GROUP 23B

AUTOMATIC TRANSMISSION OVERHAUL

CONTENTS

GENERAL INFORMATION 23B-2

GENERAL SPECIFICATIONS 23B-4

SERVICE SPECIFICATIONS 23B-5

SNAP RING, SPACER, THRUST WASHER, THRUST RACE AND PRESSURE PLATE FOR ADJUSTMENT 23B-5

TORQUE SPECIFICATIONS 23B-9

SEALANTS 23B-9

SPECIAL TOOLS 23B-10

TRANSMISSION 23B-14
DISASSEMBLY AND REASSEMBLY 23B-14

OIL PUMP 23B-40
DISASSEMBLY AND REASSEMBLY 23B-40

UNDERDRIVE CLUTCH AND INPUT SHAFT 23B-41
DISASSEMBLY AND REASSEMBLY 23B-41

REVERSE AND OVERDRIVE CLUTCH 23B-43
DISASSEMBLY AND REASSEMBLY 23B-43

PLANETARY CARRIER ASSEMBLY 23B-46
DISASSEMBLY AND REASSEMBLY 23B-46

LOW-REVERSE BRAKE 23B-48
DISASSEMBLY AND REASSEMBLY 23B-48

SECOND BRAKE 23B-49
DISASSEMBLY AND REASSEMBLY 23B-49

OUTPUT SHAFT 23B-50
DISASSEMBLY AND REASSEMBLY 23B-50

DIFFERENTIAL 23B-52
DISASSEMBLY AND REASSEMBLY 23B-52

VALVE BODY 23B-54
DISASSEMBLY AND REASSEMBLY 23B-54

DRIVE SHAFT OIL SEAL 23B-57
DISASSEMBLY AND REASSEMBLY 23B-57

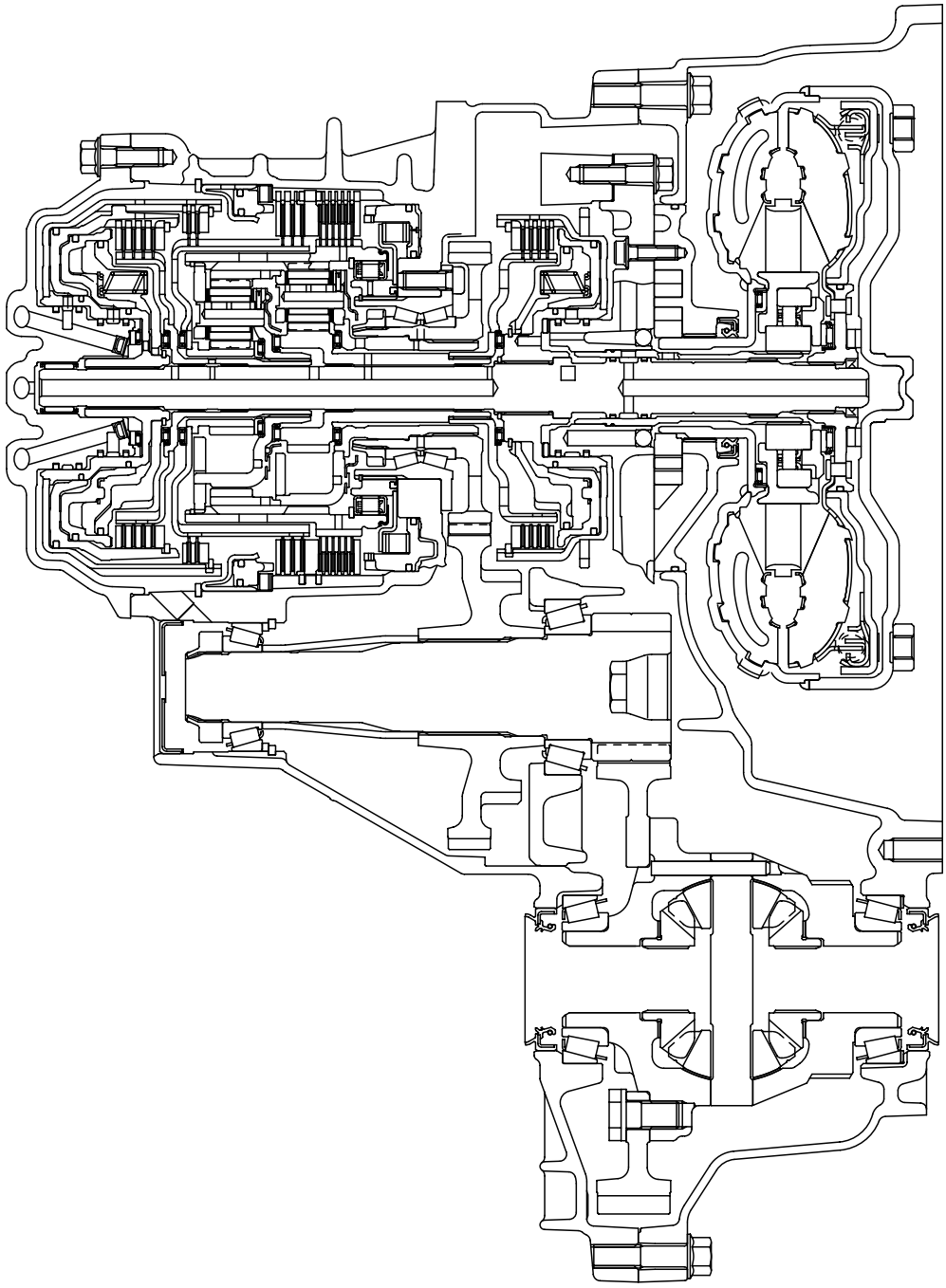
GENERAL INFORMATION

M1233000100470

AUTOMATIC TRANSMISSION MODELS

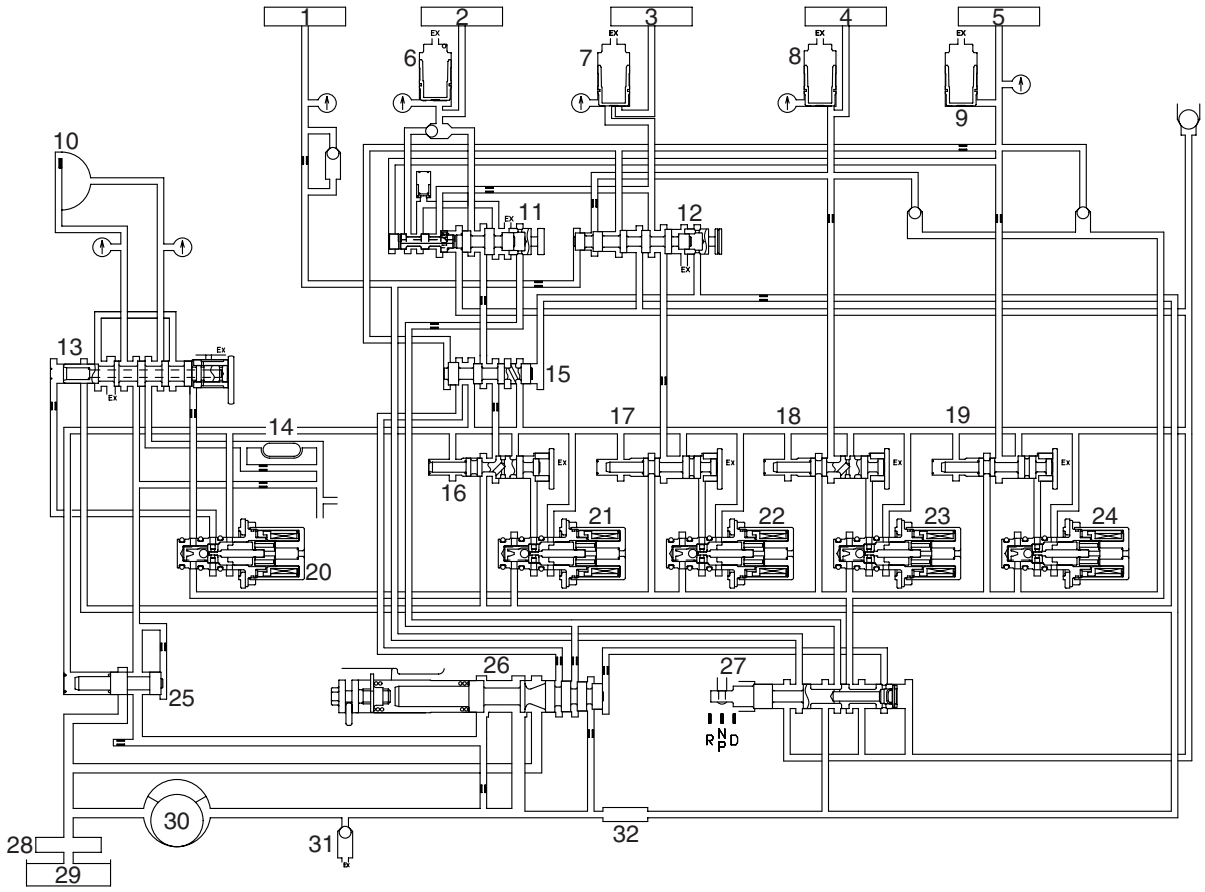
Transmission model	Combined engine	Vehicle model
F4A4B-2-N4Z	4G69-S4-MIVEC	NA4W

SECTIONAL VIEW



AK301433

HYDRAULIC CIRCUIT



AK202328AD

1. Reverse clutch
2. Low-reverse brake
3. Second brake
4. Underdrive clutch
5. Overdrive clutch
6. Low-reverse accumulator
7. Second accumulator
8. Underdrive accumulator
9. Overdrive accumulator
10. Damper clutch
11. Fail-safe valve A
12. Fail-safe valve B
13. Damper clutch control valve
14. Cooler
15. Switch valve
16. Low-reverse pressure control valve
17. Second pressure control valve
18. Underdrive pressure control valve
19. Overdrive pressure control valve
20. Damper clutch control solenoid valve
21. Low-reverse solenoid valve
22. Second solenoid valve
23. Underdrive solenoid valve
24. Overdrive solenoid valve
25. Torque converter pressure control valve
26. Regulator valve
27. Manual valve
28. Oil filter
29. Oil pan
30. Oil pump
31. Relief valve
32. Oil strainer

GENERAL SPECIFICATIONS

M1233000200507

Transmission model	Drive system	Number of speed	Damper clutch	Low-reverse one-way clutch	Final gear ratio
F4A4B-2-N4Z	2WD	4 speed	Provided	Provided	4.406

Item			F4A4B
Torque converter	Type		3-element, 1-stage, 2-phase
Transmission	Type		4-speed forward, 1-speed reverse
	Gear ratio	1st	2.842
		2nd	1.529
		3rd	1.000
		4th	0.712
		Reverse	2.480
	Number of underdrive clutch discs		4
	Number of overdrive clutch discs		4
	Number of reverse clutch discs		2
	Number of low-reverse brake discs		6
	Number of second brake discs		3

VALVE BODY SPRING IDENTIFICATION TABLE

Spring	Wire diameter mm	Coil diameter mm	Free length mm	Number of loops
Regulator valve spring	1.8	15.7	86.7	24
Underdrive pressure control valve spring	0.7	7.6	37.7	25
Overdrive pressure control valve spring	0.7	7.6	37.7	25
Low-reverse pressure control valve spring	0.7	7.6	37.7	25
Second pressure control valve spring	0.7	7.6	37.7	25
Torque converter valve spring	1.6	11.2	34.4	12.5
Damper clutch control valve spring	0.7	5.9	28.1	19
Fail-safe valve A spring	0.7	8.9	21.9	9.5
Damping valve spring	1.0	7.7	35.8	17
Line relief valve spring	1.0	7.0	17.3	10
Orifice check ball spring	0.5	4.5	17.2	15

SERVICE SPECIFICATIONS

M1233000300355

Item	Standard value
Brake reaction plate end play	0 – 0.16 mm
Second brake end play	0.79 – 1.25 mm
Low-reverse brake end play	1.65 – 2.11 mm
Output shaft preload	0.01 – 0.09 mm
Underdrive sun gear end play	0.25 – 0.45 mm
Input shaft end play	0.70 – 1.45 mm
Differential case preload	0.045 – 0.105 mm
Underdrive clutch piston end play	1.6 – 1.8 mm
Overdrive clutch return spring retainer end play	0 – 0.09 mm
Overdrive clutch end play	1.6 – 1.8 mm
Reverse clutch end play	1.5 – 1.7 mm
Backlash between differential gear and pinion	0.025 – 0.150 mm

SNAP RING, SPACER, THRUST WASHER, THRUST RACE AND PRESSURE PLATE FOR ADJUSTMENT

M1233023000344

SNAP RING (FOR ADJUSTMENT OF BRAKE REACTION PLATE END PLAY)

Thickness mm	Identification symbol
2.2	Blue
2.3	Brown
2.4	None
2.5	Blue

PRESSURE PLATE (FOR ADJUSTMENT OF LOW-REVERSE BRAKE END PLAY AND SECOND BRAKE END PLAY)

Thickness mm	Identification symbol
1.6	L
1.8	1
2.0	0
2.2	2
2.4	4
2.6	6
2.8	8
3.0	D

SPACER (FOR ADJUSTMENT OF OUTPUT SHAFT PRELOAD)

Thickness mm	Identification symbol
1.88	88
1.92	92
1.96	96
2.00	00
2.04	04
2.08	08
2.12	12
2.16	16
2.20	20
2.24	24
2.28	28
2.32	32
2.36	36
2.40	40
2.44	44
2.48	48
2.52	52
2.56	56
2.60	60
2.64	64
2.68	68
2.72	72
2.76	76

THRUST RACE (FOR ADJUSTMENT OF UNDERDRIVE SUN GEAR END PLAY)

Thickness mm	Identification symbol
1.6	–
1.7	–
1.8	–
1.9	–
2.0	–
2.1	–
2.2	–
2.3	–
2.4	–
2.5	–
2.6	–

THRUST WASHER (FOR ADJUSTMENT OF INPUT SHAFT END PLAY)

Thickness mm	Identification symbol
1.8	18
2.0	20
2.2	22
2.4	24
2.6	26
2.8	28

SPACER (FOR ADJUSTMENT OF DIFFERENTIAL CASE PRELOAD)

Thickness mm	Identification symbol
0.71	71
0.74	74
0.77	77
0.80	80
0.83	83
0.86	86
0.89	89
0.92	92
0.95	95
0.98	98
1.01	01
1.04	04
1.07	07
1.10	J
1.13	D
1.16	K
1.19	L
1.22	G
1.25	M
1.28	N
1.31	E
1.34	O
1.37	P

SNAP RING (FOR ADJUSTMENT OF UNDERDRIVE CLUTCH PISTON END PLAY AND OVERDRIVE CLUTCH END PLAY)

Thickness mm	Identification symbol
1.6	None
1.7	Blue
1.8	Brown
1.9	None
2.0	Blue

Thickness mm	Identification symbol
2.1	Brown
2.2	None
2.3	Blue
2.4	Brown
2.5	None
2.6	Blue
2.7	Brown
2.8	None
2.9	Blue
3.0	Brown

SNAP RING (FOR ADJUSTMENT OF OVERDRIVE CLUTCH RETURN SPRING RETAINERS END PLAY)

Thickness mm	Identification symbol
1.48	Brown
1.53	None
1.58	Blue
1.63	Brown

SNAP RING (FOR ADJUSTMENT OF REVERSE CLUTCH END PLAY)

Thickness mm	Identification symbol
1.6	None
1.7	Blue
1.8	Brown
1.9	None
2.0	Blue
2.1	Brown
2.2	None
2.3	Blue
2.4	Brown
2.5	None
2.6	Blue
2.7	Brown
2.8	None

SPACER (FOR ADJUSTMENT OF BACKLASH BETWEEN DIFFERENTIAL SIDE GEARS AND PINION)

Thickness mm	Identification symbol
0.75 – 0.82	–
0.83 – 0.92	–
0.93 – 1.00	–
1.01 – 1.08	–
1.09 – 1.16	–

TORQUE SPECIFICATIONS

M1233023100482

Item	N·m
TRANSMISSION	
Output shaft bearing retainer mounting bolts	29 ± 2
Output shaft lock nuts	170 ± 10
Transfer drive gear mounting bolts	34 ± 2
Rear cover mounting bolts	23 ± 3
Oil pump mounting bolts	29 ± 2
Converter housing mounting bolts	48 ± 6
Valve body mounting bolts	11 ± 1
Manual control shaft detent mounting bolts	6.0 ± 1.0
Valve body cover mounting bolts	11 ± 1
Sealing cap mounting bolts	4.9 ± 1.0
Inhibitor switch mounting bolts	11 ± 1
Manual control lever mounting nuts	22 ± 3
Output shaft speed sensor mounting bolt	11 ± 1
Input shaft speed sensor mounting bolt	11 ± 1
Oil cooler feed tube mounting bolts	11 ± 1
Eye bolt	24 ± 3
Oil filter tube mounting bolt	11 ± 1
Control cable bracket mounting bolts	23 ± 3
Corrugate clamp bracket mounting bolt (6 × 12)	11 ± 1
Corrugate clamp bracket mounting bolt (8 × 12)	23 ± 3
Rear roll stopper bracket mounting bolts	90 ± 10
Harness bracket mounting bolt	11 ± 1
Front roll stopper bracket mounting bolts	90 ± 10
COMPONENTS	
Differential drive gear bolts	135 ± 5
Valve body plate mounting bolts	6.0 ± 1.0
Valve body cover mounting bolts	11 ± 1
Solenoid valve support mounting bolts	6.0 ± 1.0

SEALANTS

M1233000500304

Item	Specified sealant
Rear cover	Mitsubishi genuine sealant Part No. MD974421 or equivalent
Converter housing	Mitsubishi genuine sealant Part No. MD974421 or equivalent
Valve body cover	Mitsubishi genuine sealant Part No. MD974421 or equivalent

FORM-IN-PLACE GASKET (FIPG)

This transmission has several areas where the form-in-place gasket (FIPG) is used for sealing. To ensure that the FIPG fully serves its purpose, it is necessary to observe some precautions when applying it. Bead size, continuity and location are of paramount importance.
Too thin a bead could cause leaks. Too thick a bead, on the other hand, could be squeezed out of location, causing blocking or narrowing of fluid passages. To prevent leaks or blocking of passages, therefore, it is absolutely necessary to apply the FIPG evenly without a break, while observing the correct bead size.
FIPG hardens as it reacts with the moisture in the atmospheric air, and it is usually used for sealing metallic flange areas.

Disassembly

Parts sealed with a FIPG can be easily removed without need for the use of a special method. In some cases, however, the FIPG in joints may have to be broken by tapping parts with a mallet or similar tool.

Surface Preparation

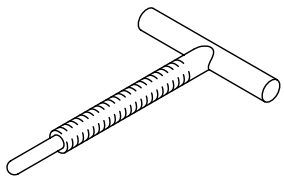
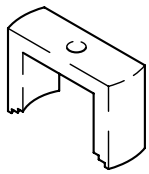
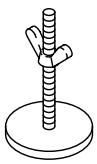
Thoroughly remove all substances deposited on the FIPG application surface, using a gasket scraper. Make sure that the FIPG application surface is flat and smooth. Also make sure that the surface is free from oils, greases and foreign substances. Do not fail to remove old FIPG that may remain in the fastener fitting holes.

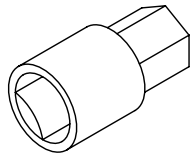
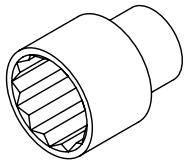
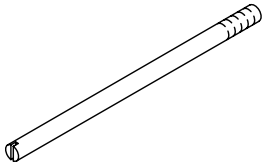
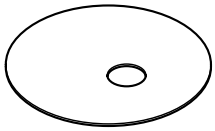
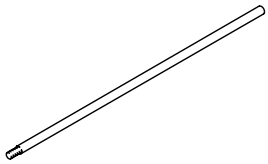
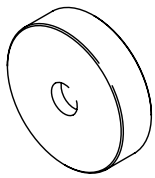
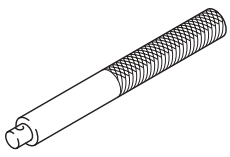
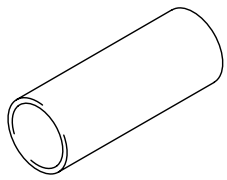
FIPG Application

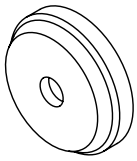
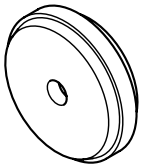
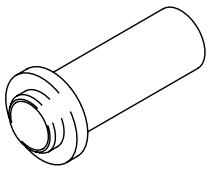
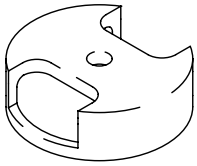
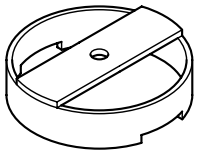
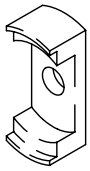
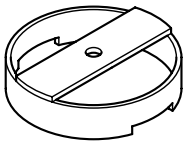
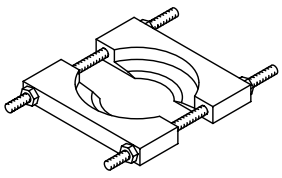
Applied FIPG bead should be of the specified size and free of any break. FIPG can be wiped away unless it has completely hardened. Install the mating parts in position while the FIPG is still wet (in less than 10 minutes after application). Do not allow FIPG to spread beyond the sealing areas during installation. Avoid operating the transmission or letting oils or water come in contact with the sealed area before a time sufficient for FIPG to harden (approximately one hour) has passed.
FIPG application method may vary from location to location. Follow the instruction for each particular case described later in this manual.

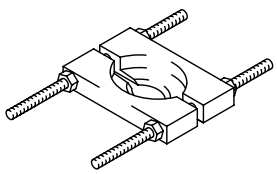
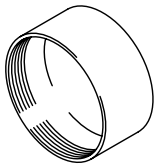
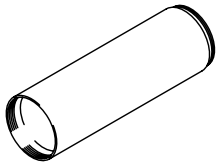
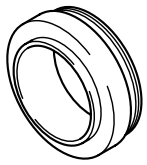
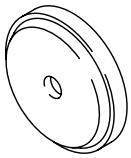
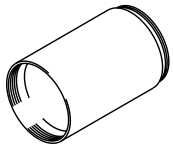
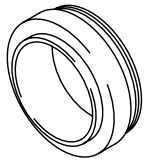
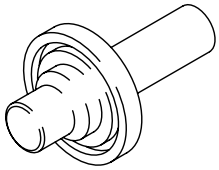
SPECIAL TOOLS

M1233000600378

Tool	Number	Name	Application
	MD998333	Oil pump remover	Removal of oil pump
	MD998903	Spring compressor	Removal and installation of one-way clutch inner race snap ring
	MD998924	Spring compressor retainer	• Removal and installation of snap ring • Measurement of underdrive clutch, overdrive clutch and reverse clutch end plays

Tool	Number	Name	Application
	MB990607	Torque wrench socket	Removal and installation of output shaft lock nut
	MB991625	Special socket (41)	Removal and installation of output shaft lock nut
	MD998412	Guide	• Installation of transfer drive gear • Installation of oil pump and oil pump gasket
	MB991631	Clearance dummy plate	Measurement of brake reaction plate, second brake and low-reverse brake end plays
	MD998913	Dial gauge extension	Measurement of low-reverse brake end plays
	MB990930	Installer adapter	Installation of output shaft taper roller bearing outer race
	MB990938	Handle	• Use with installer adapter • Installation of input shaft rear bearing
	MD998350	Bearing installer	Installation of output shaft collar and taper roller bearing

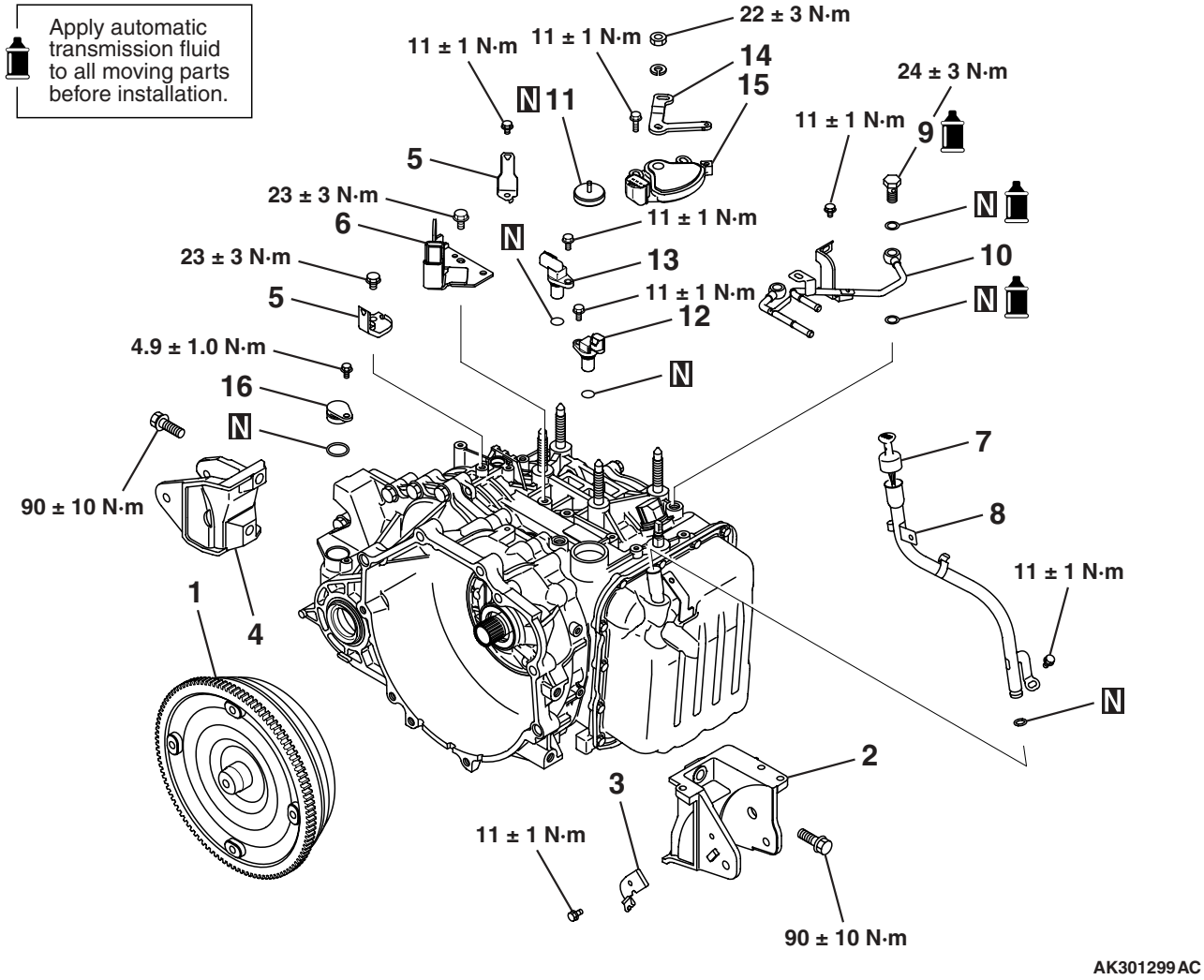
Tool	Number	Name	Application
	MB990931	Installer adapter	Installation of cap
	MB990935	Installer adapter	Installation of differential taper roller bearing outer race
	MD998334	Oil seal installer	Installation of oil pump oil seal
	MD998907	Spring compressor	Removal and installation of underdrive clutch snap ring
	MB991628	Spring compressor	• Measurement of underdrive clutch end play • Measurement of overdrive clutch end play
	MD999590	Spring compressor	Removal and installation of reverse and overdrive clutch snap ring
	MB991790	Spring compressor	Measurement of reverse clutch end play
	MD998917	Bearing remover	• Removal of output shaft transfer driven gear • Removal of differential taper roller bearing

Tool	Number	Name	Application
	MD998801	Bearing remover	Removal of output shaft taper roller bearing
	MD998812	Installer cap	Use with installer and installer adapter
	MD998814	Installer 200	Use with installer cap and installer adapter
	MD998823	Installer adapter (48)	• Installation of output shaft taper roller bearing • Installation of transfer driven gear
	MB990936	Installer adapter	• Installation of output shaft taper roller bearing outer race • Installation of transfer extension housing oil seal
	MD998813	Installer 100	Use with installer cap and installer adapter
	MD998824	Installer adapter (50)	Installation of differential taper roller bearing
	MD998800	Oil seal installer	Installation of drive shaft oil seal

TRANSMISSION

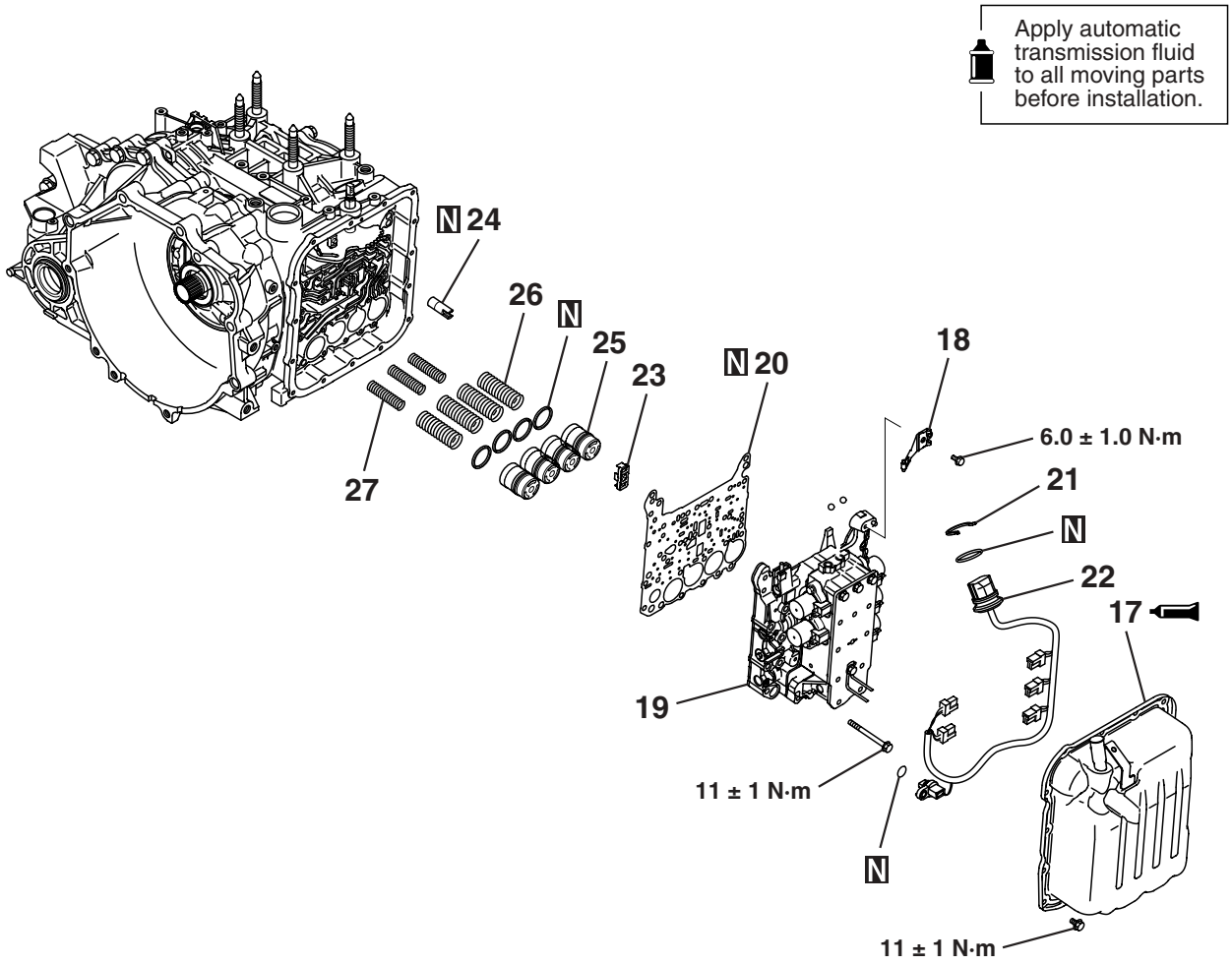
DISASSEMBLY AND REASSEMBLY

M1233001000498



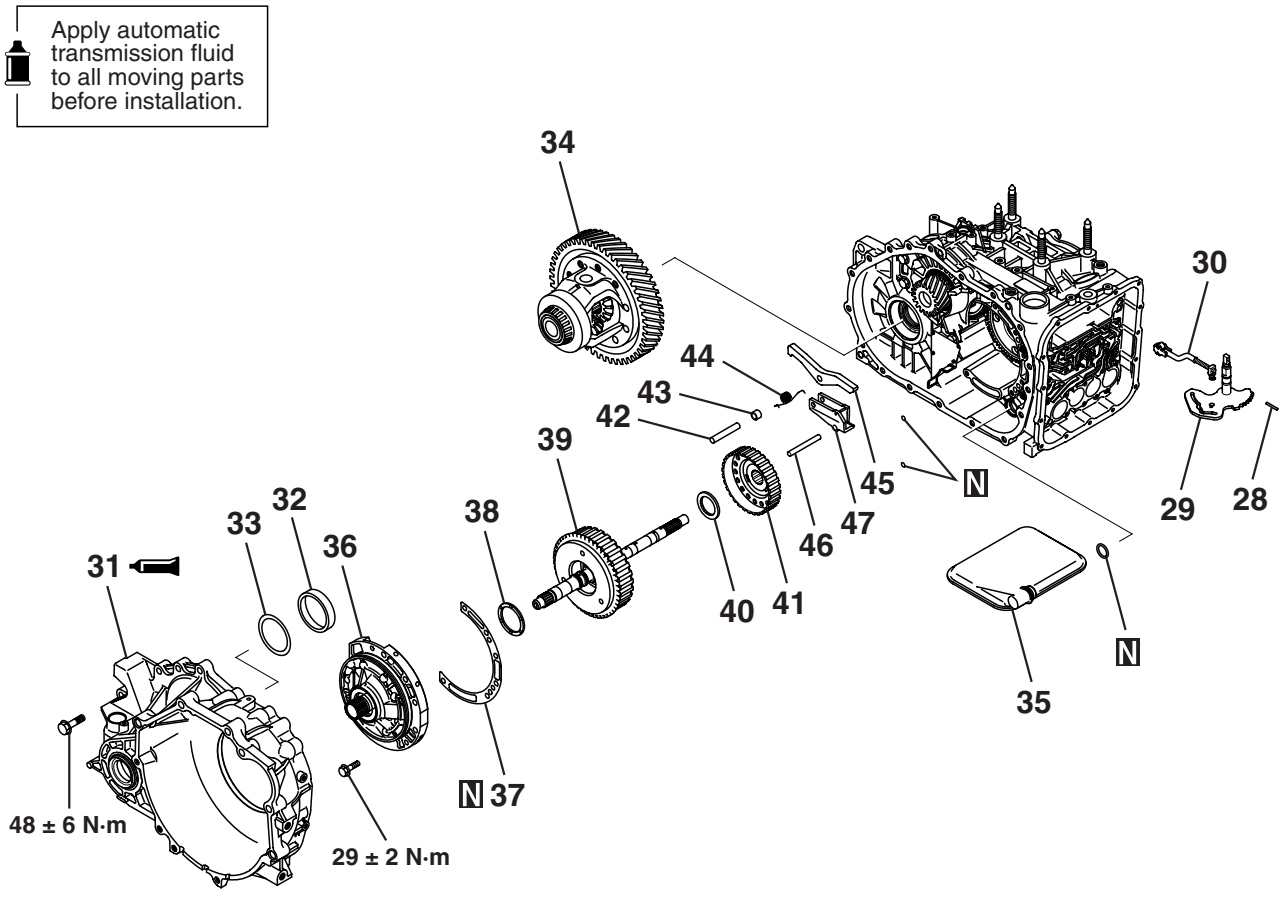
AK301299AC

1. Torque converter
2. Front roll stopper bracket
3. Harness bracket
4. Rear roll stopper bracket
5. Corrugate clamp bracket
6. Control cable bracket
7. Oil level gauge
8. Oil filler tube
9. Eye bolt
10. Oil cooler feed tube
11. Air breather
12. Input shaft speed sensor
13. Output shaft speed sensor
14. Manual control lever
15. Inhibitor switch
16. Sealing cap



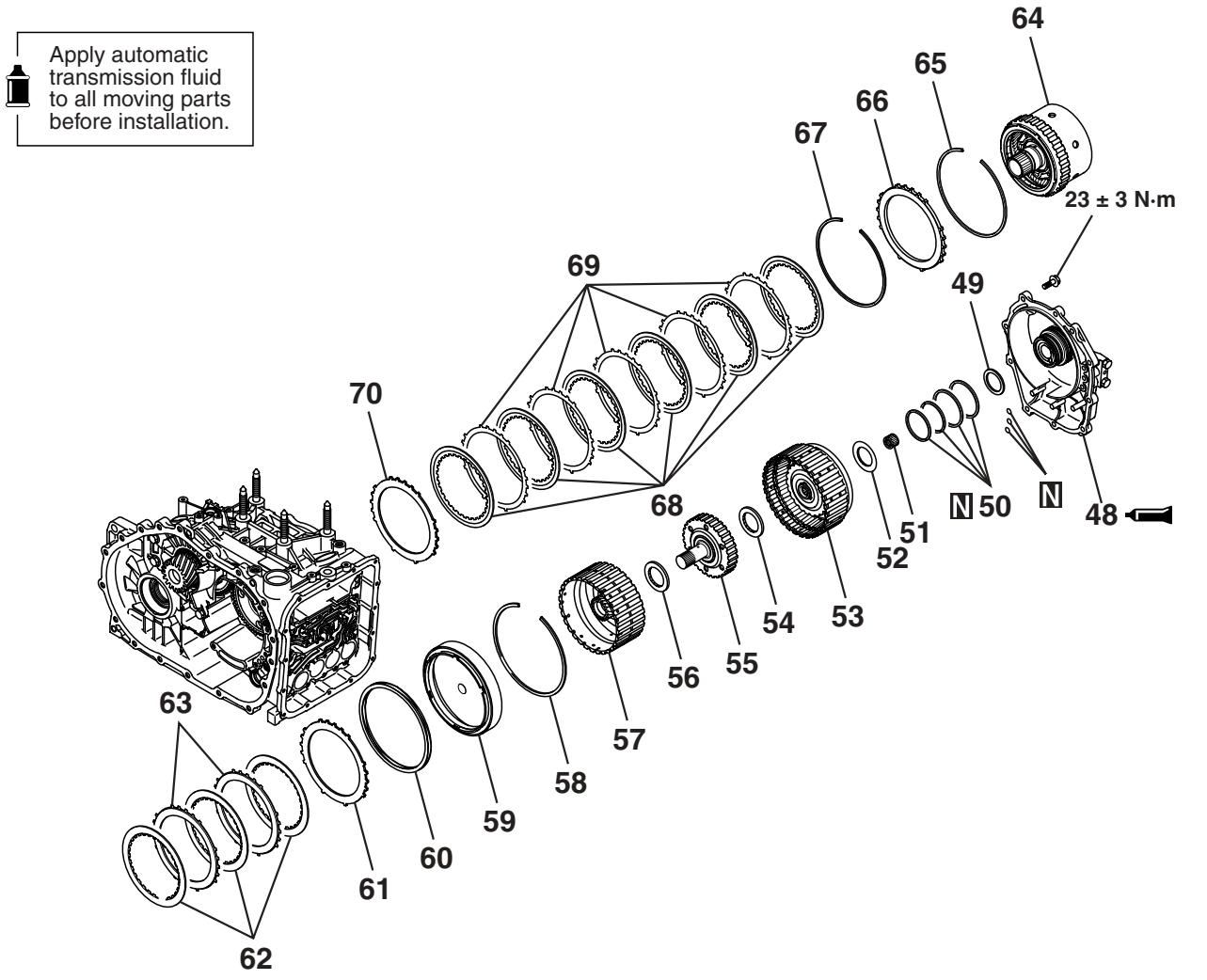
AK301300AC

17. Valve body cover
18. Manual control shaft detent
19. Valve body
20. Gasket
21. Snap ring
22. Solenoid valve harness
23. Strainer
24. Second brake retainer oil seal
25. Accumulator piston
26. Accumulator spring
27. Accumulator spring



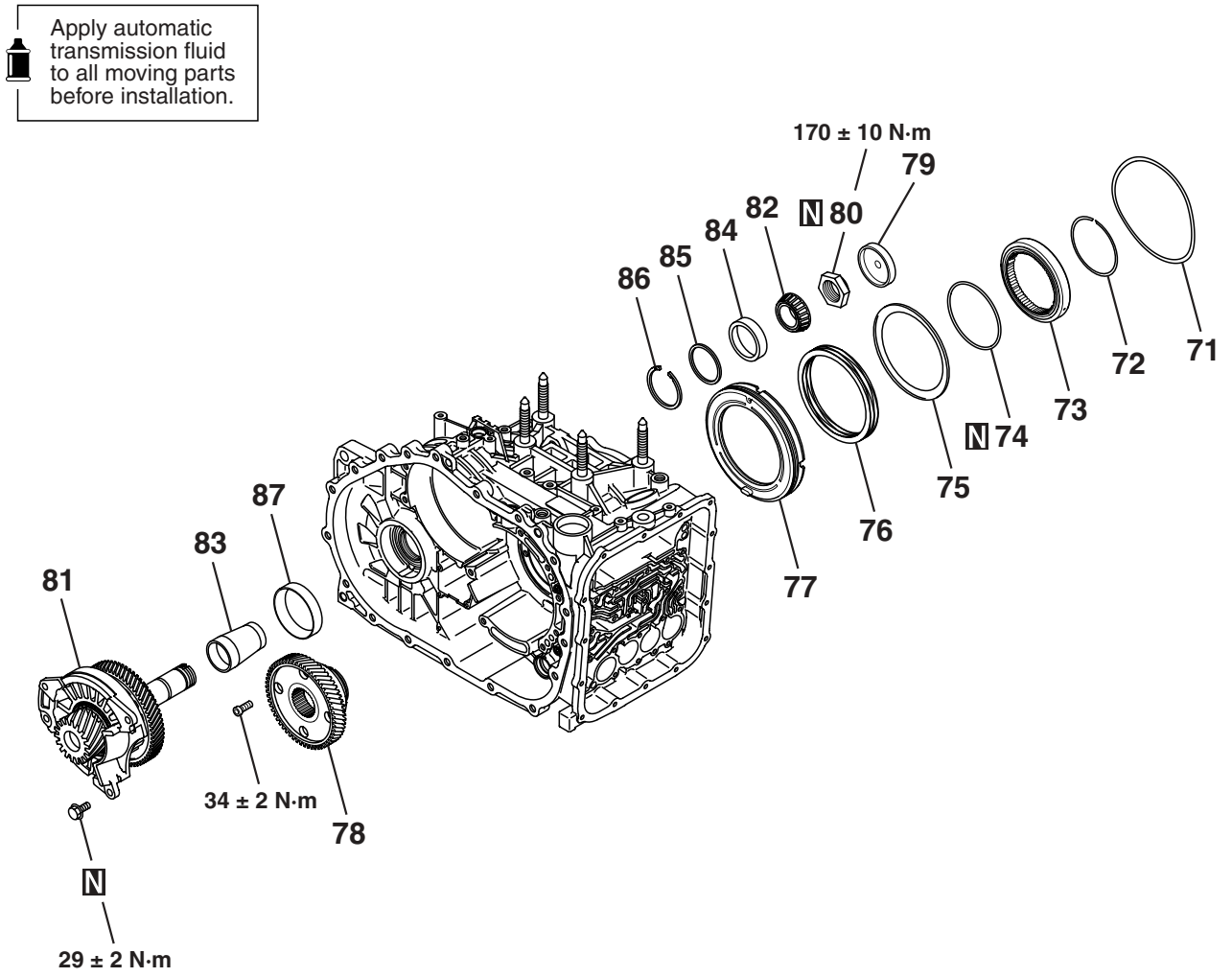
AK305605AC

28. Manual control lever shaft roller
29. Manual control lever shaft
30. Parking pawl rod
31. Converter housing
32. Outer race
33. Spacer
34. Differential
35. Oil filter
36. Oil pump
37. Gasket
38. Thrust washer #1
39. Underdrive clutch and input shaft
40. Thrust bearing #2
41. Underdrive clutch hub
42. Parking pawl shaft
43. Spacer
44. Parking pawl spring
45. Parking roller support shaft
46. Parking pawl
47. Parking roller support



AK301302AD

48. Rear cover
49. Thrust race #8
50. Seal ring
51. Input shaft rear bearing
52. Thrust bearing #7
53. Reverse and overdrive clutch
54. Thrust bearing #6
55. Overdrive clutch hub
56. Thrust bearing #5
57. Planetary reverse sun gear
58. Snap ring
59. Second brake
60. Return spring
61. Pressure plate
62. Second brake disc
63. Second brake plate
64. Planetary carrier
65. Snap ring
66 Reaction plate
67. Snap ring
68. Low-reverse brake disc
69. Low-reverse brake plate
70. Pressure plate



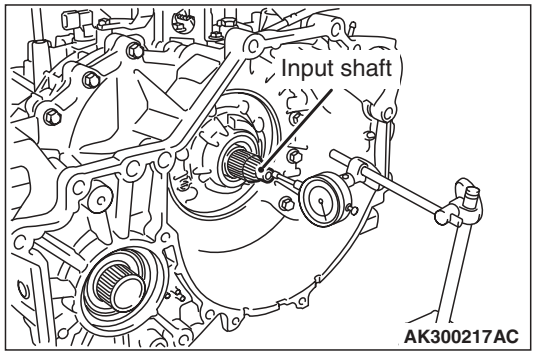
71. Wave spring
72. Snap ring
73. One-way clutch inner race
74. O-ring
75. Spring retainer
76. Return spring
77. Low-reverse brake
78. Transfer drive gear
79. Cap
80. Lock nut
81. Output shaft
82. Taper roller bearing
83. Collar
84. Outer race
85. Spacer
86. Snap ring
87. Outer race

DISASSEMBLY

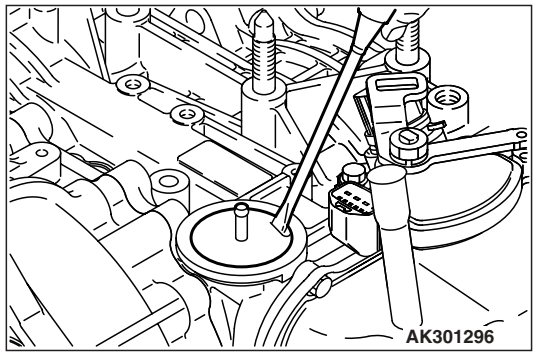
⚠ CAUTION

- **The automatic transmission includes many high-precision parts. Handle these parts extremely carefully not to scratch or damage them during disassembly and reassembly.**
- **Work bench should be covered with a rubber mat and keep it clean at all times.**
- **Do not wear any cloth gloves and do not use any rags during disassembly. Use only nylon cloth or paper towels if necessary.**
- **All removed parts must be washed clean. Metal parts may be washed in an ordinary solvent, but they should be dried completely using compressed air.**
- **Clutch discs, plastic thrust plates and rubber parts should be washed in automatic transmission fluid (ATF) and keep them free of dirt after washing.**
- **If the transmission has been found damaged and repaired, also disassemble and clean the ATF cooler system.**

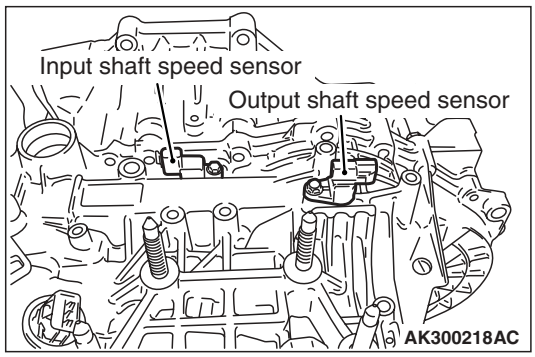
1. Remove the torque converter.



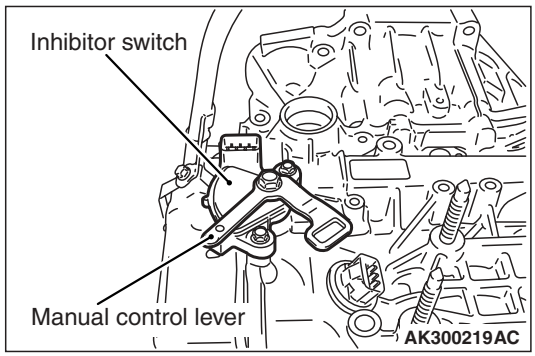
2. Use a dial gauge to measure the input shaft end play.
3. Remove each bracket.
4. Remove the oil level gauge.
5. Remove the oil filler tube.
6. Remove the oil cooler feed tube.



7. Remove the air breather.



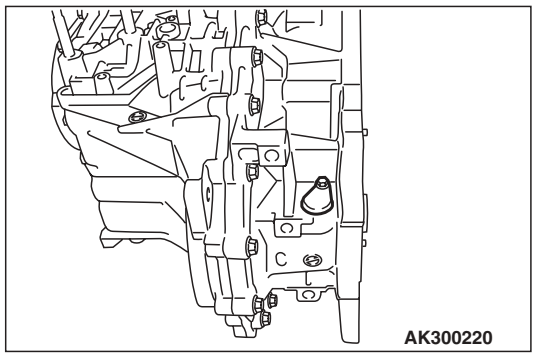
8. Remove the input shaft speed sensor and output shaft speed sensor.



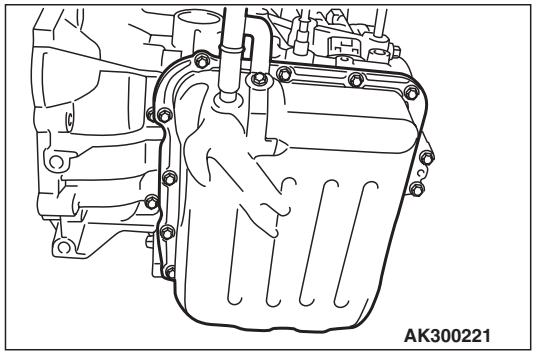
⚠ CAUTION

Be sure to remove the manual control lever mounting nut before removing the valve body. If the removal sequence is reversed, the inhibitor switch could be broken.

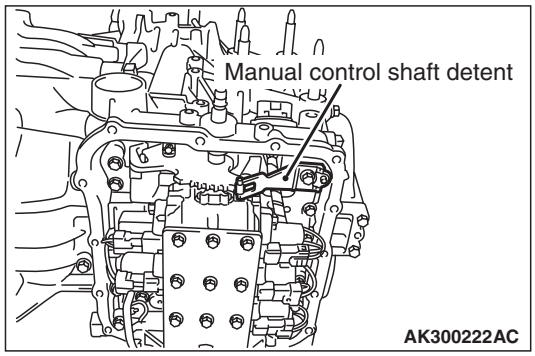
9. Remove the manual control lever, then remove the inhibitor switch.



10. Remove the sealing cap.

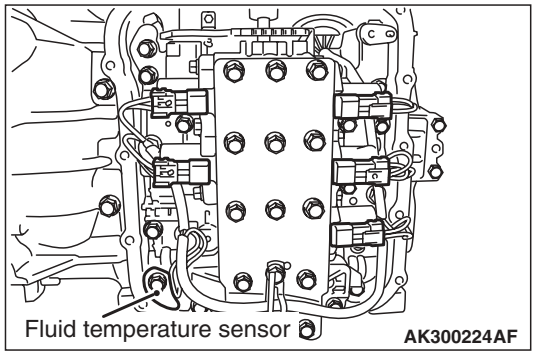

AK300221

11.Remove the valve body cover.



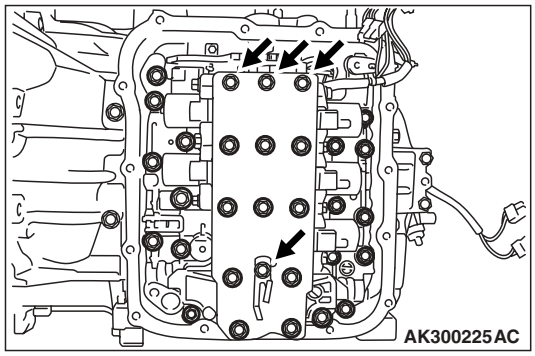
AK300222AC

12.Remove the manual control shaft detent.



AK300224AF

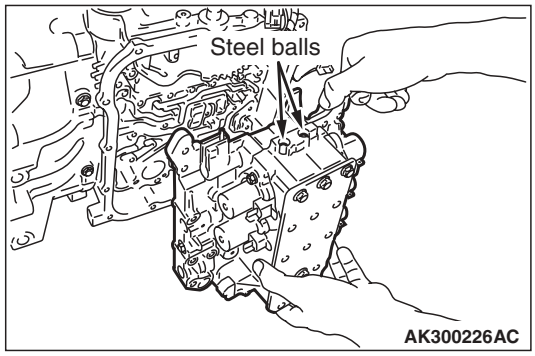
13.Disconnect the solenoid valve harness from the valve body by undoing the fluid temperature sensor and all the connectors.


AK300225AC

⚠ CAUTION

Do not remove the bolts (four pieces) shown in the illustration.

14.Remove the valve body mounting bolts (twenty seven pieces).

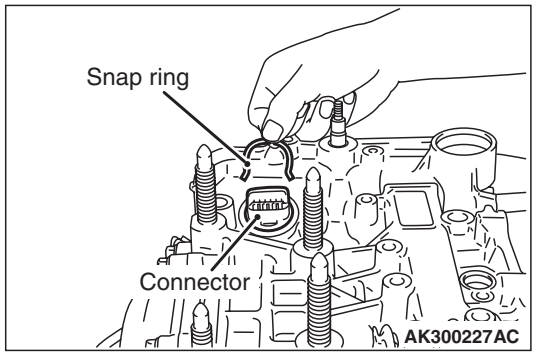


AK300226AC

⚠ CAUTION

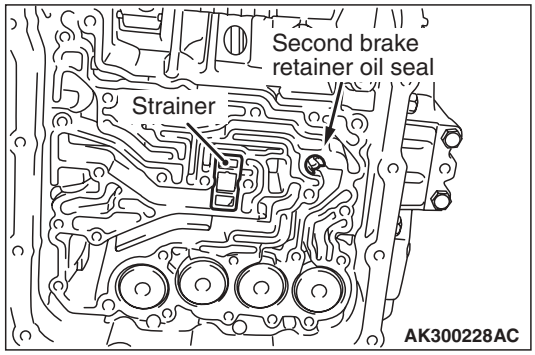
Be careful not to lose the steel balls (2 pieces).

15.Remove the valve body, gasket and the steel balls (2 pieces).



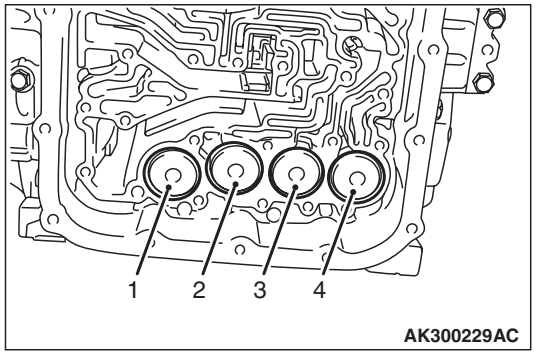
AK300227AC

16.Remove the snap ring from the connector, then push the connector into the transmission case to remove the solenoid valve harness.



AK300228AC

17.Remove the strainer and second brake retainer oil seal.

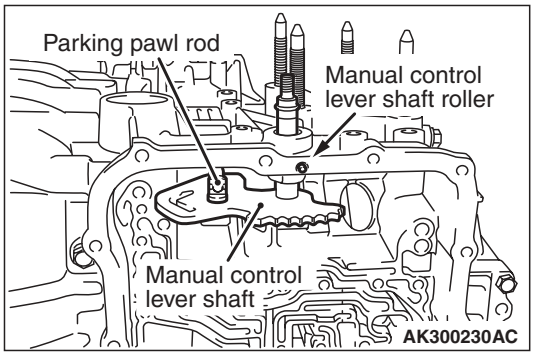


18.Remove the accumulator pistons and their springs.

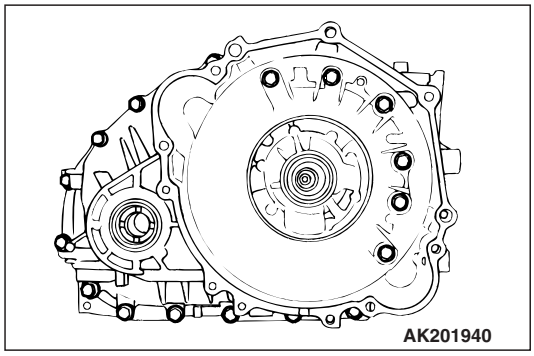
No.	Accumulator
1	For low-reverse brake
2	For underdrive clutch
3	For second brake
4	For overdrive clutch

NOTE: Put tags to the removed accumulator pistons and springs so that you will be able to reinstall them in the correct positions.

19.Remove the manual control lever shaft roller.

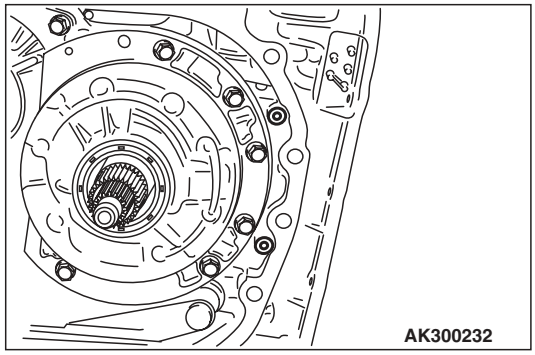


20.Remove the manual control lever shaft and the parking pawl rod.

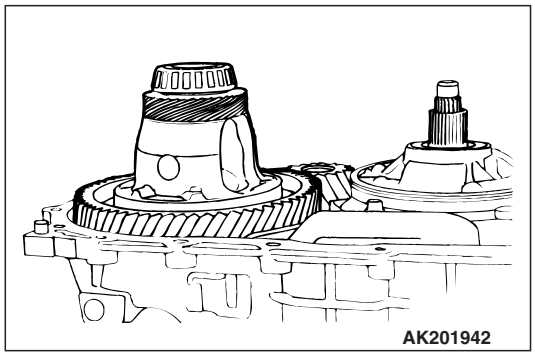


21.Remove the converter housing mounting bolts, then remove the converter housing.

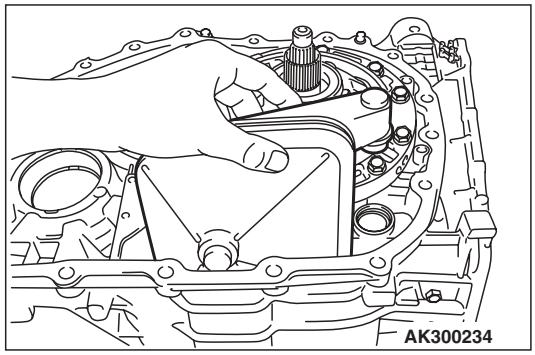
22.Remove the differential bearing outer race and spacer from the converter housing.



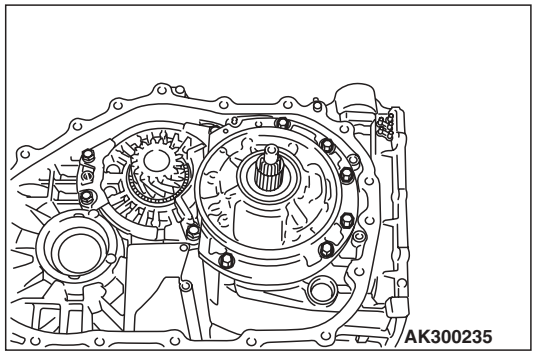
23.Remove the O-rings (2 pieces).



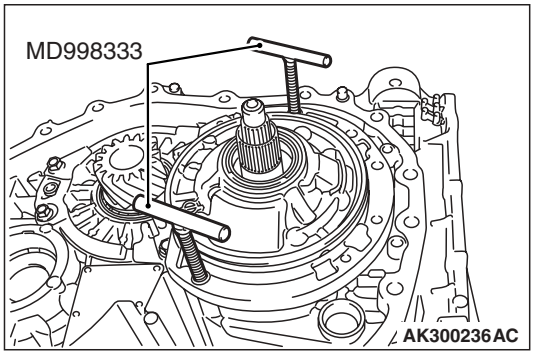
24.Remove the differential.



25.Remove the oil filter.



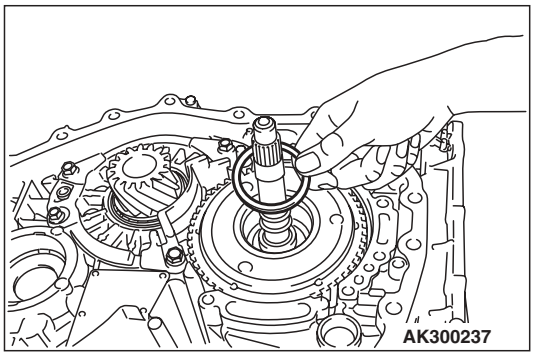
26.Remove the oil pump mounting bolts.



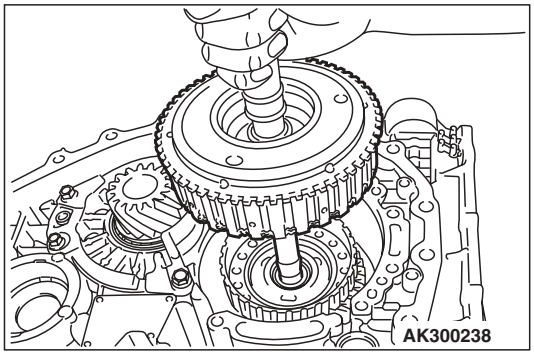
27.Install the special tools Oil pump remover as shown in the drawing.

28.Screw the special tools evenly to remove the oil pump.

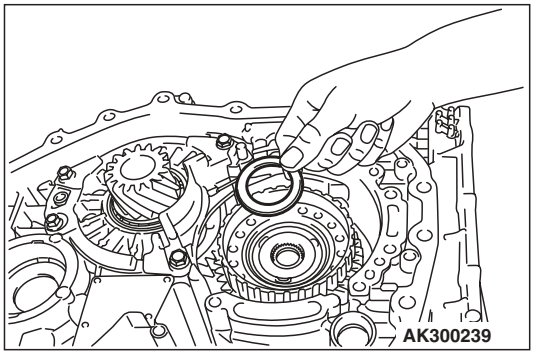
29.Remove the oil pump gasket.



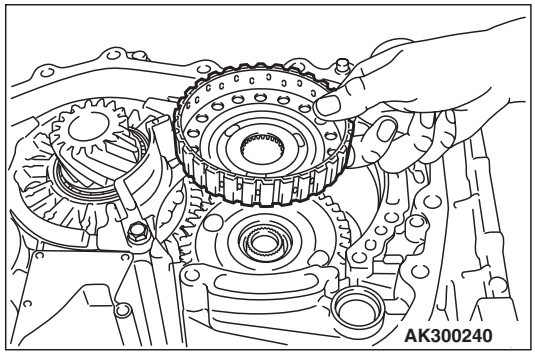
30.Remove the thrust washer #1.



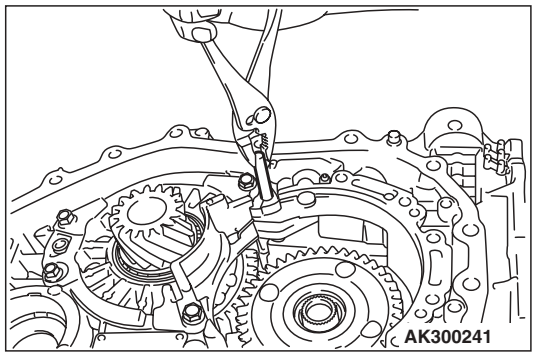
31.Holding the input shaft, remove the underdrive clutch.



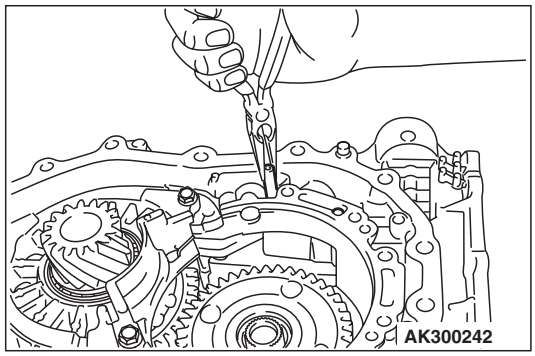
32.Remove the thrust bearing #2.



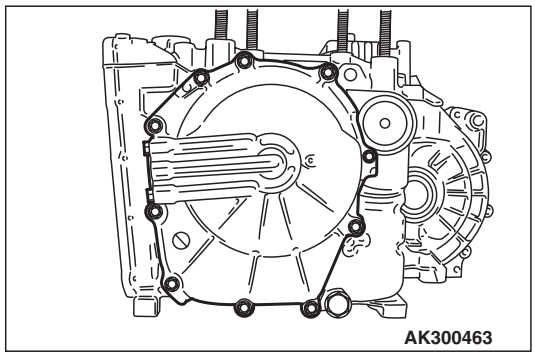
33.Remove the underdrive clutch hub.



34.Pull out the parking pawl shaft, then remove the spacer and spring.



35.Remove the parking roller support shafts (2 pieces), then remove the parking pawl and parking roller support.

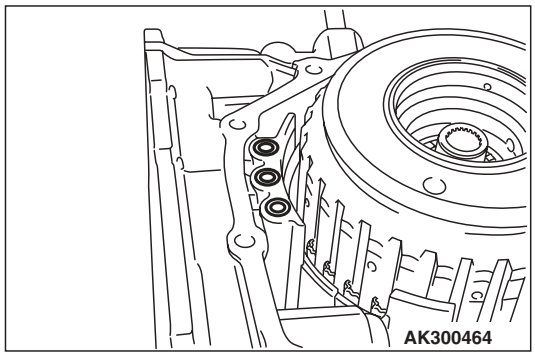


36.Remove the rear cover.

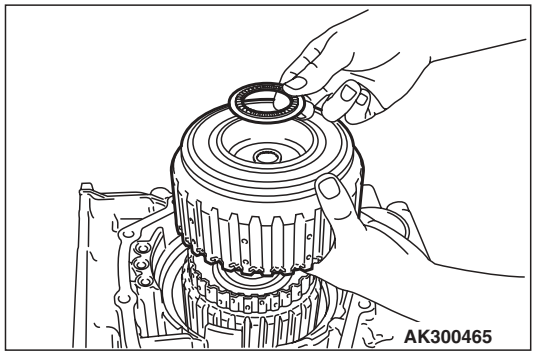
37.Remove the thrust race #8.

38.Remove the seal rings (4 pieces).

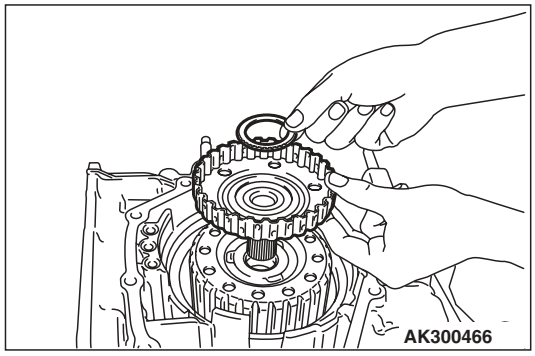
39.Remove the input shaft rear bearing.



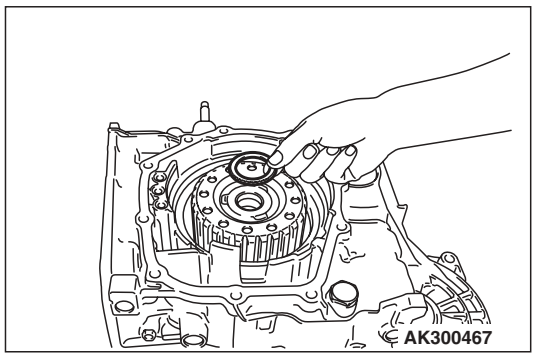
40.Remove the O-rings (three pieces).



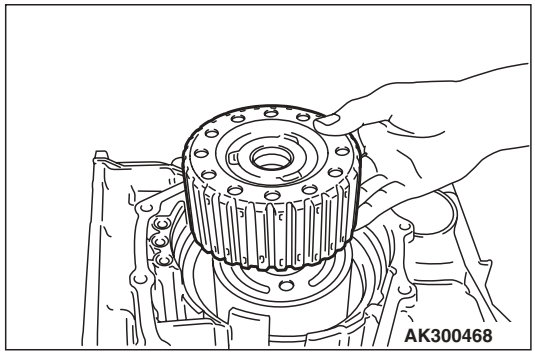
41.Remove the reverse and overdrive clutch and the thrust bearing #7.



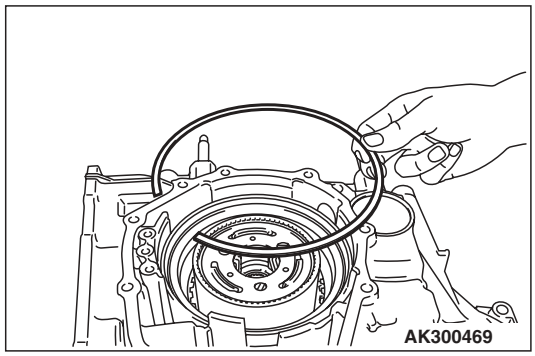
42.Remove the overdrive clutch hub and thrust bearing #6.



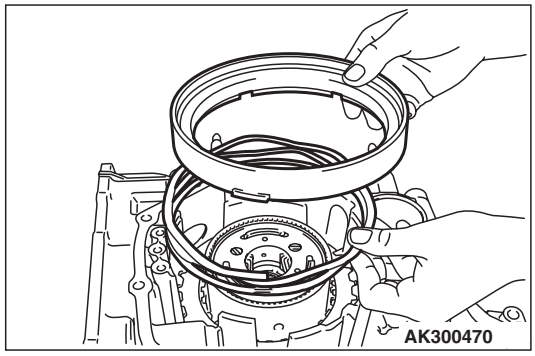
43.Remove the thrust bearing #5.



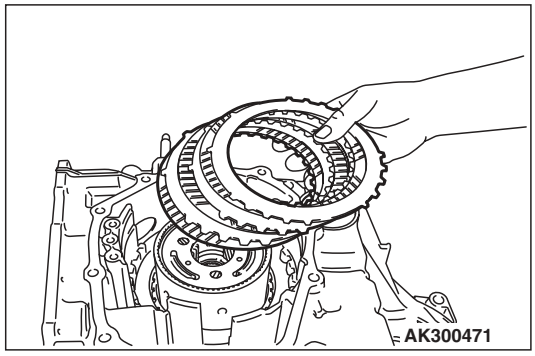
44.Remove the planetary reverse sun gear.



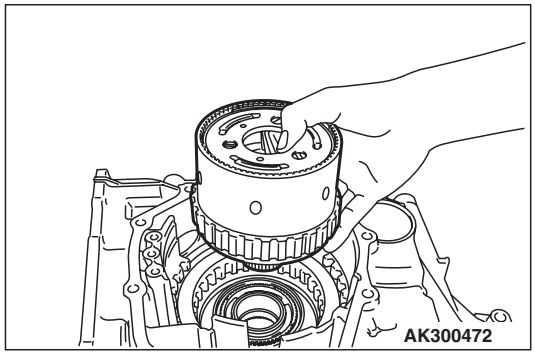
45.Remove the snap ring.



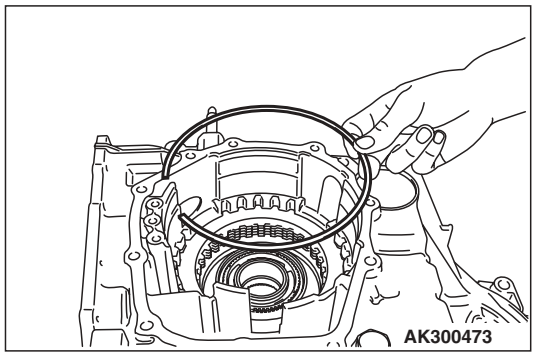
46.Remove the second brake piston and return spring.



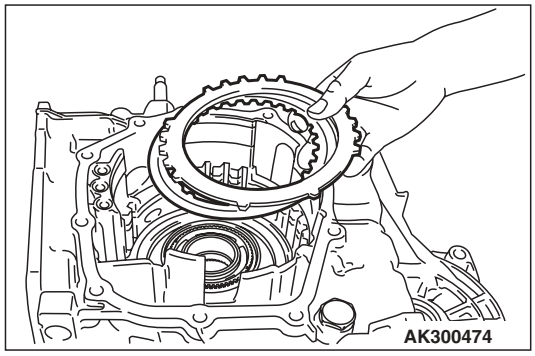
47.Remove the pressure plate, brake discs (three pieces) and brake plates (two pieces).



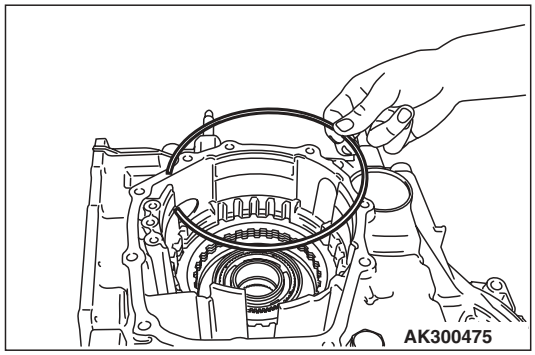
48.Remove the planetary carrier.



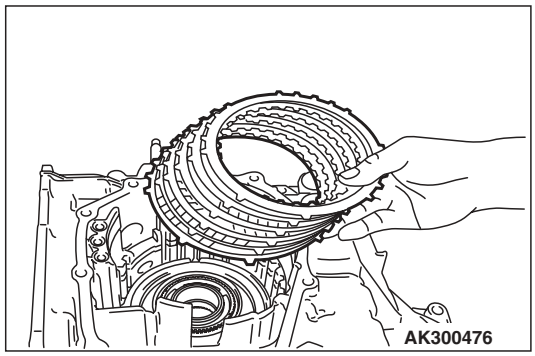
49.Remove the snap ring.



50.Remove the reaction plate and brake discs.

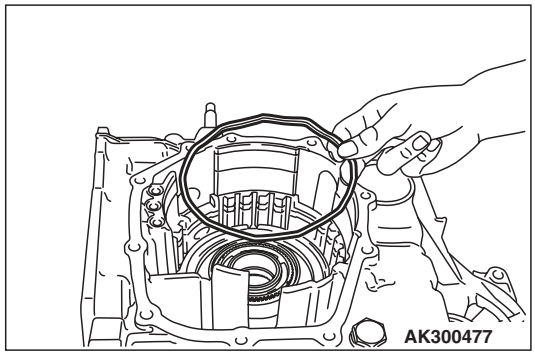


51.Remove the snap ring.

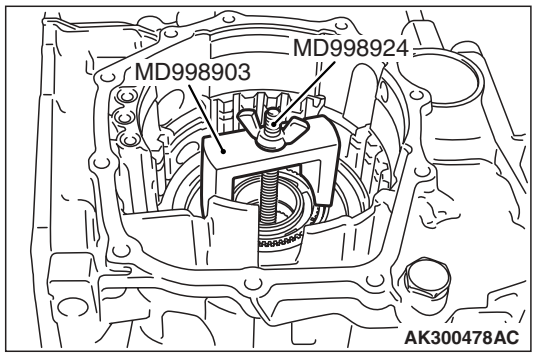


52.Remove the brake plates (five pieces), brake discs (six* pieces) and pressure plate.

*NOTE: *Includes the brake discs removed in step 50.*

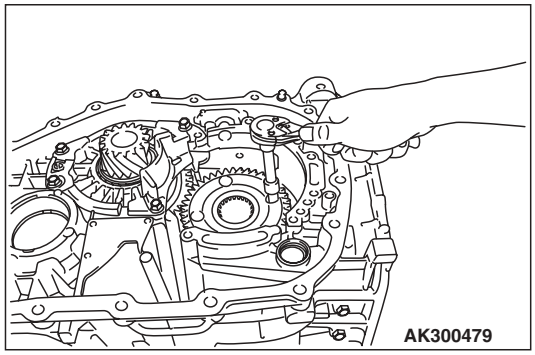


53.Remove the wave spring.

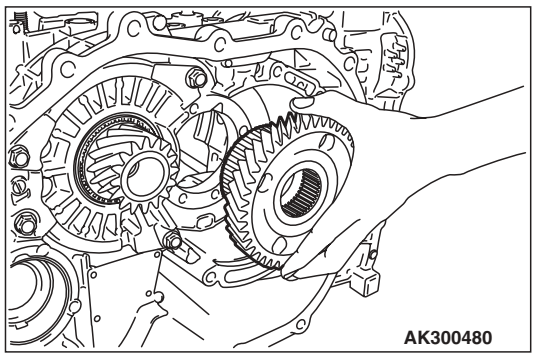


54.Use the special tools to press down the one-way clutch inner race, then remove the snap ring.
- Spring compressor (MD998903)
- Spring compressor retainer (MD998924)

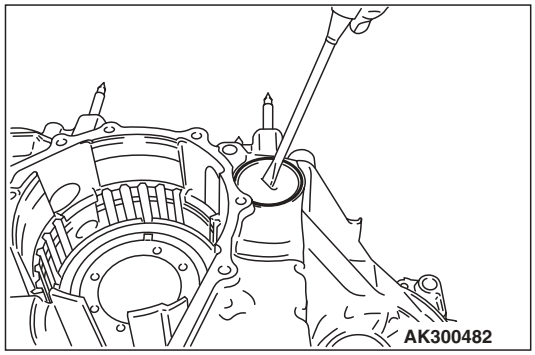
55.Remove the one-way clutch inner race, O-ring, spring retainer, return spring and low-reverse brake piston.



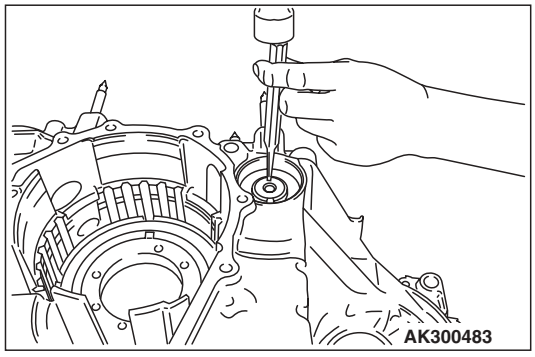
56.Remove the four or three of the transfer drive gear mounting bolts. Then turn the gear 1/8 of a turn (45°) and remove the remaining three or four bolts.



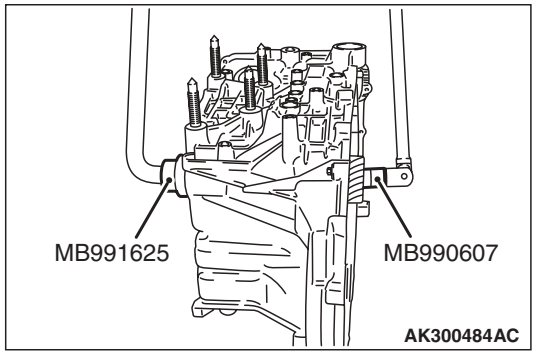
57.Remove the transfer drive gear.



58.Remove the cap.



59.Unbend the locking tab of the output shaft lock nut.

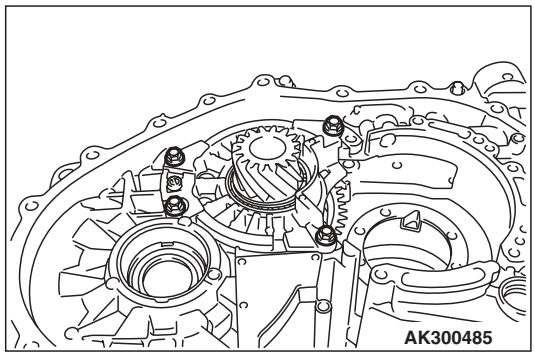


⚠ CAUTION

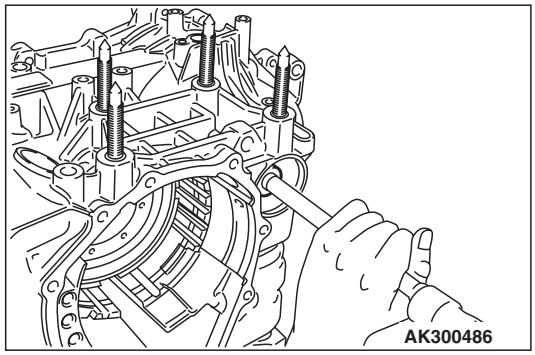
The lock nut thread is left-handed.

60.Use the special tools to remove the output shaft lock nut.

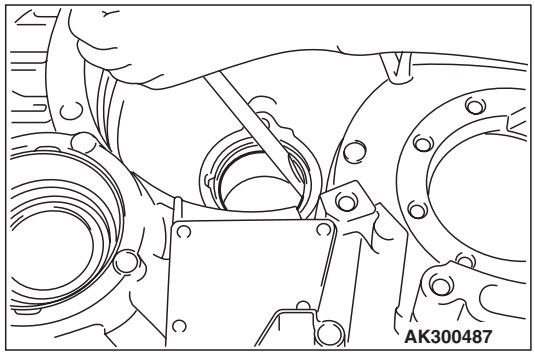
- Torque wrench socket (MB990607)
- Special socket (MB991625)



61.Remove the bearing retainer mounting bolts.



62.Remove the output shaft, taper roller bearing and collar by striking the rear end of the output shaft.



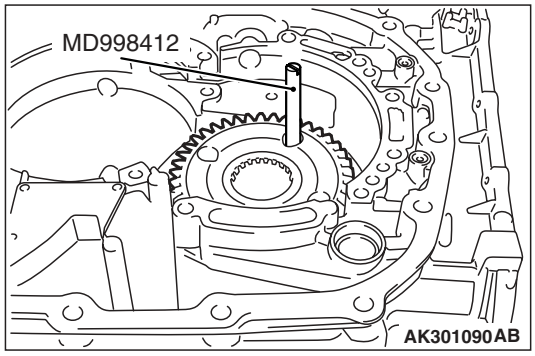
63.Remove the spacer and outer race.

64.Remove the differential bearing outer race from the transmission case.

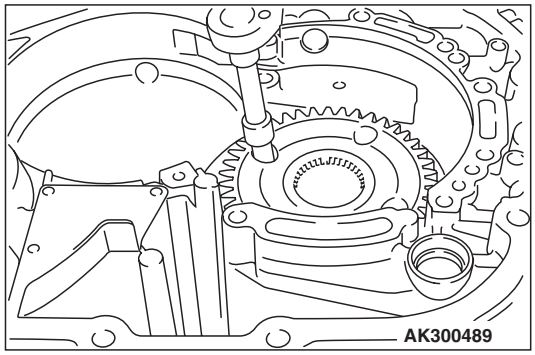
REASSEMBLY

⚠ CAUTION

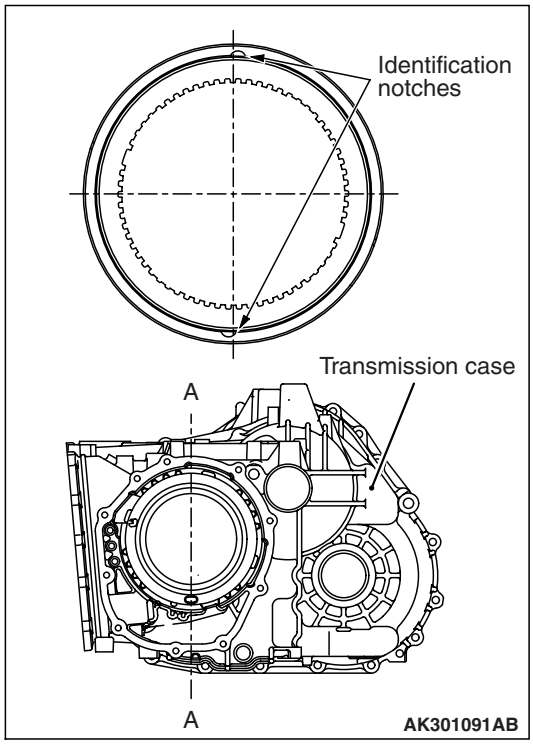
- **Never reuse any gasket, O-ring, and oil seal. Always replace them with new ones.**
- **Never use any product other than blue petrolatum jelly or white Vaseline to lubricate or hold parts during assembly.**
- **Apply ATF to friction elements, rotating parts, and sliding parts before installation.Soak new clutch discs or brake discs in ATF for at least two hours before installing them.**
- **Never apply sealant or adhesive to gaskets.**
- **When a bushing requires replacement, replace the assembly of which the bushing forms a part.**
- **Never use any cloth gloves or any rags during reassembly. Use only nylon cloth or paper towels if necessary.**
- **Change also the ATF in the cooler circuit.**



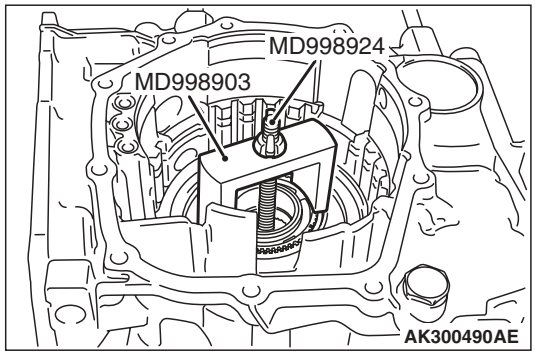
1. Use the special tool Guide (MD998412) to install the transfer drive gear.



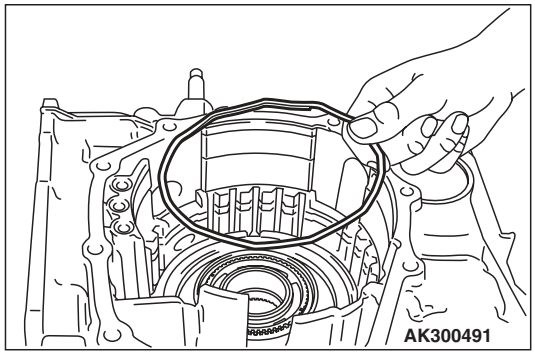
2. Tighten the transfer drive gear mounting bolts to the specified torque of 34 ± 2 N·m.
3. Install the low-reverse brake piston, return spring and spring retainer.
4. Fit a new O-ring in the groove in the one-way clutch inner race.



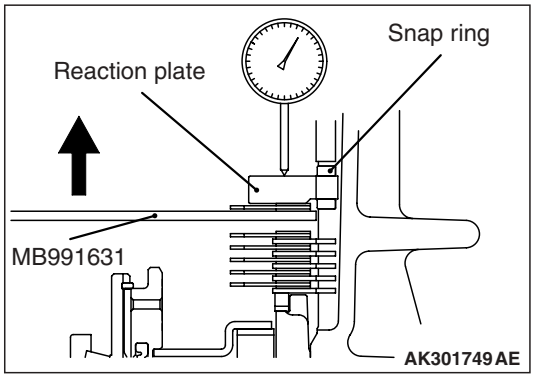
5. Locate the identification notches on the one-way clutch inner race, then install the one-way clutch inner race in the transfer drive gear bearing with the notches aligned with the A-A line as shown in the drawing.



6. Use the special tools to hold down the one-way clutch inner race, then fit the snap ring in position.
   - Spring compressor (MD998903)
   - Spring compressor retainer (MD998924)



7. Install the wave spring on the low-reverse brake piston.

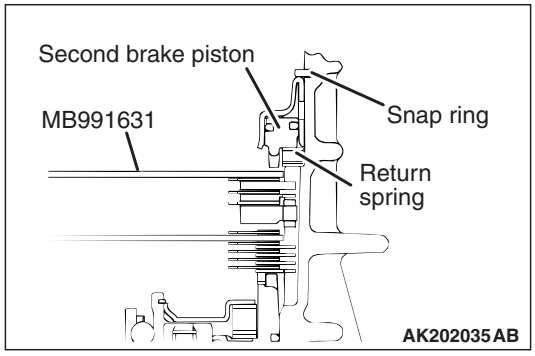


8. Install the brake discs (six pieces), brake plates (five pieces) and snap ring for the low-reverse brake as shown in the drawing.

   NOTE: Do not install the pressure plate yet.

9. Install the special tool Clearance dummy plate (MB991631) on the stack of the brake discs.
10. Install the reaction plate and the snap ring that was removed during disassembly.
11. Move up the special tool to check whether the end play of the reaction plate is within the standard value range. If necessary, remove the snap ring that has been installed in step 10 and install another appropriate snap ring.

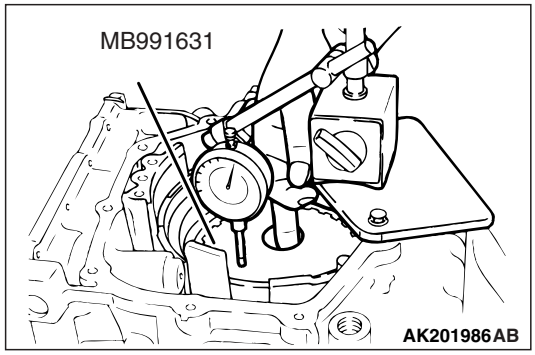
    Standard value: 0 – 0.16 mm

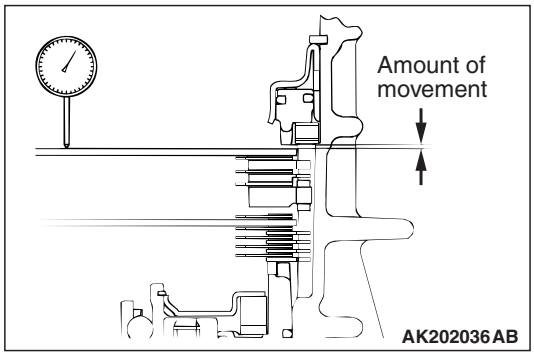


12. Install the brake discs (three pieces) and brake plates (two pieces) for the second brake as shown in the drawing.

    NOTE: Do not install the pressure plate yet.

13. Install the special tool Clearance dummy plate (MB991631).
14. Install the return spring, second brake piston, and snap ring.





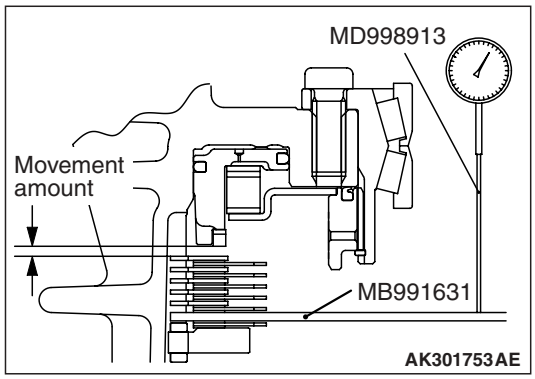
15. Move the special tool Clearance dummy plate (MB991631) to measure the amount of movement. Select a pressure plate whose thickness corresponds to the measured amount of movement from the following table.

Available pressure plates

Amount of movement mm	Thickness mm	Identification mark
0.6 – 0.8	1.6	L
0.8 – 1.0	1.8	1
1.0 – 1.2	2.0	0
1.2 – 1.4	2.2	2
1.4 – 1.6	2.4	4
1.6 – 1.8	2.6	6

Standard value (reference): 0.79 – 1.25 mm

16. Turn the transmission upside down.



17.Move the special tool Clearance dummy plate (MB991631) and measure the amount of movement using a dial gauge fitted with the special tool Dial gauge extension (MD998913). Select a pressure plate whose thickness corresponds to the measured amount of movement from the following table.

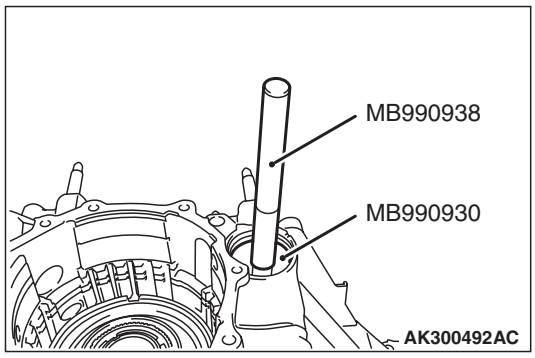
Standard value of low-reverse brake end play (reference): 1.65 – 2.11 mm

Available pressure plates

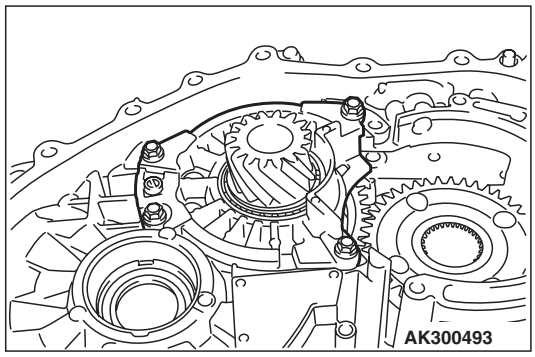
Amount of movement mm	Thickness mm	Identification mark
1.3 – 1.5	1.6	L
1.5 – 1.7	1.8	1
1.7 – 1.9	2.0	0
1.9 – 2.1	2.2	2
2.1 – 2.3	2.4	4
2.3 – 2.5	2.6	6
2.5 – 2.7	2.8	8
2.7 – 2.9	3.0	D

18.Remove all the parts has been installed in steps 7. through 17.

19.Install the snap ring in the groove formed in the output shaft hole in the transmission case.

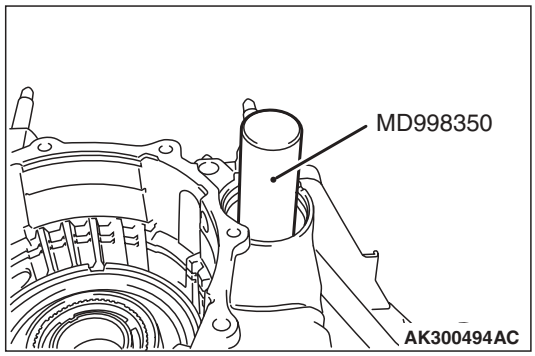


20.Use the special tool to drive the output shaft bearing outer race into the transmission case.
- Installer adapter (MB990930)
- Handle (MB990938)

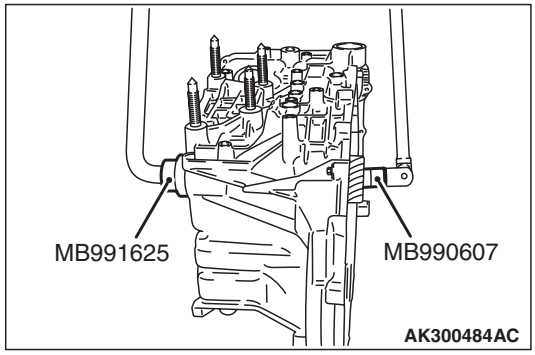


⚠ CAUTION
Do not reuse the output shaft bearing retainer mounting bolts as they are pre-coated with a sealant.

21.Install the output shaft bearing retainer mounting bolts and tighten them to the specified torque of 29 ± 2 N·m.

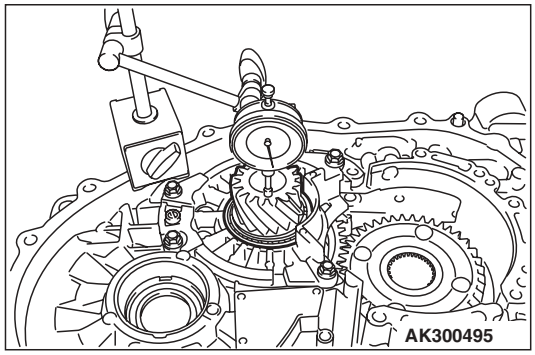


22.Use the special tool Bearing installer (MD998350) to install the collar and taper roller bearing on the output shaft.



⚠ CAUTION
The lock nut thread is left-handed.

23.Apply ATF to a new lock nut, and use the special tool to tighten the lock nut to the specified torque of 170 ± 10 N·m. Then loosen the nut one turn, then tighten it again to the specified torque.
- Torque wrench socket (MB990607)
- Special socket (MB991625)



24.Move the output shaft and to measure the amount of movement; record the measurement.

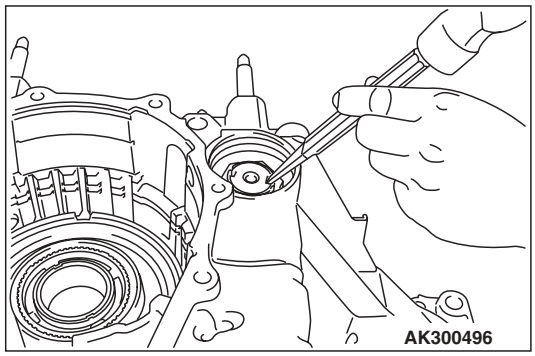
25.Remove all the parts having installed in steps 20. through 23.

26.Select a spacer whose thickness corresponds to the measurement recorded in step 24. from the table below and install the spacer.

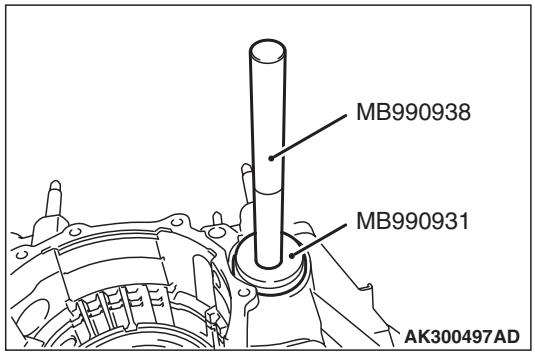
Available spacer

Amount of movement mm	Thickness mm	Identification mark
1.81 – 1.85	1.88	88
1.85 – 1.89	1.92	92
1.89 – 1.93	1.96	96
1.93 – 1.97	2.00	00
1.97 – 2.01	2.04	04
2.01 – 2.05	2.08	08
2.05 – 2.09	2.12	12
2.09 – 2.13	2.16	16
2.13 – 2.17	2.20	20
2.17 – 2.21	2.24	24
2.21 – 2.25	2.28	28
2.25 – 2.29	2.32	32
2.29 – 2.33	2.36	36
2.33 – 2.37	2.40	40
2.37 – 2.41	2.44	44
2.41 – 2.45	2.48	48
2.45 – 2.49	2.52	52
2.49 – 2.53	2.56	56
2.53 – 2.57	2.60	60
2.57 – 2.61	2.64	64
2.61 – 2.65	2.68	68
2.65 – 2.69	2.72	72
2.69 – 2.73	2.76	76

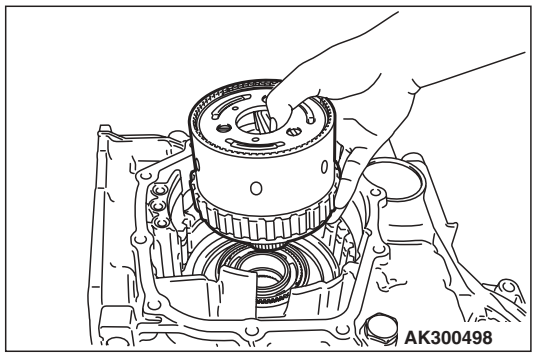
27.Repeat steps 20. through 23. to reinstall the parts.



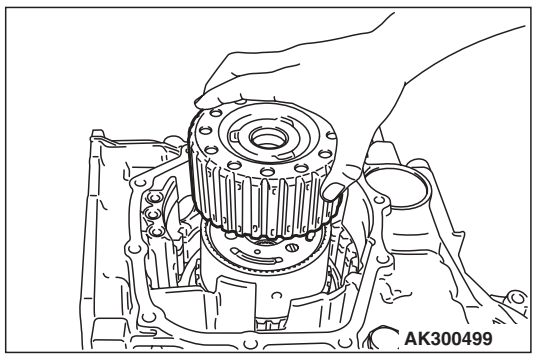
28.Stake the lock nut (at two places).



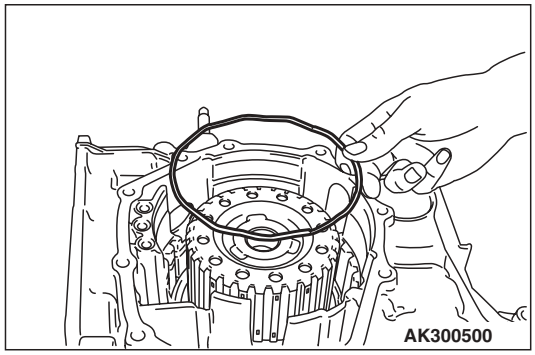
29.Use the special tools to install the cap as shown in the drawing.
- Installer adapter (MB990931)
- Handle (MB990938)



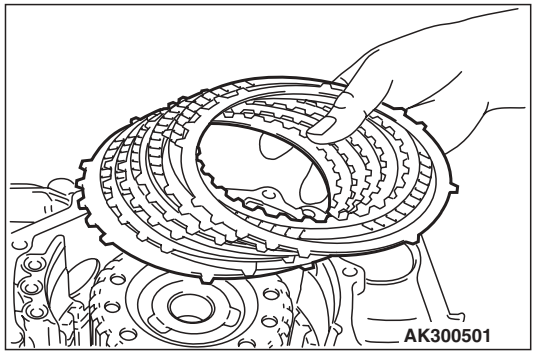
30.Install the planetary carrier assembly.



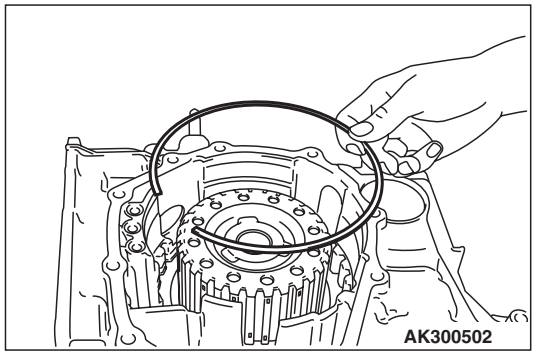
31.Install the planetary reverse sun gear.



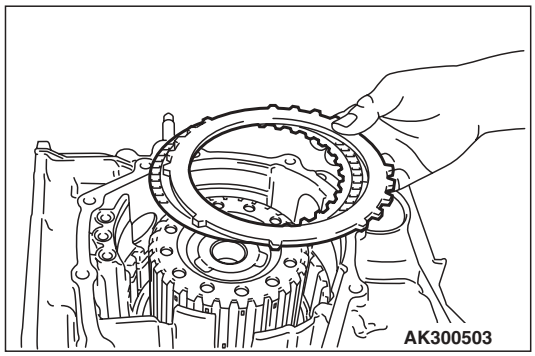
32.Install the wave spring on the low-reverse brake piston.



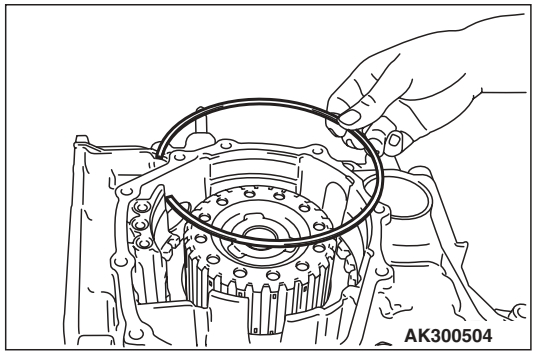
33.Install the pressure plate that has been selected in step 17. Then install the brake discs (five pieces) and brake plates (five pieces).



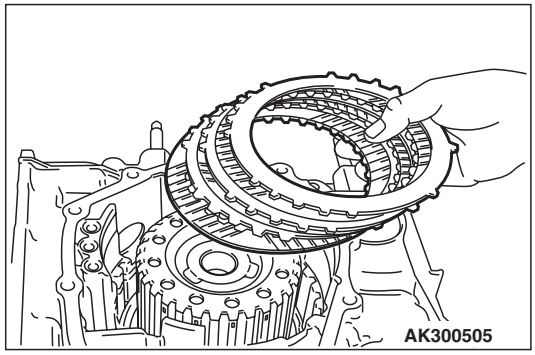
34.Install the snap ring.



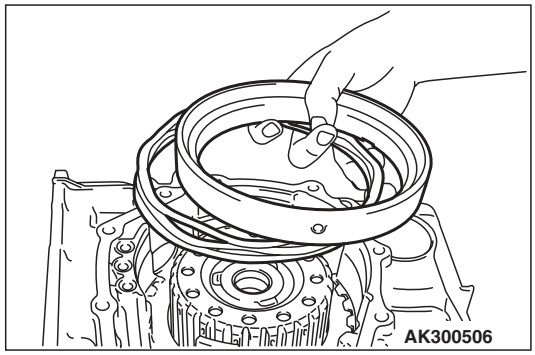
35.Install the brake disc and the reaction plate.



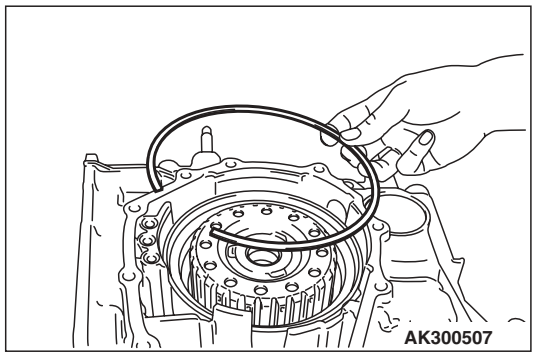
36.Install the snap ring that has been selected in step 11.



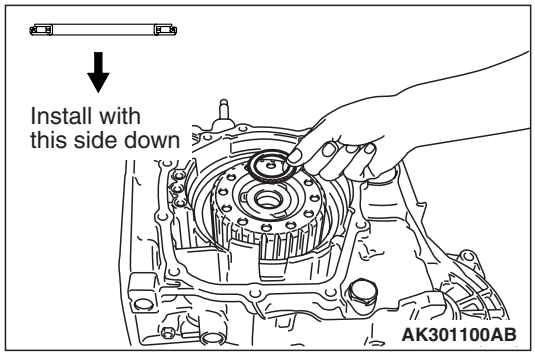
37.Install the brake discs (three pieces), brake plates (two pieces), and the pressure plate that has been selected in step 15.



38.Install the return spring and second brake.



39.Install the snap ring.

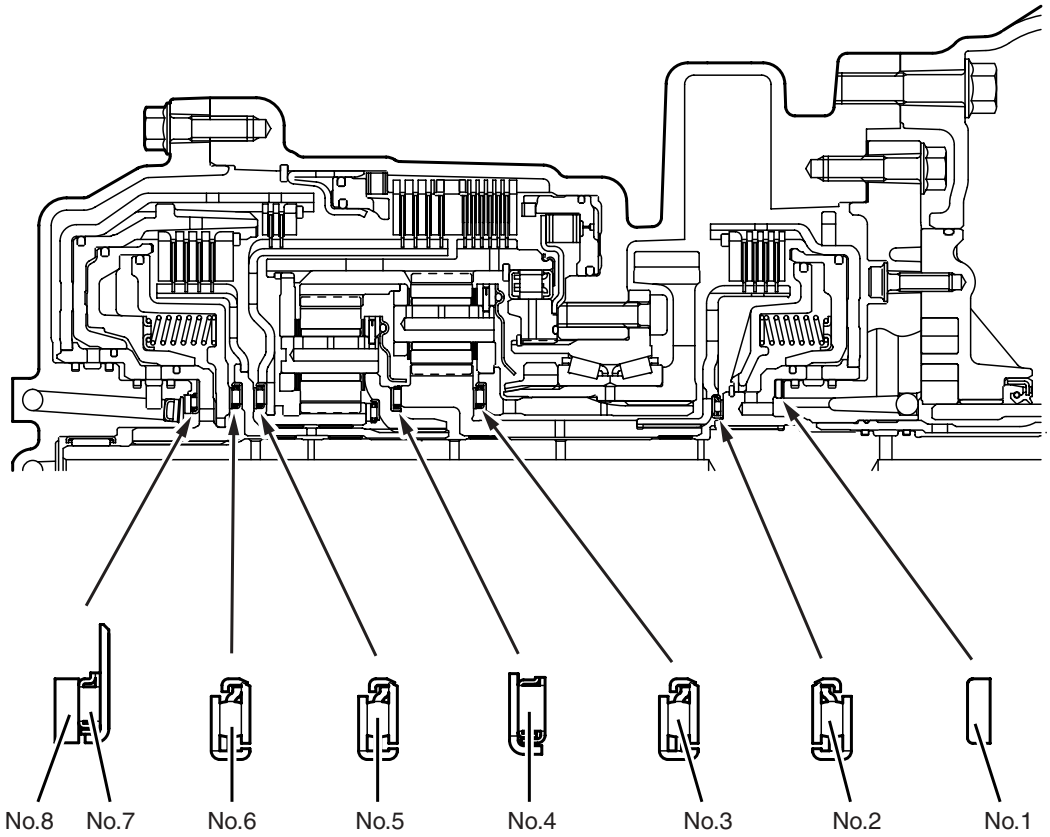


⚠ CAUTION

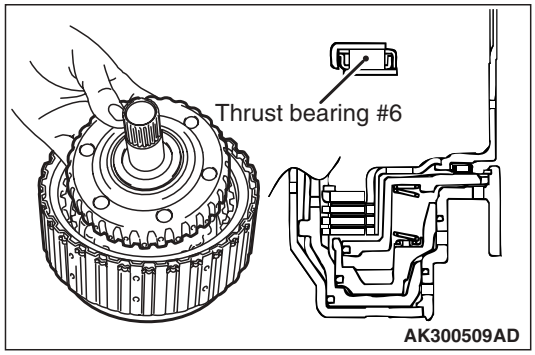
Be sure to install the thrust bearing with the indicated side facing down.

40.Install the thrust bearing #5.

IDENTIFICATION OF THRUST BEARINGS, THRUST RACES, AND THRUST WASHERS



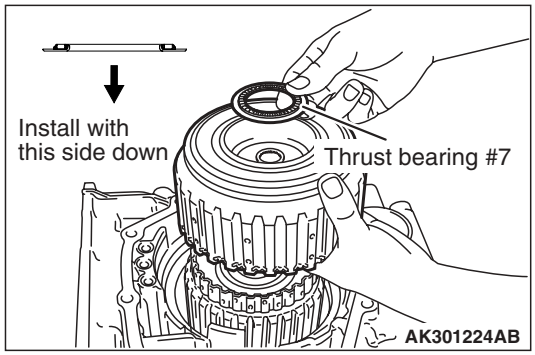
O.D. mm	I.D. mm	Thickness mm	Marking	O.D. mm	I.D. mm	Thickness mm	Marking
59	47	1.8	#1	48.9	37	1.6	#8
		2.0				1.7	
		2.2				1.8	
		2.4				1.9	
		2.6				2.0	
		2.8				2.1	
49	34	3.6	#2			2.2	
49	34	3.6	#3			2.3	
45.3	31	3.3	#4			2.4	
49	34	3.6	#5			2.5	
49	34	3.6	#6			2.6	
59	37	2.8	#7				



⚠ CAUTION

Be sure to install the thrust bearing with the indicated side facing down.

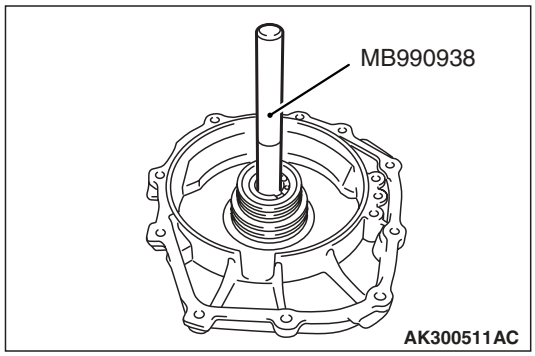
41.Install the overdrive clutch hub and thrust bearing #6 in the reverse and overdrive clutch.



⚠ CAUTION

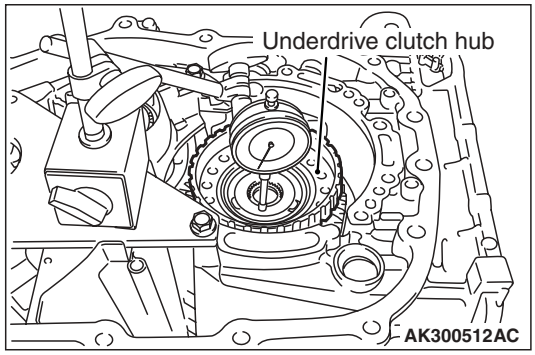
Be sure to install the thrust bearing with the indicated side facing down.

42.Install the reverse and overdrive clutch and thrust bearing #7.



43.Use the special tool Handle (MB990938) to press-fit the input shaft rear bearing into the rear cover.

44.Install the seal rings (four places).



45.Measure the end play of the underdrive sun gear using the following procedure to select a thrust race #8 of proper thickness.

(1) Install the thinnest thrust race #8 (thickness: 1.6mm) on the thrust bearing #7.

(2) Install the rear cover on the transmission and tighten the bolts to the specified torque of 23 ± 3 N·m.

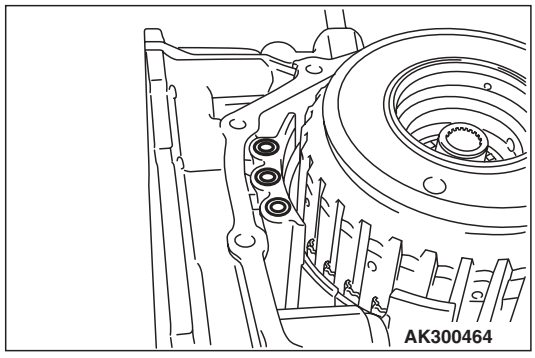
(3) Turn the transmission upside down, thus making the torque converter housing mounting end face up.

(4) Install the underdrive clutch hub on the underdrive sun gear.

(5) Measure the end play of the underdrive sun gear and record the measurement.

Standard value (reference): 0.25 – 0.45 mm

(6) Remove all the parts installed in substeps (1) through (4).

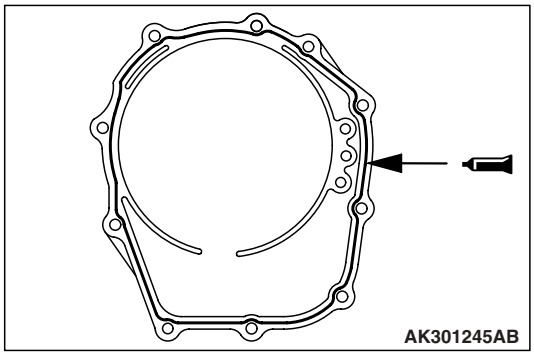


46.Install the O-rings (three places).

47.Select a thrust race #8 whose thickness corresponds to the measurement recorded in substep (5) of step 46. from the table below and install the thrust race on the thrust bearing #7.

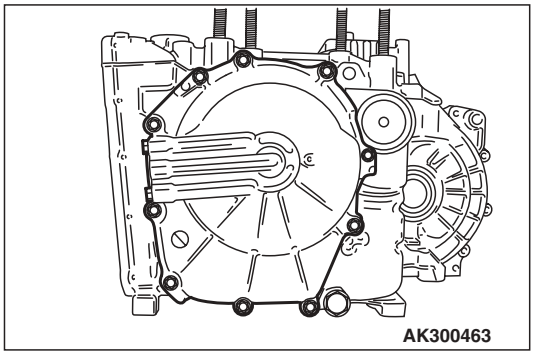
Measurement mm	Thickness mm
0.3 – 0.4	1.6
0.4 – 0.5	1.7
0.5 – 0.6	1.8
0.6 – 0.7	1.9

Measurement mm	Thickness mm
0.7 – 0.8	2.0
0.8 – 0.9	2.1
0.9 – 1.0	2.2
1.0 – 1.1	2.3
1.1 – 1.2	2.4
1.2 – 1.3	2.5
1.3 – 1.4	2.6

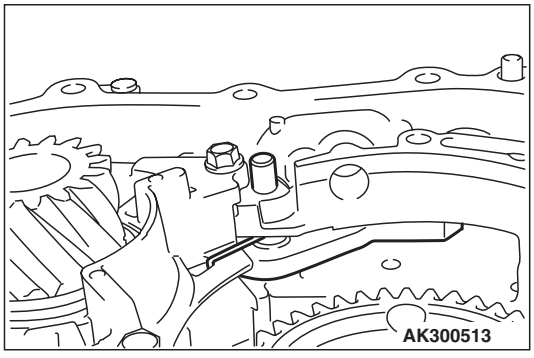


48.Apply an approx. 1.6 mm diameter bead of form-in-place gasket (FIPG) to the rear cover along its circumference as shown in the drawing.

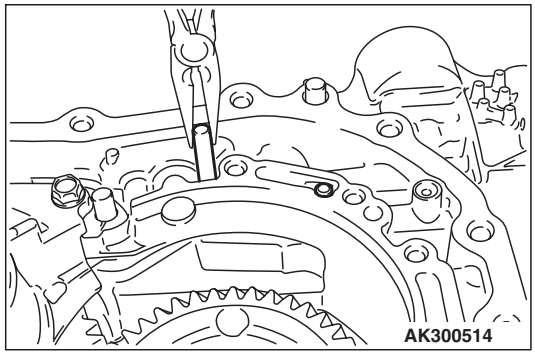
Specified sealant:
Mitsubishi genuine sealant Part No. MD974421 or equivalent



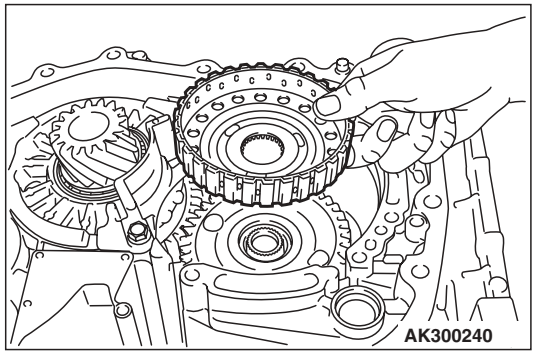
49.Install the rear cover and tighten its mounting bolts to the specified torque of 23 ± 3 N·m.



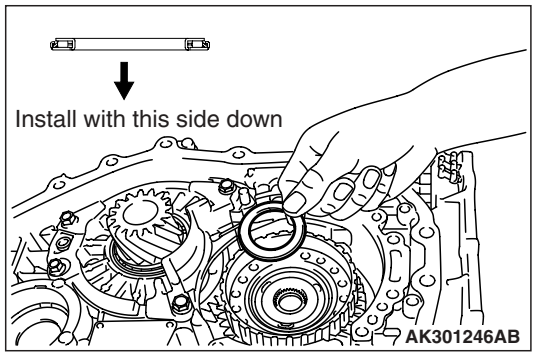
50.Install the parting pawl, spacer and spring in position, then install the parking pawl shaft.



51.Install the parking roller support, then install the parking roller support shafts (two pieces).

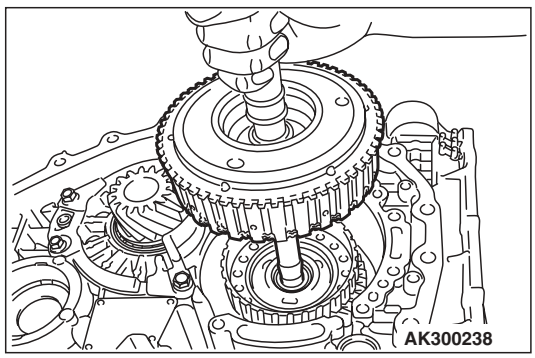


52.Install the underdrive clutch hub.

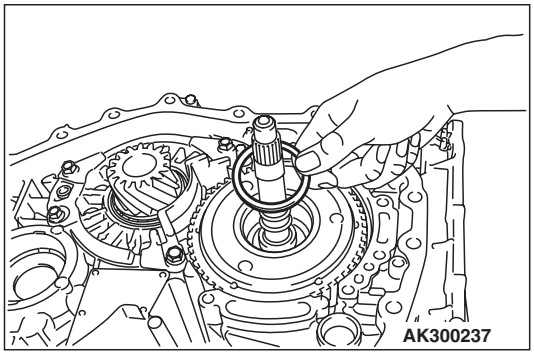


⚠ CAUTION
Install the thrust bearing with the indicated side facing down.

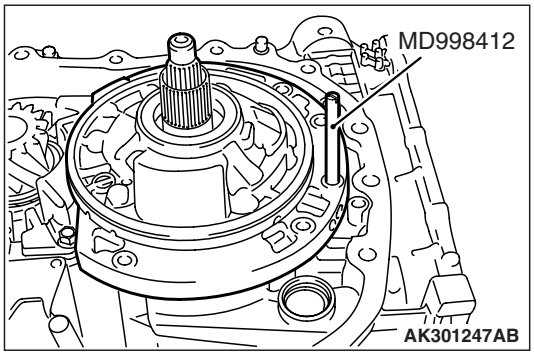
53.Install the thrust bearing #2.



54.Install the underdrive clutch holding the input shaft.



55.Install the thinnest thrust washer #1 for adjusting the input shaft end play (thickness: 1.8mm) on the underdrive clutch retainer.

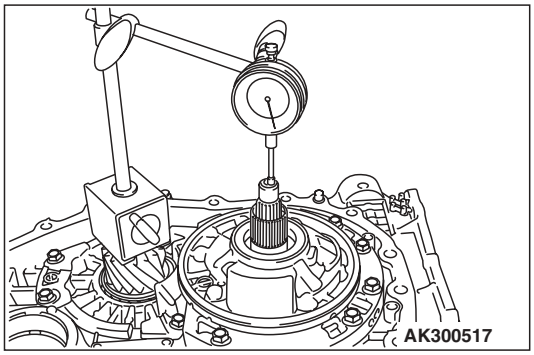


⚠ CAUTION

Never use a gasket that has been tightened.

56.Use the special tool Guide (MD998412) to install a new oil pump gasket and the oil pump.

57.Tighten the oil pump mounting bolts to the specified torque of 29 ± 2 N·m.



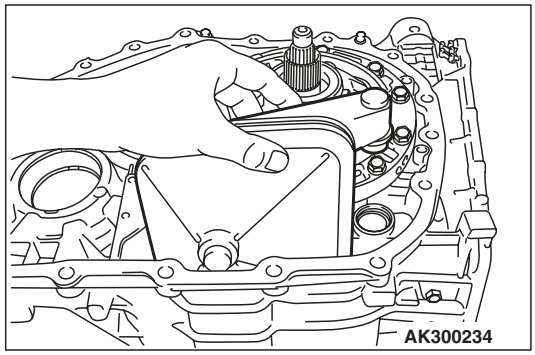
58.Measure the end play of the input shaft. Choose a thrust washer #1 of a thickness corresponding to the measurement, referring to the following table. Replace the thrust washer installed in step 55 with the thrust washer #1 thus chosen.

Available thrust washer

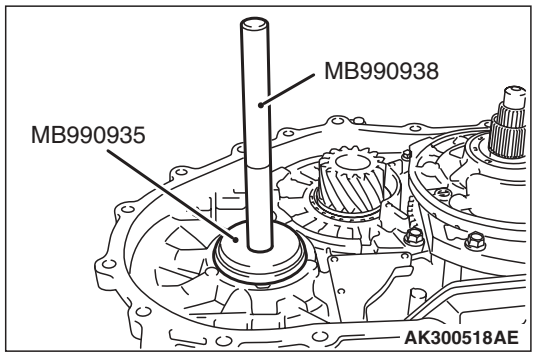
Amount of movement mm	Thickness mm	Identification mark
2.25 – 2.45	1.8	18
2.45 – 2.65	2.0	20
2.65 – 2.85	2.2	22
2.85 – 3.05	2.4	24
3.05 – 3.25	2.6	26
3.25 – 3.45	2.8	28

Make sure that the end play of the input shaft is within the standard value range with the thrust washer #1 in place.

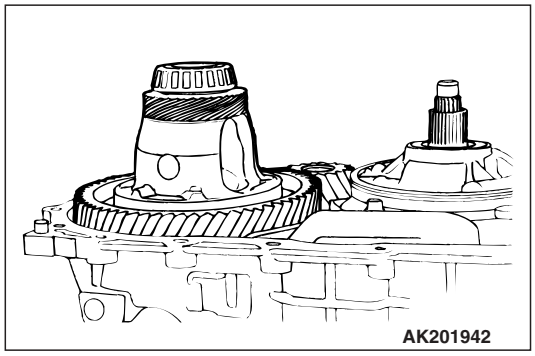
Standard value (reference): 0.70 – 1.45mm



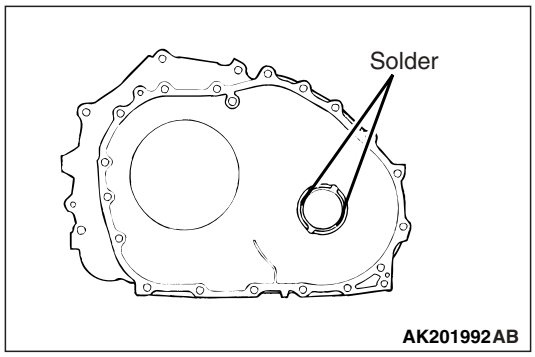
59.Install the oil filter.



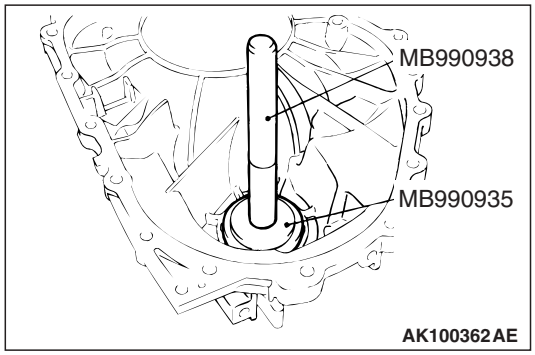
60.Use the special tools to drive the differential bearing outer race into the transmission case.
- Installer adapter (MB990935)
- Handle (MB990938)



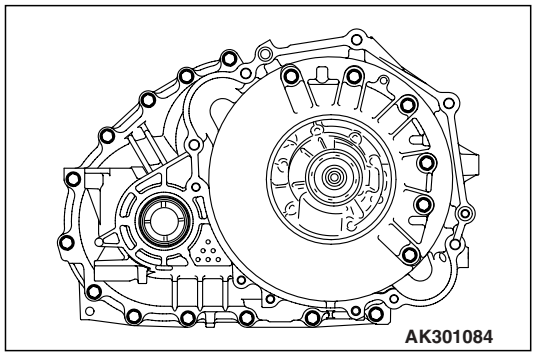
61.Install the differential.



62.Place two pieces of about 10mm long, 3mm diameter solder on the converter housing at the locations indicated in the drawing.

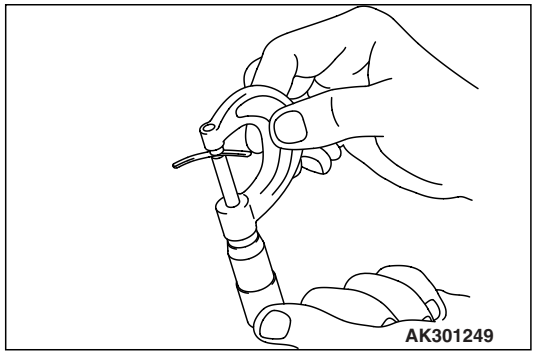


63.Use the special tools to drive the outer race into position.
- Installer adapter (MB990935)
- Handle (MB990938)



64.Install the converter housing on the transmission case without applying FIPG. Tighten the mounting bolts to the specified torque of 48 ± 6 N·m.

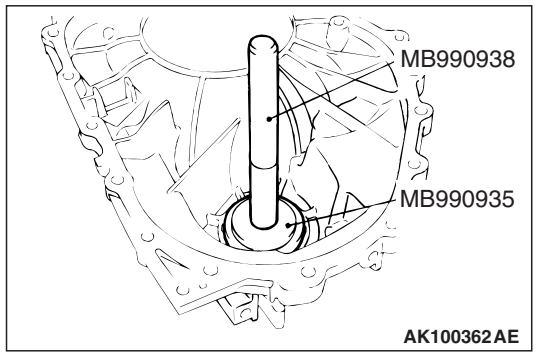
65.Remove the bolts and converter housing, and take out the solder pieces.



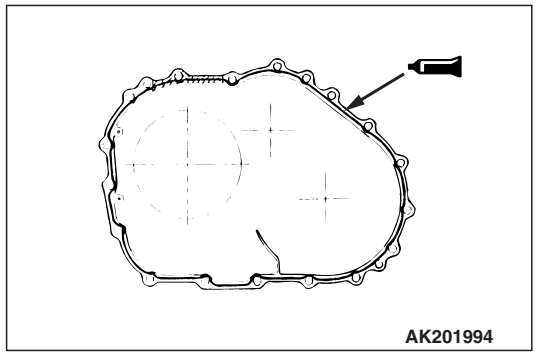
66.Use a micrometer to measure the thickness of the crashed solder.

67.Select a spacer of the thickness equivalent to the micrometer reading plus the standard preload value.

Standard preload value: 0.045 – 0.105mm

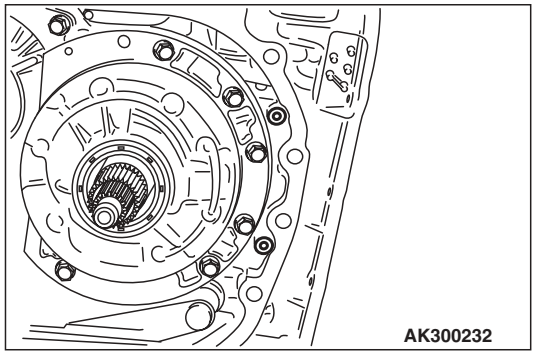


68.Install the spacer selected in step 67. into the converter housing and drive the outer race into position using the special tools.
- Installer adapter (MB990935)
- Handle (MB990938)

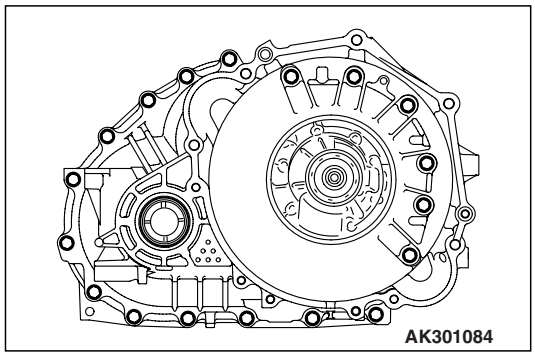


69.Apply an approx. 1.6 mm diameter bead of from-in-place gasket (FIPG) to the converter housing along its circumference as shown in the drawing.

Specified sealant:
Mitsubishi genuine sealant Part No. MD974421 or equivalent

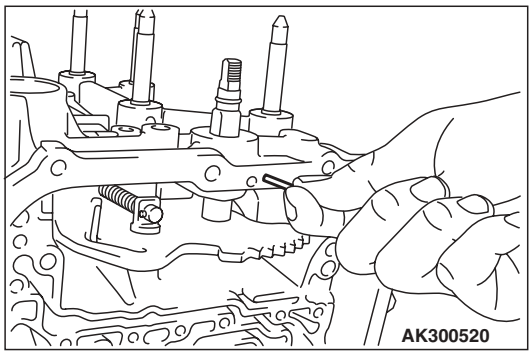

AK300232

70.Install the O-rings (two pieces).


AK301084

71.Install the converter housing and tighten the mounting bolts to the specified torque of 48 ± 6 N·m.

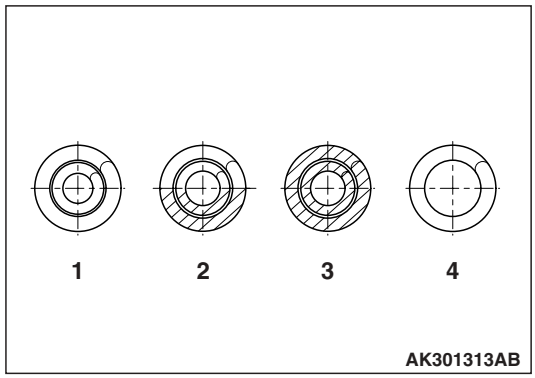
72.Install the manual control lever shaft and parking pawl rod.


AK300520

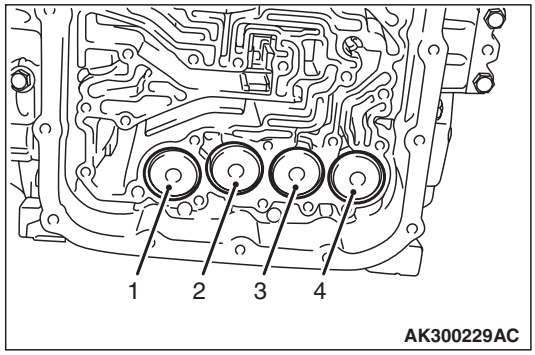
73.Install the manual control lever shaft roller.

74.Fit a new seal ring to each accumulator piston.

NOTE: All the four accumulator pistons and seal rings are identical.



AK301313AB

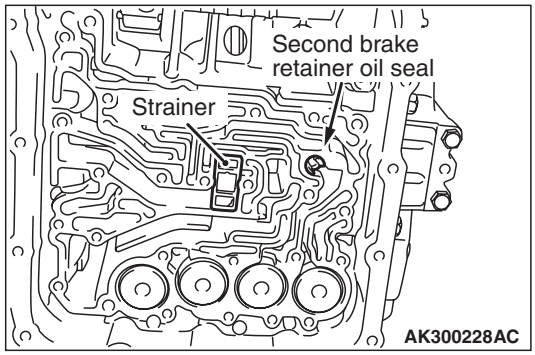


AK300229AC

75.Identify the accumulator spring for each accumulator and install it in the correct hole in the transmission case together with the piston.

NOTE: The accumulator springs are identified as shown in the table below.

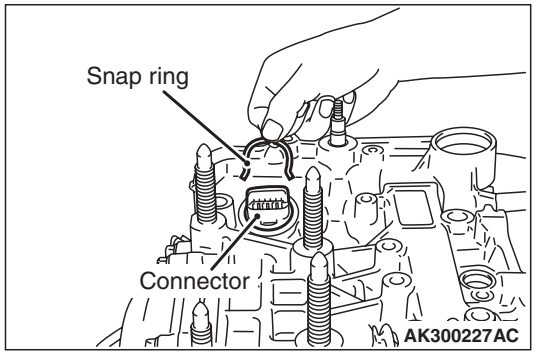
No.	Accumulator spring	Blue ink marking
1	For low-reverse brake	No marking
2	For underdrive clutch	Half of surface
3	For second brake	Entire surface
4	For overdrive clutch	No marking



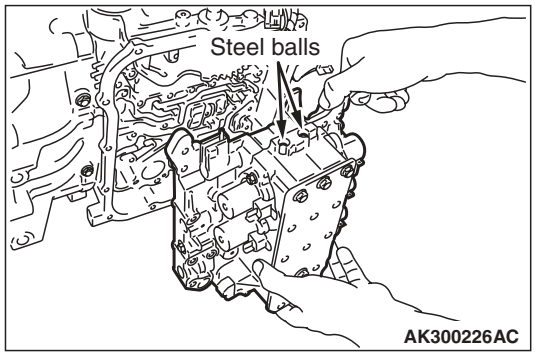
AK300228AC

76.Install the strainer and second brake retainer oil seal as shown in the drawing.

77.Fit a new O-ring into the groove in the solenoid valve harness connector.

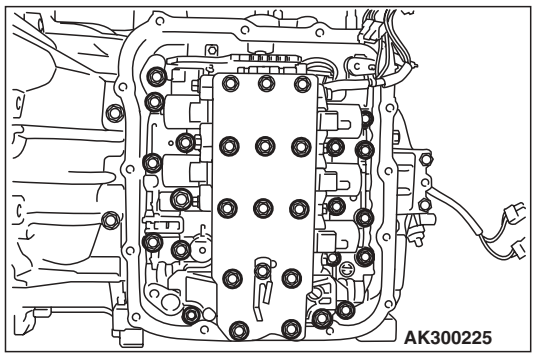


78.Insert the solenoid valve harness connector into the hole in the transmission case from inside the case. After making sure that the connector is positioned as shown in the drawing, fit the snap ring snugly into the connector groove.

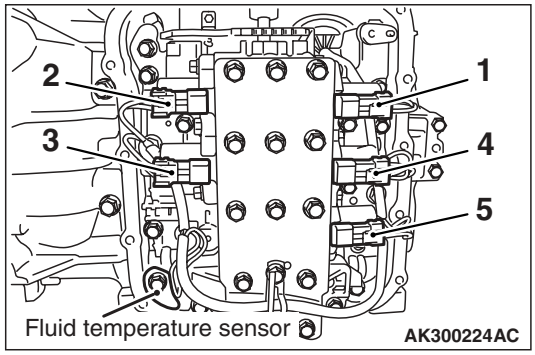


79.Install the steel balls one each in the two holes on the top of the valve body (outside valve body).

80.Install the valve body and gasket. Make sure that the pin of the manual valve is in place in the detent plate groove in the manual control lever shaft.

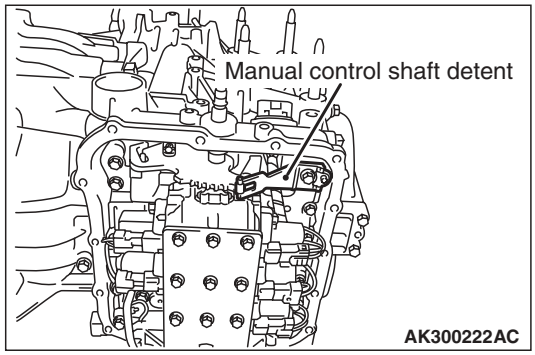


81.Install the valve body mounting bolts and tighten them to the specified torque of 11 ± 1 N·m.

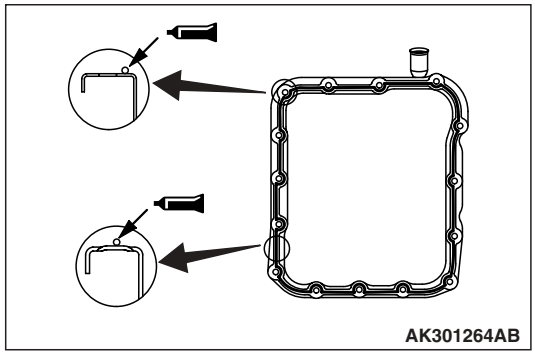


82.Install the oil temperature sensor and them connect the connector to the valve body.

No.	Solenoid valve	Wire colour	Connector housing colour
1	Underdrive solenoid valve	White/red/red	Black
2	Overdrive solenoid valve	Orange/red	Black
3	Low-reverse solenoid valve	Brown/yellow	Milky white
4	Second solenoid valve	Blue/red/red	Milky white
5	Damper clutch control solenoid valve	Blue/yellow/yellow	Black

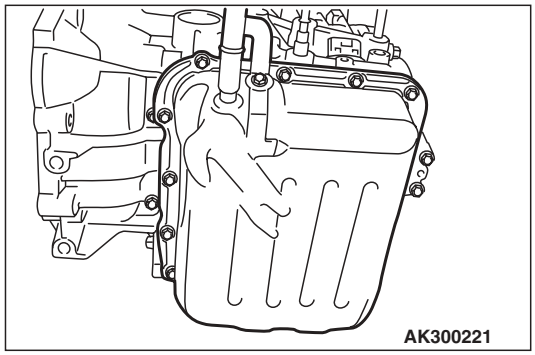


83.Install the manual control shaft detent and tighten its mounting bolt to the specified torque of 6.0 ± 1.0 N·m.

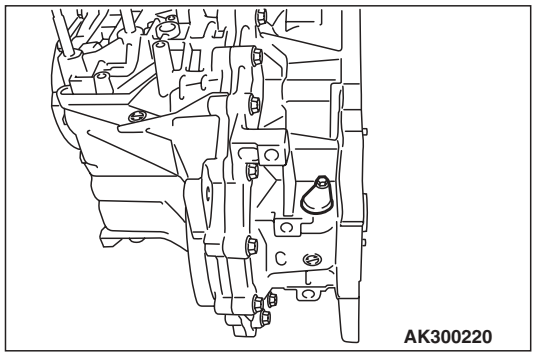


84.Apply an approx. 2.5 mm diameter bead of from-in-place gasket (FIPG) to the valve body cover along its circumference as shown in the drawing.

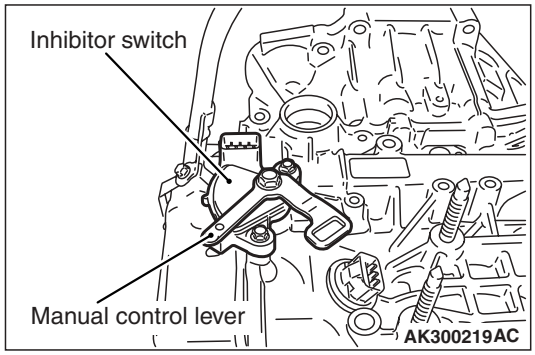
Specified sealant:
Mitsubishi genuine sealant Part No. MD974421 or equivalent



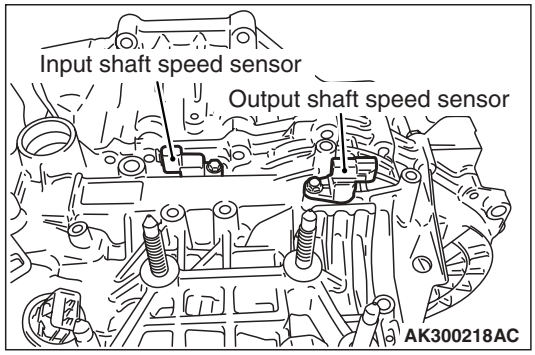
85.Install the valve body cover and tighten its mounting bolts to the specified torque of 11 ± 1 N·m.



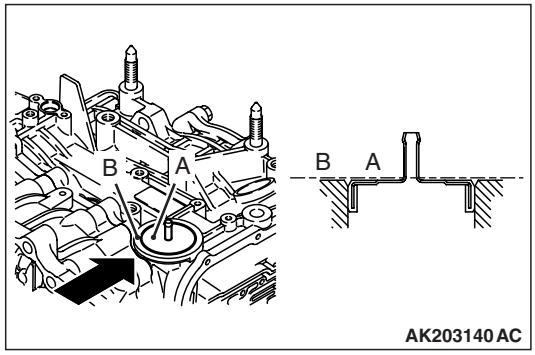
86.Install the sealing cap.



87.Install the inhibitor switch and the manual control lever, and tighten its mounting bolts to the specified torque of 23 ± 3 N·m.



88.Install the input shaft speed sensor and output shaft speed sensor.



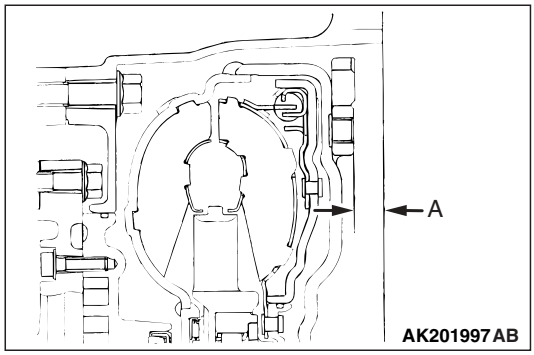
89.Press Face "A" of the air breather to be on the same plane as the Face "B" of the transmission case as shown in the drawing.

90.Coat both sides of the four new gaskets and the screw threads of the eyebolt with ATF, install the oil cooler feed tube, and then tighten the eyebolt to 24 ± 3 N·m.

91.Install a new O-ring on the oil filter tube and connect the tube to the valve body cover.

92.Install the oil level gauge.

93.Install the brackets.



⚠ CAUTION

Apply ATF to the oil pump drive hub before installing the torque converter. Be careful not to damage the oil seal lip when installing the torque converter.

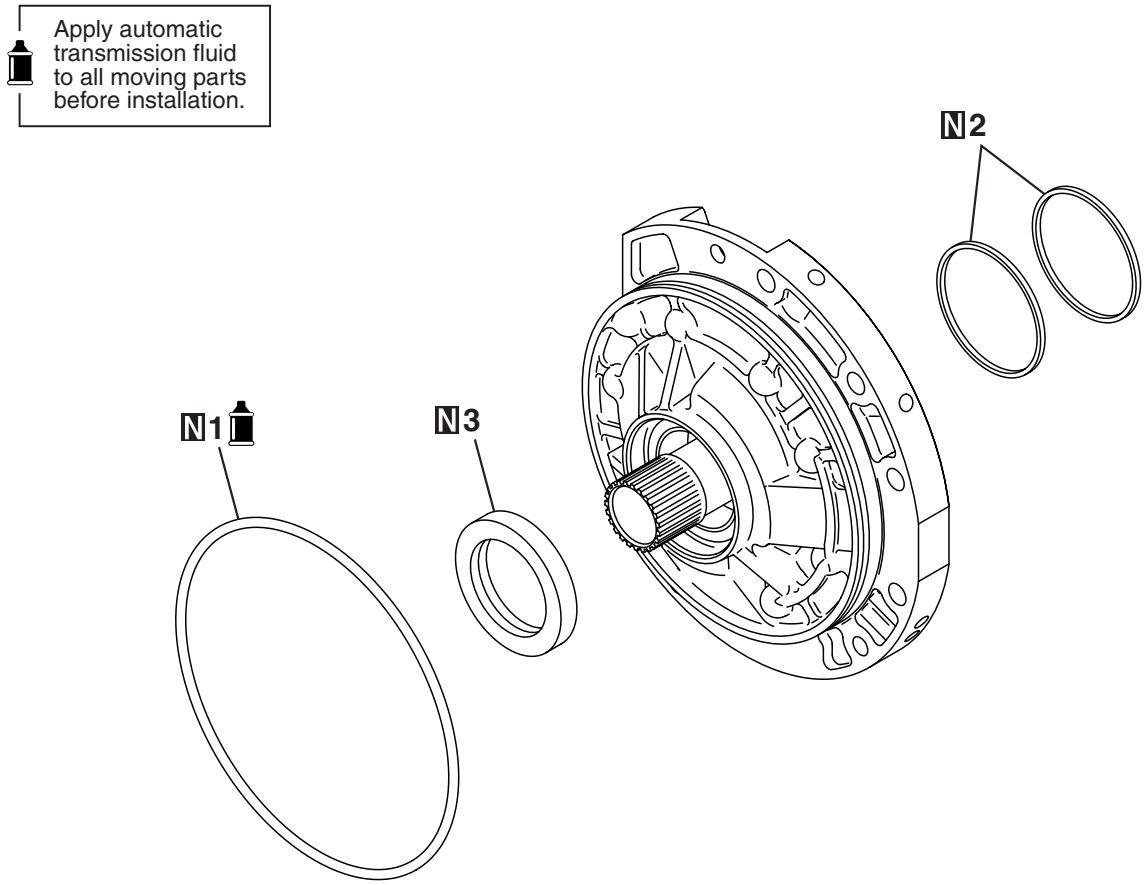
94. Install the torque converter, and secure it so that the dimension (A) indicated in the drawing meets the reference value.

Reference value: 12.2 mm

OIL PUMP

DISASSEMBLY AND REASSEMBLY

M1233001300187



AK301063AC

Disassembly steps

>>B<< 1. O-ring

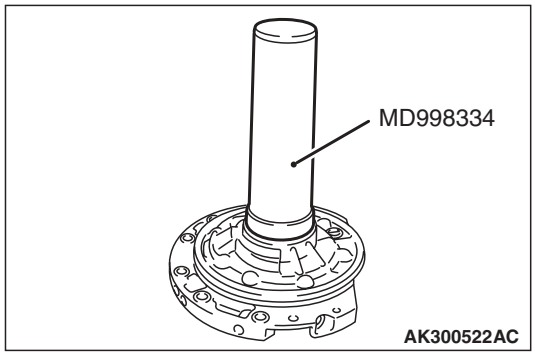
Disassembly steps (Continued)

2. Seal ring

>>A<< 3. Oil seal

REASSEMBLY SERVICE POINTS

>>A<< OIL SEAL INSTALLATION



Use the special tool Oil seal installer (MD998334) to install the oil seal.

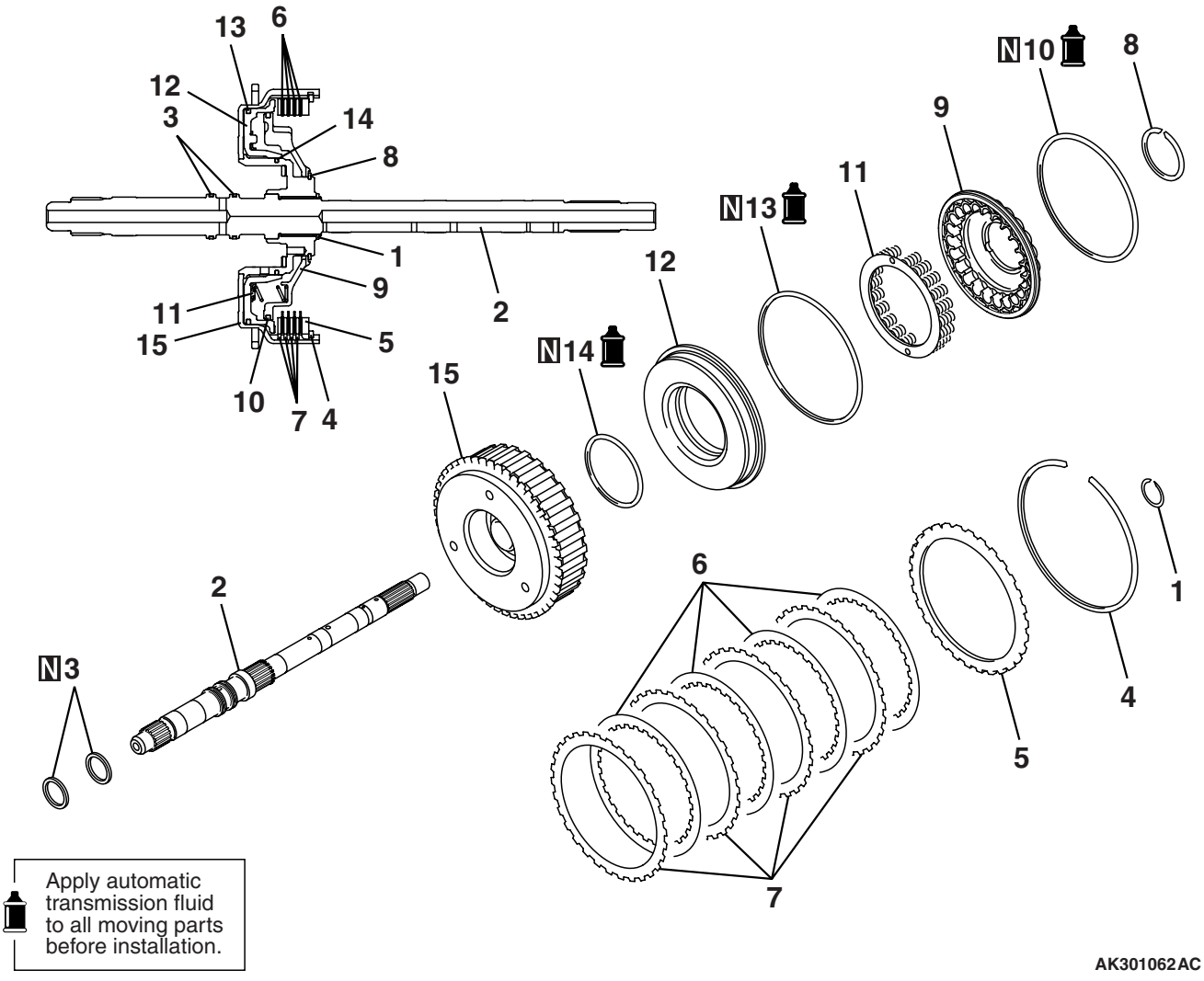
>>B<< O-RING INSTALLATION

Install a new O-ring in the groove on the periphery of the oil pump, and apply ATF, blue petrolatum jelly or white Vaseline to the periphery of the O-ring.

UNDERDRIVE CLUTCH AND INPUT SHAFT

DISASSEMBLY AND REASSEMBLY

M1233020900133

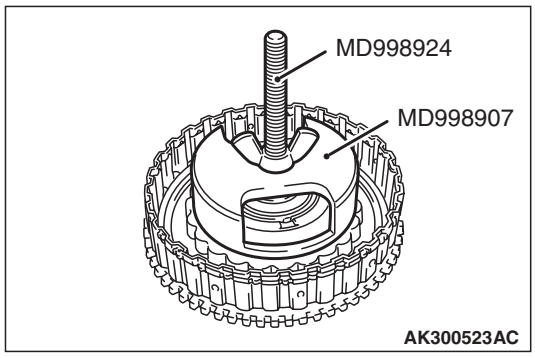


Disassembly steps

		1. Snap ring
		2. Input shaft
		3. Seal ring
	>>D<<	4. Snap ring
	>>C<<	5. Clutch reaction plate
	>>C<<	6. Clutch disc
	>>C<<	7. Clutch plate
<<A>>	>>B<<	8. Snap ring
		9. Spring retainer
	>>A<<	10. D-ring
		11. Return spring
		12. Underdrive clutch piston
	>>A<<	13. D-ring
	>>A<<	14. D-ring
		15. Underdrive clutch retainer

DISASSEMBLY SERVICE POINTS

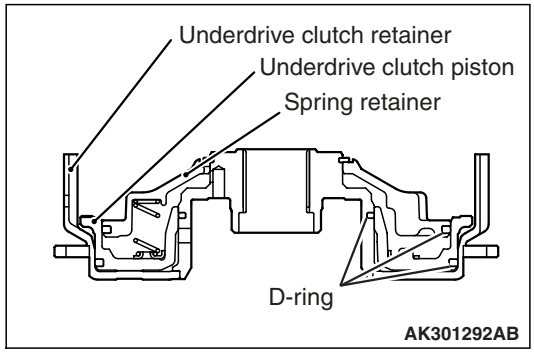
<<A>> SNAP RING REMOVAL



Use the special tools to remove the snap ring.
- Spring compressor (MD998907)
- Spring compressor retainer (MD998924)

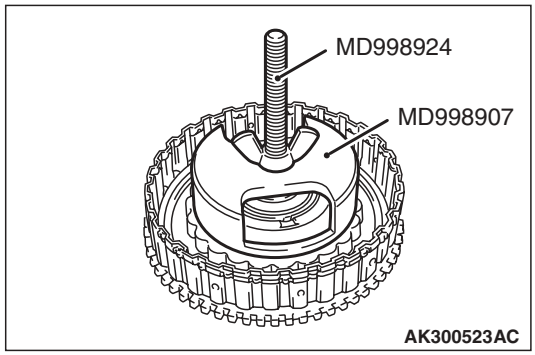
REASSEMBLY SERVICE POINTS

>>A<< D-RING INSTALLATION



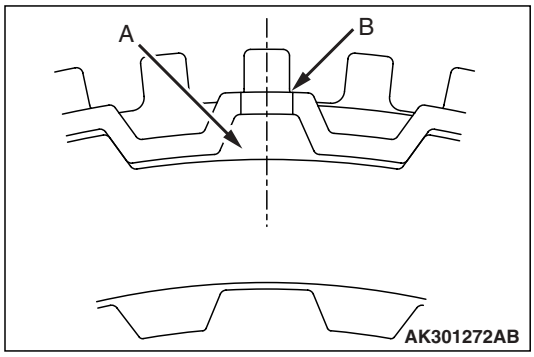
Apply ATF, blue petrolatum jelly or white Vaseline to the D-rings and handle them carefully not to damage them during installation.

>>B<< SNAP RING INSTALLATION



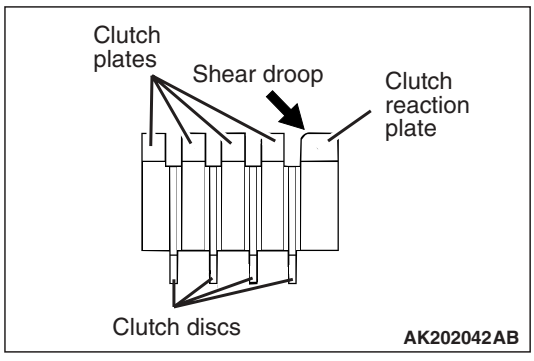
Use the special tools to install the snap ring.
- Spring compressor (MD998907)
- Spring compressor retainer (MD998924)

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



⚠ CAUTION
Soak the clutch discs in ATF before assembling it.

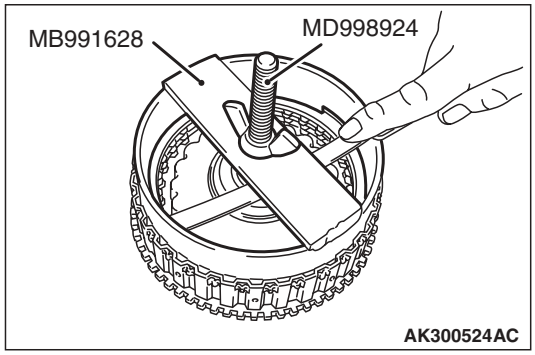
1. Assemble the clutch plates, clutch discs, and clutch reaction plates with their non-toothed portions (A in the drawing) aligned with the hole (B in the drawing) formed in a crest of the underdrive clutch retainer.



2. Orient the clutch reaction plate as shown in the drawing when it is installed.

>>D<< SNAP RING INSTALLATION

1. Install the snap ring.



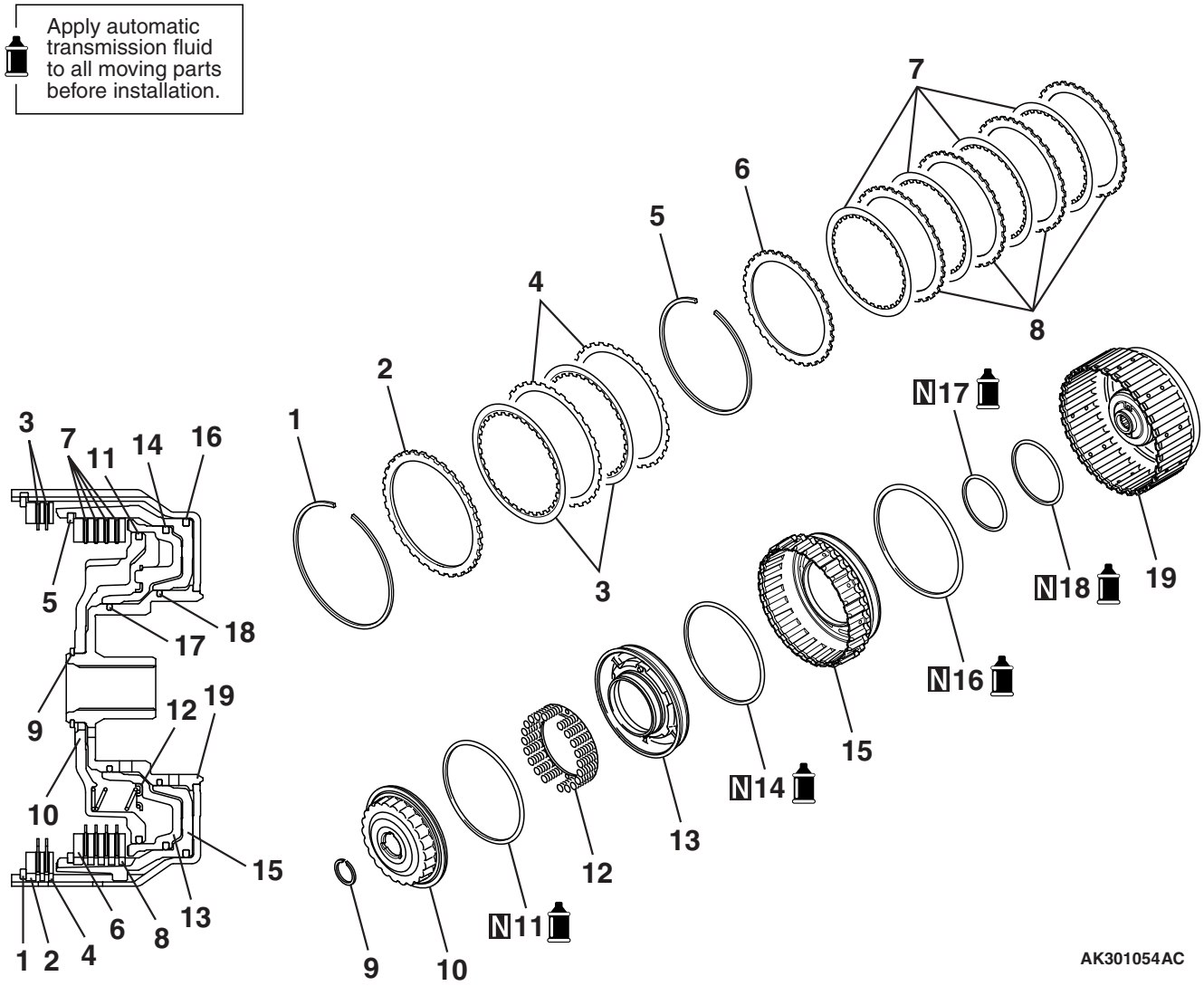
2. Press down the clutch reaction plate on its entire circumference using the special tools.
   - Spring compressor (MB991628)
   - Spring compressor retainer (MD998924)

3. Check the clearance between the snap ring and clutch reaction plate. If the clearance is not within the standard value range, make adjustment by selecting a snap ring of an appropriate thickness.
   Standard value:1.6 – 1.8 mm

REVERSE AND OVERDRIVE CLUTCH

DISASSEMBLY AND REASSEMBLY

M1233021200182

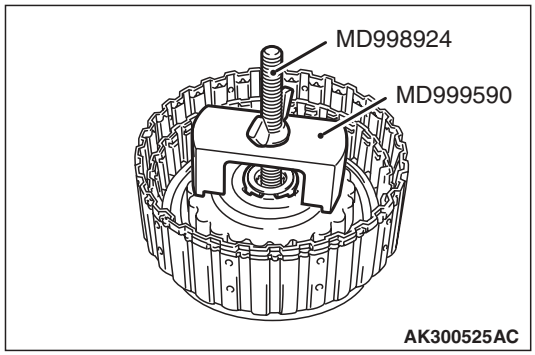


Disassembly steps

>>G<<	1.	Snap ring
>>F<<	2.	Clutch reaction plate
>>F<<	3.	Clutch disc
>>F<<	4.	Clutch plate
>>E<<	5.	Snap ring
>>D<<	6.	Clutch reaction plate
>>D<<	7.	Clutch disc
>>D<<	8.	Clutch plate
<<A>> >>C<<	9.	Snap ring
	10.	Spring retainer
>>A<<	11.	D-ring
	12.	Clutch return spring
	13.	Overdrive clutch piston
>>A<<	14.	D-ring
>>B<<	15.	Reverse clutch piston
>>A<<	16.	D-ring
>>A<<	17.	D-ring
>>A<<	18.	D-ring
	19.	Reverse clutch retainer

DISASSEMBLY SERVICE POINTS

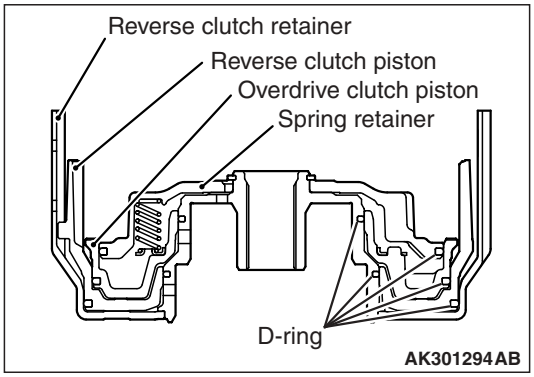
<<A>> SNAP RING REMOVAL



Use the special tools to remove the snap ring.
- Spring compressor retainer (MD998924)
- Spring compressor (MD999590)

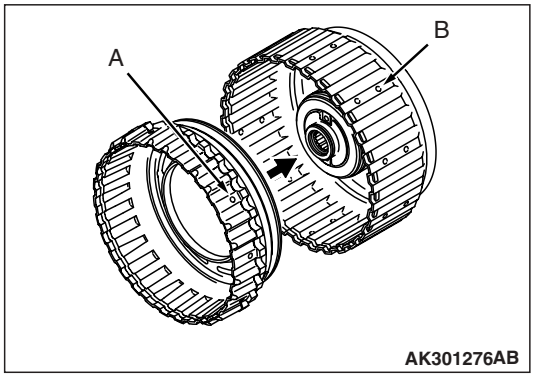
REASSEMBLY SERVICE POINTS

>>A<< D-RING INSTALLATION



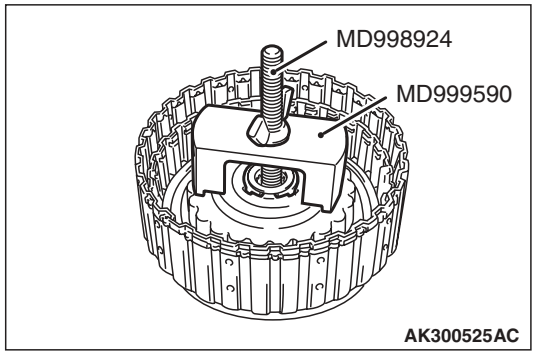
Apply ATF, blue petrolatum jelly or white Vaseline to the D-rings and handle them carefully to avoid damage during installation.

>>B<< REVERSE CLUTCH PISTON INSTALLATION

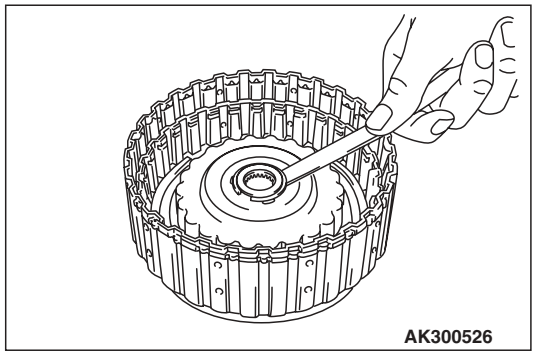


Assemble the reverse clutch piston with the reverse clutch retainer with their holes (A and B in the drawing) aligned.

>>C<< SNAP RING INSTALLATION



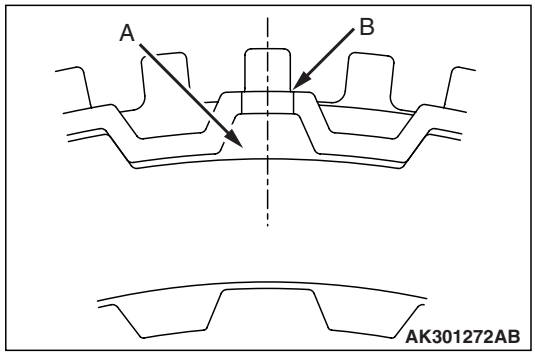
1. Use the special tools to install the snap ring.
   - Spring compressor retainer (MD998924)
   - Spring compressor (MD999590)
2. Press down the return spring retainer tightly on its entire circumference (with a force of 49N).



3. Check the clearance between the snap ring and the return spring retainer. If the clearance is not within the standard value range, make adjustment by selecting a snap ring of an appropriate thickness.

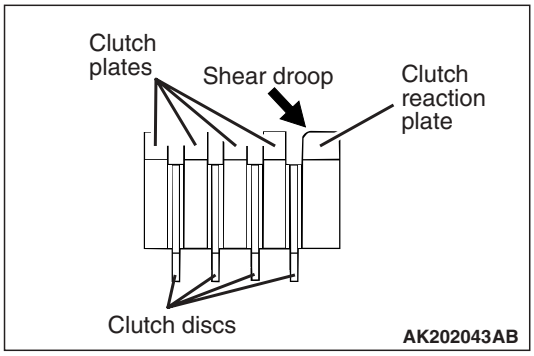
   Standard value: 0 – 0.09 mm

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



⚠ CAUTION
Soak the clutch discs in ATF before installing them.

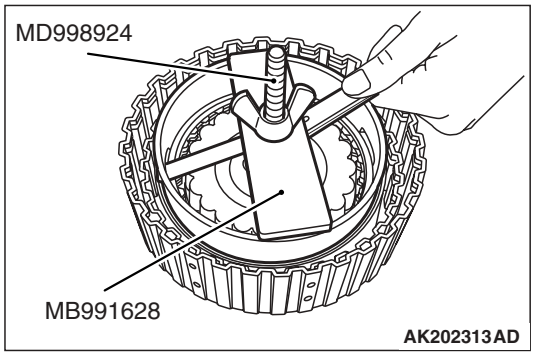
1. Assemble the clutch plates, clutch discs, and clutch reaction plate with their non-toothed portions (A in the drawing) aligned with the hole (B in the drawing) formed in a crest of the reverse clutch piston.



2. Orient the clutch reaction plate as shown in the drawing when it is installed.

>>E<< SNAP RING INSTALLATION

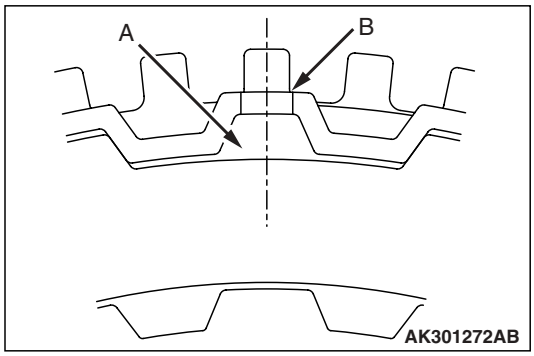
1. Install the snap ring.



2. Press down the clutch reaction plate on the circumference using the special tools.
   - Spring compressor (MB991628)
   - Spring compressor retainer (MD998924)
3. Check the clearance between the snap ring and clutch reaction plate. If the clearance is not within the standard value range, make adjustment by selecting a snap ring of an appropriate thickness.

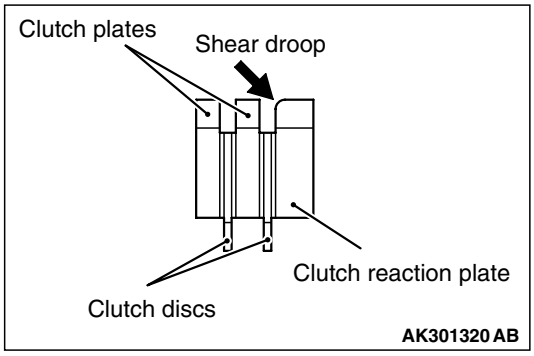
   Standard value: 1.6 – 1.8 mm

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



⚠ CAUTION
Soak the clutch discs in ATF before installing them.

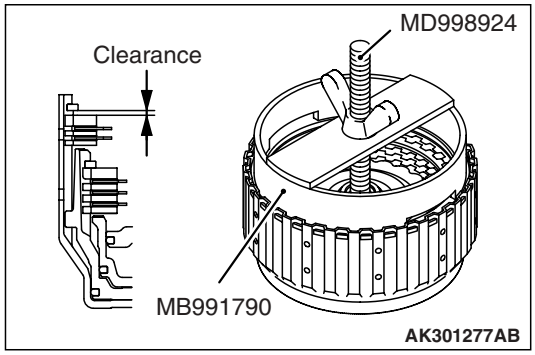
1. Assemble the clutch plates, clutch discs, and reaction plate with their non-toothed portions (A in the drawing) aligned with the hole (B in the drawing) formed in a crest of the reverse retainer.



2. Orient the clutch reaction plate as shown in the drawing when it is installed.

>>G<< SNAP RING INSTALLATION

1. Install the snap ring.



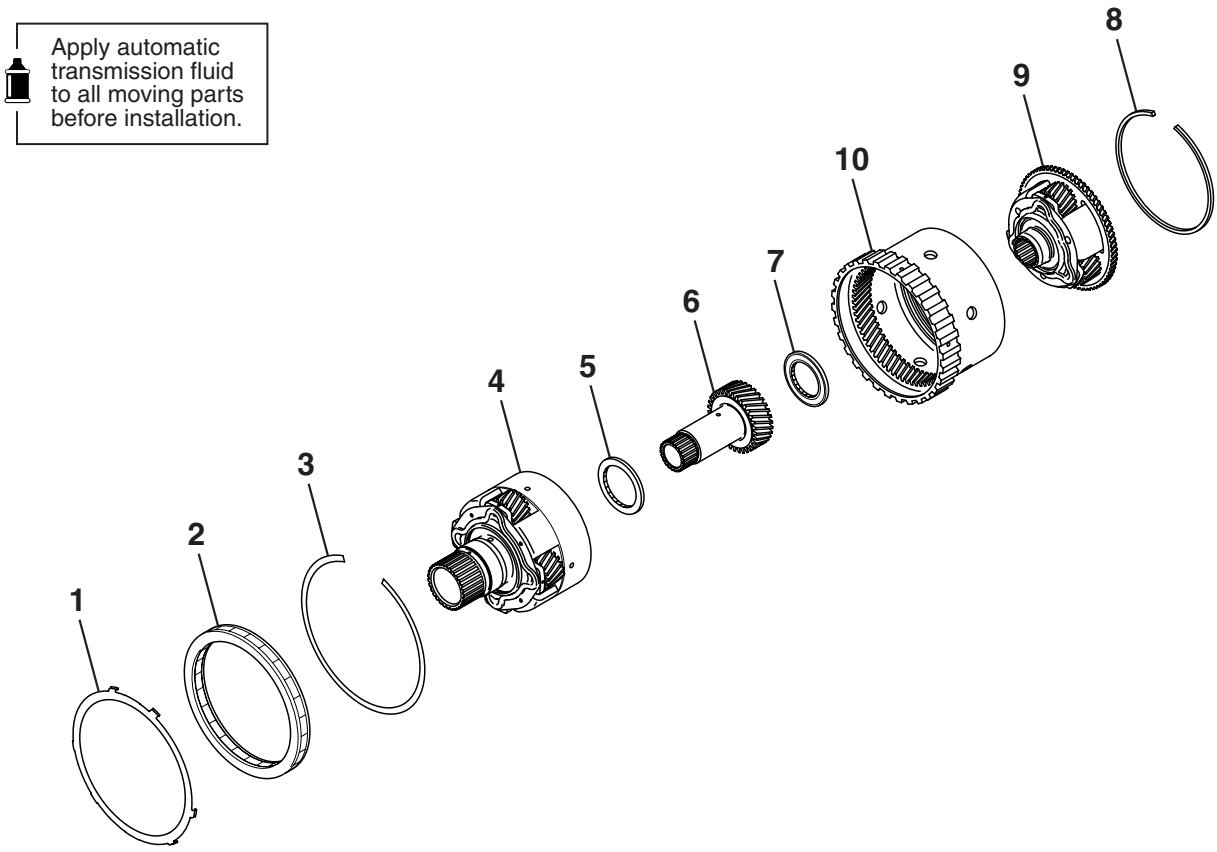
2. Press down the clutch reaction plate on its entire circumference using the special tools.
   - Spring compressor (MB991790)
   - Spring compressor retainer (MD998924)
3. Check the clearance between the snap ring and the clutch reaction plate. If the clearance is not within the standard value range, make adjustment by selecting a snap ring of an appropriate thickness.

   Standard value: 1.5 – 1.7 mm

PLANETARY CARRIER ASSEMBLY

DISASSEMBLY AND REASSEMBLY

M1233002500151

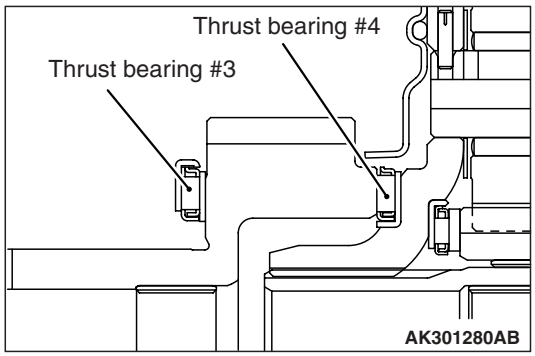


Disassembly steps

1. Stopper plate
>>B<< 2. One-way clutch
3. Snap ring
4. Output planetary carrier
>>A<< 5. Thrust bearing #3
6. Underdrive sun gear
>>A<< 7. Thrust bearing #4
8. Snap ring
9. Overdrive planetary carrier
10. Overdrive annulus gear

REASSEMBLY SERVICE POINTS

>>A<< THRUST BEARING #3/#4 INSTALLATION

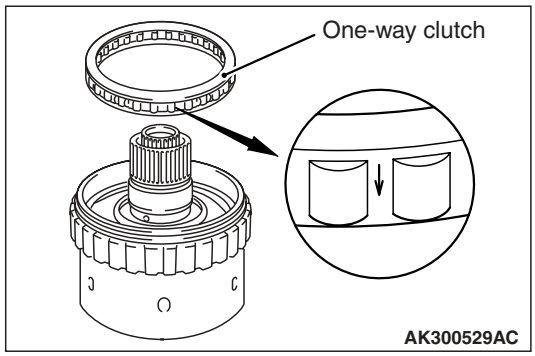


⚠ CAUTION

Make sure the ends of each thrust bearing are oriented correctly.

Install the thrust bearings #3 and #4 in position as shown in the drawing.

>>B<< ONE-WAY CLUTCH INSTALLATION

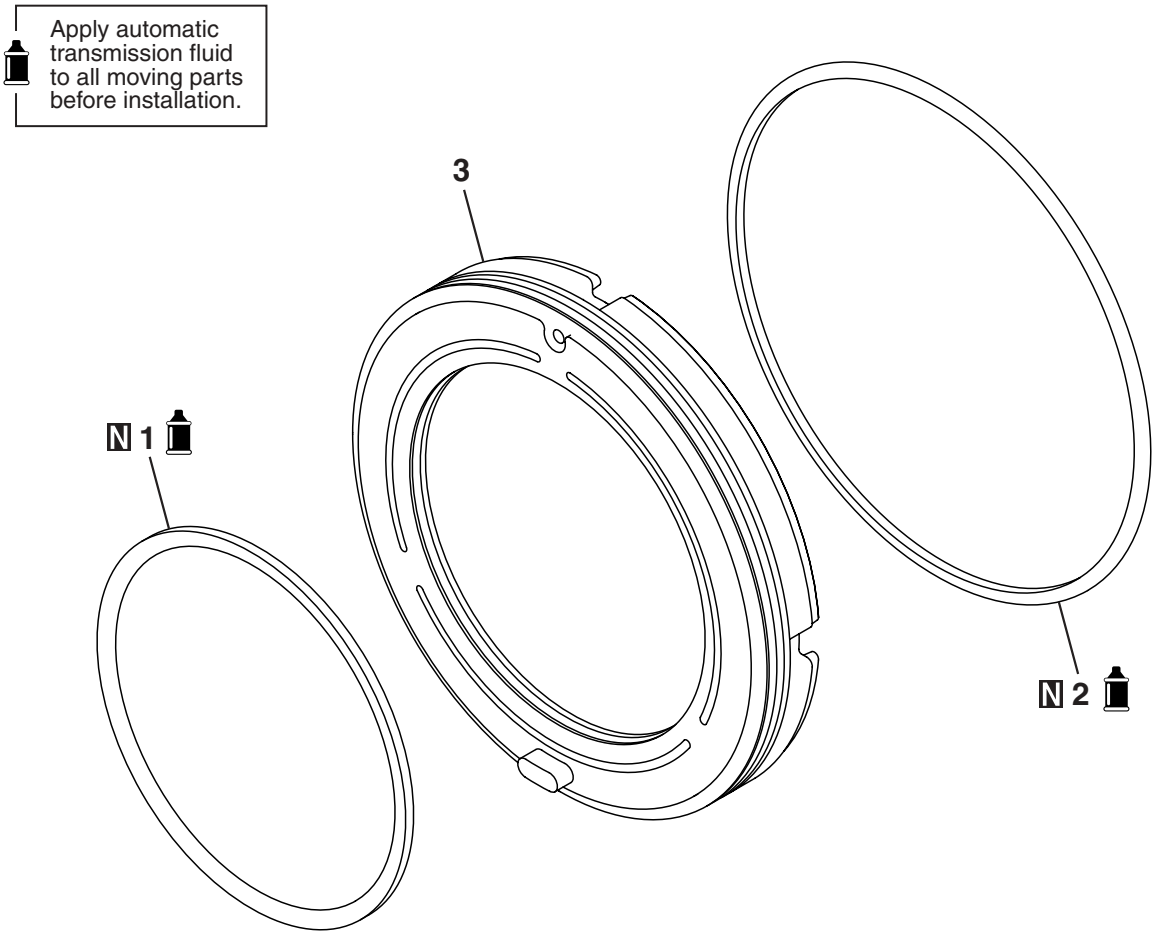


Insert the one-way clutch into the overdrive annulus gear with the arrow pointing as shown in the drawing.

LOW-REVERSE BRAKE

DISASSEMBLY AND REASSEMBLY

M1233003700170



AK301040AC

		Disassembly steps
>>A<<	1.	D-ring
>>A<<	2.	D-ring
	3.	Low-reverse brake piston

REASSEMBLY SERVICE POINTS

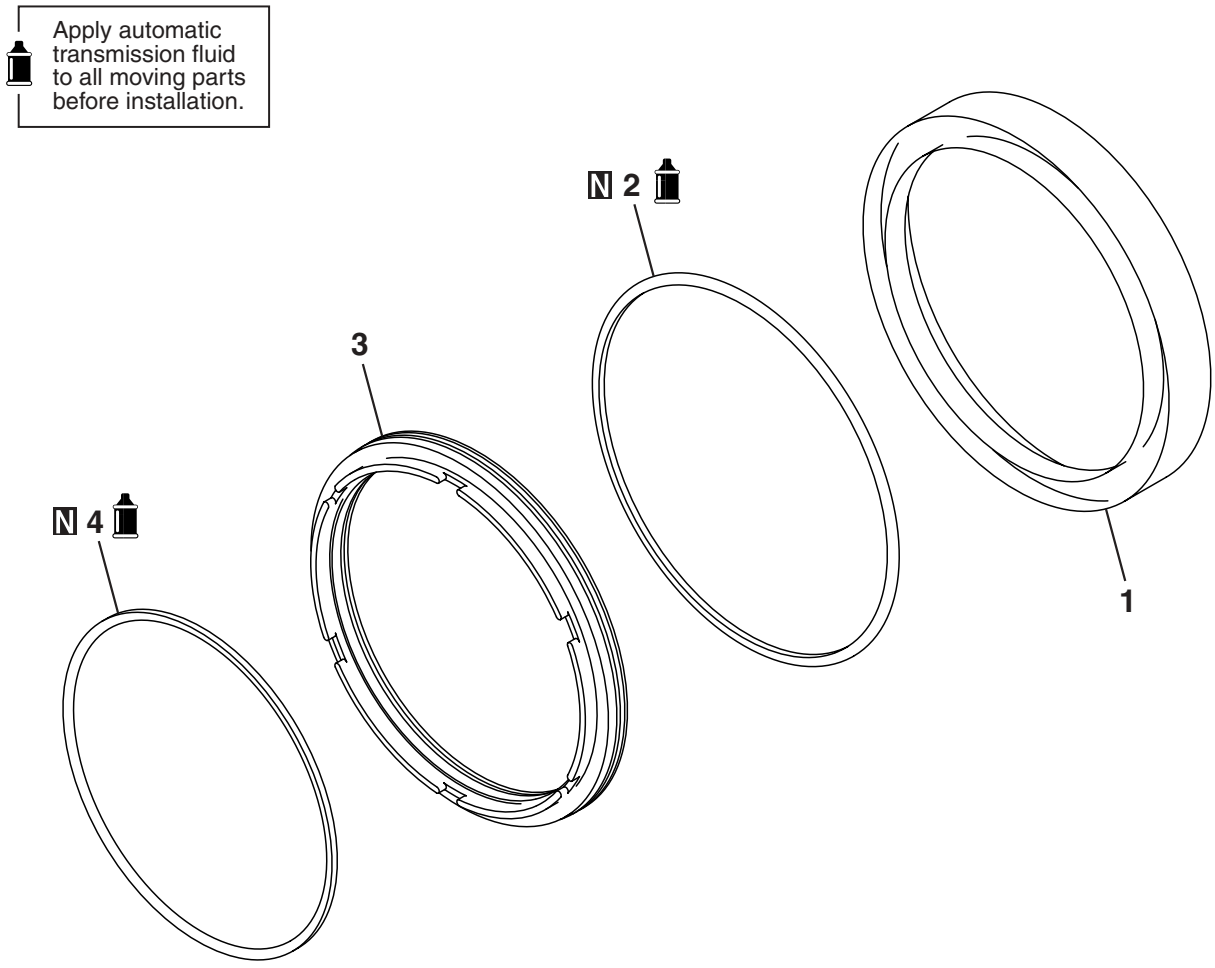
>>A<< D-RING INSTALLATION

Apply ATF, blue petrolatum jelly or white Vaseline to the D-rings before installation, and handle them carefully not to damage them during installation.

SECOND BRAKE

DISASSEMBLY AND REASSEMBLY

M1233021800117



AK301039AC

Disassembly steps

1. Second brake retainer
>>A<< 2. D-ring
3. Second brake piston
>>A<< 4. D-ring

REASSEMBLY SERVICE POINT

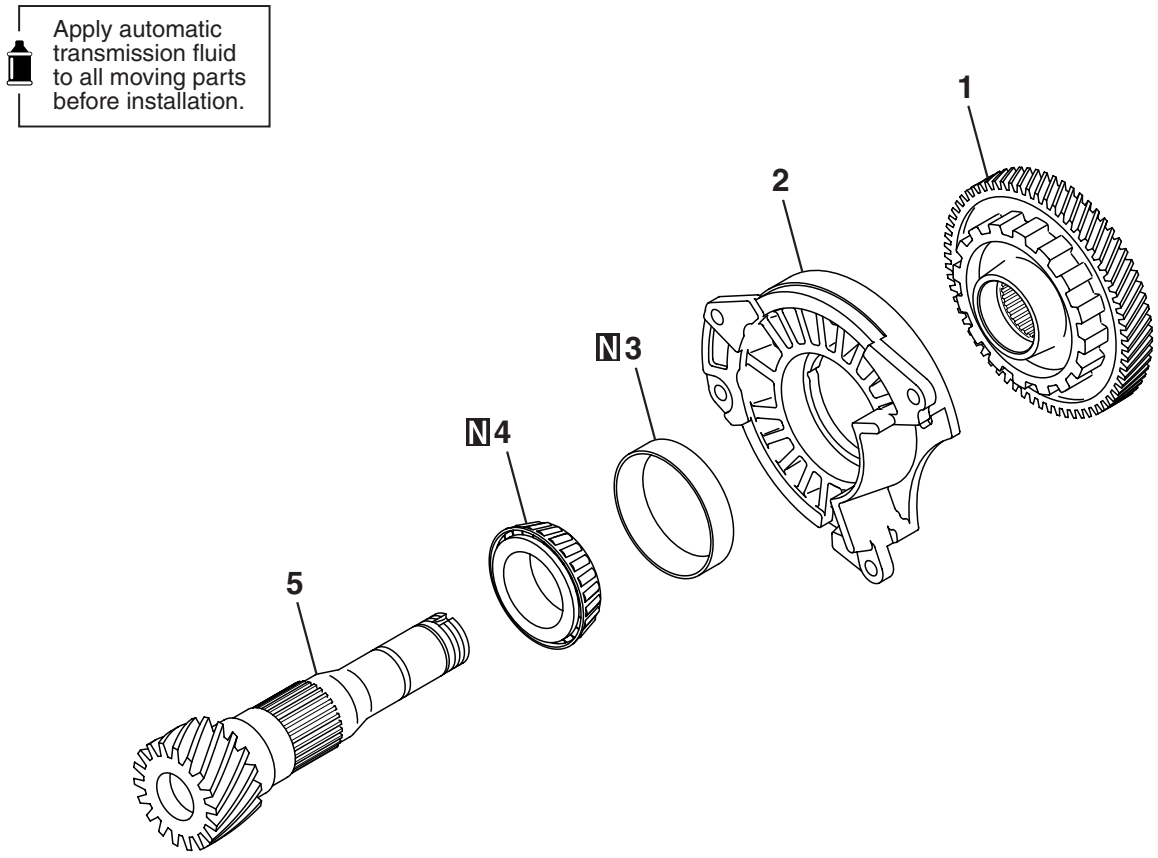
>>A<< D-RING INSTALLATION

Apply ATF, blue petrolatum jelly or white Vaseline to the D-rings, and handle them carefully to avoid damage during installation.

OUTPUT SHAFT

DISASSEMBLY AND REASSEMBLY

M1233022100081

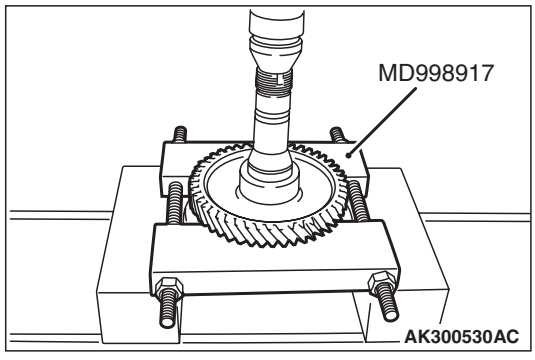


AK301036AC

			Disassembly steps
<<A>>	>>C<<	1.	Transfer driven gear
		2.	Bearing retainer
	>>B<<	3.	Outer race
<<B>>	>>A<<	4.	Taper roller bearing
		5.	Output shaft

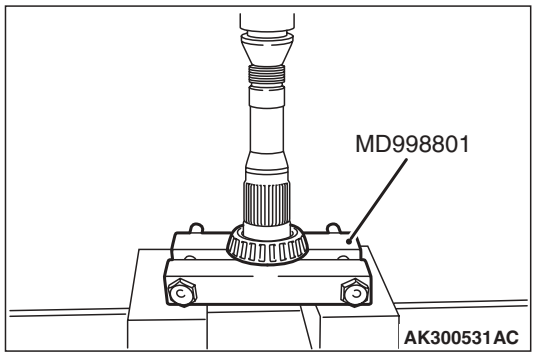
DISASSEMBLY SERVICE POINTS

<<A>> TRANSFER DRIVEN GEAR REMOVAL



Use the special tool Bearing remover (MD998917) to remove the transfer driven gear.

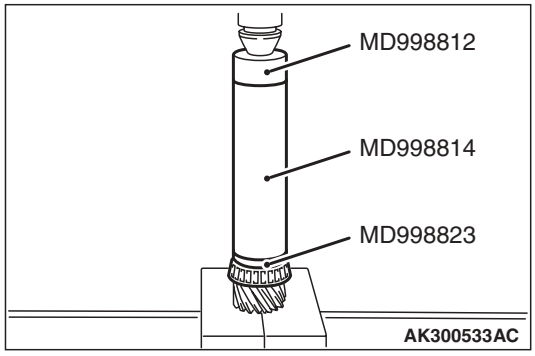
<<B>> TAPER ROLLER BEARING REMOVAL



Use the special tool Bearing remover (MD998801) to remove the taper roller bearing.

REASSEMBLY SERVICE POINTS

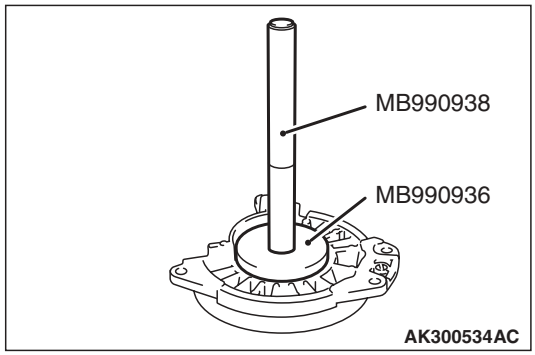
>>A<< TAPER ROLLER BEARING INSTALLATION



Use the special tools to install the taper roller bearing.

- Installer cap (MD998812)
- Installer 200 (MD998814)
- Installer adapter (MD998823)

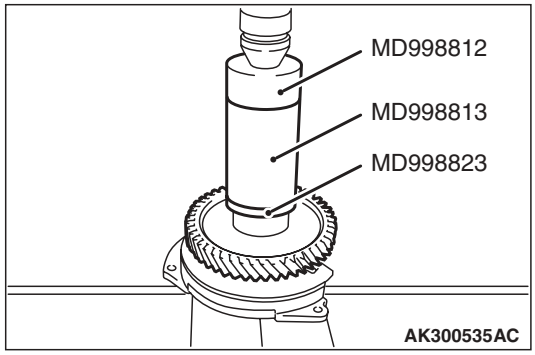
>>B<< OUTER RACE INSTALLATION



Use the special tools to install the outer race.

- Installer adapter (MB990936)
- Handle (MB990938)

>>C<< TRANSFER DRIVEN GEAR INSTALLATION



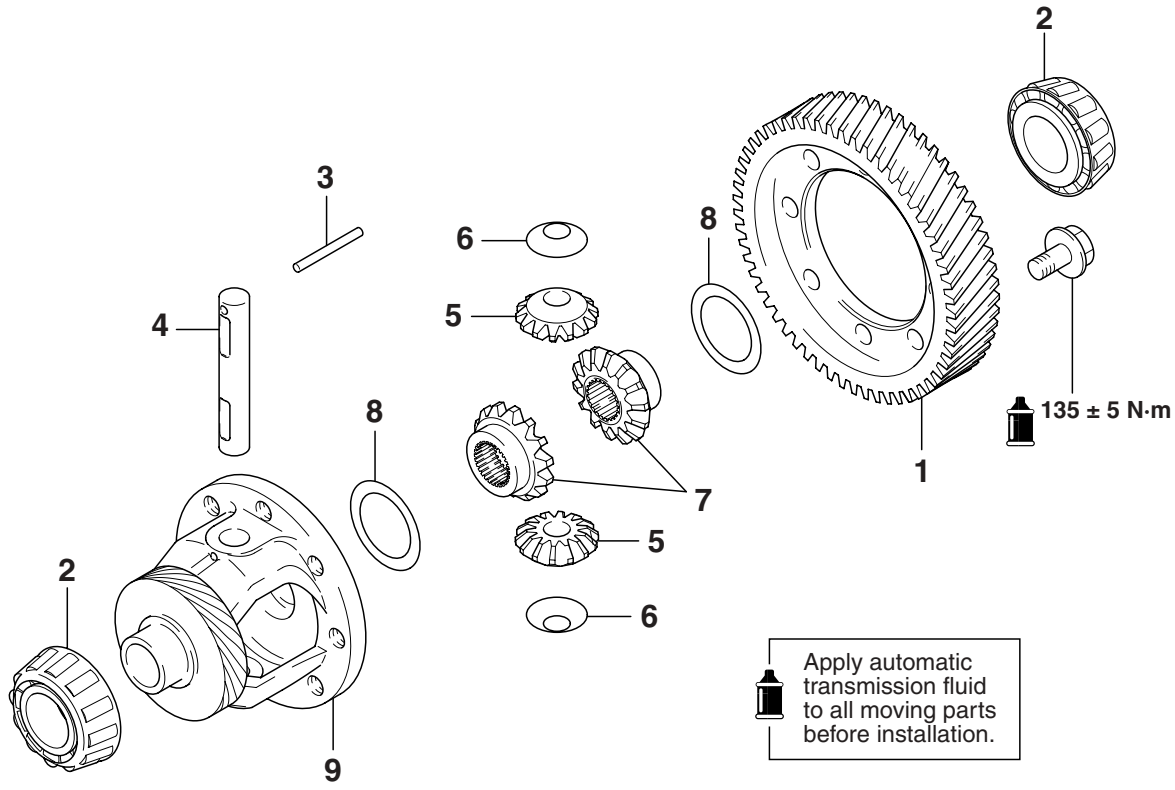
Use the special tools to install the transfer driven gear.

- Installer cap (MD998812)
- Installer 100 (MD998813)
- Installer adapter (MD998823)

DIFFERENTIAL

DISASSEMBLY AND REASSEMBLY

M1233003100316

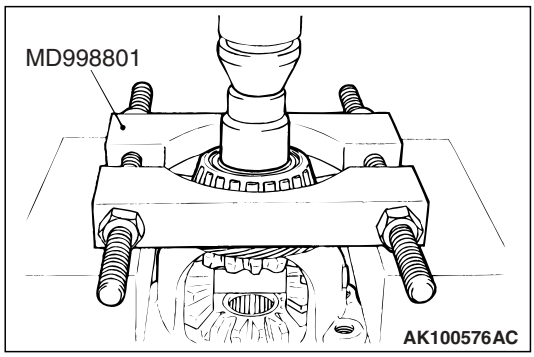


AK101411AC

			Disassembly steps
	>>D<<	1.	Differential drive gear
<<A>>	>>C<<	2.	Taper roller bearing
	>>B<<	3.	Lock pin
	>>A<<	4.	Pinion shaft
	>>A<<	5.	Pinion
	>>A<<	6.	Washer
	>>A<<	7.	Side gear
	>>A<<	8.	Spacer
		9.	Differential case

DISASSEMBLY SERVICE POINTS

<<A>> TAPER ROLLER BEARING REMOVAL



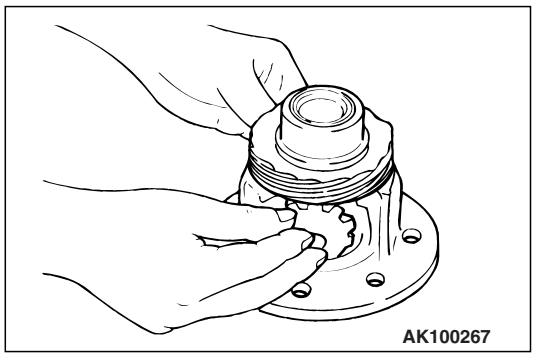
Use the special tool Bearing remover (MD998801) to remove the taper roller bearings.

REASSEMBLY SERVICE POINTS

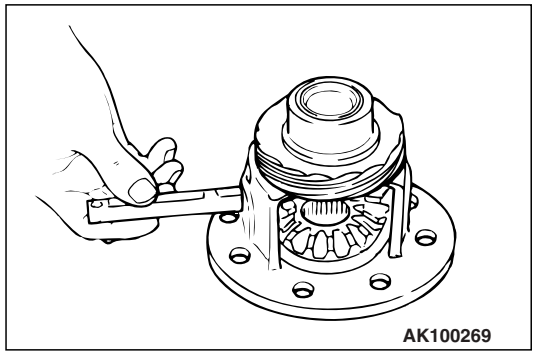
>>A<< SPACER/SIDE GEAR/WASHER/PINION/PINION SHAFT INSTALLATION

1. Install the spacer on the back of each side gear, then install the side gears into the differential case.

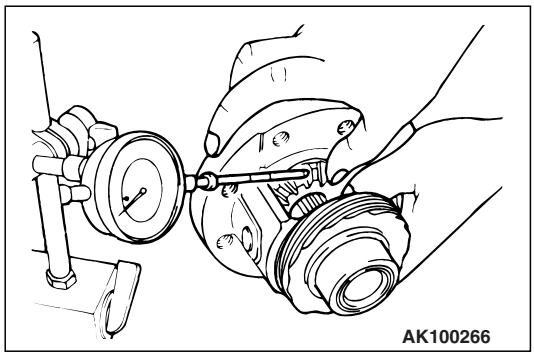
   NOTE: Use spacers of a medium thickness (0.93 – 1.00 mm) when installing new side gears.



2. Attach the washer to the back of each pinion, make both pinions engage with the side gears simultaneously, and bring the pinions into position while turning the gear set.



3. Insert the pinion shaft.



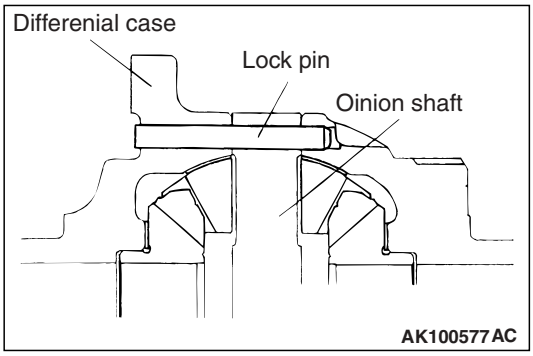
4. Measure the backlash between the side gears and pinions.

   Standard value: 0.025 – 0.150 mm

5. If the backlash is not within the standard value range, replace the spacers with appropriately selected ones and measure the backlash again.

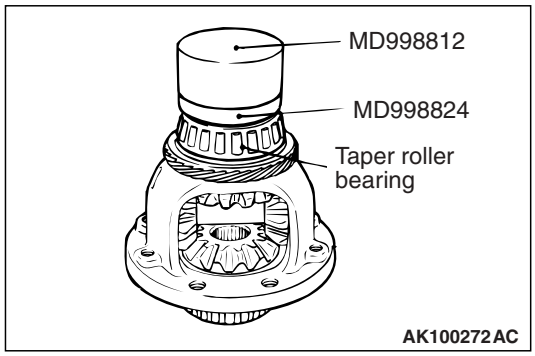
   NOTE: The amount of the backlash must be the same on both side gears.

>>B<<LOCK PIN INSTALLATION



Orient the lock pin as shown in the drawing.

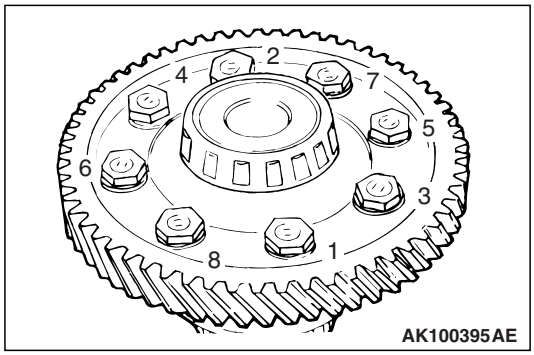
>>C<< TAPER ROLLER BEARING INSTALLATION



Use the special tools to install the taper roller bearing.

- Installer cap (MD998812)
- Installer adapter (MD998824)

>>D<< DIFFERENTIAL DRIVE GEAR INSTALLATION

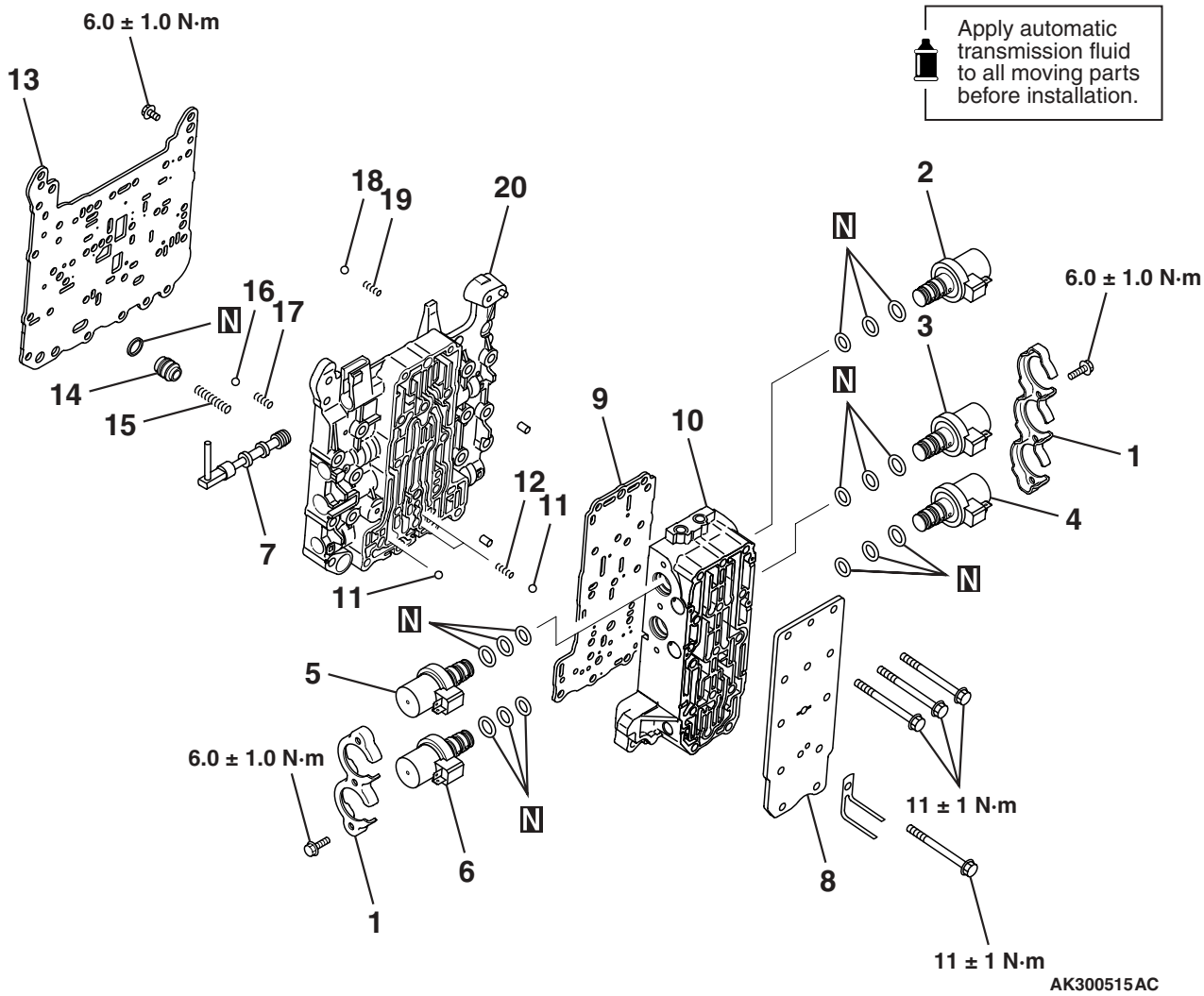


Apply ATF to the bolts, and tighten the bolts to the specified torque in the shown sequence.

VALVE BODY

DISASSEMBLY AND REASSEMBLY

M1233005500202

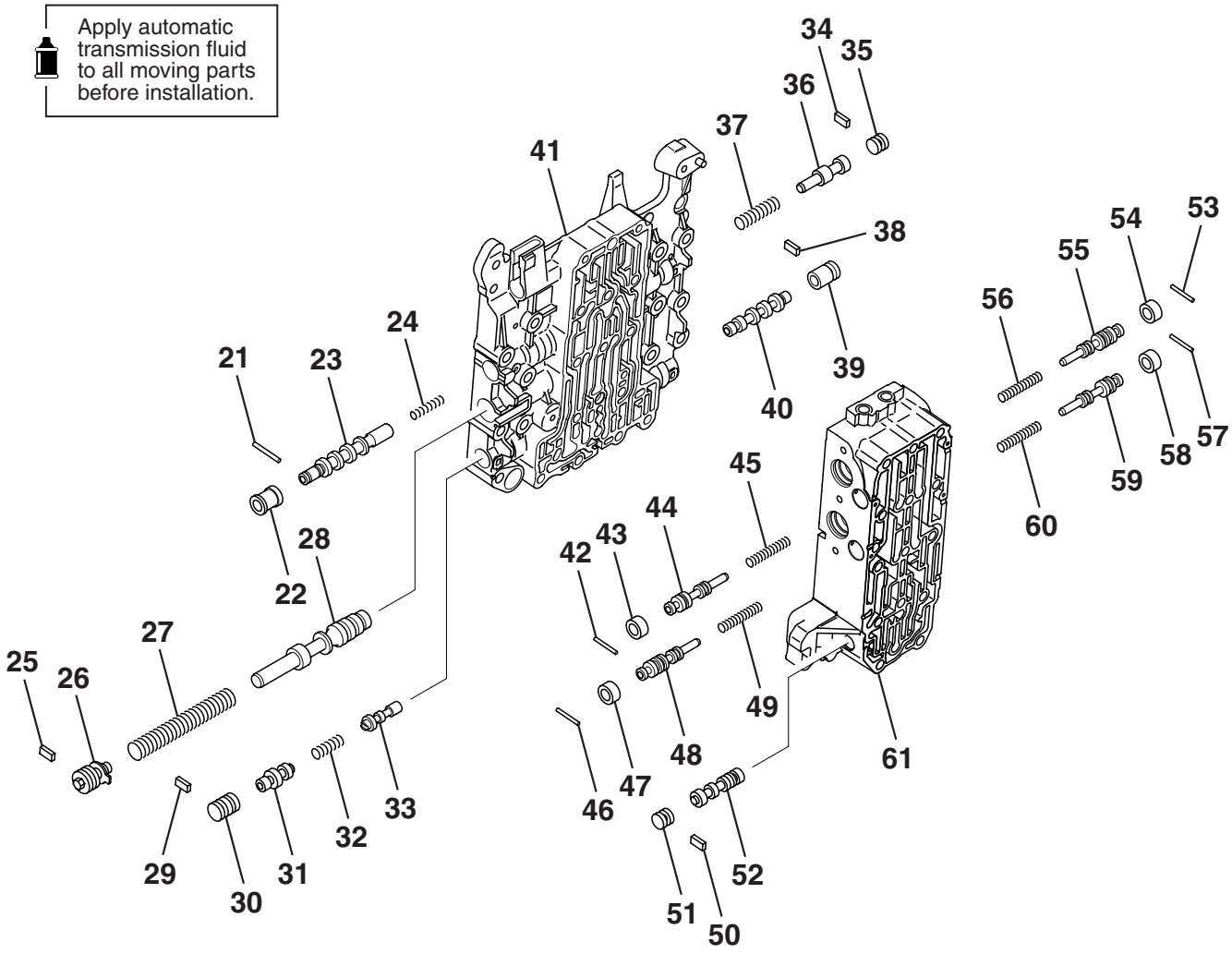


Disassembly steps

		1.	Solenoid valve support
<<A>>	>>C<<	2.	Underdrive solenoid valve
<<A>>	>>C<<	3.	Second solenoid valve
<<A>>	>>C<<	4.	Damper clutch control solenoid valve
<<A>>	>>C<<	5.	Overdrive solenoid valve
<<A>>	>>C<<	6.	Low-reverse solenoid valve
		7.	Manual valve
		8.	Cover
		9.	Plate
		10.	Outside valve body assembly

Disassembly steps (Continued)

>>B<<	11.	Steel ball (orifice check ball)
>>B<<	12.	Spring
	13.	Plate
>>A<<	14.	Damping valve
>>A<<	15.	Damping valve spring
>>A<<	16.	Steel ball (line relief)
>>A<<	17.	Spring
>>A<<	18.	Steel ball (orifice check ball)
>>A<<	19.	Spring
	20.	Inside valve body assembly



Disassembly steps

21. Roller
22. Damper clutch control valve sleeve
23. Damper clutch control valve
24. Damper clutch control valve spring
25. Plate
26. Screw
27. Regulator valve spring
28. Regulator valve
29. Plate
30. Fail-safe valve A sleeve
31. Fail-safe valve A2
32. Fail-safe valve A spring
33. Fail-safe valve A1
34. Plate
35. Plug
36. Torque converter valve
37. Torque converter valve spring
38. Plate
39. Fail-safe valve B sleeve
40. Fail-safe valve B
41. Inside valve body
42. Roller

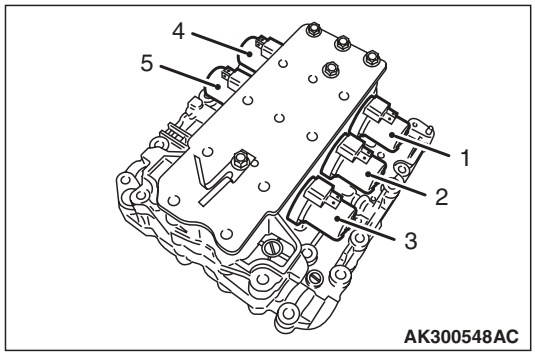
Disassembly steps (Continued)

43. Overdrive pressure control valve sleeve
44. Overdrive pressure control valve
45. Overdrive pressure control valve spring
46. Roller
47. Low-reverse pressure control valve sleeve
48. Low-reverse pressure control valve
49. Low-reverse pressure control valve spring
50. Plate
51. Plug
52. Switch valve
53. Roller
54. Underdrive pressure control valve sleeve
55. Underdrive pressure control valve
56. Underdrive pressure control valve spring
57. Roller

Disassembly steps (Continued)

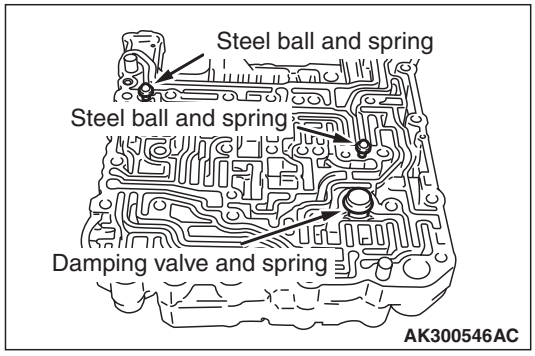
58. Second pressure control valve sleeve
59. Second pressure control valve
60. Second pressure control valve spring
61. Outside valve body

DISASSEMBLY SERVICE POINT
<<A>> SOLENOID VALVE REMOVAL



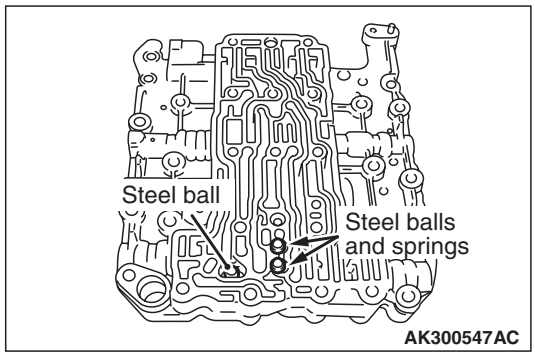
Mark each solenoid valve with white paint to identify its location.

REASSEMBLY SERVICE POINTS
>>A<< SPRING/STEEL BALL/DAMPING VALVE/DAMPING VALVE SPRING INSTALLATION



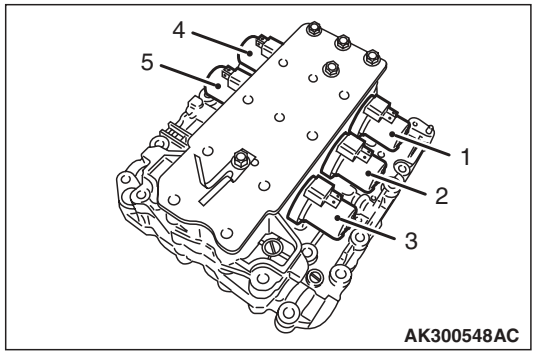
Install the springs, steel balls, damping valve, and damping valve spring into the locations indicated in the drawing.

>>B<< SPRING/STEEL BALLS INSTALLATION



Install the springs and steel balls into the locations indicated in the drawing.

>>C<< SOLENOID VALVES INSTALLATION



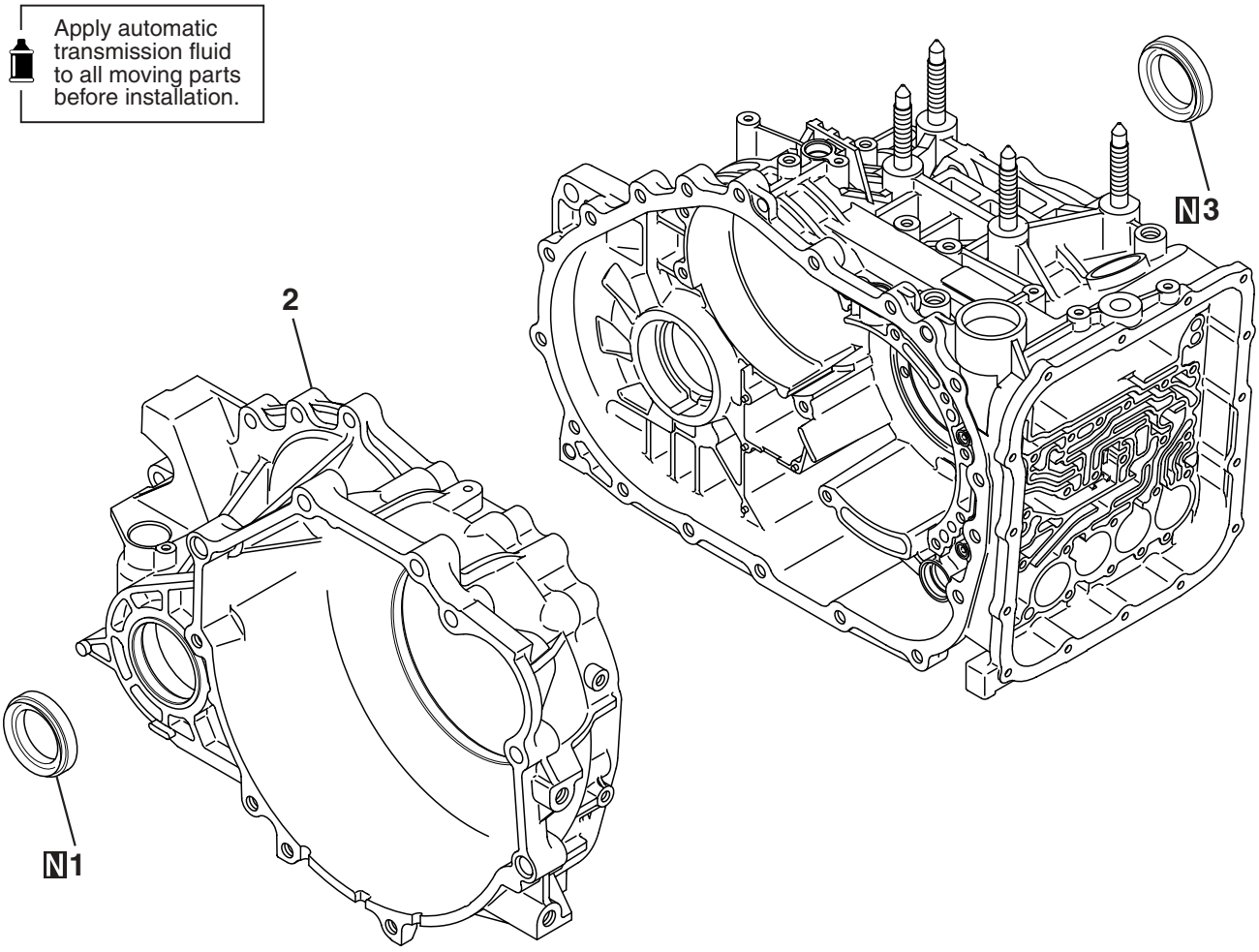
Install the solenoid valves according to the markings that have been made during disassembly.

No.	Solenoid valve
1	Underdrive solenoid valve
2	Second solenoid valve
3	Damper clutch control solenoid valve
4	Overdrive solenoid valve
5	Low-reverse solenoid valve

DRIVE SHAFT OIL SEAL

DISASSEMBLY AND REASSEMBLY

M1233004300131



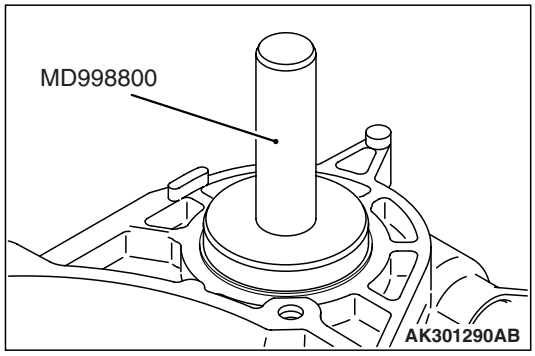
AK300508AC

Disassembly steps

>>A<<	1.	Oil seal
	2.	Converter housing
>>B<<	3.	Oil seal

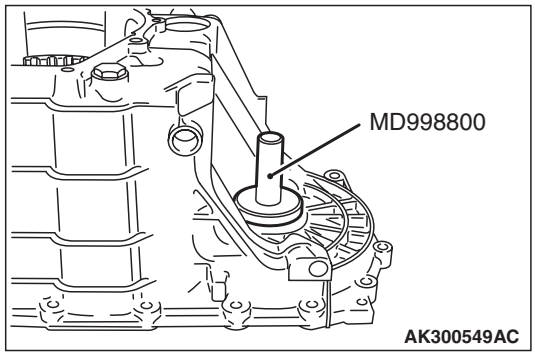
REASSEMBLY SERVICE POINT

>>A<< OIL SEAL INSTALLATION



Use the special tool to Oil seal installer (MD998800) install the oil seal.

>>B<< OIL SEAL INSTALLATION



Use the special tool Oil seal installer (MD998800) to install the oil seal.