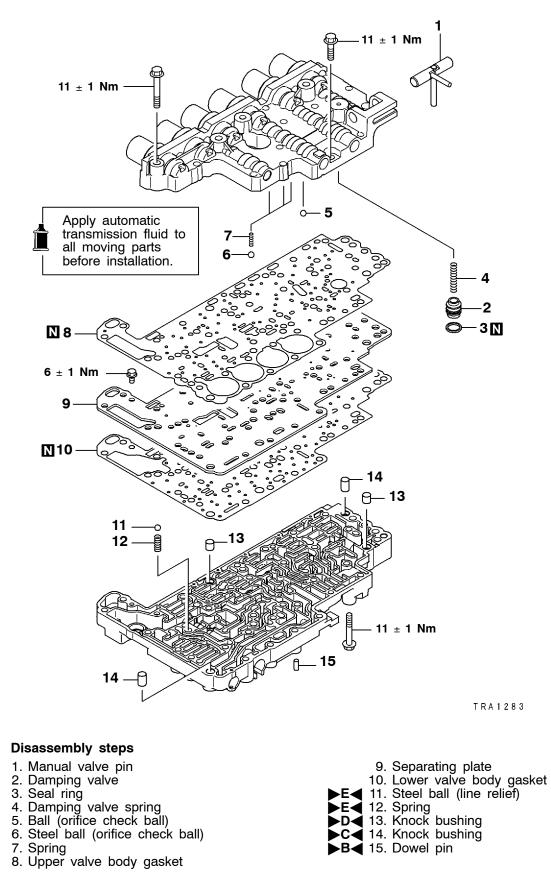
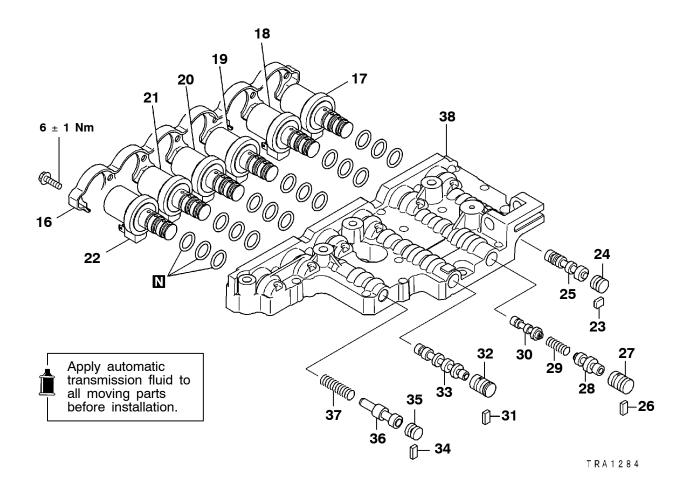
11. VALVE BODY DISASSEMBLY AND ASSEMBLY



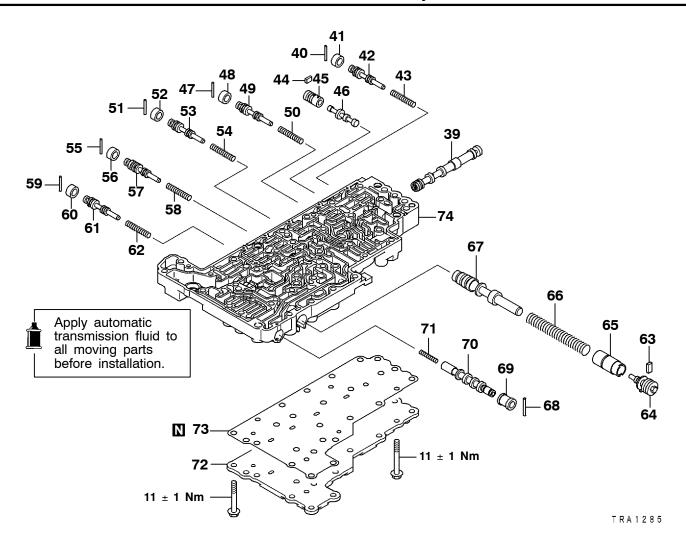
PWEE8920-I



Disassembly steps

- 16. Solenoid support ►A 17. Low/reverse brake solenoid valve
- A 18. Reduction brake solenoid valve
- A 19. Second brake solenoid valve
- A 20. Underdrive clutch solenoid valve
- A 21. Overdrive clutch solenoid valve
 - A 22. Torque converter clutch control solenoid valve
 - 23. Stopper plate
 - 24. Stopper plug
 - 25. Switching valve
 - 26. Stopper plate
 - 27. Fail-safe valve A sleeve

- 28. Fail-safe valve A2
- 29. Fail-safe valve A spring 30. Fail-safe valve A1
- 31. Stopper plate
- 32. Fail-safe valve B sleeve
- 33. Fail-safe valve B
- 34. Stopper plate
- 35. Stopper plug
- 36. Torque converter pressure control valve
- 37. Torque converter pressure control valve spring
- 38. Upper valve body



Disassembly steps

- 39. Manual valve
- 40. Roller
- 41. Low/reverse brake pressure control valve sleeve
- 42. Low/reverse brake pressure control valve
- 43. Low/reverse brake pressure control valve spring
- 44. Stopper plate
- 45. Fail-safe valve C sleeve
- 46. Fail-safe valve C
- 47. Roller
- 48. Reduction brake pressure control valve sleeve
- 49. Reduction brake pressure control valve
- 50. Reduction brake pressure control valve spring
- 51. Roller
- 52. Second brake pressure control valve sleeve
- 53. Second brake pressure control valve
- 54. Second brake pressure control valve spring
- 55. Roller
- 56. Underdrive clutch pressure control valve sleeve

- 57. Underdrive clutch pressure control valve
- 58. Underdrive clutch pressure control valve spring
- 59. Roller
- 60. Overdrive clutch pressure control valve sleeve
- 61. Overdrive clutch pressure control valve
- 62. Overdrive clutch pressure control valve spring
- 63. Stopper plate
- 64. Regulator valve adjusting screw
- 65. Regulator valve sleeve
- 66. Regulator valve spring
- 67. Regulator valve
- 68. Roller
- 69. Torque converter clutch control valve sleeve
- 70. Torque converter clutch control valve
- 71. Torque converter clutch control valve spring
- 72. Cover
- 73. Cover gasket
- 74. Lower valve body

DISASSEMBLY SERVICE POINT

A SOLENOID VALVE REMOVAL

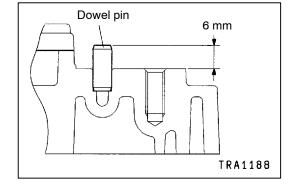
Before removing the solenoid valves, make marks with white paint, etc., so that these valves can be reinstalled in the original positions.

ASSEMBLY SERVICE POINTS

►A SOLENOID VALVE INSTALLATION

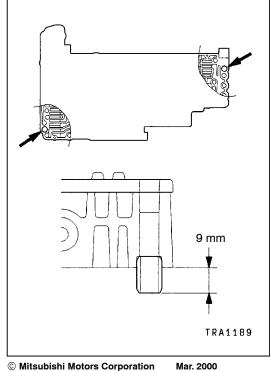
- 1. Apply ATF, petrolatum jelly or Vaseline to O-rings, and install them to solenoid valves.
- 2. Following the marks made during removal, install each solenoid valve.

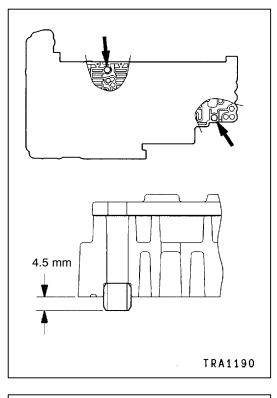
Install the dowel pin at the specified position on the lower valve body.

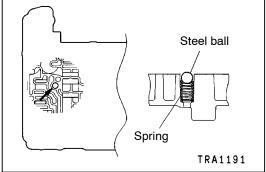


►C< KNOCK BUSHING INSTALLATION

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





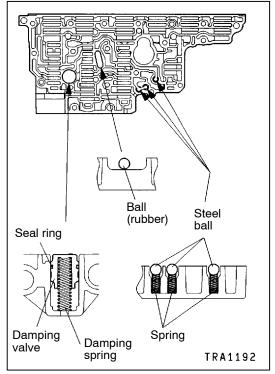


►D KNOCK BUSHING INSTALLATION

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

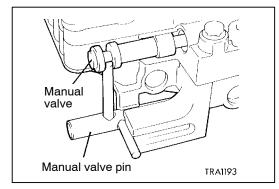
► SPRING / STEEL BALL (LINE RELIEF) INSTALLATION

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



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

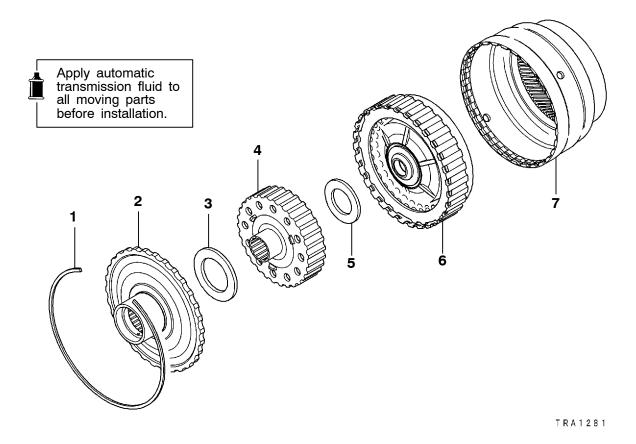
- 1. Install the spring (4.5 mm in diameter, 15.4 mm in length) and the steel ball (6.4 mm in diameter) onto the upper valve body position shown in the illustration.
- 2 Install the ball (rubber) (6.4 mm in diameter) onto the upper valve body position shown in the illustration.
- 3. After installing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



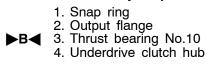
►G MANUAL VALVE INSTALLATION

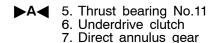
Fit the manual valve pin into the groove of the manual valve.

12. DIRECT ANNULUS GEAR DISASSEMBLY AND ASSEMBLY



Disassembly steps





Thrust bearing No.11

ASSEMBLY SERVICE POINTS

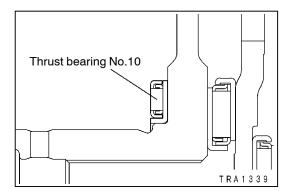
►A THRUST BEARING NO.11 INSTALLATION

Apply vaseline or petrolatum jelly on the thrust bearing No.11, and then install on the underdrive clutch.

Caution

• Take care not to mistake the thrust bearing No.11 mounting direction.

© Mitsubishi Motors Corporation Mar. 2000



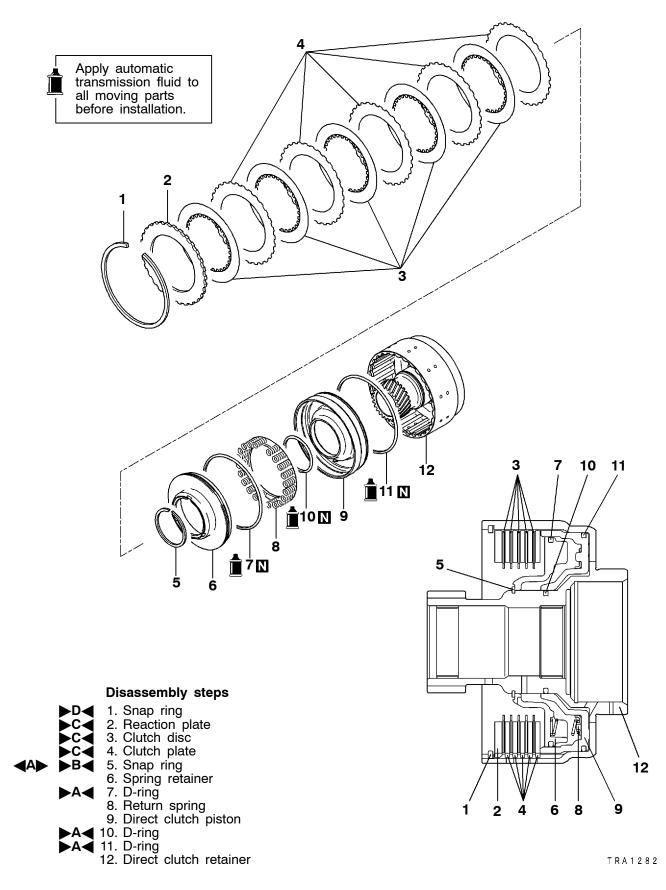
▶B◀ THRUST BEARING NO.10 INSTALLATION

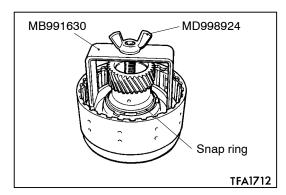
Apply vaseline or petrolatum jelly on the thrust bearing No.10, and then install on the underdrive clutch hub.

Caution

• Take care not to mistake the thrust bearing No.10 mounting direction.

13. DIRECT CLUTCH DISASSEMBLY AND ASSEMBLY





DISASSEMBLY SERVICE POINT

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

ASSEMBLY SERVICE POINTS

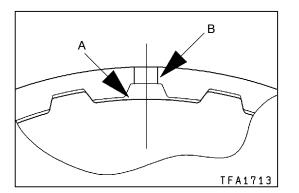
►A D-RING INSTALLATION

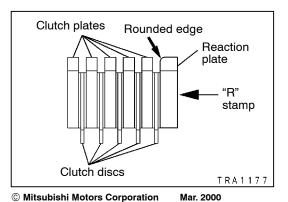
- 1. Apply ATF to the D-ring.
- 2. Install the D-ring in the direct clutch piston and spring retainer groove. Make sure that the D-ring is not twisted or damaged when installing.

MB991630 MD998924 Snap ring TFA1712

►B SNAP RING INSTALLATION

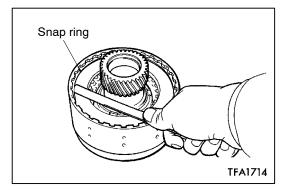
- 1. Set the special tools as shown in the illustration.
- 2. Compress the return spring, and install the snap ring.





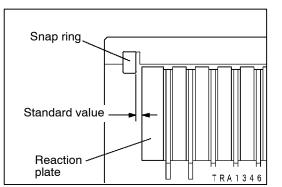
C CLUTCH PLATE / CLUTCH DISC / REACTION PLATE INSTALLATION

- 1. Alternately assemble the clutch plates and clutch discs in the reverse clutch retainer. Align the section having no teeth of the clutch plates (A in the illustration) with the reverse clutch retainer hole (B in the illustration).
- 2. Install the reaction plate so that it is oriented as shown in the illustration. Assemble in the same manner as the clutch plate so that the section with no teeth (A in the illustration) matches the retainer hole (B in the illustration).



►D SNAP RING INSTALLATION

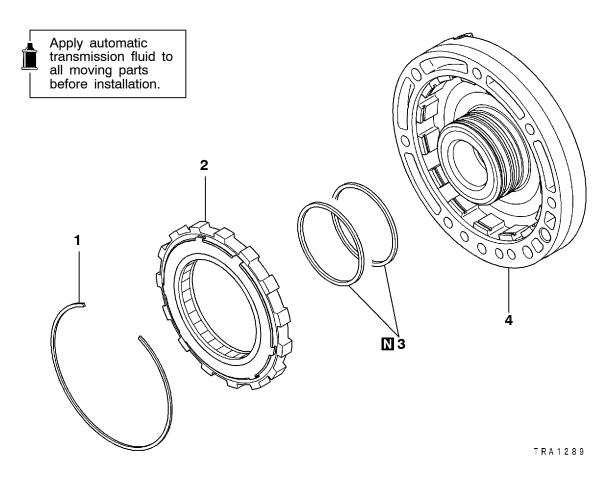
1. Install the snap ring in the direct clutch retainer groove.



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

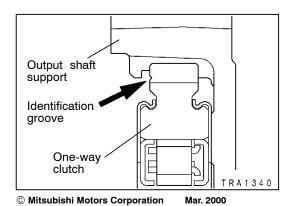
Standard value: 1.0 - 1.2 mm

14. OUTPUT SHAFT SUPPORT DISASSEMBLY AND ASSEMBLY



Disassembly steps 1. Snap ring ►A 2. One-way clutch

Seal ring
 Output shaft support

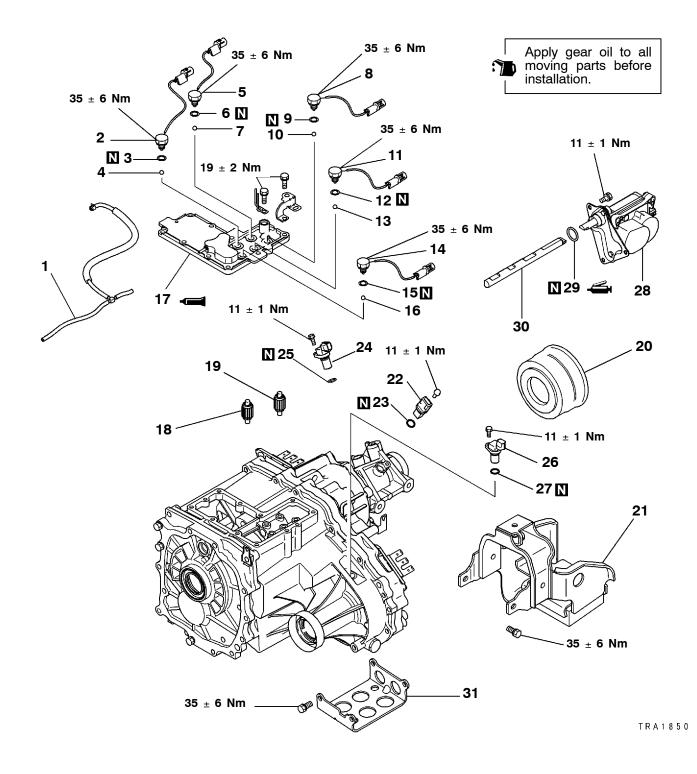


ASSEMBLY SERVICE POINT ►A ONE-WAY CLUTCH INSTALLATION

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

15. TRANSFER

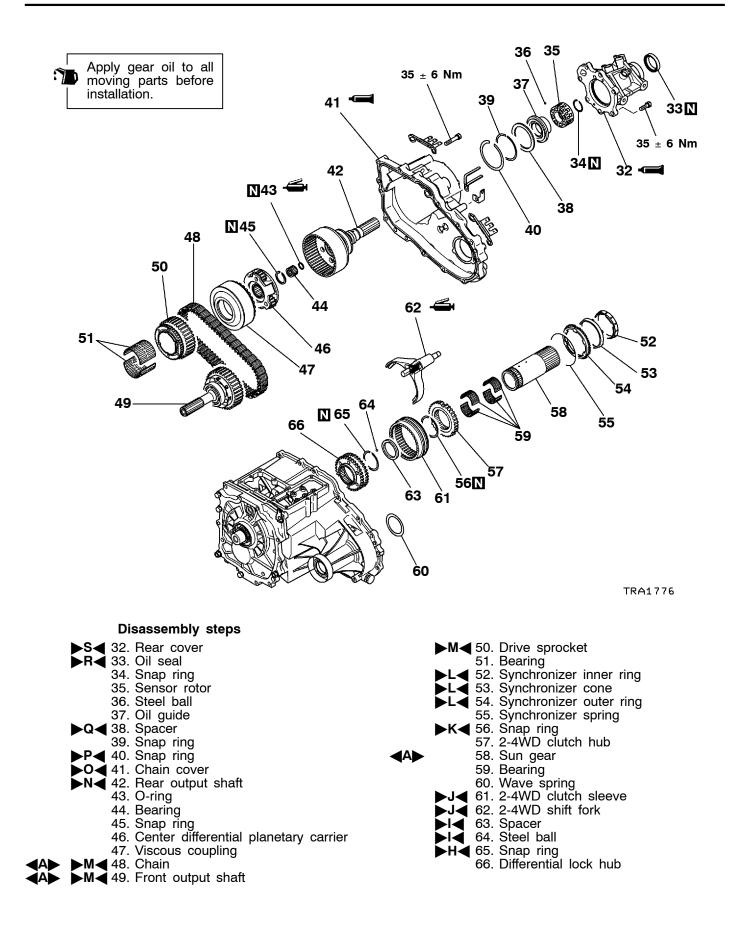
DISASSEMBLY AND ASSEMBLY

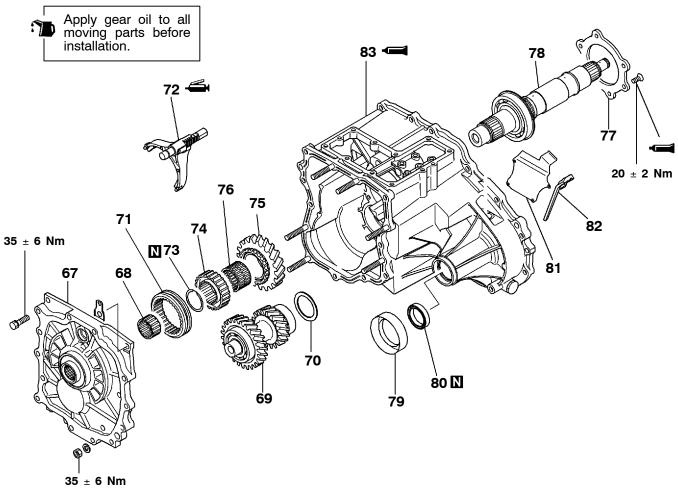


Disassembly steps

· ·
1. Vacuum hose ▶W◀ 2. 4LLC switch
3. Gasket
4. Steel ball
►W◀ 5. 2WD switch
6. Gasket
7. Steel ball
►W 8. Center differential lock switch
9. Gasket
10. Steel ball
►W 11. 4H switch
12. Gasket
13. Steel ball
►W◀14. 2WD-4WD switch
15. Gasket
16. Steel ball

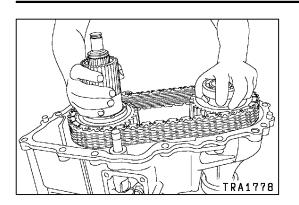
V
17. Transfer case cover
18. Shift rail drive gear
19. Shift rail drive gear
20. Dust seal guard
21. Dynamic damper
22. Vehicle speed sensor
23. O-ring
24. Rear output sensor
25. O-ring
26. Front output sensor 26. Front output sensor 20. From output sensor 27. O-ring
T ≤ 28. Shift actuator 29. O-ring
T ≤ 30. Main shift rail 31. Under guard (EXP)





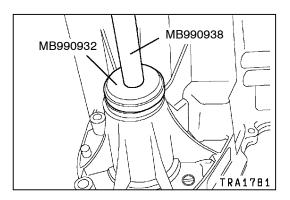
TRA1849

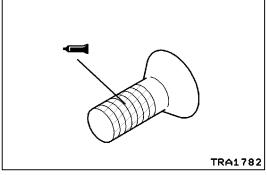




TRA1779

5 mm 2 mm 2 mm 0 0 0 0 7 TRA1780





DISASSEMBLY SERVICE POINTS

A CHAIN / FRONT OUTPUT SHAFT / SUN GEAR REMOVAL

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

∢B**▶** OIL POOL COVER REMOVAL

Unstake the positions shown in the illustration to remove the oil pool cover.

Caution

 The oil pool cover normally does not require disassembly. Once it is removed, the transfer case cannot be reused.

ASSEMBLY SERVICE POINTS

Install the oil pool cover on a new transfer case. Stake the projecting portions of the transfer so that the dimensions will be as illustrated.

►B◀OIL SEAL INSTALLATION

- 1. Use the special tools to install the oil seal on the transfer case.
- 2. Apply grease to the lip of the oil seal.

Specified grease:

MITSUBISHI genuine grease part No. 0101011 or equivalent

►C REAR BEARING RETAINER INSTALLATION

The bolts used for mounting the rear bearing retainer are pre-coated ones.

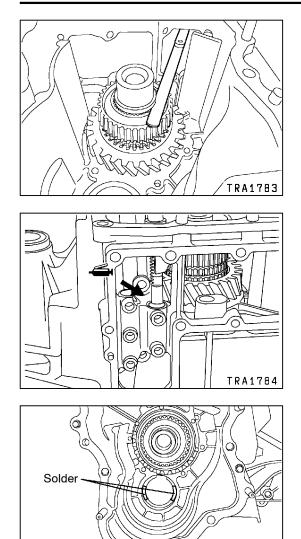
When they are to be reused, apply sealant to the threaded portion before installation.

Specified sealant:

MITSUBISHI genuine sealant part No. MD997740 or equivalent

© Mitsubishi Motors Corporation Mar. 2000

PWEE8920-I



►D SNAP RING INSTALLATION

Select a proper snap ring so that the end play of the H-L clutch hub will have the standard value, and install the snap ring on the transfer drive shaft.

Standard value: 0 - 0.08 mm

►E H-L SHIFT FORK / H-L CLUTCH SLEEVE INSTALLATION

Apply grease to the H-L shift fork shaft inserting portion, and install the H-L shift fork and H-L clutch sleeve in combined state in the transfer case.

Specified grease:

MITSUBISHI genuine grease part No. 0101011 or equivalent

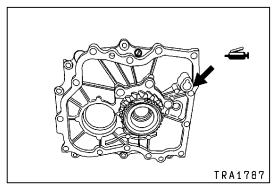
►F◀ SPACER INSTALLATION

- 1. Put pieces of solder (approx. 10 mm long and 1.6 mm in diameter) at the illustrated positions of the transfer case.
- 2. Install the countershaft gear and transfer case plate and tighten the bolts to the specified torque.
- 3. If the pieces of solder are not crushed, put thicker pieces of solder and perform Steps 1 and 2.
- 2200048

TRA1785

4. Measure the thickness of the crushed pieces of solder with a micrometer, and select a spacer of proper thickness so that the end play will have the standard value.

Standard value: 0 - 0.15 mm

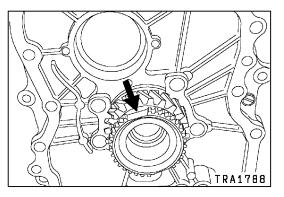


►G TRANSFER CASE PLATE INSTALLATION

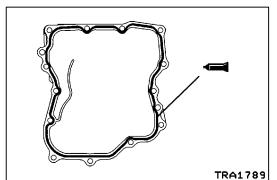
1. Apply grease to the illustrated position of the high/low shift rail inserting portion of the transfer case plate.

Specified grease:

MITSUBISHI genuine grease part No. 0101011 or equivalent



2. Face the notched portion of the input gear in the illustrated direction (in the direction of the countershaft gear bearing hole).



3. Apply sealant to the illustrated position of the transfer case.

Specified sealant:

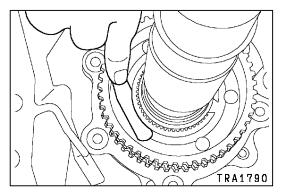
MITSUBISHI genuine sealant part No. MD997740 or equivalent

Caution

- Squeeze sealant out evenly to make sure that it is not broken or excessively supplied.
- 4. While making sure that the notched portion of the input gear positioned in Step 2 is in alignment with the gear portion of the countershaft, install the transfer case plate.

Caution

• If the sub gear does not readily come in mesh with the countershaft gear, rotate the transfer drive shaft, etc. to securely engage it.



Mitsubishi Motors Corporation Mar. 2000

►H◀ SNAP RING INSTALLATION

Select a proper snap ring so that the end play of the differential lock hub will have the standard value, and install it on the transfer drive shaft.

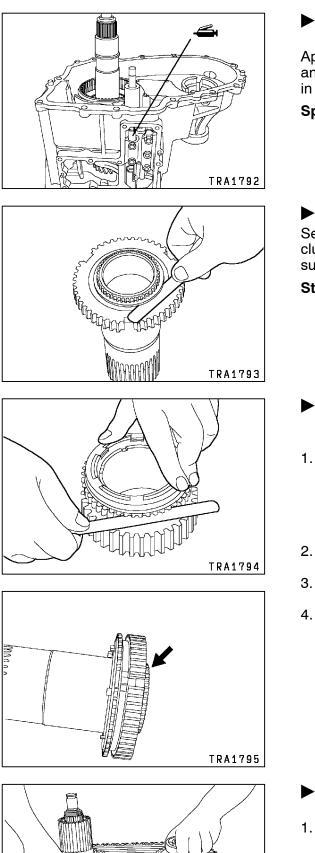
Standard value: 0 - 0.08 mm

►I STEEL BALL / SPACER INSTALLATION

Install the steel ball in the illustrated position of the transfer drive shaft and install the spacer with its oil groove toward the chain cover.

PWEE8920-I





▶J◀ 2-4WD SHIFT FORK / 2-4WD CLUTCH SLEEVE INSTALLATION

Apply grease to the 2-4WD shift fork shaft inserting portion and install the 2-4WD shift fork and 2-4WD clutch sleeve in combined state in the transfer case.

Specified grease:

MITSUBISHI genuine grease part No. 0101011 or equivalent

►K SNAP RING INSTALLATION

Select a proper snap ring so that the end play of the 2-4WD clutch hub will have the standard value, and install it on the sun gear.

Standard value: 0 - 0.08 mm

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

1. Combine the synchronizer outer ring, synchronizer cone and synchronizer inner ring, press them against the drive sprocket, and measure the dimension shown in the illustration.

Limit: 0.3 mm

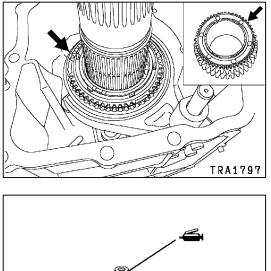
- 2. If the dimension is out of the limit value, replace them with a synchronizer ring set.
- 3. Apply gear oil to the synchronizer outer ring and synchronizer inner ring.
- 4. Line up the notched portion of the 2-4WD clutch hub with the projecting portion of the synchronizer ring and install the ring on the 2-4WD clutch hub.

TRA1796

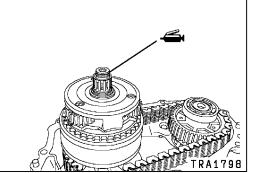
© Mitsubishi Motors Corporation Mar. 2000

M DRIVE SPROCKET / FRONT OUTPUT SHAFT / CHAIN INSTALLATION

1. Set the chain in mesh with the drive sprocket and front output shaft sprocket and install them in the transfer case.



2. Install the drive sprocket so that its illustrated holes will match the projecting portions of the synchronizer cone.



►N REAR OUTPUT SHAFT INSTALLATION

Apply grease to the O-ring at the illustrated position and install the rear output shaft.

Specified grease:

MITSUBISHI genuine grease part No. 0101011 or equivalent

►O<</t>CHAIN COVER INSTALLATION

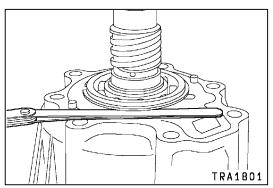
1. Apply grease to the indicated 2-4WD shift rail inserting portion.

Specified grease:

MITSUBISHI genuine grease part No. 0101011 or equivalent

TRA1800

TRA1799



2. Apply a bead of sealant to the illustrated position of the chain cover.

Specified sealant:

MITSUBISHI genuine sealant part No. MD997740 or equivalent

Caution

• Squeeze the sealant out evenly to make sure that it is not broken or excessively supplied.

►P◀ SNAP RING ISNTALLATION

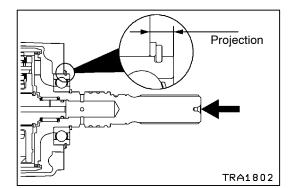
- 1. Install the snap ring in the bearing groove of the rear output shaft.
- 2. With the rear output shaft pressed against the chain cover, measure the clearance between the chain cover and snap ring.
- 3. Select a snap ring whose thickness is the dimension of the measured clearance plus the standard value.

Standard value: 0.12 - 0.24 mm

© Mitsubishi Motors Corporation Mar. 2000

PWEE8920-I

4. Remove the snap ring from the bearing groove of the rear output shaft, install the selected snap ring, and reinstall the removed snap ring in the bearing groove of the rear output shaft.

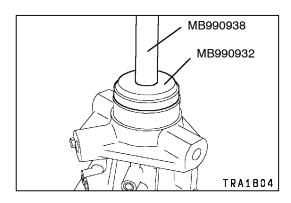


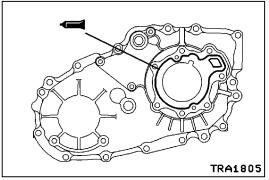


1. With the rear output shaft pressed toward the chain cover, measure the projection of the bearing from the chain cover.

Caution

- Measure the projection with the snap ring installed.
- Concave portion





- 2. Measure the dimension of the rear cover concave portion at the illustrated position.
- 3. Subtract the measured value in Step 1 from the measured value in Step 2 to calculate the clearance between the bearing and rear cover. Select a proper spacer so that the clearance will have the standard value.

Standard value: 0 - 0.12 mm

►R OIL SEAL INSTALLATION

- 1. Use the special tools to install the oil seal in the rear cover.
- 2. Apply grease to the lip of the oil seal.

Specified grease:

MITSUBISHI genuine grease part No. 0101011 or equivalent

►S REAR COVER INSTALLATION

Apply sealant to the illustrated position of the chain cover.

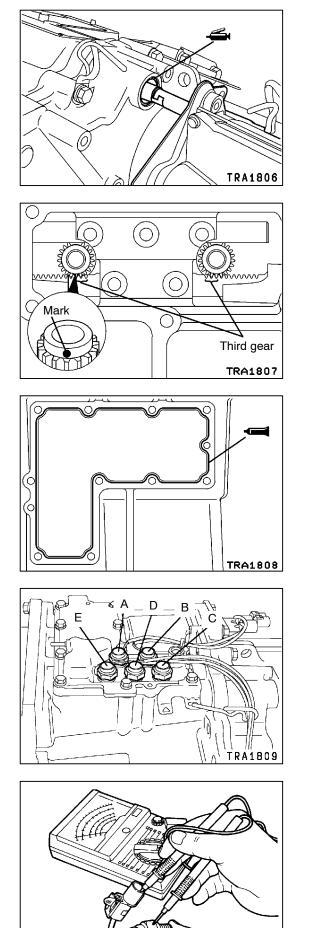
Specified sealant:

MITSUBISHI genuine sealant part No. MD997740 or equivalent

Caution

• Squeeze the sealant out evenly to make sure that it is not broken or excessively supplied.

© Mitsubishi Motors Corporation Mar. 2000



►T MAIN SHIFT RAIL / SHIFT ACTUATOR INSTALLATION

1. Apply grease to the O-ring.

Specified grease: MITSUBISHI genuine grease part No. 0101011 or equivalent

2. Combine the main shift rail key with actuator key and insert them in the transfer case.

►U◀ SHIFT RAIL DRIVE GEAR INSTALLATION

Install the shift rail drive gear with its marked tooth in mesh with the third gear groove of each shift rail.

►V◀ TRANSFER CASE COVER INSTALLATION

Apply sealant to the illustrated position of the transfer case cover.

Specified sealant:

MITSUBISHI genuine sealant part No. MD997740 or equivalent

Caution

• Squeeze the sealant out evenly to make sure that it is not broken or excessively supplied.

► W SWITCH INSTALLATION

Install the switches in the right positions.

	Switch name	Tube color	Connector color
А	4LLC switch	Black	Brown
В	2WD switch	Black	Black
С	Center differential lock switch	Blue	Brown
D	4H switch	Blue	White
Е	2-4WD switch	Blue	Black

INSPECTION

PWEE8920-I

SWITCHES

Check for the continuity between the connector terminal and switch body. Replace the switch if found faulty.

Switch state	Continuity
Switch end pressed	No
Switch end released	Yes

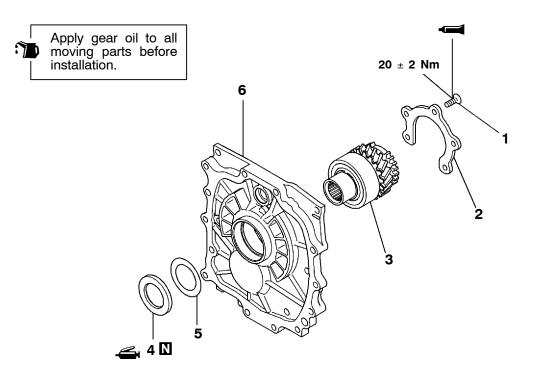
© Mitsubishi Motors Corporation Mar. 2000

2000

TRA0280

16. TRANSFER CASE PLATE

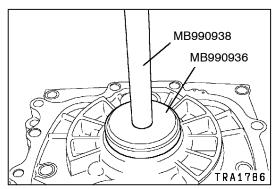
DISASSEMBLY AND ASSEMBLY



TRA1848

Disassembly steps

- ▶**B** 1. Bolt
 - 2. Bearing retainer
 - 3. Transfer input gear
- A 4. Oil seal
 - 5. Baffle plate
 - 6. Transfer case plate



© Mitsubishi Motors Corporation Mar. 2000

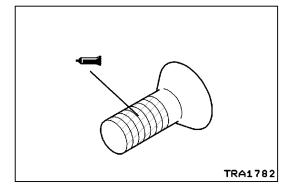
ASSEMBLY SERVICE POINTS

►A OIL SEAL INSTALLATION

- 1. Use the special tool to install the oil seal.
- 2. Apply grease to the lip of the oil seal.

Specified grease:

MITSUBISHI genuine grease part No. 0101011 or equivalent



►B BOLT INSTALLATION

Apply sealant to the threads.

Specified sealant:

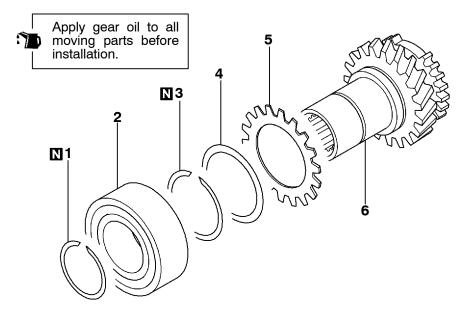
MITSUBISHI genuine sealant part No. MD997740 or equivalent

NOTE

New bolts are precoated with sealant, so sealant does not need to be applied.

17. INPUT GEAR

DISASSEMBLY AND ASSEMBLY

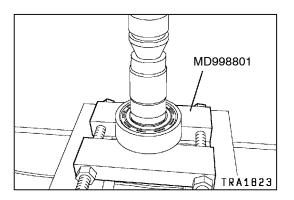


TRA1822

Disassembly steps



- 1. Snap ring
 - 2. Ball bearing
 - Snap ring (some model)
 Cone spring (some model)
 Sub gear (some model)
 Transfer input gear



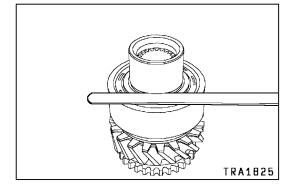
MD998812 MD998826 TRA1824

DISASSEMBLY SERVICE POINT **∢A**► BALL BEARING REMOVAL

Use the special tool to remove the ball bearing.

ASSEMBLY SERVICE POINTS ►A BALL BEARING INSTALLATION

Use the special tools to install the ball bearing.



►B SNAP RING INSTALLATION

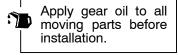
- Install the thickest snap ring that can be fitted in the snap ring groove of the input gear.
 Make sure that the ball bearing end play meets the standard of the input gear.
- standard value.

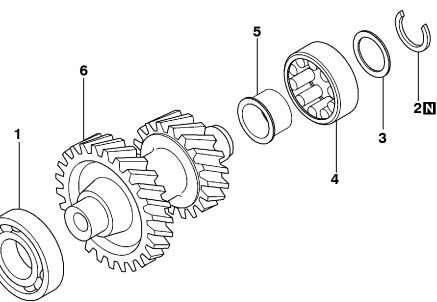
Standard value: 0 - 0.06 mm

TRA1826

18. COUNTERSHAFT GEAR

DISASSEMBLY AND ASSEMBLY



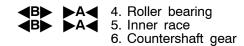


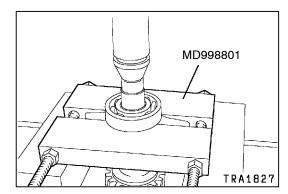
 Disassembly steps

 ▲A
 ►C
 1. Ball bearing

 ►B
 2. Snap ring

 ▲B
 ►A
 3. Spacer





Mar. 2000

© Mitsubishi Motors Corporation

DISASSEMBLY SERVICE POINTS

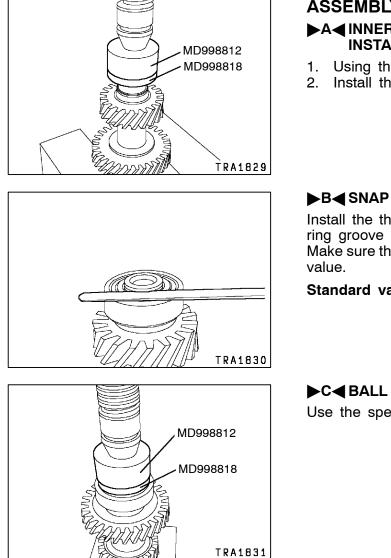
Use the special tool to remove the ball bearing.

◄B► SPACER / ROLLER BEARING / INNER RACE REMOVAL

- 1. Remove the spacer and roller bearing.
- 2. Using the special tool, remove the inner race.

NOTE

The removal sequence of roller bearing parts vary depending on the direction that the roller bearing was installed. In some cases, the inner race, roller bearing and spacer may have to be simultaneously removed.



ASSEMBLY SERVICE POINTS

►A INNER RACE / ROLLER BEARING / SPACER INSTALLATION

- 1. Using the special tool, install the inner race.
- 2. Install the roller bearing and spacer.

►B SNAP RING INSTALLATION

Install the thickest snap ring that can be fitted in the snap ring groove of the countershaft gear.

Make sure that the roller bearing end play meets the standard value.

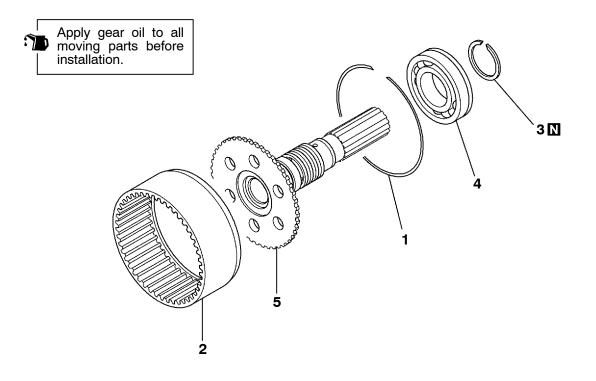
Standard value: 0 - 0.08 mm

►C BALL BEARING INSTALLATION

Use the special tools to install the ball bearing.

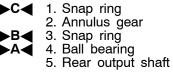
19. REAR OUTPUT SHAFT

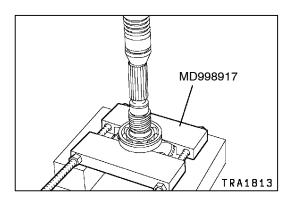
DISASSEMBLY AND ASSEMBLY



TRA1812

Disassembly steps





MD998812 MD998814 MD998824 TRA1814 © Mitsubishi Motors Corporation Mar. 2000

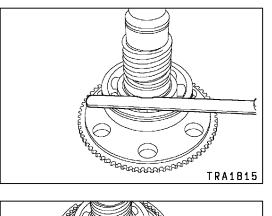
DISASSEMBLY SERVICE POINT **∢A**► BALL BEARING REMOVAL

Use the special tool to remove the ball bearing.

ASSEMBLY SERVICE POINTS ►A BALL BEARING INSTALLATION

Use the special tools to install the ball bearing.

PWEE8920-I



►B SNAP RING INSTALLATION

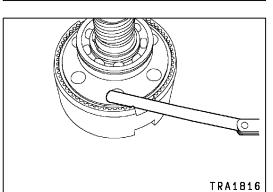
- 1. Install the thickest snap ring that can be fitted in the snap ring groove of the rear output shaft.
- 2. Make sure that the rear output shaft bearing end play meets the standard value.

Standard value: 0 - 0.08 mm

►C SNAP RING INSTALLATION

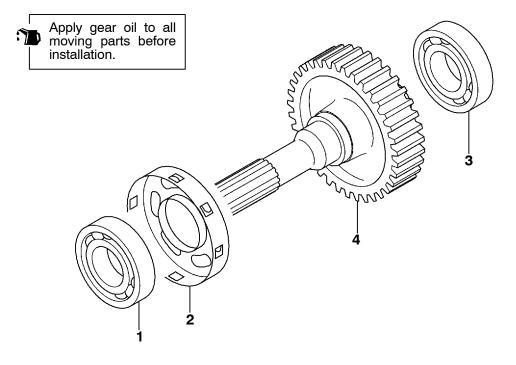
- 1. Install the thickest snap ring that can be fitted in the snap ring groove of the annulus gear.
- 2. Make sure that the annulus gear end play meets the standard value.

Standard value: 0 - 0.08 mm

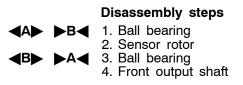


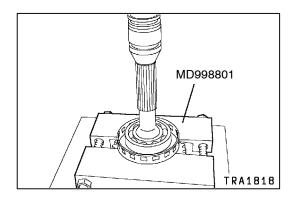
20. FRONT OUTPUT SHAFT

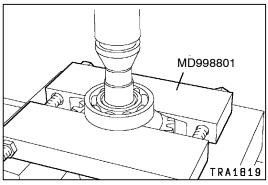
DISASSEMBLY AND ASSEMBLY



TRA1817







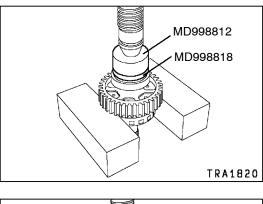
DISASSEMBLY SERVICE POINT

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

∢B▶ BALL BEARING REMOVAL

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

© Mitsubishi Motors Corporation Mar. 2000



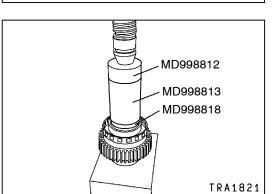
ASSEMBLY SERVICE POINTS

►A BALL BEARING INSTALLATION

- 1. Use the special tool to support the front output shaft.
- 2. Use the special tools to install the ball bearing.

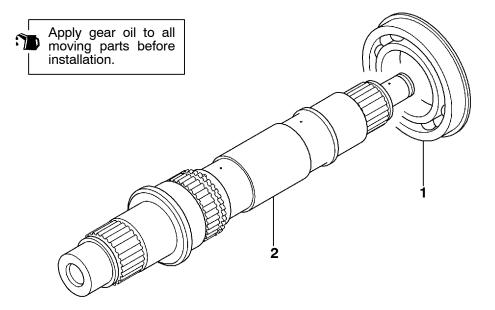
►B BALL BEARING INSTALLATION

- 1. Use the special tool to support the front output shaft.
- 2. Use the special tools to install the ball bearing.

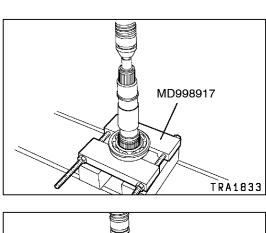


21. TRANSFER DRIVE SHAFT

DISASSEMBLY AND ASSEMBLY

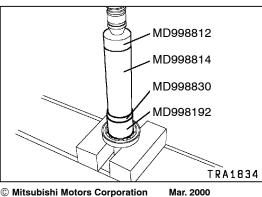


Disassembly steps 1. Ball bearing 2. Transfer drive shaft TRA1832



DISASSEMBLY SERVICE POINT **A** BALL BEARING REMOVAL

Use the special tool to remove the ball bearing.



© Mitsubishi Motors Corporation

ASSEMBLY SERVICE POINT ►A BALL BEARING INSTALLATION

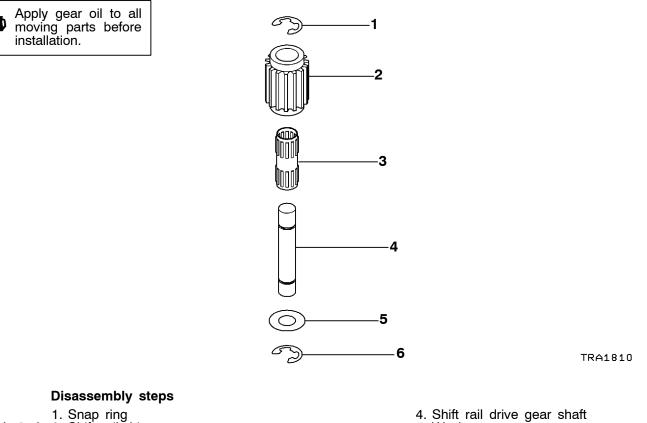
Use the special tools to install the ball bearing.

PWEE8920-I

22. SHIFT RAIL DRIVE GEAR

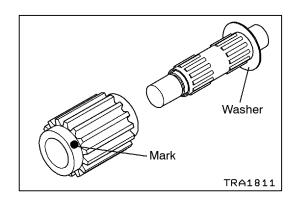
DISASSEMBLY AND ASSEMBLY

1



1. Snap ring 2. Shift rail drive gear 3. Bearing

- 5. Washer
- 6. Snap ring



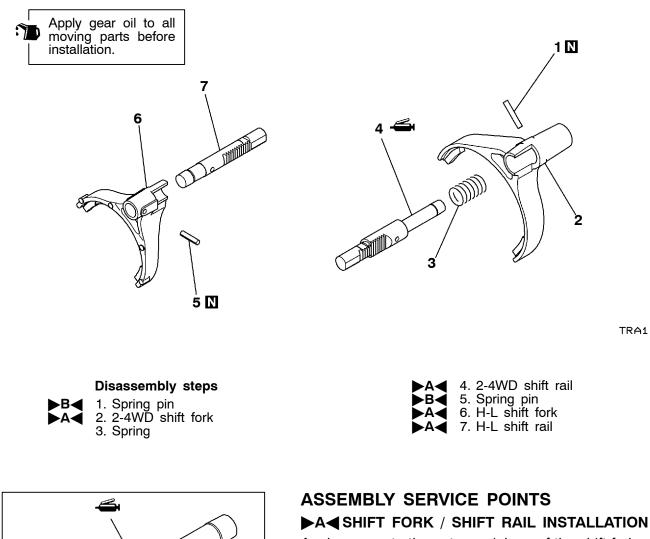
ASSEMBLY SERVICE POINT

Install the shift rail drive gear such that its mark does not face the washer.

TRA1835

23. 2-4WD SHIFT RAIL AND H-L SHIFT RAIL

DISASSEMBLY AND ASSEMBLY



Apply grease to the outer periphery of the shift fork mounting portion of the shift rail and then assemble the shift fork and shift rail.

Specified grease:

Mitsubishi genuine grease part No. 0101011 or equivalent

► B SPRING PIN INSTALLATION

Install the spring pin with its split toward the forward end of the transfer.

TRA1837

²⁻⁴WD shift rail H-L shift rail

NOTES