

## General Information

## SPECIFICATIONS

Items	End play (mm)
Underdrive clutch	1.6 ~ 1.8
Overdrive clutch	1.6 ~ 1.8
Reverse clutch	1.5 ~ 1.7
Low & reverse brak	1.65 ~ 2.11
Second brake	1.09 ~ 1.55
Brake reaction plate	0 ~ 0.16L
Underdrive sun gear	0.25 ~ 0.45L
Input shaft	0.70 ~ 1.20L
Output shaft	0.01 ~ 0.09T
Differential bearing	0.045 ~ 0.105T
Differential back lash	0.025 ~ 0.150L

## Snap ring, spacer, thrust washer and pressure plate

Part name	Thickness in(mm)	Identification symbol
Thrust washer (For adjustment of input shaft end play)	0.071(1.8)	18
	0.079(2.0)	20
	0.087(2.2)	22
	0.094(2.4)	24
	0.102(2.6)	26
	0.110(2.8)	28

# General Information

# AT-3

Snap ring (For adjustment of underdrive clutch and overdrive clutch end play)	0.079(2.0)	colorless
	0.083(2.1)	blue
	0.087(2.2)	brown
	0.091(2.3)	colorless
	0.094(2.4)	blue
	0.098(2.5)	brown
	0.102(2.6)	colorless
	0.106(2.7)	blue
	0.110(2.8)	brown
	0.114(2.9)	colorless
	0.118(3.0)	blue
	0.075(1.9)	brown
	0.071(1.8)	blue
	0.067(1.7)	colorless
0.063(1.6)	brown	
Snap ring (For adjustment of low and reverse brake and second brake reaction plate end play)	0.085(2.2)	colorless
	0.091(2.3)	blue
	0.094(2.4)	brown
	0.098(2.5)	colorless
Pressure plate (For adjustment of low and reverse brake reaction plate end play)	0.071(1.8)	E
	0.079(2.0)	D
	0.087(2.2)	C
	0.094(2.4)	B
	0.102(2.6)	A
	0.110(2.8)	O
	0.118(3.0)	I
	0.063(1.6)	F
Pressure plate (For adjustment of 2nd brake reaction plate end play)	0.094(2.4)	P
	0.102(2.6)	R
	0.110(2.8)	S
	0.118(3.0)	T
	0.126(3.2)	U
	0.134(3.4)	V

# AT-4

# Automatic Transaxle System

Snap ring (For adjustment of reverse clutch end play)	0.079(2.0)	blue
	0.083(2.1)	brown
	0.087(2.2)	colorless
	0.091(2.3)	blue
	0.094(2.4)	brown
	0.098(2.5)	colorless
	0.102(2.6)	blue
	0.106(2.7)	brown
	0.110(2.8)	colorless
	0.075(1.9)	colorless
	0.071(1.8)	brown
	0.067(1.7)	blue
	0.063(1.6)	colorless
Snap ring (For adjustment of reverse brown and overdrive clutch spring retainer colorless end play)	0.0583(1.48)	brown
	0.0602(1.53)	colorless
	0.0622(1.58)	blue
	0.0642(1.63)	brown
Thrust washer (For adjustment of underdrive sun gear end play)	0.036(1.6)	-
	0.067(1.7)	-
	0.071(1.8)	-
	0.075(1.9)	-
	0.079(2.0)	-
	0.083(2.1)	-
	0.087(2.2)	-
	0.091(2.3)	-
	0.094(2.4)	-
	0.098(2.5)	-
0.102(2.6)	-	

# General Information

# AT-5

Snap ring (For adjustment of direct clutch end play)	0.075(1.9)	brown
	0.079(2.0)	colorless
	0.083(2.1)	blue
	0.087(2.2)	brown
	0.091(2.3)	colorless
	0.094(2.4)	blue
	0.098(2.5)	brown
	0.102(2.6)	colorless
	0.106(2.7)	blue
	0.110(2.8)	brown
	0.114(2.9)	colorless
	0.118(3.0)	blue
Spacer (For adjustment of output shaft preload)	0.074(1.88)	88
	0.076(1.92)	92
	0.077(1.96)	96
	0.079(2.00)	00
	0.080(2.04)	04
	0.082(2.08)	08
	0.083(2.12)	12
	0.085(2.16)	16
	0.087(2.20)	20
	0.088(2.24)	24
	0.089(2.28)	28
	0.091(2.32)	32
	0.093(2.36)	36
	0.094(2.40)	40
	0.096(2.44)	44
	0.097(2.48)	48
	0.099(2.52)	52
	0.101(2.56)	56
	0.102(2.60)	60
	0.104(2.64)	64
0.106(2.68)	68	
0.107(2.72)	72	
0.109(2.76)	76	

# AT-6

# Automatic Transaxle System

Spacer (For adjustment of differential gear backlash)	0.024(0.6)	-
	0.027(0.7)	-
	0.031(0.8)	-
	0.035(0.9)	-
	0.039(1.0)	-
	0.043(1.1)	-
	0.047(1.2)	-
	0.051(1.3)	-
	0.055(1.4)	-
Spacer (For adjustment of differential case preload)	0.033(0.83)	83
	0.034(0.86)	86
	0.035(0.89)	89
	0.036(0.92)	92
	0.037(0.95)	95
	0.038(0.98)	98
	0.040(1.01)	01
	0.041(1.04)	04
	0.042(1.07)	07
	0.043(1.10)	10
	0.044(1.13)	13
	0.046(1.16)	16
	0.047(1.19)	19
	0.048(1.22)	22
	0.049(1.25)	25
	0.050(1.28)	28
	0.052(1.31)	31
0.053(1.34)	34	
0.054(1.37)	37	

## TIGHTENING TORQUE

Item	Nm	kgf.cm	lb-ft
Wiring harness bracket	20-26	200-260	14-18
Control cable bracket	8-12	80-120	6-8
Eye bolt	30-45	300-450	21-32
Oil cooler feed tube	10-12	100-120	7-8
Input shaft speed sensor	10-12	100-120	7-8
Output shaft speed sensor	10-12	100-120	7-8

# General Information

# AT-7

Item	Nm	kgf.cm	lb-ft
Manual control lever	18-25	180-250	13-18
Transaxle range switch	10-12	100-120	7-8
Vehicle speed sensor	4-6	40-60	3-4
Valve body cover	10-12	100-120	7-8
Valve body mounting bolt	10-12	100-120	7-8
Oil temperature sensor	10-12	100-120	7-8
Manual control shaft detent	5-7	50-70	4-5
Rear cover	20-26	200-260	14-18
Torque converter housing	42-54	420-540	29-38
Oil pump mounting bolt	20-26	200-260	14-18
Transfer drive gear	31-36	320-370	23-27
Output shaft lock nut	160-180	1600-1800	110-126
Output shaft bearing retainer	20-26	200-260	14-18
Oil filler tube	29-34	290-340	20-24
Oil drain plug	40-50	400-500	29-36
Transfer drive gear lock nut	180-210	1800-2100	126-147
Differential drive gear	130-140	1300-1400	91-98
Valve body	10-12	100-120	7-8
Solenoid valve support	5-7	50-70	4-5
Plate	5-7	50-70	4-5
Pressure check plug	8-10	80-100	6-7
Transaxle mounting subframe nut	100-120	1000-1200	72-87
Transaxle mounting subframe bolt	100-120	1000-1200	72-87
Transaxle mounting bolts	60-80	600-800	43-58
Transaxle mounting nut	60-80	600-800	43-58
Reduction brake band anchor plug	85-115	850-1150	61-83
Reduction brake piston rod nut	15-22	150-220	11-16
Tie rod end ball joint	24-34	240-340	17-24
Lower arm ball joint mounting bolt	100-120	1000-1200	72-87
Drive shaft nut	200-280	2000-2800	145-203
Muffler mounting nut	40-60	400-600	29-43
Shift lever mounting bolt	9-14	90-140	7-10
Shift lock cable fixing nut	8-12	80-120	6-8

**⚠WARNING**  
**ALWAYS FOLLOW TORQUE TIGHTENING LEVELS.**  
**FAILURE TO FOLLOW SUCH LEVELS CAN RESULT**

**IN PARTS BREAKING IF OVER-TIGHTENED OR**  
**LOOSENING IF UNDER-TIGHTENED. IN EITHER**  
**CASE, SERIOUS PERSONAL INJURY OR DEATH**

# AT-8

# Automatic Transaxle System

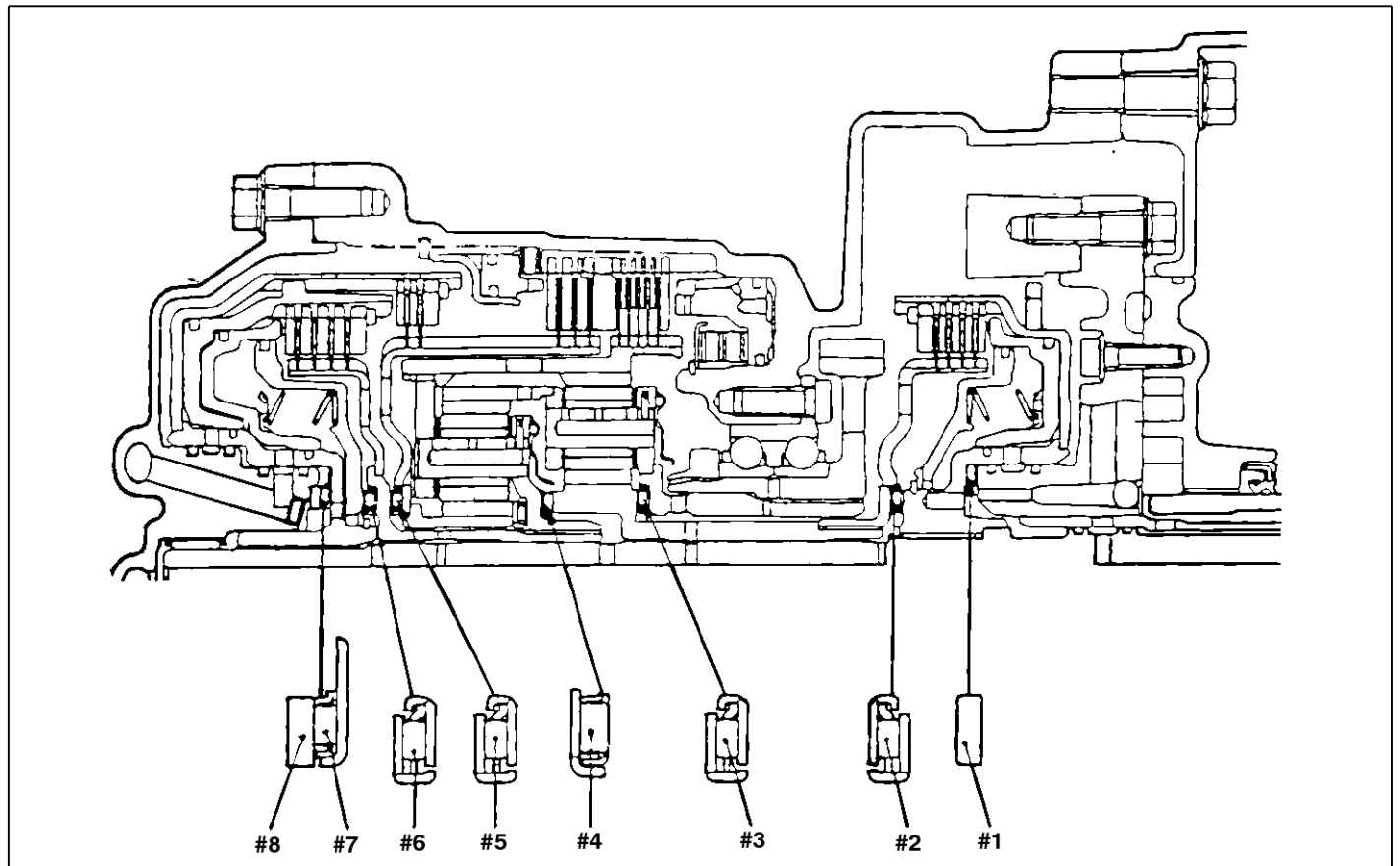
COULD RESULT TO THE VEHICLE OCCUPANTS.

## Lubricant

Items	Specified lubricant	Quantity
Transaxle fluid lit. (U.S. qts., Imp,qts.)	GENUINE DIAMOND ATF SP-III	8.5 (8.9, 7.5)

## Sealants

Items	Specified sealant
Rear cover Torque converter housing Valve body cover	LOCTITE FMD 546



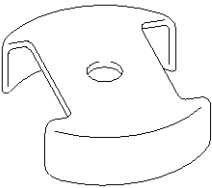
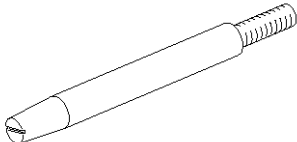
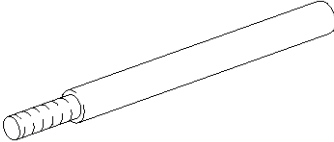
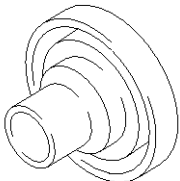
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## IDENTIFICATION OF THRUST BEARING, THRUST RACES, AND THRUST WASHERS

O.D.	I.D.	Thickness	Symbol	O.D.	I.D.	Thickness	Symbol
59	47	1.8	#1	48.9	37	1.6	#8
59	47	2.0	#1	48.9	37	1.7	#8
59	47	2.2	#1	48.9	37	1.8	#8
59	47	2.4	#1	48.9	37	1.9	#8
59	47	2.6	#1	48.9	37	2.0	#8
59	47	2.8	#1	48.9	37	2.1	#8
49	36	3.6	#2	48.9	37	2.2	#8

O.D.	I.D.	Thickness	Symbol	O.D.	I.D.	Thickness	Symbol
49	36	3.6	#3	48.9	37	2.3	#8
45.3	31	3.3	#4	48.9	37	2.4	#8
49	36	3.6	#5	48.9	37	2.5	#8
49	36	3.6	#6	48.9	37	2.6	#8
59	37	2.8	#7	-	-	-	-

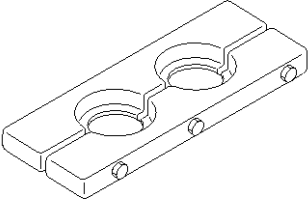
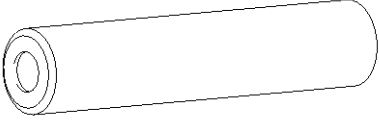
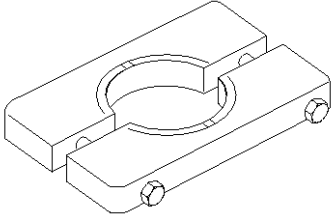
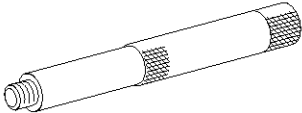
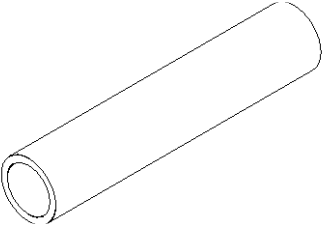
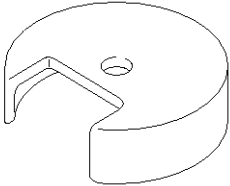
## SPECIAL SERVICE TOOLS

Tool (Number and Name)	Illustration	Use
09453-24000 Snap ring compressor		Removal and installation of the underdrive clutch snap ring.
09452-21401 Guide pin		Installation of the oil pump and transfer drive gear. (use with 09452-21301)
09453-33100 Dial gauge extension		Measurement of the low and reverse and second brake end play.
09431-39000 Oil seal installer		Installation of the drive shaft oil seal.



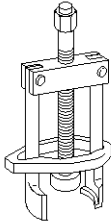
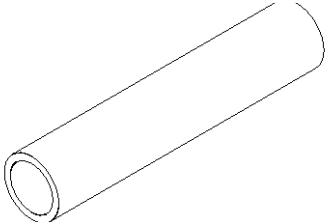
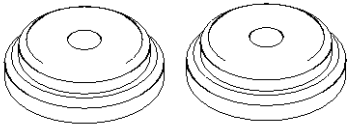
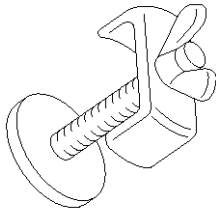
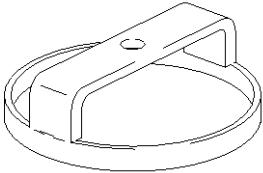
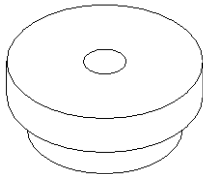
# AT-10

# Automatic Transaxle System

Tool (Number and Name)	Illustration	Use
09432-33200 Remover plate		Removal of the transfer shaft bearing.
09432-33800 Bearing installer		<ol style="list-style-type: none"><li>1. Removal of the transfer drive gear taper bearing. (use with 09433-21000)</li><li>2. Installation of the transfer shaft bearing.</li></ol>
09433-21000 Remover plate		<ol style="list-style-type: none"><li>1. Removal of the transfer drive gear taper bearing. (use with 09432-33800)</li><li>2. Removal of the differential ball bearing.</li></ol>
09500-11000 Bar		Installation of the differential outlace bearing. (use with 09532-11500)
09455-33200 Bearing installer		Installation of the differential ball bearing and output shaft taper roller bearing.
09453-21100 Snap ring compressor		Removal and installation of the low and reverse brake snap ring. (use with 09453-2100)

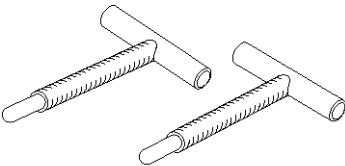
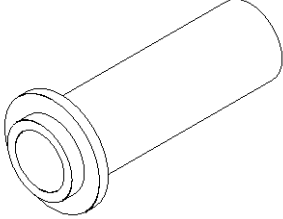
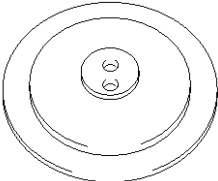
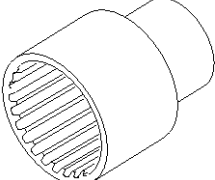
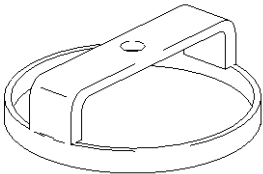
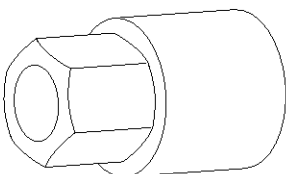
# General Information

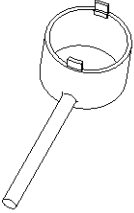
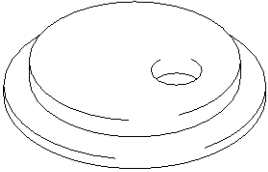
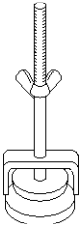
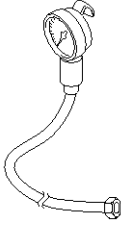
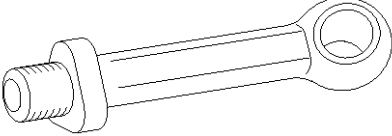
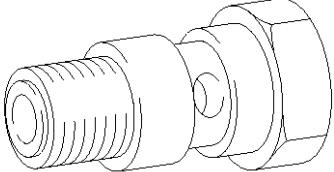
# AT-11

Tool (Number and Name)	Illustration	Use
09455-21000 Bearing and gear puller		Removal of the transfer drive gear and bearing.
09455-21100 Bearing installer		<ol style="list-style-type: none"> <li>1. Installation of the transfer drive gear and bearing.</li> <li>2. Installation of the transfer drive gear taper bearing.</li> </ol>
09532-11500 Bearing installer		Installation of the differential outlace bearing. (use with 09500-11000)
09453-21000 Snap ring compressor		<ol style="list-style-type: none"> <li>1. Removal and installation of the low &amp; reverse brake snap ring.</li> <li>2. Removal and installation of the overdrive clutch snap ring. (use with 09456-39000)</li> </ol>
09456-39000 Spring compressor		Removal and installation of the low and reverse brake and overdrive clutch snap ring.
09432-21701 Bearing outlace installer		Installation of the output shaft outlace.

# AT-12

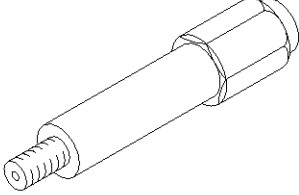
# Automatic Transaxle System

Tool (Number and Name)	Illustration	Use
09452-33100 Oil pump remover		Removal of the oil pump.
09452-21200 Oil pump oil seal installer		Installation of the oil pump oil seal.
09456-39100A/B Clearance dummy plate		Measurement of the low and reverse and second brake end play.
09457-39000 Socket wrench (41)		Removal and installation of the output lock nut.
09454-39000 Reduction socket		Adjustment for reduction brake piston.
09454-39100 Reduction socket wrench		Adjustment for reduction brake piston.

Tool (Number and Name)	Illustration	Use
09454-39200 Reduction socket wrench		Adjustment for reduction brake piston.
09456-39200 Clearance dummy plate		Measurement of low-reverse brake and second brake end plays (for F5A51, F5AH1).
09455-39000 Spring compressor		Removal and installation of direct clutch snap ring.
09452-21500 Oil pressure gauge		Measurement of the oil pressure. (use with 09452-21001, 09452-21002)
09452-21001 Oil pressure gauge adapter		Measurement of the oil pressure. (use with 09452-21500, 09452-21002)
09452-21002 Oil pressure gauge adapter		Measurement of the oil pressure. (use with 09452-21500 and 09452-21001)

# AT-14

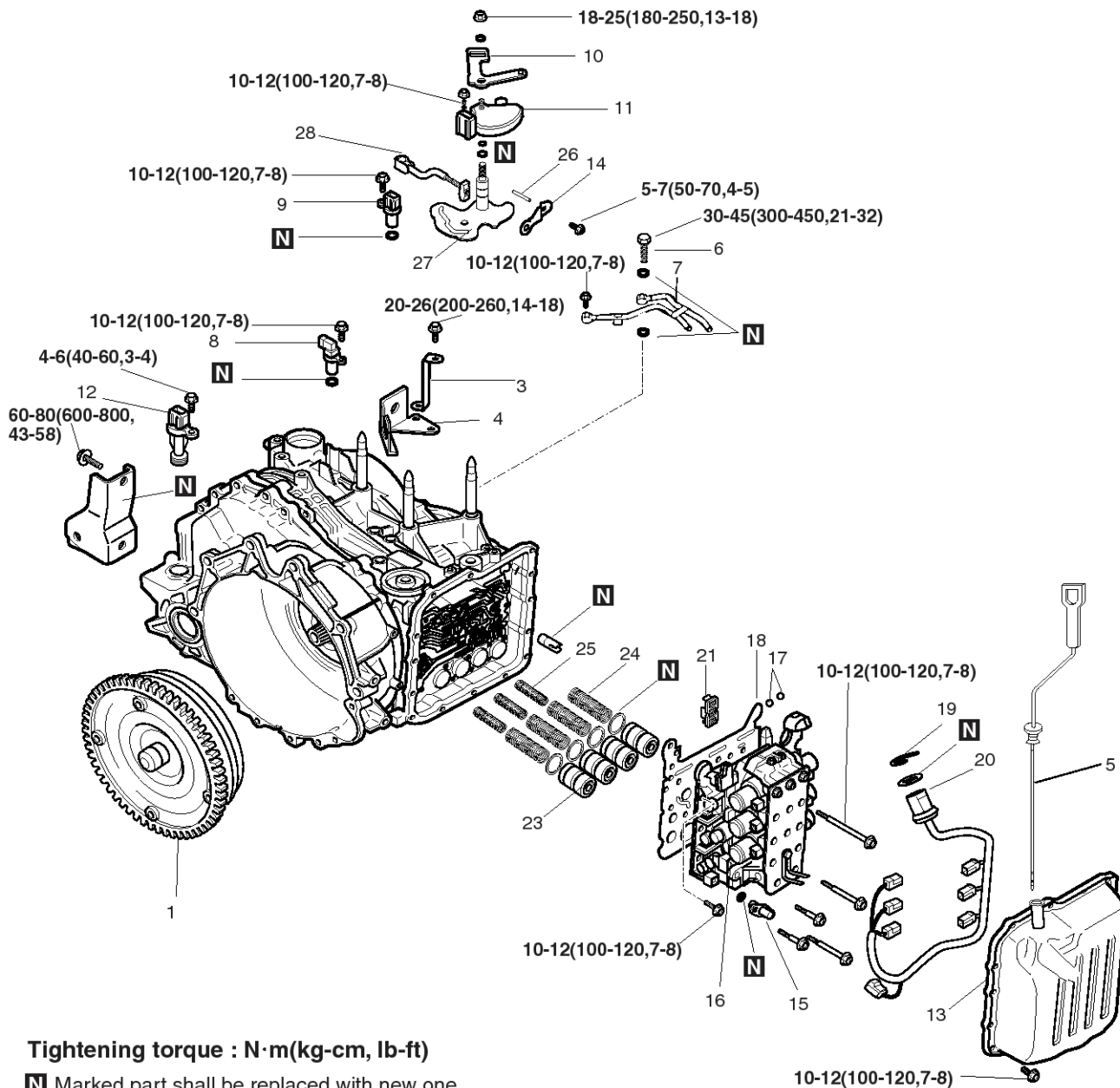
# Automatic Transaxle System

Tool (Number and Name)	Illustration	Use
09452-39000 Oil pressure gauge adapter		Measurement of the oil pressure. (use with 09452-21500 and 09452-21001) (For the direct and reduction clutch)

## Automatic Transaxle System

### Automatic Transaxle

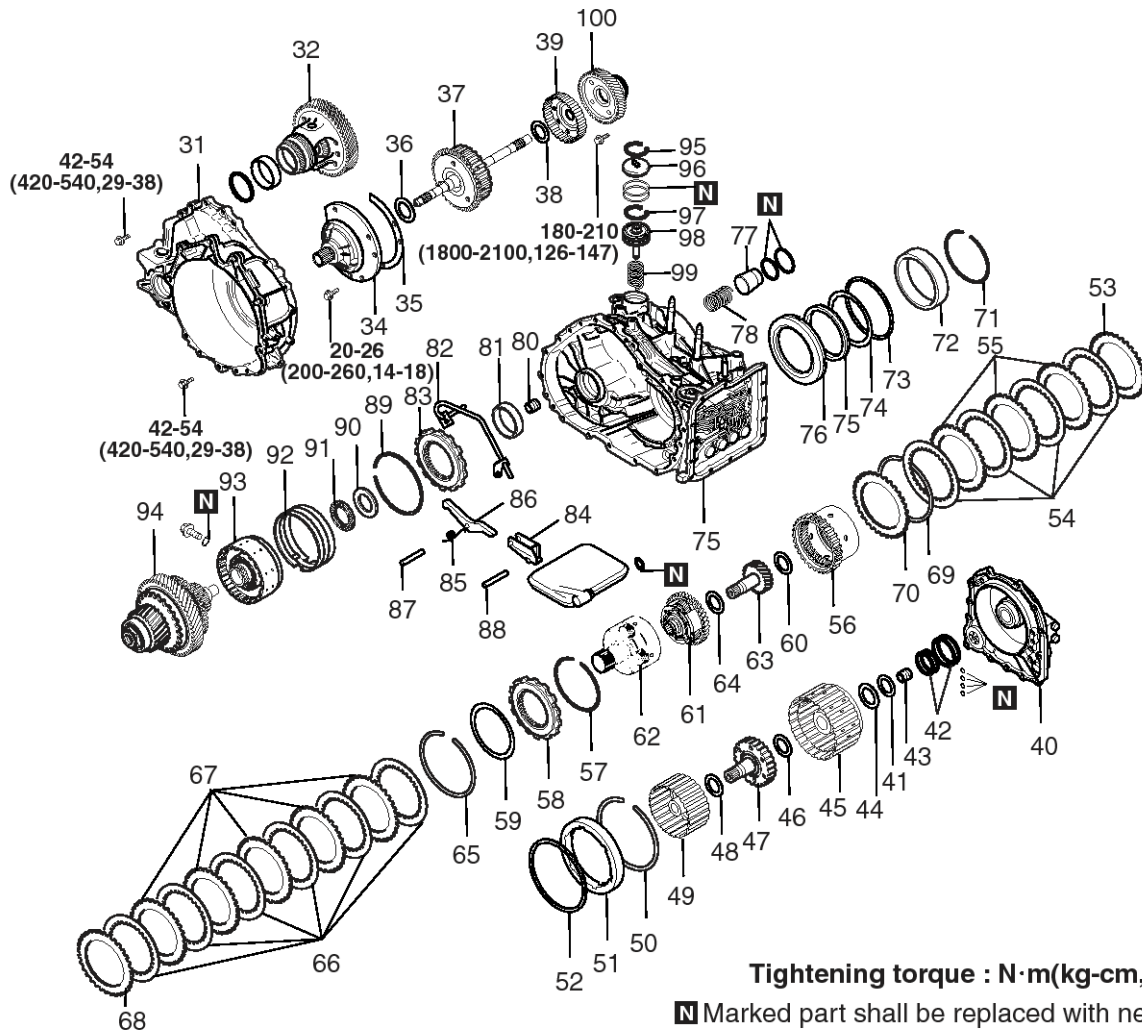
#### COMPONENTS



#### Tightening torque : N·m(kg-cm, lb-ft)

**N** Marked part shall be replaced with new one.

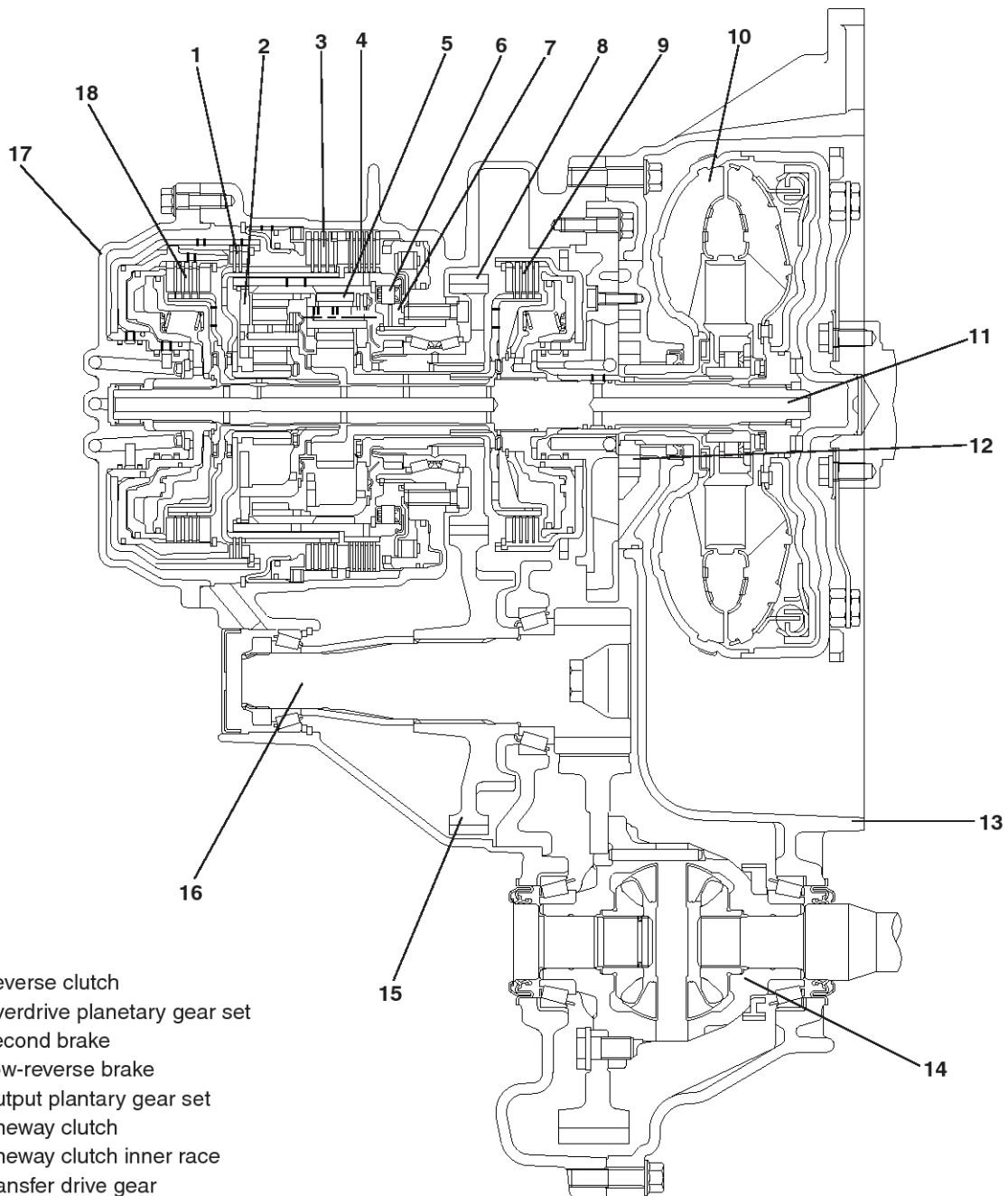
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|------------------------------|------------------------------|---------------------------------------|
| 1. Torque converter          | 11. Transaxle range switch   | 20. Solenoid valve harness            |
| 2. Roll stopper bracket      | 12. Vehicle speed sensor     | 21. Strainer                          |
| 3. Harness bracket           | 13. Valve body cover         | 22. Second brake retainer oil seal    |
| 4. Shift cable bracket       | 14. Detent spring            | 23. Accumulator piston                |
| 5. Oil level gauge           | 15. Fluid temperature sensor | 24. Accumulator spring                |
| 6. Eyebolt                   | 16. Valve body               | 25. Accumulator spring                |
| 7. Fluid cooler feed tube    | 17. Steel ball               | 26. Manual control lever shaft roller |
| 8. Output shaft speed sensor | 18. Gasket                   | 27. Manual control lever shaft        |
| 9. Input shaft speed sensor  | 19. Snap ring                | 28. Parking roller rod                |
| 10. Manual control lever     |                              |                                       |



**Tightening torque : N·m(kg-cm, lb-ft)**

**N** Marked part shall be replaced with new part.

- |  |                                 |                                  |
|--|---------------------------------|----------------------------------|
| 31. Converter housing                  | 55. Second brake plate          | 78. Spring                       |
| 32. Differential                       | 56. Low & reverse annulus gear  | 79. Transaxle case               |
| 33. Fluid filter                       | 57. Snap ring                   | 80. Needle bearing               |
| 34. Oil pump                           | 58. One way clutch 1            | 81. Outer race                   |
| 35. Gasket                             | 59. Stopper plate               | 82. Pipe                         |
| 36. Thrust washer #1                   | 60. Thrust bearing #4           | 83. One way clutch 2             |
| 37. Underdrive clutch and input shaft  | 61. Overdrive planetary carrier | 84. Parking roller support       |
| 38. Thrust bearing #2                  | 62. Output planetary carrier    | 85. Hole spring                  |
| 39. Underdrive clutch hub              | 63. Underdrive sun gear         | 86. Parking ball spring          |
| 40. Rear cover                         | 64. Thrust bearing #3           | 87. Parking pole shaft           |
| 41. Thrust race #8                     | 65. Snap ring                   | 88. Parking roller support shaft |
| 42. Sealing                            | 66. LR brake disc               | 89. Snap ring                    |
| 43. Input shaft rear bearing           | 67. LR brake plate              | 90. Thrust race                  |
| 44. Thrust bearing #7                  | 68. Pressure plate              | 91. Thrust bearing               |
| 45. Reverse and overdrive clutch       | 69. Snap ring                   | 92. Reduction brake band         |
| 46. Thrust bearing #6                  | 70. Reaction plate              | 93. Direct clutch                |
| 47. Overdrive clutch hub               | 71. Snap ring                   | 94. Direct planetary carrier     |
| 48. Thrust bearing #5                  | 72. Inner race                  | 95. Snap ring                    |
| 49. Planetary carrier reverse sun gear | 73. Wave spring                 | 96. Reduction brake piston cover |
| 50. Snap ring                          | 74. Spring retainer             | 97. Snap ring                    |
| 51. Second brake piston                | 75. Return spring               | 98. Reduction brake piston       |
| 52. Return spring                      | 76. LR brake piston             | 99. Reduction brake spring       |
| 53. Pressure plate                     | 77. Accumulator piston          | 100. Transfer drive gear set     |



1. Reverse clutch
2. Overdrive planetary gear set
3. Second brake
4. Low-reverse brake
5. Output planetary gear set
6. Oneway clutch
7. Oneway clutch inner race
8. Transfer drive gear
9. Underdrive clutch
10. Torque converter
11. Input shaft
12. Oil pump
13. Converter housing
14. Differential
15. Transfer driven gear
16. Output shaft
17. Rear cover
18. Overdrive clutch

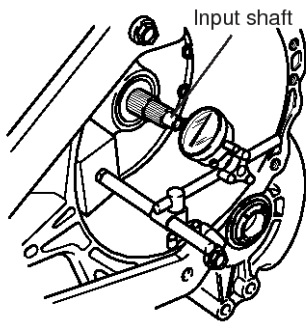


## Disassembly

### ⚠ CAUTION

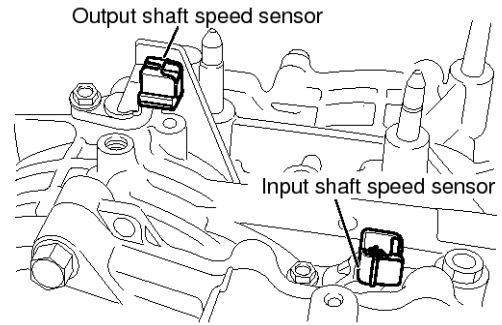
- Automatic transaxle consists of precision parts. Be careful not to damage them in disassembly and assembly.
- Keep clean workbench, and rubber and mat there on.
- Do not use cotton or muslin fiber. Use nylon fabric or paper towel.
- Clean the disassembled components. Clean the metal parts with cleaning agent or dry them with a blower.
- Clean the clutch disc, thrust plate made of resin, and rubber parts with ATF and keep them dust free.
- If transaxle body is damaged, disassemble and clean the cooler line.

1. Remove the torque converter.
2. Measure the input shaft(A) end play using a dial gauge.



LKCD029B

3. Remove each bracket.
4. Remove the wiring harness bracket.
5. Remove the shift control cable bracket.
6. Remove the fluid level gauge.
7. Remove the eyebolt, gasket and the fluid cooler feed tube.
8. Remove input speed sensor(A) and the output speed sensor(B).

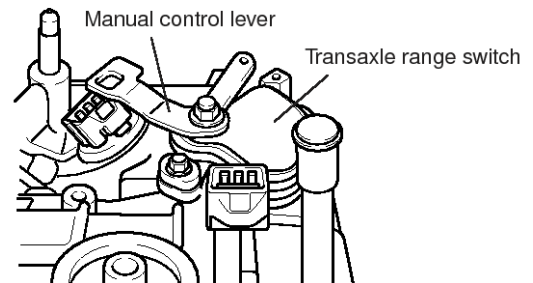


LK6D345B

9. Remove the manual control lever(A) and transaxle range switch(B).

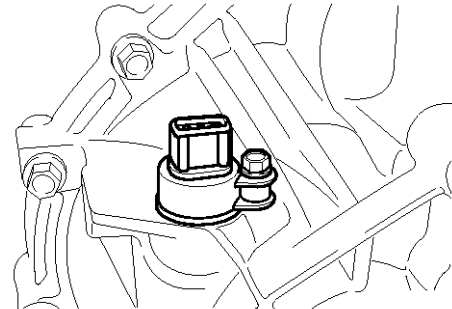
### ⚠ CAUTION

Remove transaxle range switch with valve body installed without fail.



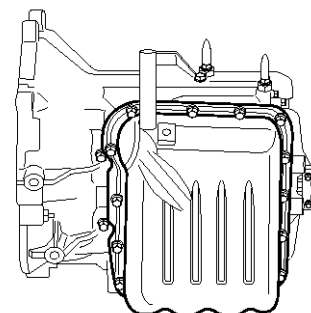
LK6D345C

10. Remove the speedometer gear.



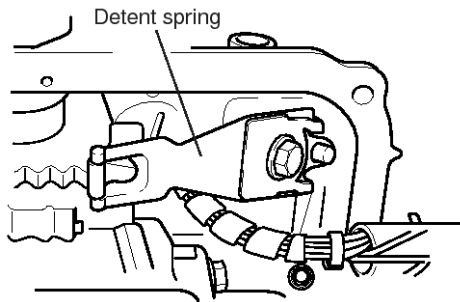
LK6D345D

11. Remove the valve body cover.



12. Remove the detent spring(A).

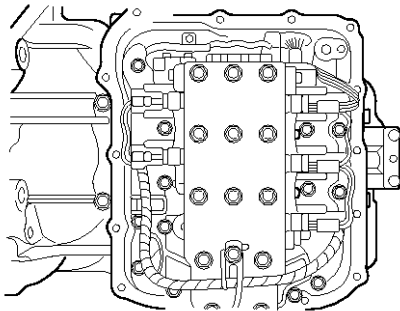
LK6D345E



13. Disconnect the harness connector from the valve body.

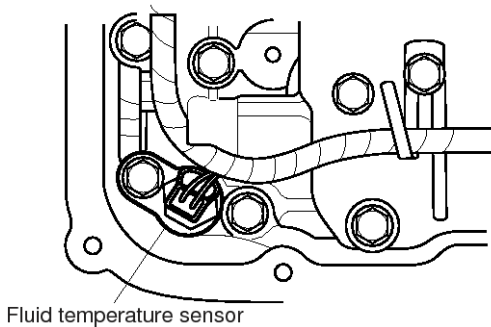
LKCD029H

14. Remove the valve body mounting bolts (28), except those bolts marked on illustration with arrow.



15. Remove the fluid temperature sensor(A).

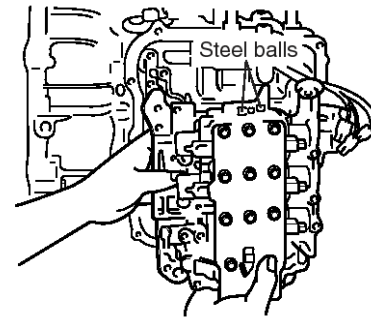
LK6D345G



16. Remove the valve body, the gasket and the steel balls (A-2EA).

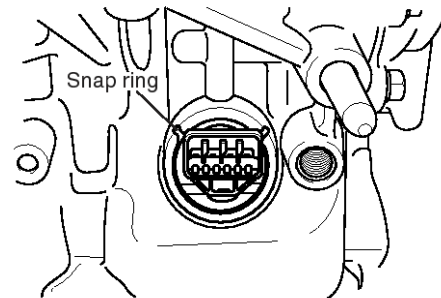
LK6D347H

**CAUTION**  
Be careful not to lose the steel balls (two).



LK6D345I

17. Remove the solenoid valve harness snap ring(A).



LK6D345J

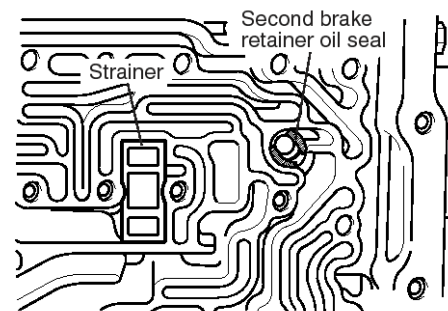
18. Remove the solenoid valve harness.

19. Remove the strainer(A).

20. Remove the second brake retainer oil seal(B).

**CAUTION**

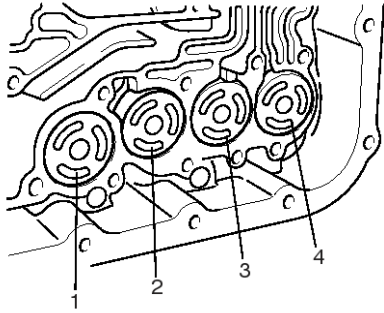
If the second brake retainer oil seal is not removed, it may be damaged when removing and installing the second brake piston.



LK6D345K

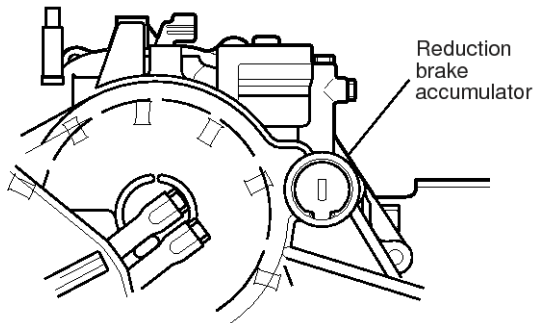
21. Remove each accumulator piston and spring.

No.	Use
1	LR brake
2	UD clutch
3	Second brake
4	OD clutch



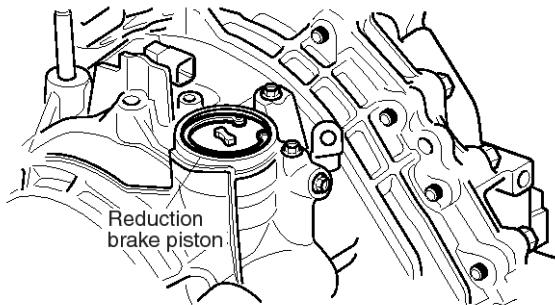
LK6D345L

22. Remove the snap ring and then the reduction brake accumulator(A) and the spring.



LK6D345H

23. Remove the snap ring and the reduction brake piston(A).

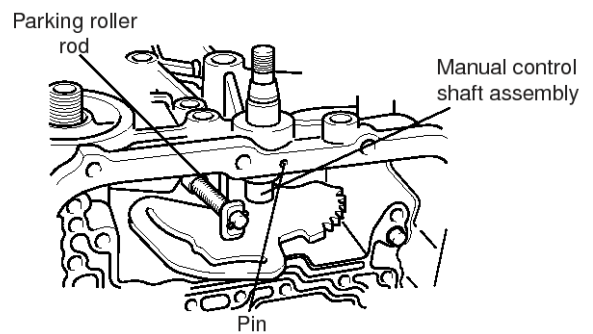


LK6D345N

24. Remove the inner snap ring, and then the brake piston and the spring.

25. Remove the manual control shaft roller rod(A).

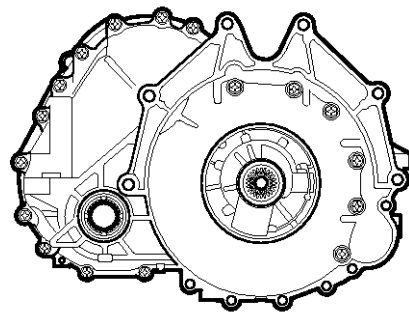
26. Remove the manual control shaft assembly(B).



LKCD030F

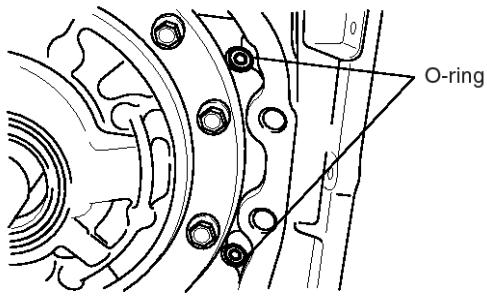
27. Remove the parking roller rod assembly.

28. Remove the converter housing mounting bolts (twenty) and the converter housing.



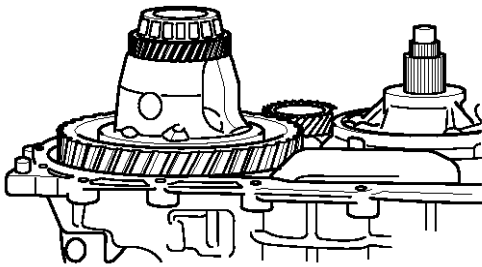
LK6D345P

29. Remove the O-ring (A-2EA).



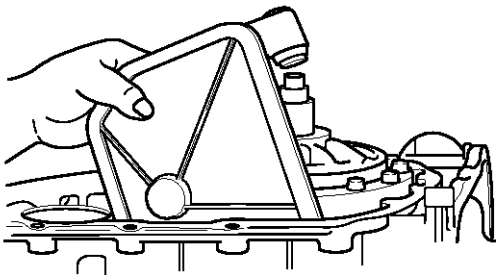
LK6D345Q

30. Remove the differential.



LK6D345R

31. Remove the main oil filter.

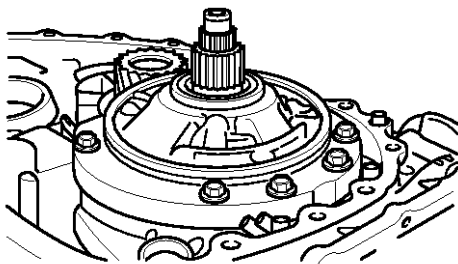


LK6D345S

32. Release the fluid pump mounting bolts(six).

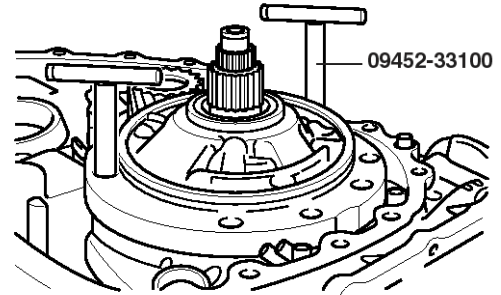
**⚠ CAUTION**

**Do not disassemble the fluid pump. Misalignment during assembly may damage the pump and the transaxle.**



LK6D345T

33. Install the SST(09452-33100).

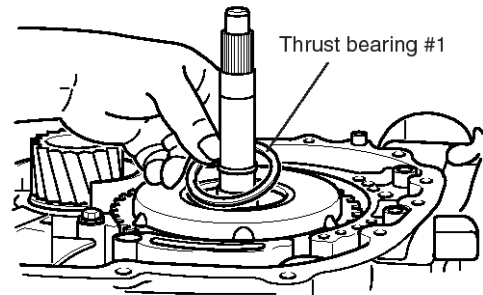


LK6D345U

34. Remove the fluid pump using the special tool.

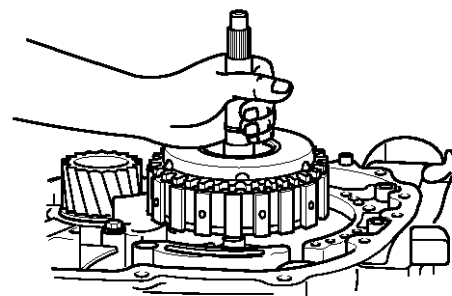
35. Remove the fluid pump gasket.

36. Remove the thrust washer #1(A).



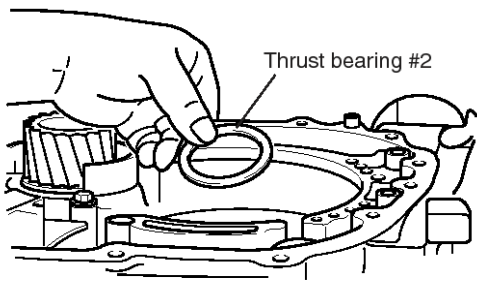
LK6D345V

37. Hold the input shaft with one hand and remove the drive clutch.



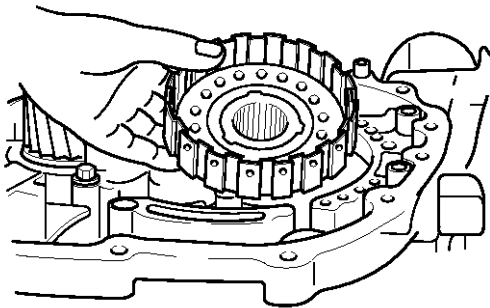
LK6D345W

38. Remove the thrust bearing #2(B).



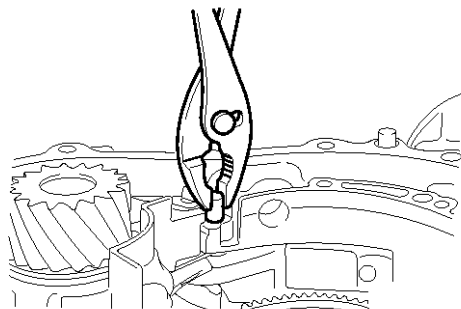
LK6D345Y

39. Remove the underdrive clutch hub.



LK6D345Z

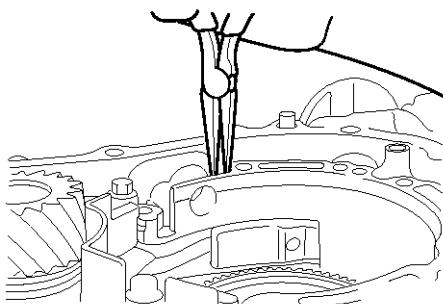
40. Remove the parking sprag shaft.



LK6D346A

41. Remove the parking sprag spring

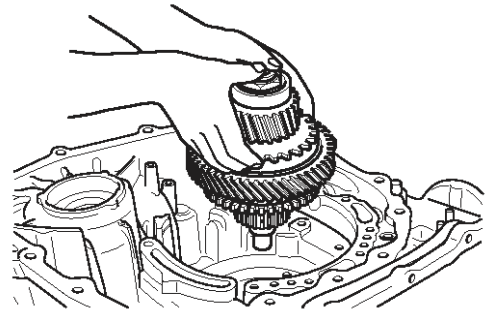
42. Remove the parking roller support shafts(two).



LK6D346B

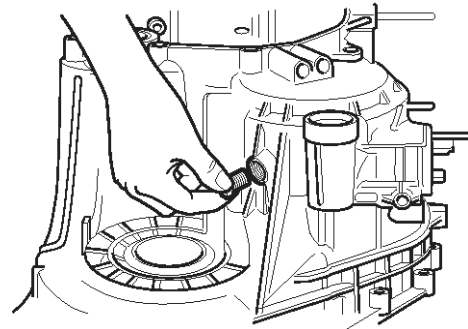
43. Remove the parking roller support.

44. Remove the direct planetary carrier assembly.



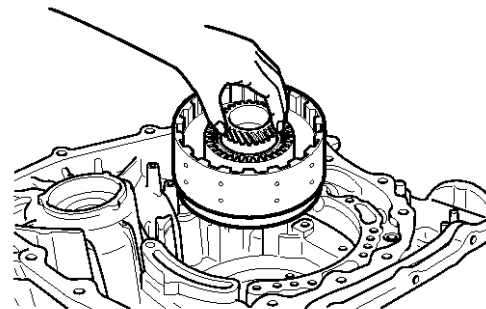
LK6D346C

45. Remove the anchor plug and O-ring.



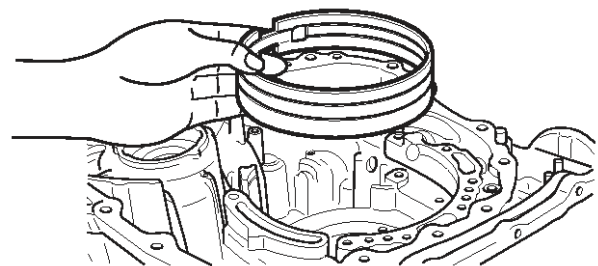
LK6D346D

46. Remove the direct clutch assembly.



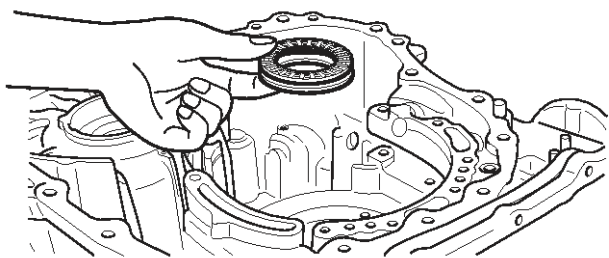
LK6D346E

47. Remove the reduction brake band.



LK6D346F

48. Remove the thrust bearing #11.

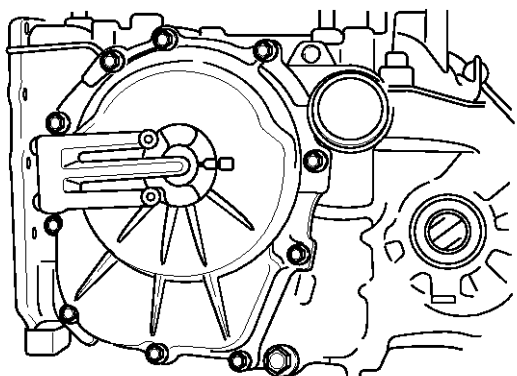


LK6D346G

49. Remove the thrust bearing #12.

50. For F4A42 model.

a. Remove the rear cover and mounting bolts.



BK1A052X

b. Remove the thrust race #8.

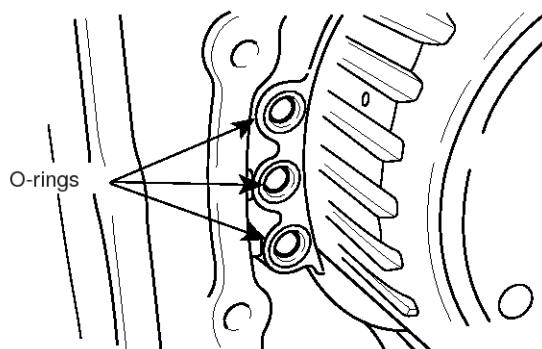
c. Remove the 4 seal rings.

**NOTICE**

*Do not remove the input shaft rear bearing unless directed to do so by the instructor.*

*Once this bearing has been removed, it MUST be replaced.*

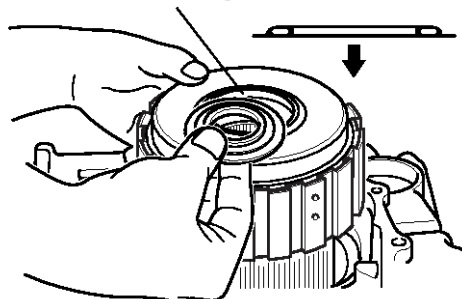
d. Remove the 3 O-rings(A).



BK1A052Y

51. Remove the thrust bearing #7(A).

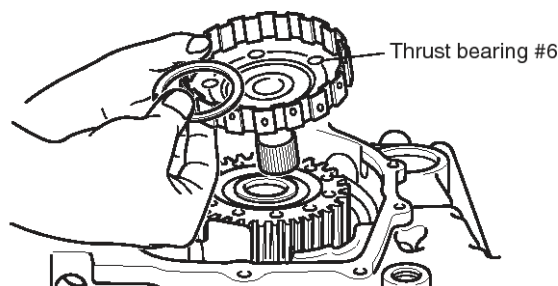
Thrust bearing #7



LK6D346K

52. Remove the reverse and overdrive clutch.

53. Remove the thrust bearing #6(A).

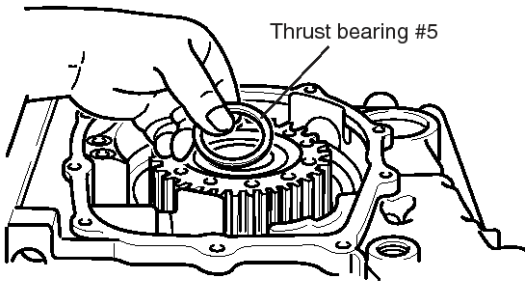


LK6D346L

54. Remove the overdrive clutch hub.

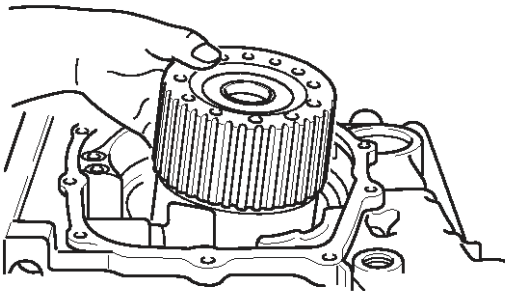
55. Remove the thrust bearing #5(A).





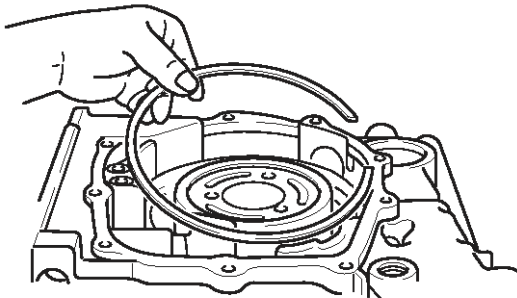
LK6D346M

56. Remove the planetary gear reverse sun gear.



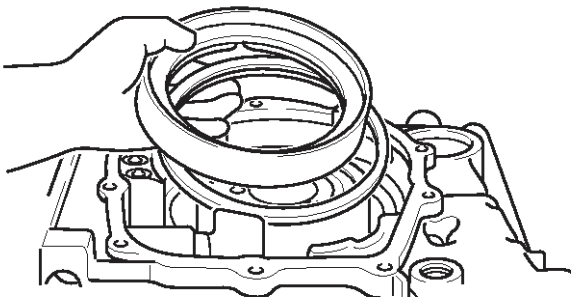
LK6D346N

57. Remove the second brake piston snap ring.



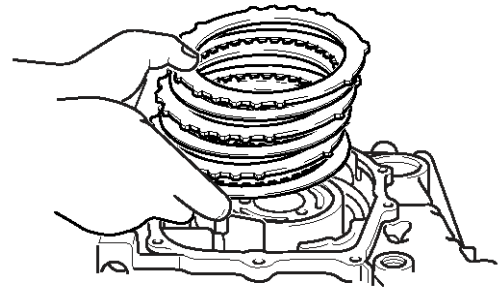
LK6D346P

58. Remove the second brake piston and return spring.



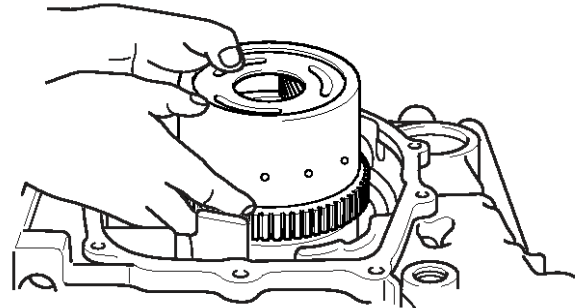
LK6D346Q

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



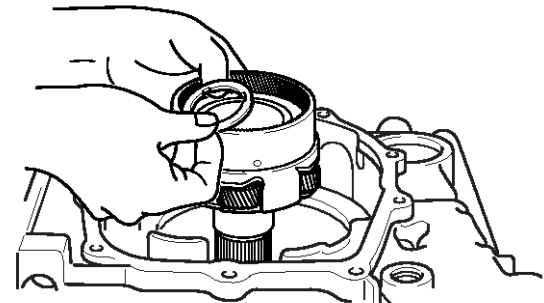
LK6D346R

60. Remove the overdrive planetary carrier.



LK6D346S

61. Remove the output planetary carrier thrust bearing #4 after removing snap ring, stopper plate and one way clutch1.

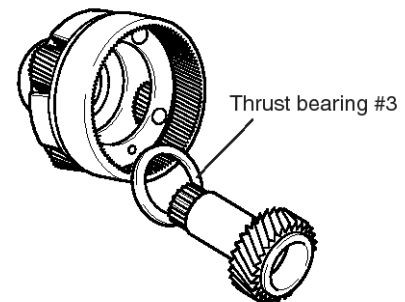


LK6D346T

62. Remove the output planetary carrier.

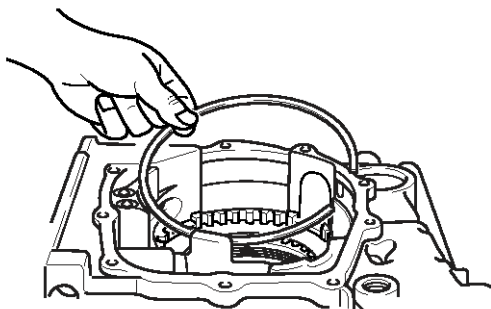
63. Remove the underdrive sun gear.

64. Remove the thrust bearing #3(A).



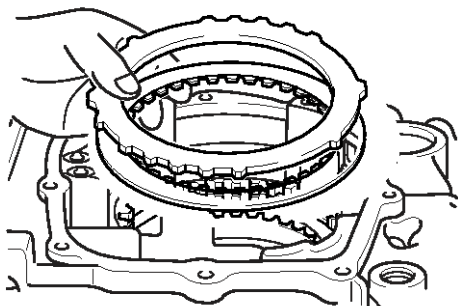
LK6D346U

65. Remove the Low & Rev. brake reaction plate snap ring.



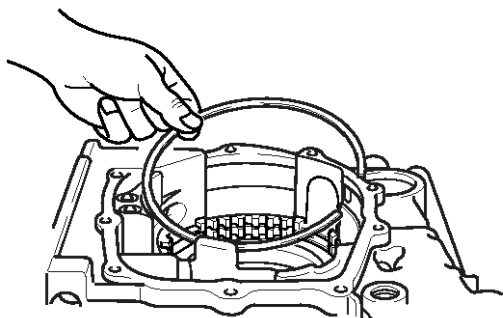
LK6D346V

66. Remove the reaction plate and brake disc.



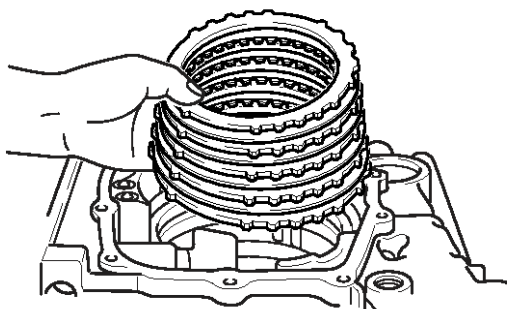
LK6D346W

67. Remove the LR brake snap ring.



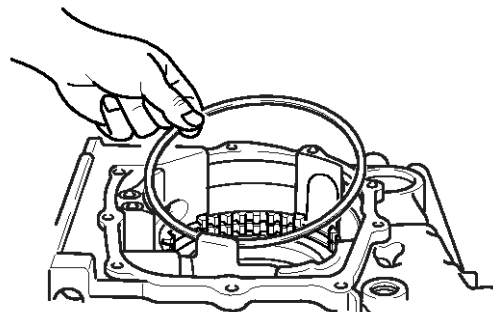
LK6D346X

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



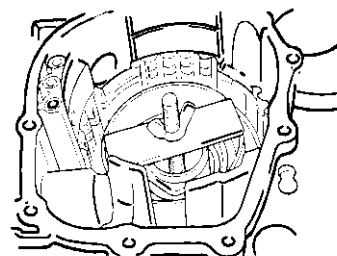
LK6D346Y

69. Remove the wave spring.



LK6D346Z

70. Remove the snap ring using special tool.



LK6D347A

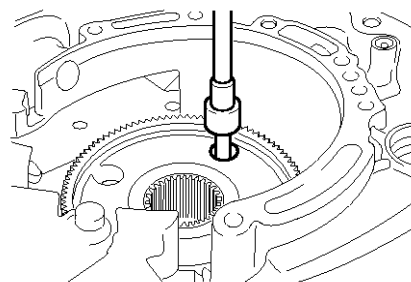
71. Remove the one way clutch inner race.

72. Remove the spring retainer, return spring and LR brake piston.

73. Release the transfer drive gear mounting bolts (eight).

### NOTICE

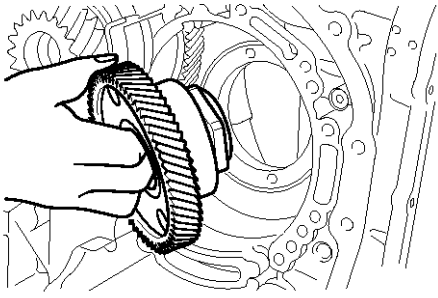
*Remove the revolving drive gear by turning it.*



LK6D347B

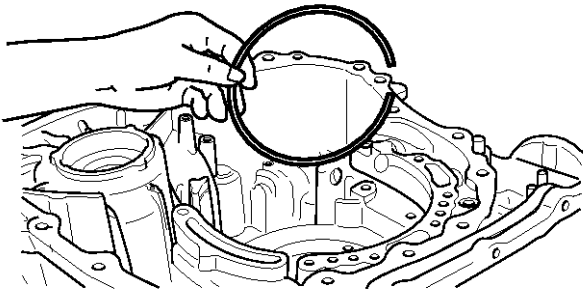
74. Remove the transfer drive gear.





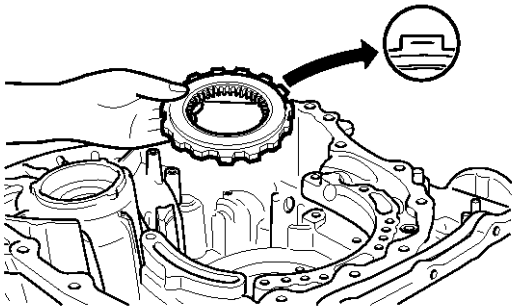
LK6D347C

75. Remove the one way clutch holding snap ring.



LK6D347D

76. Remove the one way clutch assembly.



LK6D347E

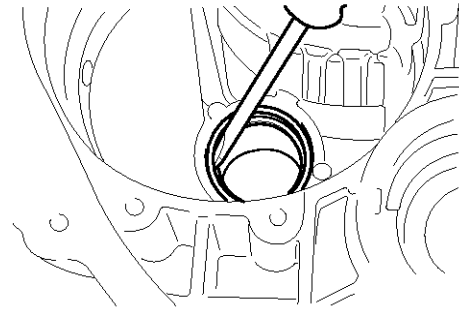
77. Remove the seal rings (two).

78. Remove the needle bearing.

**⚠ CAUTION**

Transaxle case may be damaged in replacing the output shaft rear bearing, therefore do not replace it if not faulty after checking.

79. Remove the differential bearing output race and spacer out of converter housing.



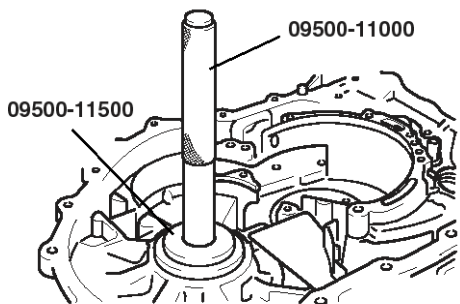
LK6D347F

80. Remove the differential bearing output race out of the transaxle case.

### Reassembly

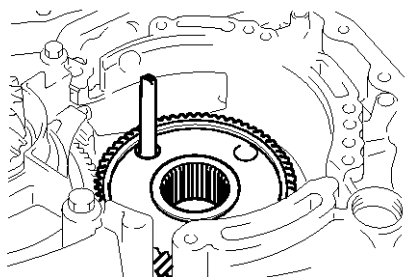
**⚠ CAUTION**

- Keep the workbench and parts always clean and dirt free.
  - Do not use cotton gloves.  
Use paper towel and nylon rag. Do not use nappy fabric.  
Kimberly's Kimtowel J130, Kim WIPE L-100 or equivalent.
  - Do not use grease at any place otherwise specified.  
Use white vaseline or blue mineral oil if necessary.
  - Insert each snap ring firmly into the seat. Do not use deformed rings.
  - Do not allow dirt remain on the surface to apply liquid gasket during reassembly.
  - Gasket, O-ring, and oil shall not be used again, and use new ones in assembly.
  - A new clutch disc and a new brake disc shall be dipped in ATF for 2 hours or more before use.
  - Replace the ATF and clean the filter thoroughly in reassembly. Replace the damaged filter element with a new one.
  - Apply required minimum quantity of white vaseline, blue mineral oil, or ATF on each of the bearing part, the thrust facemoving part, the fluid pump moving part, the seal ring, and the O-ring.
  - Do not replace the ATF in the fluid cooler.
  - Be careful not to allow dirt come through the transaxle openings before mounting onto the vehicle. (including electronic part connector)
1. Install the differential bearing output race on the transaxle case using the special tool.



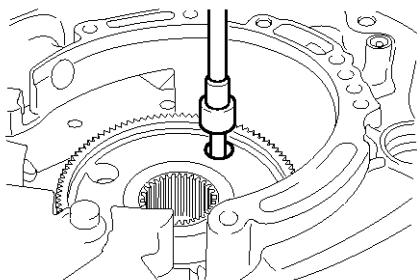
LK6D350A

2. Apply ATF on the transaxle case and install 2 guide pins.
3. Install the transfer drive gear.



LK6D350B

4. Connect the transfer drive gear mounting bolts (eight) using tightening torque.



LK6D347B

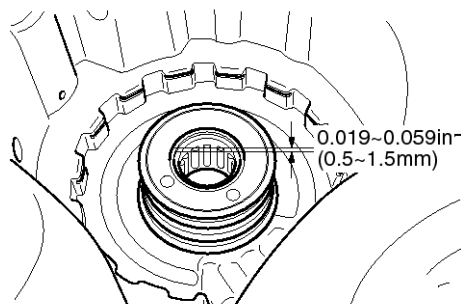
Tightening torque :

31-36 Nm (320-370 kgf-cm, 23-27 lb-ft)

### **NOTICE**

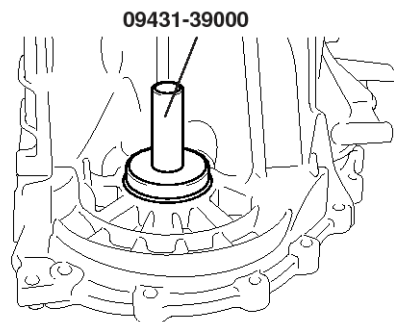
Turn the transfer drive gear one revolution and ensure no interference with bolts.

5. Install the output shaft rear bearing.



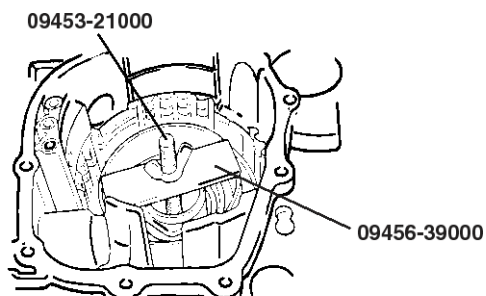
LK6D350C

6. Install the 4 seal rings.
7. Install the driveshaft oil seal on the transaxle case.



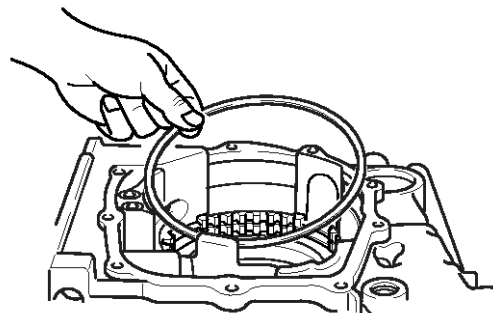
LK6D350D

8. Install the LR brake piston and the return spring.
9. Install the spring retainer.
10. Install the one way clutch inner race.
11. Install the snap ring using the special tool.



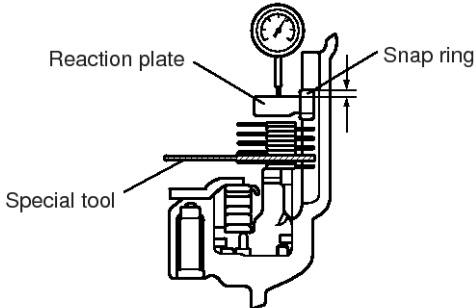
LK6D347G

12. Install the wave spring.



LK6D346Z

13. Install the LR brake pressure plate on the SST(09456-39100), and install the brake disc, the brake plate and the snap ring(A) as illustrated on the figure.



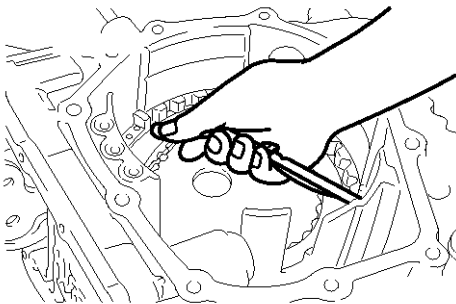
LKCD029D

14. Install the reaction plate and the used snap ring.  
15. Move special tool and check the end play, and install appropriate snap rings (8 sizes).

Standard value : 0-0.0063in(0-0.16mm)

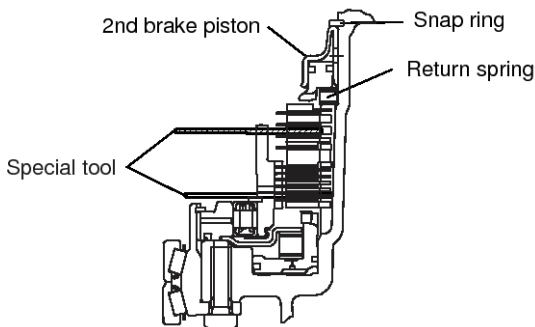
**NOTICE**

Upon releasing the clutch, determine the actual gap between the LR brake disc and the plate.



LK6D350E

16. Install the brake disc, the brake plate, and second brake pressure plate using the SST(09456-39100) as illustrated on figure.



LKCD029E

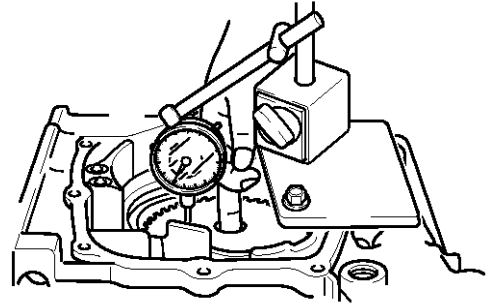
17. Install the return spring, the second brake piston and

the snap ring.

18. Move the special tool and check the end play.

Standard value

0.0311 - 0.0492in (0.79 - 1.25 mm)



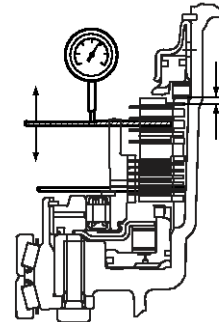
LK6D350F

**NOTICE**

Using the below formula and the SST(09456-39100) installed at procedure 10, choose a pressure plate :

[A (travel)+special tool thickness  
0.079in(2.0mm)-0.061in(1.55mm)]

~ [A (travel)+special tool thickness  
0.079in(2.0mm)-0.043in(1.09mm)]



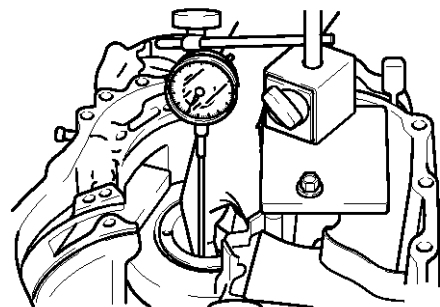
LKCD029F

19. Turn the transaxle upside down.

20. Connect the special tool (09453-33100) with dial gauge, and move the special tool to check the end play.

Standard value :

0.0531 - 0.0713in (1.35 - 1.81 mm)



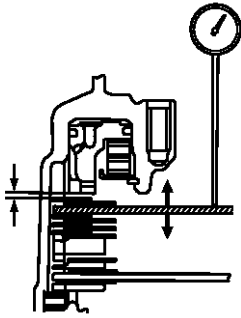
LK6D350H

## NOTICE

Using the below formula and the SST(09456-39100) installed at procedure 7, choose a pressure plate :

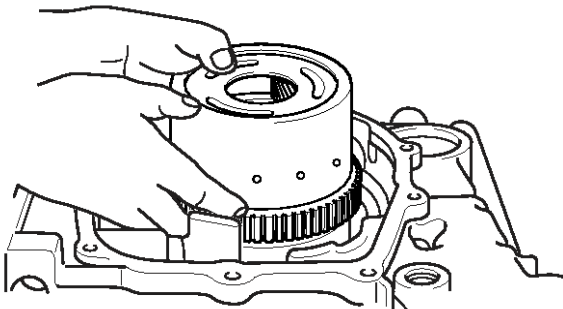
[A (travel)+special tool thickness  
0.079in(2.0mm)-0.083in(2.11mm)]

~ [A (travel)+special tool thickness  
0.079in(2.0mm)-0.065in(1.65mm)]



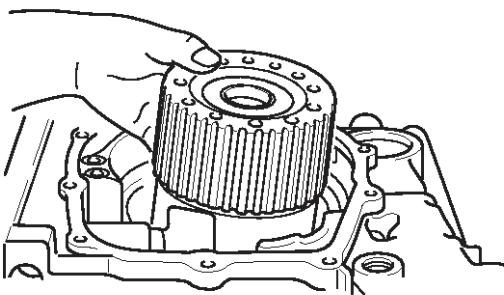
LK6D350I

21. Remove parts installed in procedures 14-22.
22. Install the overdrive planetary carrier and output planetary carrier.



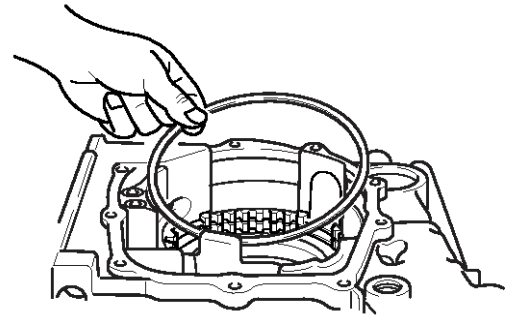
LK6D350K

23. Install the planetary gear reverse sun gear.



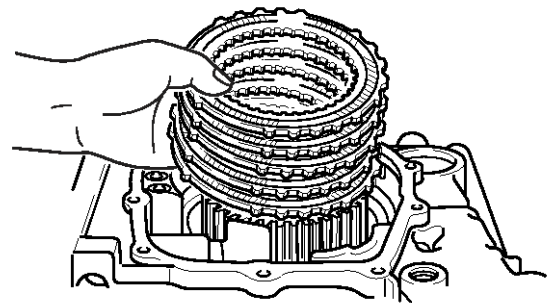
LK6D350L

24. Install the wave spring.



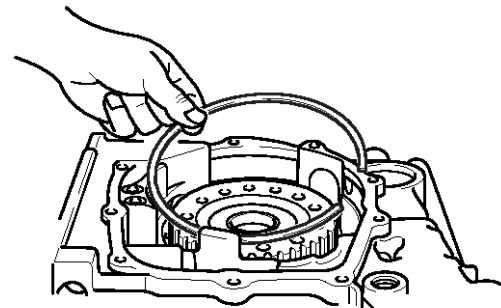
LK6D346Z

25. Install the pressure plate, the brake disc, and the brake plate.



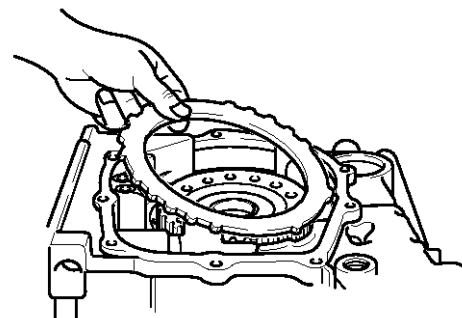
LK6D350M

26. Install the snap ring.



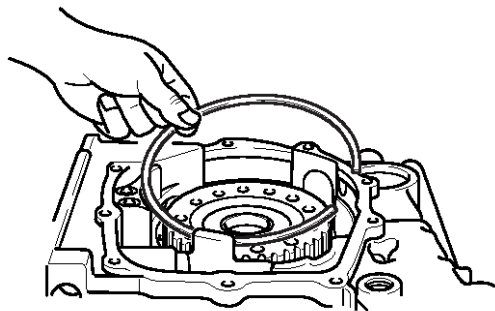
LK6D350N

27. Install the reaction plate.



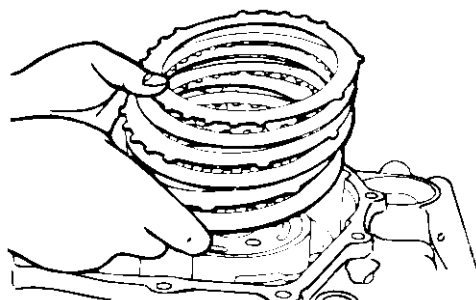
LK6D350O

28. Install the snap ring.



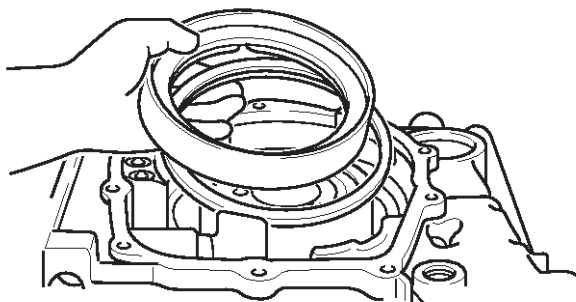
LK6D350P

29. Install the brake disc, the brake plate, and the pressure plate.



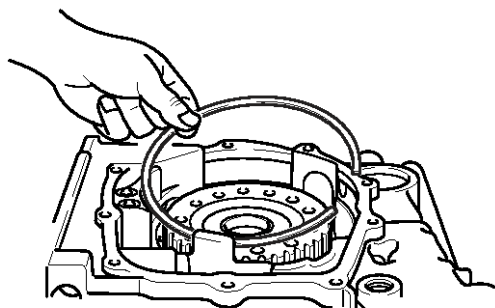
LK6D350Q

30. Install the return spring and the second brake piston.



LK6D350R

31. Install the snap ring.

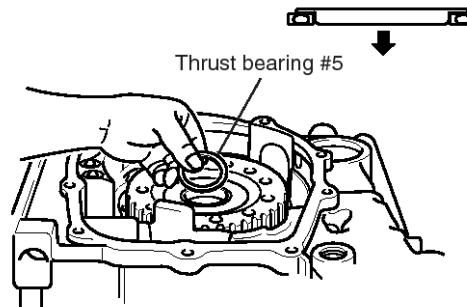


LK6D350S

32. Install the thrust bearing #5(A).

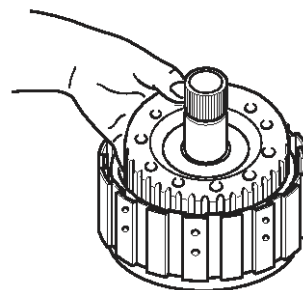
**⚠ CAUTION**

Be careful not to reverse the direction of the thrust bearing.



LK6D350T

33. Assemble the overdrive clutch hub and the thrust bearing #6 into the reverse & overdrive clutch.

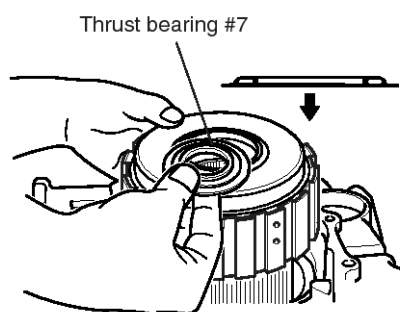


LK6D350U

34. Install the reverse and overdrive clutch and the thrust bearing #7(A).

**⚠ CAUTION**

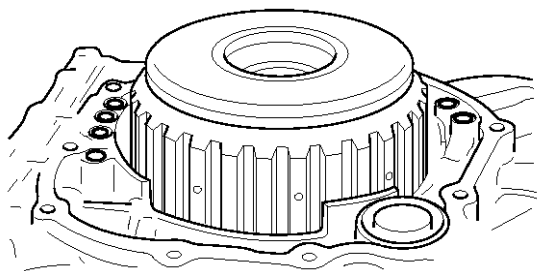
Be careful not to reverse the direction of the thrust bearing.



LK6D350V

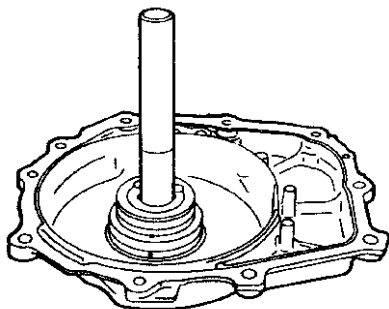
35. Install the overdrive clutch assembly.

36. Install O-rings(six).



LK6D352V

37. Install the input shaft bearing.



LK6D350W

38. Install the seal rings(four).

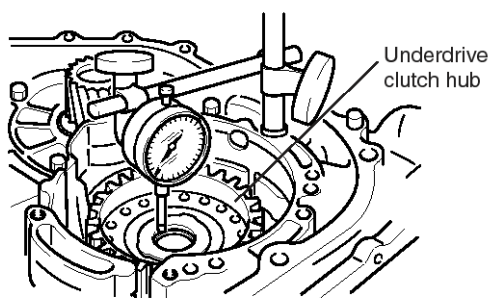
39. Insert the used thrust bearing #8 and install the rear cover.

**NOTICE**

Rear cover will be installed in order to check the underdrive sun gear gap.

40. Measure the underdrive sun gear end play. Choose the installed thrust race in the order of standard value, and install it.

Standard value : 0.0098-0.0177in(0.25-0.45mm)

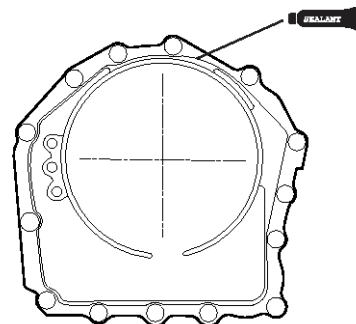


LK6D350X

41. Continue to apply liquid gasket at application points at the rear cover with  $\varnothing 1.6$ mm thickness.

Liquid gasket

Part name : Threebond 1281B or LOCTITE FMD546

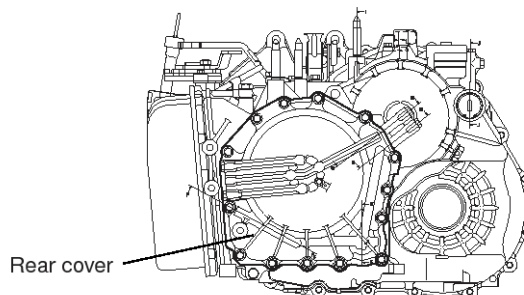


LKCD029G

42. Install the rear cover(A) and tighten it with tightening torque.

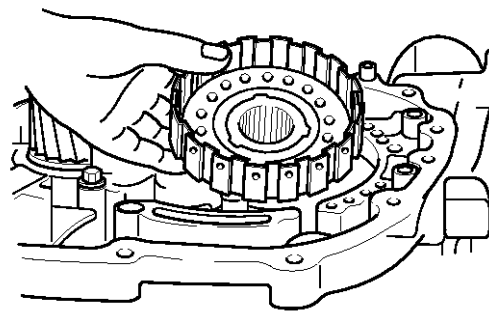
Tightening torque:

20-26 Nm (200-260 kgf-cm, 14-18 lb-ft)



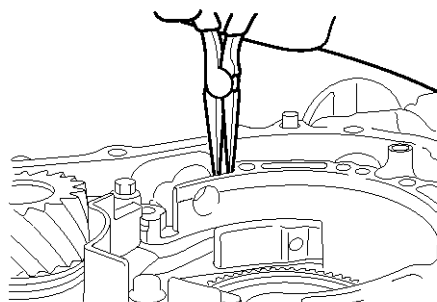
LKCD029C

43. Install the underdrive clutch hub.



LK6D345Z

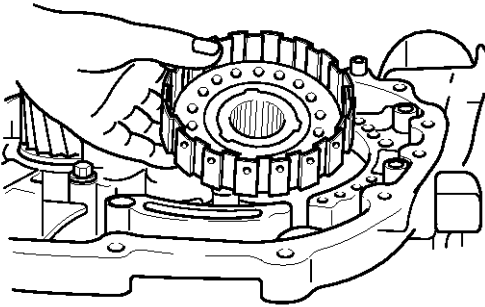
44. Install the parking roller support and the roller shafts(two).





45. Install the underdrive clutch hub.

LK6D346B



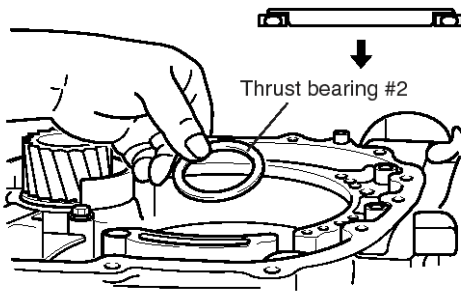
46. Install the thrust bearing #2(A).

LK6D345Z



**CAUTION**

Be careful not to reverse the direction of the thrust bearing.



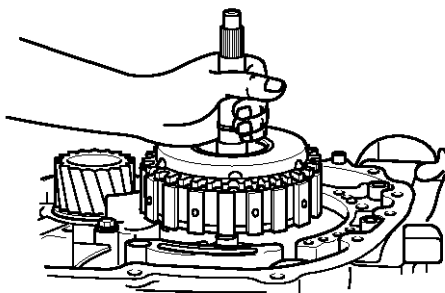
LK6D352G

47. Hold the input shaft and install the underdrive clutch.



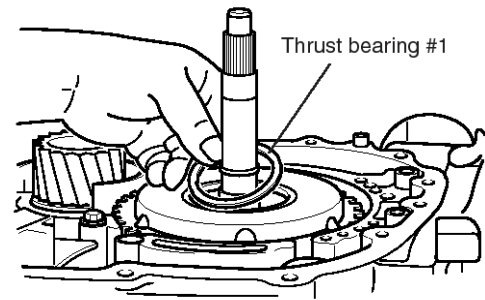
**NOTICE**

Look into the hole where the output speed sensor will be installed, in order to check if direct planetary carrier assembly is seated correctly.



LK6D345W

48. Install the used thrust washer #1(A).



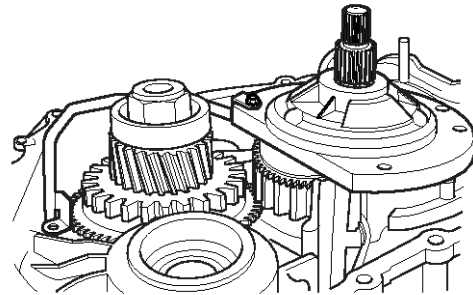
LK6D345V

49. Install the new oil pump gasket and the oil pump assembly.



**CAUTION**

Do not reuse used gasket.



LK6D352I

50. Tighten the oil pump mounting bolt with tightening torque.

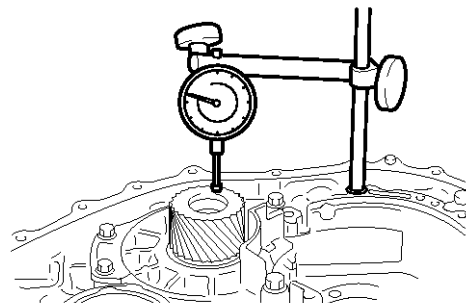
Tightening torque :

20-26 Nm (200-260 kgf·cm, 14-18 lb·ft)

51. Check the input shaft end play and install the appropriate thrust washer in procedure 58.

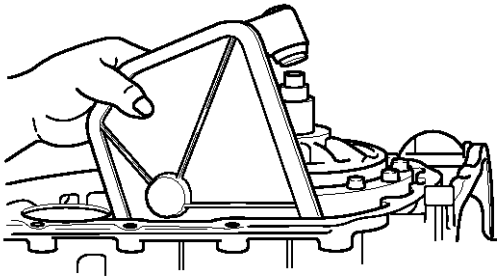
Standard range :

0.027-0.057in(0.70-1.45mm)



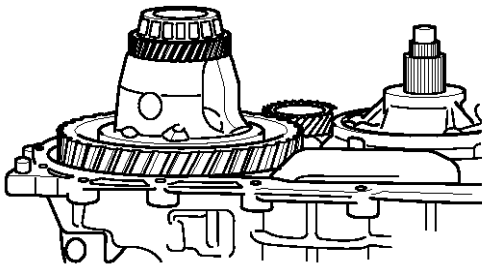
LK6D352J

52. Install the main fluid filter.



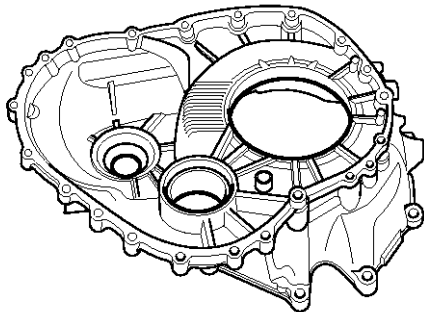
LK6D345S

53. Install the differential assembly.



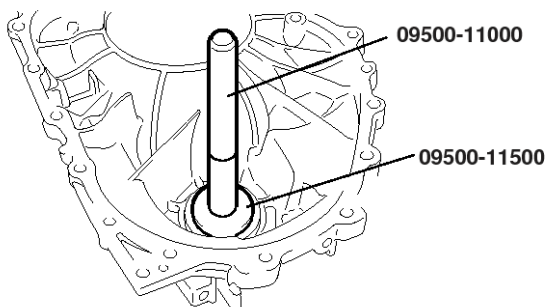
LK6D345R

54. Install 3 solders (length approx 0.39in(10mm), thickness 0.12in(3mm)) on the torque converter housing at positions illustrated on the figure.



LK6D320G

55. Hit output race into the housing using the special tool.

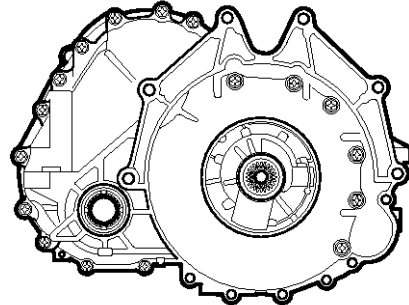


LK6D352L

56. Install the torque converter housing onto the transaxle case without applying sealing material and tighten with tightening torque.

Tightening torque :

42-54 Nm (420-540 kgf·cm, 29-38 lb·ft)

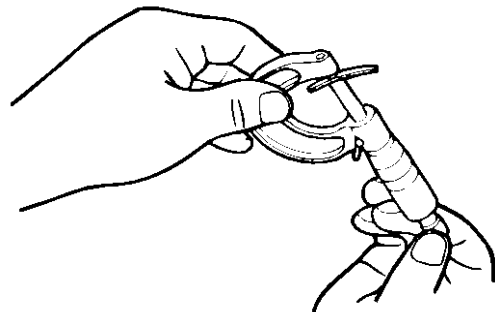


LK6D345P

57. Release the bolts and remove the solders.

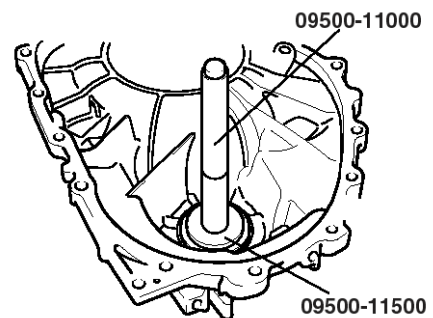
58. Measure the solder thickness with a micrometer and choose a spacer using the below formula:

$$(T+0.0022\text{in}(0.056\text{mm}))\sim(T+0.0041\text{in}(0.105\text{mm}))$$



LK6D352M

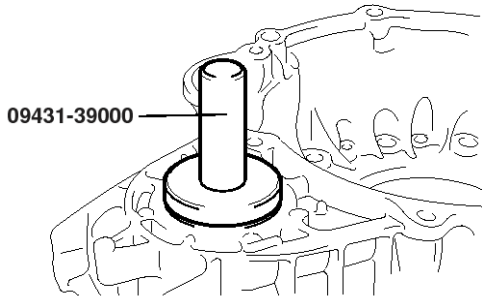
59. Install the spacer chosen at procedure 69 on the converter housing. Tap the output race into it using the special tool.



LK6D352N

60. Install the drive shaft oil seal on the torque converter housing case.



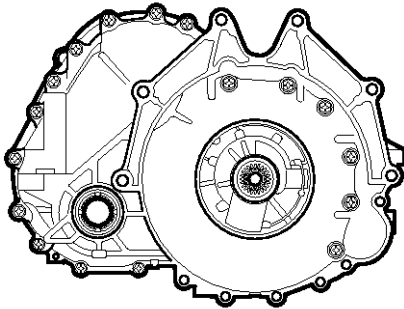


LK6D352O

61. Continually apply liquid gasket at the torque converter housing at  $\varnothing 0.063$ in.(1.6mm) thickness as the figure.

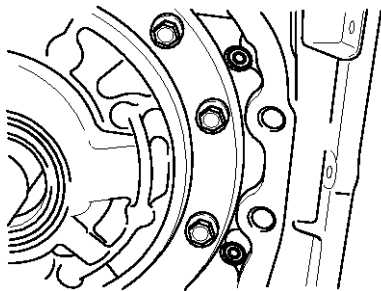
Standard sealant :

Threebond 1281B or LOTITE FMD546



LK6D345P

62. Install new O-rings(two).



LKCD030E

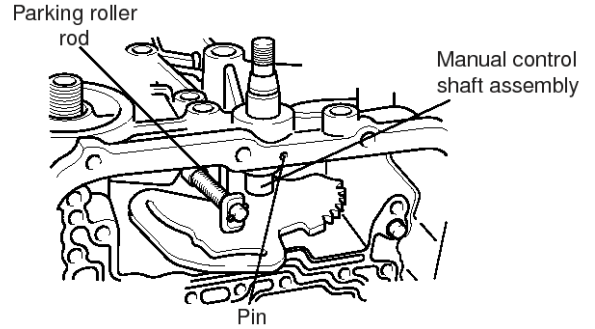
63. Connect the torque converter housing and tighten the connecting bolts (twenty) with tightening torque.

Tightening torque :

42-54 Nm (420-540 kgf-cm, 29-38 lb-ft)

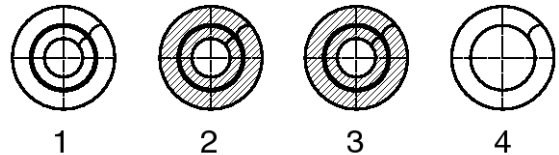
64. Install the manual control shaft and the parking roller rod(B).

65. Install the manual control shaft roller(A).



LKCD030F

66. Install each accumulator piston, a new seal ring, and the piston.

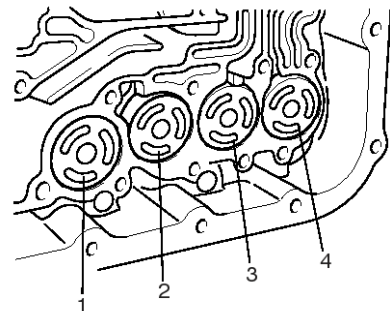


LK6D352P

### NOTICE

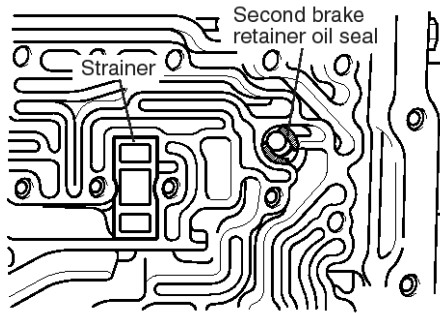
Accumulator spring identification

No.	Use	I.D.Color
1	LR brake	Colorless
2	UD clutch	Yellow
3	2ND brake	White
4	OD clutch	Colorless



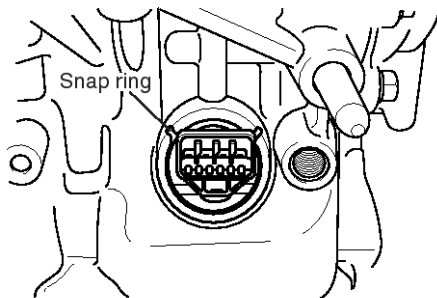
LK6D345L

67. Install the strainer(A) and the second brake retainer oil seal(B).



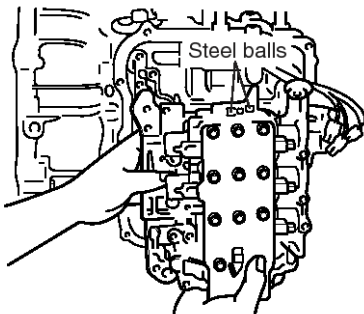
LK6D345K

68. Install the solenoid valve harness and install the snap ring(A) around the connector tightly.



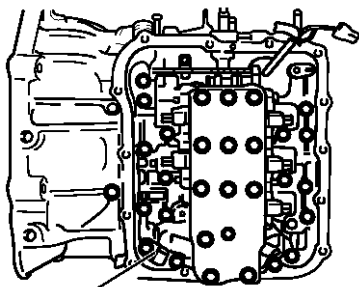
LK6D345J

69. Install the valve body, the gasket and the steel balls(A-2EA).



LK6D345I

70. Install the fluid temperature sensor(A).



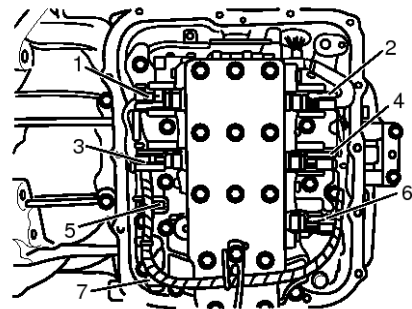
LK6D352R

71. Install the valve body mounting bolts(twenty eight).

Tightening torque:

10-12 Nm (100-120 kgf·cm, 7-8 lb-ft)

72. Connect the connector valve body.

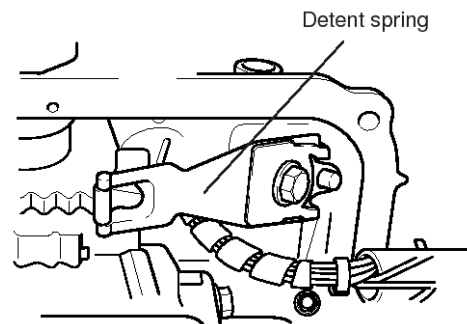


LK6D352X

73. Install the detent spring(A).

Tightening torque:

5-7 Nm (50-70 kgf·cm, 4-5 lb-ft)



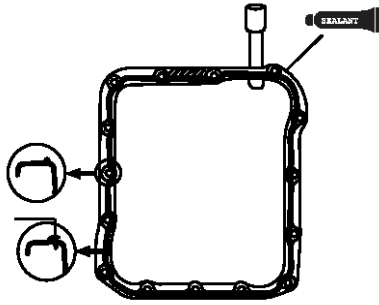
LKCD030G

74. Continually apply liquid gasket at the valve body at  $\varnothing 0.098\text{in}(2.5\text{mm})$  thickness as the figure.

Liquid gasket

Standard sealant

Threebond 1281B or LOCTITE FMD546

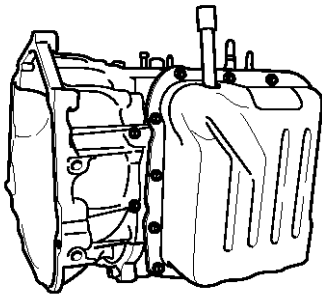


LKCD030H

75. Install the valve body cover and tighten the mounting bolts with tightening torque.

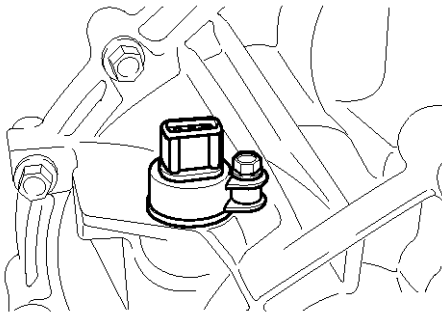
Tightening torque:

10-12 Nm (100-120 kgf-cm, 7-8 lb-ft)



LK6D352T

76. Install the speedometer gear.

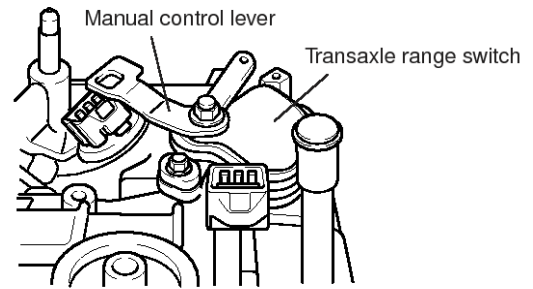


LK6D345D

77. Install the transaxle range switch(B) and the manual control lever(A).

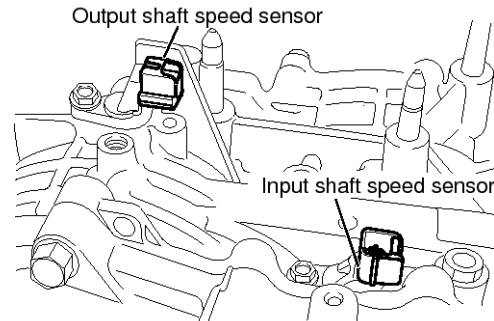
**CAUTION**

The transaxle range switch shall be installed with the valve body installed as it was.



LK6D345C

78. Install the input speed sensor(A) and output speed sensor(B).



LK6D345B

79. Install the eye bolt, a new gasket, and the oil cooler feed tube.

80. Install the fluid level gauge.

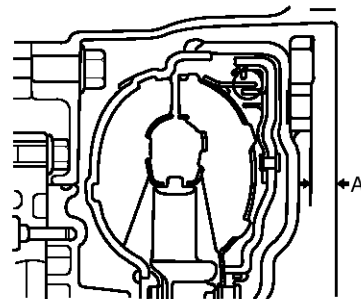
81. Install each bracket.

82. Install the torque converter and tighten it into tolerance.

Tolerance : approx. 0.37in(9.4mm)

**CAUTION**

Apply ATF to avoid damage on the torque converter shaft and the oil pump seal lip.

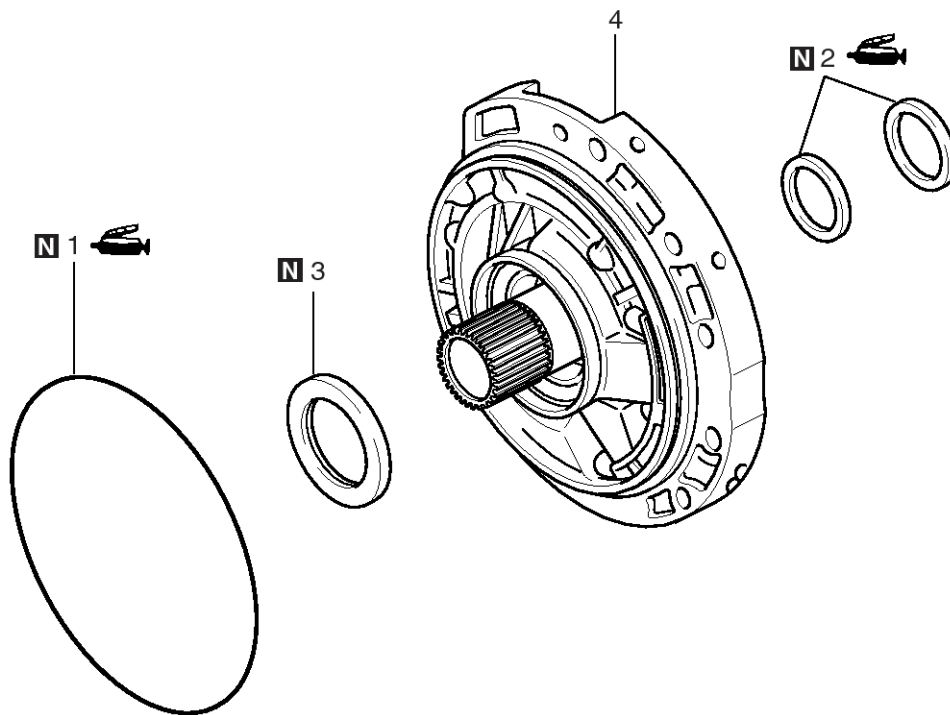


LK6D352U

## Hydraulic System

### Oil Pump

#### COMPONENTS



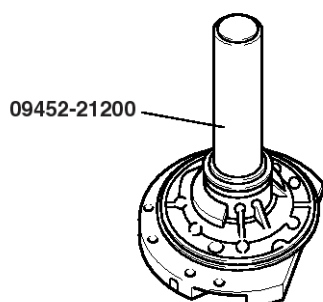
**N** Marked part shall be replaced with new part.

#### Disassembly steps

1. O-ring
2. Seal ring
3. Oil seal
4. Oil pump assembly

#### Reassembly

1. Install the oil seal.



2. Install the O-ring.

Install the new O-ring around fluid pump and apply ATF, blue mineral oil, or white vaseline around the O-ring.

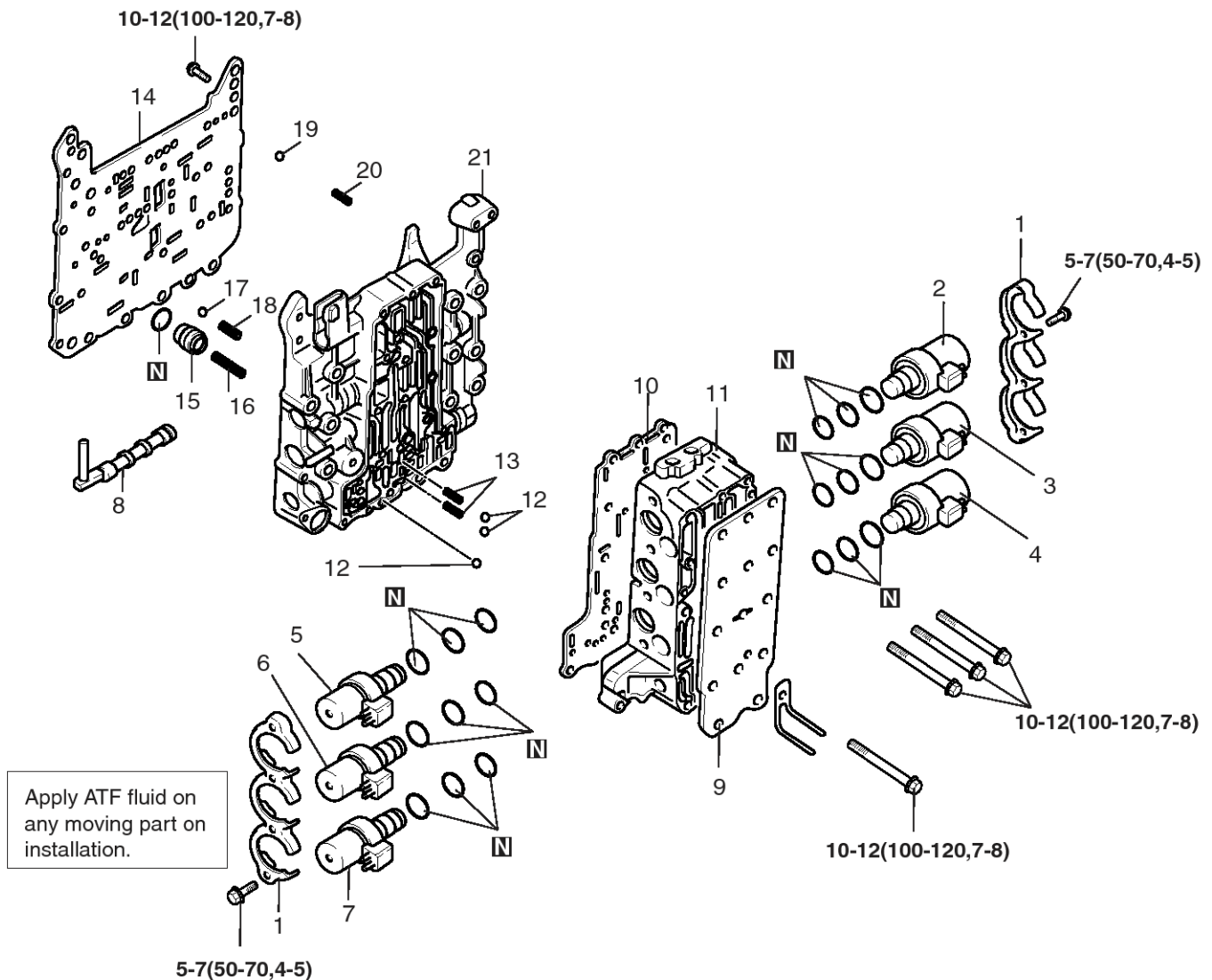
LK6D370A

LK6D370B

## Valve Body System

### Valve Body

#### COMPONENTS(1)



**N** Marked part shall be replaced with new part.

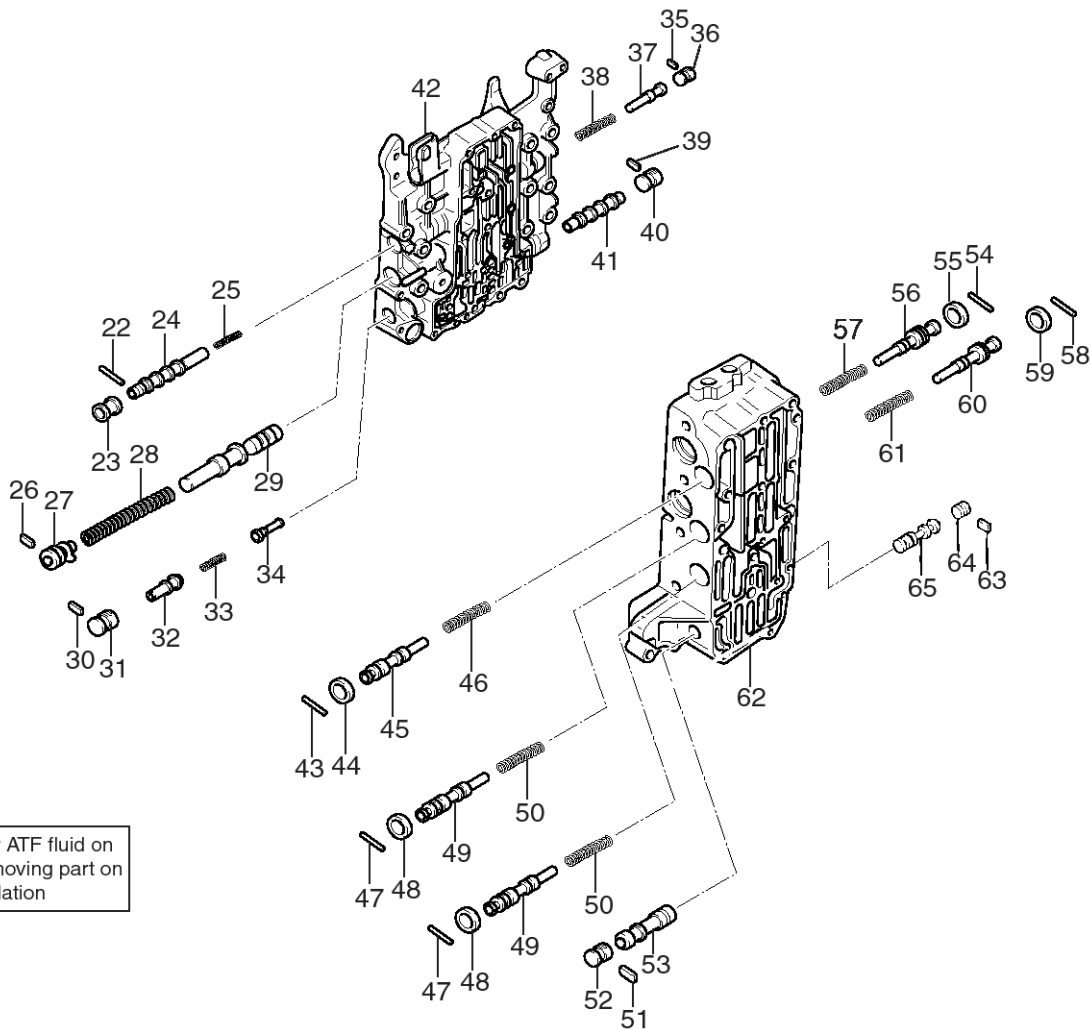
**Tightening torque : N·m(kg-cm, lb-ft)**

#### Disassembly steps

1. Solenoid valve support
2. UD clutch solenoid valve
3. 2nd brake solenoid valve
4. Damper clutch control solenoid valve
5. OD clutch solenoid valve
6. L&R brake solenoid valve
7. Reduction brake solenoid valve
8. Manual valve
9. Cover
10. Plate

11. Outside valve body assembly
12. Steel ball (Orifice check ball)
13. Spring
14. Plate
15. Damping valve
16. Damping valve spring
17. Steel ball (line relief)
18. Spring
19. Steel ball (Orifice check ball)
20. Spring
21. Inside valve body assembly

## COMPONENTS(2)



Apply ATF fluid on any moving part on installation

### Disassembly procedure

- |  |   |  |
|--|---|--|
| 22. Roller                             | 40. Failsafe B sleeve                             | 53. Switch valve                             |
| 23. Damper clutch control valve sleeve | 41. Failsafe B                                    | 54. Roller                                   |
| 24. Damper clutch control valve        | 42. Inside valve body                             | 55. Underdrive pressure control valve sleeve |
| 25. Damper clutch control valve spring | 43. Roller  | 56. Underdrive pressure control valve        |
| 26. Plate                              | 44. Overdrive pressure control valve sleeve       | 57. Underdrive pressure control valve spring |
| 27. Screw                              | 45. Overdrive pressure control valve              | 58. Roller                                   |
| 28. Regulator valve spring             | 46. Overdrive pressure control valve spring       | 59. Second pressure control valve sleeve     |
| 29. Regulator valve                    | 47. Roller  | 60. Second pressure control valve            |
| 30. Plate                              | 48. Low and reverse pressure control valve sleeve | 61. Second pressure control valve spring     |
| 31. Failsafe valve A sleeve            | 49. Low and reverse pressure control valve        | 62. Outside valve body                       |
| 32. Failsafe valve A2                  | 50. Low and reverse pressure control valve spring | 63. Plate                                    |
| 33. Failsafe A spring                  | 51. Plate   | 64. Failsafe valve C sleeve                  |
| 34. Failsafe valve A1                  | 52. Plug  | 65. Failsafe valve C                         |
| 35. Plate                              |   |  |
| 36. Plug                               |   |  |
| 37. Torque converter valve             |   |  |
| 38. Torque converter valve spring      |   |  |
| 39. Plate                              |   |  |

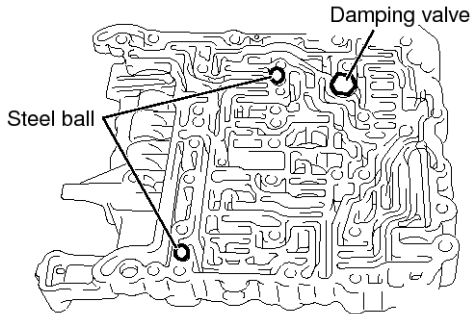
### Disassembly

1. Remove each solenoid valve.

Mark each installation point with white paint or so.

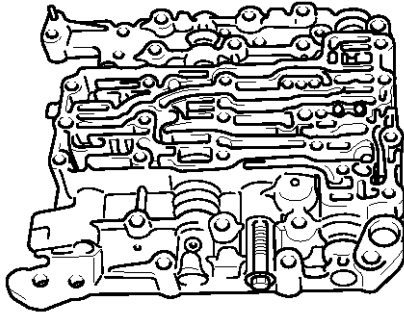
## Reassembly

1. Install the spring/steel ball(B)/damping valve(A)/damping valve spring.



LK6D355C

2. Install the spring/steel ball.

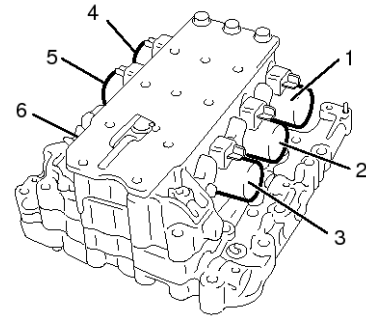


LK6D355D

3. Install each solenoid valve.

- 1) Apply ATF or white vaseline on the O-ring and assemble it caring not to damage it.
- 2) Remove the marking made in disassembly and install them.

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



LK6D355E

## Clutch & Brake

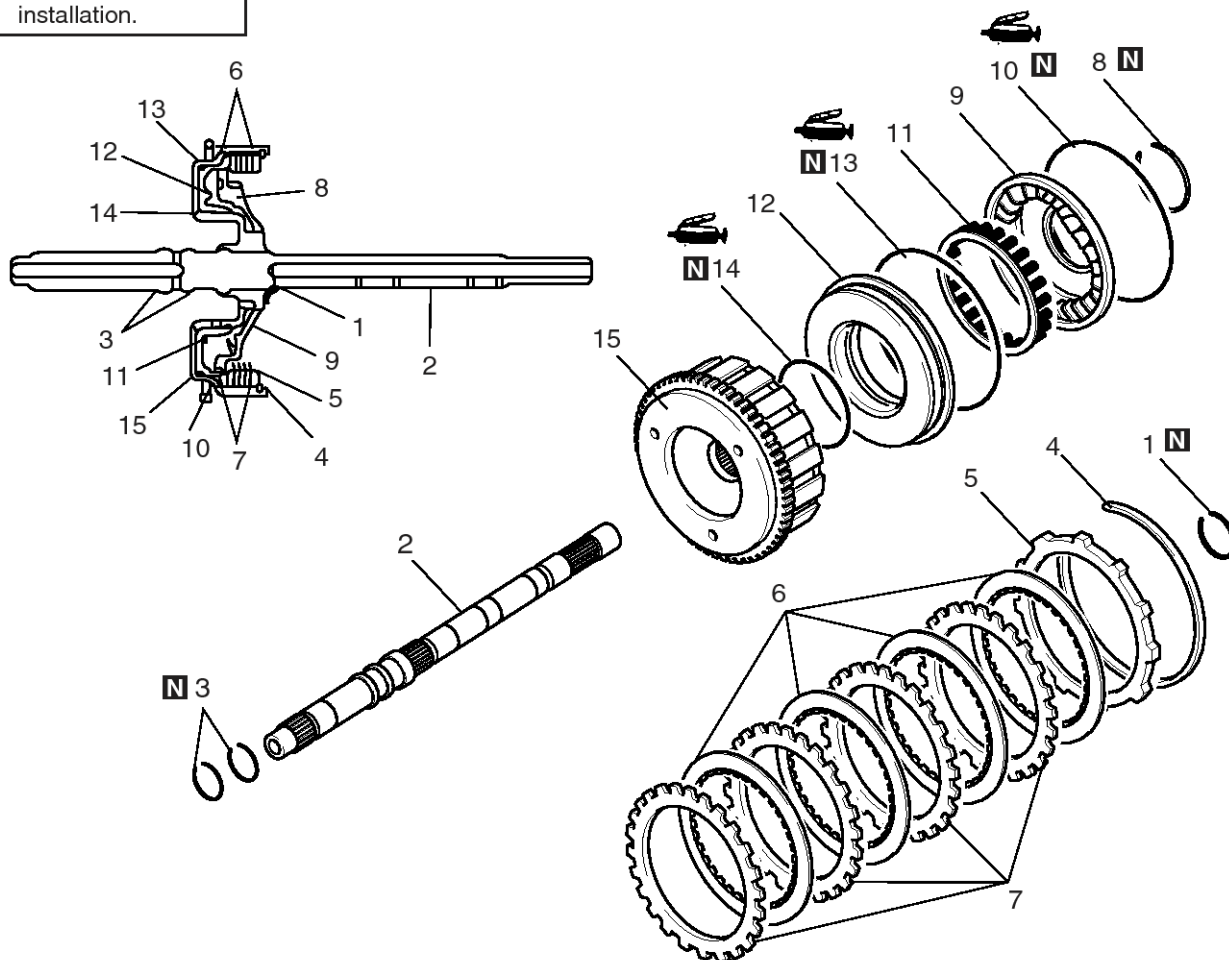
### Underdrive Clutch

#### COMPONENTS





Apply ATF fluid on any moving part on installation.



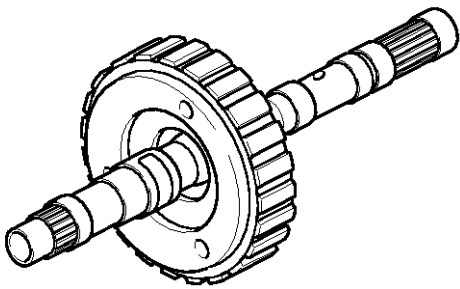
**N** Marked part shall be replaced with new part.

## Disassembly procedure

- |                          |                                      |
|--------------------------|--------------------------------------|
| 1. Snap ring             | 9. Underdrive clutch spring retainer |
| 2. Input shaft           | 10. O-ring                           |
| 3. Seal ring             | 11. Return spring                    |
| 4. Snap ring             | 12. Underdrive clutch piston         |
| 5. Clutch reaction plate | 13. O-ring                           |
| 6. Clutch disc           | 14. O-ring                           |
| 7. Clutch plate          | 15. Underdrive clutch retainer       |
| 8. Snap ring             |                                      |

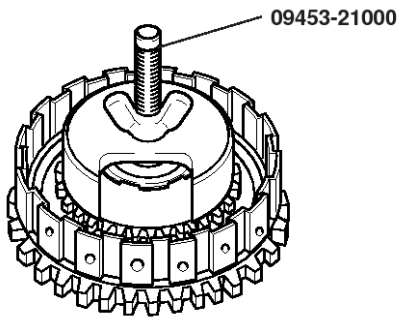
## Disassembly

1. Remove the input shaft snap ring.



LK6D360B

2. Disconnect the input shaft.
3. Remove seal rings(two).
4. Remove the clutch reaction plate snap ring.
5. Disconnect the clutch reaction plate.
6. Disassemble the clutch disce (four) and plates (four).
7. Remove the under clutch piston snap ring using the special tool(09453-21000).

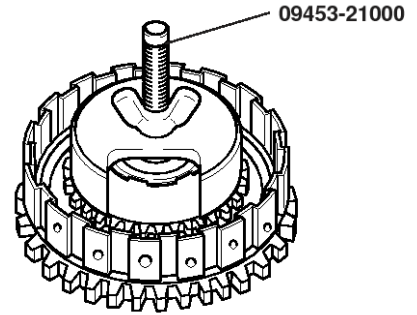


LK6D360C

8. Remove the clutch spring retainer.
9. Remove the O-ring.
10. Remove the clutch return spring.
11. Remove the under clutch piston using compressed air.
12. Remove the O-rings(two).

## Reassembly

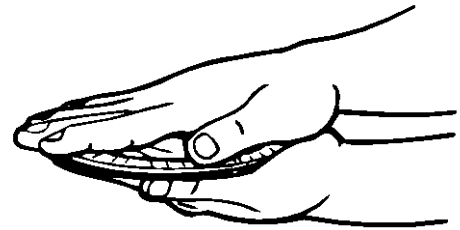
1. Install the O-ring(two).
2. Install the underdrive clutch piston.
3. Install the clutch return spring.
4. Install the O-ring.
5. Install the clutch spring retainer.
6. Install the clutch spring retainer snap ring using the special tool(09453-21000).



LK6D360C

## NOTICE

Hold the 2 clutch discs together, and slide them a little, If there is a gap, they are wave discs.

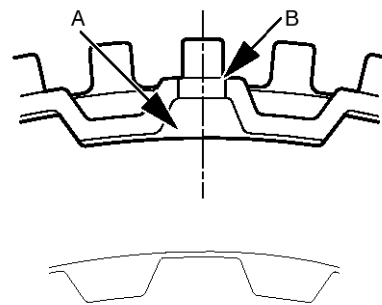


LK6D360D

7. Align the teeth of the clutch plate, the clutch disc and the clutch reaction plate (fig.A), and hold the underdrive clutch(fig.B).

## CAUTION

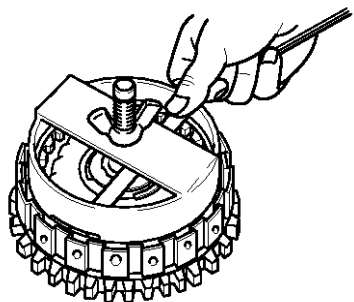
Dip the clutch disc in ATF sufficiently before assembly.



LK6D360E

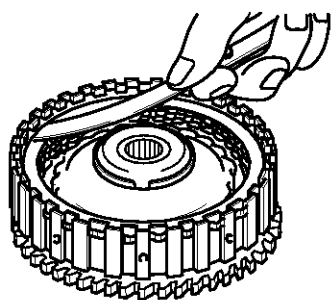
8. Install the clutch reaction plate in the direction on figure.
9. Install the snap ring.
10. Check the gap between the snap ring and the reaction plate.

Standard value : 0.063-0.071in(1.6-1.8mm)



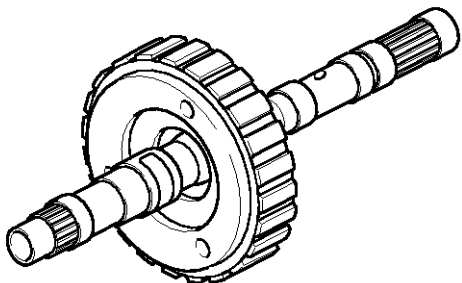
LK6D360G

11. If the gap deviates from standard value, choose a proper snap ring (15 sizes).



LK6D360H

12. Install the underdrive clutch assembly on the input shaft.



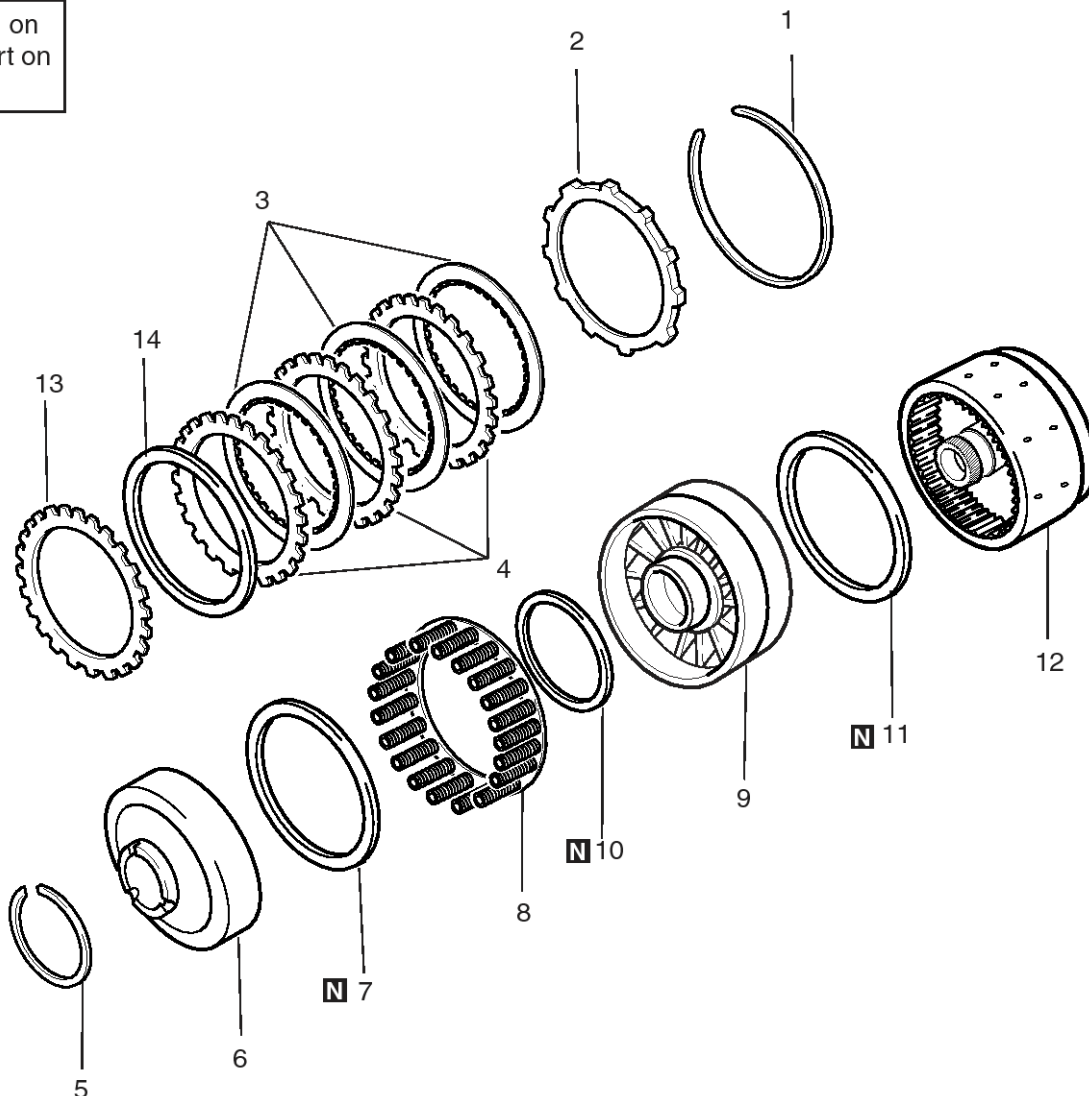
LK6D360B

13. Install the snap ring on the input shaft.

## Direct Clutch

### COMPONENTS

Apply ATF fluid on any moving part on installation.



**N** Marked part shall be replaced with new part.

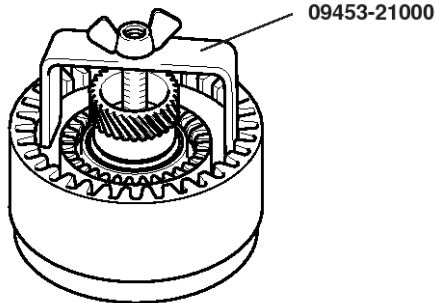
#### Disassembly procedure

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. Snap ring</li> <li>2. Clutch reaction plate</li> <li>3. Clutch disc</li> <li>4. Clutch plate</li> <li>5. Snap ring</li> <li>6. Spring retainer</li> <li>7. O-ring</li> </ol> | <ol style="list-style-type: none"> <li>8. Return spring</li> <li>9. Direct clutch piston</li> <li>10. O-ring</li> <li>11. O-ring</li> <li>12. Direct clutch retainer</li> <li>13. Intermediate plate</li> <li>14. Cushion plate</li> </ol> |
|--|--|

#### Disassembly

1. Remove the direct clutch snap ring.

2. Remove the clutch reaction plate.
3. Remove the clutch discs (five) and plates (five).
4. Remove the snap ring using special tool(09453-21000).

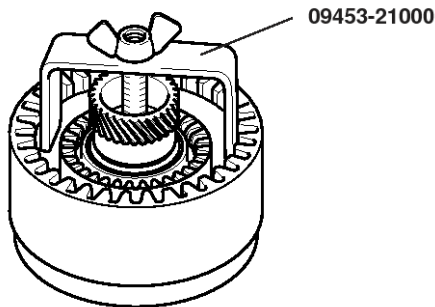


LK6D385B

5. Remove the direct spring retainer.
6. Remove the return spring.
7. Remove the direct clutch piston and O-ring.

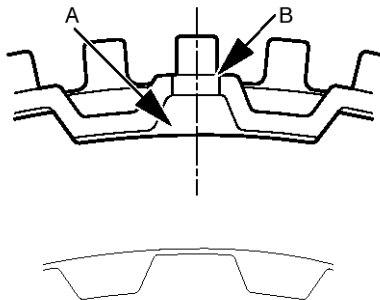
## Reassembly

1. Install the O-rings on direct clutch retainer and piston.
2. Install the clutch piston.
3. Install the O-ring on spring retainer and install return spring and retainer.
4. Install the snap ring using the special tool(09453-21000).



LK6D385B

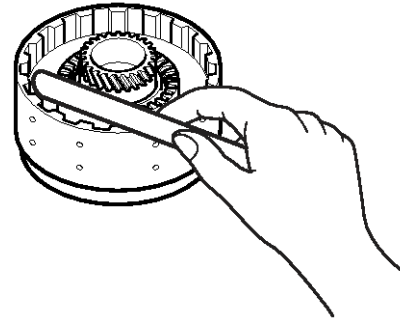
5. Aligning the teeth of the clutch plate, the clutch disc, and the clutch reaction plate (fig.A) and the direct clutch retainer hole (fig.B), assemble them.



LK6D365F

6. Install the direct clutch reaction plate as illustrated on the figure.
7. Applying force of 5kg on the direct clutch reaction plate, measure the gap with the snap ring using a gauge. If the measurement deviates from standard value, use an appropriate snapping (12 sizes).

Standard value : 0.024-0.031in(0.6-0.8mm)



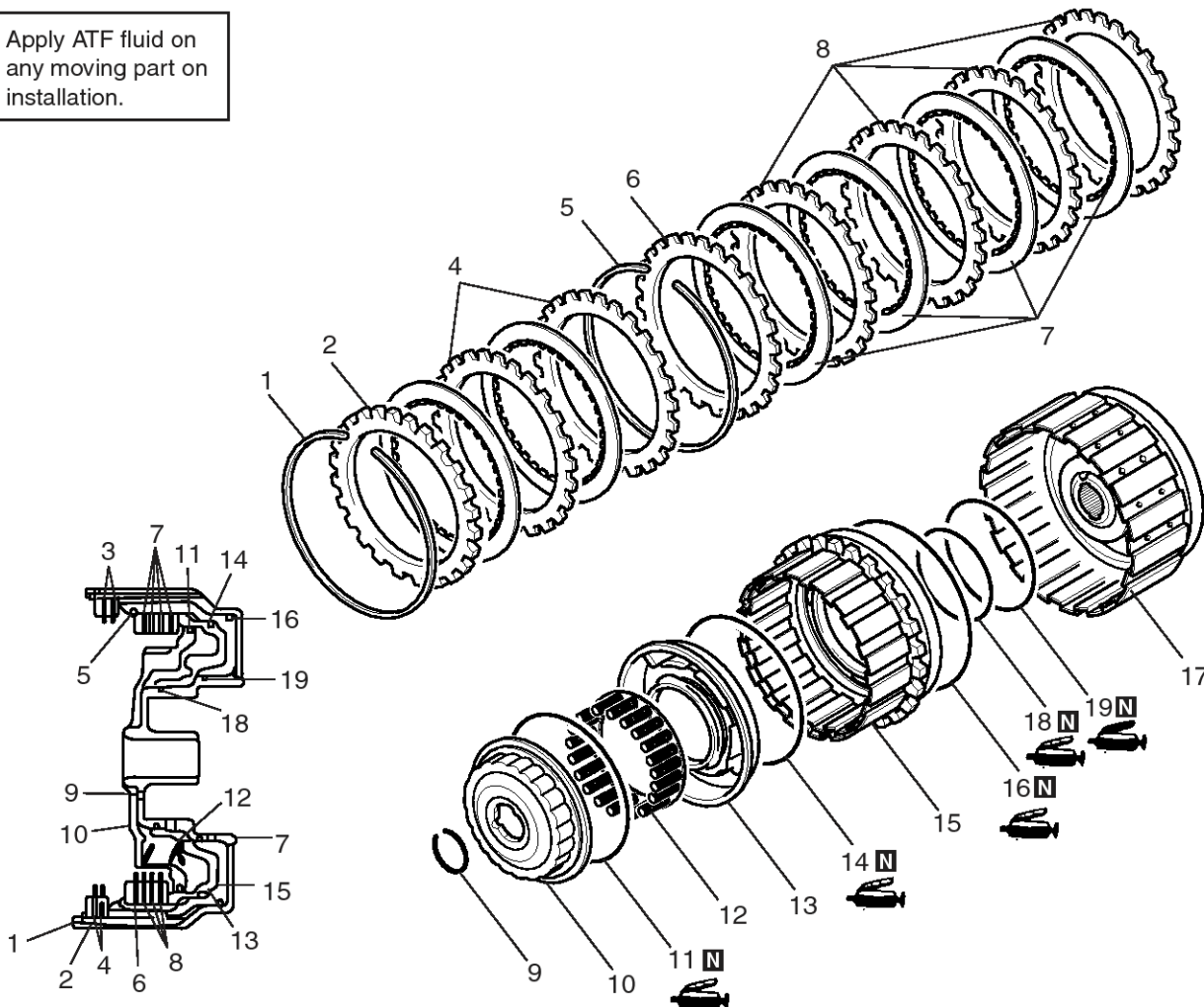
LK6D385C

## Reverse and Overdrive Clutch

### COMPONENTS



Apply ATF fluid on any moving part on installation.



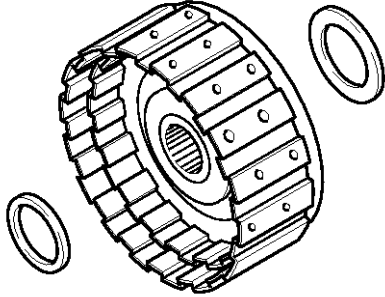
**N** Marked part shall be replaced with new part.

#### Disassembly steps

- |                          |                             |
|--------------------------|-----------------------------|
| 1. Snap ring             | 11. O-ring                  |
| 2. Clutch reaction plate | 12. Return spring           |
| 3. Clutch disc           | 13. Overdrive clutch piston |
| 4. Clutch plate          | 14. O-ring                  |
| 5. Snap ring             | 15. Reverse clutch piston   |
| 6. Clutch reaction plate | 16. O-ring                  |
| 7. Clutch disc           | 17. Reverse clutch retainer |
| 8. Clutch plate          | 18. O-ring                  |
| 9. Snap ring             | 19. O-ring                  |
| 10. Spring retainer      |                             |

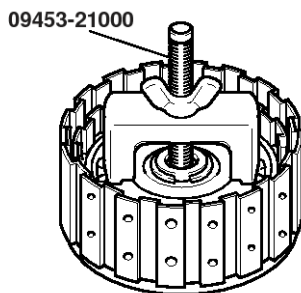
## Disassembly

1. Remove the overdrive clutch reaction plate snap ring.



LK6D365B

2. Remove the overdrive reaction plate.
3. Remove the overdrive clutch discs(four) and the plates(four).
4. Remove the reverse clutch reaction plate snap ring.
5. Remove the reverse clutch reaction plate.
6. Remove the reverse clutch discs(two) and the plates(two).
7. Remove the clutch spring retainer snap ring using special tool(09453-21000).

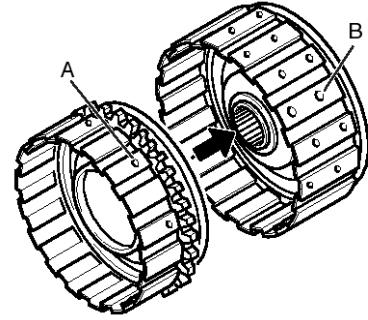


LK6D365C

8. Disconnect the clutch spring retainer.
9. Remove the O-ring.
10. Remove the clutch return spring.
11. Remove the overdrive clutch piston using compressed air.
12. Remove the O-ring.
13. Remove the reverse clutch piston.
14. Remove the O-rings(three).

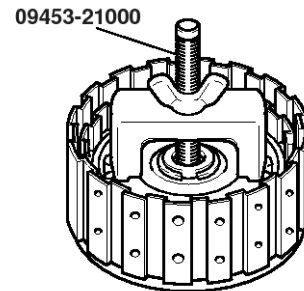
## Reassembly

1. Install the O-rings(three).
2. Connect the reverse retainer and reverse clutch piston aligning holes A & B.



LK6D365D

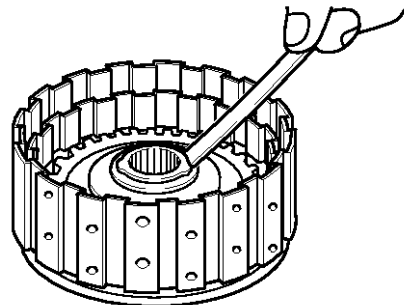
3. Install the reverse clutch piston.
4. Install the O-ring.
5. Install the overdrive clutch piston.
6. Install the clutch return spring.
7. Install the O-ring.
8. Install the clutch spring retainer.
9. Install the overdrive clutch spring retainer snap ring using the special tool(09453-21000).



LK6D365C

10. Measure the gap with the snap rings by using special tool. If the gap deviates from standard value, use an appropriate snap ring(4 sizes).

End play : 0-0.035L in(0T-0.09L mm)

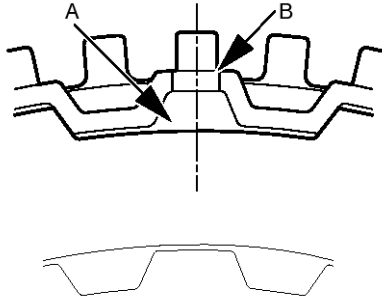


LK6D365E

## CAUTION

Dip the clutch disc in ATF sufficiently before assembly.

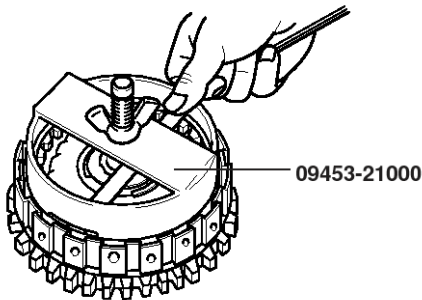
11. Aligning the teeth of the clutch plate, the clutch disc, and the clutch reaction plate (fig.A) and the reverse clutch retainer hole (fig.B), assemble them.



LK6D365F

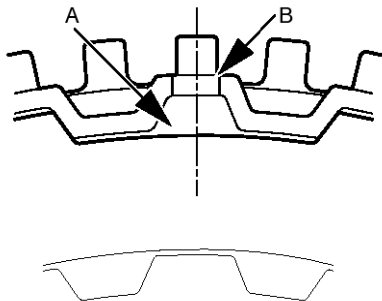
12. Install the reverse clutch discs (two) and plates (two).  
 13. Install the reverse clutch reaction plate.  
 14. Install the snap ring.  
 15. Measure the gap between the reverse clutch reaction plate and the snap ring by using special tool. If the gap deviates from standard value, use an appropriate snap ring (4 sizes).

Standard value : 0.059-0.067in(1.5-1.7mm)



LK6D365G

16. Aligning the teeth of the clutch plate, the clutch disc, and the clutch reaction plate (fig.A) and the overdrive clutch retainer hole (fig.B), assemble them.



LK6D365F

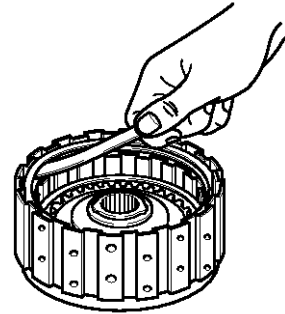
17. Install the overdrive clutch discs (four) and plates (four).

18. Install the overdrive clutch reaction plate.

19. Install the snap ring.

20. Measure the gap between the overdrive reaction plate and the snap ring. If the gap deviates from standard value, use an appropriate snap ring (15 sizes).

Standard value : 0.063-0.071in(1.6-1.8mm)

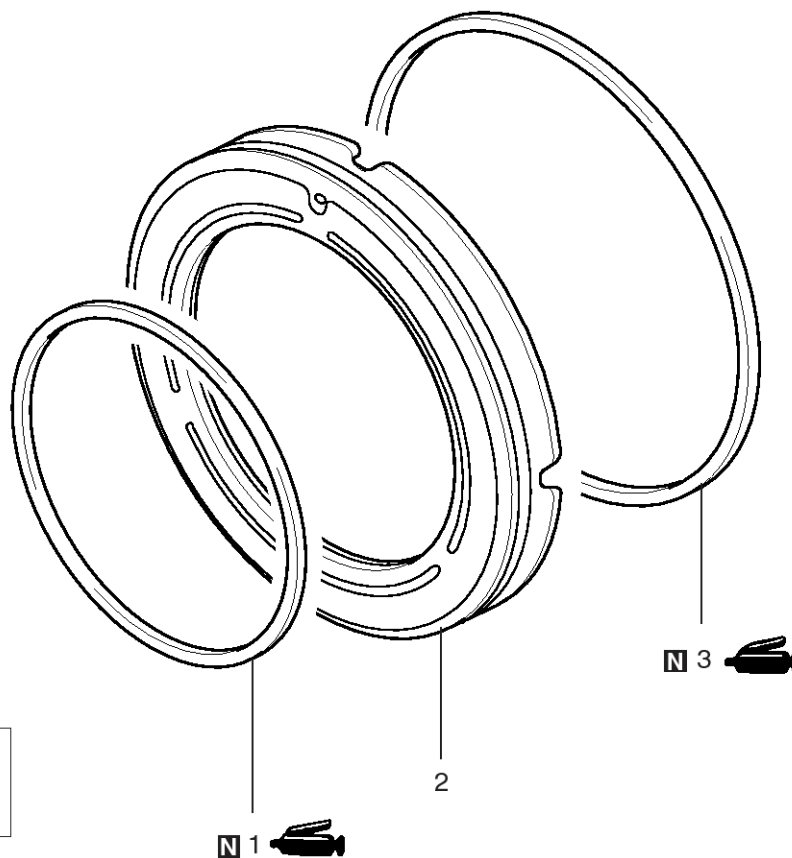


LK6D365H



## Low and Reverse Brake

### COMPONENTS



Apply ATF fluid on any moving part on installation.

**N** Marked part shall be replaced with new part.

#### Disassembly procedure

1. O-ring
3. O-ring

2. Low and reverse brake piston

LK6D395A

#### REASSEMBLY

1. Install the O- ring.

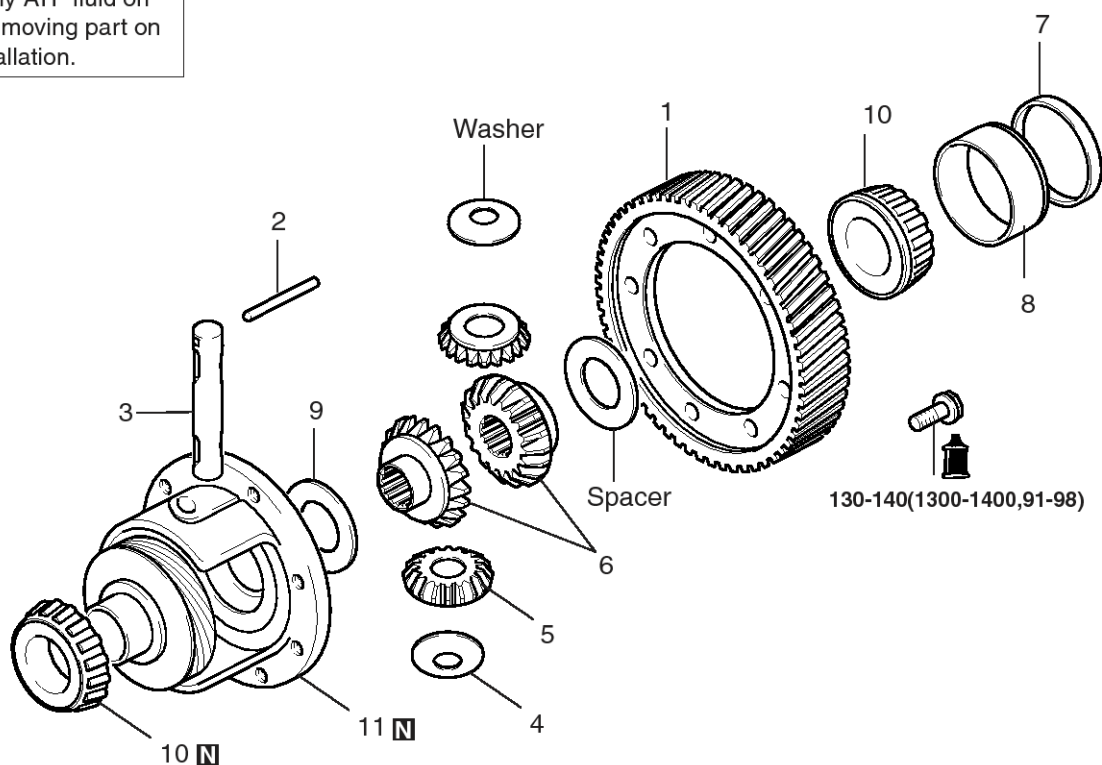
Apply ATF or white vaseline on the O-ring and install it caring not to damage it.

## Gear System

### Differential

#### COMPONENTS

Apply ATF fluid on any moving part on installation.



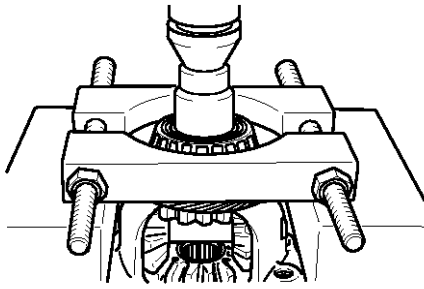
**Tightening torque : N·m(kg-cm, lb-ft)**

☐ Marked part shall be replaced with new part.

- |                            |                          |
|----------------------------|--------------------------|
| 1. Differential drive gear | 7. Spacer                |
| 2. Lock pin                | 8. Outer race            |
| 3. Pinion shaft            | 9. Spacer                |
| 4. Washer                  | 10. Taper roller bearing |
| 5. Pinion gear             | 11. Differential case    |
| 6. Side gear               |                          |

### Disassembly

1. Remove the taper roller bearing.



LK6D410B

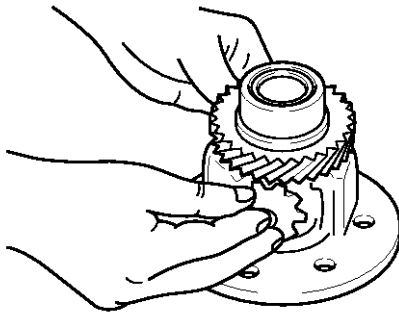
**Reassembly**

1. Remove the spacer, the side gear, the washer, the pinion and the pinion shaft.

1) Connect the side gear with the spacer, and install the side gear into differential case.

**NOTICE**

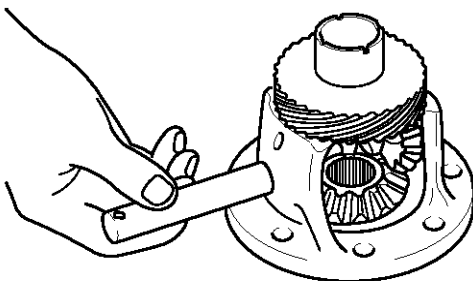
Use a spacer of neutral thickness 0.037-0.039in(0.93-1.00mm) for a new side gear.



LK6D410C

2) Connect the washer to the pinion and install them simultaneously at the point so that they may lock with the side gear.

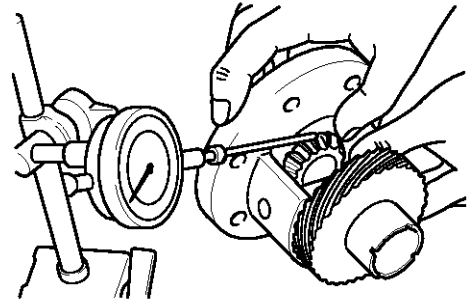
3) Install the pinion shaft.



LK6D410D

4) Check the side gear pinion backlash and install a proper spacer.

Standard value :  
0.00098-0.0059in (0.025-0.150mm)



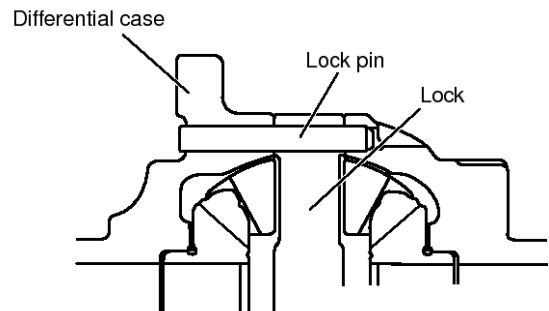
LK6D410E

**NOTICE**

Adjust backlashes at both sides to be within standard value.

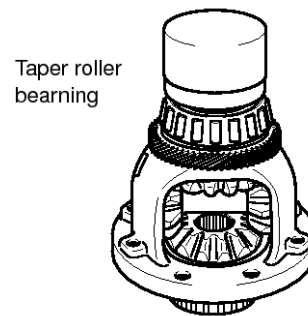
2. Install the lock pin.

Install the lock pin at the direction illustrated on the figure.



LK6D410F

3. Install the taper roller bearing.

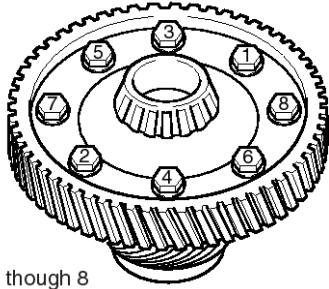


LK6D410G

4. Install the differential drive gear.

5. Apply ATF on bolts and install them in the order illustrated on the figure and tighten them with tightening torque.

Tightening torque:  
130-140 Nm (1300-1400 kgf-cm, 91-98 lb-ft)

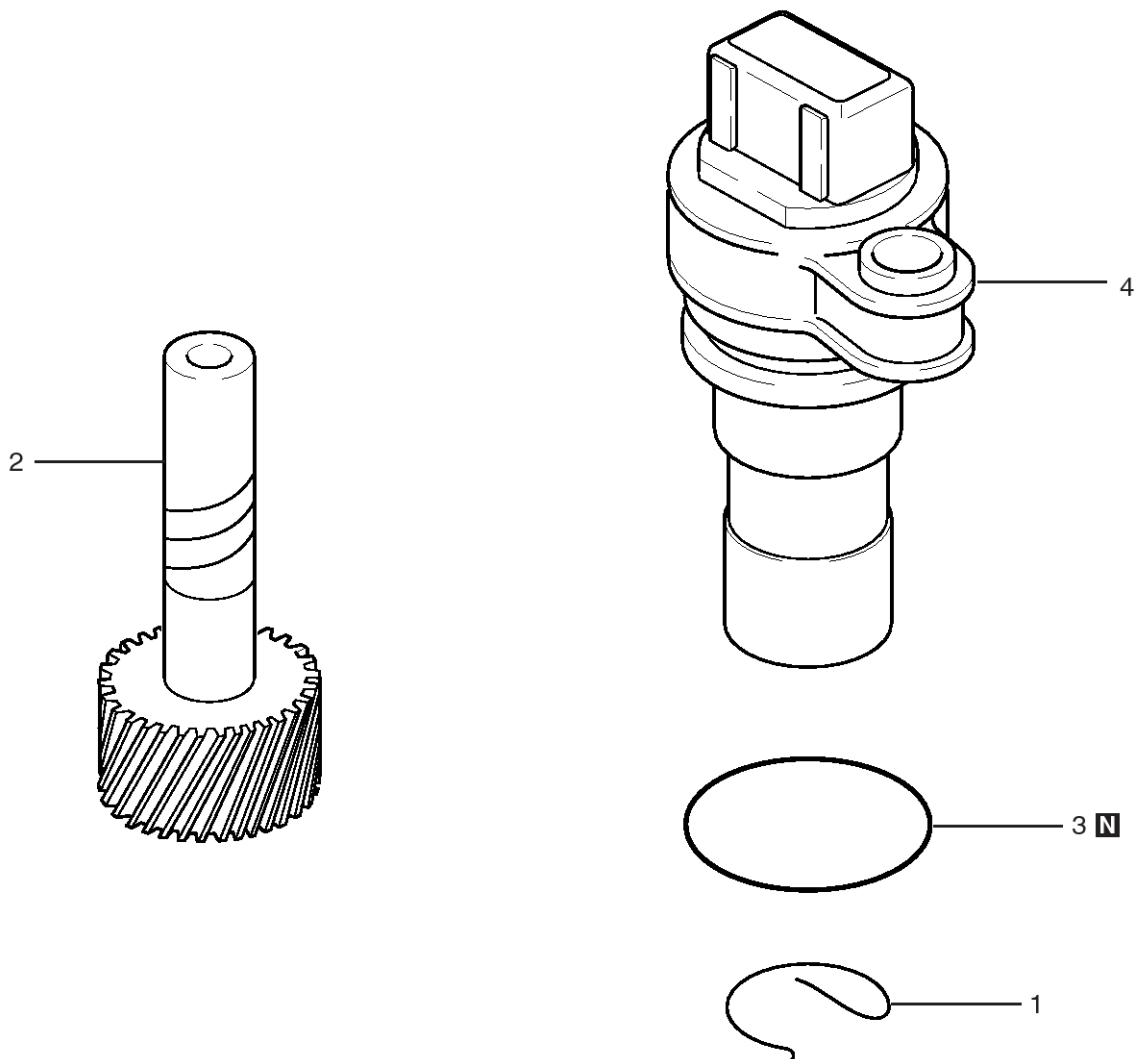


1 through 8  
indicate tightening sequence

LK6D410H

## Speedometer Driven Gear Assembly

### SPEEDOMETER DRIVEN GEAR COMPONENTS



Apply ATF fluid on any moving part on installation.

**N** Marked part shall be replaced with new part.

#### Disassembly procedure

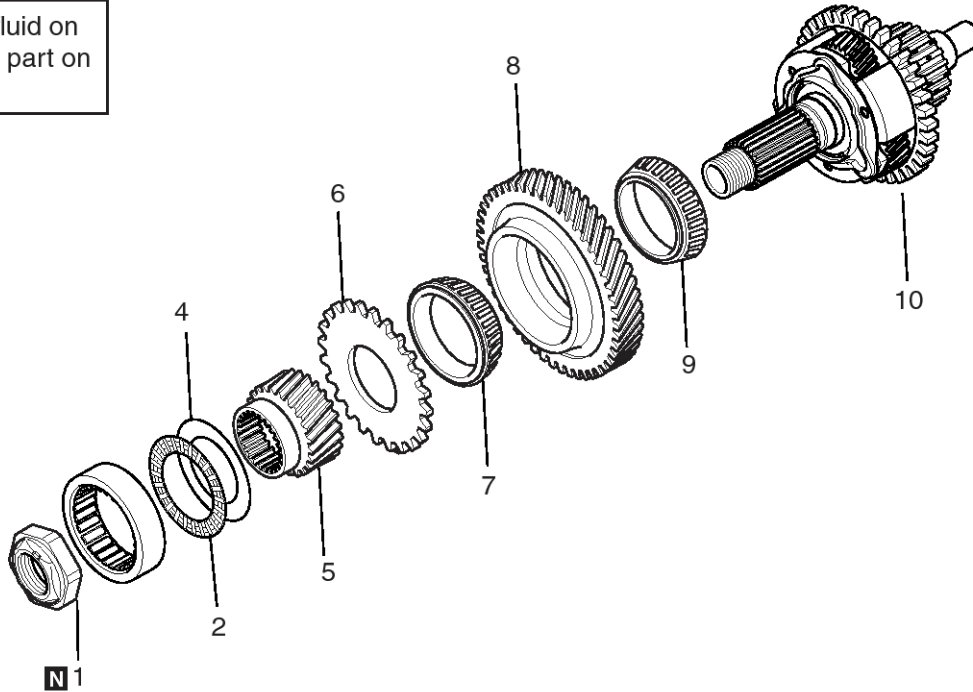
1. E-clip
2. Speedometer driven gear

3. O-ring
4. Sleeve

## Planetary Gear

### COMPONENTS

Apply ATF fluid on any moving part on installation.



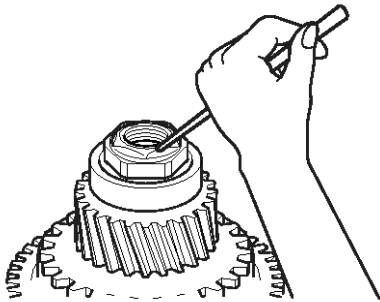
**N** Marked part shall be replaced with new part.

#### Disassembly procedure

1. Lock nut
2. Roller bearing
3. Thrust bearing (#9)
4. Thrust race (#10)
5. Output gear
6. Parking brake gear
7. Taper roller bearing
8. Transfer driven gear
9. Taper roller bearing
10. Direct planetary carrier

### Disassembly

1. Cock the lock nut only enough to turn.

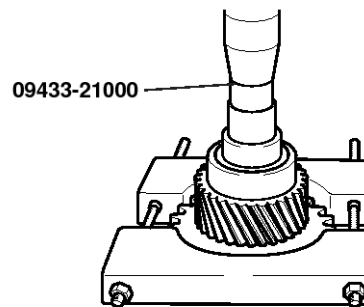


LK6D375B

2. Remove the lock nut.

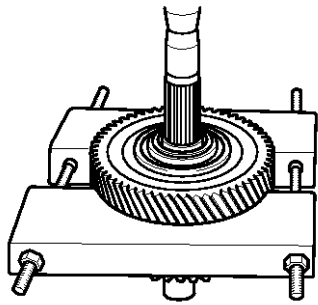
LK6D375A

3. Remove the output gear and the parking brake gear using the special tool(09432-21000).



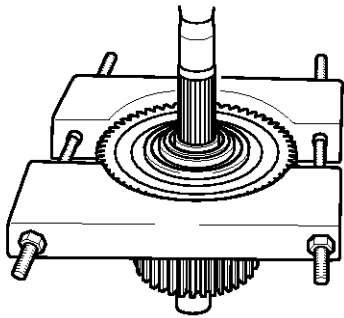
LK6D375C

4. Remove the taper roller bearing and the transfer driven gear.



LK6D375D

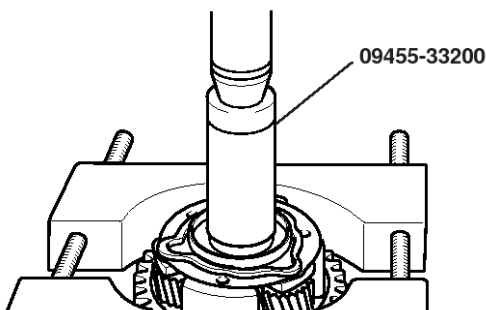
5. Remove the inner taper roller bearing.



LK6D375E

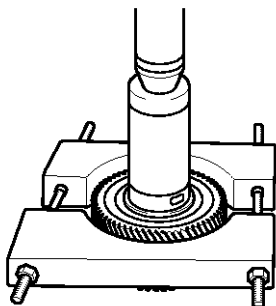
## Reassembly

1. Install the inner taper roller bearing using the special tool(09455-33200).



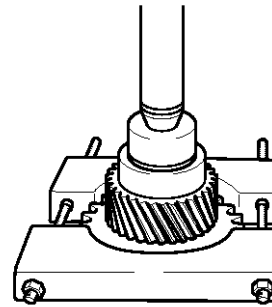
LK6D375F

2. Install the transfer driven gear and the taper roller bearing.



LK6D375G

3. Install the parking brake gear and the output gear.

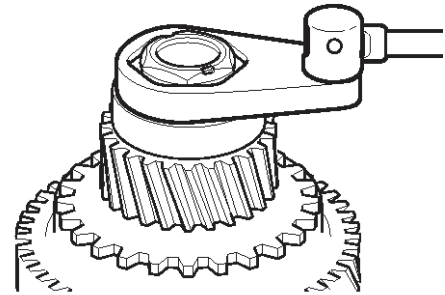


LK6D375H

4. Install the roller bearing and tighten the lock nut with tightening torque.

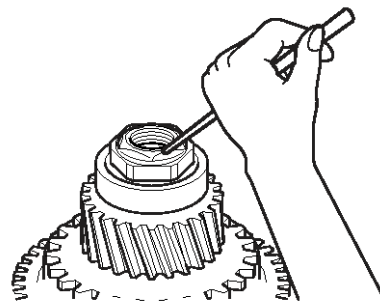
Tightening torque:

160-180 Nm (1600-1800 kgf-cm, 110-126 lb-ft)



AKCD026L

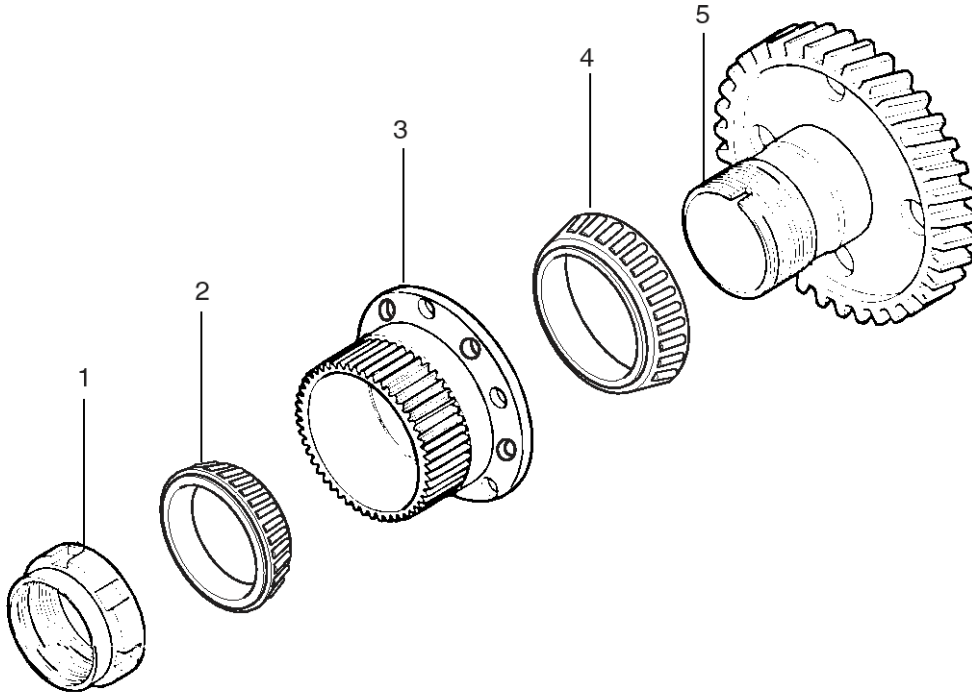
5. Cock the lock nut (two points) not to move.



LK6D375B

## Transfer Drive Gear

### COMPONENTS

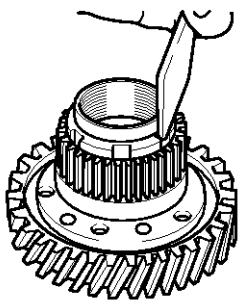


#### Disassembly procedure

1. Lock nut
2. Taper roller bearing
3. Transfer drive gear bearing
4. Taper roller bearing
5. Transfer drive gear

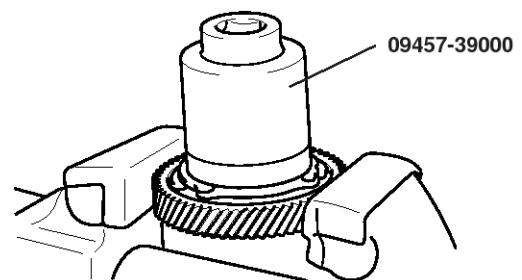
### Disassembly

1. Cock the lock nut only enough to turn.



LK6D380B

2. Remove the output gear and the parking brake gear using the special tool(09457-39000).



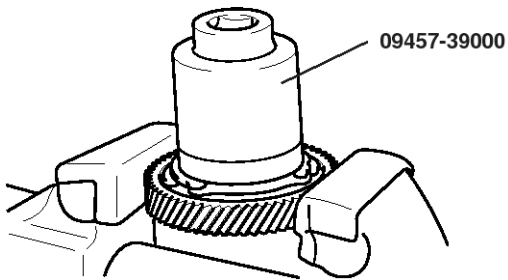
LKCD032A

LK6D380C

### Reassembly

1. Assemble the transfer drive gear bearing.





LK6D380C

2. Apply ATF on a new lock nut and tighten it with tightening torque.

Release it one revolution and retighten it with tightening torque.

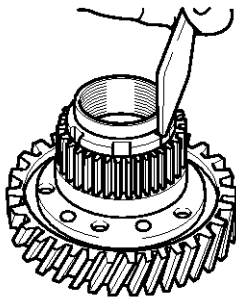
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Tightening torque:

180-210 Nm (1800-2100 kgf-cm, 126-147 lb-ft)

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3. Tighten the lock nut with punch (2 points).



LK6D380B