

Transfer Case and Extension Case Assembly

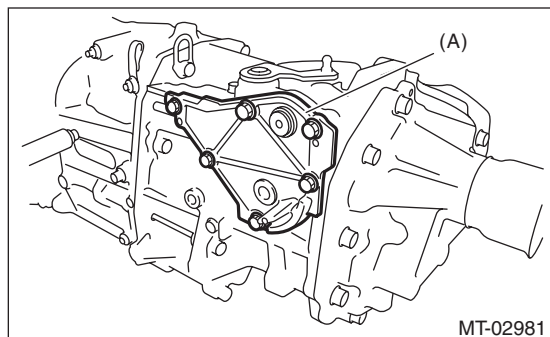
MANUAL TRANSMISSION AND DIFFERENTIAL

10. Transfer Case and Extension Case Assembly

A: REMOVAL

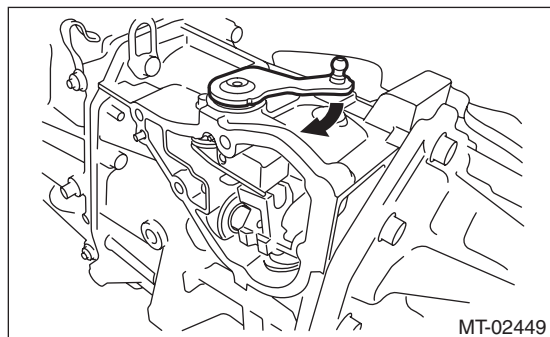
- 1) Remove the manual transmission assembly from the vehicle. <Ref. to 6MT-26, REMOVAL, Manual Transmission Assembly.>
- 2) Remove the back-up light switch and the neutral position switch. <Ref. to 6MT-40, REMOVAL, Switches and Harness.>
- 3) Remove the transfer case together with the extension case assembly.

- (1) Remove the transmission cover.

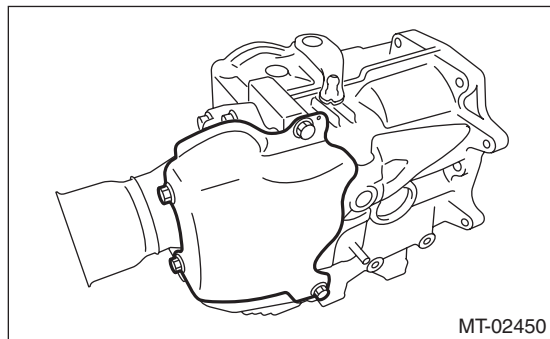


(A) Transmission cover

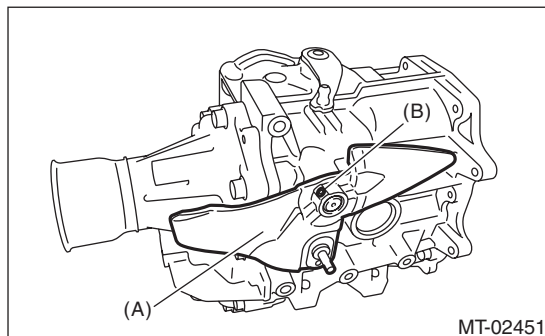
- (2) Set and hold the selector lever COMPL to the 1st-2nd side, and remove the transfer case and extension case assembly as a unit.



- 4) Remove the transfer cover.



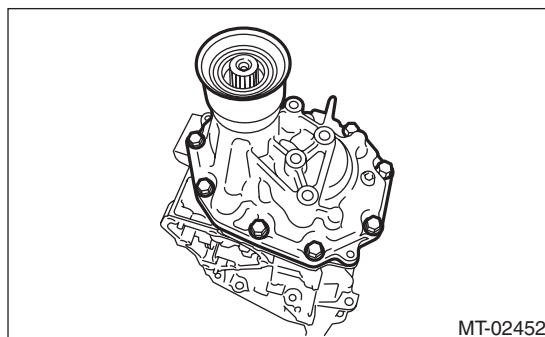
- 5) Use the ST to push out the spring pin and remove the shift lever COMPL from shifter arm No. 2.
ST 398791700 SPRING PIN REMOVER 2



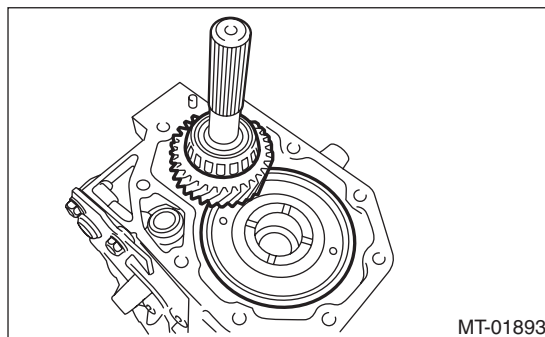
(A) Shift lever COMPL

(B) Spring pin

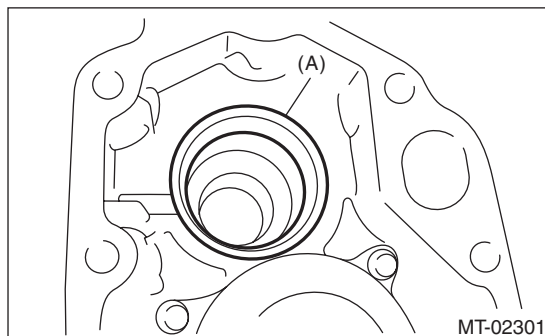
- 6) Remove the extension case assembly.



- 7) Remove the transfer driven gear and center differential as a unit.



- 8) Remove the bearing outer race and thrust washer from the extension case.



(A) Bearing outer race

Transfer Case and Extension Case Assembly

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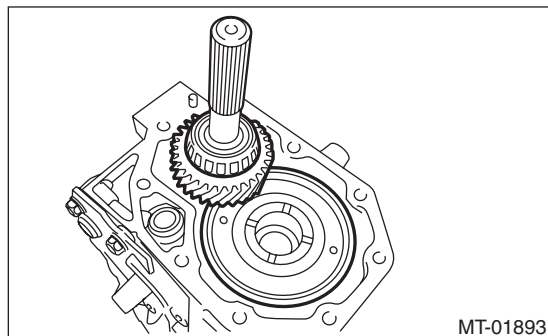
B: INSTALLATION

- 1) Clean the mating surfaces of the transmission case, transfer case and extension case.
- 2) Apply a coat of grease to the front roller bearing and rear roller bearing of the transfer driven gear.

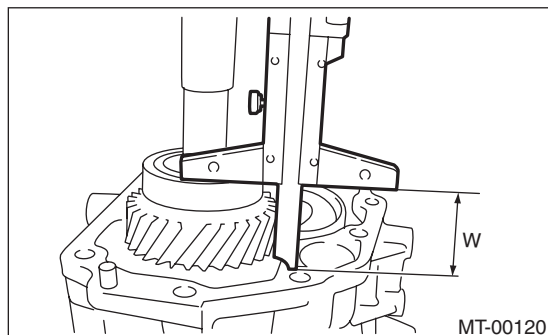
Grease:

NICHIMOLY N-130 or equivalent

- 3) Install the center differential and transfer driven gear to the transfer case.



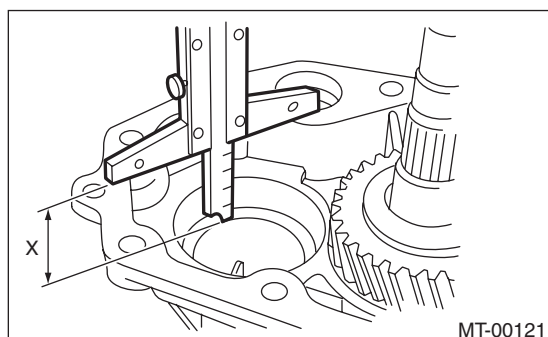
- 4) Install the bearing outer race to transfer driven gear.
- 5) While pressing the bearing outer race horizontally, rotate the driven shaft for ten turns.
- 6) Measure the height "W" between transfer case and taper roller bearing on the transfer driven gear.



- 7) Measure depth "X" of bearing insertion part of the extension case.

NOTE:

Measure with bearing outer race and thrust washer removed.



- 8) Calculate the thrust washer thickness "t" using the following calculation.

$$t = X - W + (0.15 - 0.2 \text{ mm } (0.006 - 0.008 \text{ in}))$$

X: Depth of bearing insertion part of the extension case

W: Height between transfer case and taper roller bearing on the transfer driven gear

0.15 — 0.20 mm (0.006 — 0.008 in): Amount of standard protrusion

- 9) Select the washer with the nearest value in the following table.

NOTE:

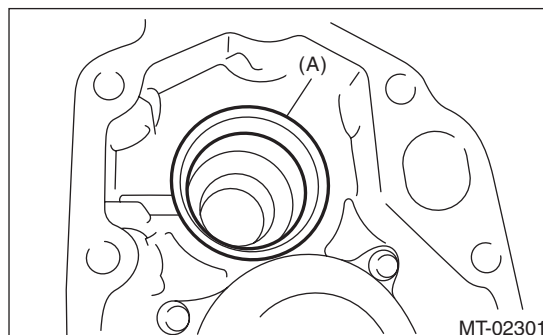
Be sure that it is always within the preload.

Preload of the taper roller bearing (amount of standard protrusion):

0.15 — 0.20 mm (0.006 — 0.008 in)

| Thrust washer (50 × 61 × t) | |
|-----------------------------|-------------------|
| Part No. | Thickness mm (in) |
| 803050060 | 0.50 (0.0197) |
| 803050061 | 0.55 (0.0217) |
| 803050062 | 0.60 (0.0236) |
| 803050063 | 0.65 (0.0256) |
| 803050064 | 0.70 (0.0276) |
| 803050065 | 0.75 (0.0295) |
| 803050066 | 0.80 (0.0315) |
| 803050067 | 0.85 (0.0335) |
| 803050068 | 0.90 (0.0354) |
| 803050069 | 0.95 (0.0374) |
| 803050070 | 1.00 (0.0394) |
| 803050071 | 1.05 (0.0413) |
| 803050072 | 1.10 (0.0433) |
| 803050073 | 1.15 (0.0453) |
| 803050074 | 1.20 (0.0472) |
| 803050075 | 1.25 (0.0492) |
| 803050076 | 1.30 (0.0512) |
| 803050077 | 1.35 (0.0531) |
| 803050078 | 1.40 (0.0551) |
| 803050079 | 1.45 (0.0571) |

- 10) Install the selected thrust washer and bearing outer race to the extension case.



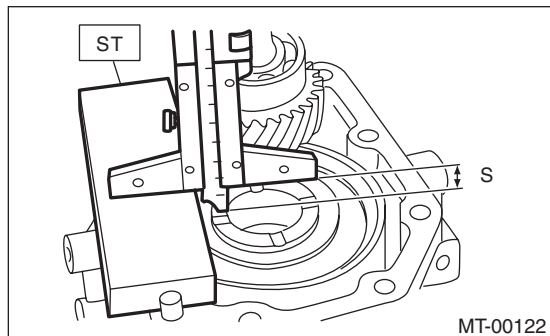
(A) Bearing outer race

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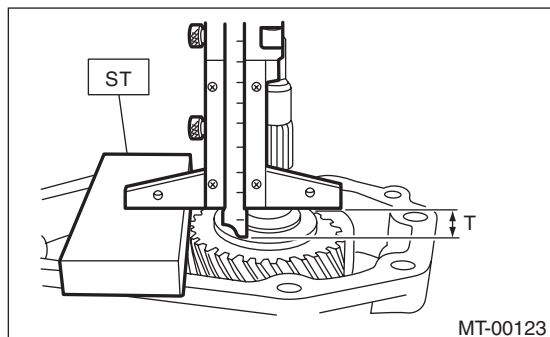
11) Measure the depth "S" between the transfer case + ST and the center differential.

ST 398643600 GAUGE



12) Measure the height "T" between the extension case + ST and the transfer drive gear.

ST 398643600 GAUGE



13) Calculate the thrust washer thickness "U" using the following calculation.

$$U = S + T - 30 \text{ mm (1.18 in)} - (0.15 - 0.35 \text{ mm (0.0059 - 0.0138 in)})$$

S: Depth between the transfer case + ST and the center differential

T: Height between the extension case + ST and the transfer gear

30 mm (1.18 in): Thickness of ST 15 mm (0.59 in) \times 2
0.15 — 0.35 mm (0.0059 — 0.0138 in): Clearance

14) Select a suitable thrust washer in the following table.

Clearance:

0.15 — 0.35 mm (0.0059 — 0.0138 in)

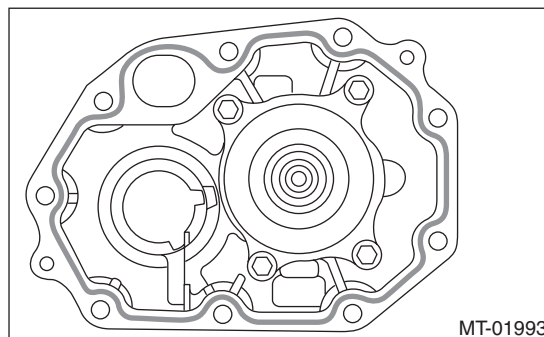
| Thrust washer | |
|---------------|-------------------|
| Part No. | Thickness mm (in) |
| 803036050 | 0.9 (0.035) |
| 803036054 | 1.0 (0.039) |
| 803036051 | 1.1 (0.043) |
| 803036055 | 1.2 (0.047) |
| 803036052 | 1.3 (0.051) |
| 803036056 | 1.4 (0.055) |
| 803036053 | 1.5 (0.059) |
| 803036057 | 1.6 (0.063) |
| 803036058 | 1.7 (0.067) |
| 803036080 | 1.8 (0.071) |
| 803036081 | 1.9 (0.075) |

15) Fit the thrust washer onto the center differential.

16) Apply liquid gasket seamlessly to the mating surface of transfer case.

Liquid gasket:

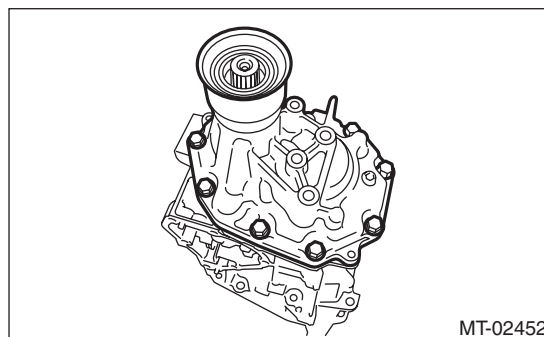
THREE BOND 1215 (Part No. 004403007) or equivalent



17) Install the extension case assembly to the transfer case.

Tightening torque:

40 N·m (4.1 kgf·m, 29.5 ft·lb)



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18) Temporarily install the gasket to the transmission case side.

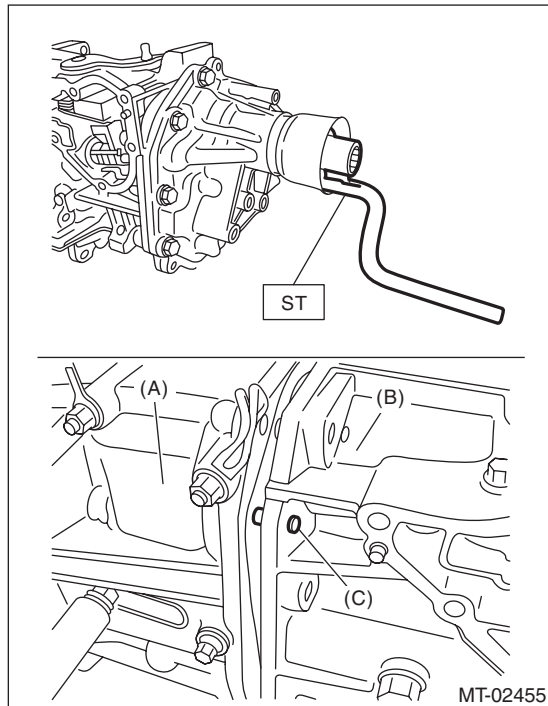
NOTE:

Use a new gasket.

19) Install the extension case assembly along with the transfer case to the transmission case.

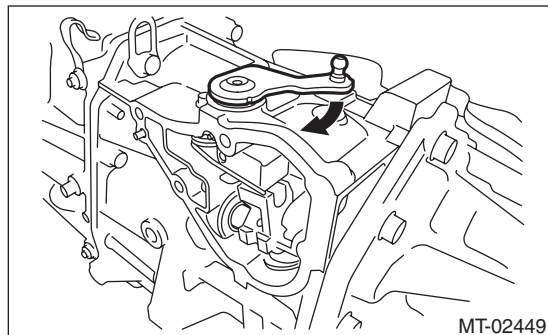
(1) While moving the HANDLE to align the spline position, press in the transfer case assembly until the knock pin comes slightly out of transfer case.

ST 18631AA000 HANDLE



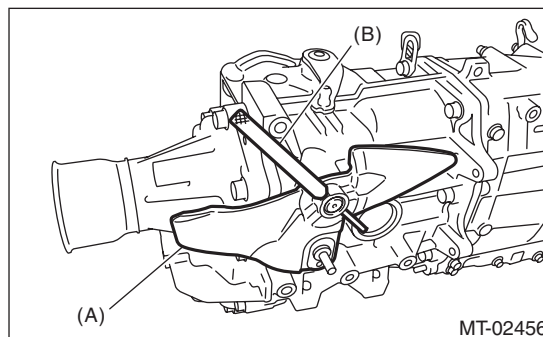
- (A) Transmission case
- (B) Transfer case
- (C) Knock pin

(2) Set and hold the selector lever to the 1st-2nd side, and install the transfer case assembly so that the shifter arm edge and fork rod does not contact.



20) Temporarily tighten the transfer case assembly.

21) Install the shift lever COMPL to the shifter arm No. 2, then insert the remover or similar tool instead of spring pin.

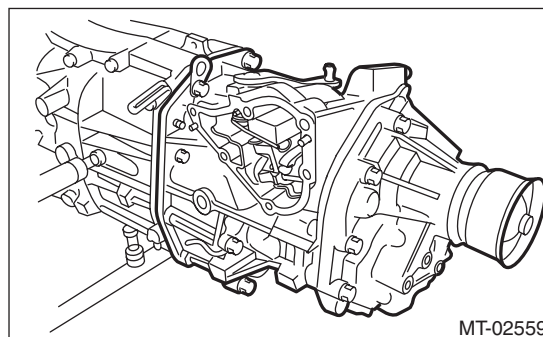


- (A) Shift lever COMPL
- (B) Remover

22) Operate the selector arm and remover to confirm the correct shifting into each gear is possible.
23) Tighten the transfer case assembly to the specified torque.

Tightening torque:

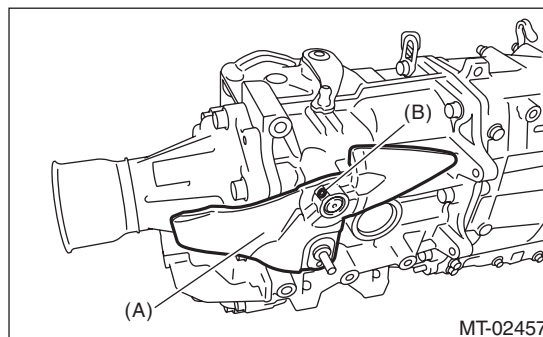
24.5 N·m (2.5 kgf-m, 18.1 ft-lb)



24) Secure the shift lever COMPL to the shifter arm No. 2 using a spring pin.

NOTE:

Use new spring pin.



- (A) Shift lever COMPL
- (B) Spring pin

Transfer Case and Extension Case Assembly

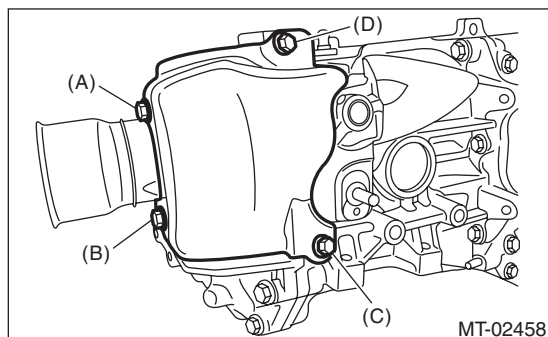
MANUAL TRANSMISSION AND DIFFERENTIAL

25) Install the transfer cover.

- (1) Temporarily tighten the transfer cover mounting bolts.
- (2) Tighten bolts in order of (B), (A), (C), (D) to the specified torque.

Tightening torque:

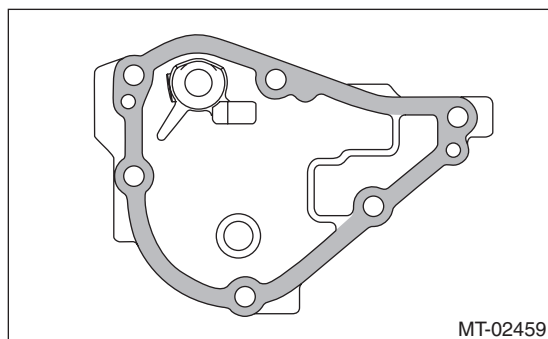
15 N·m (1.5 kgf-m, 11.1 ft-lb)



26) Apply liquid gasket seamlessly to the mating surface of transmission cover.

Liquid gasket:

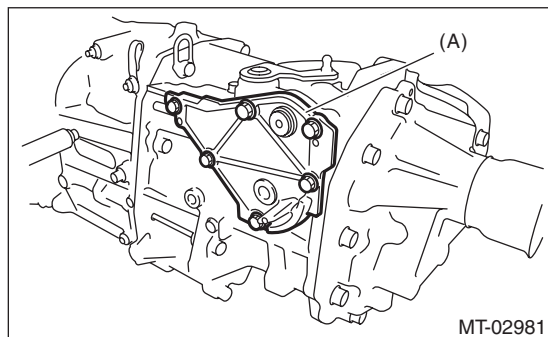
THREE BOND 1215 (Part No. 004403007) or equivalent



27) Install the transmission cover to transfer case.

Tightening torque:

25 N·m (2.5 kgf-m, 18.4 ft-lb)



(A) Transmission cover

28) Install the back-up light switch and the neutral switch. <Ref. to 6MT-40, BACK-UP LIGHT AND NEUTRAL POSITION SWITCH, INSTALLATION, Switches and Harness.>

29) Install the manual transmission assembly to the vehicle. <Ref. to 6MT-29, INSTALLATION, Manual Transmission Assembly.>

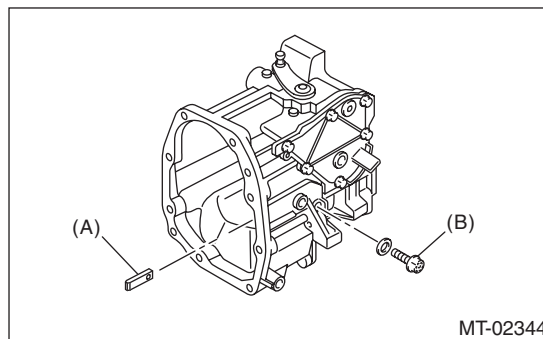
C: DISASSEMBLY

1. TRANSFER CASE

1) Remove the interlock plate.

NOTE:

Do not remove the precoat bolt (B) if the parts are assembled as a transmission assembly.



(A) Interlock plate

(B) Precoat bolt

2) Remove the shift link assembly. <Ref. to 6MT-55, REMOVAL, Shift Link Assembly.>

2. EXTENSION CASE

1) Remove the transfer drive gear assembly. <Ref. to 6MT-50, REMOVAL, Transfer Drive Gear.>

2) Remove the oil seal from the extension case. <Ref. to 6MT-36, REPLACEMENT, Oil Seal.>

3) Remove the dust cover.

D: ASSEMBLY

1. TRANSFER CASE

1) Install the shift link assembly to the transfer case. <Ref. to 6MT-58, INSTALLATION, Shift Link Assembly.>

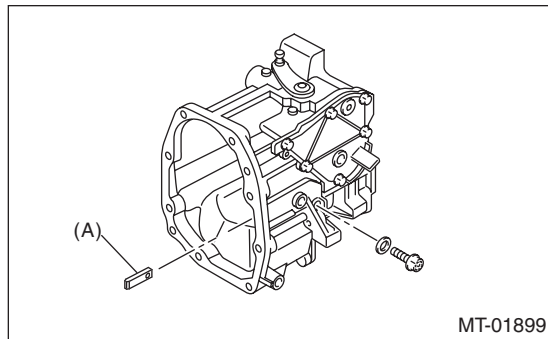
2) Attach the interlock plate to transfer case.

NOTE:

- Use a new bolt and gasket.
- Clean the bolt threads before installing the interlock plate.

Tightening torque:

20 N·m (2.0 kgf-m, 14.8 ft-lb)



(A) Interlock plate

2. EXTENSION CASE

1) Using the ST, install the oil seal to the extension case. <Ref. to 6MT-36, REPLACEMENT, Oil Seal.>

NOTE:

Use a new oil seal.

2) Install the dust cover.

3) Install the transfer drive gear to the extension case. <Ref. to 6MT-50, INSTALLATION, Transfer Drive Gear.>