

## AT-2

## Automatic Transaxle System

### General Information

#### Specifications

#### Service Standard

Item	Specifications [mm(in.)]
Input shaft end play (Rear)	0.25 ~ 0.45 (0.0098 ~ 0.0177)
2/6 brake pressure plate end play	2.35 ~ 2.65 (0.0925 ~ 0.1043)
Low & reverse brake pressure plate end play	2.25 ~ 2.55 (0.0886 ~ 0.1004)
Under drive brake snap ring end play	0.65 ~ 0.95 (0.0255 ~ 0.0374)
Over drive clutch snap ring end play	1.05 ~ 1.35 (0.0413 ~ 0.0531)
35R clutch snap ring end play	A6MF1 : 0.85 ~ 1.15 (0.0335 ~ 0.0453) A6MF2 : 1.05 ~ 1.35 (0.0413 ~ 0.0531)
Middle & rear planetary gear end play	0.1 ~ 0.4 (0.0039 ~ 0.0157)
Input shaft end play (Front)	0.55 ~ 0.85 (0.0216 ~ 0.0334)
Differential side gear & differential pinion gear backlash	0.025 ~ 0.150 (0.0009 ~ 0.0059)

#### Tightening Torques

Item	N.m	kgf.m	lb-ft
Transfer drive gear	30.4 ~ 35.3	3.1 ~ 3.6	22.4 ~ 26.0
Rear cover	27.5 ~ 34.3	2.8 ~ 3.5	20.3 ~ 25.3
Under drive brake retainer	30.4 ~ 35.3	3.1 ~ 3.6	22.4 ~ 26.0
Under drive brake chamber	4.9 ~ 9.8	0.5 ~ 1.0	3.6 ~ 7.2
Parking rod guide	9.8 ~ 11.8	1.0 ~ 1.2	7.2 ~ 8.7
Oil pump pipe	9.8 ~ 11.8	1.0 ~ 1.2	7.2 ~ 8.7
Oil pump	19.6 ~ 25.5	2.0 ~ 2.6	14.5 ~ 15.9
Oil filter assembly	9.8 ~ 11.8	1.0 ~ 1.2	7.2 ~ 8.7
Torque converter housing	27.5 ~ 34.3	2.8 ~ 3.5	20.3 ~ 25.3
Valve body cover	12.8 ~ 14.7	1.3 ~ 1.5	9.4 ~ 10.8
Detent spring	24.5 ~ 35.3	2.5 ~ 3.6	18.1 ~ 26.0
Valve body cover	9.8 ~ 11.8	1.0 ~ 1.2	7.2 ~ 8.7
Inhibitor switch	9.8 ~ 11.8	1.0 ~ 1.2	7.2 ~ 8.7
Manual control lever	17.7 ~ 24.5	1.8 ~ 2.5	13.0 ~ 18.1

#### Sealants

Item	Specified sealant
Rear cover liquid gasket	Three bond 1281B or LOCTITE FMD-546
Torque converter housing liquid gasket	
Valve body liquid gasket	

## General Information

## AT-3

### Snap Ring, Thrust Washer, Thrust race and Pressure plate

Part name	Part No.	Thickness[mm(in.)]
Pressure plate (Low & reverse brake) * A6MF1 : 1.1t ~ 2.3t * A6MF2 : 2.9t ~ 3.9t	45649-3B611	1.1(0.0433)
	45649-3B613	1.3(0.0512)
	45649-3B615	1.5(0.0591)
	45649-3B617	1.7(0.0669)
	45649-3B619	1.9(0.0748)
	45649-3B621	2.1(0.0827)
	45649-3B623	2.3(0.0906)
	45649-3B625	2.5(0.0984)
	45649-3B627	2.7(0.1063)
	45649-3B629	2.9(0.1142)
	45649-3B631	3.1(0.1220)
	45649-3B633	3.3(0.1299)
	45649-3B635	3.5(0.1378)
	45649-3B637	3.7(0.1457)
	45649-3B639	3.9(0.1535)
Thrust race (Input shaft end play-Rear)	45853-3B614	1.4(0.0551)
	45853-3B615	1.5(0.0591)
	45853-3B616	1.6(0.0630)
	45853-3B617	1.7(0.0669)
	45853-3B618	1.8(0.0709)
	45853-3B619	1.9(0.0748)
	45853-3B620	2.0(0.0787)
	45853-3B621	2.1(0.0827)
	45853-3B622	2.2(0.0866)
45853-3B623	2.3(0.0906)	

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## Automatic Transaxle System

Part name	Part No.	Thickness[mm(in.)]
Thrust washer (Input shaft end play-Front) * A6MF1 : 1.8t ~ 2.8t * A6MF2 : 4.4t ~ 5.4t	45472-3B618	1.8(0.0709)
	45472-3B620	2.0(0.0787)
	45472-3B622	2.2(0.0866)
	45472-3B624	2.4(0.0945)
	45472-3B626	2.6(0.1024)
	45472-3B628	2.8(0.1102)
	45472-3B644	4.4(0.1732)
	45472-3B646	4.6(0.1811)
	45472-3B648	4.8(0.1890)
	45472-3B650	5.0(0.1969)
	45472-3B652	5.2(0.2047)
	45472-3B654	5.4(0.2126)
Snap ring (Under drive brake disk set)	45619-3B617	1.7(0.0669)
	45619-3B619	1.9(0.0748)
	45619-3B621	2.1(0.0827)
	45619-3B623	2.3(0.0906)
	45619-3B625	2.5(0.0984)
	45619-3B627	2.7(0.1063)
	45619-3B629	2.9(0.1142)
Thrust washer (Middle & rear planetary gear end play)	45729-3B630	3.0(0.1181)
	45729-3B632	3.2(0.1260)
	45729-3B634	3.4(0.1339)
	45729-3B636	3.6(0.1417)
	45729-3B638	3.8(0.1496)
	45729-3B640	4.0(0.1575)
	45729-3B642	4.2(0.1654)
	45729-3B644	4.4(0.1732)
45729-3B646	4.6(0.1811)	

## General Information

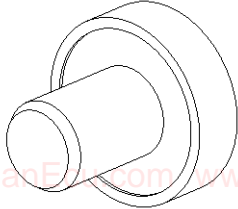
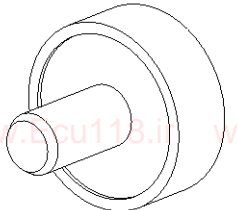
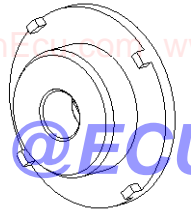
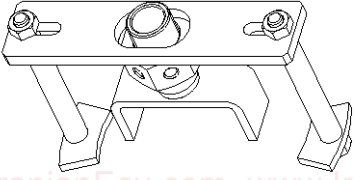
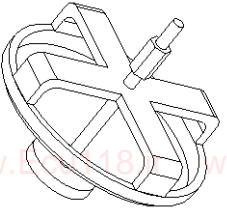
## AT-5

Part name	Part No.	Thickness[mm(in.)]
Pressure plate (2/6 brake Disk set)  * A6MF1 : 1.5t ~ 2.9t * A6MF2 : 1.9t ~ 3.1t	45683-3B615	1.5(0.0591)
	45683-3B617	1.7(0.0669)
	45683-3B619	1.9(0.0748)
	45683-3B621	2.1(0.0827)
	45683-3B623	2.3(0.0906)
	45683-3B625	2.5(0.0984)
	45683-3B627	2.7(0.1063)
	45683-3B629	2.9(0.1142)
	45683-3B631	3.1(0.1220)
Snap ring (Over drive clutch)	45552-3B617	1.7(0.0669)
	45552-3B619	1.9(0.0748)
	45552-3B621	2.1(0.0827)
	45552-3B623	2.3(0.0906)
	45552-3B625	2.5(0.0984)
	45552-3B627	2.7(0.1063)
Snap ring (35R clutch)	45452-3B616	1.6(0.0630)
	45452-3B618	1.8(0.0709)
	45452-3B620	2.0(0.0787)
	45452-3B622	2.2(0.0866)
	45452-3B624	2.4(0.0945)
	45452-3B626	2.6(0.1024)
	45452-3B628	2.8(0.1102)

## AT-6

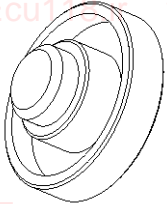
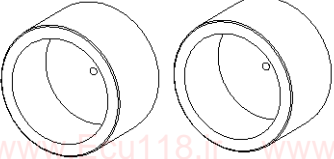
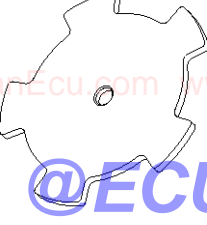
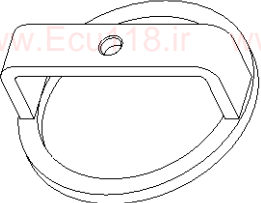
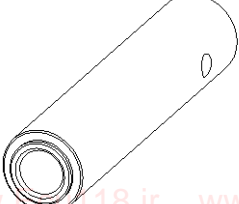
## Automatic Transaxle System

### Special Service Tools

Tool (Number and name)	Illustration	Application
09453-3L200 Bearing installer(Up)	 <p style="text-align: center;">S97AT9111D</p>	Installation of the bearing for transfer driven gear (Up)
09453-3L210 Bearing installer(Down)	 <p style="text-align: center;">S97AT9112D</p>	Installation of the bearing for transfer driven gear (Down)
09453-3L220 Lock nut remover & Installer	 <p style="text-align: center;">S97AT9113D</p>	Removal and installation of transfer drive lock nut
09453-3L230 Snap ring remover & installer	 <p style="text-align: center;">S97AT9114D</p>	Removal and installation of 35R clutch snap ring
09452-3L100 Snap ring remover & installer	 <p style="text-align: center;">S97AT9115D</p>	Removal and installation of oil pump return spring

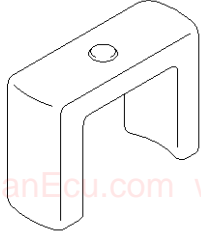
## General Information

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Tool (Number and name)	Illustration	Application
09453-3L240 Oil seal installer	 <p style="text-align: center;">S97AT9116D</p>	Installation of oil seal for the transaxle case housing
09453-3L250 Bearing installer	 <p style="text-align: center;">S97AT9117D</p>	Installation of the differential bearing
09453-1M110 Snap ring remover & installer	 <p style="text-align: center;">S97AT9118D</p>	Installation of the snap ring for low & reverse brake return spring (with the bar & nut-SST No.:09453-1M210)
09453-3L270 Snap ring remover & installer	 <p style="text-align: center;">S97AT9119D</p>	Installation of the snap ring for under drive brake spring
09459-3L100 Oil seal installer	 <p style="text-align: center;">S97AT9120D</p>	Installation of the manual shaft oil seal

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## Automatic Transaxle System

Tool (Number and name)	Illustration	Application
09453 - 4C400 Spring compressor	 <p data-bbox="831 658 927 680">AK66782A</p>	Removal and installation of over drive clutch balance piston snap ring

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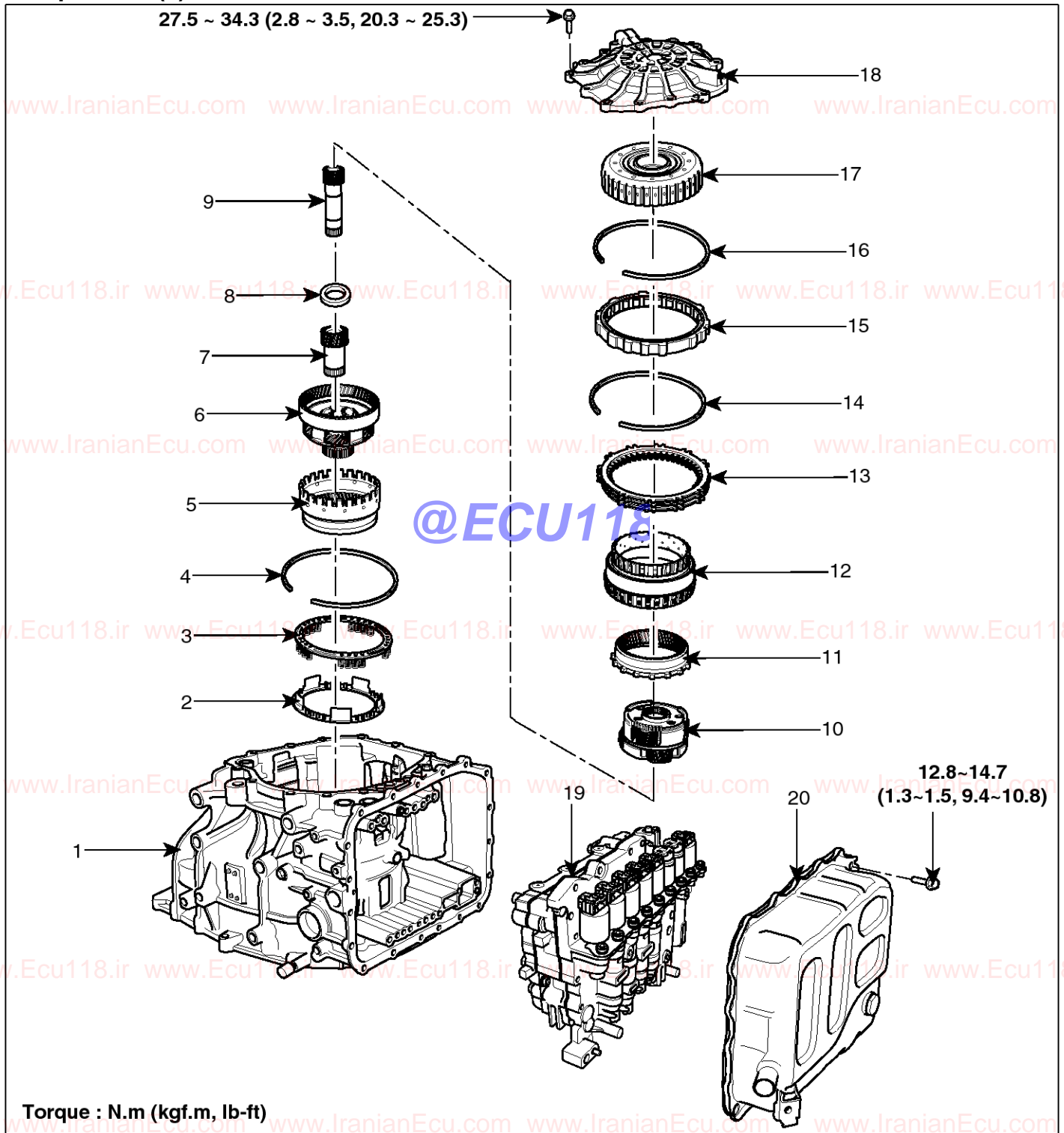
# Automatic Transaxle System

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## Automatic Transaxle System

### Automatic Transaxle

#### Components (1)



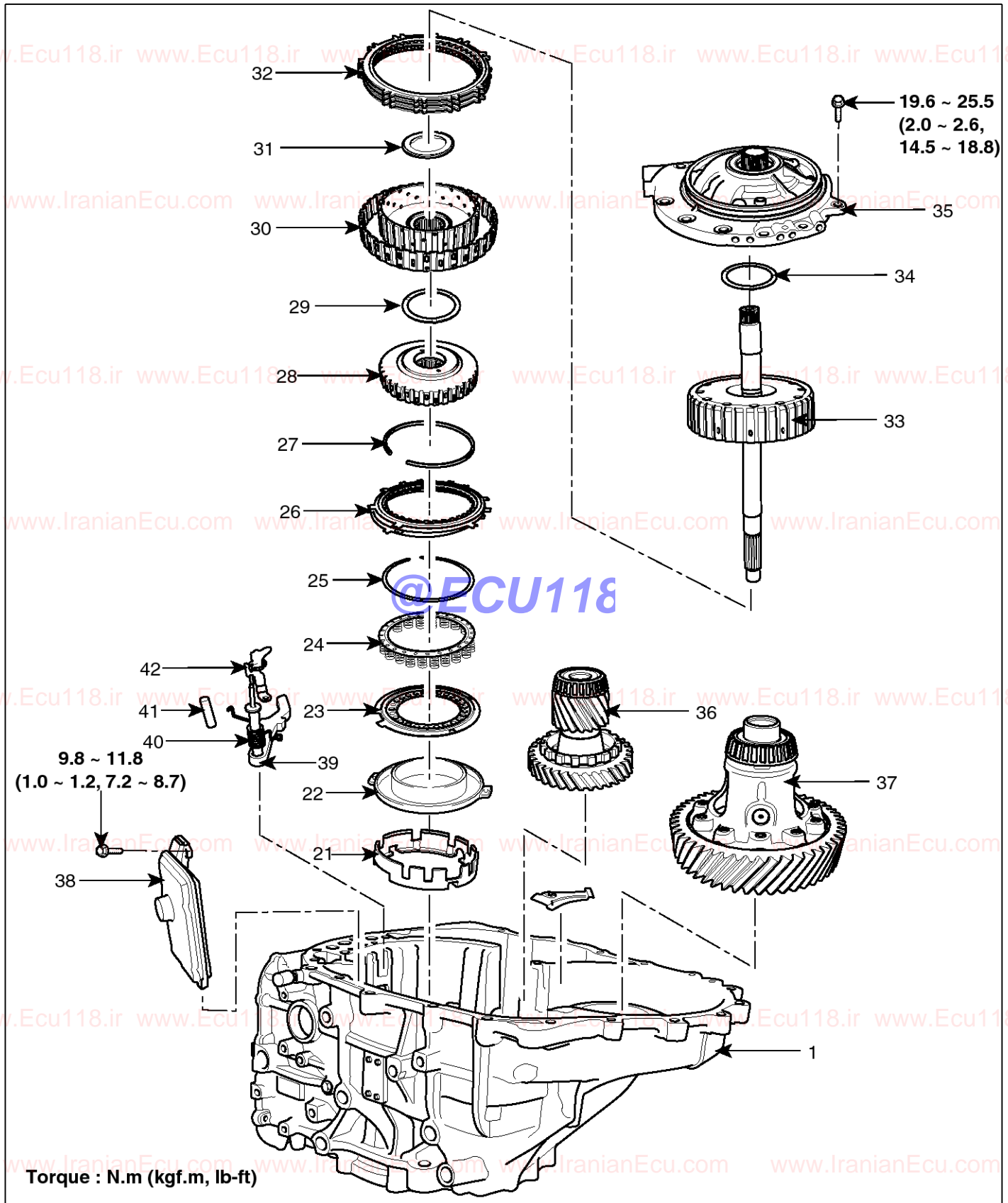
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# AT-10

# Automatic Transaxle System

## Components (2)



## Automatic Transaxle System

AT-11

1. Automatic transaxle case
2. Low & reverse brake piston
3. Low & reverse brake return spring
4. Snap ring
5. Front annulus gear assembly
6. Front planetary gear assembly
7. Front sun gear assembly
8. Bearing
9. Middle sun gear assembly
10. Middle & Rear planetary gear assembly
11. Rear annulus gear
12. One way clutch inner race assembly
13. Low & reverse brake disk set
14. Snap ring
15. One way clutch assembly
16. Snap ring
17. Over drive clutch assembly
18. Rear cover assembly
19. Valve body assembly
20. Valve body cover
21. Under drive brake retainer
22. Under drive brake chamber
23. Under drive brake piston
24. Under drive brake spring
25. Snap ring
26. Under drive brake disk set
27. Snap ring
28. Under drive brake hub assembly
29. Thrust washer
30. 35R & 2/6 hub assembly
31. Thrust Bearing
32. 2/6 brake Disk set
33. 35R clutch assembly
34. Thrust washer
35. Oil pump assembly
36. Transfer driven gear assembly
37. Differential assembly
38. Oil filter assembly
39. Parking sprag
40. Parking sprag shaft & spring
41. Support shaft
42. Parking rod guide

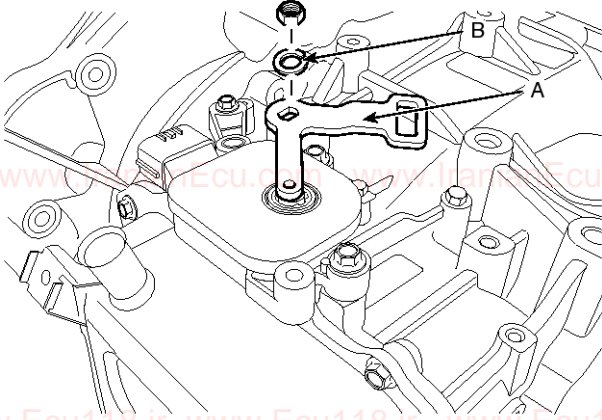
**@ECU118**

## AT-12

## Automatic Transaxle System

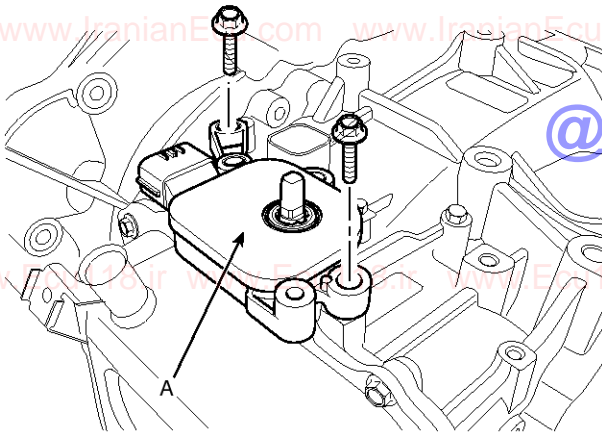
### Disassembly

1. Remove the manual control lever (A) and the washer (B) after removing a nut.



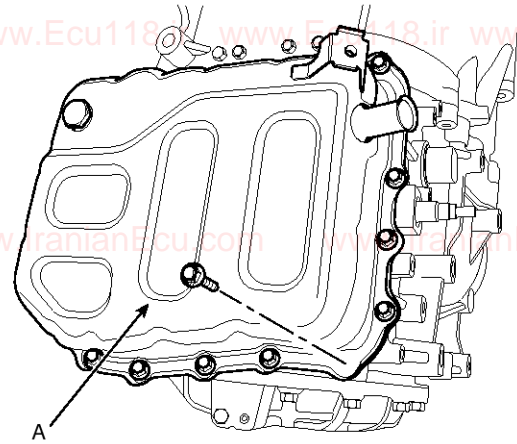
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2. Remove the inhibitor assembly (A) after removing two bolt.



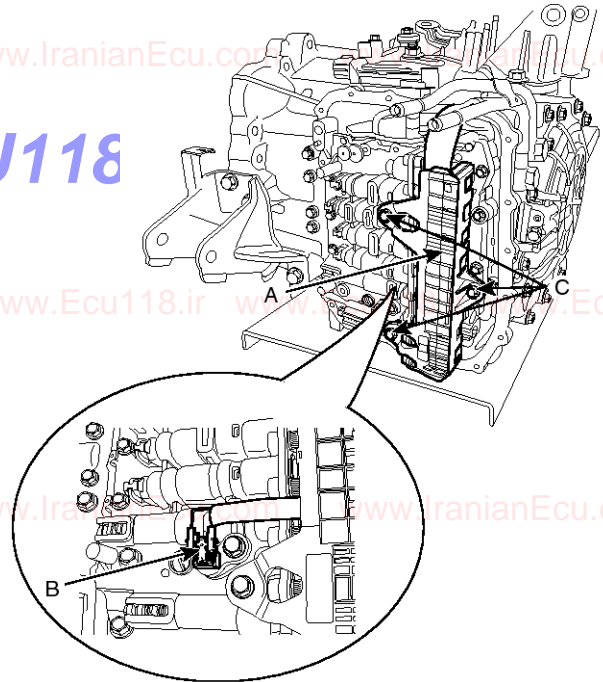
S98AT9173D

3. Remove the valve body cover (A) after removing bolts (19ea).



S98AT9172D

4. Remove the bolt (C-3ea) after disconnecting the solenoid valve connector assembly (A) and the oil temperature sensor connector (B).

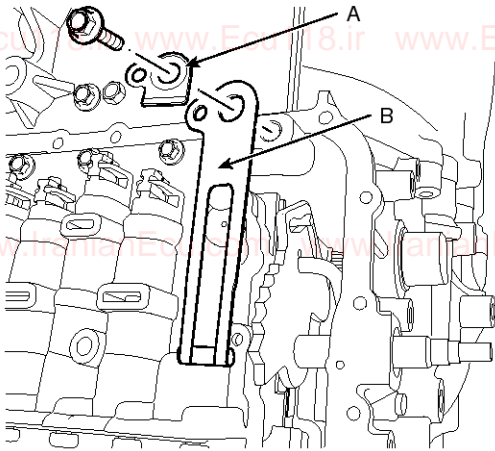


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# Automatic Transaxle System

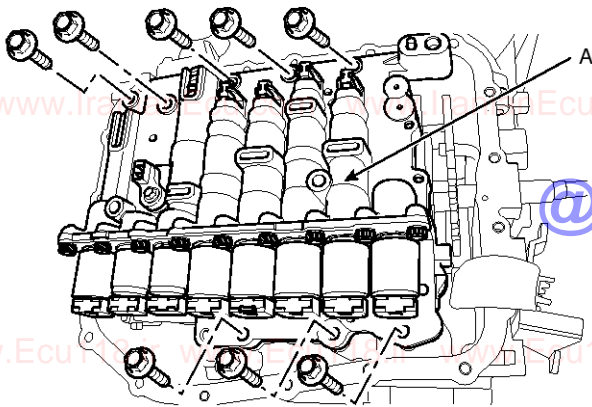
# AT-13

5. Remove the detent spring assembly (A) and plate (B) after removing a bolt.



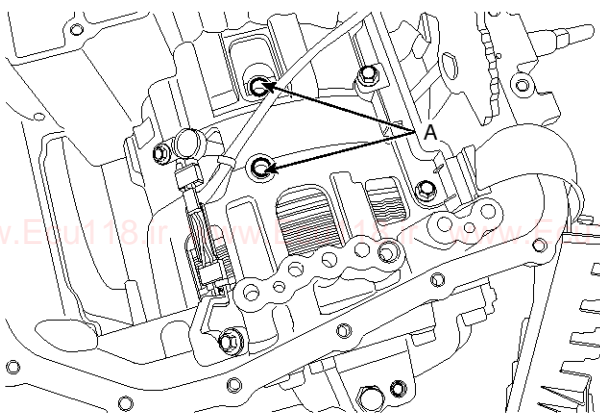
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6. Remove the valve body assembly (A).



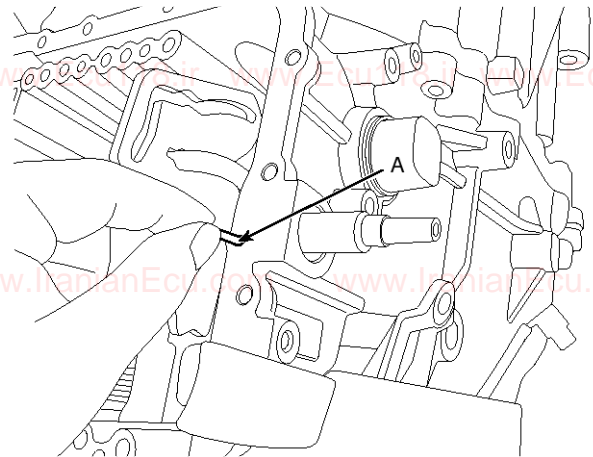
S98AT9168D

7. Remove the pipe seal (A-2ea).



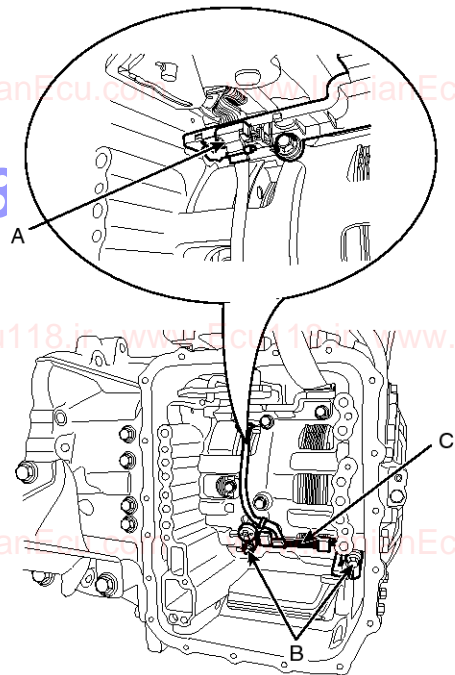
S98AT9175D

8. Remove the fixing pin (A) with a magnet.



S98AT9167D

9. Remove the input/output speed sensor assembly (C) after disconnecting the connector (A) from the main wiring and removing the bolt (B-2ea).

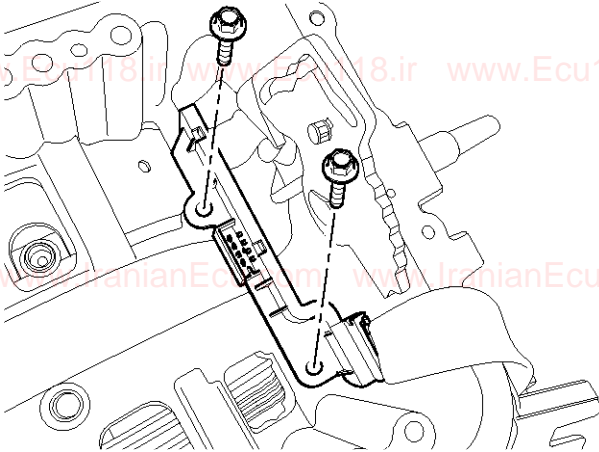


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## AT-14

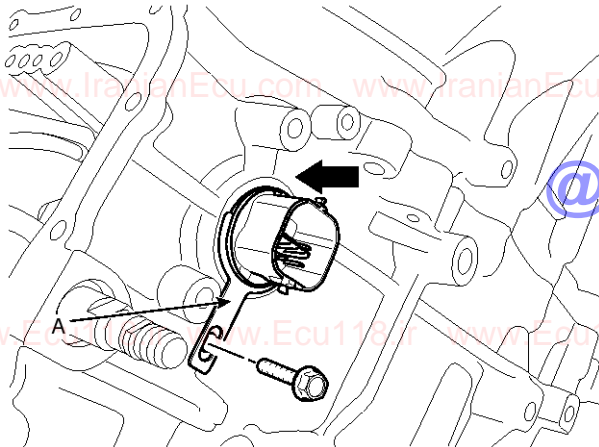
## Automatic Transaxle System

10. Remove the main wiring mounting bolt (2ea).



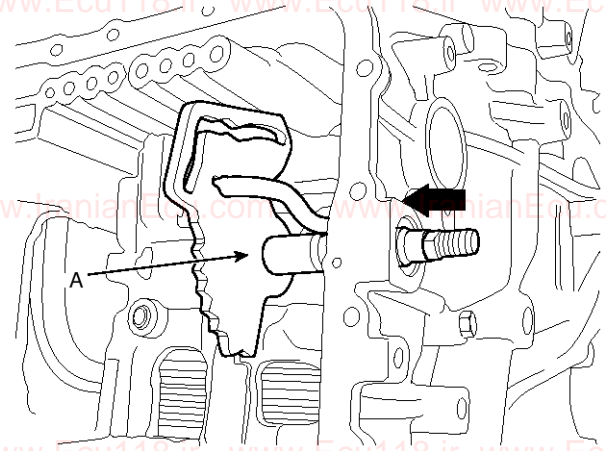
S97AT9065D

11. Remove the fixing pin (A) after removing a bolt and then, remove the solenoid valve connector by pushing in the arrow direction.



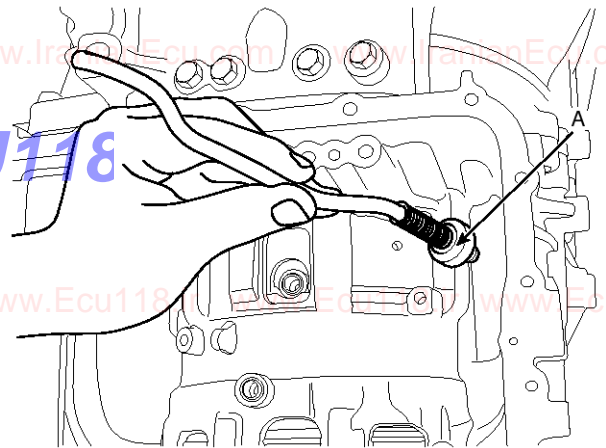
S98AT9164D

12. Remove the detent lever assembly (A) by pushing in the arrow direction after removing the end of the parking rod assembly.



S98AT9163D

13. Remove the parking rod assembly (A) from the parking rod guide.

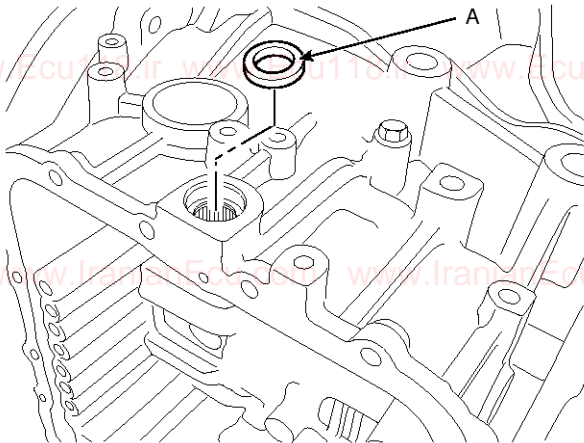


S98AT9162D

# Automatic Transaxle System

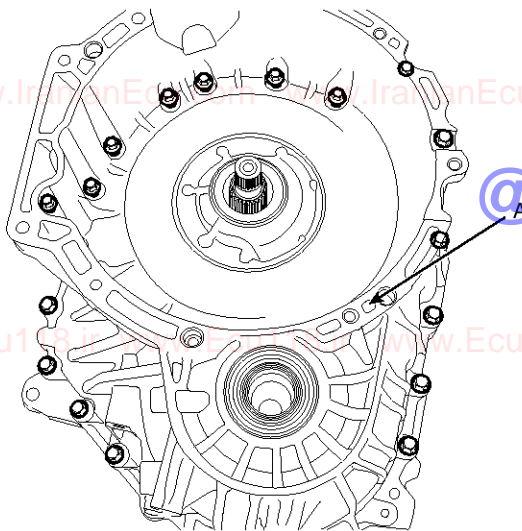
# AT-15

14. Remove the manual shaft oil seal (A).

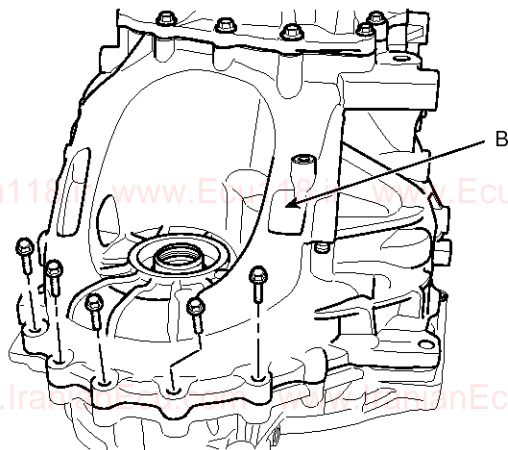


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15. Remove the converter housing assembly (B) from the transaxle case assembly (A) after removing the bolts (22ea).

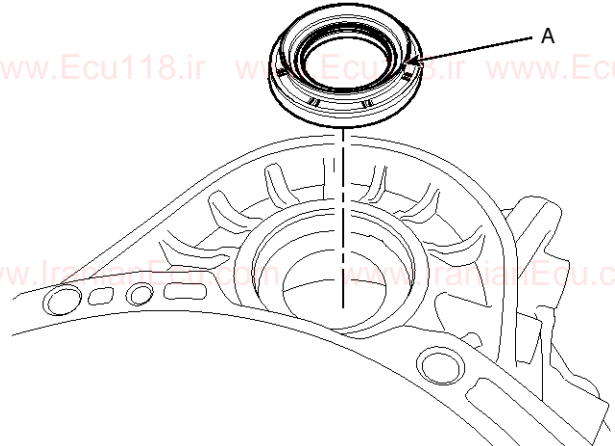


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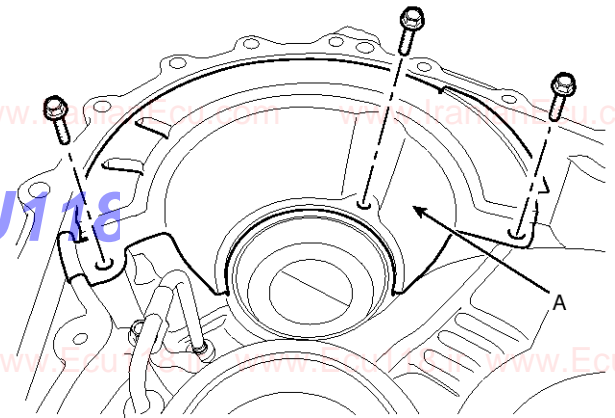
S98AT9159D

16. Remove the differential oil seal (A).



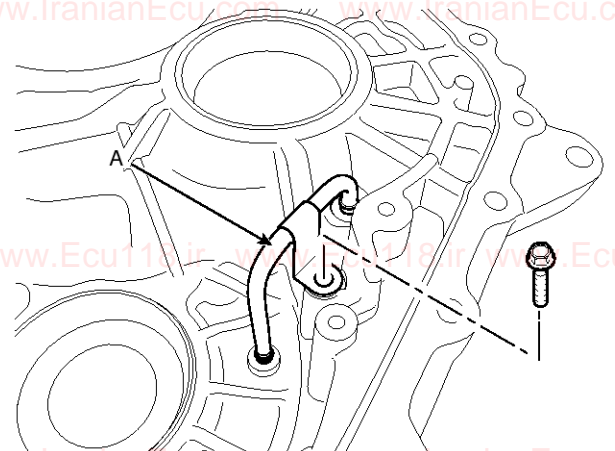
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17. Remove the oil guide (A) after removing the bolts (3ea).



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18. Remove the lubricating pipe (A) after removing a bolt.

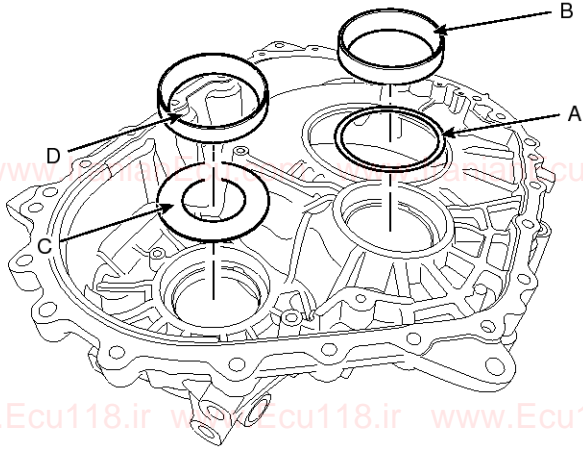


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## AT-16

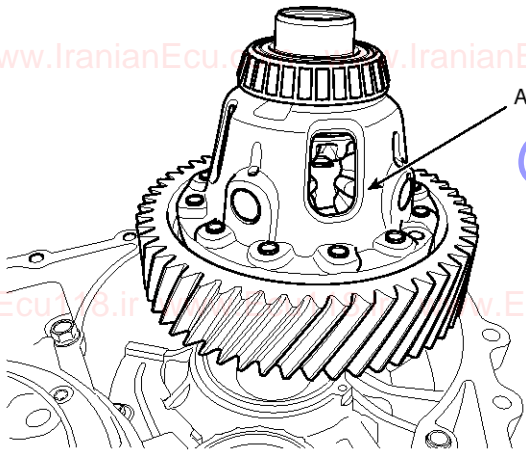
## Automatic Transaxle System

19. Remove the differential bearing spacer (A), the outer race (B), the transfer driven gear spacer (C) and the outer race (D) of the converter housing side with the puller.



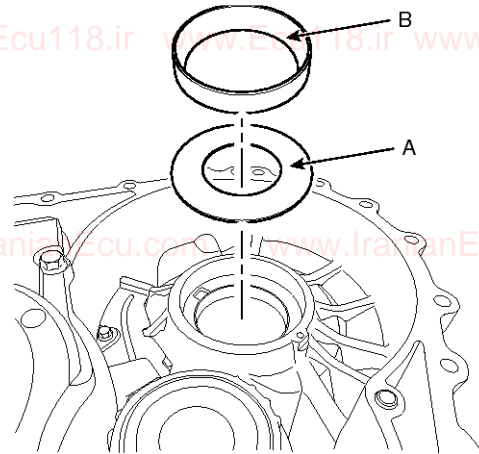
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20. Remove the differential assembly (A).



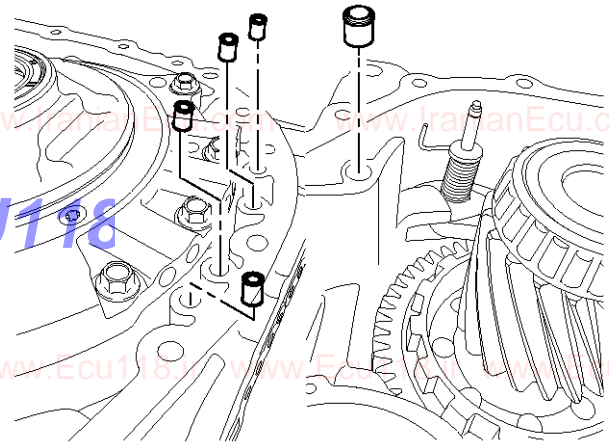
S98AT9152D

21. Remove the spacer (A) and the differential bearing outer race (B) with the puller.



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22. Remove the seals (5ea).

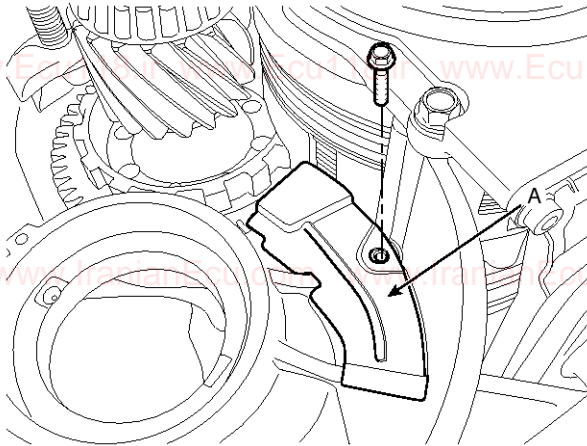


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# Automatic Transaxle System

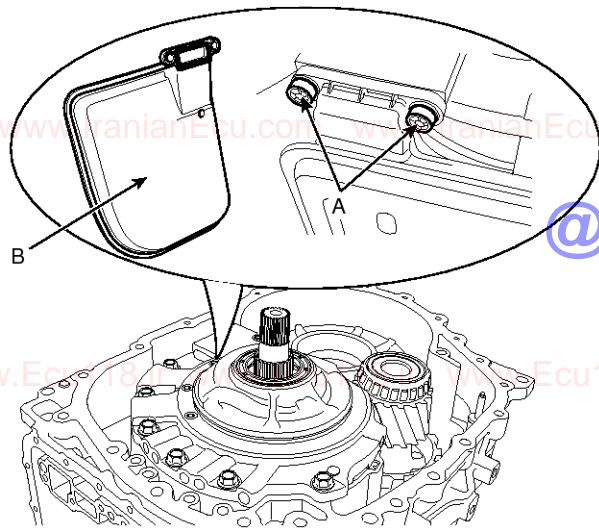
# AT-17

23. Remove the oil guide (A) after removing a bolt.



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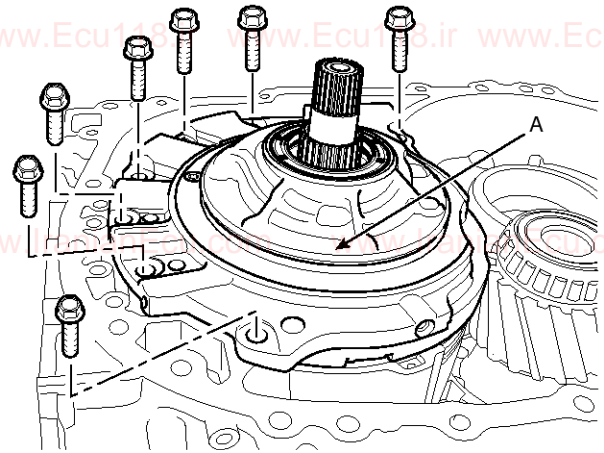
24. Remove the oil filter assembly (B) after removing the bolts (A-2ea).



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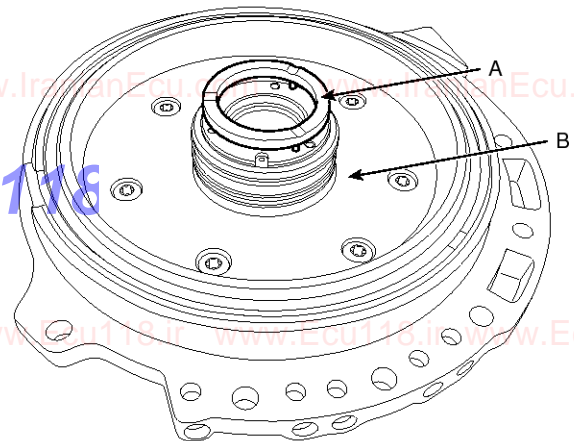
25. Remove the O-ring from the oil pump assembly.

26. Remove the oil pump assembly (A) after removing the bolts (7ea).



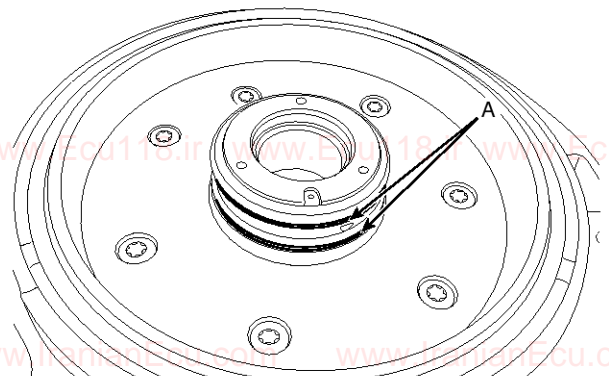
S98AT9147D

27. Remove the thrust washer (A) from the oil pump assembly (B).



S98AT9146D

28. Remove the seal rings (A-2ea) from the oil pump assembly.



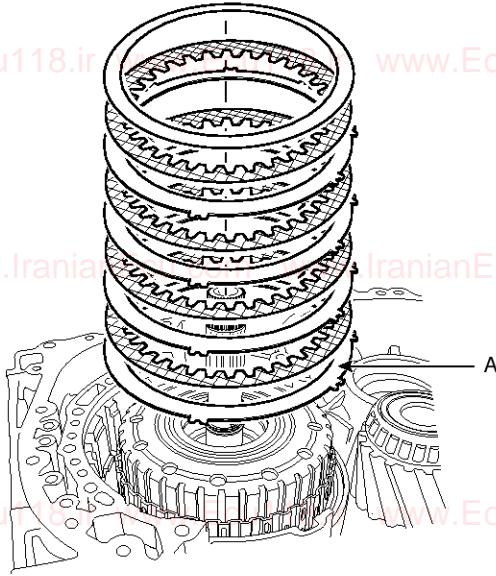
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## AT-18

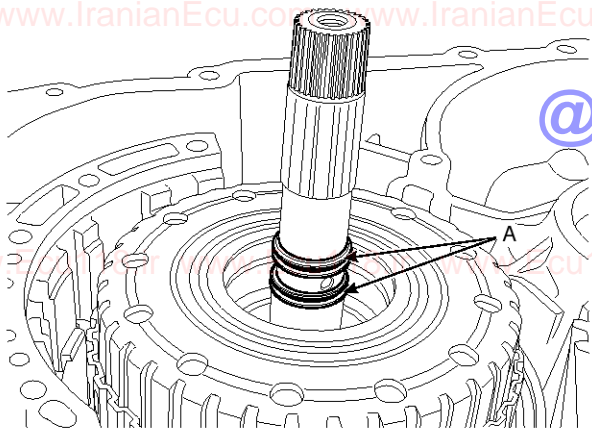
## Automatic Transaxle System

29. Remove the 2/6 brake disc set in order.



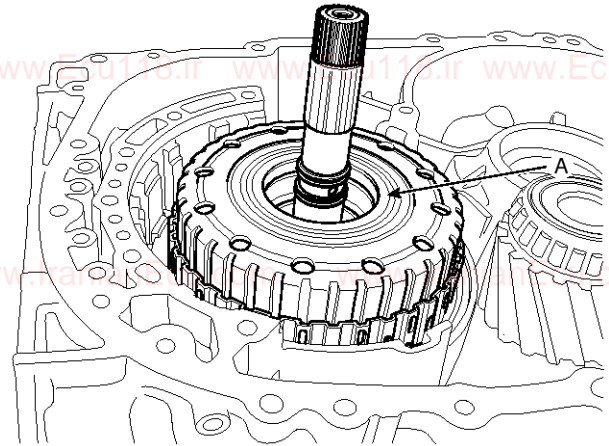
S97AT9044D

30. Remove the seal rings (A-2ea).



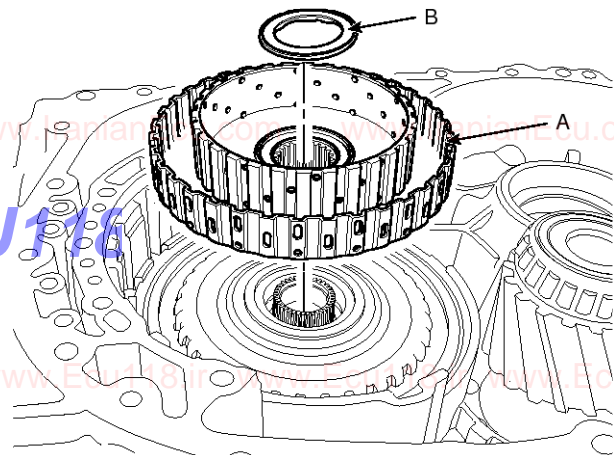
S98AT9143D

31. Remove the 35R clutch assembly (A).



S98AT9142D

32. Remove the 35R & 2/6 brake hub assembly (A) and the thrust bearing (B).

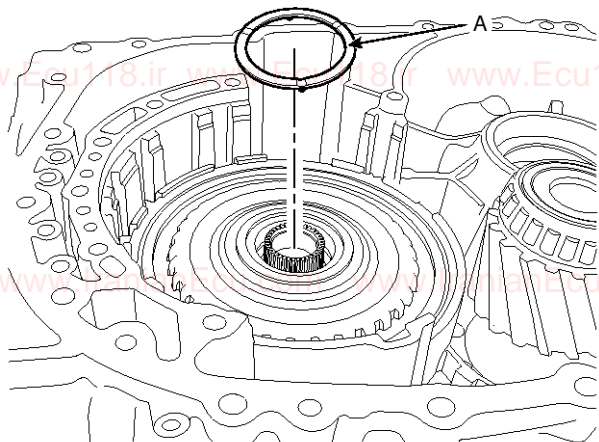


S98AT9141D

# Automatic Transaxle System

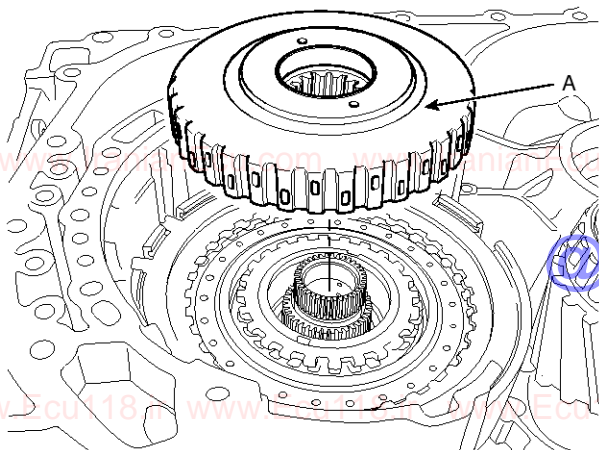
# AT-19

33. Remove the thrust washer (A).



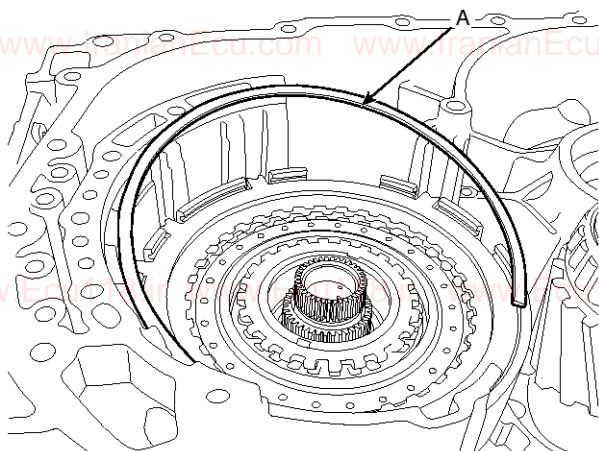
S98AT9140D

34. Remove the under drive brake hub assembly (A).



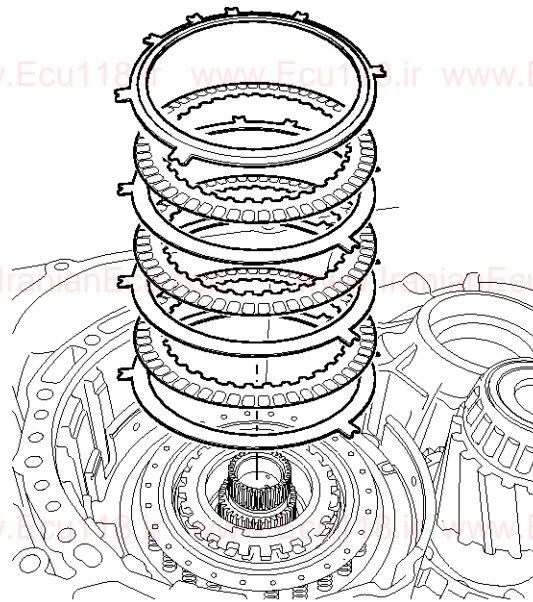
S98AT9139D

35. Remove the snap ring (A).



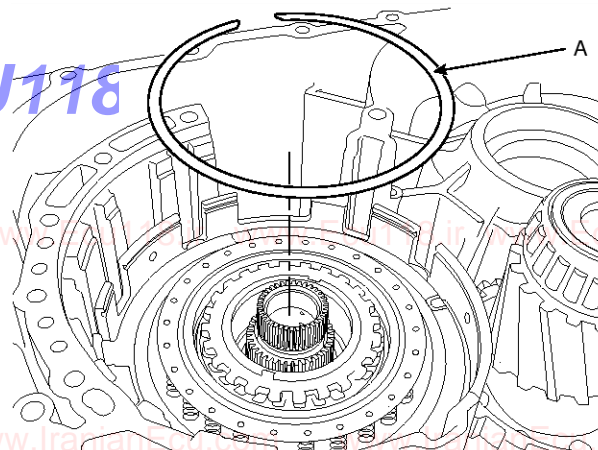
S98AT9138D

36. Remove the under drive brake disk set in order.



S97AT9037D

37. Remove the snap ring (A) with SST(No.: 09453-3L270).

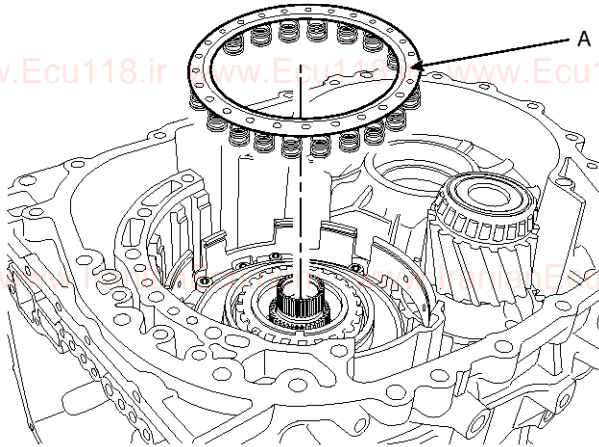


S98AT9136D

## AT-20

## Automatic Transaxle System

38. Remove the under drive brake spring (A).

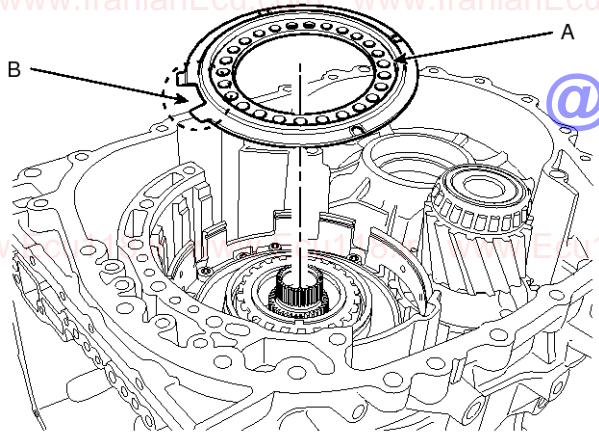


S98AT9135D

39. Remove the under drive brake piston (A).

### ⚠ CAUTION

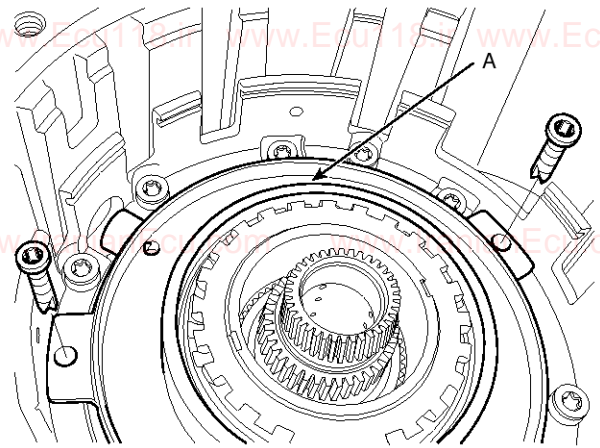
The projecting part (B) should be located at the position as below picture when removing the under drive brake piston (A).



S98AT9134D

40. Remove the D-ring (Outside) and O-ring (Inside).

41. Remove the under drive brake chamber (A) after removing 2 bolts.

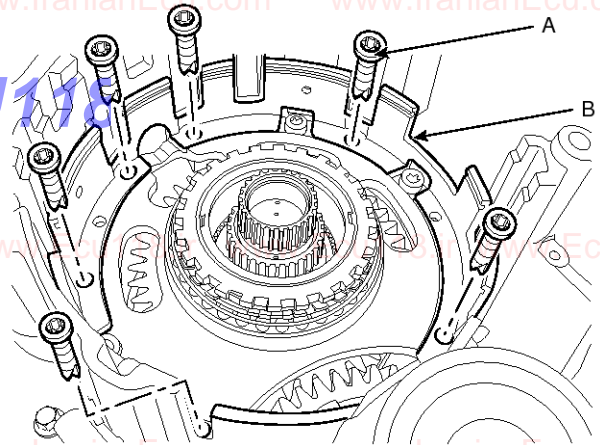


S98AT9133D

42. Remove the under drive brake retainer (B) mounting bolt (A-6ea).

### ⚠ CAUTION

Must check the bolts (6ea) position.



S98AT9132D

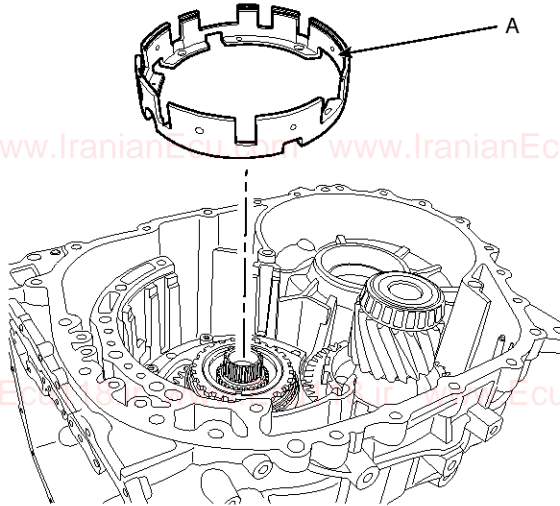
# Automatic Transaxle System

# AT-21

43. Remove the under drive brake retainer (A).

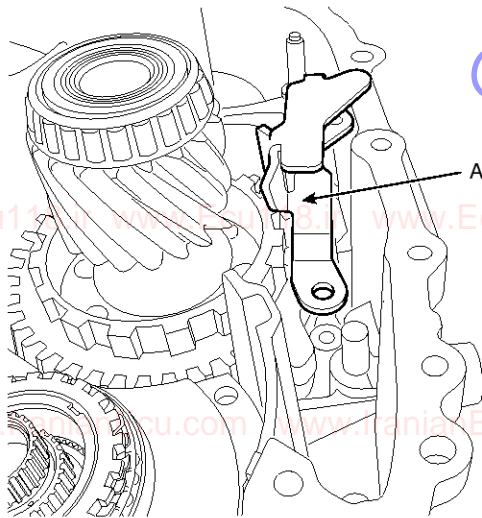
**CAUTION**

Must check the installation position and direction.



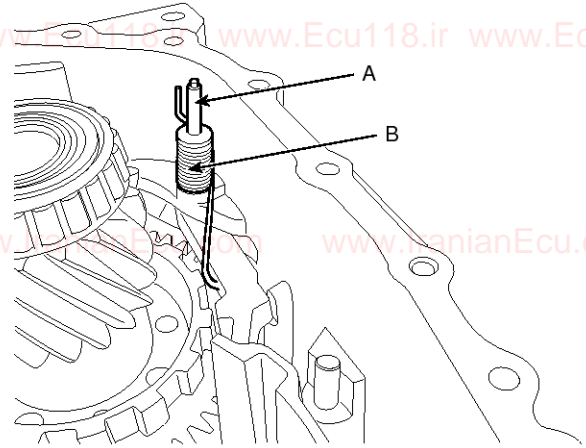
S98AT9131D

44. Remove the parking rod guide (A).



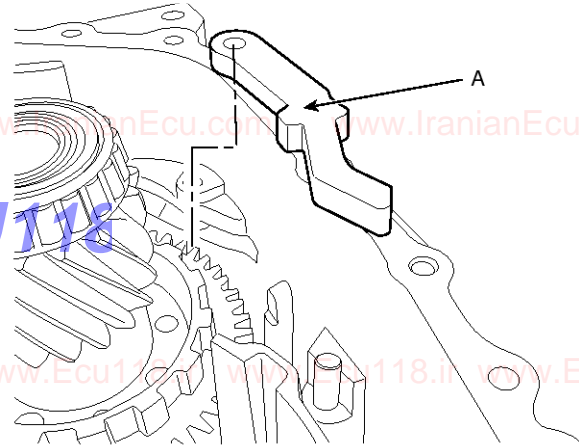
S98AT9130D

45. Remove the parking sprag shaft (A) and the spring (B).



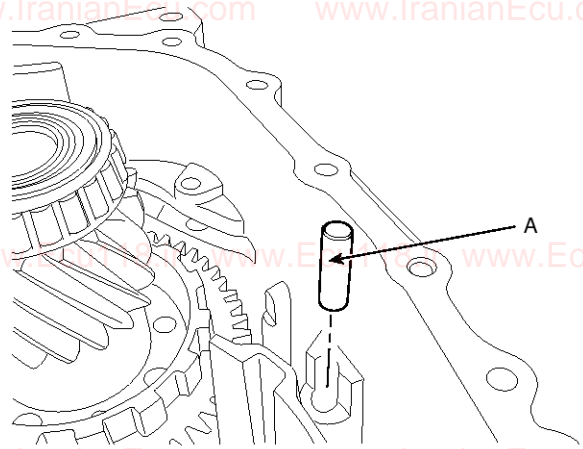
S98AT9129D

46. Remove the parking sprag (A).



S98AT9128D

47. Remove the support shaft (A).

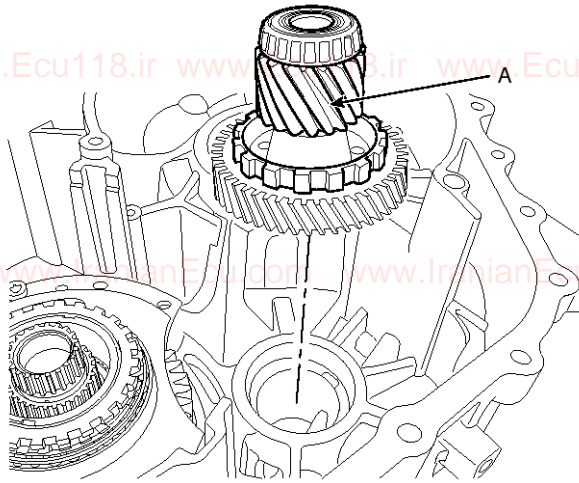


S98AT9127D

## AT-22

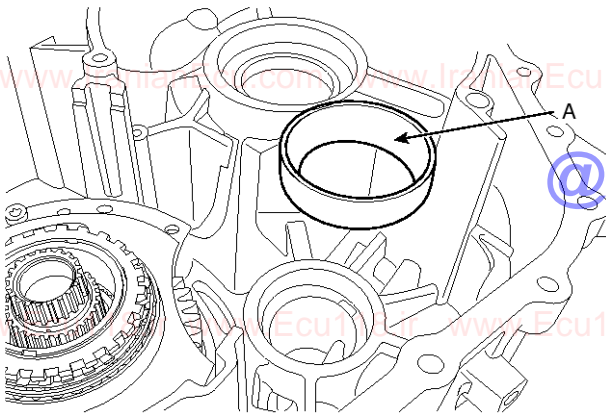
## Automatic Transaxle System

48. Remove the transfer driven gear assembly (A).



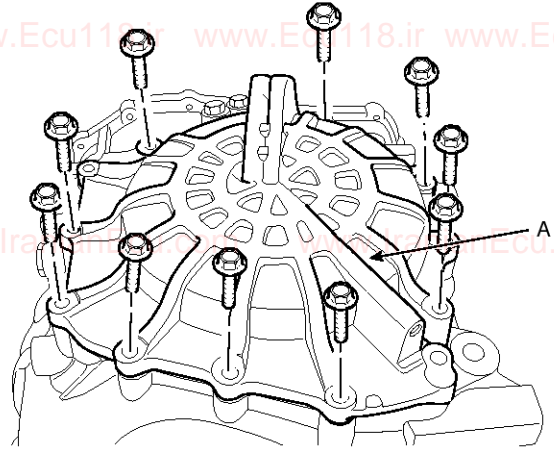
S98AT9126D

49. Remove the transfer driven gear outer race (A) with the puller.



S98AT9125D

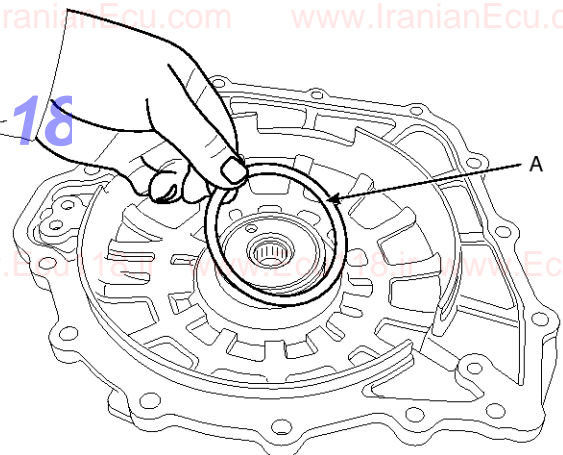
50. Remove the rear cover assembly (A) from the transaxle case after removing the bolts (14ea).



S98AT9124D

51. Apply the sealant on the left side of the transaxle case.

52. Remove the spacer (A) from the rear cover assembly.

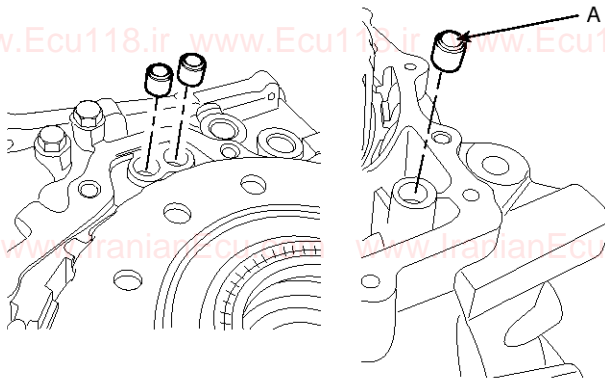


S98AT9122D

# Automatic Transaxle System

# AT-23

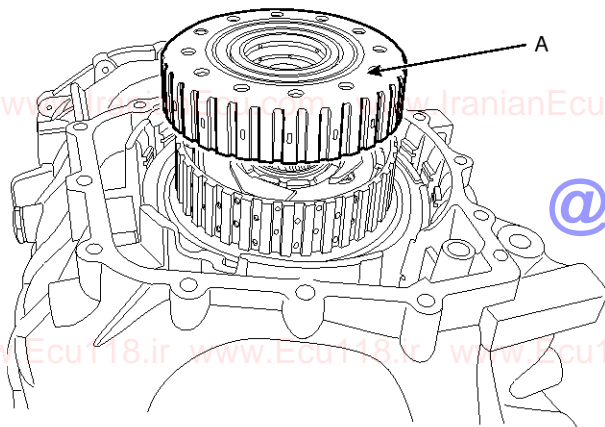
53. Remove the seal (A-3ea) from the transaxle case.



S98AT9121D

54. Remove the thrust bearing.

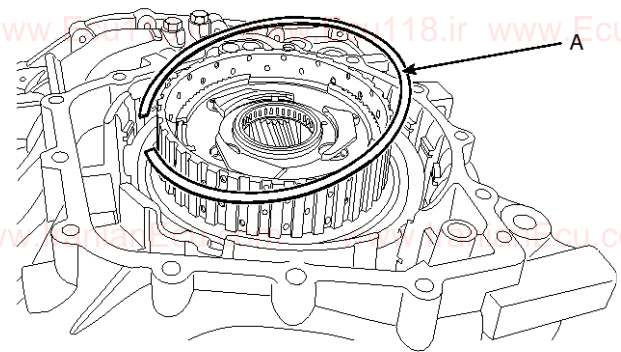
55. Remove the over drive clutch assembly (A).



S98AT9120D

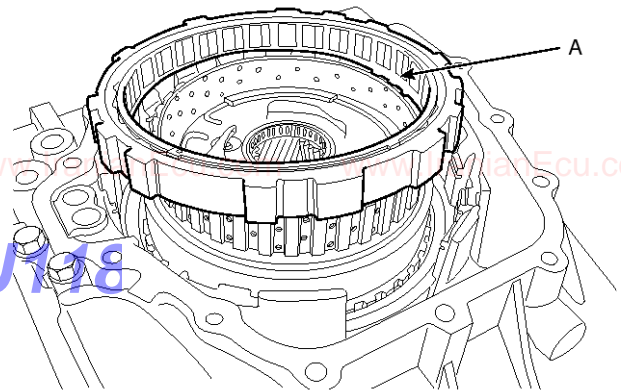
56. Remove the plastic thrust washer.

57. Remove the snap ring (A).



S98AT9119D

58. Remove the one way (1-way) clutch assembly (A).



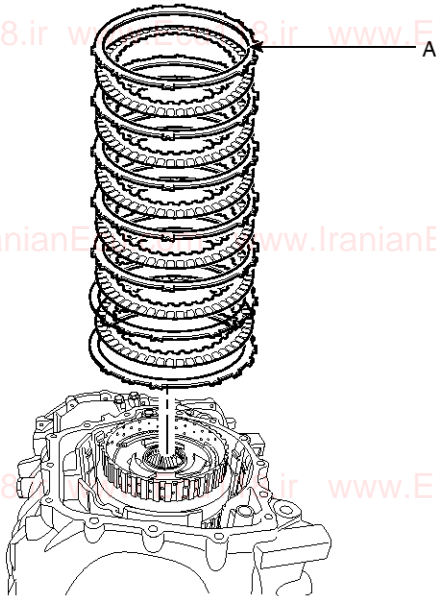
S98AT9118D

59. Remove the snap ring.

## AT-24

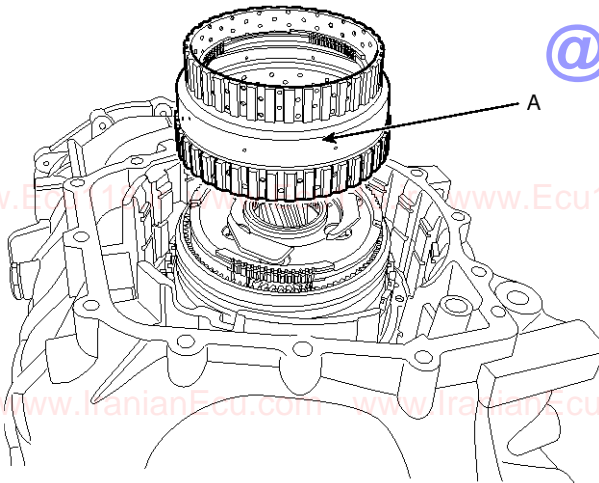
## Automatic Transaxle System

60. Remove the low & reverse brake pressure plate (A), the cushion plate & disc set in order.



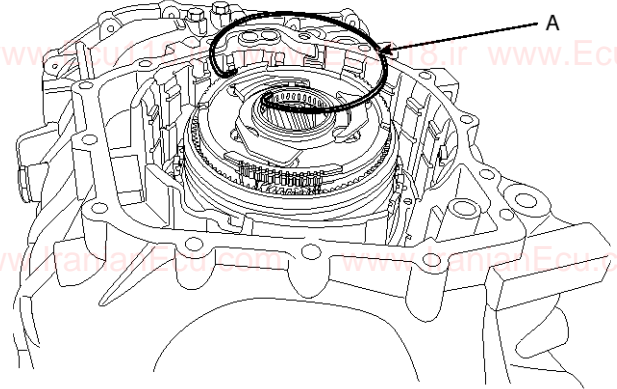
S95AT0001L

61. Remove the one way clutch inner race assembly (A) with closing up the snap ring.



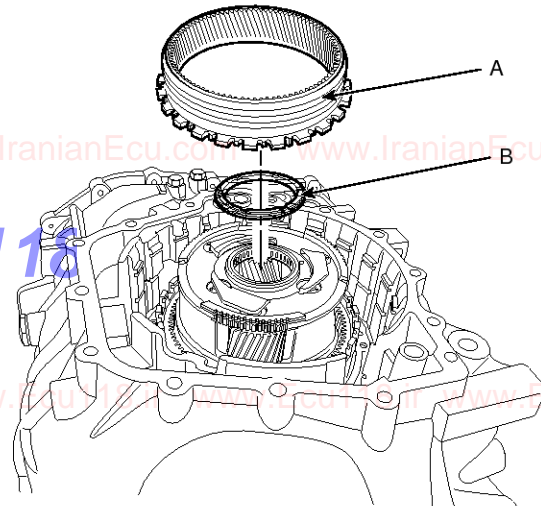
S98AT9115D

62. Remove the snap ring (A).



S98AT9114D

63. Remove the thrust washer (B) after removing the rear annulus gear (A).

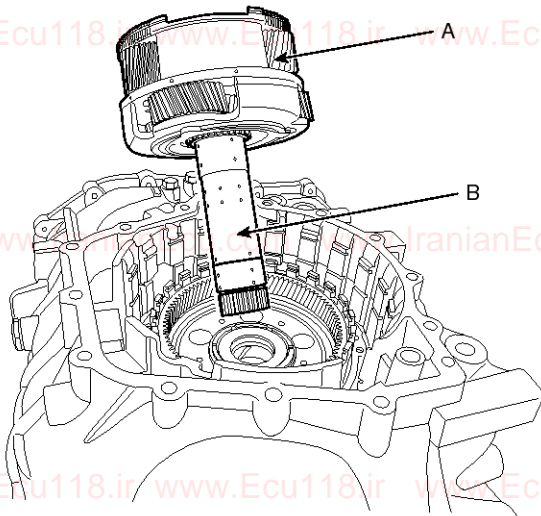


S98AT9001D

# Automatic Transaxle System

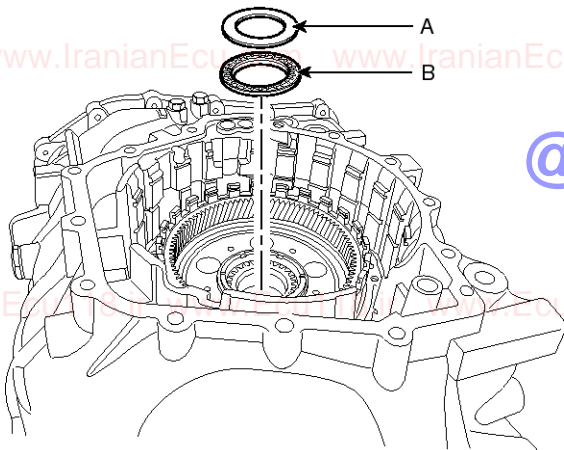
AT-25

64. Remove the middle & rear planetary gear assembly (A) and the middle sun gear assembly (B).



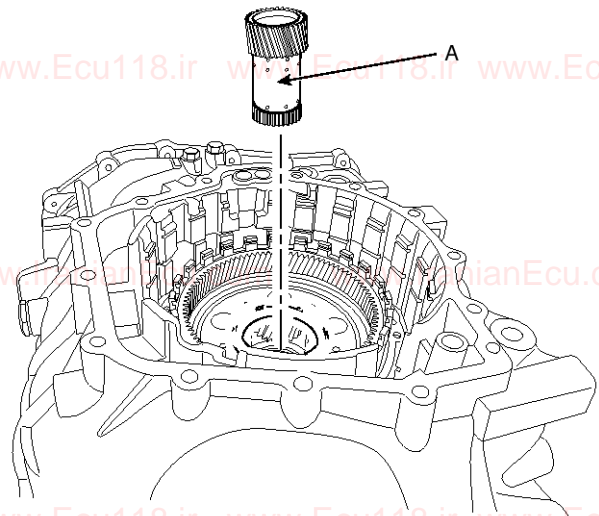
S98AT9112D

65. Remove the bearing (A) and the race set (B).



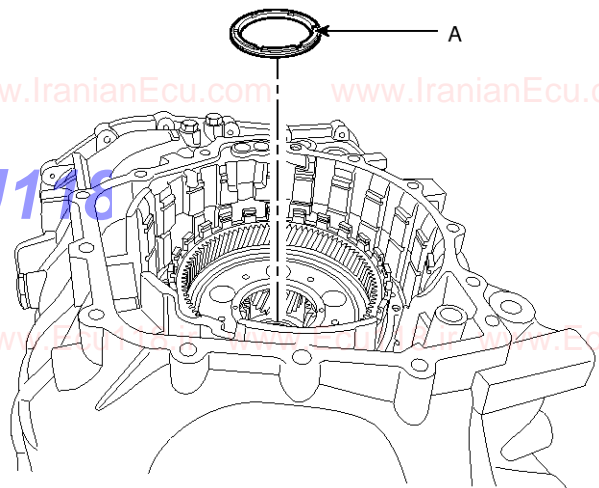
S98AT9110D

66. Remove the front sun gear assembly (A).



S98AT9109D

67. Remove the thrust washer (A).



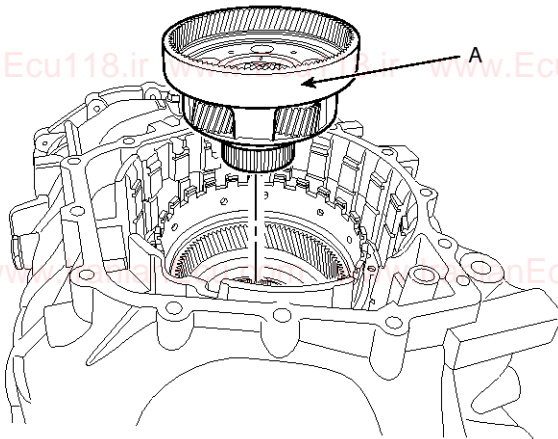
S98AT9108D



## AT-26

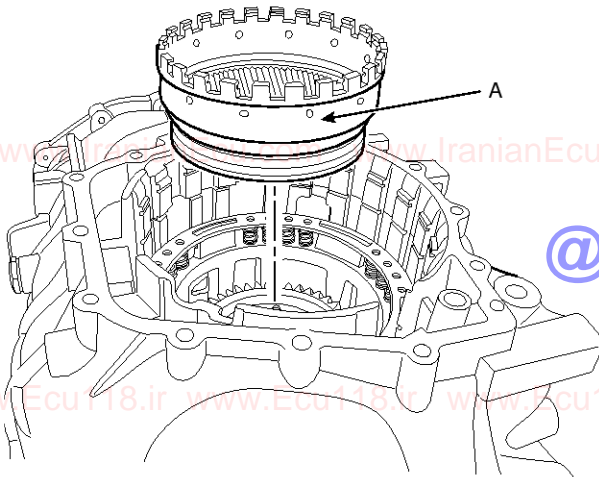
## Automatic Transaxle System

68. Remove the front planetary gear assembly (A).



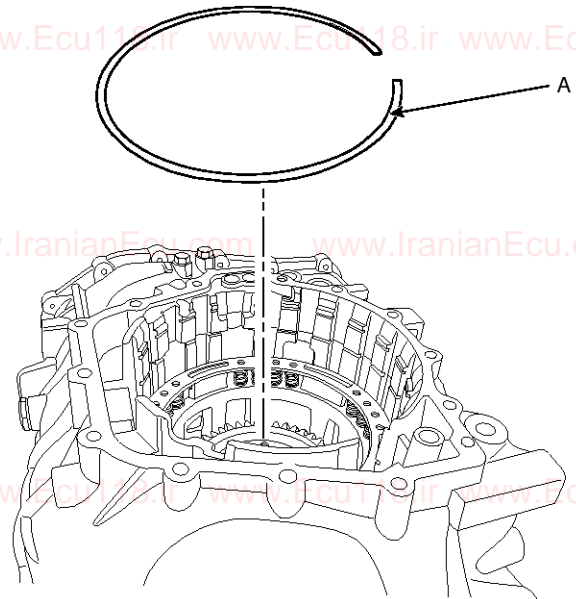
S98AT9107D

69. Remove the front annulus gear assembly (A).



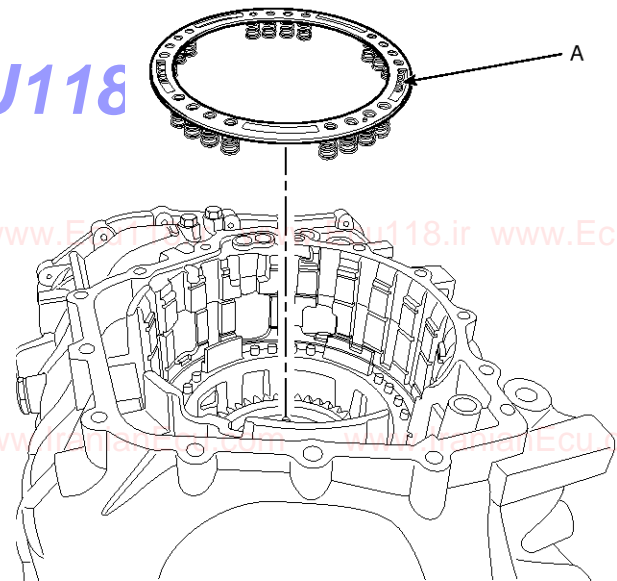
S98AT9106D

70. Remove the snap ring (A) with the SST(No.: 09453-1M110).



S98AT9105D

71. Remove the low & reverse brake return spring (A).

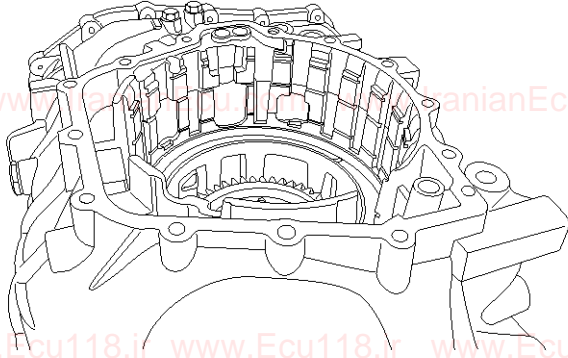
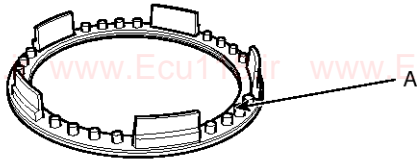


S98AT9104D

# Automatic Transaxle System

AT-27

72. Remove the low & reverse brake piston (A).



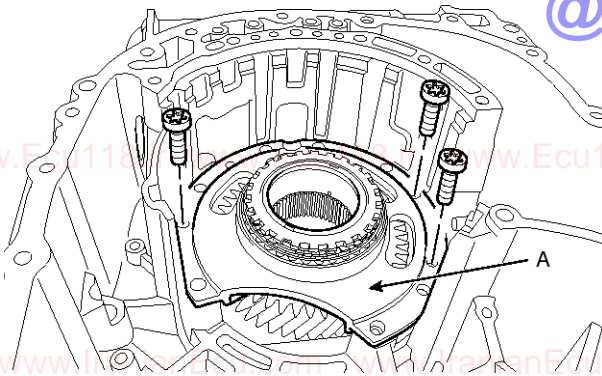
S98AT9103D

73. Remove the D-ring (2ea) at the inside and the outside.

74. Remove the transfer drive assembly (A) from the transaxle case after removing the bolts (3ea).

**CAUTION**

Must mark the bolt installation position.



S98AT9101D

## Reassembly

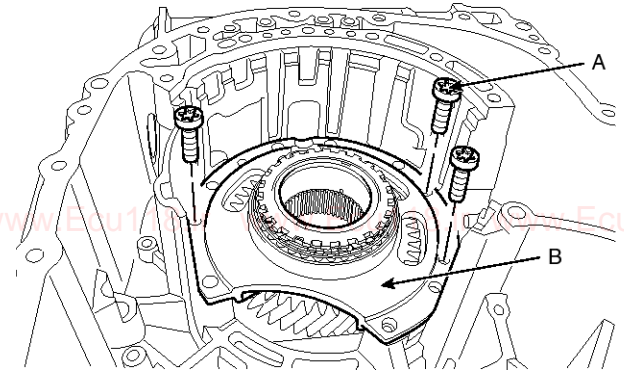
1. Install the transfer drive assembly (B) to the transaxle case by tightening the bolts (A-3ea).

**Tightening torque:**

30.4~35.3 N.m (3.1~3.6 kgf.m, 22.4~26.0 lb-ft)

**CAUTION**

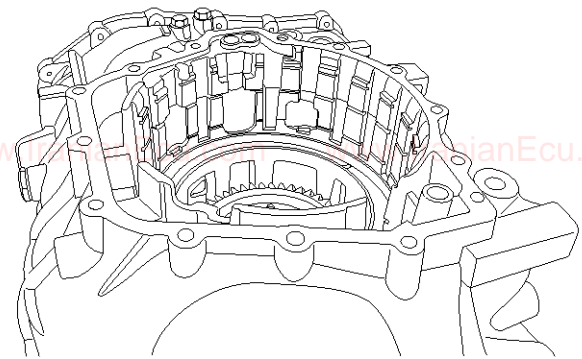
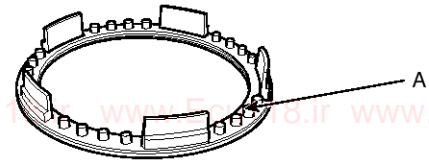
Install the transfer drive assembly after check the mark of the bolt installation position.



S98AT9180D

2. Install the D-ring (2ea) at the inside and the outside.

3. Install the low & reverse brake piston (A).

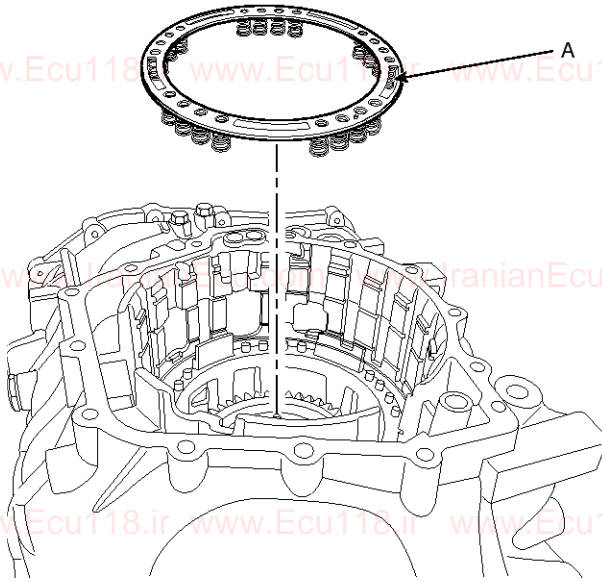


S98AT9103D

## AT-28

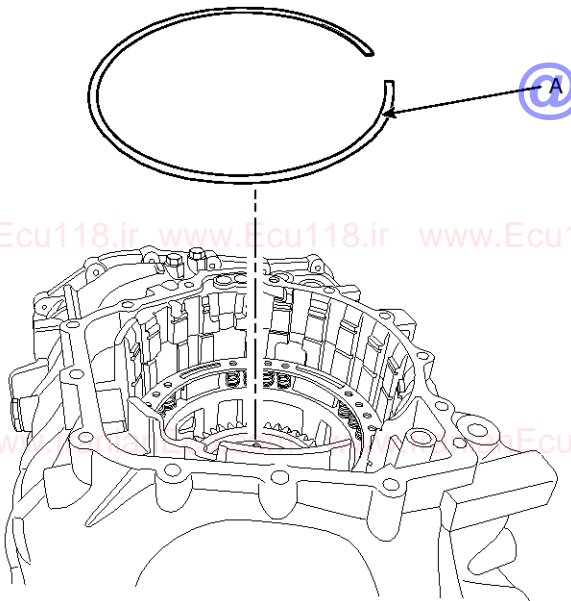
## Automatic Transaxle System

4. Install the low & reverse brake return spring (A).



S98AT9104D

5. Install the snap ring (A) with the SST(No.: 09453-1M110).

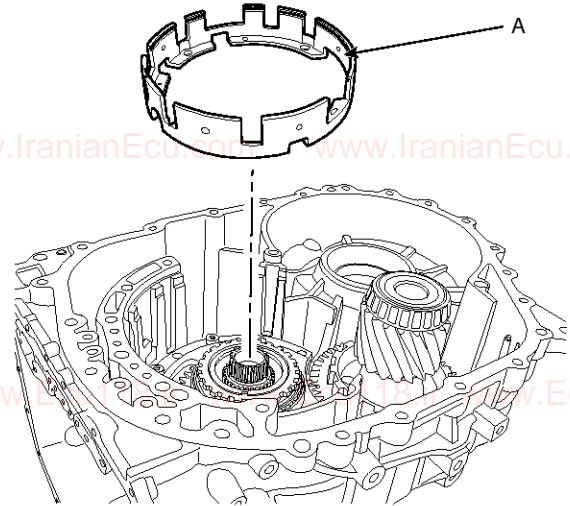


S98AT9105D

6. Install the under drive brake retainer (A).

### ⚠ CAUTION

Must check the installation position and direction and mounting bolts (3ea) position.



S98AT9131D

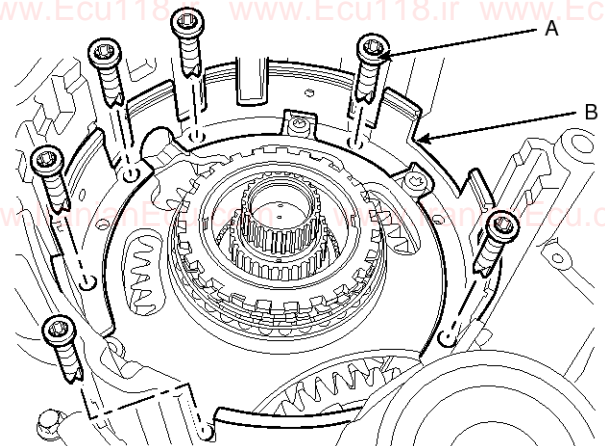
7. Tighten the under drive brake retainer (B) mounting bolt (A-6ea).

### Tightening torque:

30.4 ~ 35.3 N.m (3.1~3.6 kgf.m, 22.4 ~ 26.0 lb-ft)

### ⚠ CAUTION

Must check the bolts (6ea) position.



S98AT9132D

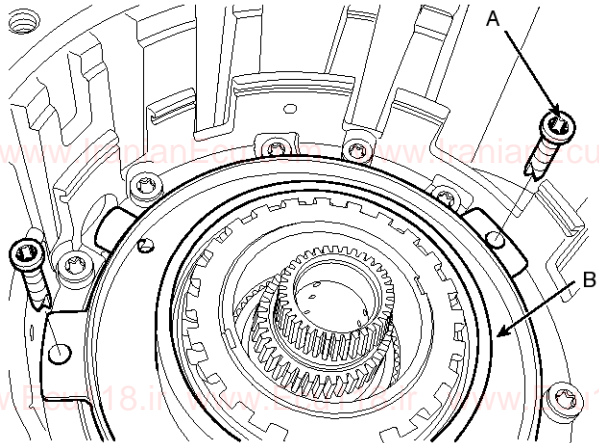
# Automatic Transaxle System

AT-29

8. Install the under drive brake chamber (B) after tightening bolts (A-2ea).

**Tightening torque:**

4.9 ~ 9.8 N.m(0.5~1.0 kgf.m, 3.6 ~ 7.2 lb-ft)



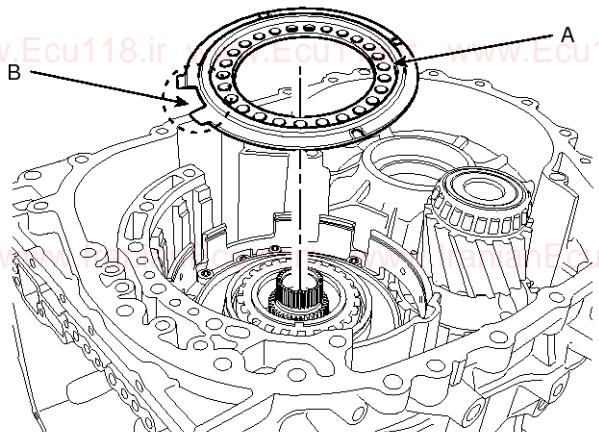
S98AT9178D

9. Install the D-ring (Outside) and O-ring (Inside) to the under drive brake piston.

10. Install the under drive brake piston (A).

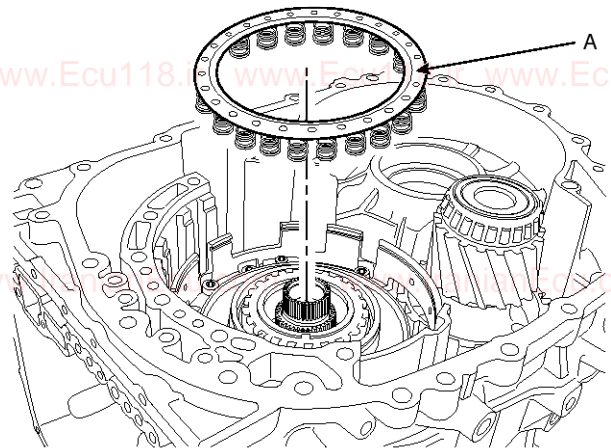
**CAUTION**

The projecting part (B) should be located at the position as below picture when installing the under drive brake piston (A).



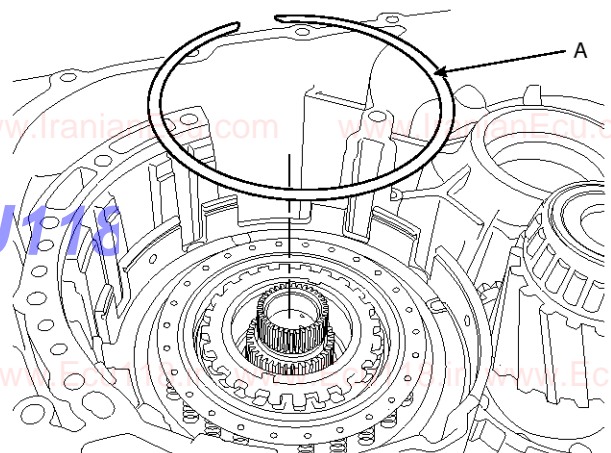
S98AT9134D

11. Install the under drive brake spring (A).



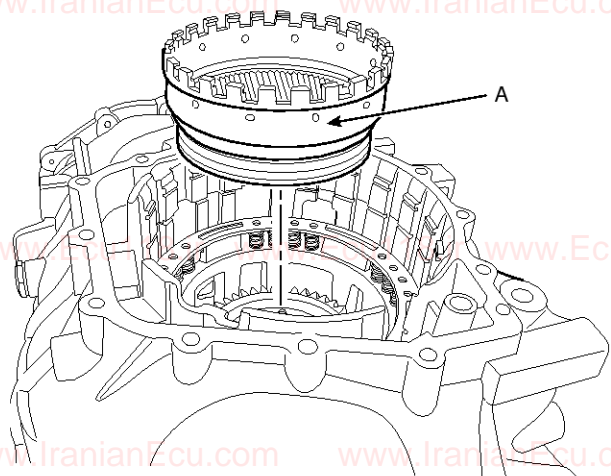
S98AT9135D

12. Install the snap ring (A) with SST(No.: 09453-3L270).



S98AT9136D

13. Install the front annulus gear assembly (A).

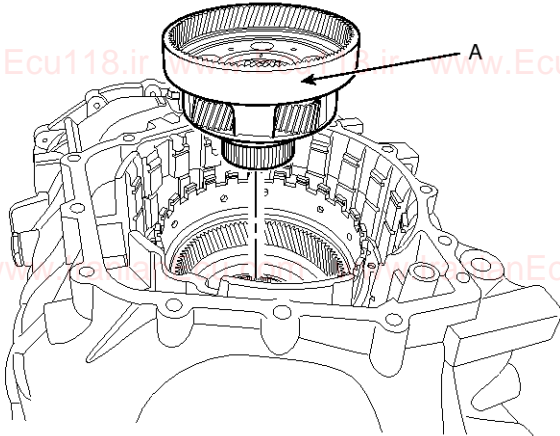


S98AT9106D

## AT-30

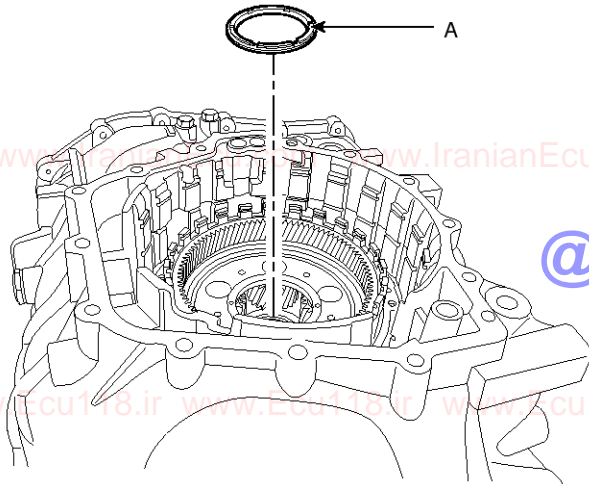
## Automatic Transaxle System

14. Install the front planetary gear assembly (A).



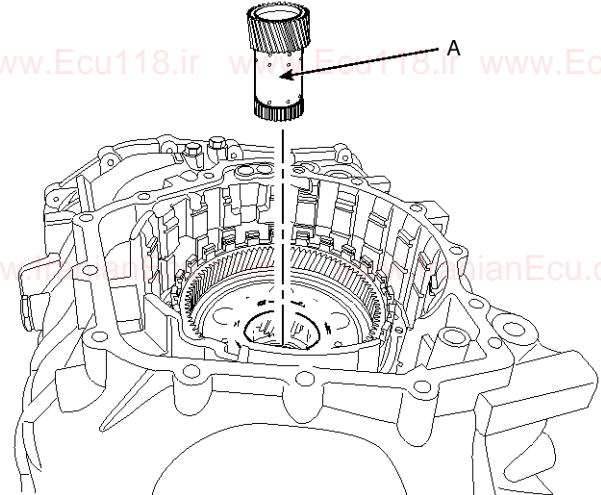
S98AT9107D

15. Install the thrust washer (A).



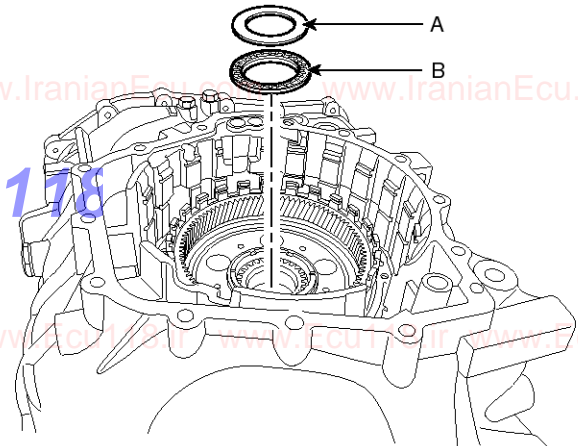
S98AT9108D

16. Install the front sun gear assembly (A).



S98AT9109D

17. Install the bearing (A) and the race set (B).

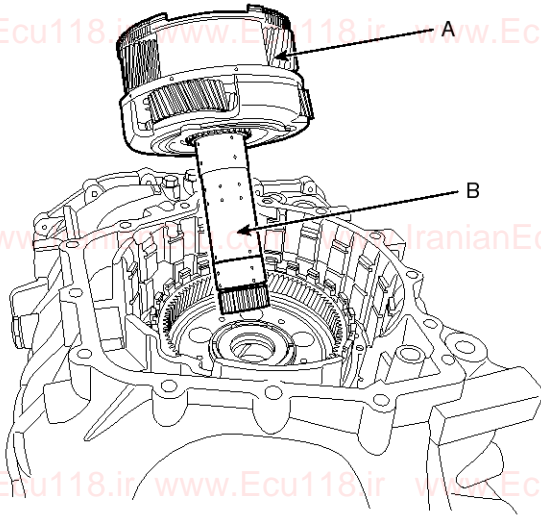


S98AT9110D

# Automatic Transaxle System

# AT-31

18. Install the middle & rear planetary gear assembly (A) and the middle sun gear assembly (B).



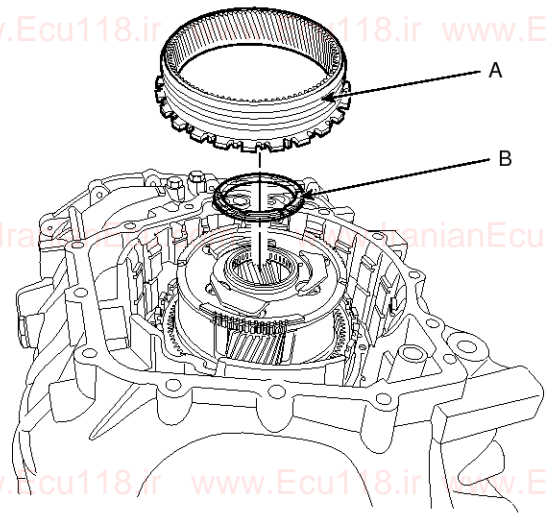
S98AT9112D

19. Install the middle & rear planetary gear assembly thrust washer.

**Specification:** 0.1~0.4mm (0.0039 ~ 0.0157in.)

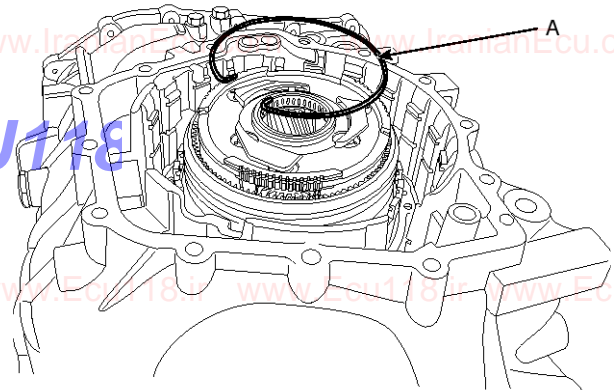
Part No.	Thickness [mm(in.)]
45729-3B630	3.0(0.1181)
45729-3B632	3.2(0.1259)
45729-3B634	3.4(0.1338)
45729-3B636	3.6(0.1417)
45729-3B638	3.8(0.1496)
45729-3B640	4.0(0.1574)
45729-3B642	4.2(0.1653)
45729-3B644	4.4(0.1732)
45729-3B646	4.6(0.1811)

20. Install the thrust washer (B) after installing the rear annulus gear (A).



S98AT9001D

21. Install the snap ring (A).

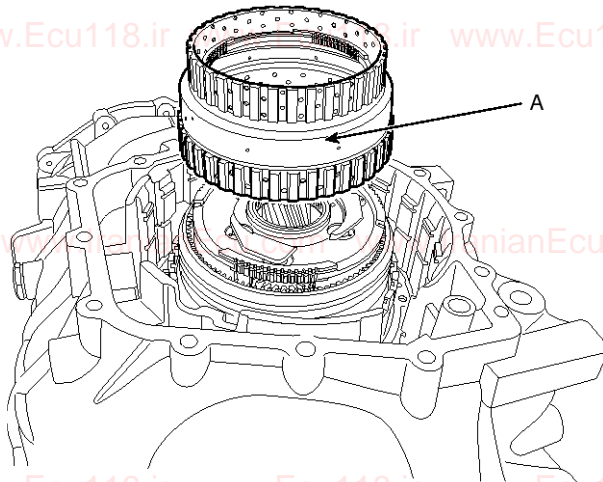


S98AT9114D

## AT-32

## Automatic Transaxle System

22. Install the one way clutch inner race assembly (A) and fix it with the snap ring.

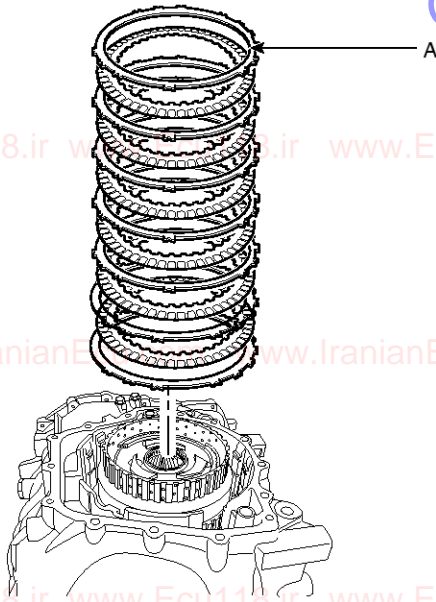


S98AT9115D

23. Install the low & reverse brake pressure plate, the cushion plate, the disc set and the snap ring in order.

### CAUTION

When installing the disc set, lay plates (5ea) and disc (5ea) each one at the bottom and then, lay the reaction plate (A-1ea) at the top.



S95AT0001L

24. Install the pressure plate properly to satisfy the specification for the low & reverse brake disc set end play.

### End play specification:

A6MF1/2 : 2.25 ~ 2.55 mm (0.0886 ~ 0.01004 in.)

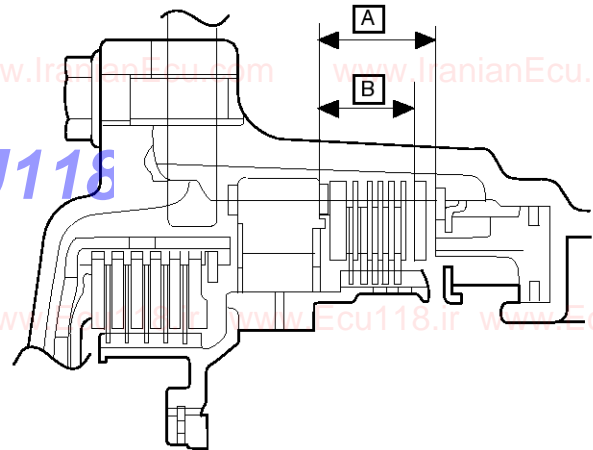
### CAUTION

Select the proper pressure plate as below method.

Pressure plate thickness = A - B - Specification

A : Low & reverse (L/R) brake piston upside ~ Snap ring groove [Under the load 49N.m (5 kgf.m, 36 lb-ft)]

B : The height of pressing the disc set (L/R brake) including the cushion plate under the load about 3,433N.m (350kgf.m, 2532lb-ft) + The snap ring thickness



S98AT9002D

# Automatic Transaxle System

AT-33

Select the pressure plate in below table.

Part No.	Thickness[mm(in.)]
45649-3B611	1.1(0.0433)
45649-3B613	1.3(0.0512)
45649-3B615	1.5(0.0591)
45649-3B617	1.7(0.0669)
45649-3B619	1.9(0.0748)
45649-3B621	2.1(0.0827)
45649-3B623	2.3(0.0906)
45649-3B625	2.5(0.0984)
45649-3B627	2.7(0.1063)
45649-3B629	2.9(0.1142)
45649-3B631	3.1(0.1220)
45649-3B633	3.3(0.1299)
45649-3B635	3.5(0.1378)
45649-3B637	3.7(0.1457)
45649-3B639	3.9(0.1535)

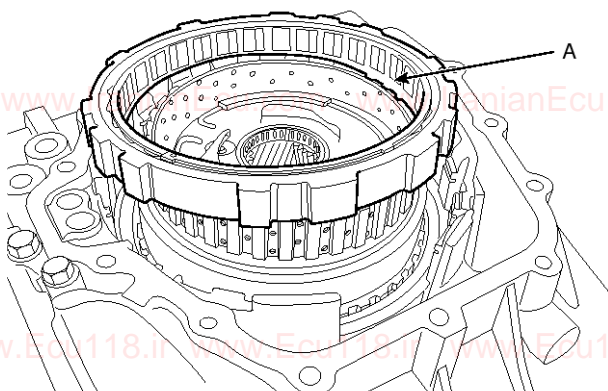
\* A6MF1 : 1.1t ~ 2.3t

\* A6MF2 : 2.9t ~ 3.9t

25. Install the one way (1-way) clutch assembly (A).

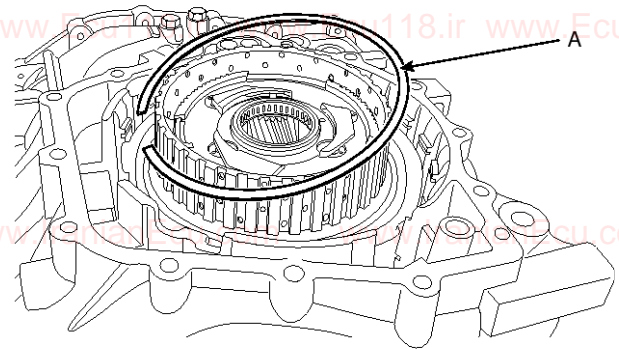
**NOTICE**

Check the one way (1-way) clutch assembly (A) whether rotating in counterclockwise direction only.



S98AT9118D

26. Install the snap ring (A).



S98AT9119D

27. Install the proper thrust washer to the middle & rear planetary gear assembly.

**Specification** : 0.1 ~ 0.4mm (0.0039 ~ 0.0157in.)

**NOTICE**

Thrust washer thickness = (The end of the sun gear of the over drive clutch assembly ~ The reached face of the washer) - (The thrust bearing ~ the installing part of the middle & rear planetary gear assembly washer) - Specification (Average value)

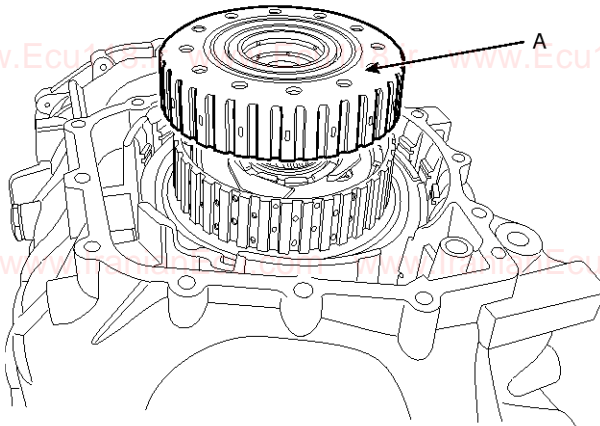
Part No.	Thickness[mm(in.)]
45729-3B630	3.0(0.1181)
45729-3B632	3.2(0.1260)
45729-3B634	3.4(0.1339)
45729-3B636	3.6(0.1417)
45729-3B638	3.8(0.1496)
45729-3B640	4.0(0.1575)
45729-3B642	4.2(0.1654)
45729-3B644	4.4(0.1732)
45729-3B646	4.6(0.1811)



## AT-34

## Automatic Transaxle System

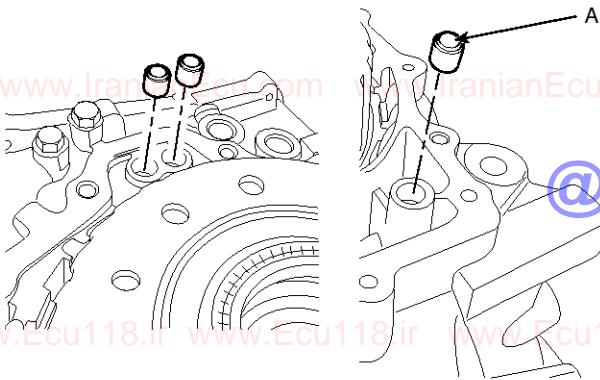
28. Install the over drive clutch assembly (A).



S98AT9120D

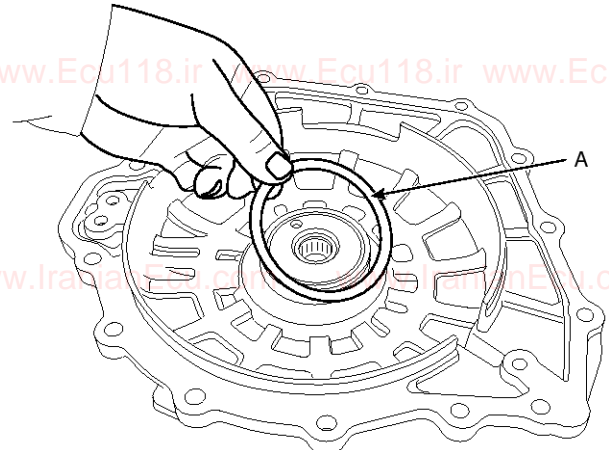
29. Install the thrust bearing.

30. Install the seal (A-3ea) to the transaxle case.



S98AT9121D

31. Install the spacer (A) to the rear cover assembly.



S98AT9122D

**Specification:** 0.25 ~ 0.45 mm (0.0098 ~ 0.0177in.)

### NOTICE

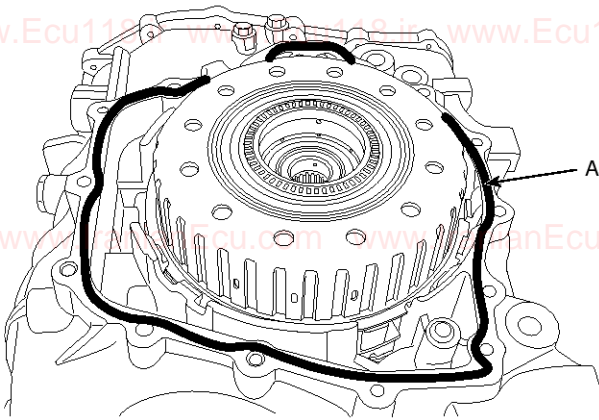
Spacer thickness = [The installing part of the rear cover of the transaxle case side {Under the load 29.4N.m (3 kgf.m, 21.7lb-ft)} - Thrust bearing height] - (The installing part of the rear cover side - Spacer installing part depth) - Specification (Average value)

Part No.	Thickness[mm(in.)]
45683-3B615	1.5(0.0591)
45683-3B617	1.7(0.0669)
45683-3B619	1.9(0.0748)
45683-3B621	2.1(0.0827)
45683-3B623	2.3(0.0906)
45683-3B625	2.5(0.0984)
45683-3B627	2.7(0.1063)
45683-3B629	2.9(0.1142)
45683-3B631	3.1(0.1220)

# Automatic Transaxle System

# AT-35

32. Apply the sealant (A) on the left side of the transaxle case.

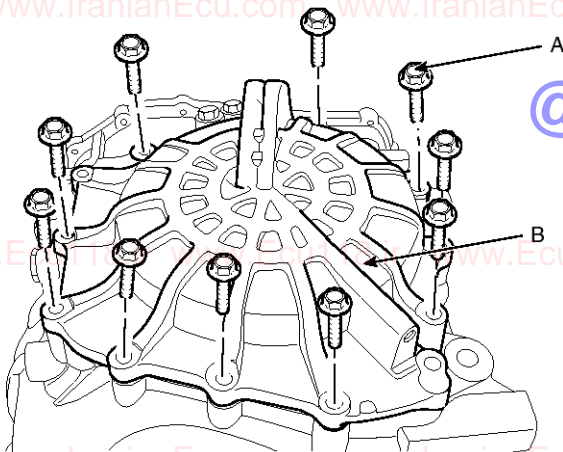


S98AT9123D

33. Install the rear cover assembly (B) to the transaxle case by tightening the bolts (A-14ea).

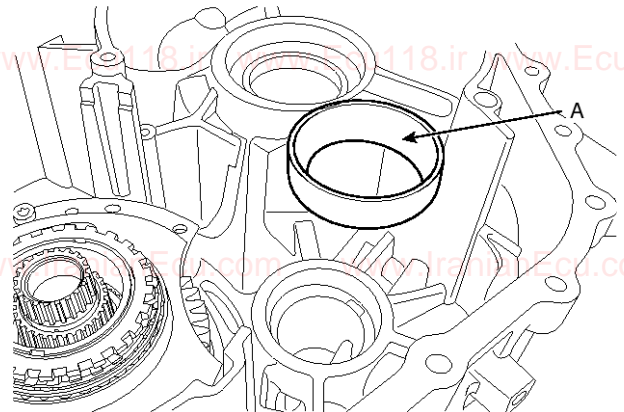
**Tightening torque:**

27.5 ~ 34.3 N.m (2.8~3.5 kgf.m, 20.3~25.3 lb-ft)



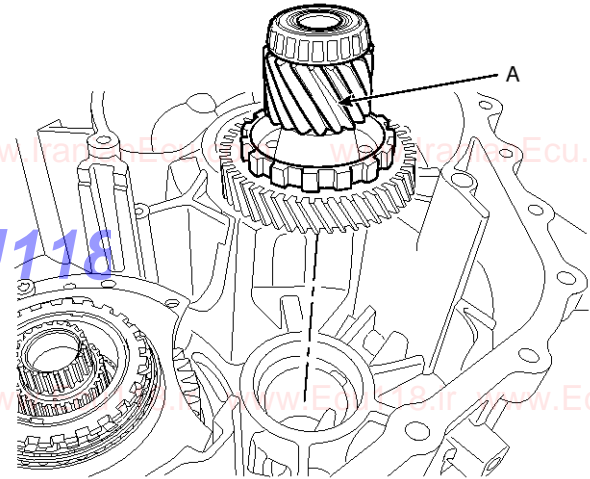
S98AT9179D

34. Install the transfer driven gear outer race (A).



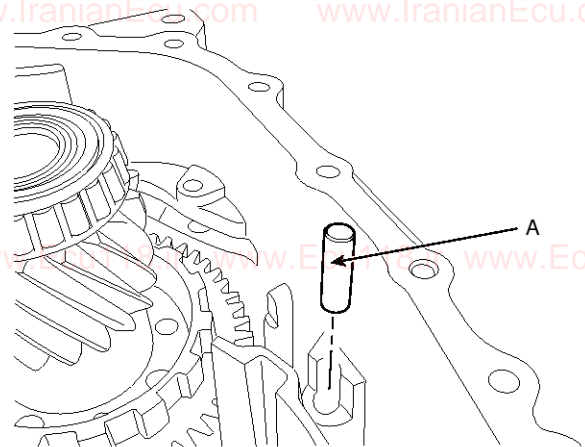
S98AT9125D

35. Install the transfer driven gear assembly (A).



S98AT9126D

36. Install the support shaft (A).

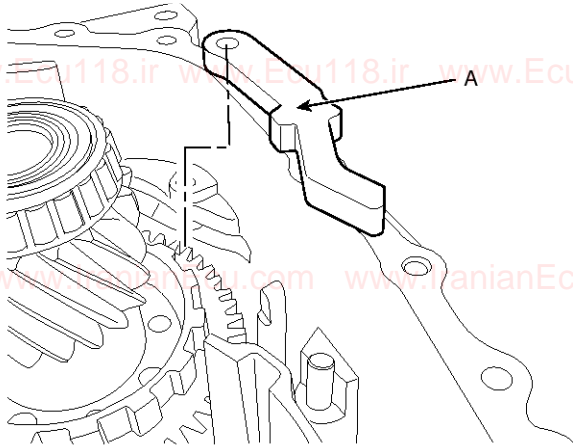


S98AT9127D

## AT-36

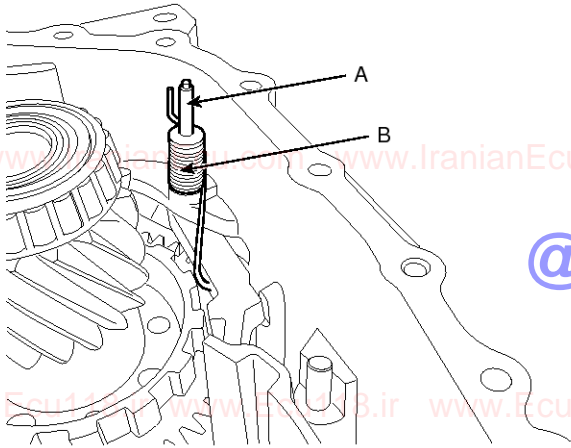
## Automatic Transaxle System

37. Install the parking sprag (A).



S98AT9128D

38. Install the parking sprag shaft (A) and the spring (B).

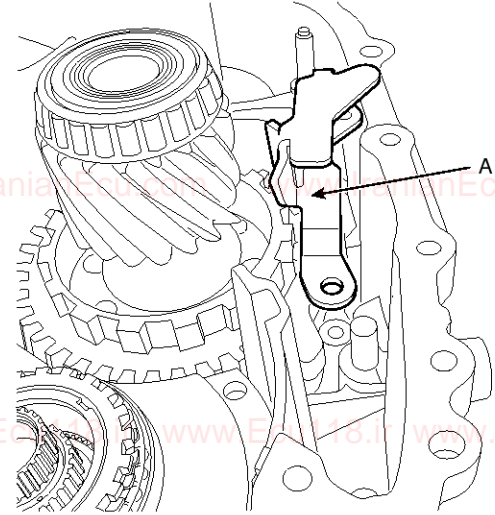


S98AT9129D

39. Install the parking rod guide (A).

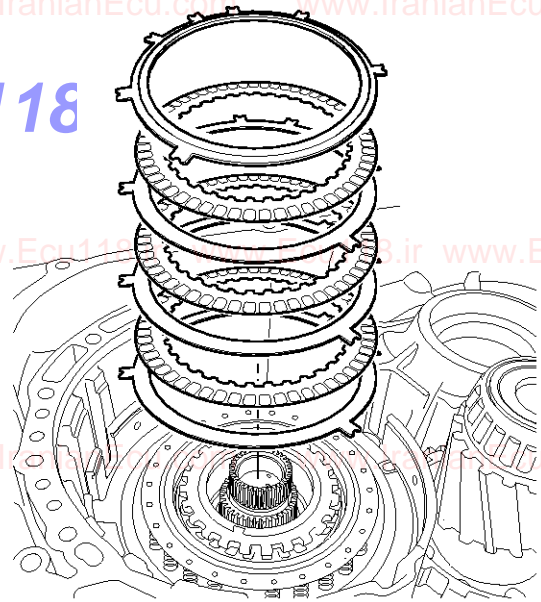
**Tightening torque:**

9.8~11.8 N.m (1.0~1.2 kgf.m, 7.2~8.7 lb-ft)



S98AT9130D

40. Install the under drive brake disk set in order.



S97AT9037D

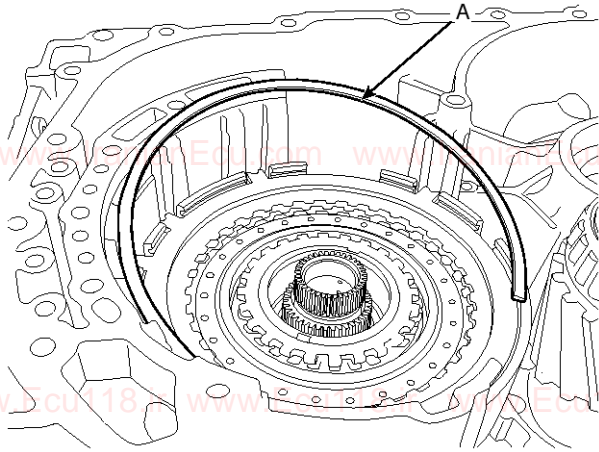
# Automatic Transaxle System

# AT-37

41. Install the snap ring (A) to satisfy the specification of the end play of the under & drive brake disc set.

### End play specification

A6MF1/2 : 0.65 ~ 0.95mm (0.0255 ~ 0.0374in.)



S98AT9138D

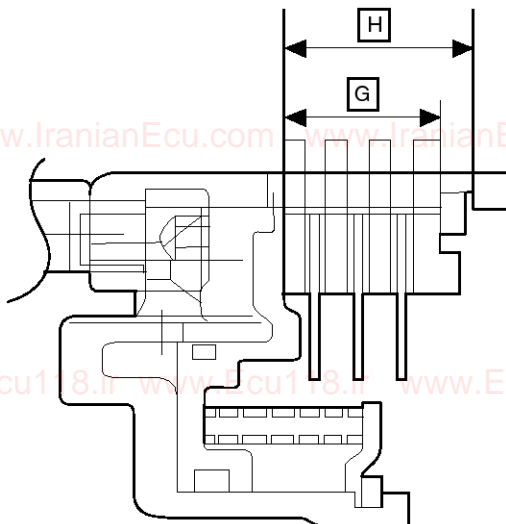
### NOTICE

Select the proper snap ring as below method.

Snap ring thickness = H - G - Specification

A : Under & drive(U/D) brake piston upside ~ Snap ring groove [Under the load 49N.m (5 kgf.m, 36 lb-ft)]

B : The height of pressing the disc set (U/D brake) under the load about 49N.m (5 kgf.m, 36 lb-ft)

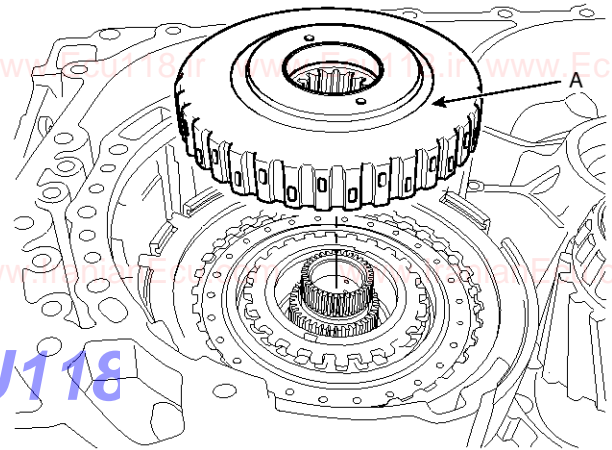


S98AT9003D

Select the proper snap ring in below table.

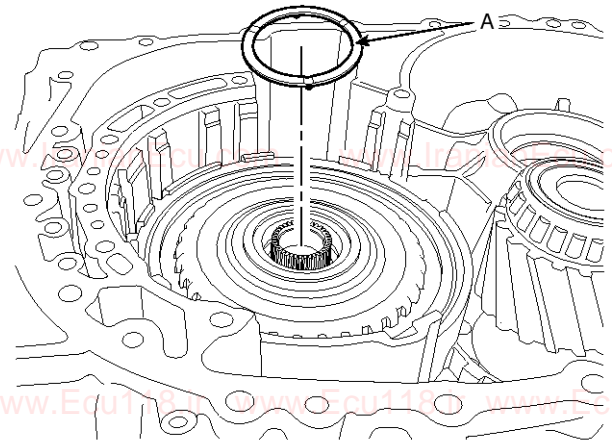
Part No.	Thickness[mm(in.)]
45619-3B617	1.7(0.0669)
45619-3B619	1.9(0.0748)
45619-3B621	2.1(0.0827)
45619-3B623	2.3(0.0906)
45619-3B625	2.5(0.0984)
45619-3B627	2.7(0.1063)
45619-3B629	2.9(0.1142)

42. Install the under drive brake hub assembly (A).



S98AT9139D

43. Install the thrust washer (A).

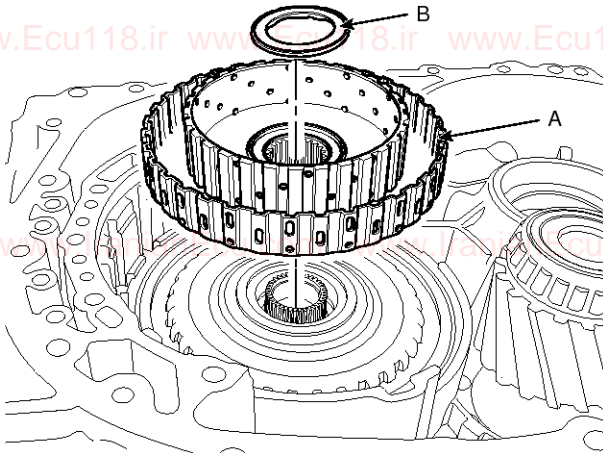


S98AT9140D

## AT-38

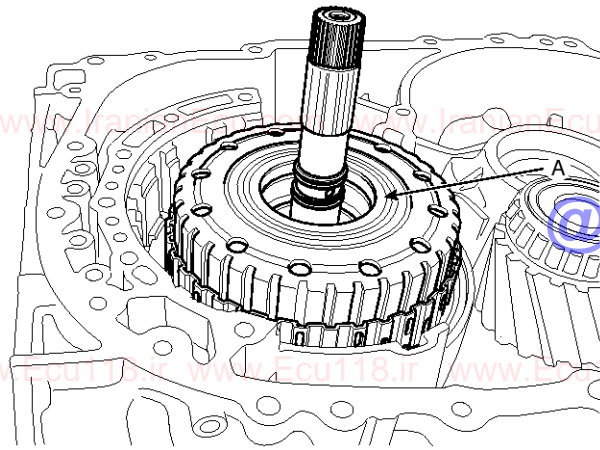
## Automatic Transaxle System

44. Install the 35R & 2/6 brake hub assembly (A) and the thrust bearing (B).



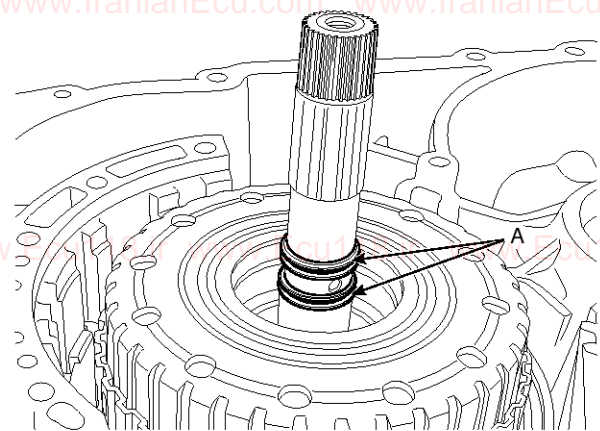
S98AT9141D

45. Install the 35R clutch assembly (A).



S98AT9142D

46. Install the seal rings (A-2ea).

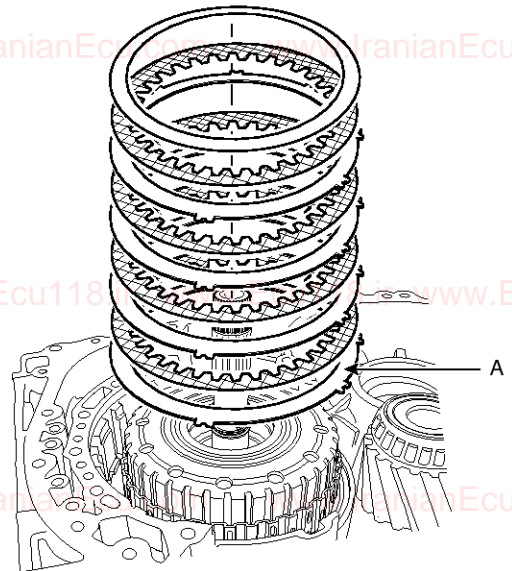


S98AT9143D

47. Install the 2/6 brake disc set in order.

### ⚠ CAUTION

When installing the disc set, lay the reaction plate (A-1ea) at the bottom and then, lay plates (4ea) and disc (4ea) each one with overlapping each other. Finally lay the cushion plate at the top.



S97AT9044D

# Automatic Transaxle System

# AT-39

48. Install the proper pressure plate to satisfy the specification of the end play of the 2/6 brake disc set.

**End play specification :**

2.05~2.35 mm (0.0807~0.0925 in.)

**NOTICE**

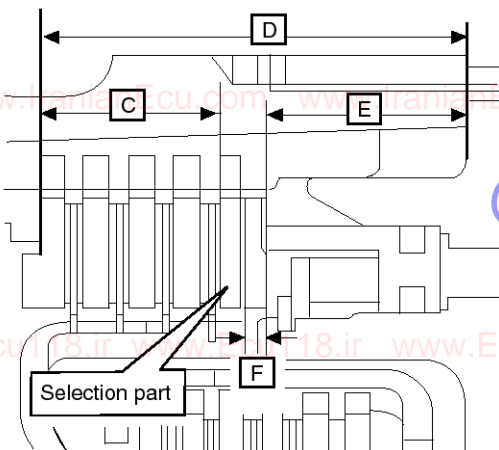
Select the pressure plate as below method.

$$\text{Pressure plate thickness} = D - (C + E + F) - \text{Specification}$$

D : Oil pump installing part ~ Under & drive brake retainer upside

C + F : The height of pressing the disc set (2/6 brake) including the cushion plate under the load about 3,924N.m (400kgf.m, 2,894lb-ft)

E : Oil pump installing part ~ 2/6 piston upside



S97AT0009L

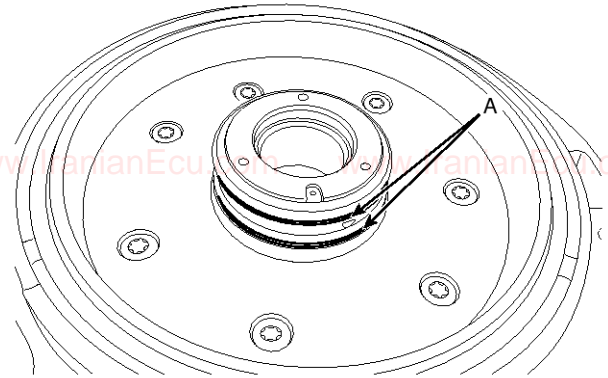
Select the pressure plate in below table.

Part No.	Thickness[mm(in.)]
45683-3B615	1.5(0.0591)
45683-3B617	1.7(0.0669)
45683-3B619	1.9(0.0748)
45683-3B621	2.1(0.0827)
45683-3B623	2.3(0.0906)
45683-3B625	2.5(0.0984)
45683-3B627	2.7(0.1063)
45683-3B629	2.9(0.1142)
45683-3B631	3.1(0.1220)

\* A6MF1 : 1.5t ~ 2.9t

\* A6MF2 : 1.9t ~ 3.1t

49. Install the seal rings (A-2ea) from the oil pump assembly.

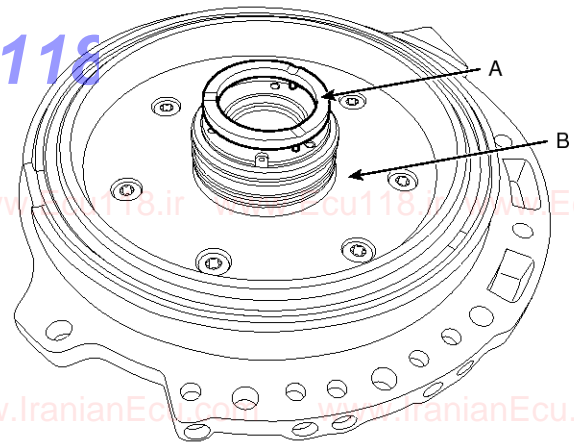


S98AT9145D

50. Install the thrust washer (A) from the oil pump assembly (B).

**End play Specification :**

0.55~0.85 mm (0.0217~0.0335 in.)



S98AT9146D

# AT-40

# Automatic Transaxle System

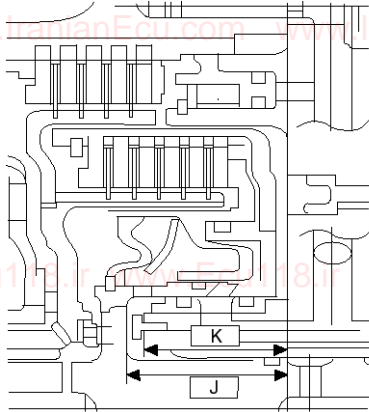
### NOTICE

Select the thrust washer as below method.

Thrust washer thickness = J - K - Specification

J : Case ~ Input shaft thrust washer left side

K : Oil pump ~ Oil pump thrust washer installing part



S98AT9005D

Select the thrust washer in below table.

#### A6MF1

Part No.	Thickness[mm(in)]
45472-3B618	1.8(0.0708)
45472-3B620	2.0(0.0787)
45472-3B622	2.2(0.0866)
45472-3B624	2.4(0.0944)
45472-3B626	2.6(0.1023)
45472-3B628	2.8(0.1102)

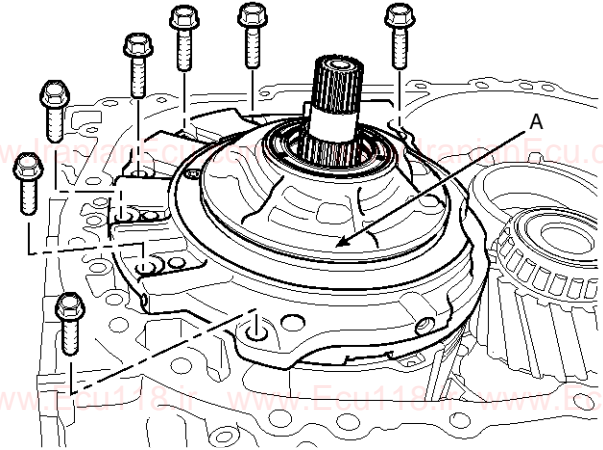
#### A6MF2

Part No.	Thickness[mm(in)]
45472-3B644	4.4(0.1732)
45472-3B646	4.6(0.1811)
45472-3B648	4.8(0.1890)
45472-3B650	5.0(0.1969)
45472-3B652	5.2(0.2047)
45472-3B654	5.4(0.2126)

51. Install the oil pump assembly (A) by tightening the bolts (7ea).

#### Tightening torque:

19.6~25.5 N.m (2.0~2.6 kgf.m, 14.5~18.8 lb-ft)



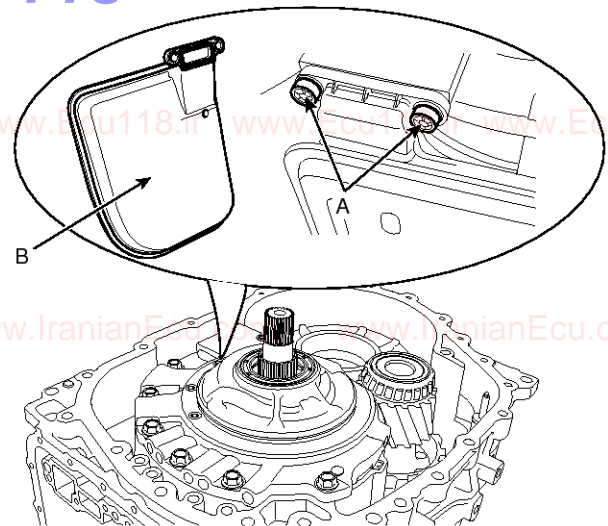
S98AT9147D

52. Install the O-ring to the oil pump assembly.

53. Install the oil filter assembly (B) by tightening the bolts (A-2ea).

#### Tightening torque:

9.8~11.8 N.m (1.0~1.2 kgf.m, 7.2~8.7 lb-ft)



S98AT9148D

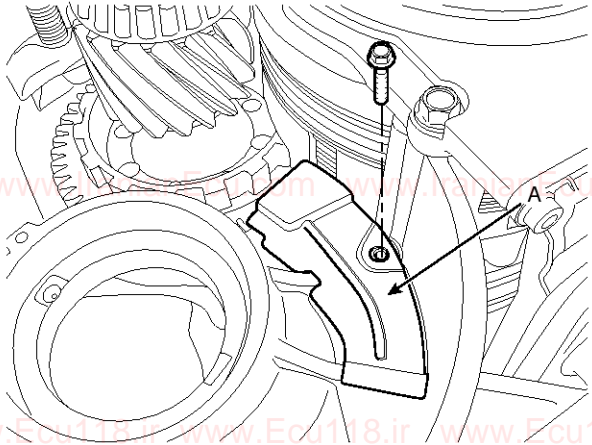
# Automatic Transaxle System

# AT-41

54. Install the oil guide (A) by tightening a bolt.

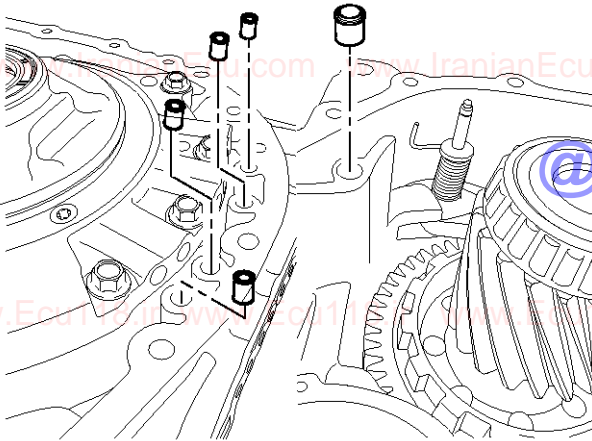
**Tightening torque:**

9.8~11.8 N.m (1.0~1.2 kgf.m, 7.2~8.7 lb-ft)



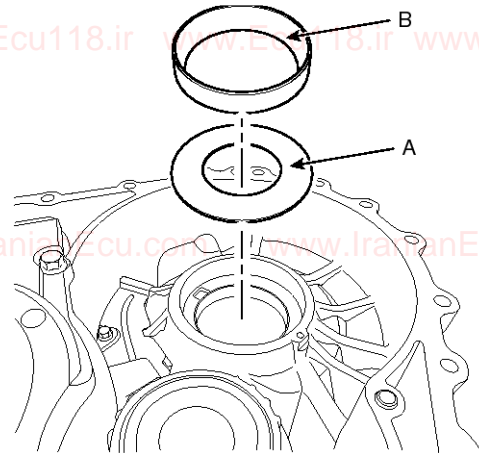
S98AT9149D

55. Install the seals (5ea).



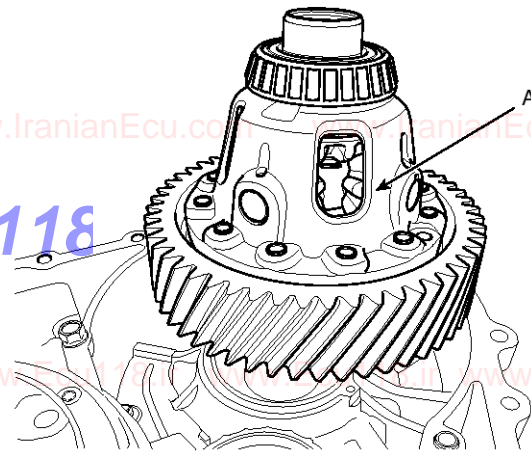
S97AT9050D

56. Install the spacer (A) and the differential bearing outer race (B).



S98AT9151D

57. Install the differential assembly (A).



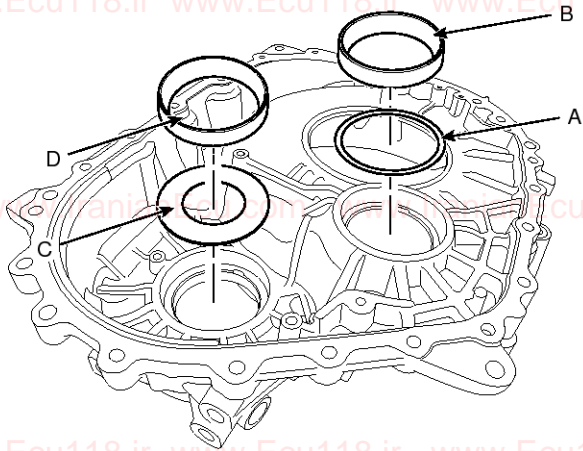
S98AT9152D



## AT-42

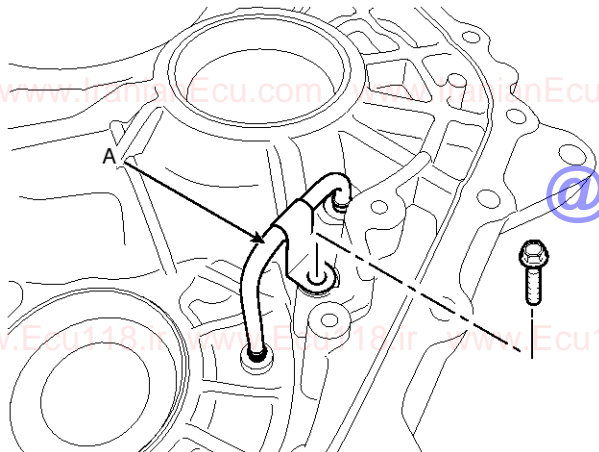
## Automatic Transaxle System

58. Install the differential bearing spacer (A), the outer race (B), the transfer driven gear spacer (C) and the outer race (D) of the converter housing side.



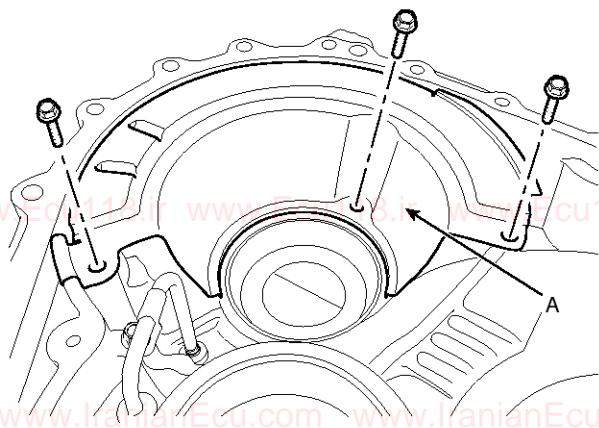
S98AT9153D

59. Install the lubricating pipe (A) by tightening a bolt.



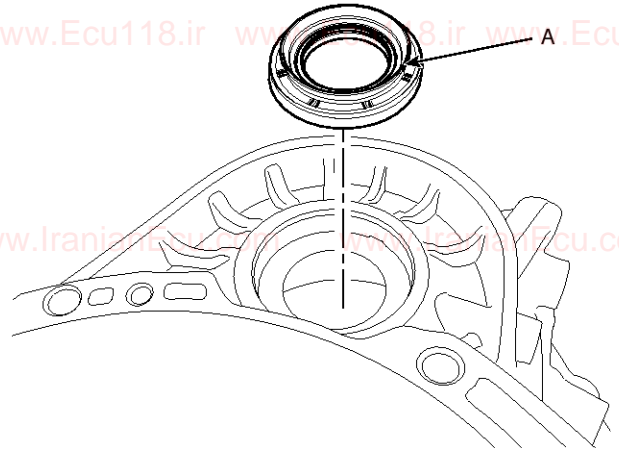
S98AT9154D

60. Install the oil guide (A) by tightening the bolts (3ea).



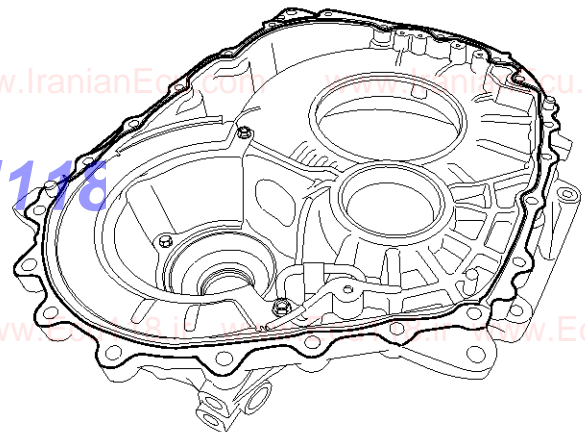
S98AT9155D

61. Install the differential oil seal (A) with the SST (No.: 09453-3L240).



S98AT9156D

62. Apply the sealant on the left side of the converter housing.



S98AT9157D

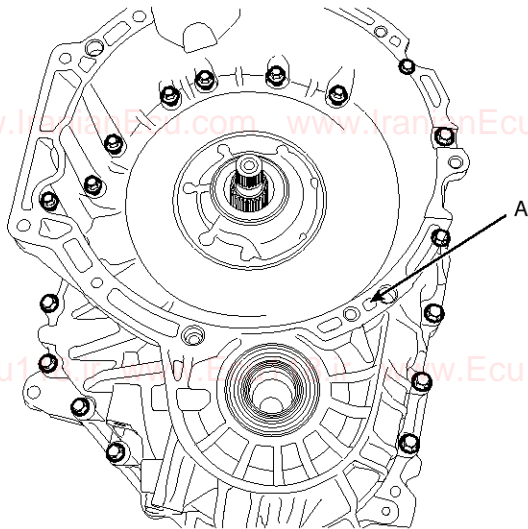
## Automatic Transaxle System

## AT-43

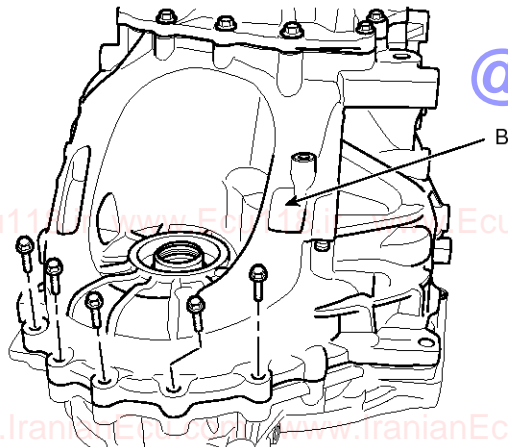
63. Install the converter housing assembly (B) to the transaxle case assembly (A) by tightening the bolts (22ea).

**Tightening torque:**

27.5~34.3 N.m(2.8~3.5 kgf.m, 20.3~25.3 lb-ft)

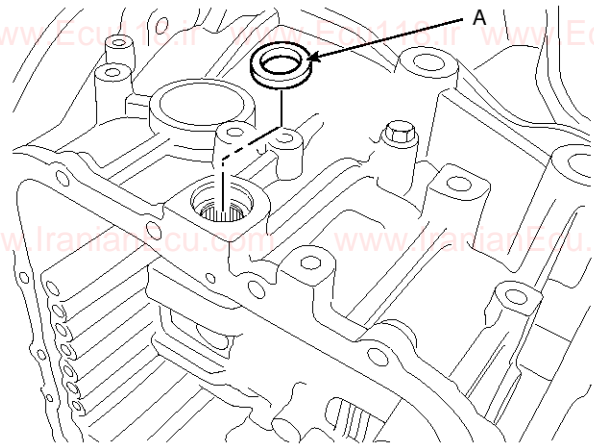


S98AT9160D



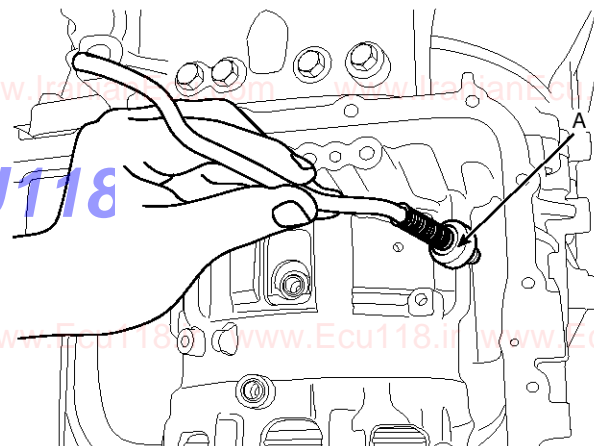
S98AT9159D

64. Install the manual shaft oil seal (A) with the SST (No.: 09459-3L100).



S98AT9161D

65. Install the parking rod assembly (A) into the parking rod guide.

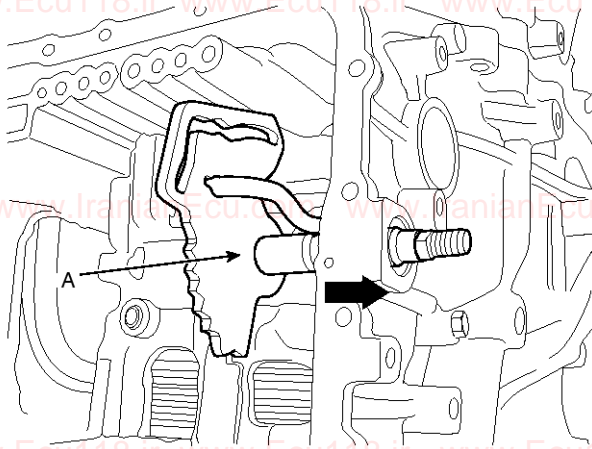


S98AT9162D

## AT-44

## Automatic Transaxle System

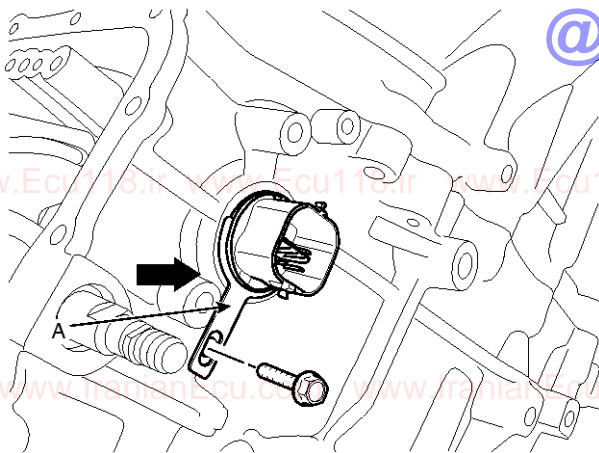
66. Install by pushing the end of the parking rod assembly in the arrow direction after installing the detent lever assembly (A).



S98AT9176D

67. Install the fixing pin (A) by tightening a bolt after installing the solenoid valve connector by pushing in the arrow direction.

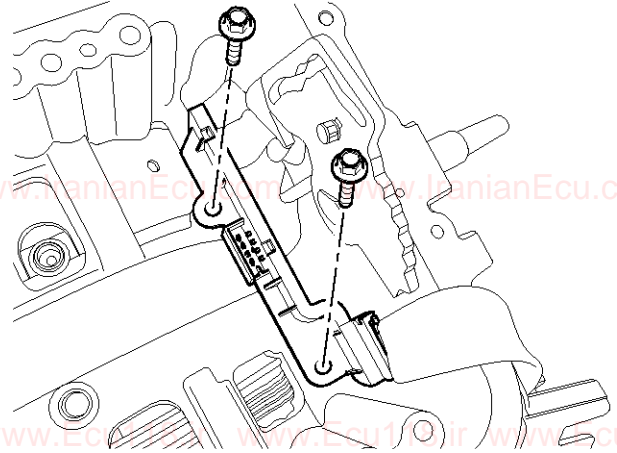
**Tightening torque:**  
9.8~11.8 N.m (1.0~1.2 kgf.m, 7.2~8.7 lb-ft)



S98AT9177D

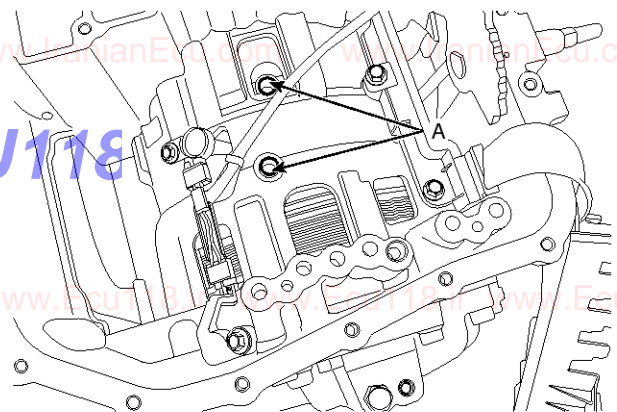
68. Install the main wiring mounting bolt (2ea).

**Tightening torque:**  
9.8~11.8 N.m (1.0~1.2 kgf.m, 7.2~8.7 lb-ft)



S97AT9065D

69. Install the pipe seal (A-2ea).



S98AT9175D

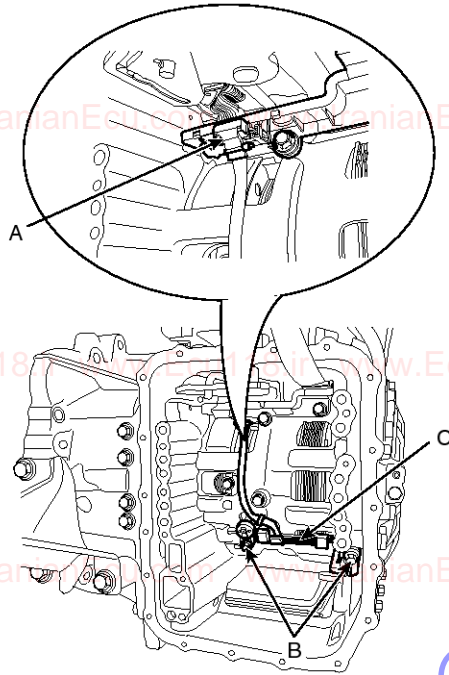
# Automatic Transaxle System

# AT-45

70. Connect the connector (A) to the main wiring after installing the input/output speed sensor assembly (C) by tightening the bolts (B-2ea).

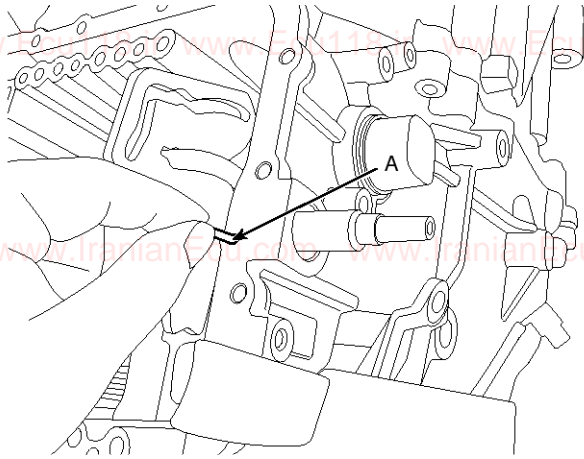
**Tightening torque:**

9.8~11.8 N.m (1.0~1.2 kgf.m, 7.2~8.7 lb-ft)



S98AT9166D

71. Install the fixing pin (A).

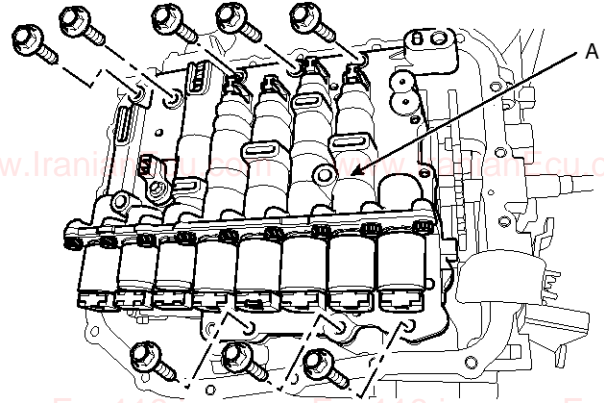


S98AT9167D

72. Install the valve body assembly (A).

**Tightening torque:**

9.8~11.8 N.m (1.0~1.2 kgf.m, 7.2~8.7 lb-ft)

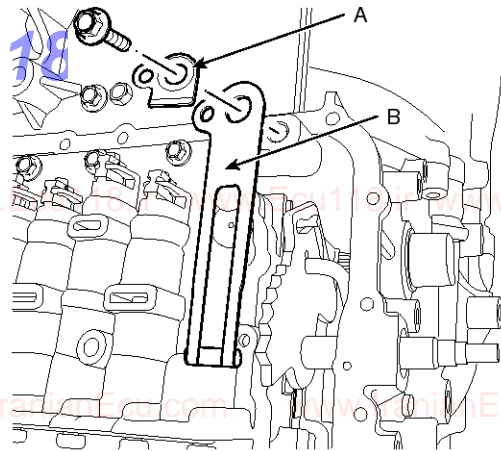


S98AT9168D

73. Install the detent spring assembly (A) and plate (B) by tightening a bolt.

**Tightening torque:**

24.5~35.3 N.m (2.5~3.6 kgf.m, 18.1~26.0 lb-ft)



S98AT9169D

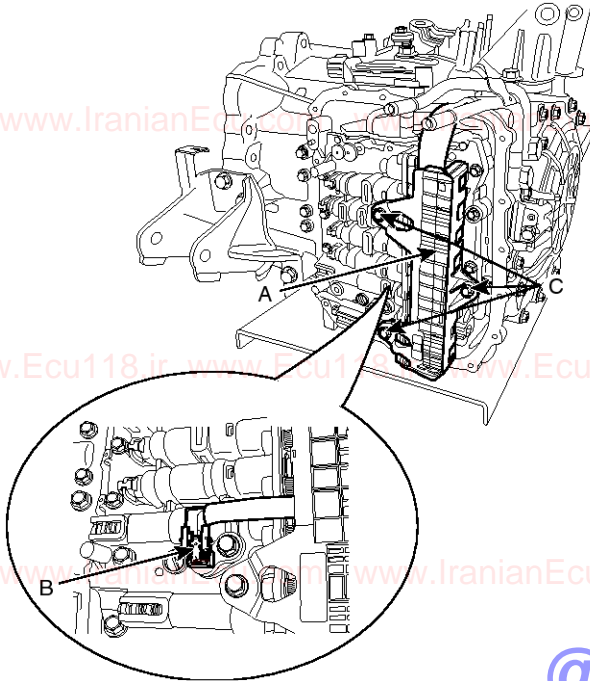
## AT-46

## Automatic Transaxle System

74. Install the solenoid valve connector assembly (A) mounting bolts (C-3ea) after connecting the oil temperature sensor connector (B).

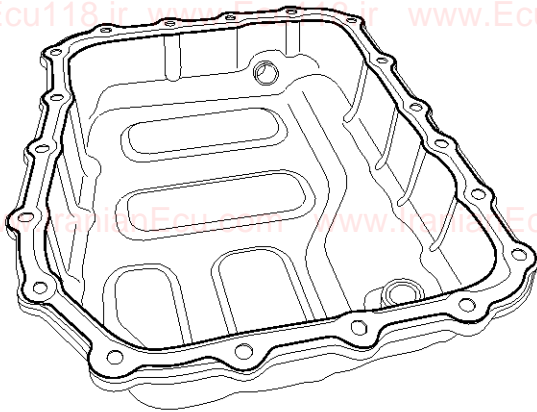
**Tightening torque:**

9.8~11.8 N.m (1.0~1.2 kgf.m, 7.2~8.7 lb-ft)



S98AT9170D

75. Apply the sealant on the valve body cover.

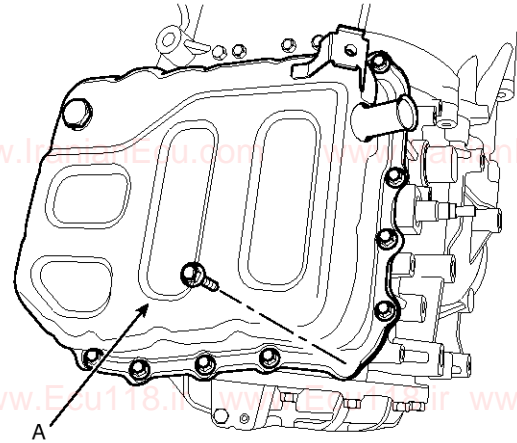


S97AT9071D

76. Install the valve body cover (A) by tightening bolts (19ea).

**Tightening torque:**

12.8~14.7 N.m (1.3~1.5 kgf.m, 9.4~10.9 lb-ft)

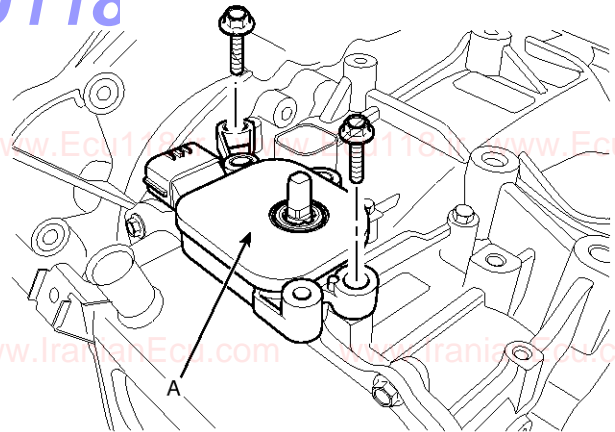


S98AT9172D

77. Install the inhibitor assembly (A) by tightening two bolt.

**Tightening torque:**

9.8~11.8 N.m (1.0~1.2 kgf.m, 7.2~8.7 lb-ft)



S98AT9173D

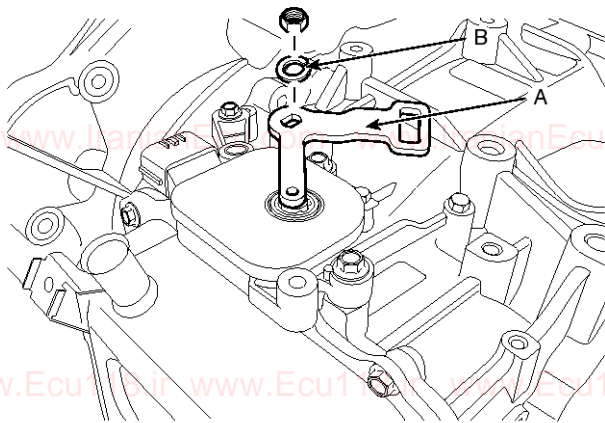
## Automatic Transaxle System

AT-47

78. Install the manual control lever (A) and the washer (B) by tightening a nut.

**Tightening torque:**

17.7~24.5 N.m (1.8~2.5 kgf.m, 13.0~18.1 lb-ft)



S98AT9174D

**@ECU118**

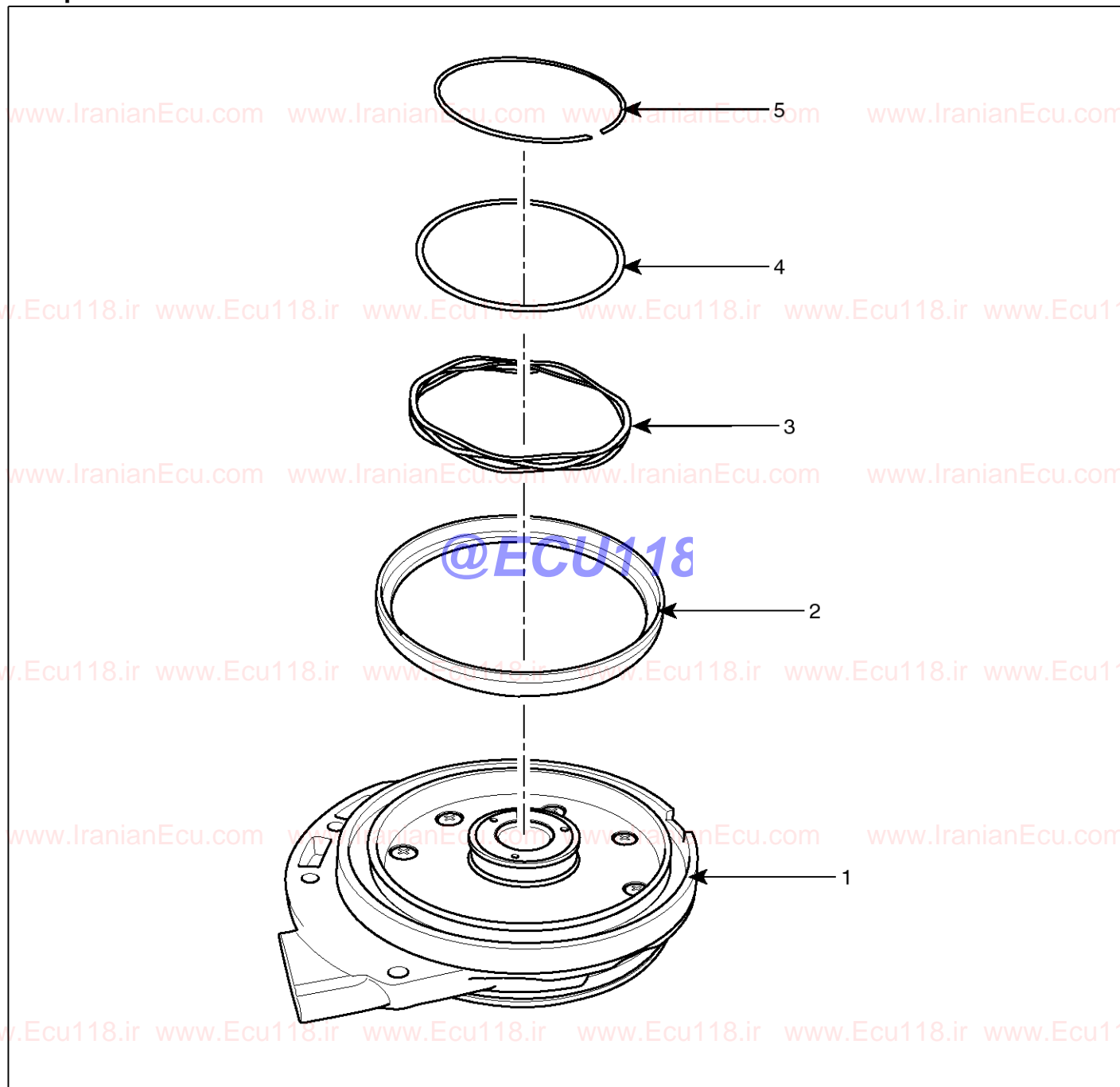
## AT-48

## Automatic Transaxle System

### Hydraulic System

#### Oil Pump

#### Components



S97AT9100D

1. Oil pump assembly
2. 2/6 brake piston
3. Return Spring

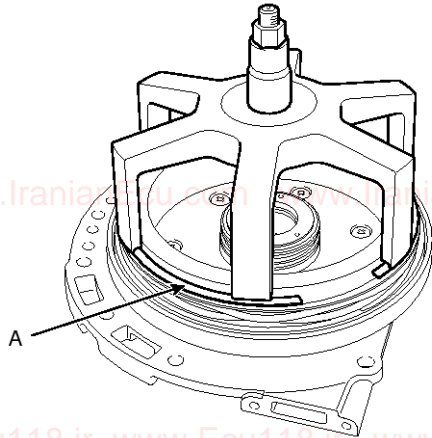
4. Spring retainer
5. Snap ring

# Hydraulic System

# AT-49

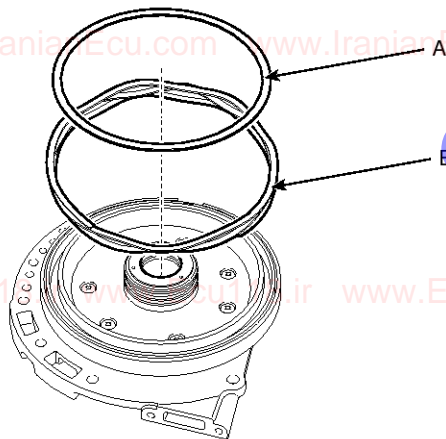
## Disassembly

1. Remove the snap ring (A) with the snap ring remover (SST No.:09452-3L100).



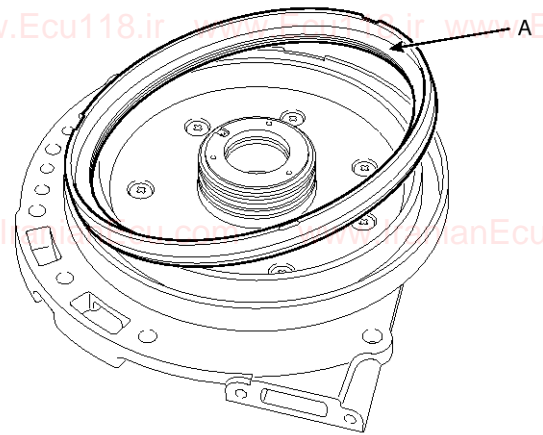
S98AT9204D

2. Remove the 2/6 brake piston return spring (A) and the spring retainer (B) from the oil pump assembly.



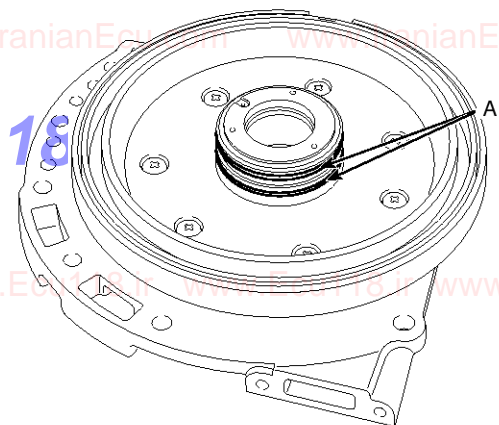
S98AT9203D

3. Remove the 2/6 brake piston (A) from the oil pump assembly.



S98AT9202D

4. Remove the D-ring (2-ea) from the 2/6 brake piston.
5. Remove the seal ring (A-2ea) from the oil pump assembly.



S98AT9201D

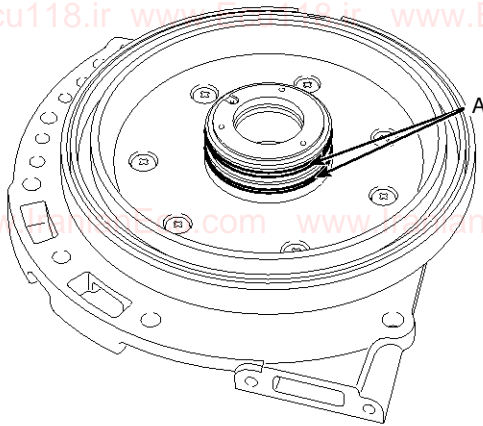


## AT-50

## Automatic Transaxle System

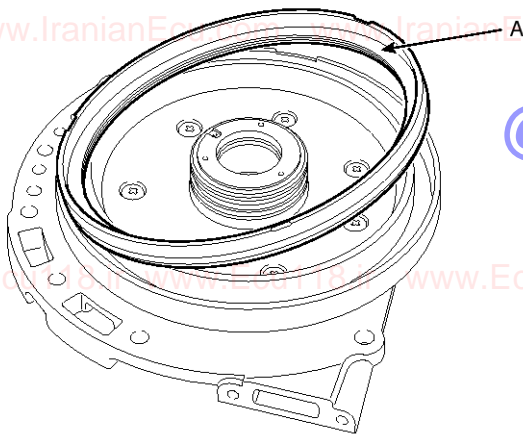
### Reassembly

1. Install the seal ring (A-2ea) to the oil pump assembly.



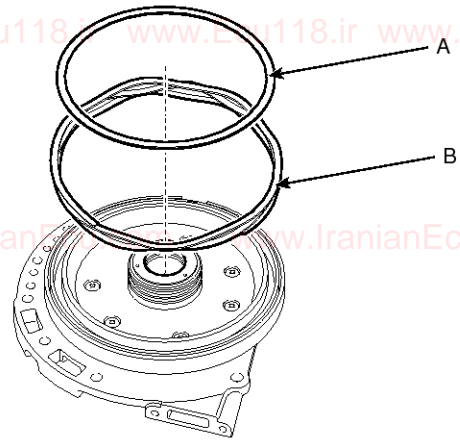
S98AT9201D

2. Install the D-ring (2ea) to the 2/6 brake piston.
3. Install the 2/6 brake piston (A) to the oil pump assembly.



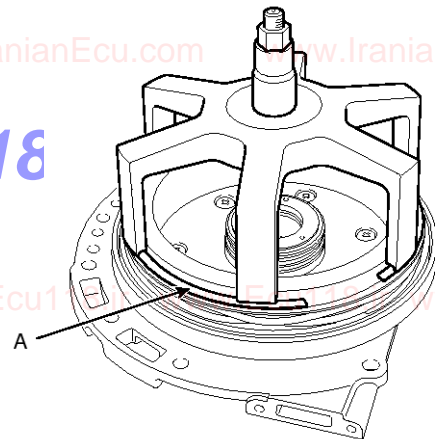
S98AT9202D

4. Put the 2/6 brake piston return spring (A) and the spring retainer (B) to the oil pump assembly.



S98AT9203D

5. Fix the return spring and the spring retainer after installing the snap ring (A) with the snap ring installer (SST No.:09452-3L100).



S98AT9204D

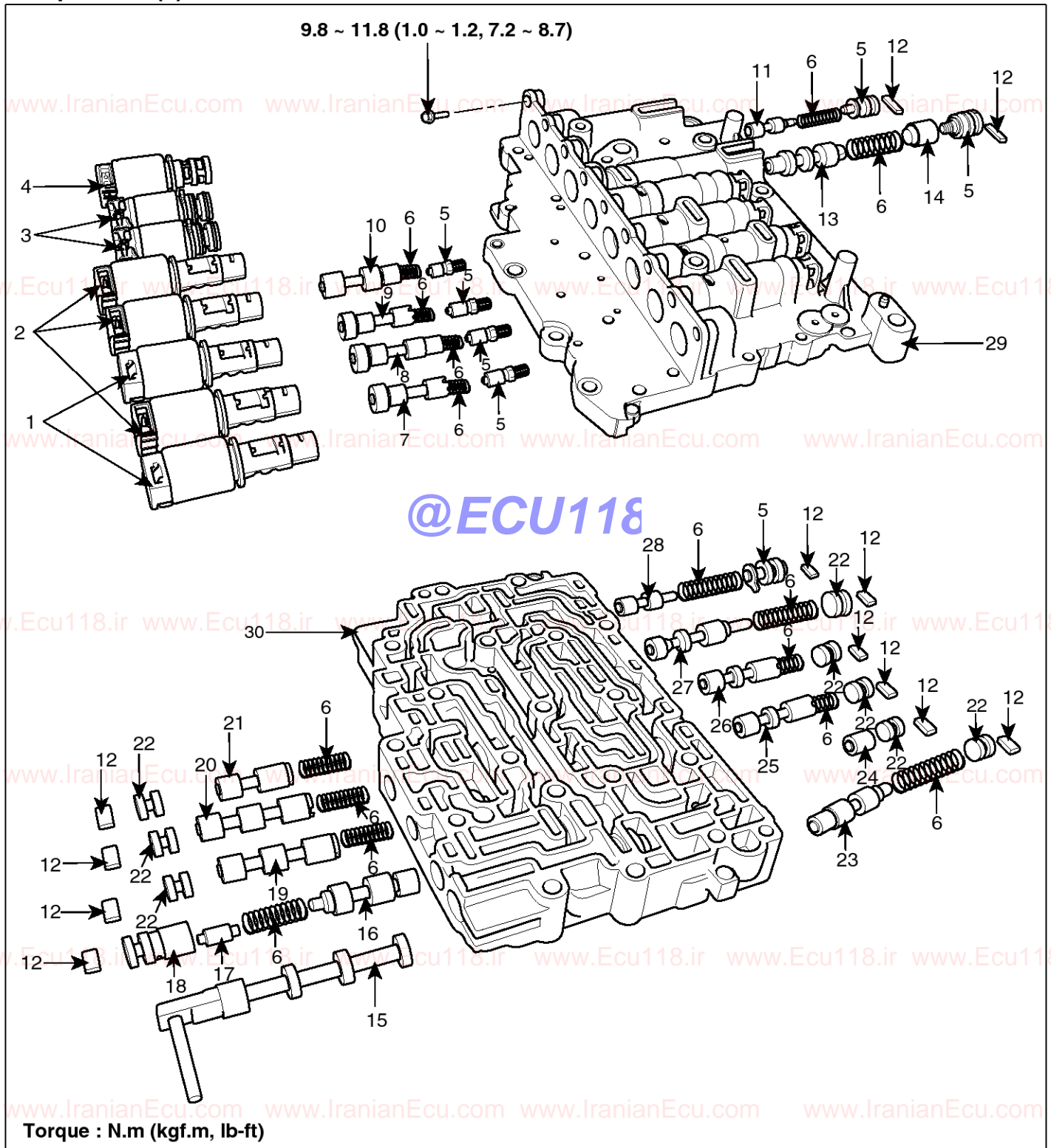
# Valve Body System

AT-51

## Valve Body System

### Valve Body

#### Components (1)



S97AT0004L

## AT-52

## Automatic Transaxle System

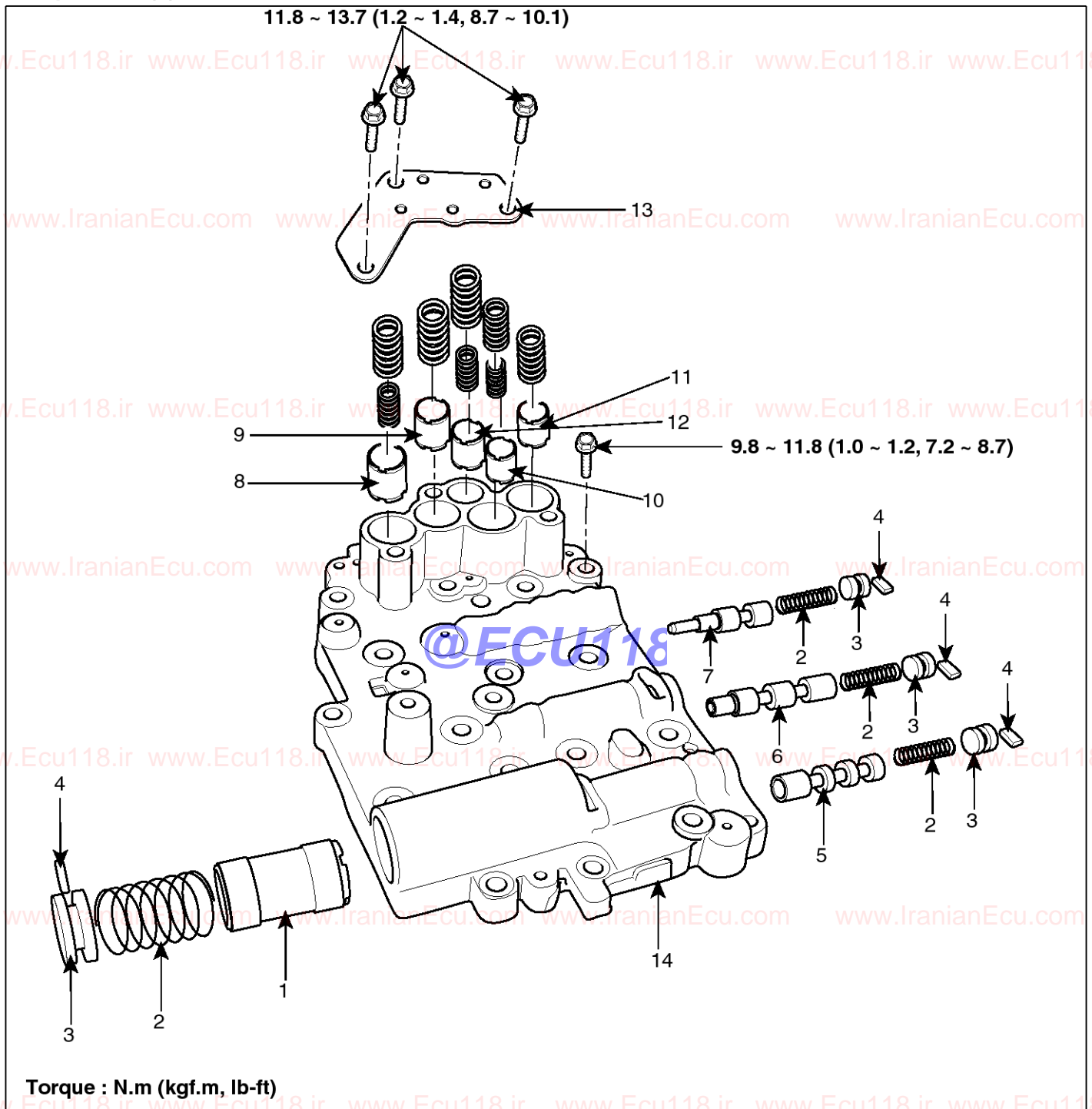
1. VFS solenoid valve (NL)
2. VFS solenoid valve (NH)
3. ON/OFF solenoid valve
4. VFS solenoid valve (NH)
5. Adjust screw
6. Coil spring
7. 35R pressure control valve
8. 2/6 brake pressure control valve
9. Under drive pressure control valve
10. Over drive pressure control valve
11. Reducing valve-1
12. Stopper plate
13. Regulator valve
14. Regulator sleeve
15. Manual valve
16. T/C pressure control valve
17. T/C pressure control plug
18. T/C pressure control sleeve
19. 35R pressure switch valve
20. 2/6 brake pressure switch valve
21. Under drive pressure switch valve
22. Stopper plug
23. low & reverse switch valve
24. 35R & 2/6 brake check valve
25. Over drive pressure switch valve
26. Over drive & low & reverseswitch valve
27. T/C control valve
28. Reducing valve-2
29. Outer valve body assembly
30. Middle valve body assembly

**@ECU118**

# Valve Body System

AT-53

## Components (2)



S97AT0005L

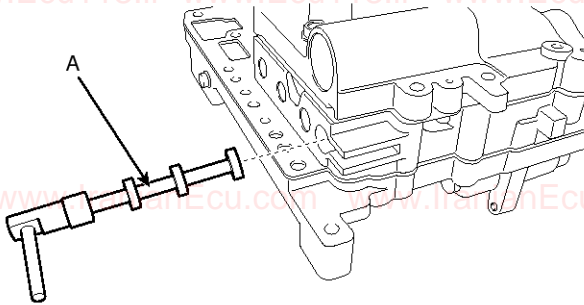
- |                            |                               |
|----------------------------|-------------------------------|
| 1. Accumulator piston (DN) | 8. Accumulator 2              |
| 2. Coil spring             | 9. Accumulator 1              |
| 3. Stopper plug            | 10. Accumulator 4             |
| 4. Stopper plate           | 11. Accumulator 3             |
| 5. L/U switch valve        | 12. Damping valve (RED2)      |
| 6. 35R switch valve        | 13. Accumulator plate         |
| 7. Fail safe valve (OD)    | 14. Inner valve body assembly |

# AT-54

# Automatic Transaxle System

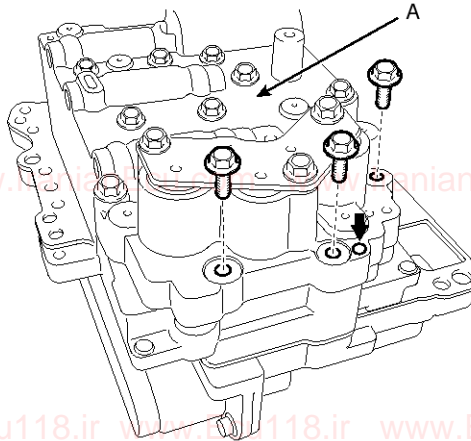
## Disassembly

1. Remove the manual valve (A).

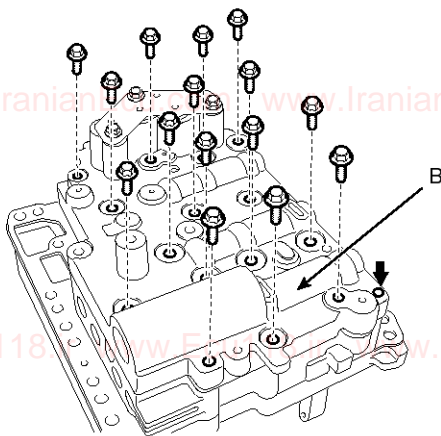


S98AT9320D

2. Remove the Inner, Middle (A) and the outer valve body (B) after removing bolts (18ea).

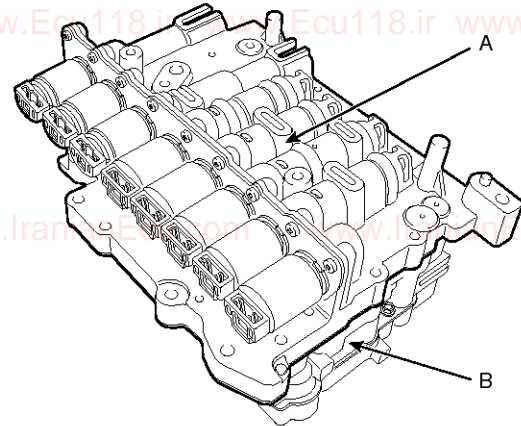


S98AT9319D



S98AT9318D

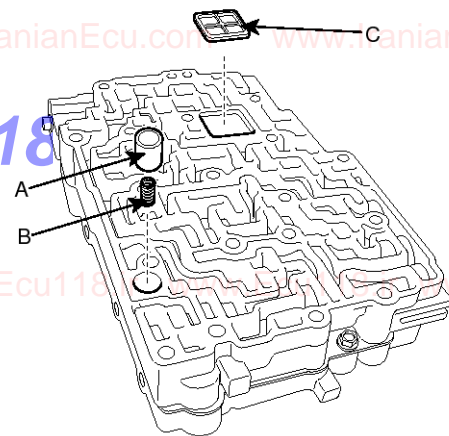
3. Remove the outer valve body assembly (A) from the middle valve body (B).



S98AT9317D

4. Remove the damping valve (A) and the coil spring (B).

5. Remove the oil strainer (C).



S97AT9216D

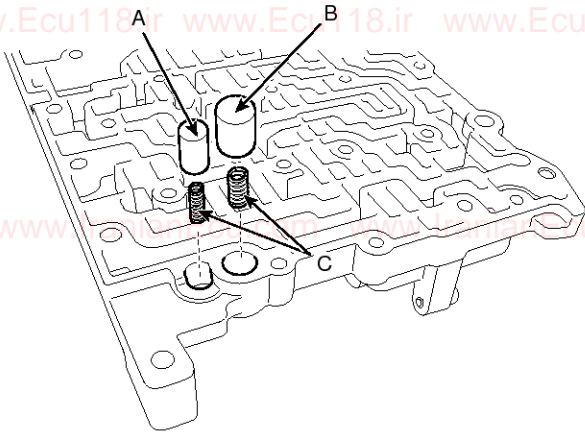
6. Remove the middle valve body from the inner valve body assembly.

7. Remove the separating plate from the outer valve body.

# Valve Body System

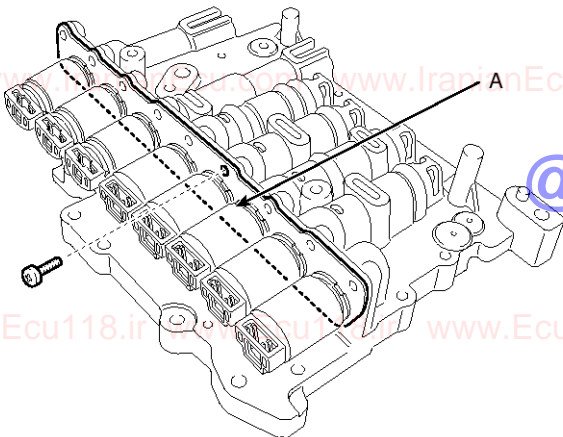
# AT-55

8. Remove the damping valve (A), the check valve (B) and the coil spring (C).



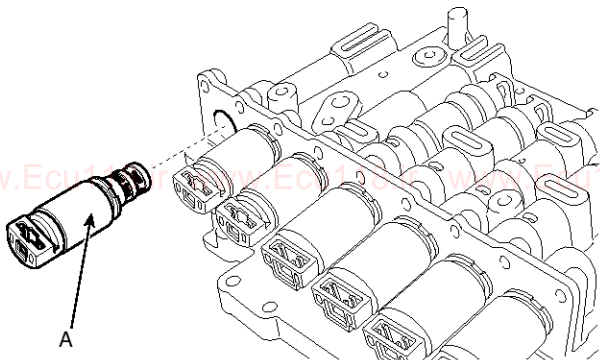
S98AT9314D

9. Remove the solenoid valve supporter (A) after removing the bolts (9ea).



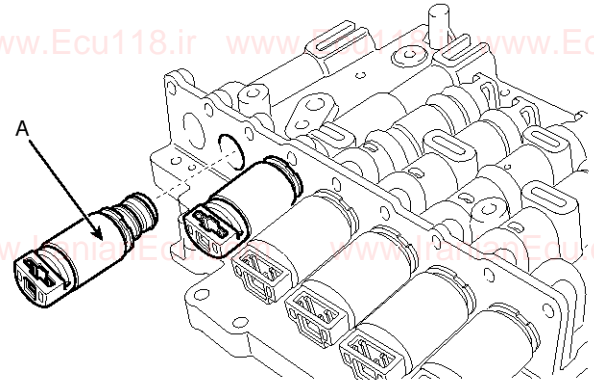
S98AT9313D

10. Remove the VFS Solenoid valve (A). (Black - NH)



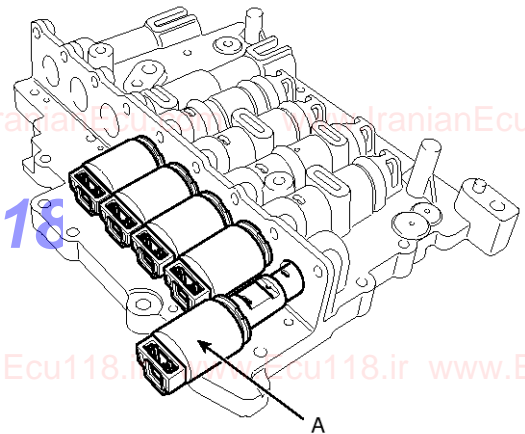
S98AT9312D

11. Remove the ON/OFF Solenoid valves (A-2ea).



S98AT9311D

12. Remove the VFS Solenoid valves (A-5ea). (White-NL, Black-NH)



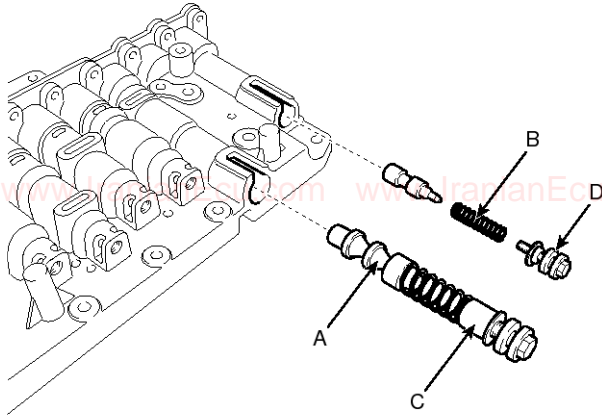
S98AT9310D

13. Remove the reducing valve, the coil spring and the adjust screw in order after removing the stopper plate.

# AT-56

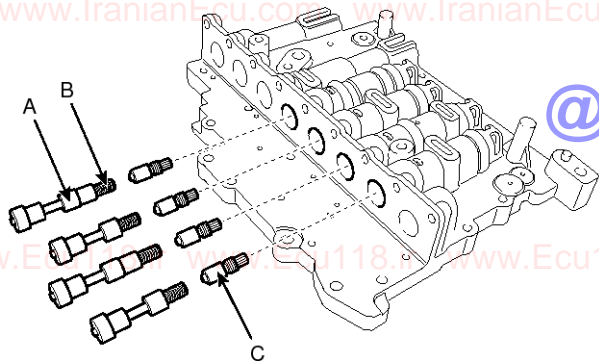
# Automatic Transaxle System

14. Remove the regulator valve (A), the coil spring (B), the regulator sleeve (C) and the adjust screw (D) in order after removing the stopper plate.



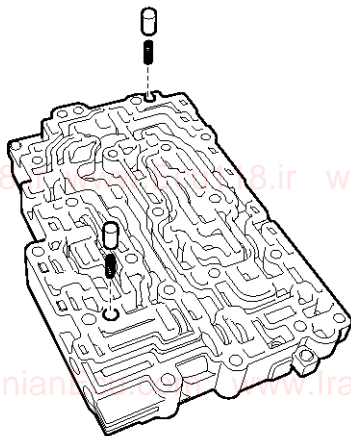
S98AT9309D

15. Remove the adjust screw (A), the coil Spring (B), and the pressure control valve (C) in order.



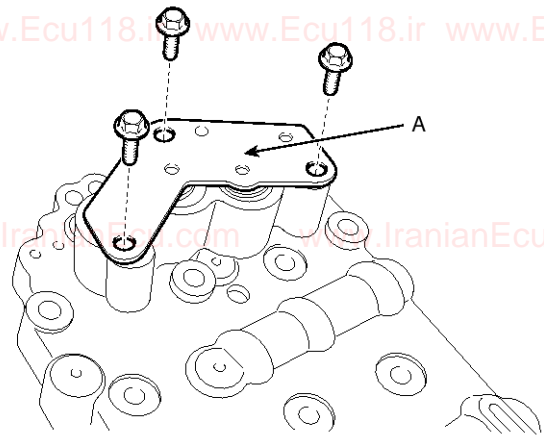
S98AT9308D

16. Remove the check valve (2ea) and the coil spring.



S97AT9207D

17. Remove the accumulator plate (A) after removing the bolts (3ea).

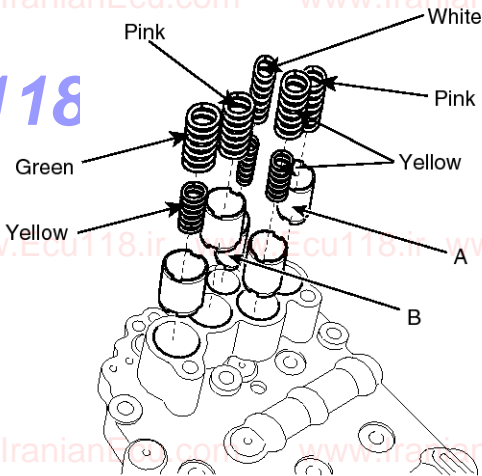


S98AT9306D

18. Remove the accumulator piston (A-4ea), the damping valve (B) and each coil spring.

**CAUTION**

Must check each spring color mark as below.

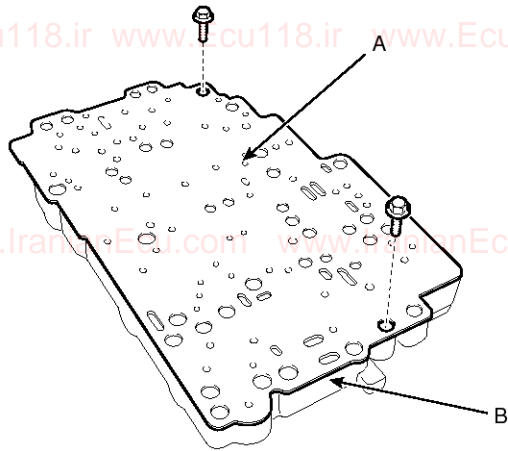


S97AT0006L

# Valve Body System

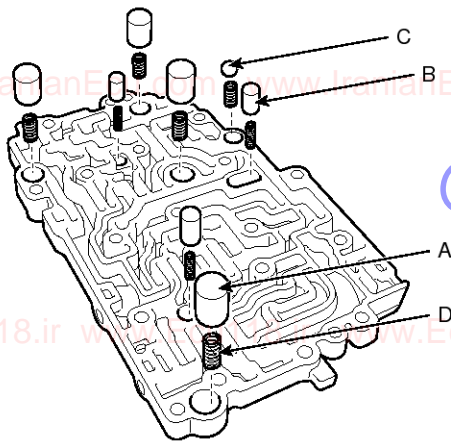
AT-57

19. Remove the separating plate (A) from the inner valve body (B) after removing the bolts (2ea).



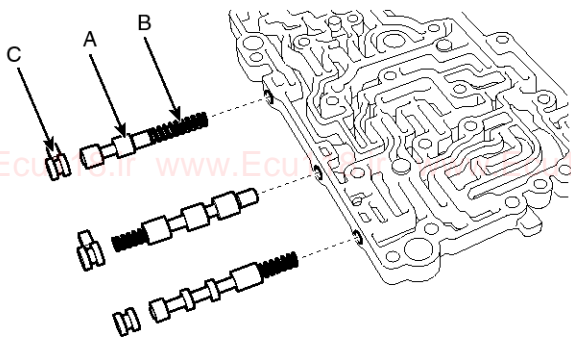
S98AT9304D

20. Remove the damping valve (A-4ea), check valve (B-3ea), the steel ball (C) and the coil spring (D).



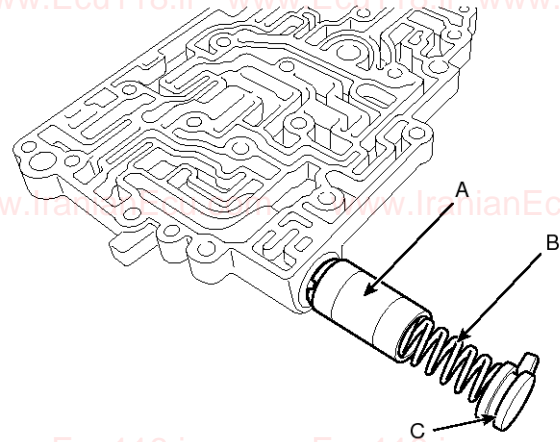
S98AT9303D

21. Remove the switch valve (A), the coil spring (B), the stopper plug (C) and the plate.



S97AT0010L

22. Remove the accumulator piston (DN) (A), the coil Spring (B) and stopper plug (C) from the inner valve body in order.



S98AT9301D

@ECU118

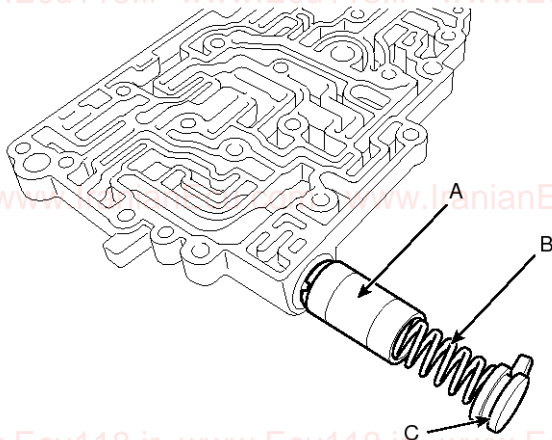


# AT-58

# Automatic Transaxle System

## Reassembly

1. Install the accumulator piston(DN) (A), the coil spring (B) and the stopper plug (C) to inner valve body.

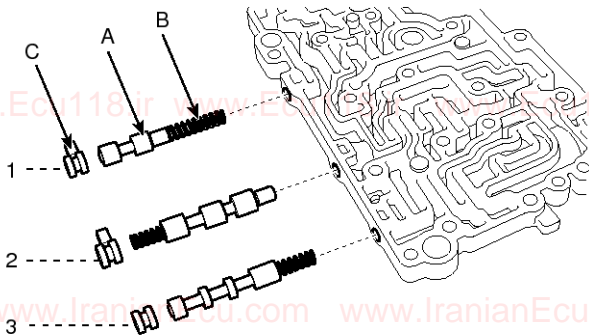


S98AT9301D

2. Install the switch valve (A), the coil spring (B), the stopper plug (C) and the plate to each position.

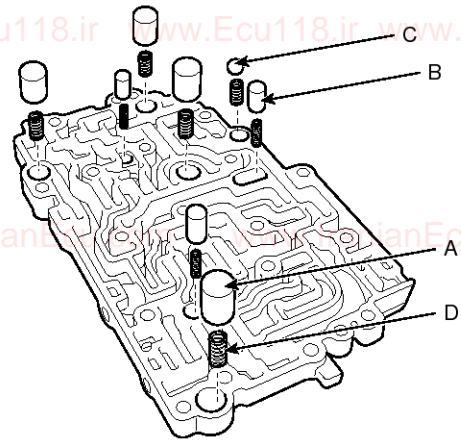
### NOTICE

1. OD fail safe valve
2. 35R switch valve
3. L/U switch valve



S98AT9302D

3. Install the damping valve (A-4ea), the check valve (B-3ea), the steal ball (C) and the coil spring (D).

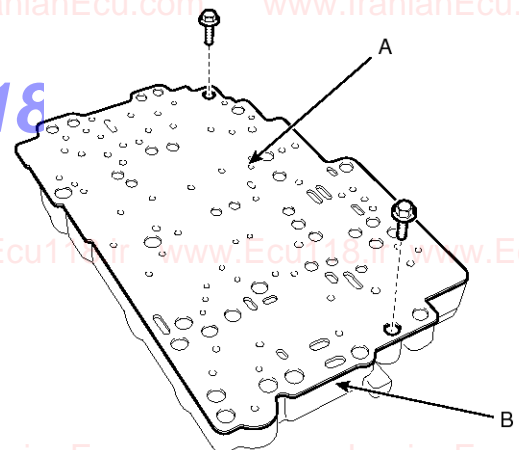


S98AT9303D

4. Install the separating plate (A) to the inner valve body (B) by tightening bolts (2ea).

### Tightening torque :

4.9~6.9 N.m (0.5~0.7 kgf.m, 3.6 ~ 5.1 lb-ft)

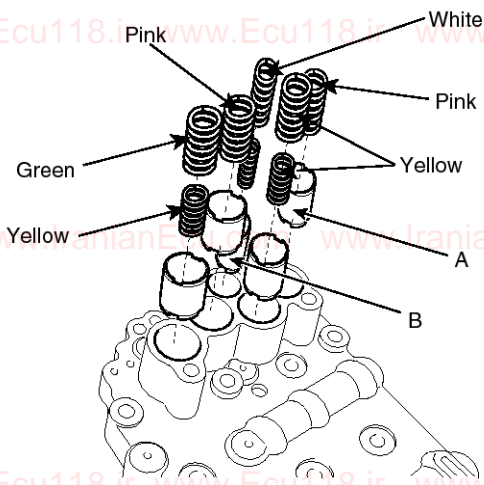


S98AT9304D

# Valve Body System

AT-59

5. Install the accumulator piston (A-4ea), the damping valve (B) and each coil spring.

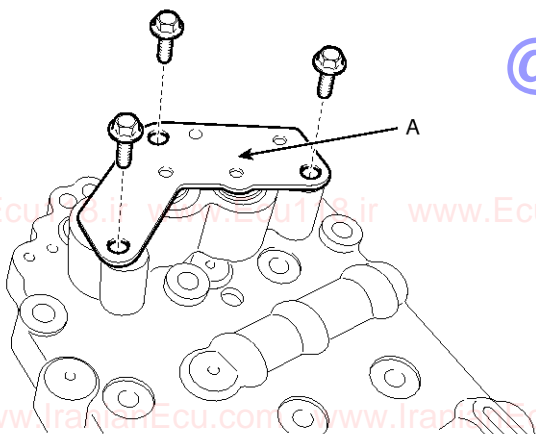


S97AT0006L

6. Install the accumulator plate (A) by tightening the bolts (3ea).

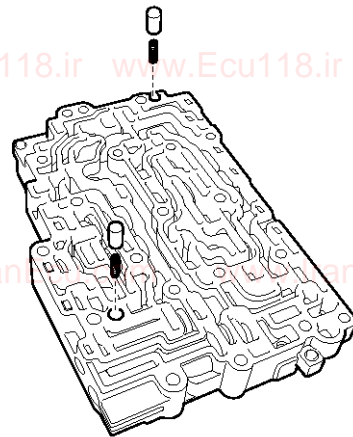
**Tightening torque :**

11.8 ~ 13.7 N.m (1.2 ~ 1.4 kgf.m, 8.7 ~ 10.1 lb-ft)



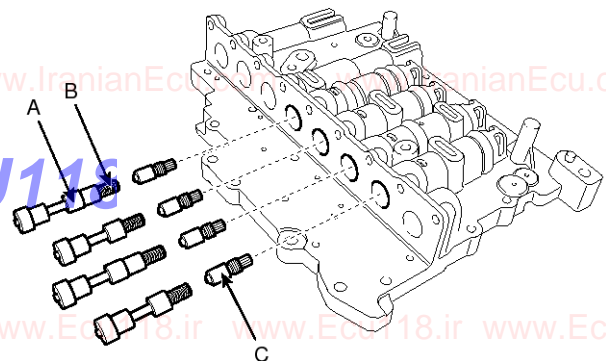
S98AT9306D

7. Install the check valve (2ea) and the coil spring.



S97AT9207D

8. Install the adjust screw (A), the coil spring (B) and the pressure control valve (C) in order.

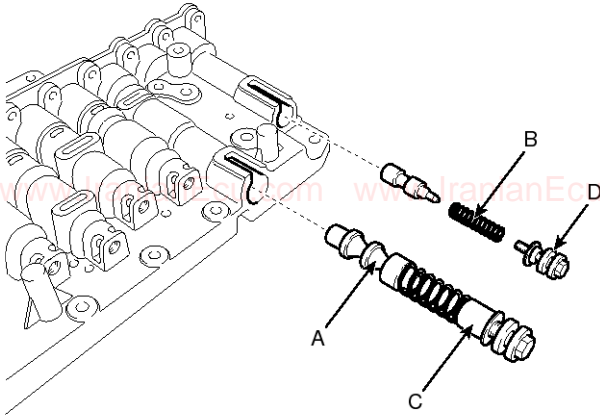


S98AT9308D

## AT-60

## Automatic Transaxle System

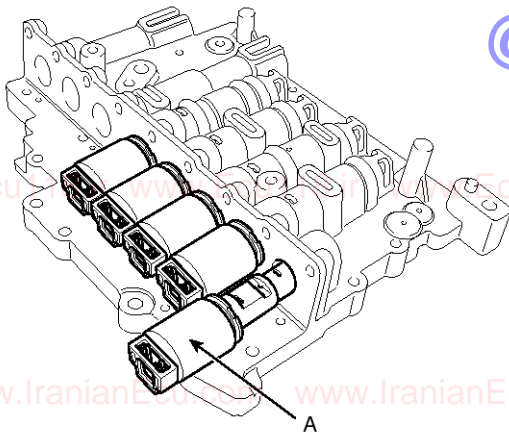
9. Install the regulator valve (A), the coil spring (B), the regulator sleeve (C) and the adjust screw (D) in order and then, fix them with the stopper plate.



S98AT9309D

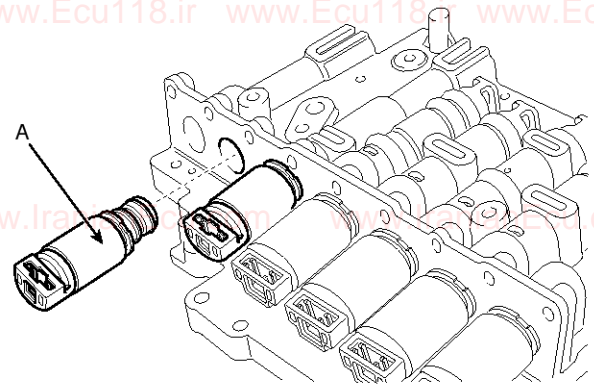
10. Install the reducing valve, the coil spring and the adjust screw in order and then, fix them with the stopper plate.

11. Install the VFS Solenoid valves (A-5ea) to each position. (White-NL, Black-NH)



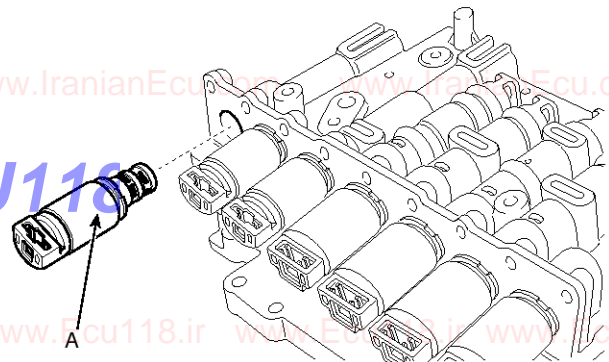
S98AT9310D

12. Install the ON/OFF Solenoid valves (A-2ea) to each position.



S98AT9311D

13. Install the VFS Solenoid valve (A). (Black - NH)



S98AT9312D

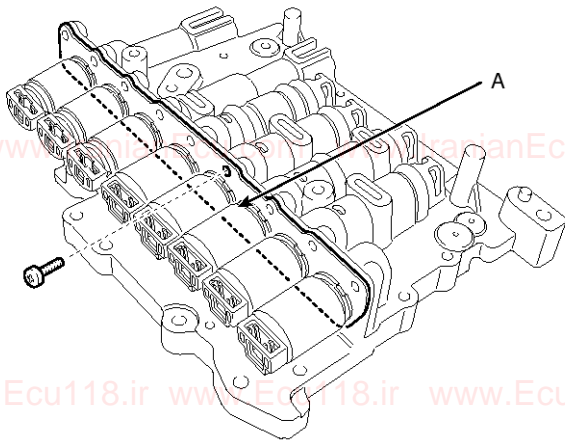
# Valve Body System

AT-61

14. Install the solenoid valve supporter (A) by tightening the bolts (9ea).

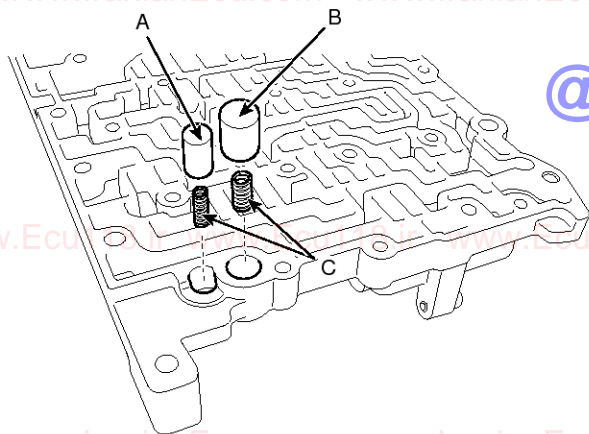
**Tightening torque :**

9.8~11.8 N.m (1.0~1.2 kgf.m, 7.2 ~ 8.7 lb-ft)



S98AT9313D

15. Install the damping valve (A), the check valve (B) and the coil spring (C).



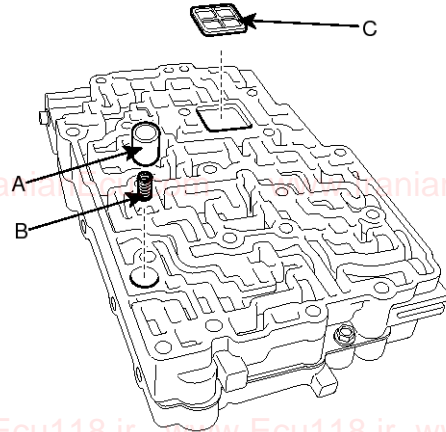
S98AT9314D

16. Install the separating plate to the outer valve body.

17. Install the middle valve body to the inner valve body assembly.

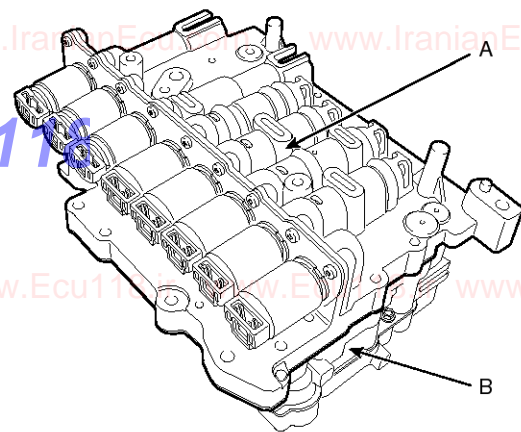
18. Install the oil strainer (C).

19. Install the damping valve (A) and the coil spring (B) to each position.



S97AT9216D

20. Install the outer valve body assembly (A) to the middle valve body (B).



S98AT9317D

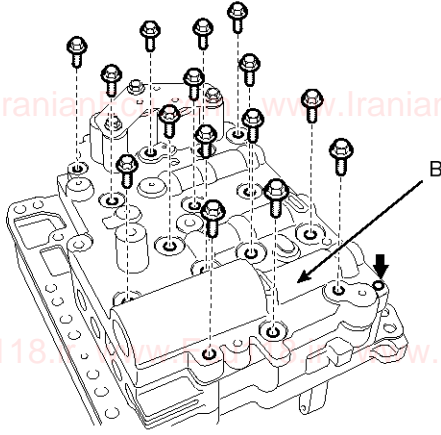
## AT-62

## Automatic Transaxle System

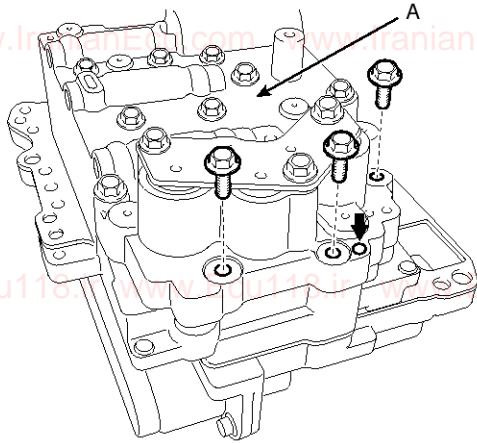
21. Install the inner, middle (A) and the outer valve body (B) by tightening the bolts (18ea) after set  $\phi 6$  bar to the installation guide hole (2ea).

**Tightening torque :**

9.8~11.8 N.m (1.0~1.2 kgf.m, 7.2 ~ 8.7 lb-ft)

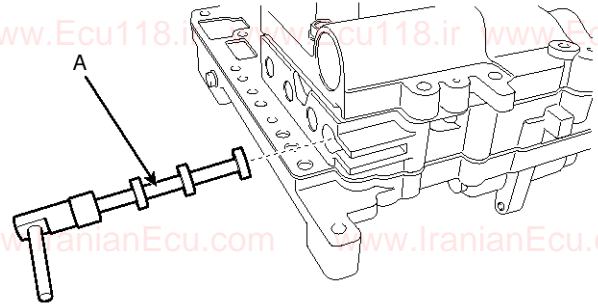


S98AT9318D



S98AT9319D

22. Install the manual valve (A).



S98AT9320D

@ECU118

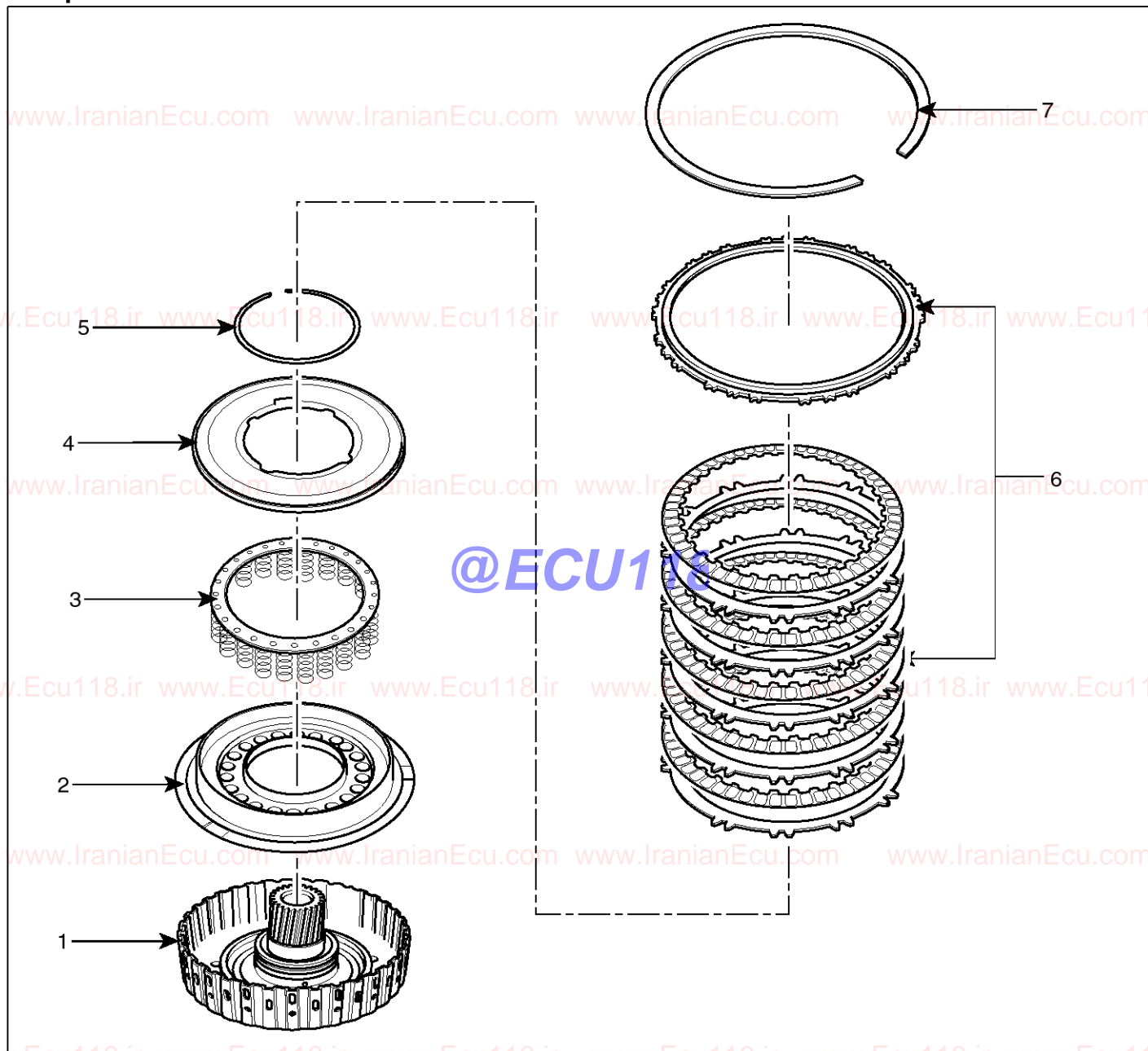
# Clutch & Brake

# AT-63

## Clutch & Brake

### Overdrive Clutch

#### Components



S97AT9300D

- 1. Over drive clutch retainer assembly
- 2. Over drive clutch piston
- 3. Over drive clutch Return Spring
- 4. Over drive clutch balance piston

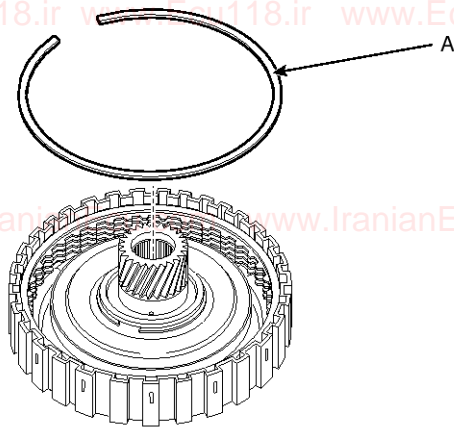
- 5. Snap ring
- 6. Over drive clutch disc set
- 7. Snap ring

# AT-64

# Automatic Transaxle System

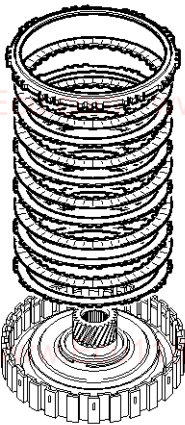
## Disassembly

1. Remove the snap ring (A).



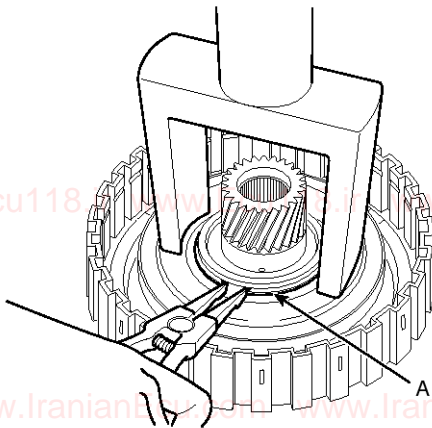
S98AT9407D

2. Remove the over drive clutch disc in order.



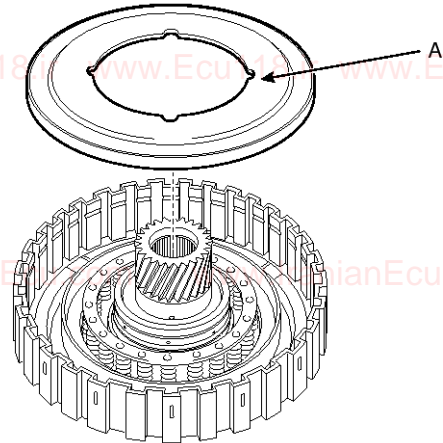
S97AT9306D

3. Remove the snap ring (A) with the SST (No.: 09453-4C400).



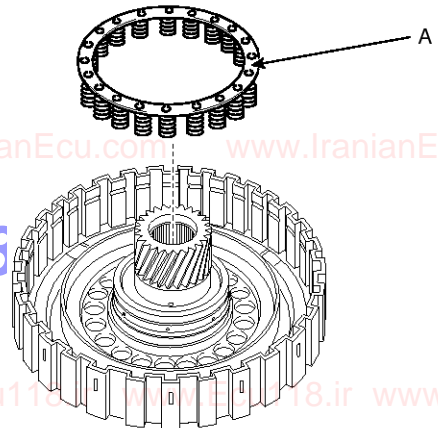
S98AT9405D

4. Remove the over drive clutch balance piston (A).



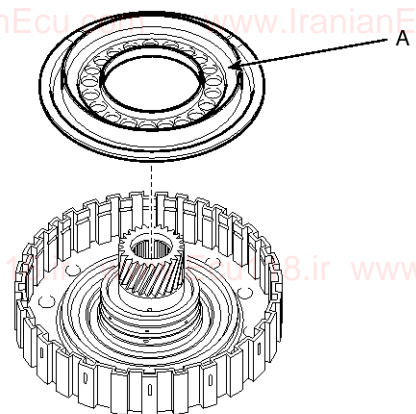
S98AT9404D

5. Remove the over drive clutch return spring (A).



S98AT9403D

6. Remove the over drive clutch piston (A).

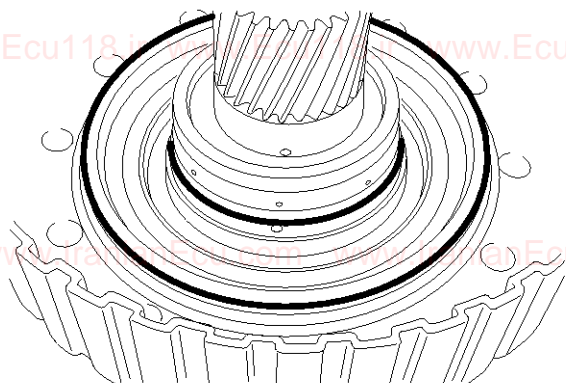


S98AT9402D

# Clutch & Brake

# AT-65

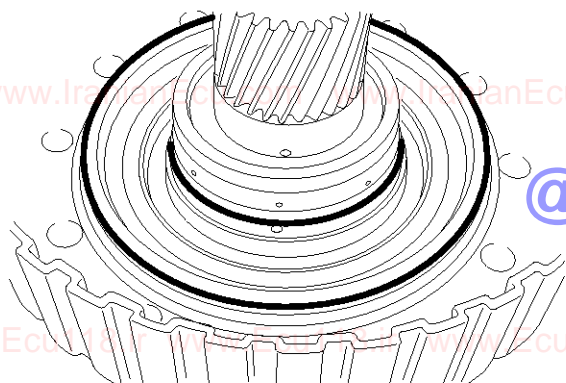
7. Remove the D-ring (2ea).



S97AT9301D

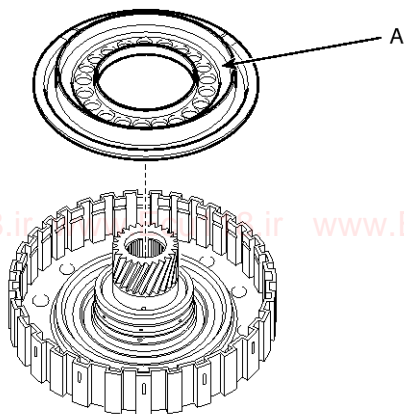
## Reassembly

1. Install the D-ring (2ea).



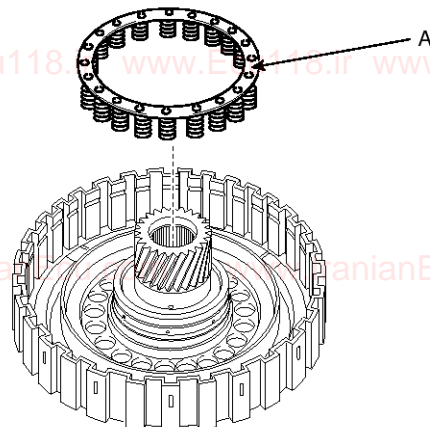
S97AT9301D

2. Install the over drive clutch piston (A).



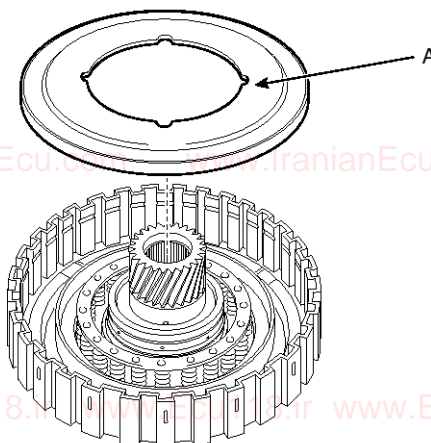
S98AT9402D

3. Install the over drive clutch return spring (A).



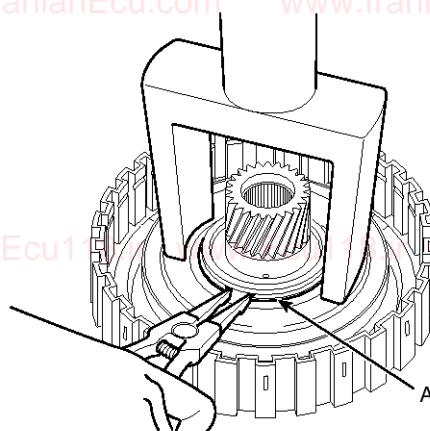
S98AT9403D

4. Install the over drive clutch balance piston (A).



S98AT9404D

5. Install the snap ring (A) with the SST (No.: 09453-4C400).



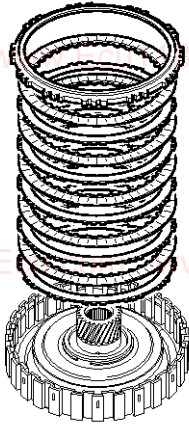
S98AT9405D



## AT-66

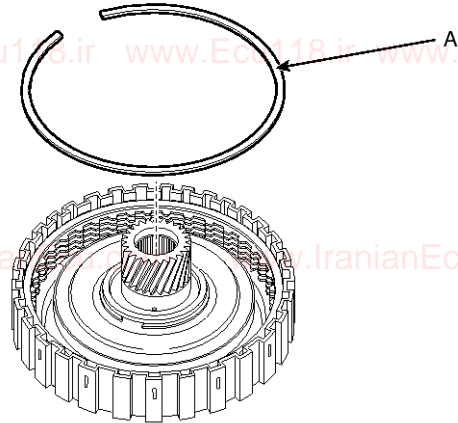
## Automatic Transaxle System

6. Install the over drive clutch disc in order.



S97AT9306D

7. Install the snap ring (A).



S98AT9407D

### End play:

1.25 ~ 1.55 mm (0.0492 ~ 0.0610 in.)

※ Snap ring thickness = (Over drive clutch piston-retainer height) - [Disc set height under the load 49N.m (5 kgf.m, 36 lb-ft)] - Specification(Average)

Part No.	Thickness [mm(in.)]
45552-3B617	1.7(0.0669)
45552-3B619	1.9(0.0748)
45552-3B621	2.1(0.0826)
45552-3B623	2.3(0.0905)
45552-3B625	2.5(0.0984)
45552-3B627	2.7(0.1062)
45552-3B629	2.9(0.1141)

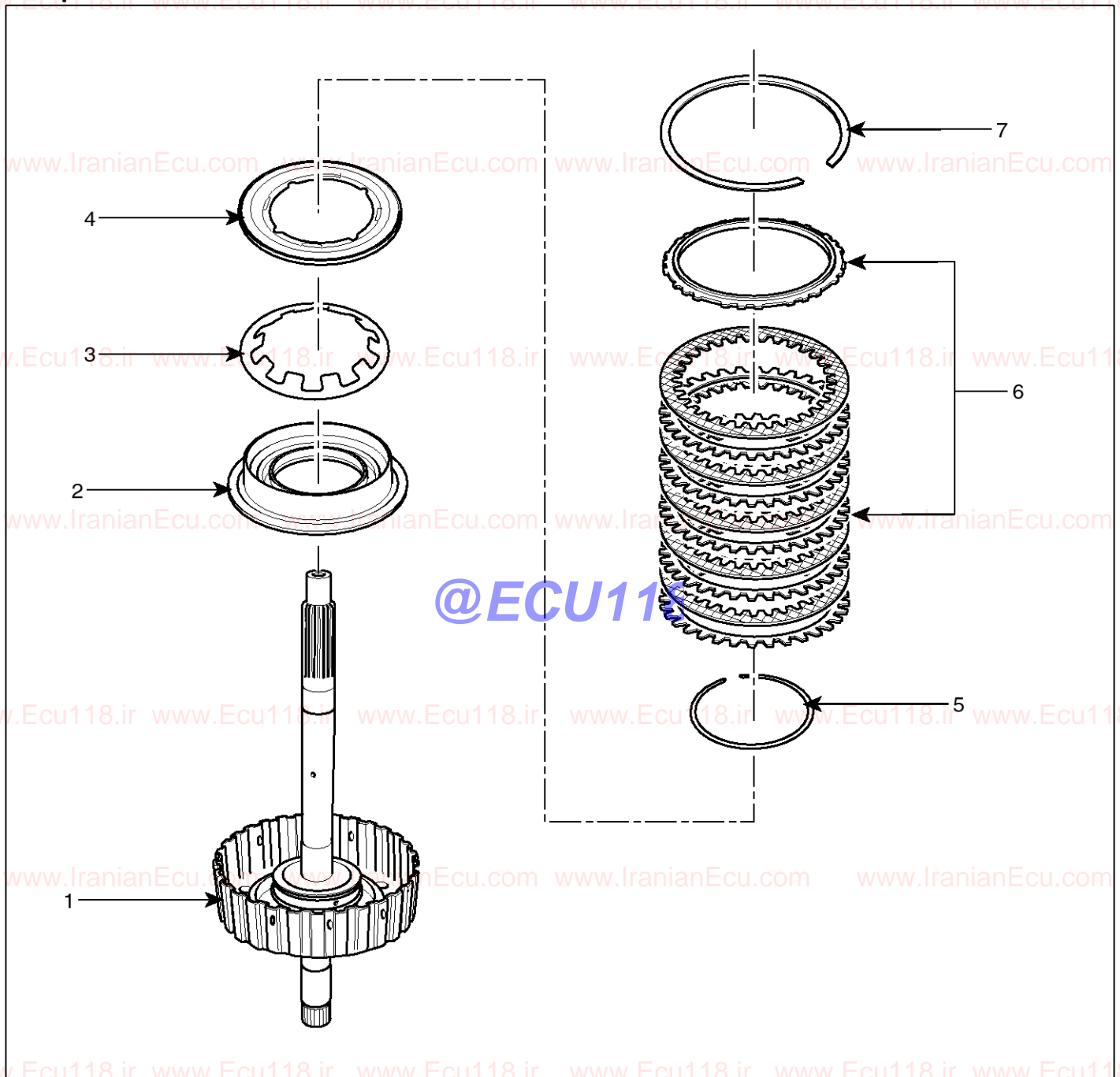
@ECU118

# Clutch & Brake

# AT-67

## Reverse and Overdrive Clutch

### Components



- 1. 35R clutch retainer assembly
- 2. 35R clutch piston
- 3. 35R clutch return spring
- 4. 35R clutch balance piston

- 5. Snap ring
- 6. 35R clutch disc set
- 7. Snap ring

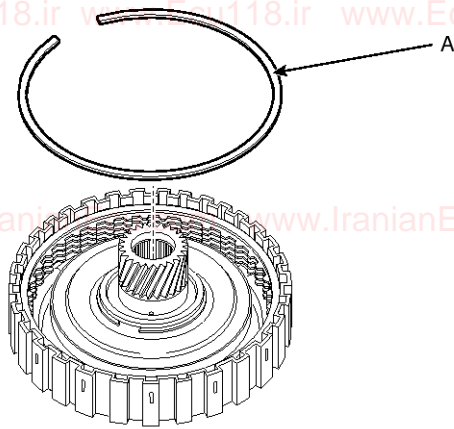
S97AT9400D

## AT-68

## Automatic Transaxle System

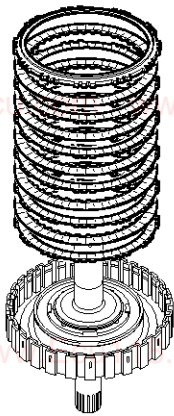
### Disassembly

1. Remove the snap ring (A).



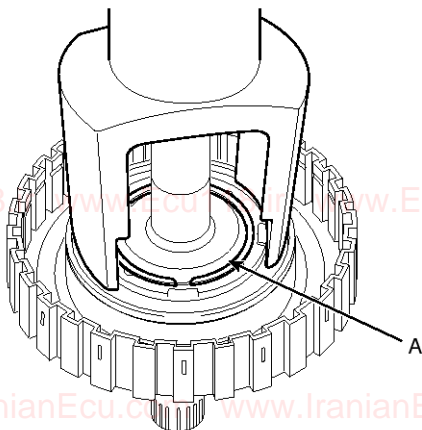
S98AT9407D

2. Remove the 35R clutch disc in order.



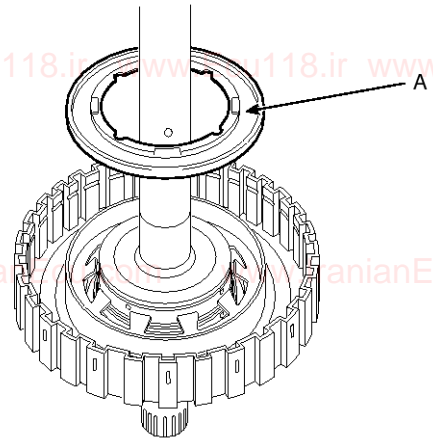
S98AT9506D

3. Remove the snap ring (A) with the SST (No.: 09453-3L230).



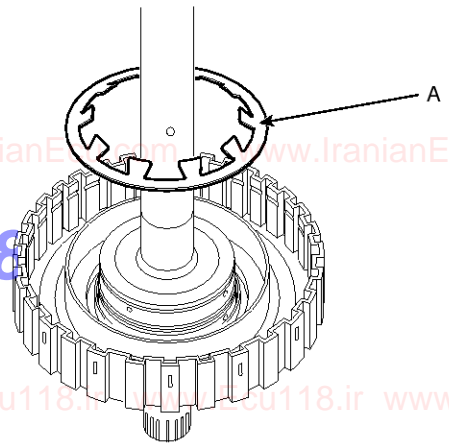
S98AT9505D

4. Remove the 35R clutch balance piston (A).



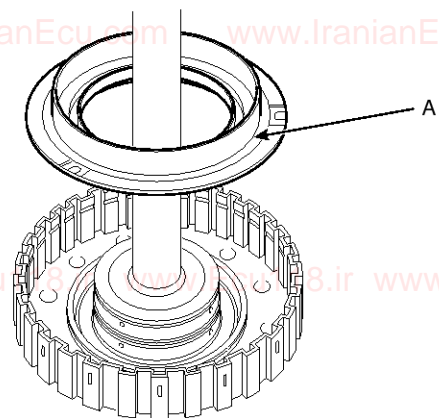
S98AT9504D

5. Remove the 35R clutch return spring (A).



S98AT9503D

6. Remove the 35R clutch piston (A).

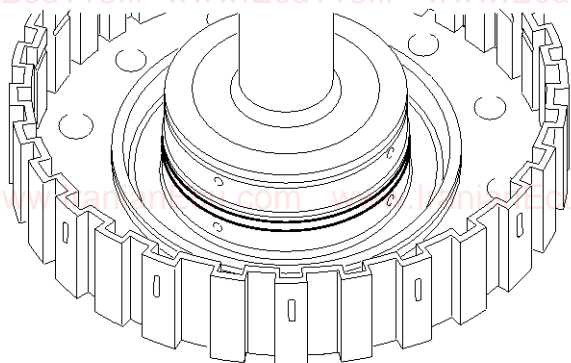


S98AT9502D

## Clutch & Brake

AT-69

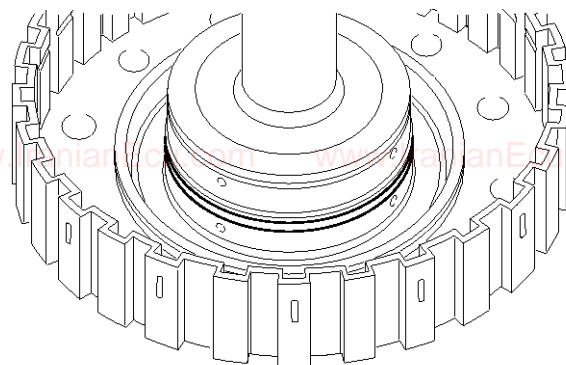
7. Remove the D-ring (1ea-outside) and the O-ring (1ea-inside).



S97AT9401D

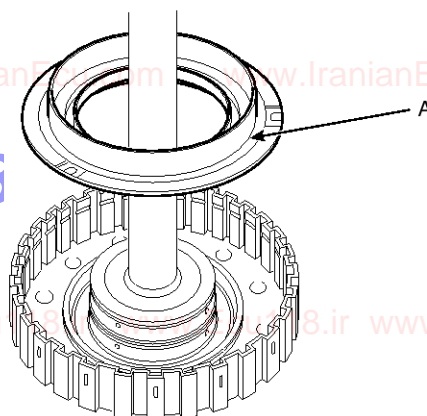
### Reassembly

1. Install the D-ring (1ea-outside) and the O-ring (1ea-inside).



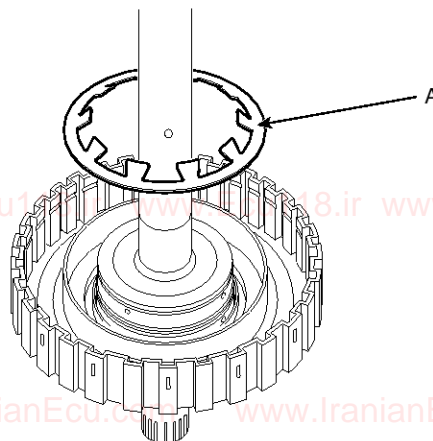
S97AT9401D

2. Install the 35R clutch piston (A).



S98AT9502D

3. Install the 35R clutch return spring (A).



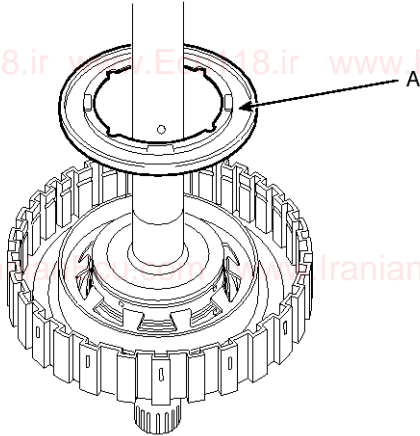
S98AT9503D

@ECU118

# AT-70

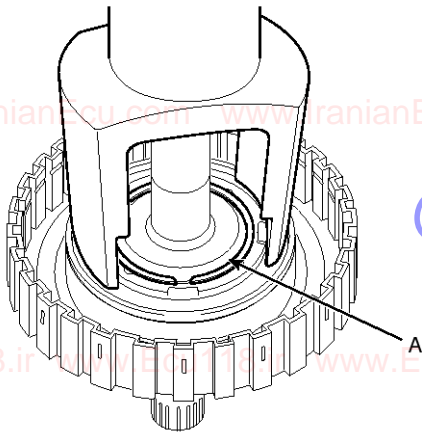
# Automatic Transaxle System

4. Install the 35R clutch balance piston (A).



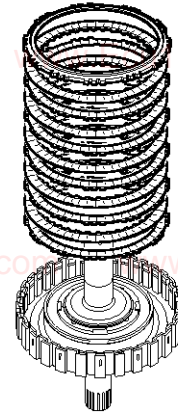
S98AT9504D

5. Install the snap ring (A) with the SST (No.: 09453-3L230).



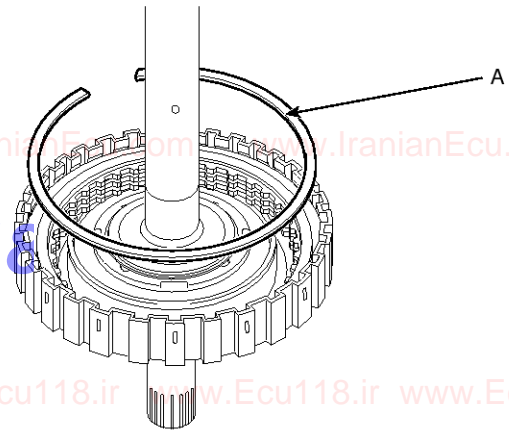
S98AT9505D

6. Install the 35R Clutch disc in order.



S98AT9506D

7. Install the snap ring (A).



S98AT9507D

**End play specification :**

A6MF1 : 0.85~1.15 mm (0.0335~0.0453 in.)

A6MF2 : 1.05~1.35 mm (0.0413~0.0531 in.)

※ Snap ring thickness = (35R Clutch piston-retainer height) - [Disc set height under the load 49N.m (5 kgf.m, 36 lb-ft)] - Specification(Average)

Part No.	Thickness [mm(in.)]
45452-3B616	1.6(0.0629)
45452-3B618	1.8(0.0708)
45452-3B620	2.0(0.0787)
45452-3B622	2.2(0.0866)
45452-3B624	2.4(0.0944)
45452-3B626	2.6(0.1023)
45452-3B628	2.8(0.1102)

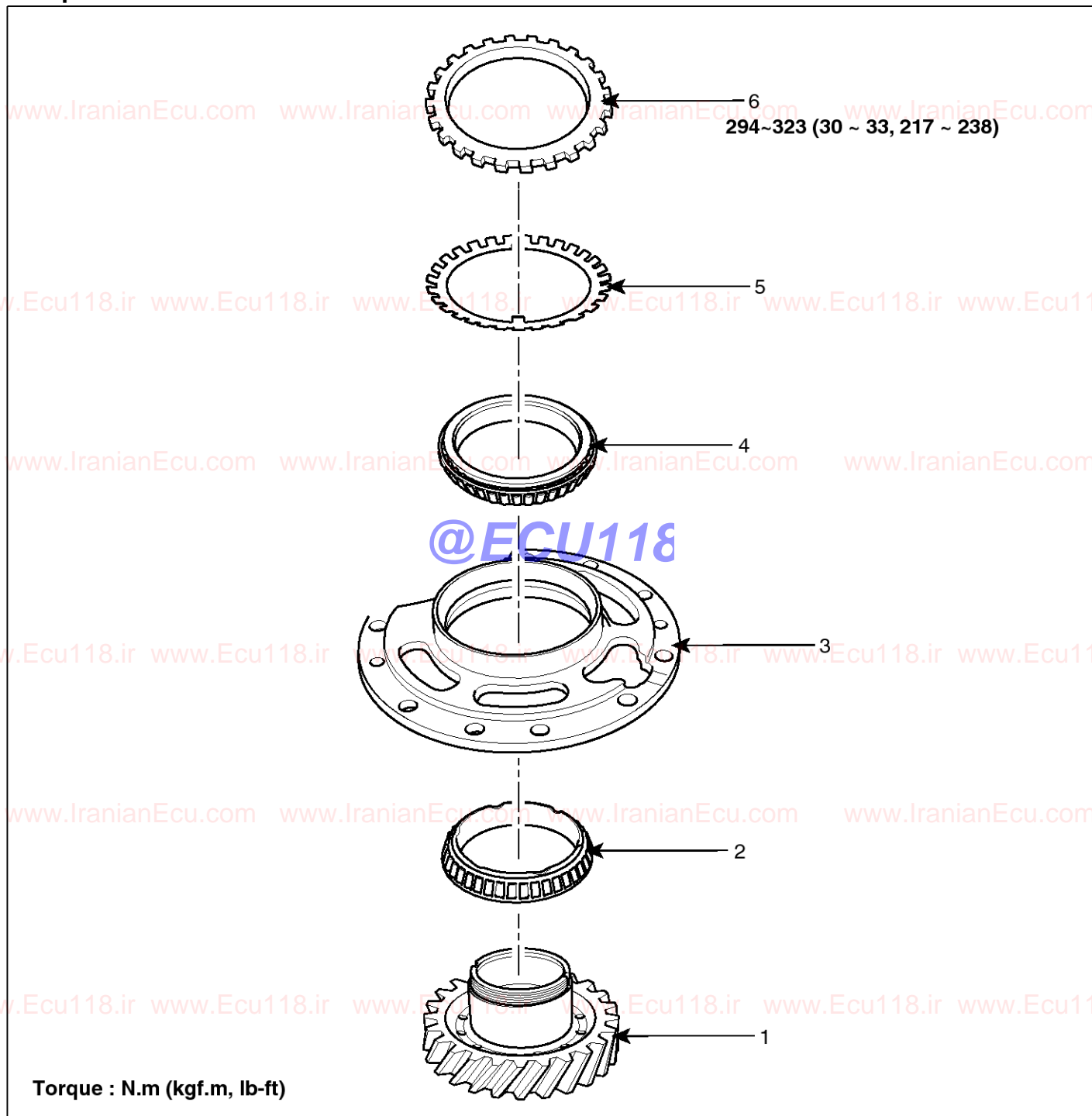
# Gear System

AT-71

## Gear System

### Transfer Drive Gear

#### Components



S97AT0007L

- 1. Transfer drive gear
- 2. Taper roller bearing
- 3. Bearing retainer

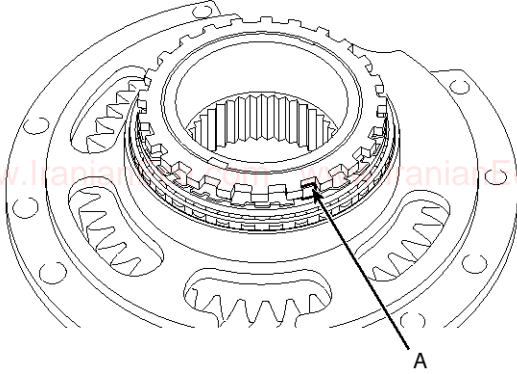
- 4. Taper roller bearing
- 5. Stopper plate
- 6. Lock nut

## AT-72

## Automatic Transaxle System

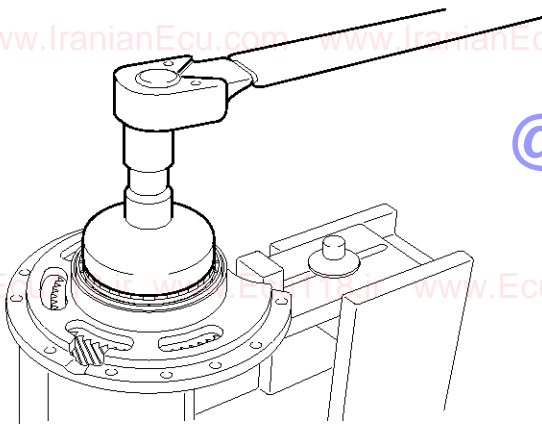
### Disassembly

1. Unfold the stopper plate projection part (A - about 2ea) of the lock nut.



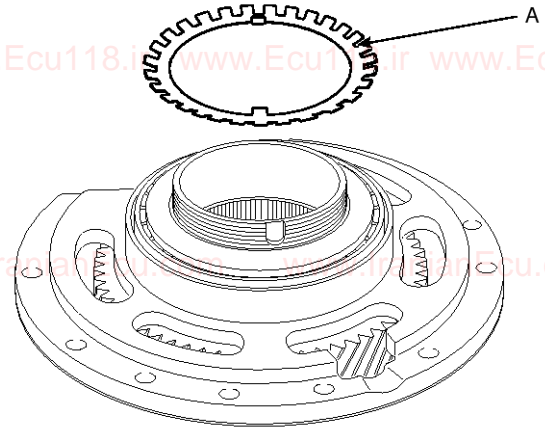
S98AT9604D

2. Unscrew the lock nut with a torque wrench and the SST (No.:09453-3L220).



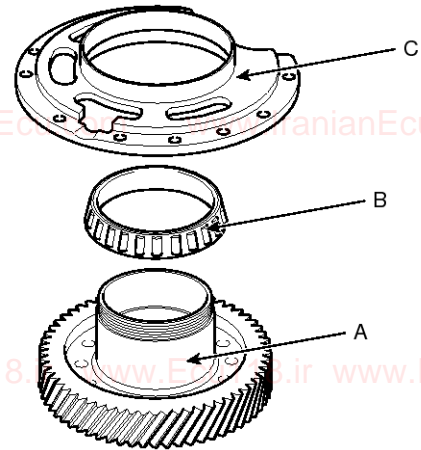
S97AT9503D

3. Remove the stopper plate (A).



S98AT9602D

4. Remove the taper roller bearing (B) and the bearing retainer (C) from the transfer drive gear (A) in order.



S98AT9601D

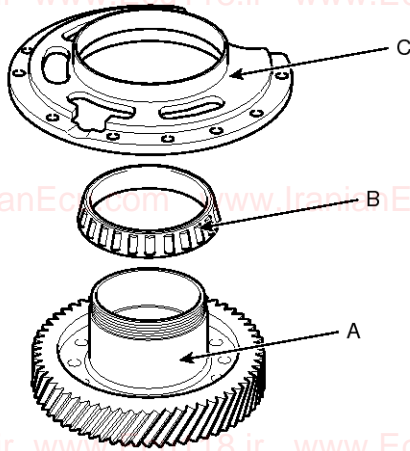
@ECU118

# Gear System

# AT-73

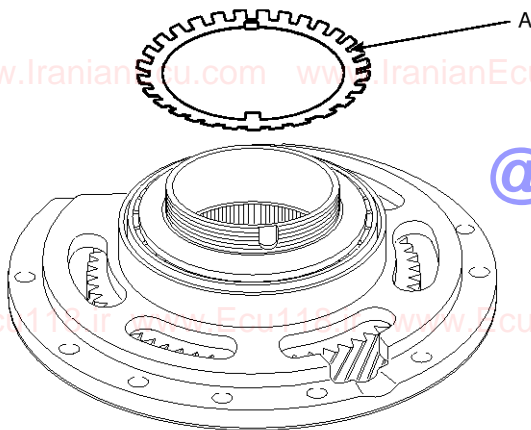
## Reassembly

1. Install the taper roller bearing (B) and the bearing retainer (C) from the transfer drive gear (A) in order.



S98AT9601D

2. Install the stopper plate (A) at the groove.

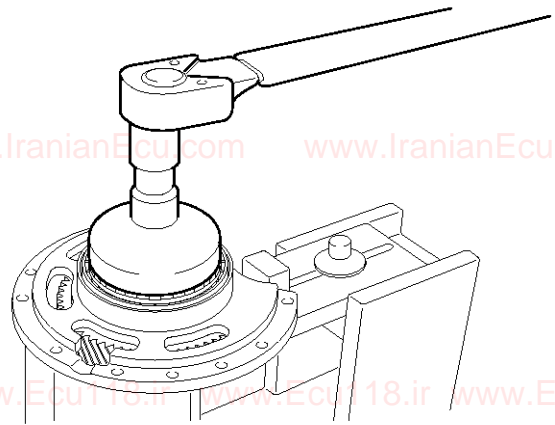


S98AT9602D

3. Tighten the lock nut with a torque wrench and the SST (No.:09453-3L220).

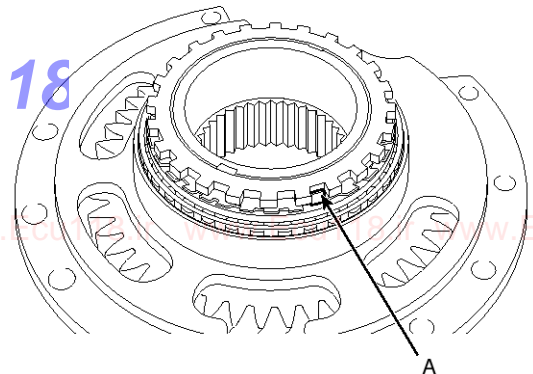
### Tightening torque :

294~323 N.m (30 ~ 33 kgf.m, 217 ~ 238 lb-ft)



S97AT9503D

4. Fold the stopper plate projection part (A) of the lock nut.



S98AT9604D

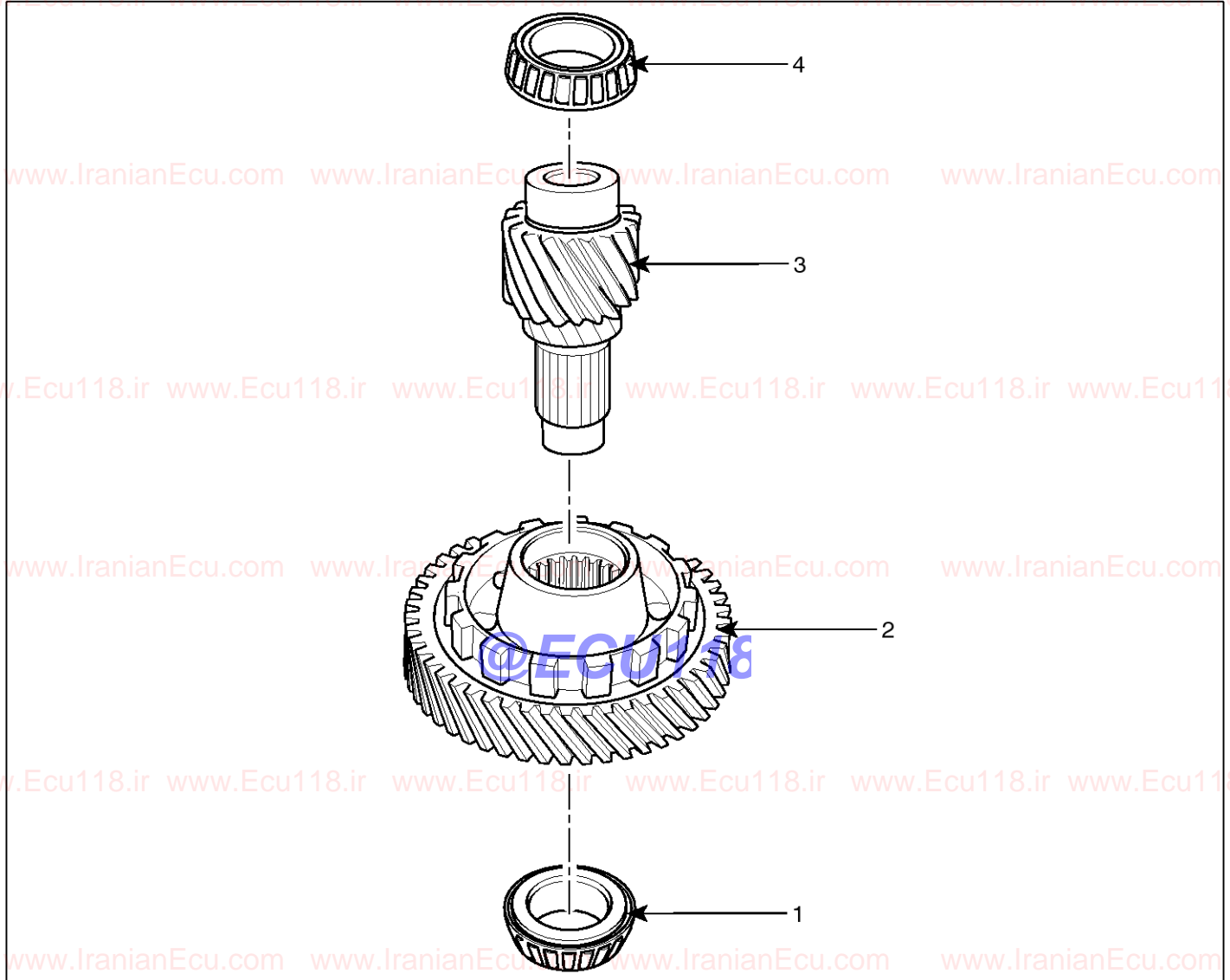


## AT-74

## Automatic Transaxle System

### Transfer Driven Gear

#### Components



S97AT9511D

- 1. Taper roller bearing
- 2. Transfer driven gear

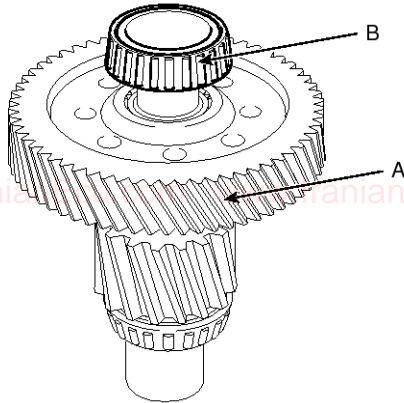
- 3. Output shaft
- 4. Taper roller bearing

# Gear System

# AT-75

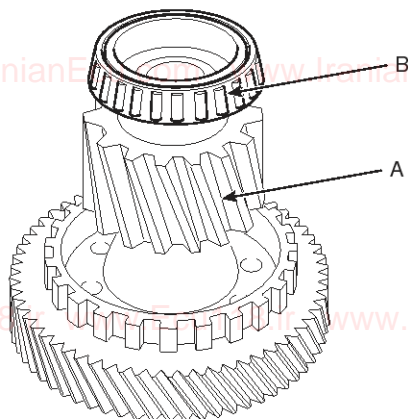
## Disassembly

1. Remove the taper roller bearing (B) from the output shaft (A).



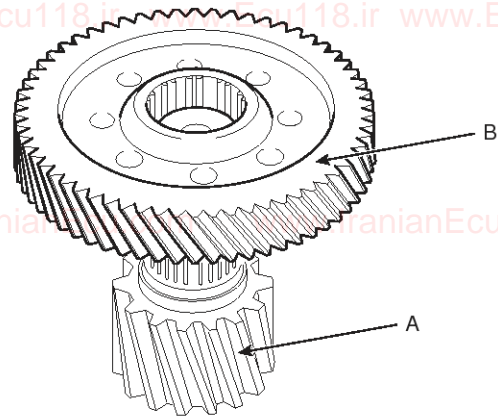
S98AT9607D

2. Remove another taper roller bearing (B) from the opposite side of the output shaft (A).



S98AT9606D

3. Remove the transfer driven gear (B) from the output shaft (A).



S98AT9605D

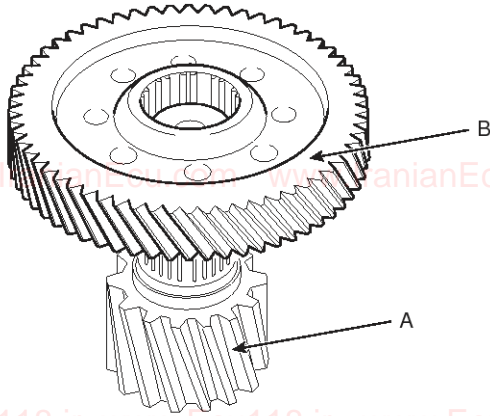
**@ECU118**

## AT-76

## Automatic Transaxle System

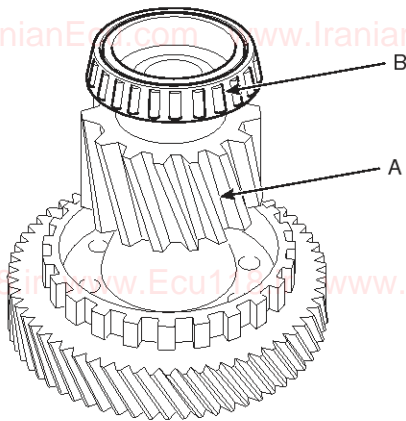
### Reassembly

1. Install the transfer driven gear (B) to the output shaft (A).



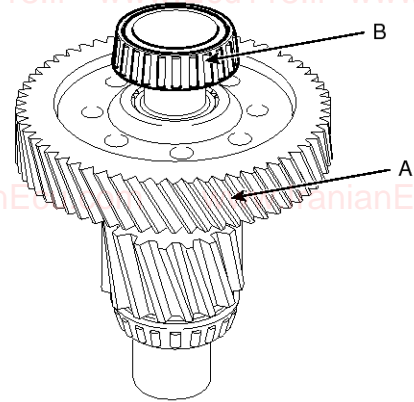
S98AT9605D

2. Install the taper roller bearing (B) to the output shaft (A) with the SST (No.: 09453-3L200).



S98AT9606D

3. Install another taper roller bearing (B) to the opposite side of the output shaft (A) with the SST (No.: 09453-3L210).



S98AT9607D

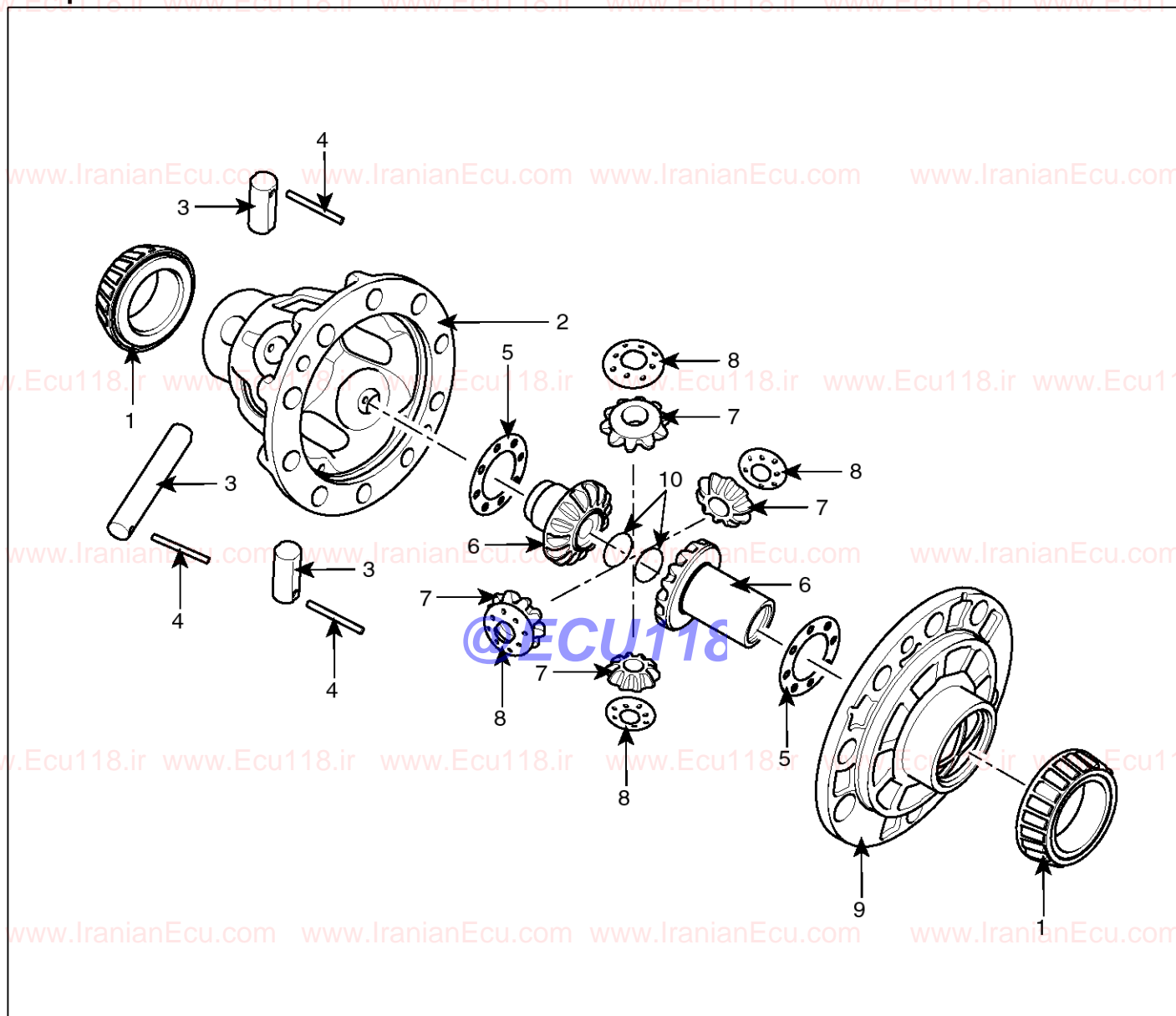
@ECU118

# Gear System

AT-77

## Differential

### Components



S98AT9006D

1. Taper roller bearing
2. Differential cup
3. Pinion shaft
4. Lock pin
5. Side spacer

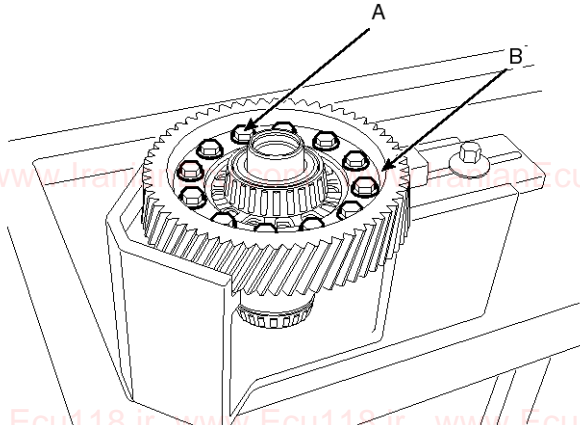
6. Differential side gear
7. Differential pinion gear
8. Differential pinion washer
9. Differential cover
10. Cap seal ring

# AT-78

# Automatic Transaxle System

## Disassembly

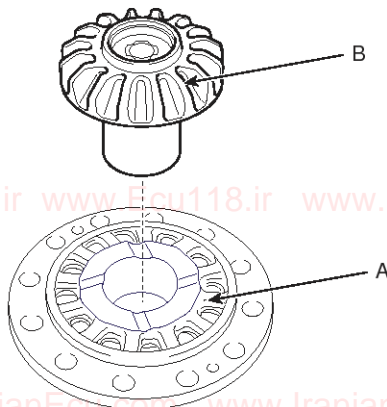
1. Remove the differential gear (B) after removing the bolts (A).



S98AT9712D

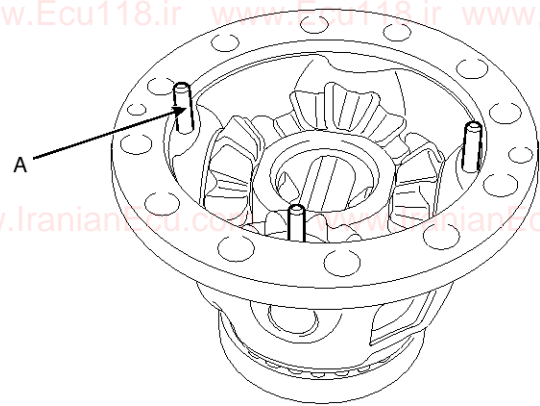
2. Remove the differential cup and cover after removing the screws (2ea).

3. Remove the differential side gear (B) from the differential cover (A).



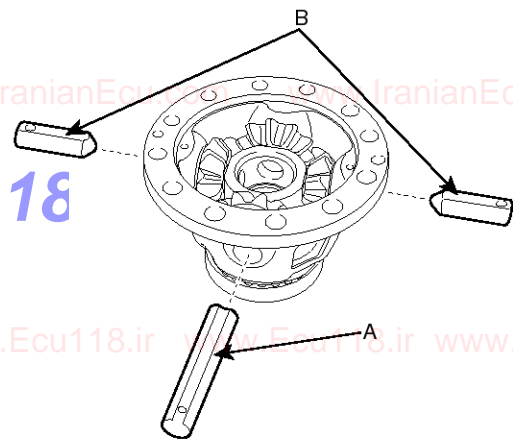
S98AT9710D

4. Remove the pinion shaft after removing the lock pin (A-3ea).



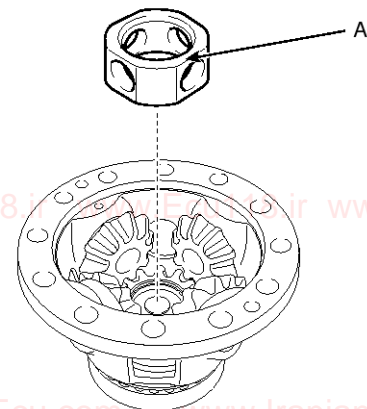
S97AT0008L

5. Remove the pinion shaft (A) and the pinion short shaft (B-2ea).



S97AT9608D

6. Remove the pinion shaft supporter (A).

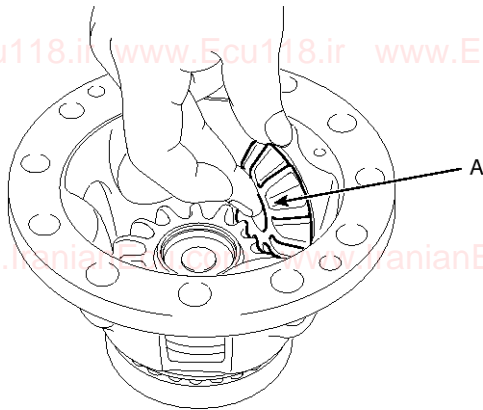


S98AT9707D

# Gear System

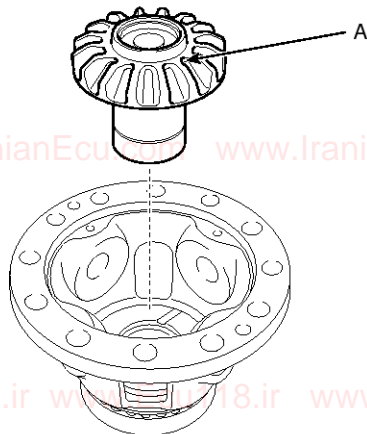
# AT-79

7. Remove the differential pinion gear (A-4ea).



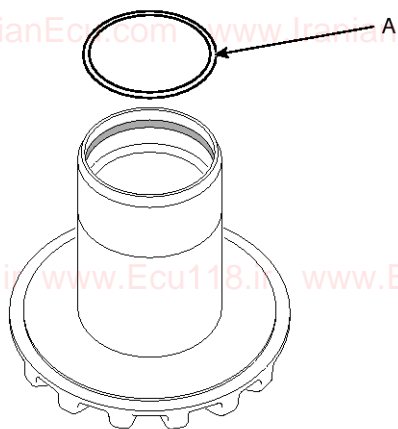
S98AT9706D

8. Remove the side gear (A) from the differential cup.



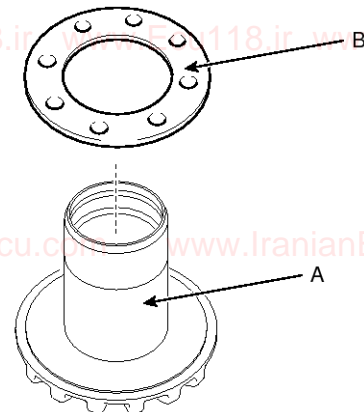
S98AT9705D

9. Remove the O-ring (A) from the differential side gear.



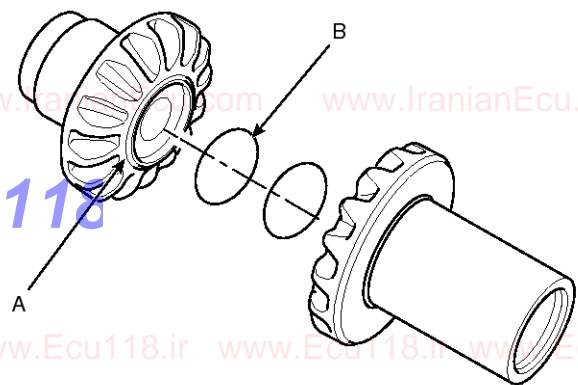
S98AT9704D

10. Remove the side spacer (B) from the differential side gear (A).



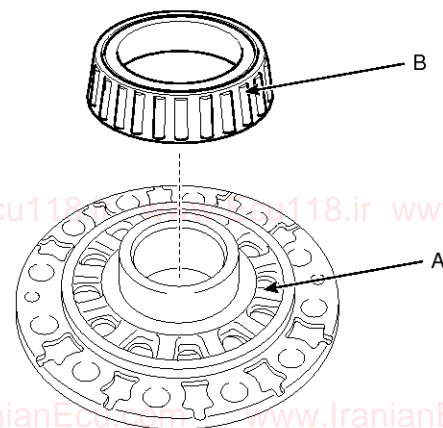
S98AT9703D

11. Remove the cap seal ring (B) from the differential side gear (A).



S98AT9008D

12. Remove the taper roller bearing (B) from the differential cover (A).

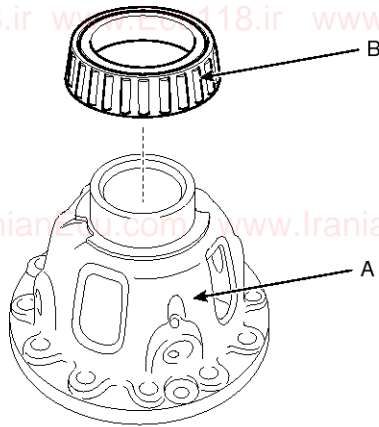


S98AT9702D

## AT-80

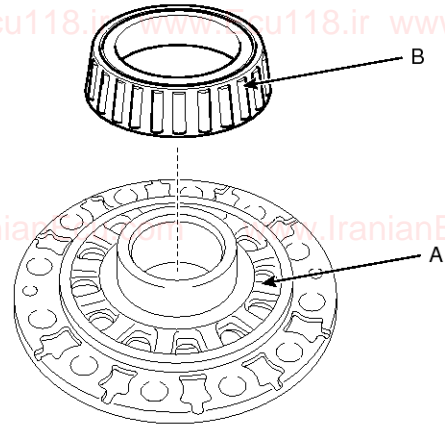
## Automatic Transaxle System

13. Remove the taper roller bearing (B) from the differential cup (A).



S98AT9701D

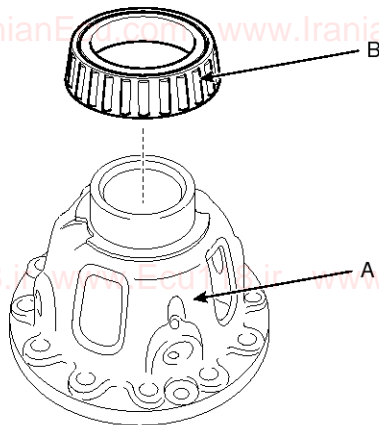
2. Install the taper roller bearing (B) to the differential cover (A) with the SST (No.: 09453-3L250).



S98AT9702D

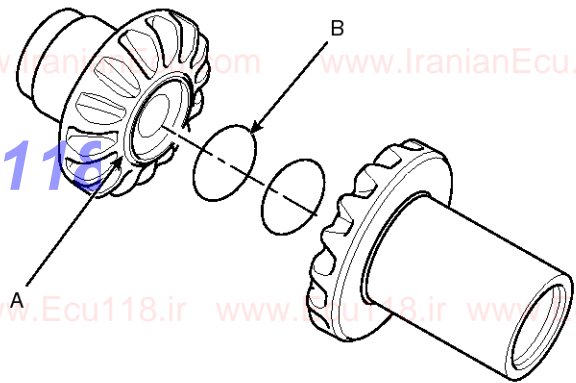
### Reassembly

1. Install the taper roller bearing (B) to the differential cup (A) with the SST (No.: 09453-3L250).



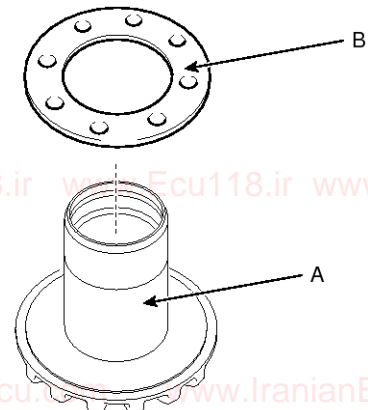
S98AT9701D

3. Install the cap seal ring (B) to the differential side gear (A).



S98AT9008D

4. Install the side spacer (B) to the differential side gear (A).

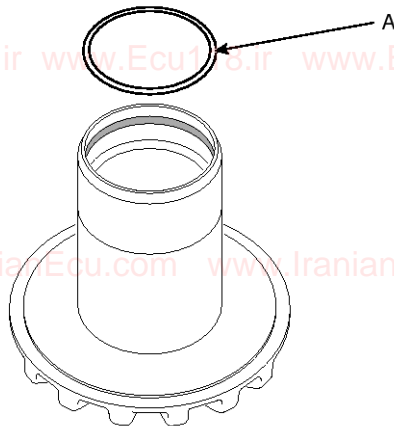


S98AT9703D

# Gear System

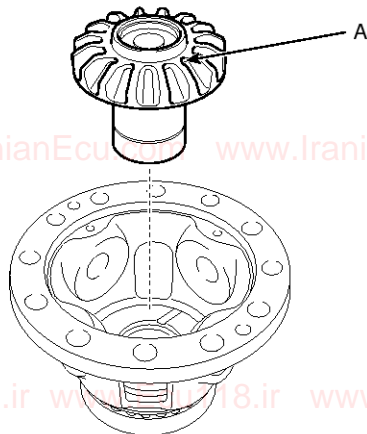
# AT-81

5. Install the O-ring (A) to the differential side gear.



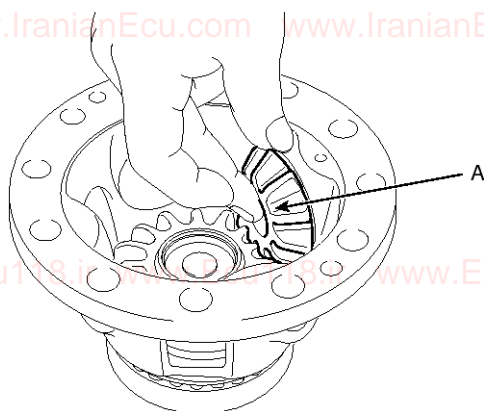
S98AT9704D

6. Install the side gear (A) to the differential cup.



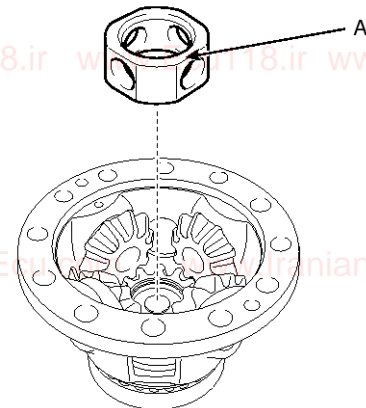
S98AT9705D

7. Install the pinion gear (A-4ea).



S98AT9706D

8. Install pinion shaft supporter (A).

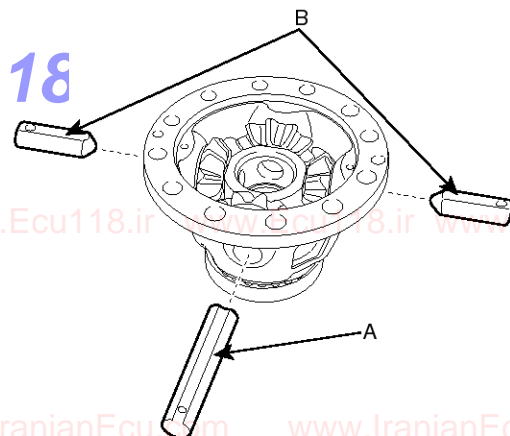


S98AT9707D

9. Install the pinion shaft (A) and the pinion short shaft (B-2ea).

**⚠ CAUTION**

Be careful when installing the shafts to match the groove of the shaft and the groove of the cup.



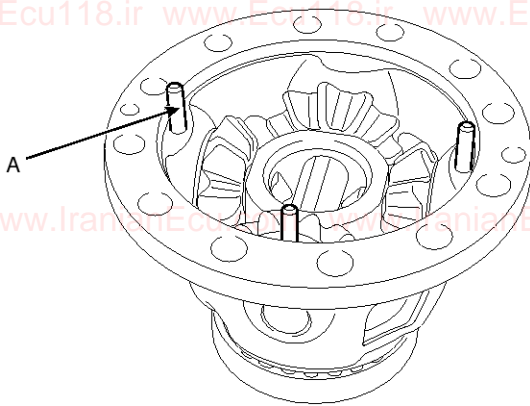
S97AT9608D



## AT-82

## Automatic Transaxle System

10. Install the pinion shaft by installing the lock pin (A-3ea).

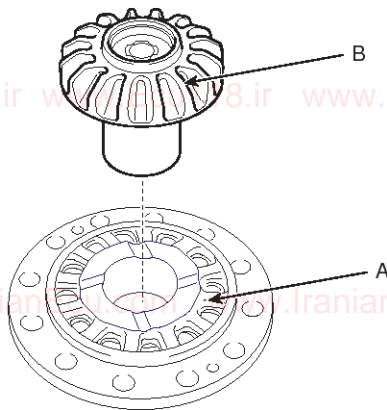


S97AT0008L

11. Install the differential side gear (B) to the differential cover (A).

### ⚠ CAUTION

Adjust backlash between the differential side gear and the differential pinion gear by selecting the side spacer to satisfy backlash specification [0.025 ~ 0.150 mm (0.0009 ~ 0.0059in)]. Be careful to adjust backlash equally.



S98AT9710D

12. Install the differential cup and cover by tightening the screws (2ea).

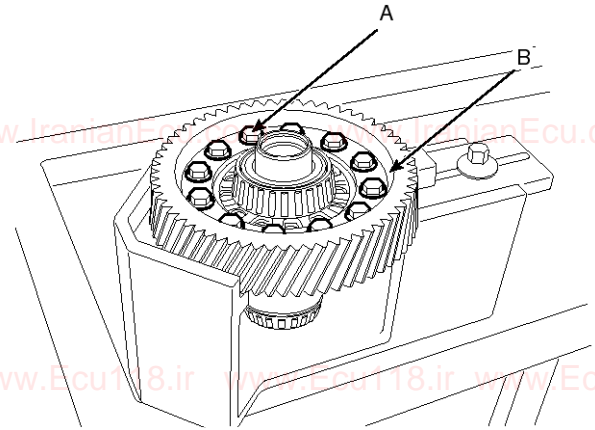
### Tightening torque :

9.8~11.8 N.m(1.0~1.2 kgf.m, 7.2~8.7 lb-ft)

13. Install the differential gear (B) by tightening the bolts (A).

### Tightening torque :

9.8~11.8 N.m(1.0~1.2 kgf.m, 7.2~8.7 lb-ft)



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