actuated.

1. Shift the 2-4WD shift rail at the 4WD position.
2. Remove the chain cover, and then remove the H-L shift rail.

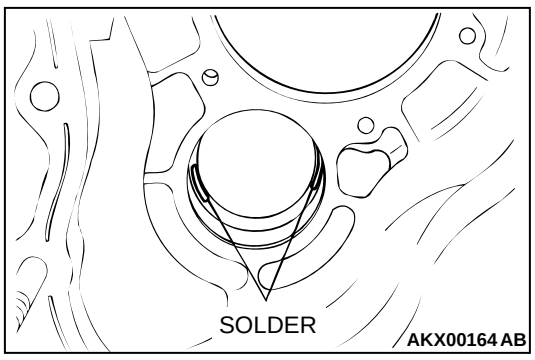
<<B>> REAR OUTPUT SHAFT/CHAIN/FRONT OUTPUT SHAFT REMOVAL



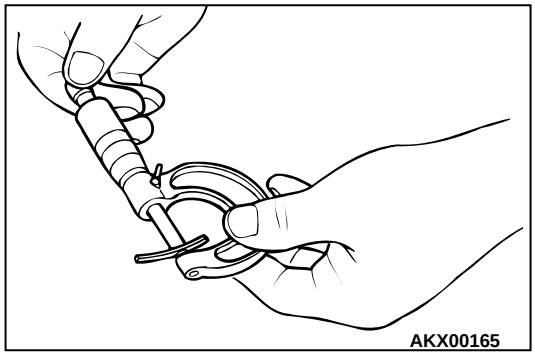
Remove the rear output shaft, chain and front output shaft as a set.

ADJUSTMENT BEFORE ASSEMBLY

SPACER SELECTION FRO ADJUSTMENT OF COUNTER-SHFT GEAR END PLAY



1. Place pieces of solder [approximately 10 mm (0.4 inch) in length and 1.6 mm (0.06 inch) in diameter] in the transfer case housing as shown.
2. Install the countershaft gear into the transfer case.
3. Install the transfer case plate and tighten the bolts.

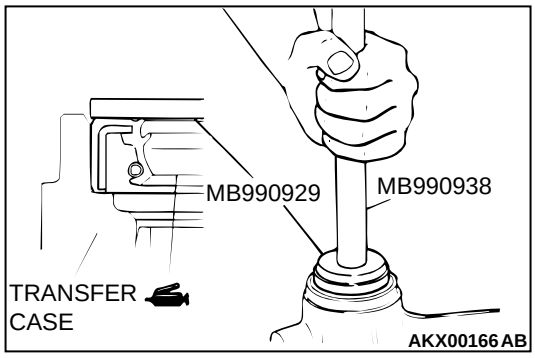


4. Using a micrometer, measure the thickness of the crushed solder. Based on the result, select a spacer which adjusts the end play to the standard value shown below:

   Standard value: 0 – 0.15 mm (0 – 0.006 inch)

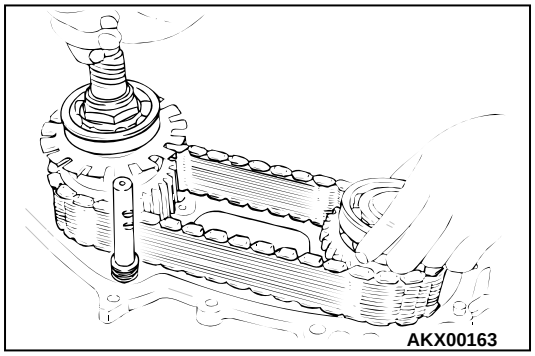
   NOTE: If the solder is not crushed, repeat steps 1 and 2 using thicker solder.

ASSEMBLY SERVICE POINTS



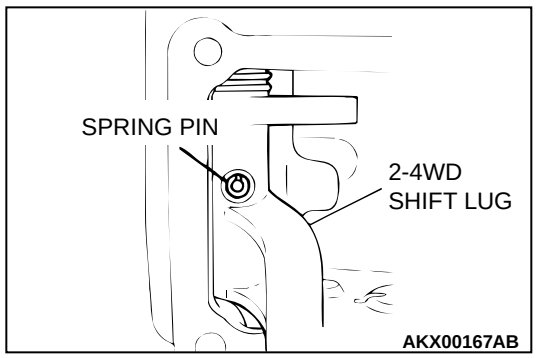
>>A<< OIL SEAL INSTALLATION

1. Use special tools MB990929 and MB990938 to install the oil seal.
2. Apply MITSUBISHI genuine grease Part number 0101011 or equivalent to the lip of the oil seal.



>>B<< FRONT OUTPUT SHAFT/CHAIN/REAR OUTPUT SHAFT INSTALLATION

1. Engage the chain precisely with the sprocket of the rear output shaft and the front output shaft.
2. Install the 2-4WD shift fork on the 2-4WD clutch sleeve. While passing them beside the 2-4WD shift rail, install the front output shaft, and chain and rear output shaft.



>>C<< SPRING PIN INSTALLATION

1. Align the 2-4WD shift lug with the 2-4WD shift rail spring pin hole.
2. Hammer in the spring valve so that the spring pin slit matches the center of the shift rail shaft.

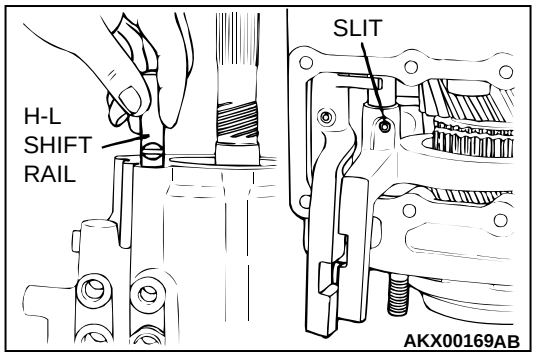
>>D<< INTERLOCK PLUNGER/CHAIN COVER INSTALLATION

1. Insert the interlock plunger into a position where it does not interfere with 2-4WD shift rail.

⚠ CAUTION

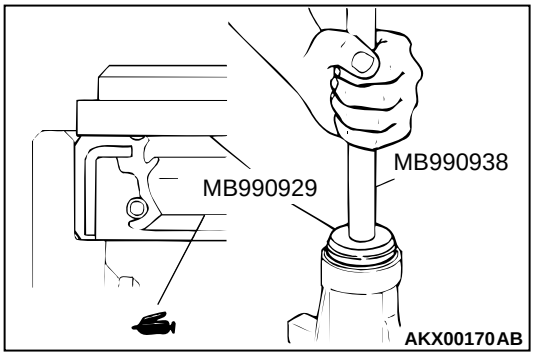
Squeeze the sealant out evenly to apply it in an unbroken, non-excessive quantity.

2. Apply sealant MITSUBISHI genuine sealant Part number MD997740 or equivalent to the chain cover, and then install the chain cover.



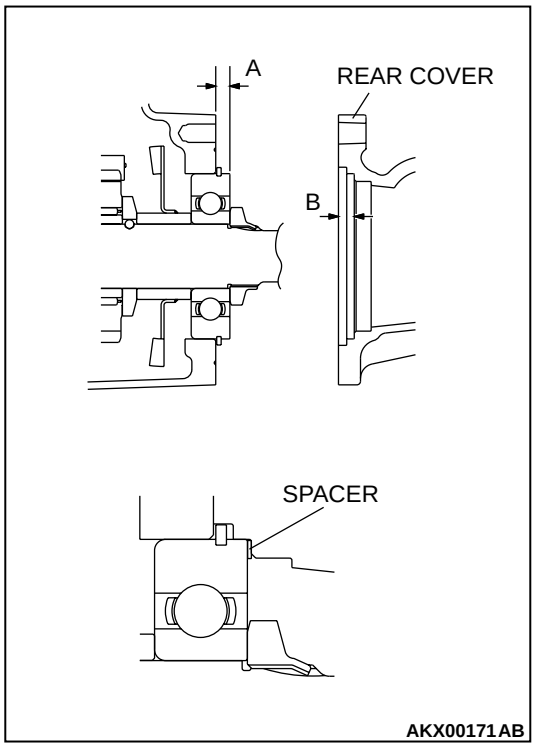
>>E<< H-L SHIFT RAIL/SPRING PIN INSTALLATION

1. Insert the H-L shift rail from the H-L shift rail hole, paying attention to the direction of the shift rail.
2. Align the spring pin holes on the shift rail with the shift fork. Then tap in the spring pin so that the slit of the spring pin is facing the shaft center of the shift rail.



>>F<< OIL SEAL INSTALLATION

1. Use special tools MB990929 and MB990938 to install the oil seal.
2. Apply MITSUBISHI genuine grease Part number 0101011 or equivalent to the lip of oil seal.

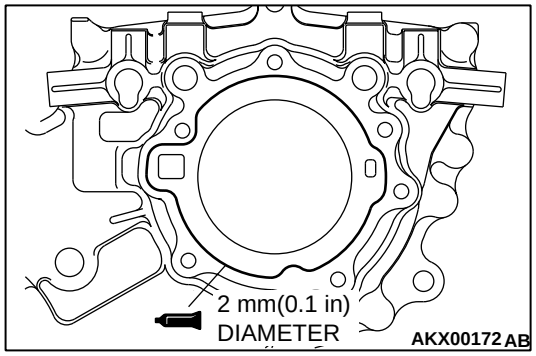


>>G<< SPACER INSTALLATION

1. Measure projection A of the rear output shaft bearing and depth B of the second stage of the rear cover.
2. Subtract A from B and let the answer be C. Select a spacer so that the subtracted value will be the standard value shown below.

   Standard value: 0 – 0.08 mm (0 – 0.003 inch)

>>H<< REAR COVER INSTALLATION

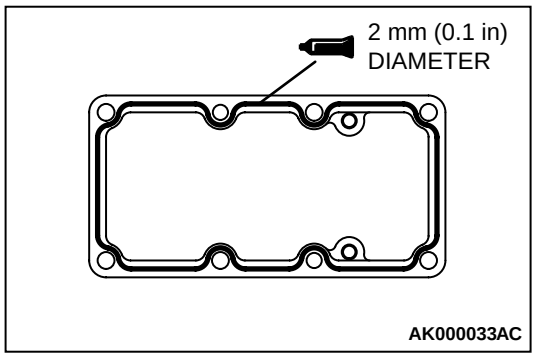


⚠ CAUTION

Squeeze the sealant out evenly to apply it in an unbroken, non-excessive quantity.

Apply sealant Mitsubishi genuine sealant Part number MD997740 or equivalent to the chain cover.

>>I<< CONTROL HOUSING INSTALLATION

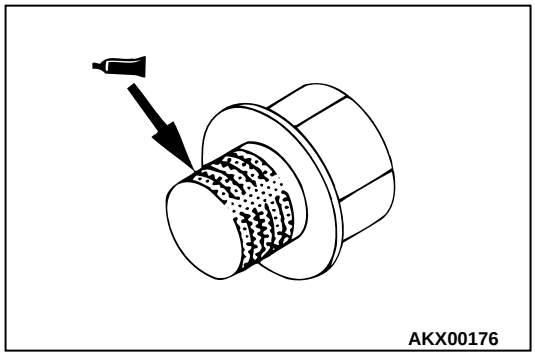


⚠ CAUTION

Squeeze the sealant out evenly to apply it in an unbroken, non-excessive quantity.

Apply sealant Mitsubishi genuine sealant Part number MD997740 or equivalent to the control housing.

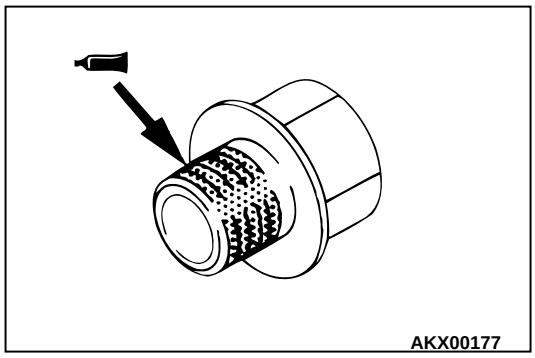
>>J<< H-L SHIFT RAIL PLUG INSTALLATION



Apply sealant 3M™ ADD Part number 8672 or equivalent to the threads.

NOTE: The new plug is precoated with sealant, so sealant does not need to be applied.

>>K<< PLUG INSTALLATION



Apply sealant 3M™ ADD Part number 8672 or equivalent to the threads.

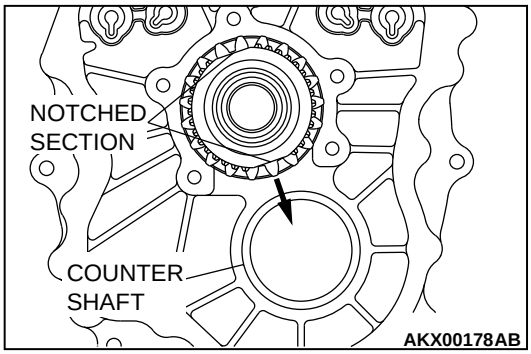
NOTE: The new plug is precoated with sealant, so sealant does not need to be applied.

>>L<< SPACER INSTALLATION

Install the previously selected spacer (see ADJUSTMENT BEFORE ASSEMBLY).

>>M<< TRANSFER CASE PLATE INSTALLATION

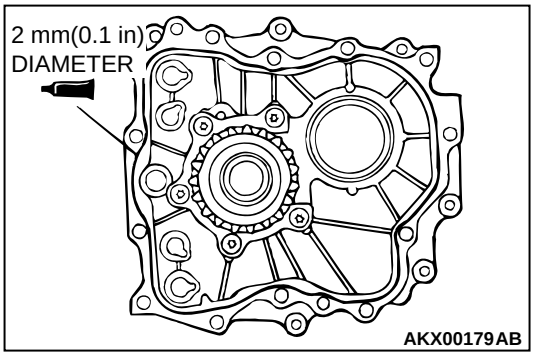
1. Face the notched section of the input gears in the direction shown in the illustration.



⚠ CAUTION

Squeeze the sealant out evenly to apply it in an unbroken, non-excessive quantity.

2. Apply MITSUBISHI genuine sealant Part number MD997740 or equivalent to the transfer case plate.



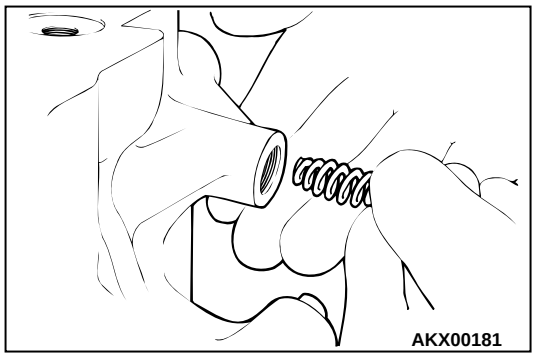
⚠ CAUTION

The transfer case plate must be installed smooth and straight to get a good seal.

3. Install the transfer case plate together with the input gear. Slide the input gear tooth aligned in Step 1 along the tooth space of the countershaft gear.

>>N<< SPRING INSTALLATION

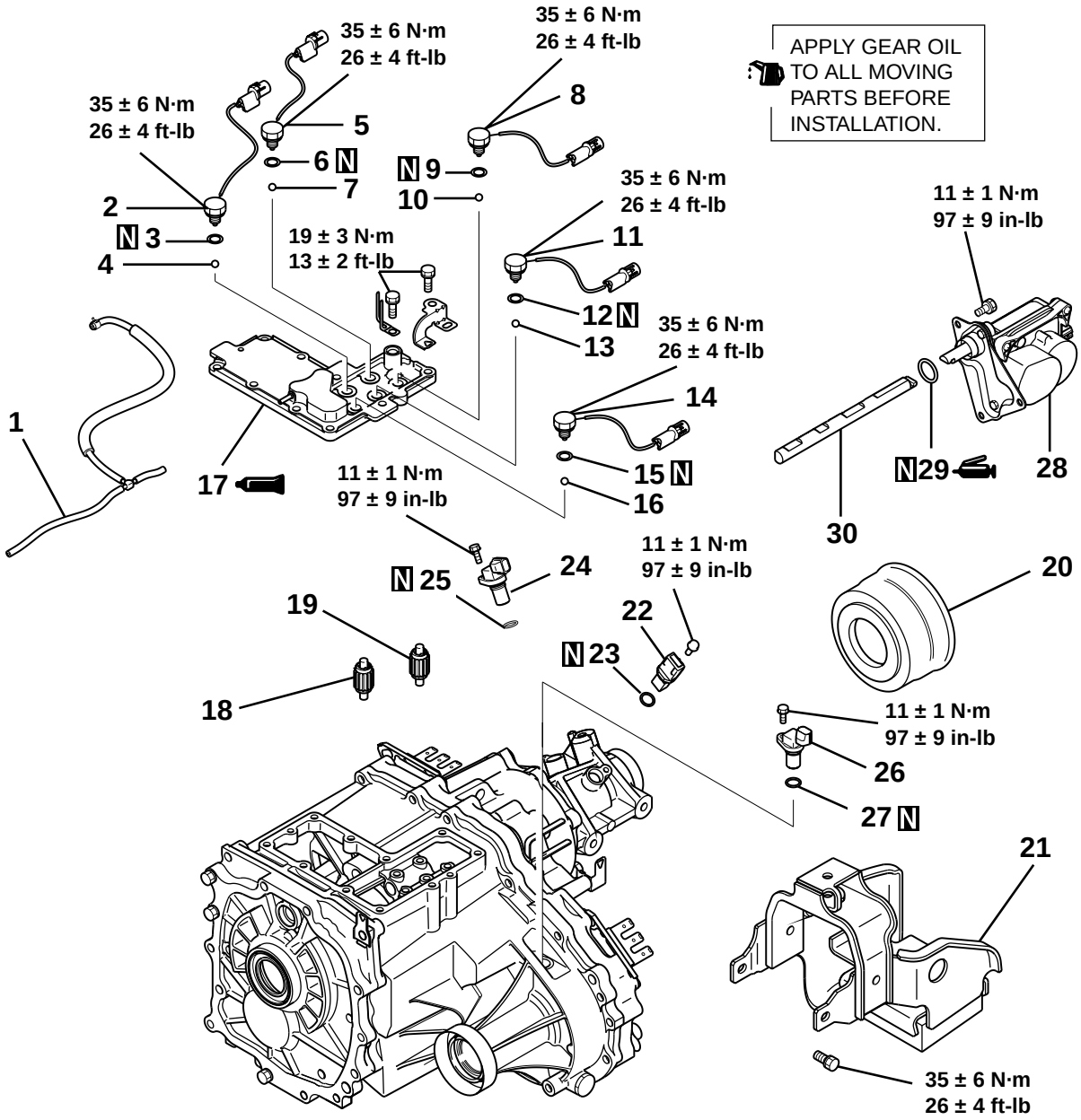
Install the spring with its tapered end toward the ball.



DISASSEMBLY AND ASSEMBLY

M1233013300032

<SUPER SELECT 4WD>



AKX00205AB

DISASSEMBLY STEPS

- 1. VACUUM HOSE
- >>W<< 2. 4LLC DETECTION SWITCH
- 3. GASKET
- 4. STEEL BALL
- >>W<< 5. 2WD DETECTION SWITCH
- 6. GASKET
- 7. STEEL BALL
- >>W<< 8. CENTER DIFFERENTIAL LOCK SWITCH
- 9. GASKET
- 10. STEEL BALL
- >>W<< 11. 4H DETECTION SWITCH

DISASSEMBLY STEPS

- 12. GASKET
- 13. STEEL BALL
- >>W<< 14. 2-4WD DETECTION SWITCH
- 15. GASKET
- 16. STEEL BALL
- >>V<< 17. TRANSFER CASE COVER
- >>U<< 18. SHIFT RAIL DRIVE GEAR
- >>U<< 19. SHIFT RAIL DRIVE GEAR
- 20. DUST SEAL GUARD
- 21. DYNAMIC DAMPER
- 22. VEHICLE SPEED SENSOR
- 23. O-RING

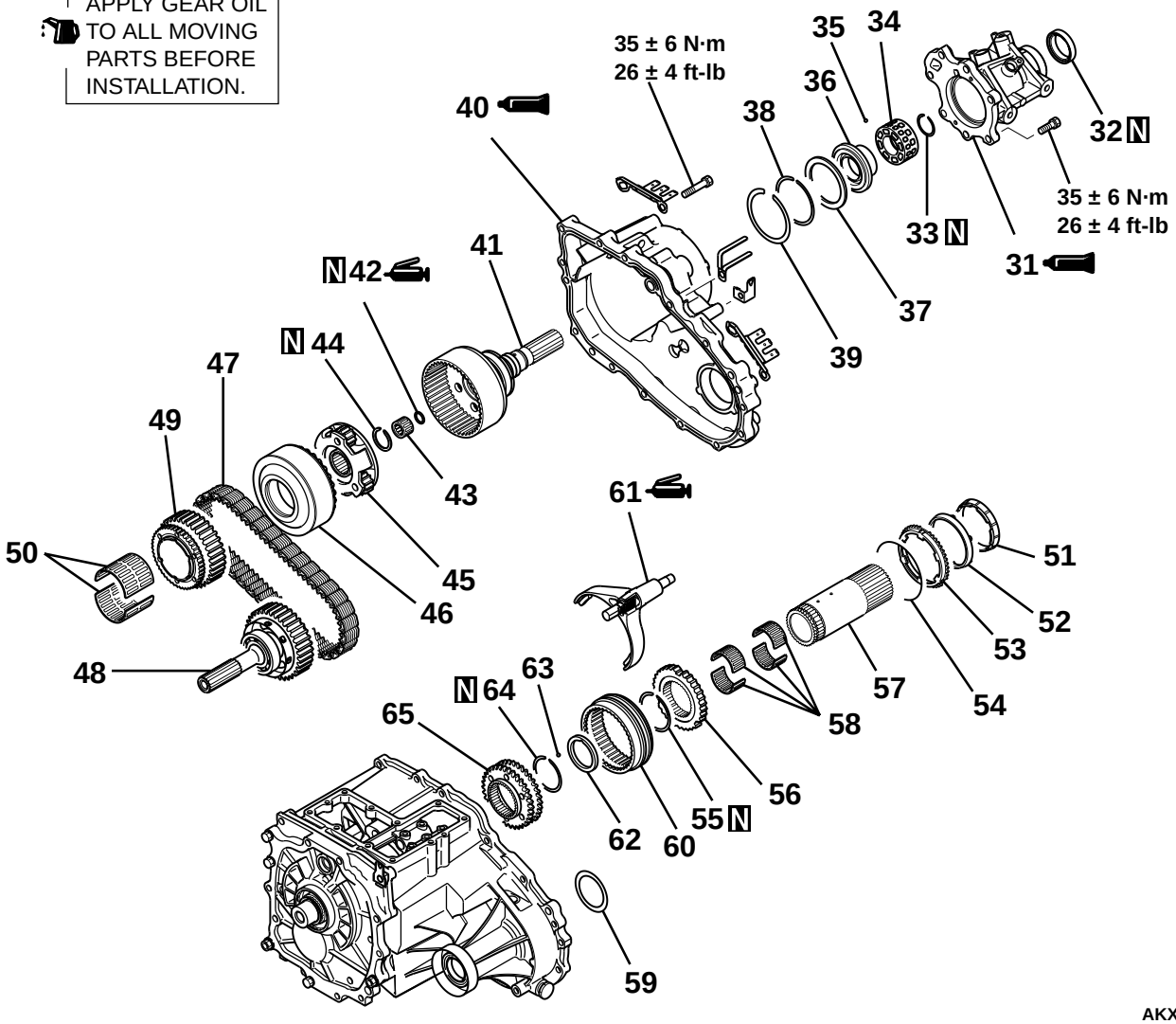
TSB Revision

DISASSEMBLY STEPS

24. REAR OUTPUT SENSOR
25. O-RING
26. FRONT OUTPUT SENSOR
27. O-RING

>>T<< 28. SIFT ACTUATOR
29. O-RING

>>T<< 30. MAIN SHIFT RAIL



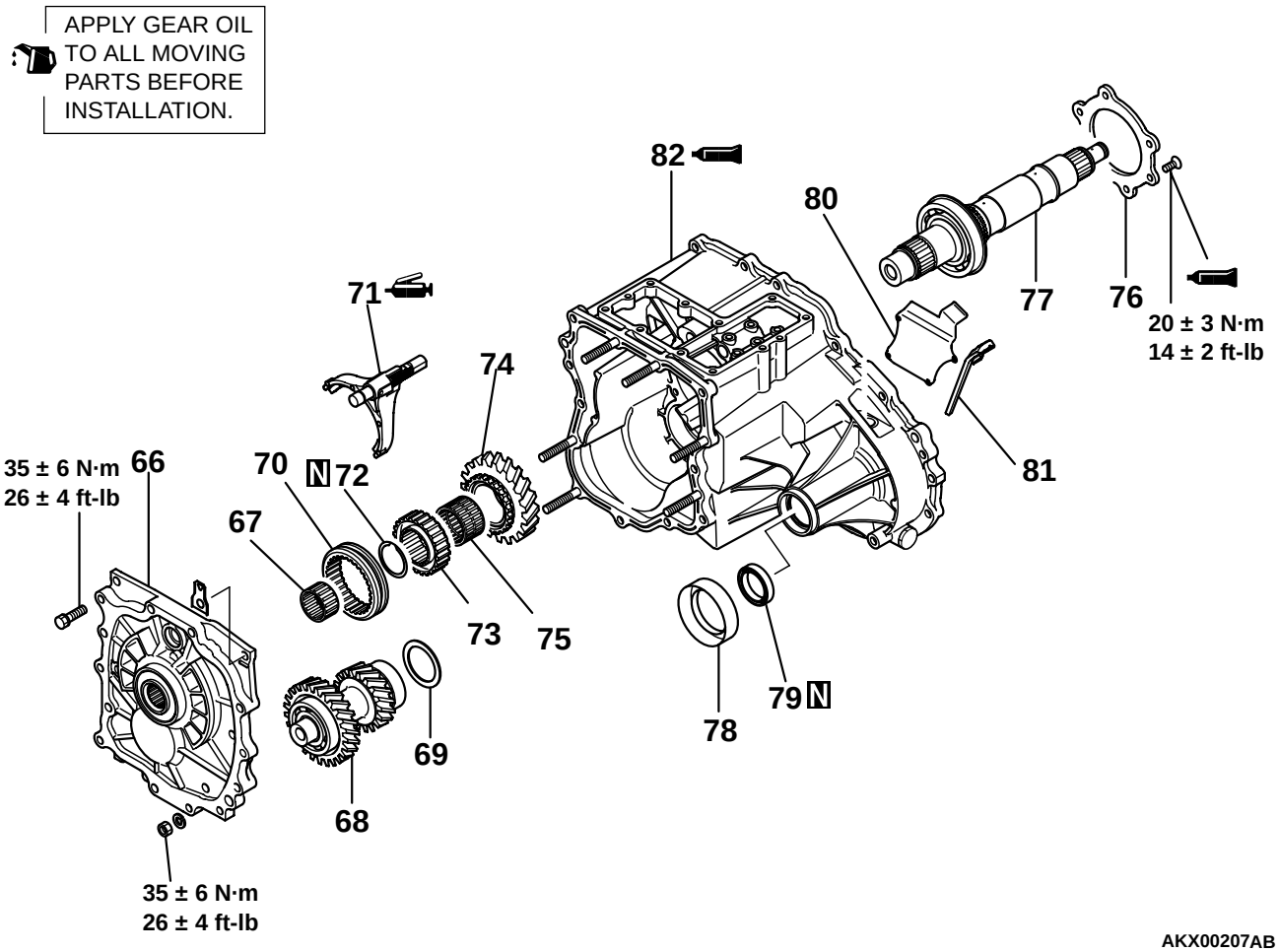
DISASSEMBLY STEPS

>>S<< 31. REAR COVER
>>R<< 32. OIL SEAL
33. SNAP RING
34. SENSOR ROTOR
35. STEEL BALL
36. OIL GUIDE
>>Q<< 37. SPACER
38. SNAP RING
>>P<< 39. SNAP RING
>>O<< 40. CHAIN COVER
>>N<< 41. REAR OUTPUT SHAFT
42. O-RING
43. BEARING

DISASSEMBLY STEPS

44. SNAP RING
45. CENTER DIFFERENTIAL PLANETARY CARRIER
46. VISCOUS COUPLING
<<A>> >>M<< 47. CHAIN
<<A>> >>M<< 48. FRONT OUTPUT SHAFT
>>M<< 49. DRIVE SPROCKET
50. BEARING
>>L<< 51. SYNCHRONIZER INNER RING
>>L<< 52. SYNCHRONIZER CONE
>>L<< 53. SYNCHRONIZER OUTER RING
54. SYNCHRONIZER SPRING
65. DIFFERENTIAL LOCK HUB

TSB Revision



AKX00207AB

DISASSEMBLY STEPS

>>G<<	66.	TRANSFER CASE PLATE
	67.	BEARING
	68.	COUNTER SHAFT GEAR
>>F<<	69.	SPACER
>>E<<	70.	H-L CLUTCH SLEEVE
>>E<<	71.	H-L SHIFT FORK
>>D<<	72.	SNAP RING
	73.	H-L CLUTCH HUB
	74.	LOW SPEED GEAR

DISASSEMBLY STEPS

	75.	BEARING
>>C<<	76.	REAR BEARING RETAINER
	77.	TRANSFER DRIVE SHAFT
	78.	DUST SEAL GUARD
>>B<<	79.	OIL SEAL
<<B>> >>A<<	80.	OIL GUIDE
	81.	OIL GUIDE
	82.	TRANSFER CASE

Required special tools:

- MB990932: Installer Adapter
- MB990936: Installer Adapter
- MB990938: Handle

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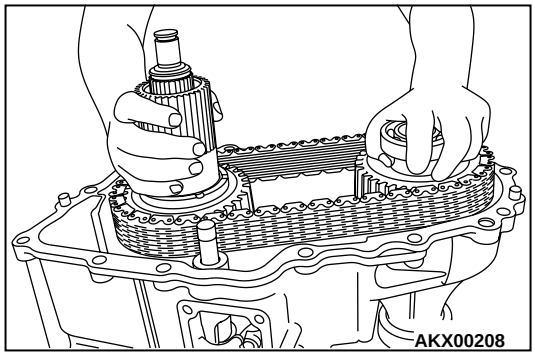
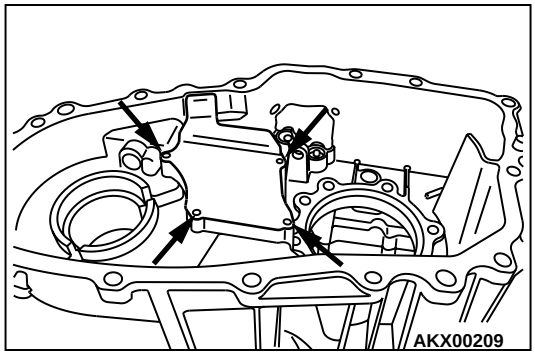
DISASSEMBLY SERVICE POINTS

<<A>> CHAIN/FRONT OUTPUT SHAFT/SUN GEAR REMOVAL



Remove the sun gear, chain and front output shaft as a set.

<<B>> OIL GUIDE REMOVAL



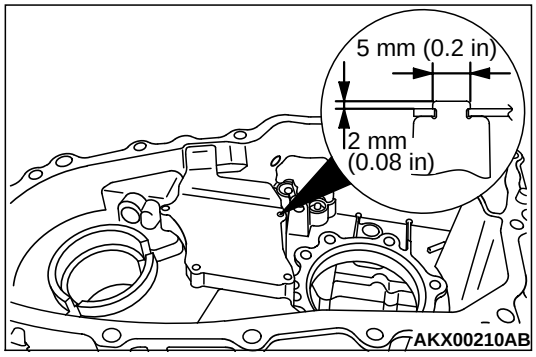
⚠ CAUTION

Usually no disassembly is necessary for the oil guide. After removal, the transfer case can not be reused.

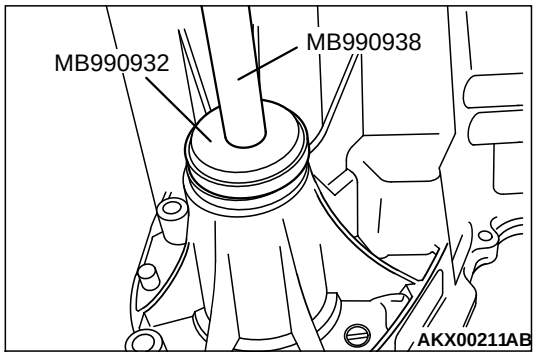
Remove the caulking part and disassemble the oil guide.

ASSEMBLY SERVICE POINTS

>>A<< OIL GUIDE INSTALLATION

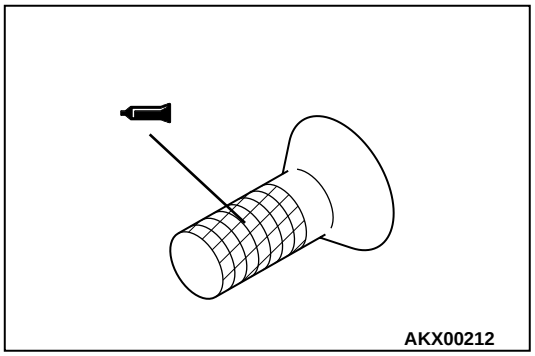


Mount the oil guide on new transfer case, and caulk so that the dimension of protruded part (4 places) is as shown to fix the oil guide.



>>B<< OIL SEAL INSTALLATION

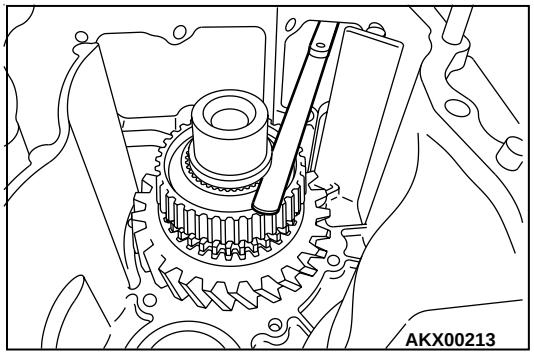
1. Use special tools MB990929 and MB990938 to install the oil seal.
2. Apply MITSUBISHI genuine grease Part number 0101011 or equivalent to the lip of the oil seal.



>>C<< REAR BEARING RETAINER INSTALLATION

Apply MITSUBISHI genuine sealant part number MD997740 or equivalent to the threads.

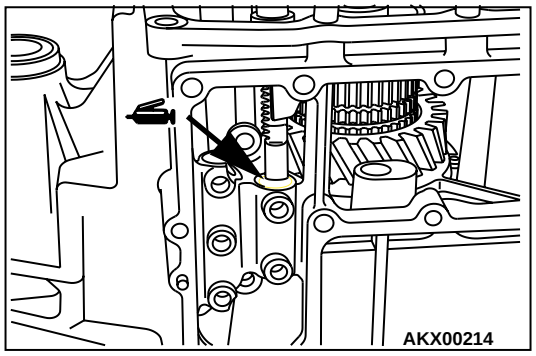
NOTE: The new bolt is precoated with sealant, so sealant does not need to be applied.



>>D<< SNAP RING INSTALLATION

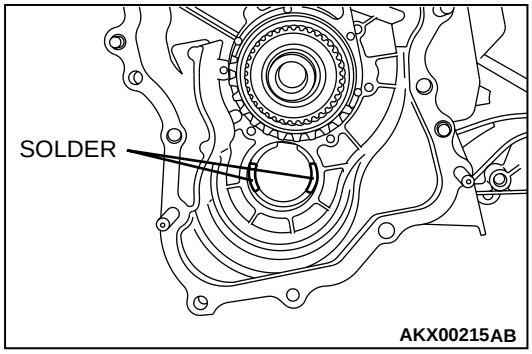
Select and install the snap ring which adjusts the H-L clutch hub end play to the standard value.

Standard value: 0 – 0.08 mm (0 – 0.003 inch)



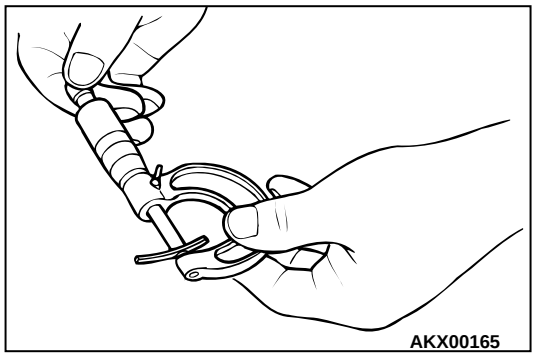
>>E<< H-L SHIFT FORK/H-L CLUTCH SLEEVE INSTALLATION

Apply MITSUBISHI genuine grease Part number 0101011 or equivalent to the high-low shift fork lift inserting part at indicated in drawing. Install the high-low shift fork and the high low clutch sleeve in the combined state onto the transfer case.



>>F<< SPACER INSTALLATION

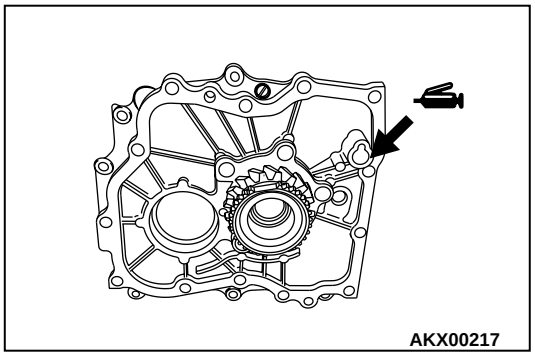
1. Place pieces of solder [approximately 10 mm (0.4 inch) in length and 1.6 mm (0.06 inch) in diameter] in the transfer case housing as shown.
2. Install the countershaft gear into the transfer case.
3. Install the transfer case plate and tighten the bolts.



4. Using a micrometer, measure the thickness of the crushed solder. Based on the result, select a spacer which adjusts the end play to the standard value shown below:

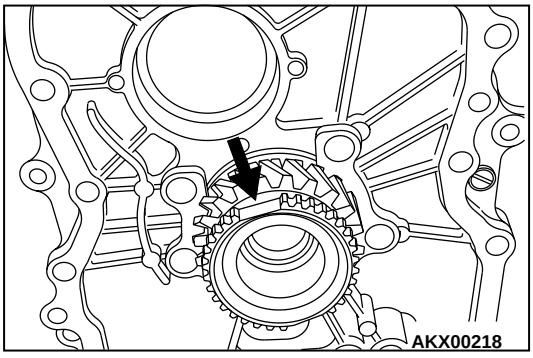
   Standard value: 0 – 0.15 mm (0 – 0.006 inch)

   NOTE: If the solder is not crushed, repeat steps 1 and 2 using thicker solder.

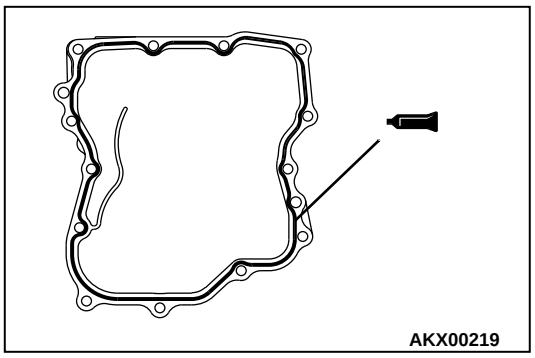


>>G<< TRANSFER CASE PLATE INSTALLATION

1. Apply MITSUBISHI genuine grease Part number 0101011 or equivalent to the high-low shift rail inserting part indicated in the drawing



2. Face the notched section of the input gears in the direction shown in the illustration.

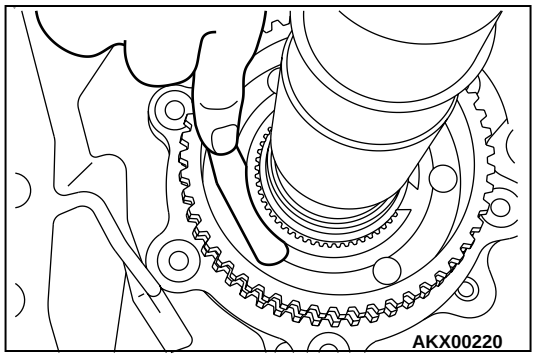


⚠ CAUTION
Squeeze the sealant out evenly to apply it in an unbroken, non-excessive quantity.

3. Apply MITSUBISHI genuine sealant Part number MD997740 or equivalent to the transfer case.

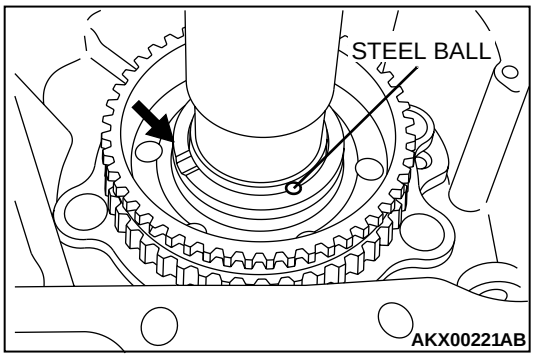
⚠ CAUTION
In case the sub-gear is difficult to engage the counter shaft gear, install securely by rotating the transfer drive shaft and such.

4. Install the transfer case plate together with the input gear. Slide the input gear tooth aligned in Step 2 along the tooth space of the countershaft gear.

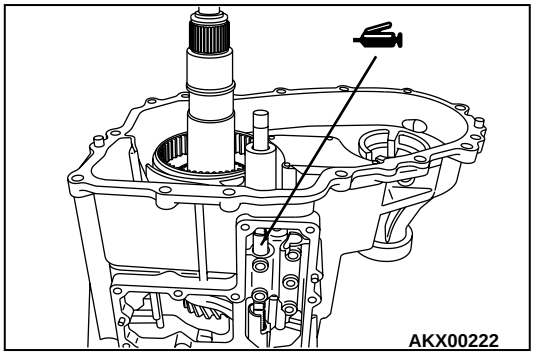


>>H<< SNAP RING INSTALLATION
Select and install the snap ring which adjusts the differential lock hub end play to the standard value.

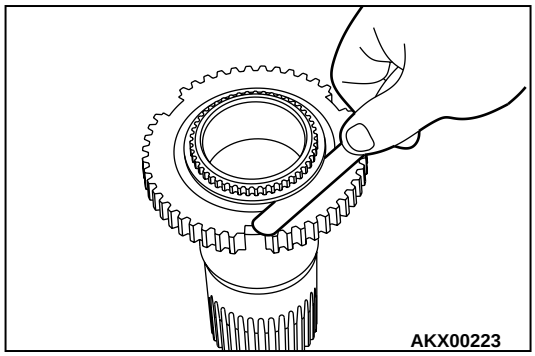
Standard value: 0 – 0.08 mm (0 – 0.003 inch)



>>I<< STEEL BALL/SPACER INSTALLATION
Install the steel ball at the indicated location on the transfer drive shaft, and then install so that the oil groove of spacer is the chain cover side.



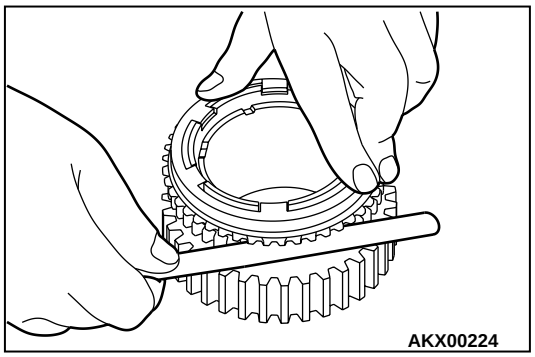
>>J<< 2-4WD SHIFT FORK/2-4WD CLUTCH SLEEVE INSTALLATION
Apply MITSUBISHI genuine grease Part number 0101011 or equivalent to 2-4WD shift fork shaft inserting part indicated in drawing, and then install the 2-4WD shift fork and the 2-4WD clutch sleeve in combined state on the transfer case.


AKX00223

>>K<< SNAP RING INSTALLATION

Select and install the snap ring which adjusts the 2-4WD clutch hub end play to the standard value.

Standard value: 0 – 0.08 mm (0 – 0.003 inch)

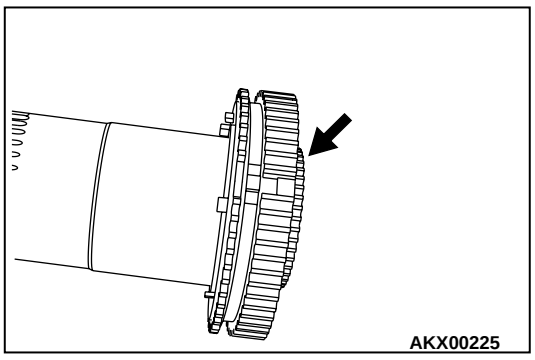

AKX00224

>>L<< SYNCHRONIZER OUTER RING/SYNCHRONIZER CONE/SYNCHRONIZER INNER RING INSTALLATION

1. Push the synchronizer outer ring, synchronizer corn and the synchronizer inner ring into the drive sprocket in combined state, and then measure the indicated dimension of the drive sprocket and synchronizer outer ring.

   LIMIT: 0.3 mm (0.012 inch)

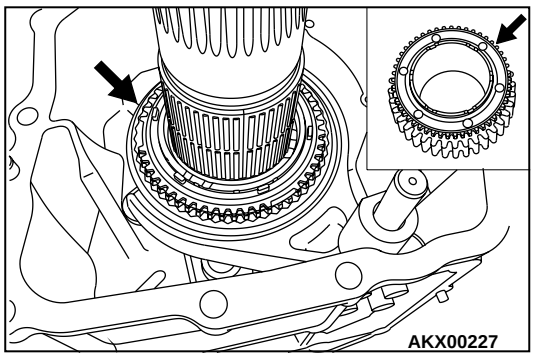
2. In case that the value is out of limit, exchange as the synchronizer ring set.


AKX00225

3. Combine the synchronizer outer ring, the synchronizer cone and the synchronizer inner ring, and install them by mating the notch of 2-4WD clutch hub and protrusion of the synchronizer outer ring.

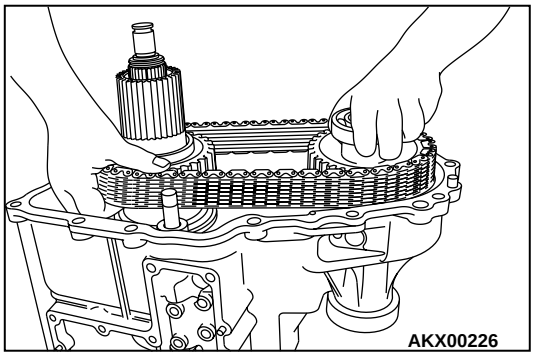
>>M<< DRIVE SPROCKET/FRONT OUTPUT SHAFT/CHAIN INSTALLATION

1. Engage the chain to the drive sprocket and the sprocket of front output shaft.

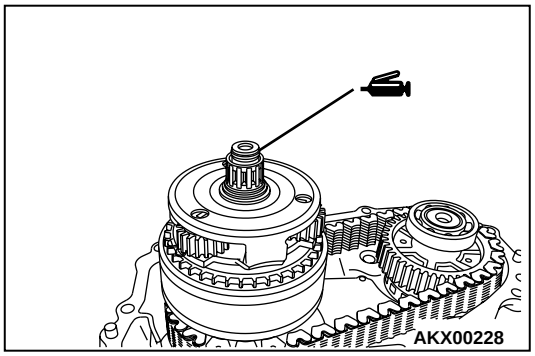


⚠ CAUTION

Then engage the indicated hole of drive sprocket to the protrusion of the synchronizer cone.

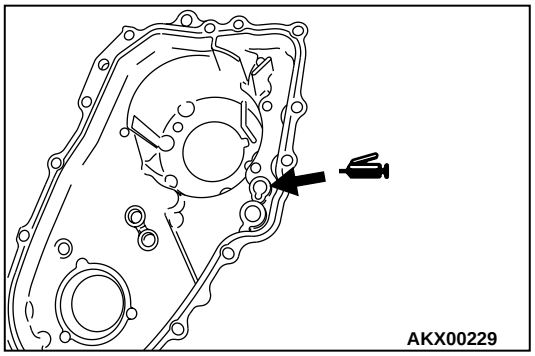


2. Install the chain, the drive sprocket and the front output shaft onto the transfer case in combined state.



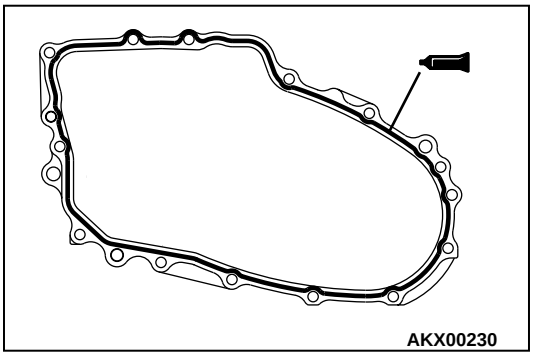
>>N<< REAR OUTPUT SHAFT INSTALLATION

Apply MITSUBISHI genuine grease Part number 0101011 or equivalent to the indicated O-ring, and then install the rear output shaft.



>>O<< CHAIN COVER INSTALLATION

1. Apply MITSUBISHI genuine grease Part number 0101011 or equivalent to the indicated 2-4WD shift rail insertion part.
2. Apply sealant MITSUBISHI genuine sealant Part number MD997740 or equivalent to the chain cover, and then install the chain cover.

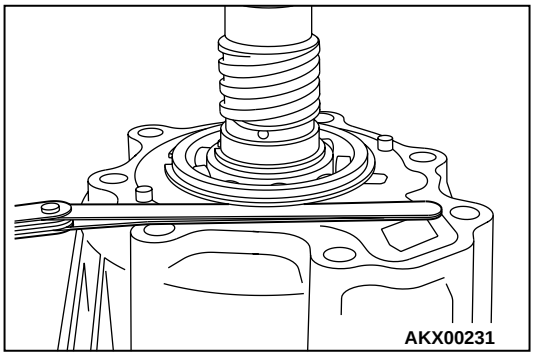

AKX00230

⚠ CAUTION
Squeeze the sealant out evenly to apply it in an unbroken, non-excessive quantity.

>>P<< SNAP RING INSTALLATION

1. Install the snap ring onto the bearing groove of the rear output shaft.
2. Measure the clearance between the chain cover and snap ring while pushing the rear output shaft to chain cover side.
3. Select the snap ring of a value which the standard value is added to the measured clearance value.

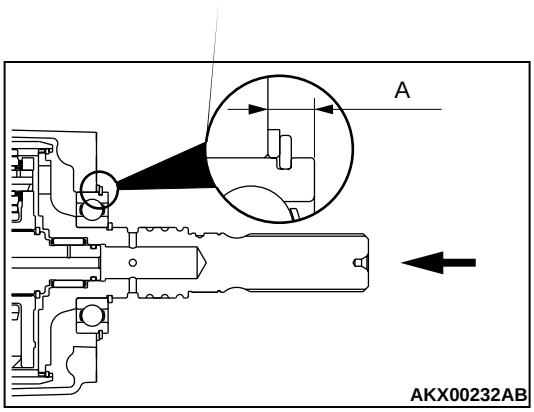
   Standard value: 0 – 12 – 0.24 mm (0.005 – 0.009 inch)
4. Remove the snap ring of the bearing groove of the rear output shaft, and install the selected snap ring. Then install again the snap ring on the bearing groove of the rear output shaft.


AKX00231

>>Q<< SPACER INSTALLATION

⚠ CAUTION
Then, measure it with the snap ring installed.

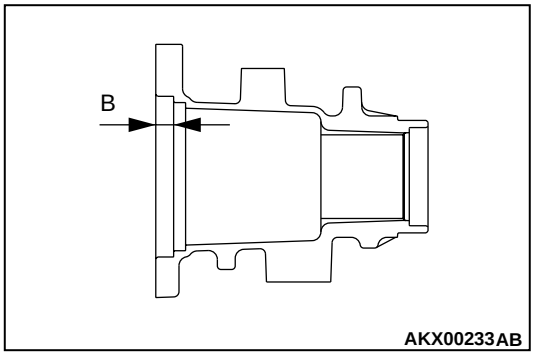
1. Measure the protrusion amount A of bearing from the chain cover while pushing the rear output shaft to the chain cover side.



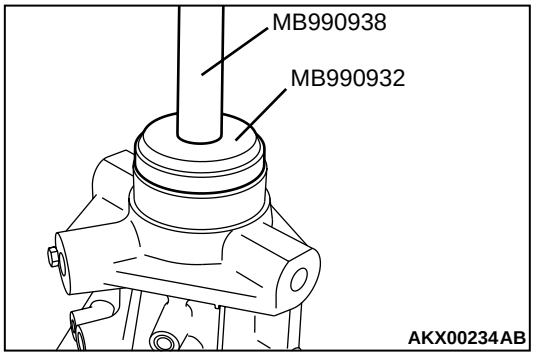
AKX00232AB

2. Measure the depression B at indicated part of the rear cover.
3. Calculate the clearance between the bearing and rear cover by subtracting the measurement value A from measurement value B of the procedure 2, and then select and install the spacer so that the clearance is the standard value.

   Standard value: 0 – 0.12 mm (0 – 0.005 inch)

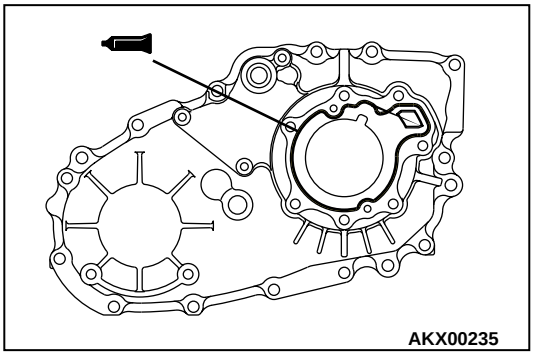


AKX00233AB



>>R<< OIL SEAL INSTALLATION

1. Use special tools MB990932 and MB990938 to install the oil seal.
2. Apply MITSUBISHI genuine grease Part number 0101011 or equivalent to the lip of the oil seal.

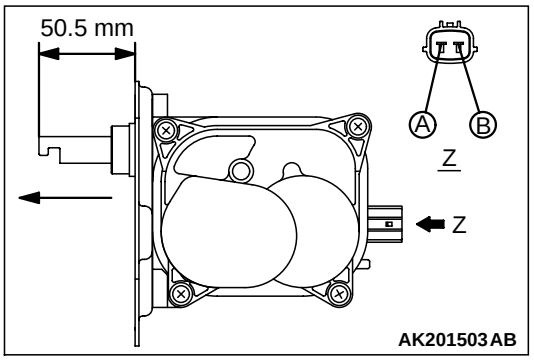


>>S<< REAR COVER INSTALLATION

⚠ CAUTION

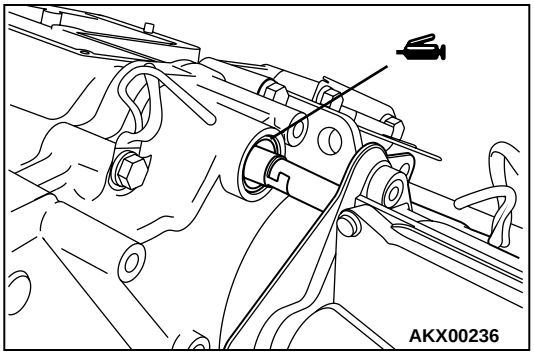
Squeeze the sealant out evenly to apply it in an unbroken, non-excessive quantity.

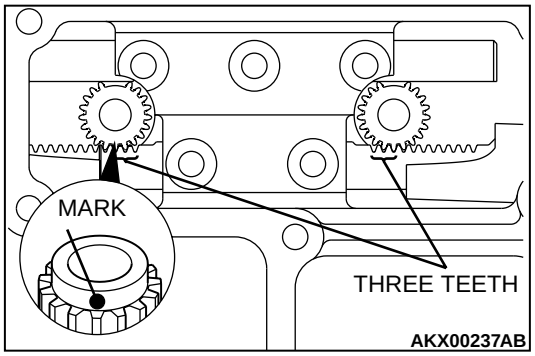
Apply sealant Mitsubishi genuine sealant Part number MD997740 or equivalent to the chain cover, and then install the rear cover.



>>T<< MAIN SHIFT RAIL/SHIFT ACTUATOR INSTALLATION

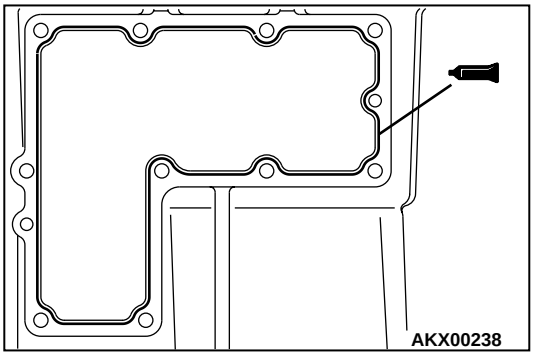
1. Apply MITSUBISHI genuine grease Part number 0101011 or equivalent to the O-ring at indicated location.
2. Insert the combination of the key of the main shift rail and the key of the actuator into the transfer case.





>>U<< SHIFT RAIL DRIVE GEAR INSTALLATION

Install so that the mating mark of the shift rail drive gear engages 3 teeth of each shift rail drive gear.

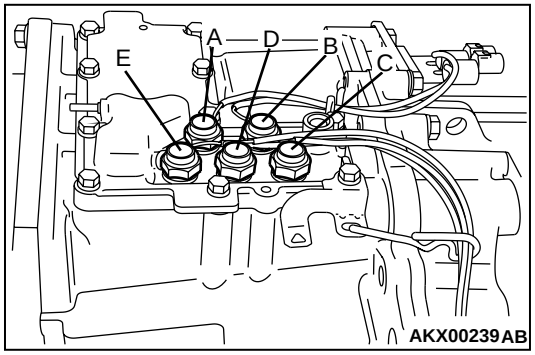


>>V<< TRANSFER CASE COVER INSTALLATION

⚠ CAUTION

Squeeze the sealant out evenly to apply it in an unbroken, non-excessive quantity.

Apply sealant MITSUBISHI genuine sealant Part number MD997740 or equivalent to the transfer case, and then install the transfer case cover.



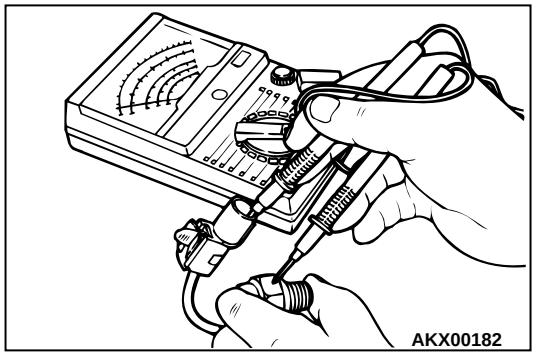
>>W<< 2-4WD DETECTION SWITCH/4H DETECTION SWITCH/CENTER DIFFERENTIAL LOCK DETECTION SWITCH/2WD DETECTION SWITCH/4LLC DETECTION SWITCH INSTALLATION

Install with care. Do not make a mistake when locating each switch.

	DETECTION SWITCH NAME	TUBE COLOR	CONNECTOR COLOR
A	4LLC	Black	Brown
B	2WD	Black	Black
C	CENTER DIFFERENTIAL LOCK	Blue	Brown
D	4H	Blue	White
E	2-4WD	Blue	Black

INSPECTION

M1233013400028



2-4WD, H-L, 4LLC, 2WD, CENTER DIFFERENTIAL LOCK, 4H DETECTION SWITCH

Check for the continuity between the connector terminal and switch body.

SWITCH STATE	CONTINUITY
Switch end pressed	No
Switch end released	Yes

LOW RANGE OPERATION DETECTION SWITCH

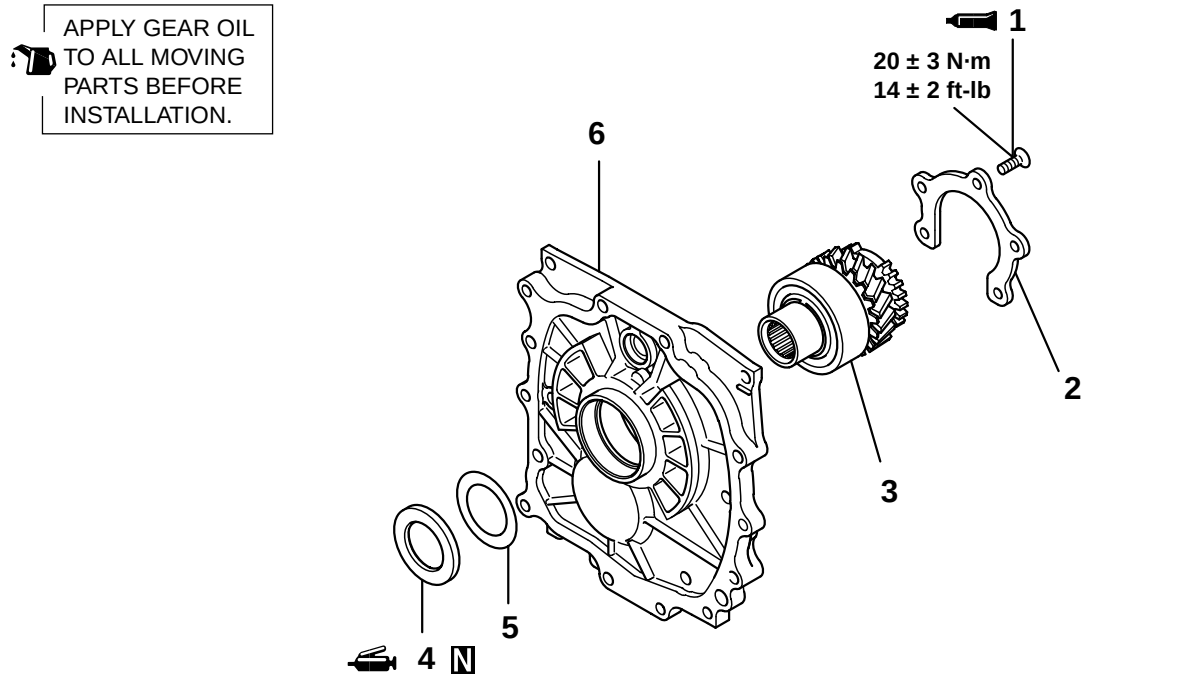
Check for the continuity between the connector terminal and switch body.

SWITCH STATE	CONTINUITY
Switch end pressed	Yes
Switch end released	No

TRANSFER CASE PLATE

DISASSEMBLY AND ASSEMBLY

M1233024200028



AKX00438AD

DISASSEMBLY STEPS

>>B<< 1. BOLT
2. BEARING RETAINER
3. TRANSFER INPUT GEAR

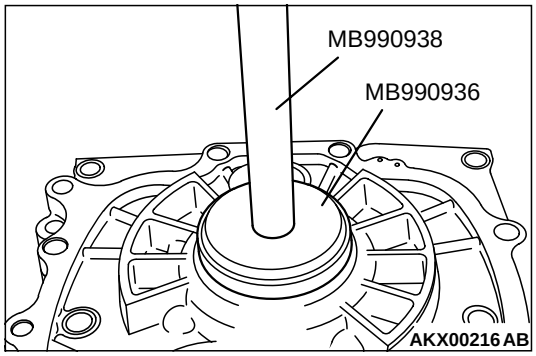
DISASSEMBLY STEPS

>>A<< 4. OIL SEAL
5. BAFFLE PLATE
6. TRANSFER CASE PLATE

TSB Revision

Required Special Tools:

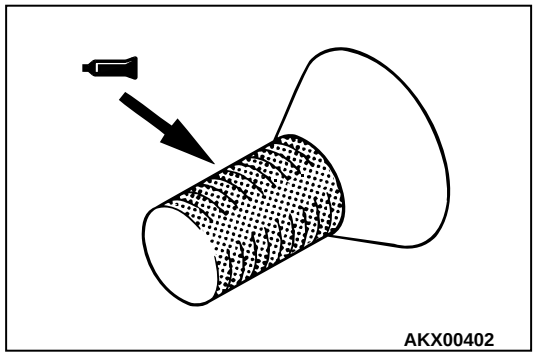
- MB990938: Handle
- MB990936: Installer Adapter



ASSEMBLY SERVICE POINTS

>>A<< OIL SEAL INSTALLATION

1. Use special tools MB990938 and MB990936 to install the oil seal.
2. Apply Mitsubishi genuine grease part number 0101011 or equivalent to the lip of the oil seal.



>>B<< BOLT INSTALLATION

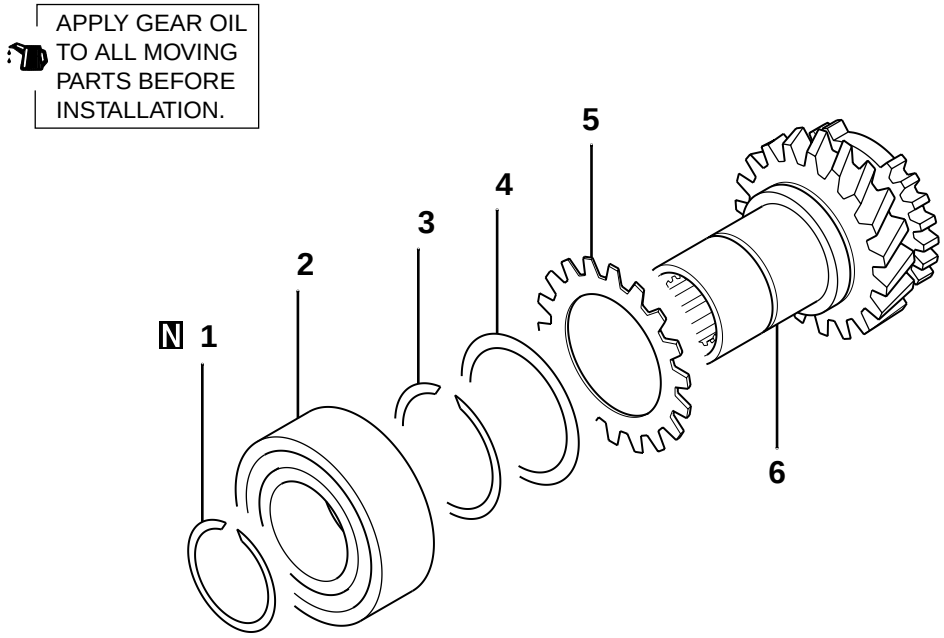
Apply Mitsubishi genuine sealant part number MD997740 or equivalent to the threads.

NOTE: The new bolt is precoated with sealant, so sealant does not need to be applied.

INPUT GEAR

DISASSEMBLY AND ASSEMBLY

M1233015100034



AKX00252AB

		DISASSEMBLE STEPS
	>>B<<	1. SNAP RING
<<A>>	>>A<<	2. BALL BEARING
		3. SNAP RING
		4. CONE SPRING
		5. SUB GEAR
		6. TRANSFER INPUT GEAR

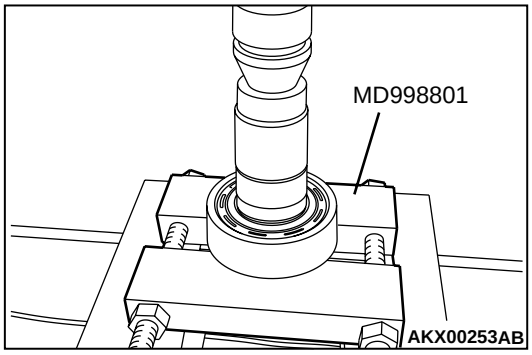
Required special tools:

- MD998801: Bearing Remover
- MD998812: Installer Cap
- MD998826: Installer Adapter

DISASSEMBLY SERVICE POINT

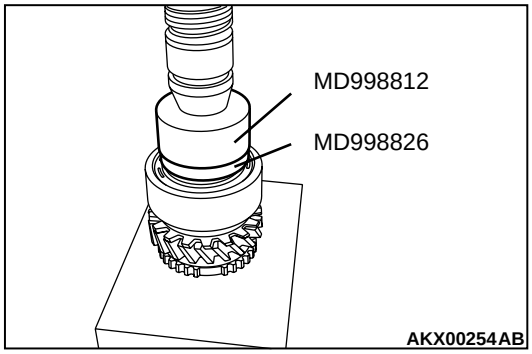
<<A>> BALL BEARING REMOVAL

Use special tool MD998801 to remove the ball bearing.



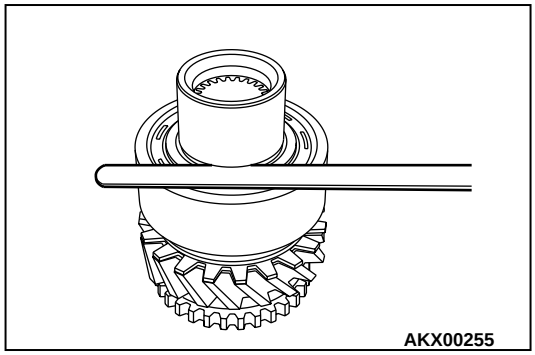
TSB Revision

ASSEMBLY SERVICE POINTS



>>A<< BALL BEARING INSTALLATION

Use special tools MD998812 and MD998826 to install the ball bearing.



>>B<< SNAP RING INSTALLATION

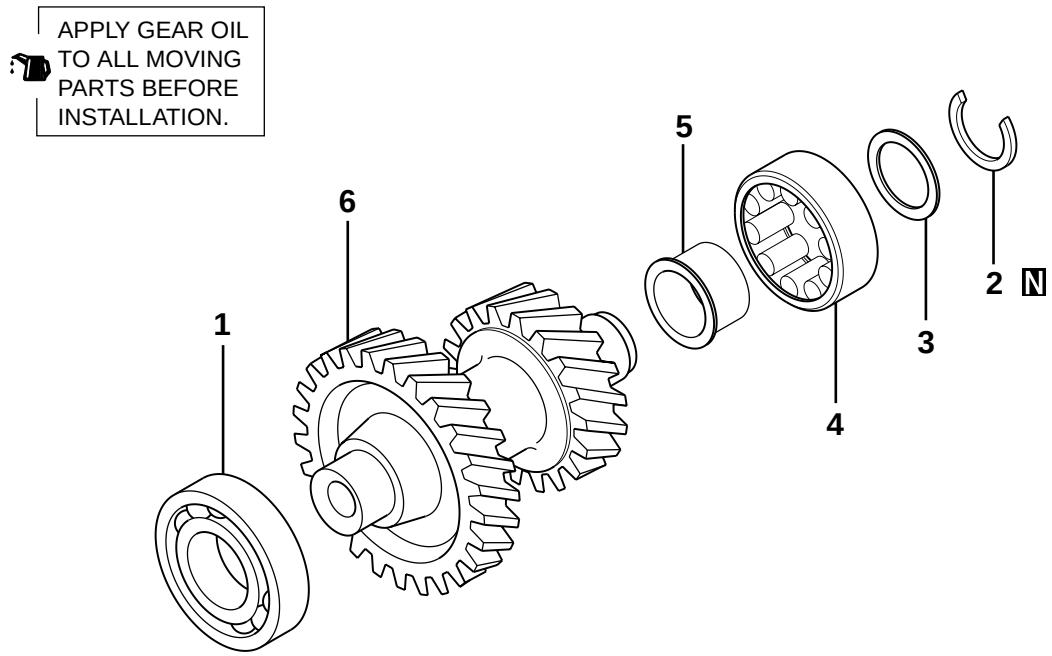
1. Install the thickest snap ring that can be fitted in the snap ring groove of the transfer input gear.
2. Make sure that the transfer input gear bearing end play meets the standard value.

   Standard value: 0 – 0.06 mm (0 – 0.002 inch)

COUNTERSHAFT GEAR

DISASSEMBLY AND ASSEMBLY

M1233024000035



TSB Revision

DISASSEMBLY STEPS

<<A>> >>C<< 1. BALL BEARING
>>B<< 2. SNAP RING
<<B>> >>A<< 3. SPACER
<<B>> >>A<< 4. ROLLER BEARING
<<B>> >>A<< 5. INNER RACE
6. COUNTER SHAFT GEAR

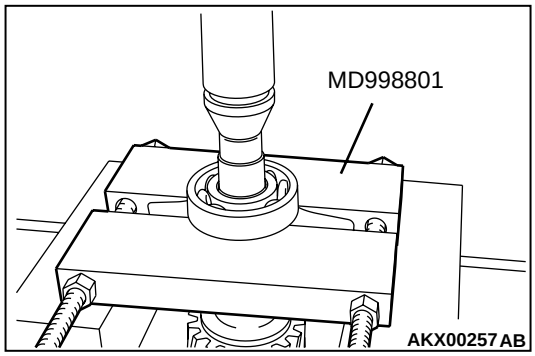
Required special tools:

- MD998801: Bearing Remover
- MD998368: Bearing Installer
- MD998812: Installer Cap
- MD998818: Installer Adapter

DISASSEMBLY SERVICE POINT

<<A>> BALL BEARING REMOVAL

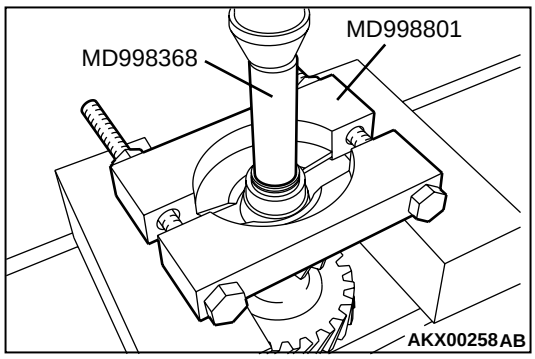
Use special tool MD998801 to remove the ball bearing.



<<B>> SPACER/ROLLER BEARING/INNER RACE REMOVAL

1. Remove the spacer and roller bearing.
2. Use special tools MD998801 and MD998368 to remove the inner race.

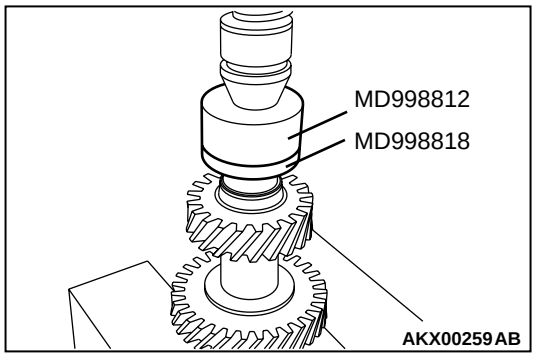
NOTE: In the case that the installation of the spacer, roller bearing, and inner race is in reverse order according to the vehicle, then remove the inner race, roller bearing and spacer at the same time.

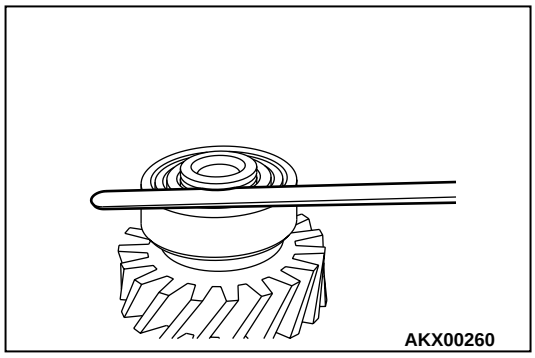


ASSEMBLY SERVICE POINTS

>>A<< INNER RACE/ROLLER BEARING/SPACER INSTALLATION

1. Use special tools MD998812 and MD998818 to install the inner race.
2. Install the roller bearing and spacer.

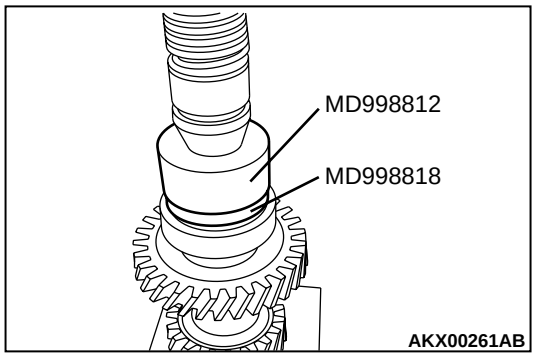




>>B<< SNAP RING INSTALLATION

1. Install the thickest snap ring that can be fitted into the snap ring groove of the counter shaft gear.
2. Make sure that the counter shaft gear roller bearing end play meets the standard value.

   Standard value: 0 – 0.08 mm (0 – 0.003 inch)



>>C<< BALL BEARING INSTALLATION

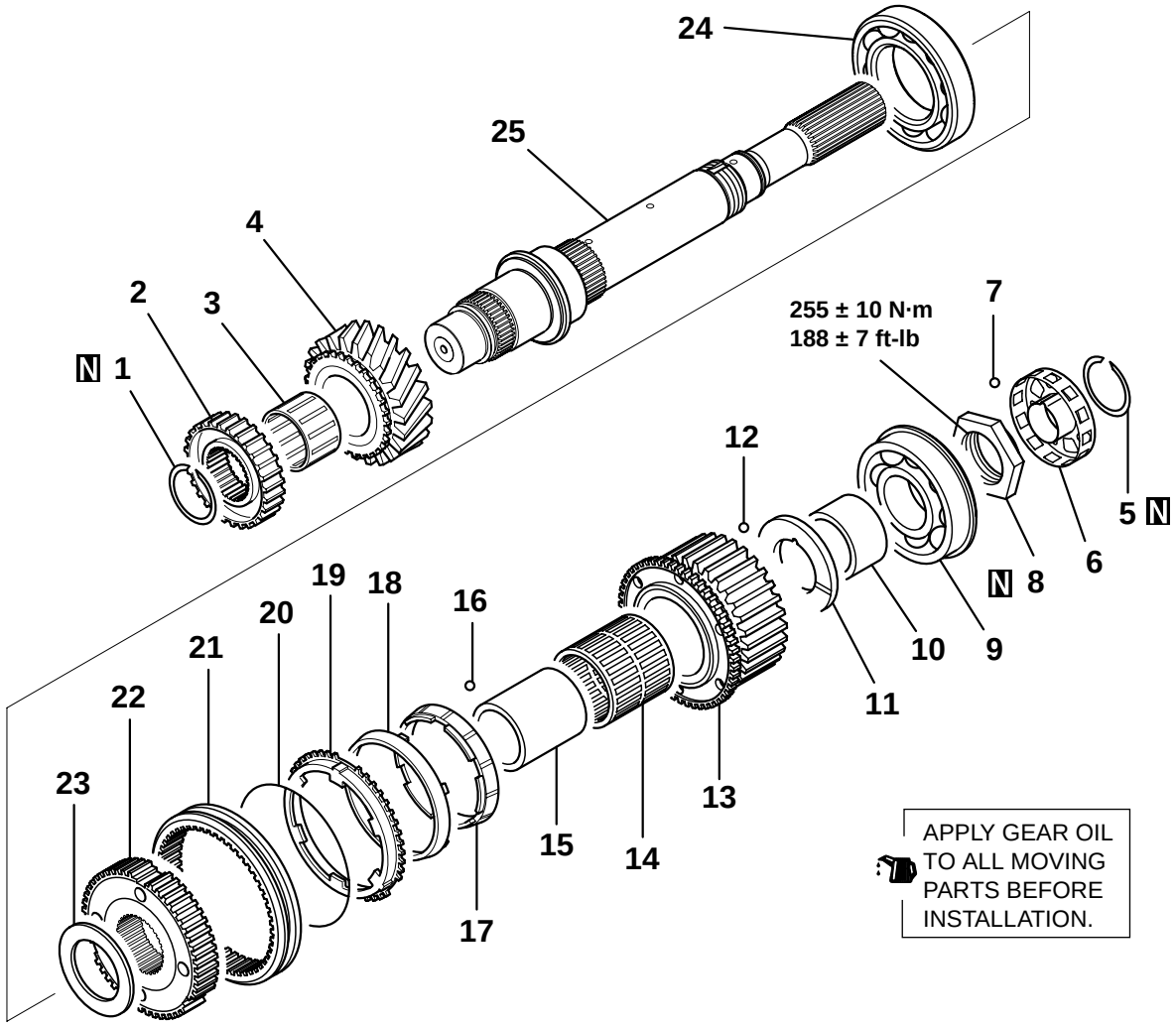
Use special tools MD998812 and MD998818 to install the ball bearing.

REAR OUTPUT SHAFT

DISASSEMBLY AND ASSEMBLY

M1233013600022

<PART TIME 4WD>



AK000017AB

DISASSEMBLY STEPS

	>>F<<	1.	SNAP RING
<<A>>	>>E<<	2.	CLUTCH HUB
		3.	LOW SPEED GEAR
		4.	NEEDLE BEARING
		5.	SNAP RING
		6.	ROTOR
		7.	STEEL BALL
<<B>>	>>D<<	8.	JAM NUT
<<C>>	>>C<<	9.	BALL BEARING
		10.	SPACER
		11.	SPROCKET SPACER
		12.	STEEL BALL
		13.	DRIVE SPROCKET

DISASSEMBLY STEPS

		14.	NEEDLE BEARING
		15.	SPROCKET SLEEVE
		16.	STEEL BALL
		17.	SYNCHRONIZER INNER RING
		18.	SYNCHRONIZER CONE
		19.	SYNCHRONIZER OUTER RING
		20.	SYNCHRONIZER SPRING
		21.	CLUTCH SLEEVE
<<D>>	>>B<<	22.	CLUTCH HUB
<<D>>		23.	STOPPER PLATE
<<D>>	>>A<<	24.	BALL BEARING
		25.	REAR OUTPUT SHAFT

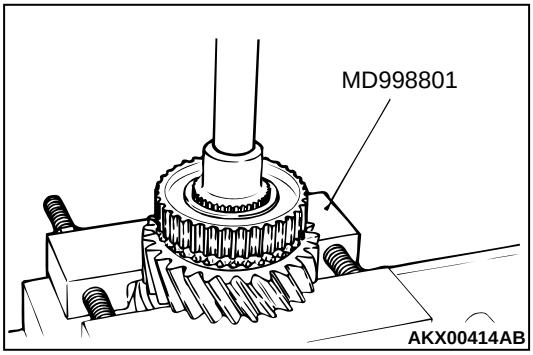
Required Special Tools:

- MB991013: Special Spanner
- MD998801: Bearing Remover

TSB Revision

- MD998812: Installer Cap
- MD998813: Installer-100
- MD998814: Installer-200
- MD998820: Installer Adapter (42)
- MD998821: Installer Adapter (44)
- MD998829: Installer Adapter (60)

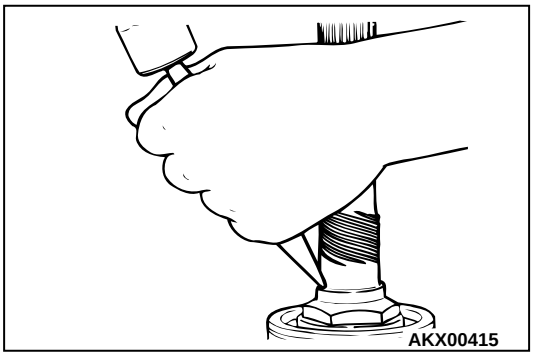
DISASSEMBLY SERVICE POINTS



<<A>> CLUTCH HUB REMOVAL

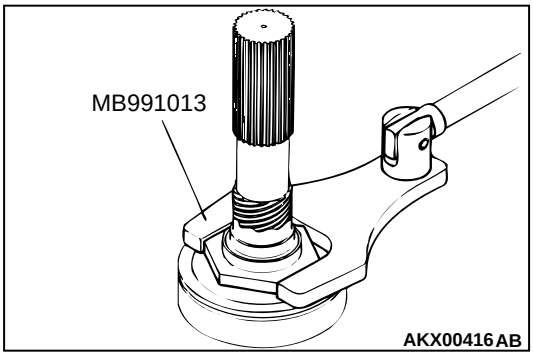
1. Use special tool MD998801 to support the low speed gear.
2. Use a press to push at the front end of the rear output shaft and then remove the hub and gear.

   NOTE: The clutch hub may fit loosely on the shaft, so that removal is possible without using a press.

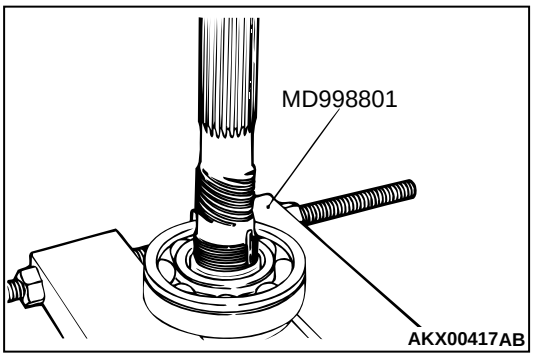


<<B>> JAM NUT REMOVAL

1. Remove the staked nut from the shaft.
2. Hold the drive sprocket in a soft-jaw vise.
3. Shift the clutch sleeve to the drive sprocket side.



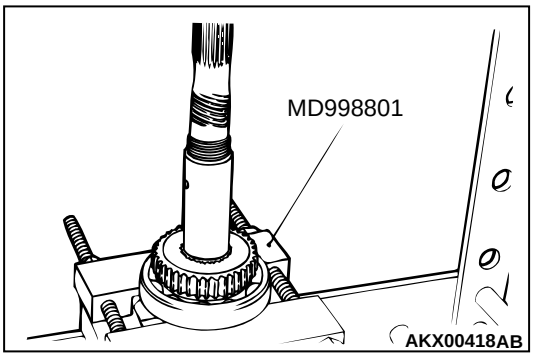
4. Use special tool MB991013 to remove the jam nut.



<<C>> RADIAL BALL BEARING REMOVAL

1. Use special tool MD998801 to support the ball bearing.
2. Use a press to push at a rear end of the rear output shaft, and then remove the radial ball bearing.

   NOTE: The bearing may fit loosely on the shaft, so that removal is possible without using a press.

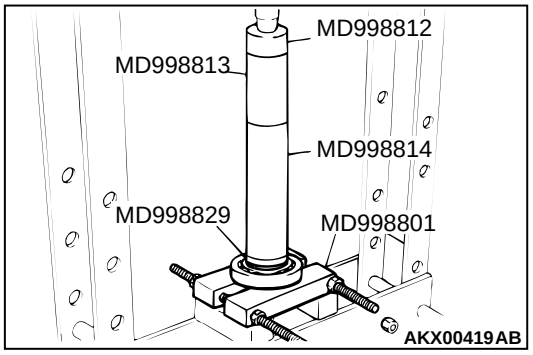


<<D>> CLUTCH HUB REMOVAL

1. Place special tool MD998801 so that the load is applied at the bearing.
2. Use a press to push at the rear end of the rear output shaft, and then remove the clutch hub and ball bearing.

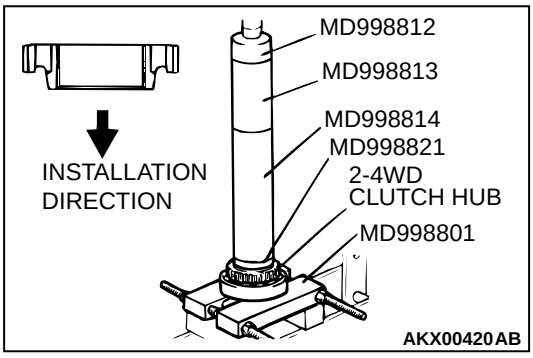
   NOTE: The clutch hub may fit loosely on the shaft, so that removal is possible without using a press.

ASSEMBLY SERVICE POINTS



>>A<< BALL BEARING/STOPPER PLATE INSTALLATION

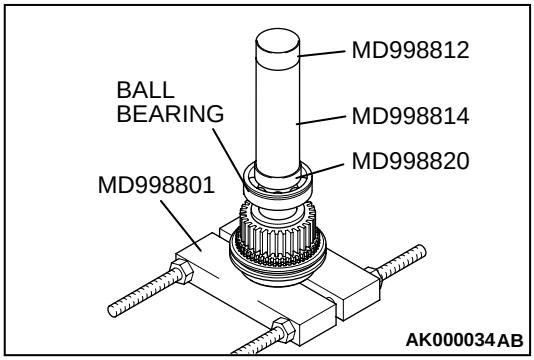
1. Use special tool MD998801 to the rear output shaft.
2. After installing the ball bearing, fit the stopper plate onto the rear output shaft.
3. Use special tools MD998812, MD998813, MD998814 and MD998829 to press in the ball bearing.



>>B<< CLUTCH HUB INSTALLATION

1. Use special tool MD998801 to the rear output shaft.
2. Confirm the clutch hub installation direction, and fit onto the rear output shaft.
3. Use special tools MD998812, MD998813, MD998814 and MD998821 to press in the clutch hub.

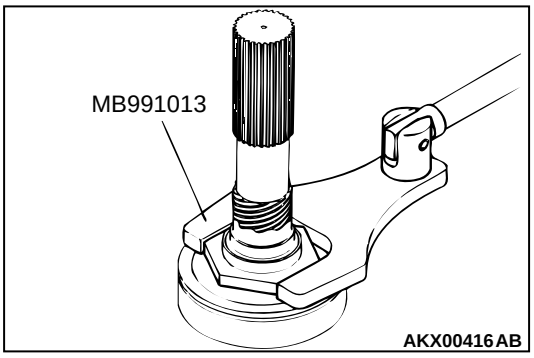
   NOTE: The clutch hub may fit loosely on the shaft, so that installation is possible without using a press.



>>C<< BALL BEARING INSTALLATION

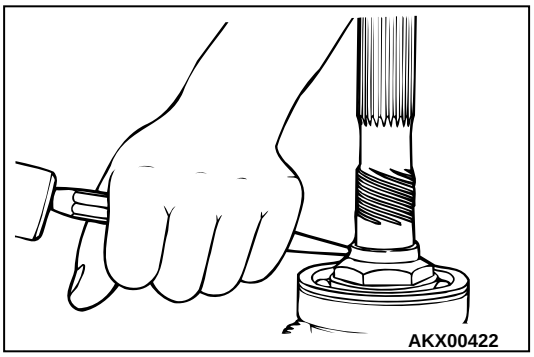
1. Use special tool MD998801 to support the rear output shaft.
2. Use special tools MD998812, MD998814 and MD998819 to install the radial ball bearing.

   NOTE: The ball bearing may be fitted loosely on the shaft, so that installation is possible without using a press.

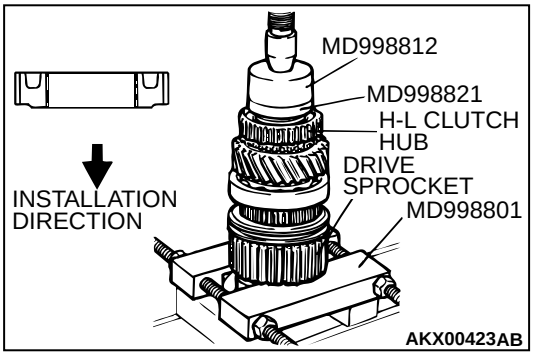


>>D<< JAM NUT INSTALLATION

1. Hold the drive sprocket in a soft-jaws vise.
2. Shift the clutch sleeve to the drive sprocket side.
3. Using special tool MB991013, tighten the jam nut to the specified torque.

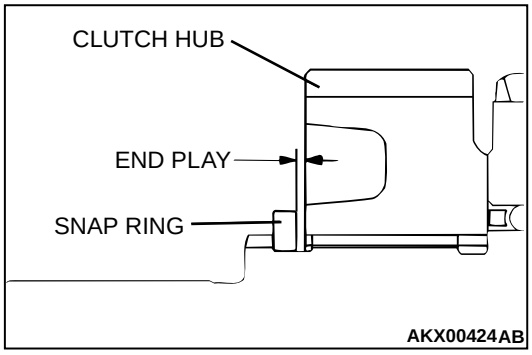


4. Stake the two places of the jam nut as shown in illustration.



>>E<< CLUTCH HUB INSTALLATION

1. Use special tool MD998801 to support the drive sprocket.
2. Confirm the clutch hub installation direction, and fit onto the rear output shaft.
3. Use special tools MD998812 and MD998821 to press in the clutch hub.



>>F<< SNAP RING INSTALLATION

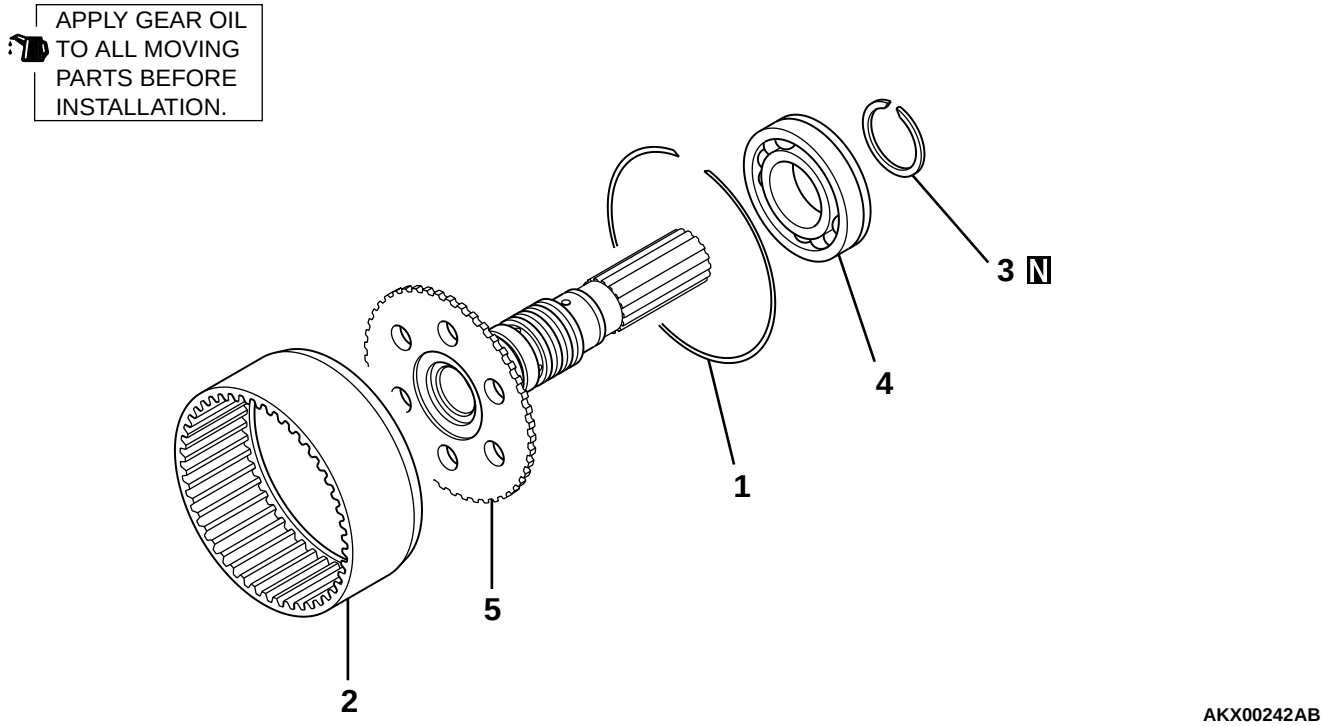
1. Install the thickest snap ring that can be fitted in the snap ring groove of the rear output shaft.
2. Make sure that the clutch hub end play meets the standard value.

   Standard value: 0 – 0.08 mm (0 – 0.003 inch)

DISASSEMBLY AND ASSEMBLY

M1233013600033

<SUPER SELECT 4WD>



		DISASSEMBLY STEPS
>>C<<	1.	SNAP RING
	2.	ANNULUS GEAR
>>B<<	3.	SNAP RING
<<A>> >>A<<	4.	BALL BEARING
	5.	REAR OUTPUT SHAFT

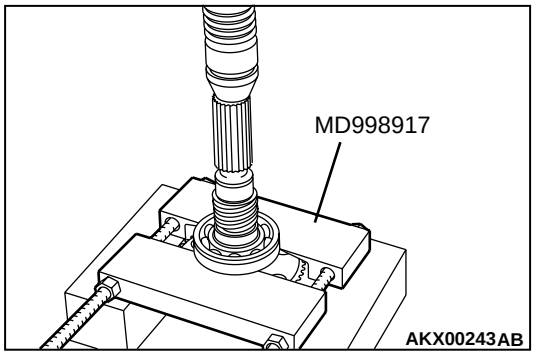
Required special tools

- MD998812: Installer Cap
- MD998814: Installer-200
- MD998824: Installer Adapter
- MD998917: Bearing Remover

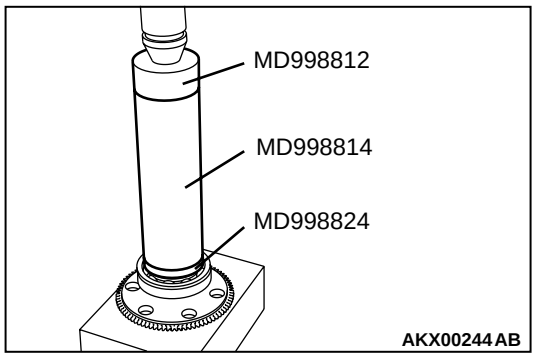
DISASSEMBLY SERVICE POINT

<<A>> BALL BEARING REMOVAL

Use special tool MD998917 to remove the ball bearing.

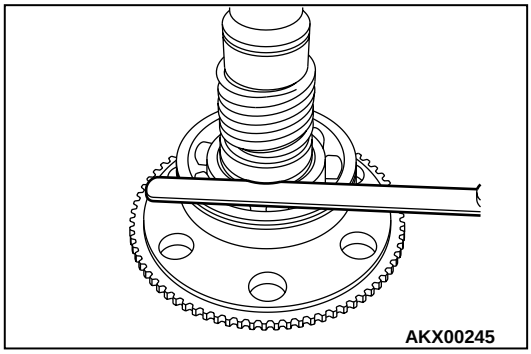


ASSEMBLY SERVICE POINTS



>>A<< BALL BEARING INSTALLATION

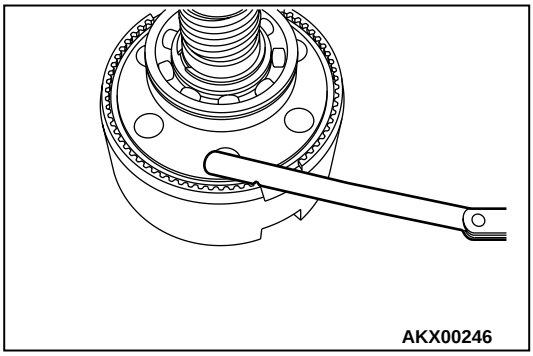
Use special tools MD998812, MD998814 and MD998824 to install the ball bearing.



>>B<< SNAP RING INSTALLATION

1. Install the thickest snap ring that can be fitted in the snap ring groove of the rear output shaft.
2. Make sure that the rear output shaft bearing end play meets the standard value.

   Standard value: 0 – 0.08 mm (0 – 0.003 inch)



>>C<< SNAP RING INSTALLATION

1. Install the thickest snap ring that can be fitted in the snap ring groove of the annulus gear.
2. Make sure that the annulus gear end play meets the standard value.

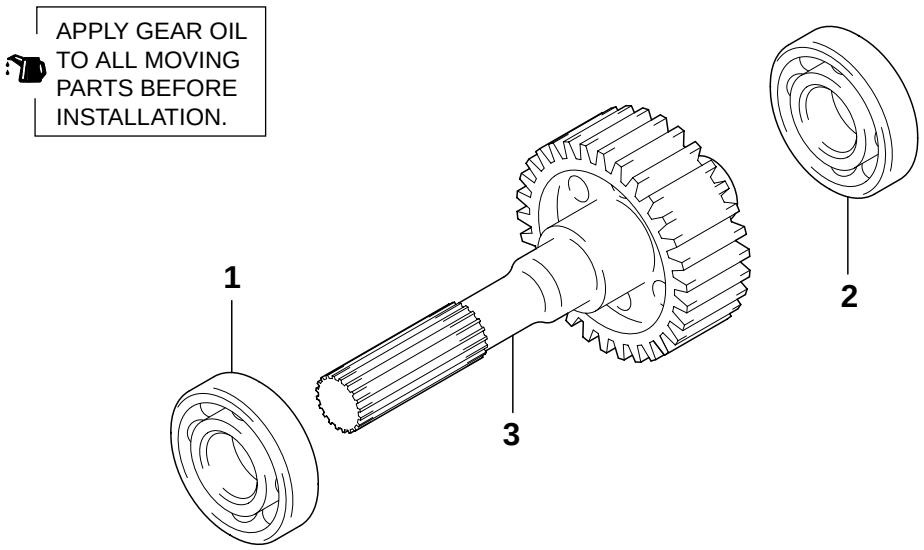
   Standard value: 0 – 0.08 mm (0 – 0.003 inch)

FRONT OUTPUT SHAFT

DISASSEMBLY AND ASSEMBLY

M1233014800029

<PART TIME 4WD>



AKX00425AB

		DISASSEMBLY STEPS
<<A>> >>B<<	1.	BALL BEARING
<<A>> >>A<<	2.	BALL BEARING
	3.	FRONT OUTPUT SHAFT

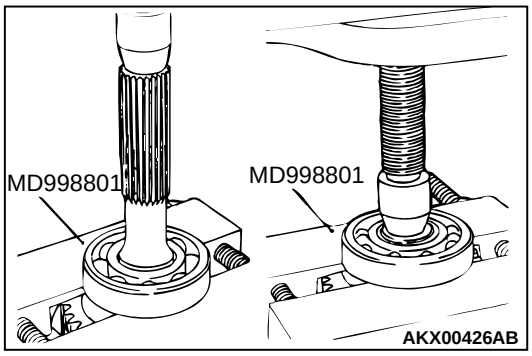
Required Special Tools:

- MD998801: Bearing Remover
- MD998812: Installer Cap
- MD998813: Installer-100
- MD998818: Installer Adapter (38)

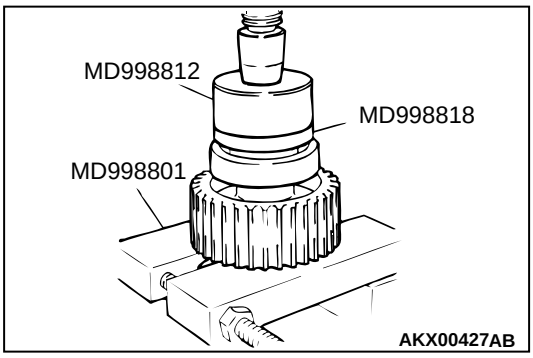
DISASSEMBLY SERVICE POINT

<<A>> BALL BEARING REMOVAL

1. Use special tool MD998801 to support the ball bearing.
2. Press the front output shaft with a press and remove the ball bearings.

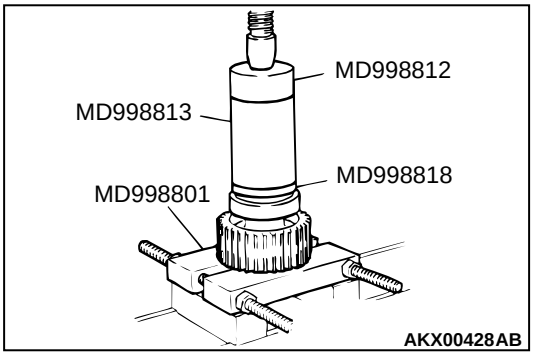


ASSEMBLY SERVICE POINTS



>>A<< BALL BEARING INSTALLATION

1. Use special tool MD998801 to support the front output shaft.
2. Use special tools MD998812 and MD998818 to install the ball bearing.



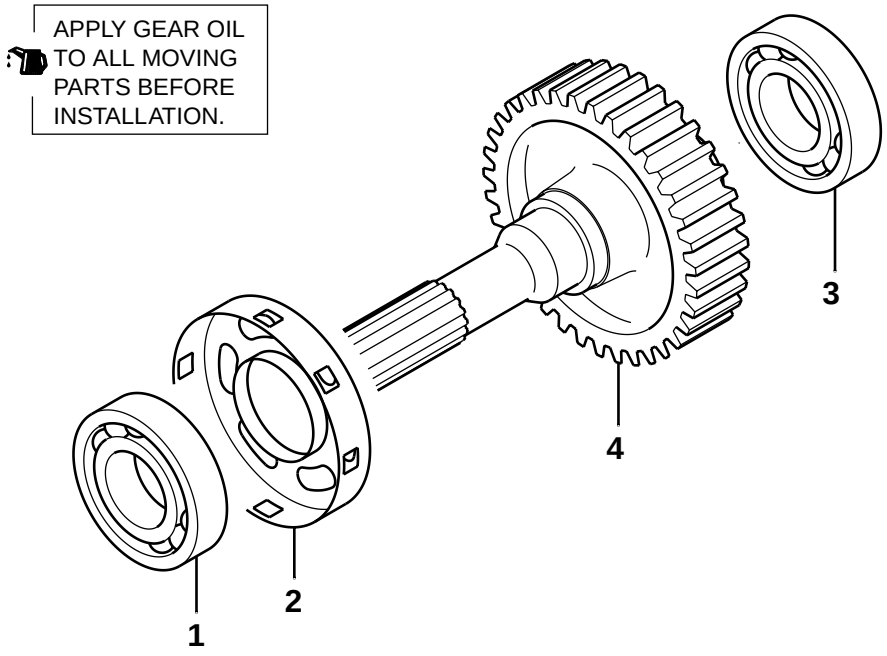
>>B<< BALL BEARING INSTALLATION

1. Use special tool MD998801 to support the front output shaft.
2. Use special tools MD998812, MD998813 and MD998818 to install the ball bearing.

DISASSEMBLY AND ASSEMBLY

<SUPER SELECT 4WD>

M1233014800030



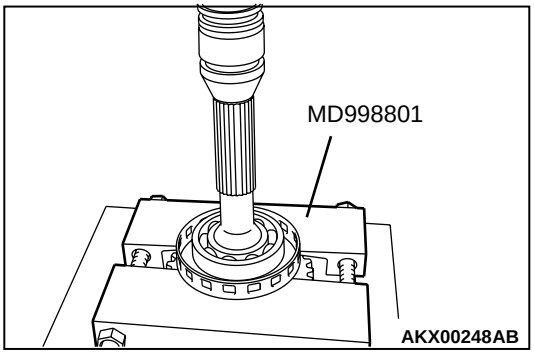
		DISASSEMBLY STEPS
<<A>> >>B<<	1.	BALL BEARING
	2.	SENSOR ROTOR
<<B>> >>A<<	3.	BALL BEARING
	4.	FRONT OUTPUT SHAFT

TSB Revision

Required Special tools:

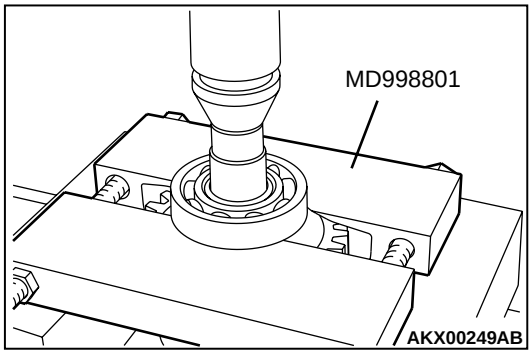
- MD998801: Bearing Remover
- MD998812: Installer Cap
- MD998813: Installer-100
- MD998818: Installer Adapter

DISASSEMBLY SERVICE POINT



<<A>> BALL BEARING REMOVAL

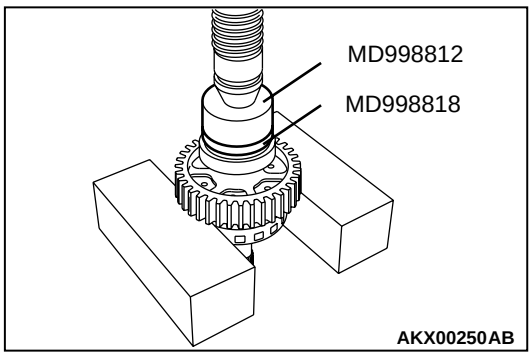
Use special tool MD998801 to remove the ball bearing.



<<B>> BALL BEARING REMOVAL

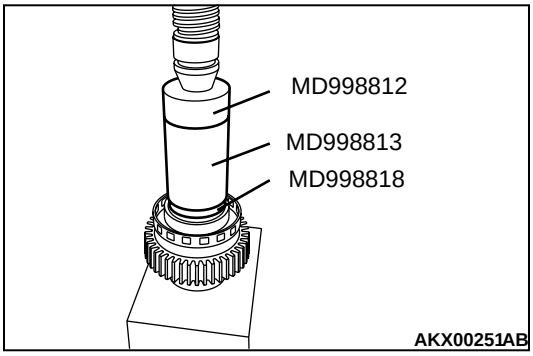
Use special tool MD998801 to remove the ball bearing.

ASSEMBLY SERVICE POINTS



>>A<< BALL BEARING INSTALLATION

Use special tools MD998812 and MD998818 to install the ball bearing.



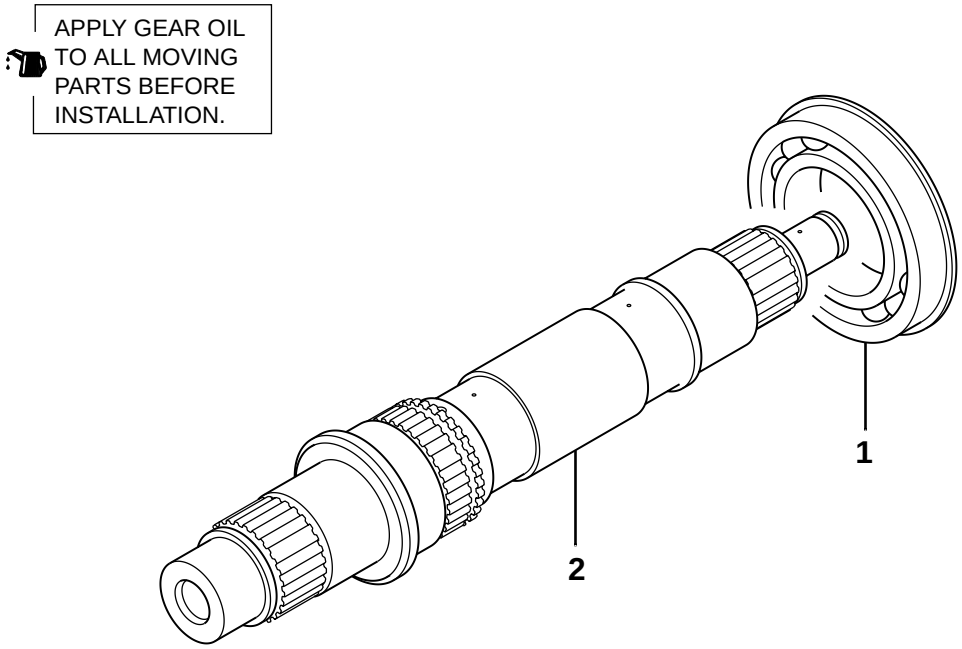
>>B<< BALL BEARING INSTALLATION
Use special tools MD998812, MD998813 and MD998818 to install the ball bearing.

TRANSFER DRIVE SHAFT

DISASSEMBLY AND ASSEMBLY

M1233014500028

<SUPER SELECT 4WD>



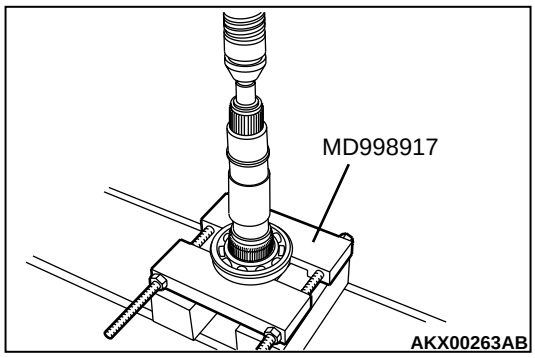
DISASSEMBLY STEPS

<<A>> >>A<< 1. BALL BEARING
2. TRANSFER DRIVE SHAFT

Required special tools

- MD998192: Bearing puller
- MD998812: Installer Cap
- MD998814: Installer-200
- MD998830: Installer Adapter
- MD998917: Bearing Remover

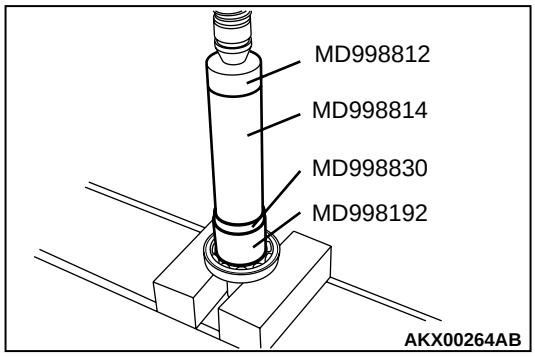
DISASSEMBLY SERVICE POINT



<<A>> BALL BEARING REMOVAL

Use special tool MD9988917 to remove the ball bearing.

ASSEMBLY SERVICE POINTS



>>A<< INNER RACE/ROLLER BEARING/SPACER INSTALLATION

Use special tools MD998812, MD998814, MD998830 and MD998192 to install the inner race.

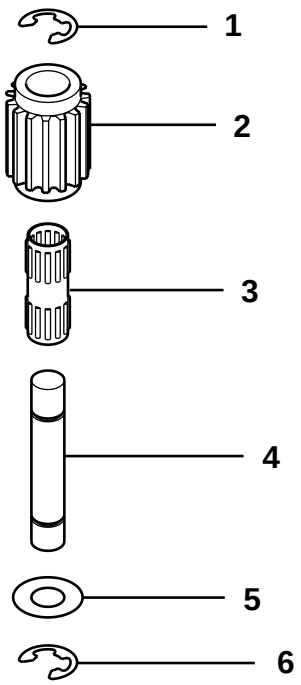
SHIFTRAIL DRIVE GEAR

DISASSEMBLY AND ASSEMBLY

M1233030500017

<SUPER SELECT 4WD>

APPLY GEAR OIL TO ALL MOVING PARTS BEFORE INSTALLATION.



AKX00240AB

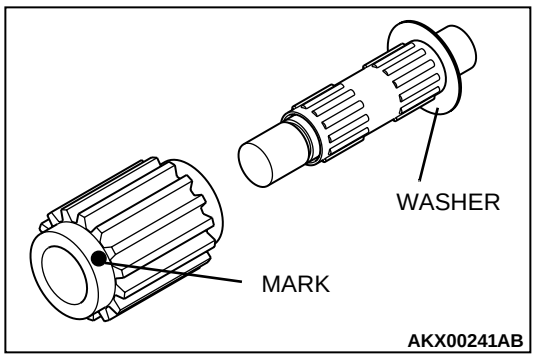
DISASSEMBLY STEPS

1. SNAP RING
>>A<< 2. SHIFT RAIL DRIVE GEAR
3. BEARING
4. SHIFT RAIL DRIVE GEAR SHAFT
5. WASHER
6. SNAP RING

ASSEMBLY SERVICE POINT

>>A<< SHIFT RAIL DRIVE GEAR INSTALLATION

Install so that the mating mark of the shift rail drive gear is opposite side of the washer.



AKX00241AB

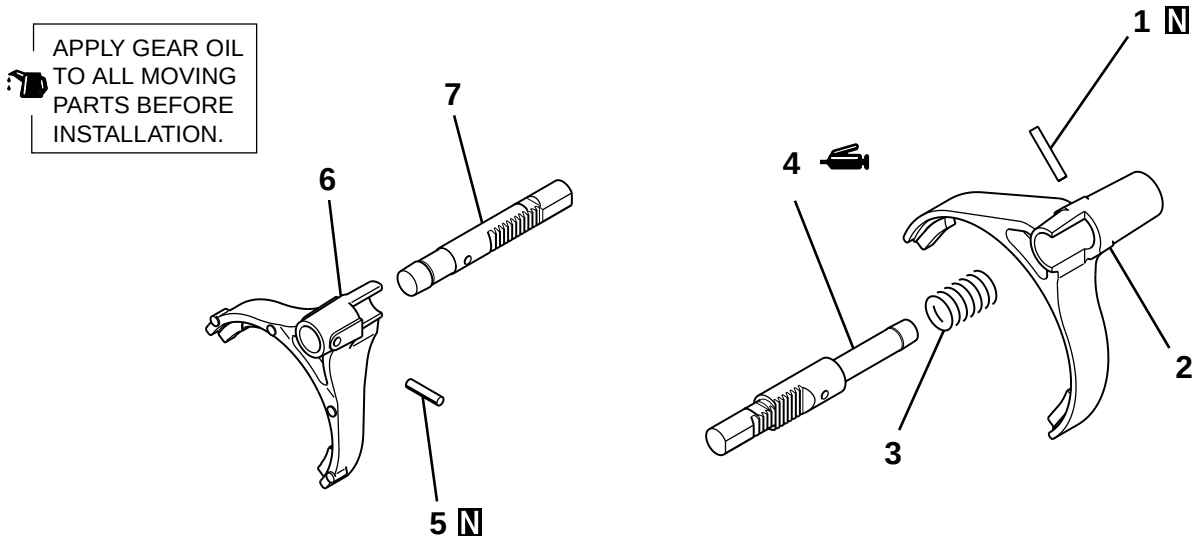
TSB Revision

2-4 SHIFT RAIL/H-L SHIFT RAIL

DISASSEMBLY AND ASSEMBLY

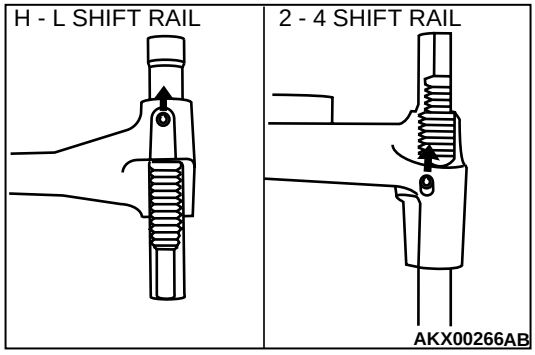
M1233031500010

<SUPER SELECT 4WD>



AKX00265AB

		DISASSEMBLY STEPS
>>A<<	1.	SPRING PIN
	2.	2-4WD SHIFT FORK
	3.	SPRING
>>B<<	4.	2-4WD SHIFT RAIL
>>A<<	5.	SPRING PIN
	6.	H-L SHIFT FORK
	7.	H-L SHIFT RAIL

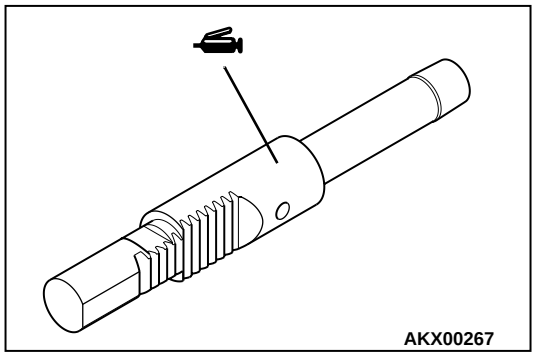


AKX00266AB

ASSEMBLY SERVICE POINTS

>>A<< SPRING PIN INSTALLATION

Install the spring pin so that the slit of spring pin faces forward of the transfer.



>>B<< 2-4WD SHIFT RAIL INSTALLATION
Apply Mitsubishi genuine grease Part number 0101011 or equivalent to the contact part between 2-4WD shift rail and 2-4 WD shift fork, and install.

SPECIFICATIONS

TORQUE SPECIFICATION

M1233023100028

Transmission

ITEM	SPECIFICATION
Anchor plug <V5A51>	98 ± 15 N·m (71 ± 11 ft-lb)
Cable end bracket mounting bolt	48 ± 6 N·m (35 ± 4 ft-lb)
Converter housing to transmission case tightening bolts	48 ± 6 N·m (35 ± 4 ft-lb)
Detent spring mounting bolt	5.9 ± 1 N·m (52 ± 9 in-lb)
Input shaft speed sensor mounting bolt	11 ± 1 N·m (97 ± 9 in-lb)
Lower valve body cover mounting bolt	11 ± 1 N·m (97 ± 9 in-lb)
Lower valve body mounting bolt	11 ± 1 N·m (97 ± 9 in-lb)
Manual control lever mounting nut	22 ± 3 N·m (16 ± 2 ft-lb)
Oil filter mounting bolt	5.9 ± 1 N·m (52 ± 9 in-lb)
Oil pan mounting bolt	11 ± 1 N·m (97 ± 9 in-lb)
Oil pump mounting bolt	23 ± 3 N·m (17 ± 2 ft-lb)
Output shaft speed sensor mounting bolt	11 ± 1 N·m (97 ± 9 in-lb)
Output shaft support mounting bolt	23 ± 3 N·m (17 ± 2 ft-lb)
Park/neutral position switch mounting bolt	11 ± 1 N·m (97 ± 9 in-lb)
Reduction brake piston adjust rod <V5A51>	4.9 N·m (43 in-lb)
Reduction brake piston nut <V5A51>	18 ± 3 N·m (13 ± 2 ft-lb)
Separating plate mounting bolt	5.9 ± 1 N·m (52 ± 9 in-lb)
Solenoid support mounting bolt	5.9 ± 1 N·m (52 ± 9 in-lb)
Transfer to transfer case adapter tightening bolt	35 ± 6 N·m (26 ± 4 ft-lb)
Transmission case to transfer case adapter tightening bolt	48 ± 6 N·m (35 ± 4 ft-lb)
Upper valve body mounting bolt	11 ± 1 N·m (97 ± 9 in-lb)
Valve body mounting bolt	11 ± 1 N·m (97 ± 9 in-lb)

Transfer

ITEM	SPECIFICATION
2WD switch <SUPER SELECT 4WD>	35 ± 6 N·m (26 ± 4 ft-lb)
2-4WD switch <SUPER SELECT 4WD>	35 ± 6 N·m (26 ± 4 ft-lb)
4H switch <SUPER SELECT 4WD>	35 ± 6 N·m (26 ± 4 ft-lb)
4LL switch <SUPER SELECT 4WD>	35 ± 6 N·m (26 ± 4 ft-lb)
4WD switch <PART TIME 4WD>	34 ± 5 N·m (25 ± 4 ft-lb)
Center differential lock switch <SUPER SELECT 4WD>	35 ± 6 N·m (26 ± 4 ft-lb)
Control housing to transfer case tightening bolt	19 ± 3 N·m (13 ± 2 ft-lb)
H-L shift rail plug <PART TIME 4WD>	32 ± 2 N·m (24 ± 1 ft-lb)
Low switch <PART TIME 4WD>	35 ± 6 N·m (26 ± 4 ft-lb)
Output sensor mounting bolt <SUPER SELECT 4WD>	11 ± 1 N·m (97 ± 9 in-lb)
Plug <PART TIME 4WD>	35 ± 6 N·m (26 ± 4 ft-lb)
Rear cover to chain cover tightening bolt	35 ± 6 N·m (26 ± 4 ft-lb)
Rear output shaft jam nut <PART TIME 4WD>	255 ± 10 N·m (188 ± 7 ft-lb)
Sift actuator mounting bolt <SUPER SELECT 4WD>	11 ± 1 N·m (97 ± 9 in-lb)
Speedometer sensor mounting bolt	11 ± 1 N·m (97 ± 9 in-lb)
Transfer case plate to bearing retainer mounting bolt	20 ± 2 N·m (14 ± 1 ft-lb)
Transfer case plate to transfer case tightening bolt and nut	35 ± 6 N·m (26 ± 4 ft-lb)
Transfer case to bearing retainer mounting bolt <SUPER SELECT 4WD>	20 ± 2 N·m(14 ± 1 ft-lb)
Transfer case to chain cover tightening bolt	35 ± 6 N·m (26 ± 4 ft-lb)
Transfer switch <PART TIME 4WD>	34 ± 5 N·m (25 ± 4 ft-lb)

GENERAL SPECIFICATIONS

M1233000200314

TRANSMISSION MODEL		V4A51-7-HCB	V5A51-7-HCB
Applicable engine		3.8L	
Transmission type		Electronically controlled 4-speed full-automatic	
Torque converter type		3-element with torque converter clutch	
Transmission gear ratio	1st	2.842	3.789
	2nd	1.495	2.057
	3rd	1.000	1.421
	4th	0.731	1.000
	5th	–	0.731
	Reverse	2.720	3.865
Transfer type		PART TIME 4WD	SUPER SELECT 4WD
Transfer gear ratio	High	1.000	
	Low	1.900	

SERVICE SPECIFICATIONS

M1233000300021

Transmission

ITEM	STANDARD VALUE
Output shaft end play mm (in) <V4A51>	0.25 – 0.55 (0.0098 – 0.0217)
Direct planetary carrier end play mm (in) <V5A51>	0.25 – 0.55 (0.0098 – 0.0217)
Underdrive clutch end play mm (in)	1.6 – 1.8 (0.063 – 0.071)
Input shaft end play mm (in)	0.25 – 0.81 (0.0098 – 0.0319)
Overdrive clutch end play mm (in)	2.0 – 2.2 (0.079 – 0.087)
Overdrive clutch return spring retainer end play mm (in)	0 – 0.09 (0 – 0.004)
Second brake end play mm (in)	1.49 – 1.95 (0.0587 – 0.0768)
Center support end play mm (in)	0 – 0.16 (0 – 0.0063)
Brake reaction plate end play mm (in)	0 – 0.16 (0 – 0.0063)
Reverse clutch end play mm (in)	1.5 – 1.7 (0.059 – 0.067)
Low/reverse brake end play mm (in)	1.65 – 2.11 (0.0650 – 0.0831)
Direct clutch end play mm (in) <V5A51>	1.0 – 1.2(0.039 – 0.047)

Transfer

ITEM	STANDARD VALUE
Countershaft gear end play mm (in)	0 – 0.15 (0 – 0.006)
Rear output shaft bearing to rear cove clearance mm (in) <PART TIME 4WD>	0 – 0.08 (0 – 0.003)
H-L clutch hub end play mm (in)	0 – 0.08 (0 – 0.003)
Differential lock hub end play mm (in) <SUPER SELECT 4WD>	0 – 0.08 (0 – 0.003)
2-4WD clutch hub end play mm (in) <SUPER SELECT 4WD>	0 – 0.08 (0 – 0.003)
Synchronizer outer ring to drive sprocket clearance mm (in) <SUPER SELECT 4WD>	Limit 0.3 (0.01)
Rear output shaft bearing snap ring to chain cover preload mm (in) <SUPER SELECT 4WD>	0.12 – 0.24 (0.005 – 0.009)
Rear output shaft bearing to rear cove clearance mm (in) <SUPER SELECT 4WD>	0 – 0.12 (0 – 0.005)
Input gear bearing end play mm (in)	0 – 0.06 (0 – 0.002)
Countershaft gear bearing end play mm (in)	0 – 0.08 (0 – 0.003)
Rear output shaft bearing end play mm (in) <SUPER SELECT 4WD>	0 – 0.08 (0 – 0.003)
Annulus gear end play mm (in) <SUPER SELECT 4WD>	0 – 0.08 (0 – 0.003)

VALVE BODY SPRING IDENTIFICATION

M1233022900021

ITEM	WIRE DIAMETER mm (in)	OUTSIDE DIAMETER mm (in)	FREE HEIGHT mm (in)	NUMBER OF LOOPS
Orifice check ball spring	0.5 (0.020)	4.5 (0.177)	15.4 (0.606)	15
Torque converter clutch control valve spring	0.7 (0.028)	5.9 (0.232)	28.1 (1.106)	19
Damping valve spring	1.0 (0.039)	7.7 (0.303)	35.8 (1.409)	17
Torque converter pressure control valve spring	1.6 (0.063)	11.2 (0.441)	29.4 (1.157)	9.5
Fail-safe valve a spring	0.7 (0.028)	8.9 (0.350)	21.9 (0.862)	9.5
Pressure control valve spring	0.7 (0.028)	7.6 (0.299)	37.7 (1.484)	25
Line relief valve spring	1.0 (0.039)	7.0 (0.276)	17.3 (0.681)	10
Regulator valve spring	1.3 (0.051)	13.3 (0.524)	44.6 (1.756)	10.5

ADJUSTING PLATE, SNAP RING AND SPACERS

M1233023000021

Transmission

Thrust race (For adjustment of output shaft end play<V4A51> and direct planetary carrier end play <V5A51>)

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
1.6 (0.063)	None	MR276705
1.8 (0.071)	None	MR276706
2.0 (0.079)	None	MR276707
2.2 (0.087)	None	MR276708
2.4 (0.094)	None	MR276709

Snap ring (For adjustment of underdrive clutch and overdrive clutch end play)

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
1.6 (0.063)	Brown	MD759960
1.7 (0.067)	None	MD759961
1.8 (0.071)	Blue	MD759962
1.9 (0.075)	Brown	MD758892
2.0 (0.079)	None	MD750841
2.1 (0.083)	Blue	MD750842
2.2 (0.087)	Brown	MD750843
2.3 (0.091)	None	MD750844
2.4 (0.094)	Blue	MD750845
2.5 (0.098)	Brown	MD750846
2.6 (0.102)	None	MD750847
2.7 (0.106)	Blue	MD750848
2.8 (0.110)	Brown	MD750849
2.9 (0.114)	None	MD750850
3.0 (0.118)	Blue	MD750851

Thrust race (For adjustment of input shaft end play)

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
1.4 (0.055)	None	MD723063
1.6 (0.063)	None	MD707267
1.8 (0.071)	None	MD723064
2.0 (0.079)	None	MD707268
2.2 (0.087)	None	MD723065
2.4 (0.094)	None	MD724358
2.6 (0.102)	None	MD754798

Snap ring (For adjustment of overdrive clutch return spring retainer end play)

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
1.48 (0.058)	Brown	MR336158
1.53 (0.060)	Black	MR336159
1.58 (0.062)	None	MR336160
1.63 (0.064)	Brown	MR336161

Pressure plate (For adjustment of second brake end play)

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
1.6 (0.063)	F	MR336390
1.8 (0.071)	E	MR336391
2.0 (0.079)	D	MR336392
2.2 (0.087)	C	MR336393
2.4 (0.094)	B	MR336394
2.6 (0.102)	A	MR336395
2.8 (0.110)	0	MR336396
3.0 (0.118)	1	MR336397

Snap ring (For adjustment of center support and brake reaction plate end play)

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
2.2 (0.087)	None	MD756784
2.3 (0.091)	Blue	MD756785
2.4 (0.094)	Brown	MD758552
2.5 (0.098)	None	MD758553

Snap ring (For adjustment of reverse clutch end play)

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
1.6 (0.063)	None	MD761088
1.7 (0.067)	Blue	MD761089
1.8 (0.071)	Brown	MD761090
1.9 (0.075)	None	MD758947
2.0 (0.079)	Blue	MD756690
2.1 (0.083)	Brown	MD756691
2.2 (0.087)	None	MD756692

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
2.3 (0.091)	Blue	MD756693
2.4 (0.094)	Brown	MD756694
2.5 (0.098)	None	MD756695
2.6 (0.102)	Blue	MD756696
2.7 (0.106)	Brown	MD756697
2.8 (0.110)	None	MD756698

Snap ring (For adjustment of direct clutch end play) <V5A51>

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
1.9 (0.075)	Brown	MD758946
2.0 (0.079)	None	MD753397
2.1 (0.083)	Blue	MD753398
2.2 (0.087)	Brown	MD753399
2.3 (0.091)	None	MD753400
2.4 (0.094)	Blue	MD753401
2.5 (0.098)	Brown	MD753402
2.6 (0.102)	None	MD753403
2.7 (0.106)	Blue	MD753404
2.8 (0.110)	Brown	MD753405
2.9 (0.114)	None	MD753406
3.0 (0.118)	Blue	MD753407

Pressure plate (For adjustment low/reverse brake end play)

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
1.8 (0.071)	E	MD759425
2.0 (0.079)	D	MD759426
2.2 (0.087)	C	MD759427
2.4 (0.094)	B	MD759428
2.6 (0.102)	A	MD759429
2.8 (0.110)	0	MD759430
3.0 (0.118)	1	MD759431

Transfer

Snap ring (For adjustment input gear bearing end play)

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
2.30 (0.091)	None	MD704199
2.35 (0.093)	Red	MD704200
2.40 (0.094)	White	MD704201
2.45 (0.096)	Blue	MD704202
2.50 (0.098)	Green	MD704203

Spacer (For adjustment of countershaft gear end play)

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
1.77 (0.070)	None	MB896728
1.91 (0.075)	Blue	MB896729
2.05 (0.081)	Brown	MB896730
2.19 (0.086)	White	MB896731
2.33 (0.091)	Red	MB896732

Snap ring (For adjustment of countershaft gear bearing end play)

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
1.48 (0.058)	Blue	MB919176
1.62 (0.064)	None	MB919177

Snap ring (For adjustment of H-L clutch hub end play) <PART TIME 4WD>

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
2.18 (0.086)	Blue	MR110983
2.25 (0.089)	None	MR110934
2.32 (0.091)	Brown	MR110935
2.39 (0.094)	White	MR110936

Spacer (For adjustment of rear output shaft to rear cover clearance) <PART TIME 4WD>

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
2.75 (0.108)	B75	MR528586
2.79 (0.110)	B79	MR528587
2.83 (0.111)	B83	MR528588
2.87 (0.113)	B87	MR528589
2.91 (0.115)	B91	MR528590
2.95 (0.116)	B95	MR528591
2.99 (0.118)	B99	MR528592
3.03 (0.119)	C03	MR528593
3.07 (0.121)	C07	MR528594
3.11 (0.122)	C11	MR528595

Snap ring (For adjustment of H-L clutch hub end play) <SUPER SELECT 4WD>

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
2.18 (0.086)	–	MR410928
2.25 (0.089)	–	MR410929
2.32 (0.091)	–	MR410930
2.39 (0.094)	–	MR410931

Spacer (For adjustment of rear output shaft to chain cover preload) <SUPER SELECT 4WD>

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
1.57 (0.062)	–	MR486340
1.63 (0.064)	–	MR486341
1.69 (0.067)	–	MR486342
1.75 (0.069)	–	MR486343
1.81 (0.071)	–	MR486344
1.87 (0.074)	–	MR486345
1.93 (0.076)	–	MR486346
1.99 (0.078)	–	MR486347
2.05 (0.081)	–	MR477935
2.11 (0.083)	–	MR477936
2.17 (0.085)	–	MR477937
2.23 (0.088)	–	MR477938
2.29 (0.090)	–	MR477939
2.35 (0.093)	–	MR477940
2.41 (0.095)	–	MR477941
2.47 (0.097)	–	MR477942
2.53 (0.100)	–	MR477943
2.59 (0.102)	–	MR477944
2.65 (0.104)	–	MR477945
2.71 (0.107)	–	MR477946
2.77 (0.109)	–	MR477947

Spacer (For adjustment of rear output shaft to rear cover clearance) <SUPER SELECT 4WD>

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
2.57 (0.101)	–	MR477950
2.63 (0.104)	–	MR477951
2.69 (0.106)	–	MR477952
2.75 (0.108)	–	MR477953
2.81 (0.111)	–	MR477954
2.87 (0.113)	–	MR477955
2.93 (0.115)	–	MR477956
2.99 (0.118)	–	MR477957
3.05 (0.120)	–	MR477958
3.11 (0.122)	–	MR477959
3.17 (0.125)	–	MR477960
3.23 (0.127)	–	MR477961
3.29 (0.129)	–	MR477962

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
3.35 (0.132)	–	MR477963
3.41 (0.134)	–	MR477964
3.47 (0.137)	–	MR477965
3.53 (0.139)	–	MR477966
3.59 (0.141)	–	MR477967
3.65 (0.144)	–	MR477968
3.71 (0.146)	–	MR486348
3.77 (0.148)	–	MR486349
3.83 (0.151)	–	MR486350
3.89 (0.153)	–	MR486351
3.95 (0.156)	–	MR486352

Snap ring (For adjustment annulus gear end play) <SUPER SELECT 4WD>

THICKNESS mm (in)	IDENTIFICATION SYMBOL	PART NO.
1.90 (0.075)	–	MR305024
1.94 (0.076)	–	MR305025
1.98 (0.078)	–	MR305026
2.02 (0.080)	–	MR305027
2.06 (0.081)	–	MR305028
2.10 (0.083)	–	MR305029

SEALANTS AND ADHESIVES

M1233000500025

Transmission

ITEMS	SPECIFIED SEALANTS
Transfer case adapter	MITSUBISHI genuine sealant part No. MR166584 or equivalent
Sealing cap	3M™ ADD part No.8672 or equivalent
Converter housing	MITSUBISHI genuine sealant part No. MR166584 or equivalent
Oil pan	MITSUBISHI genuine sealant part No. MR166584 or equivalent

Transfer

ITEMS	SPECIFIED SEALANTS AND ADHESIVE
Chain cover	MITSUBISHI genuine sealant part No. MD997740 or equivalent
Rear cover	MITSUBISHI genuine sealant part No. MD997740 or equivalent
Support pin insertion	3M™ AAD part No.8672 or equivalent
Support pin thread	MITSUBISHI genuine adhesive part No. MD160450 or equivalent
Control housing	MITSUBISHI genuine sealant part No. MD997740 or equivalent
H-L shift rail plug	3M™ AAD part No.8672 or equivalent
Plug	3M™ AAD part No.8672 or equivalent
Transfer case plate	MITSUBISHI genuine sealant part No. MD997740 or equivalent
Bearing retainer mounting bolt	MITSUBISHI genuine sealant part No. MD997740 or equivalent