

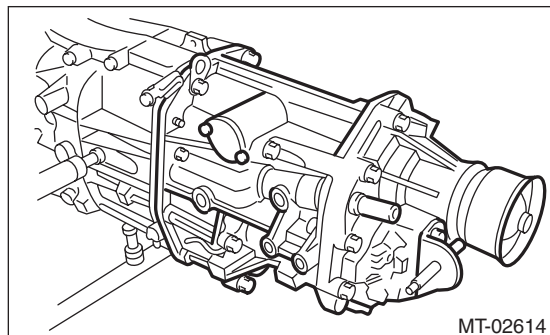
# Transfer Case and Extension Case Assembly

## MANUAL TRANSMISSION AND DIFFERENTIAL

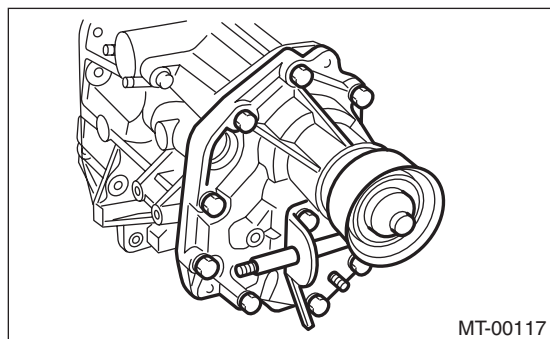
### 9. Transfer Case and Extension Case Assembly

#### A: REMOVAL

- 1) Remove the manual transmission assembly from the vehicle. <Ref. to 5MT-23, REMOVAL, Manual Transmission Assembly.>
- 2) Remove the back-up light switch and the neutral position switch. <Ref. to 5MT-33, REMOVAL, Switches and Harness.>
- 3) Remove the transfer case together with the extension case assembly.



- 4) Remove the gasket.
- 5) Remove the shifter arm.
- 6) Remove the extension case assembly.



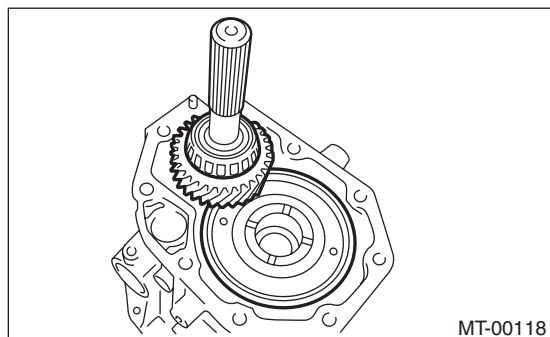
#### B: INSTALLATION

- 1) Apply a coat of grease to the front roller bearing and rear roller bearing of the transfer driven gear.

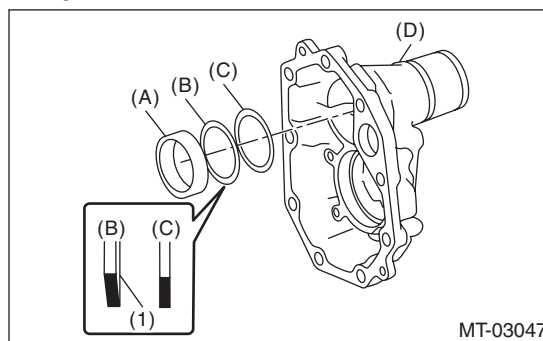
##### Grease:

**NICHIMOLY N-130 or equivalent**

- 2) Install the center differential and transfer driven gear into the transfer case.

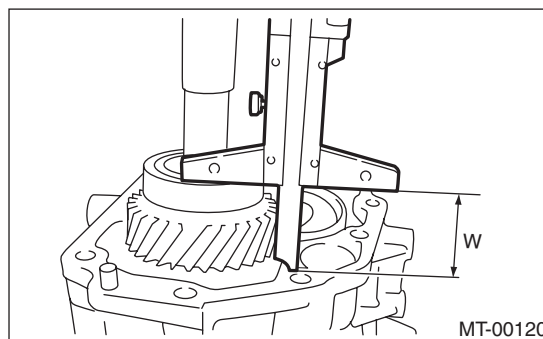


- 3) Remove the bearing outer race, dish plate and adjusting washer from the extension case.



- (A) Bearing outer race
  - (B) Dish plate
  - (C) Thrust washer
  - (D) Extension case
- (1) Paint side

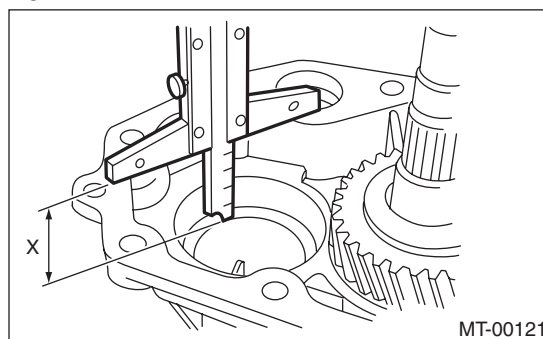
- 4) Install the bearing outer race to transfer driven gear.
- 5) While pressing the bearing outer race horizontally, rotate the driven shaft for ten turns.
- 6) Measure the height "W" between transfer case and taper roller bearing on the transfer driven gear.



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

##### NOTE:

Measure with bearing outer race, dish plate and adjusting washer removed.



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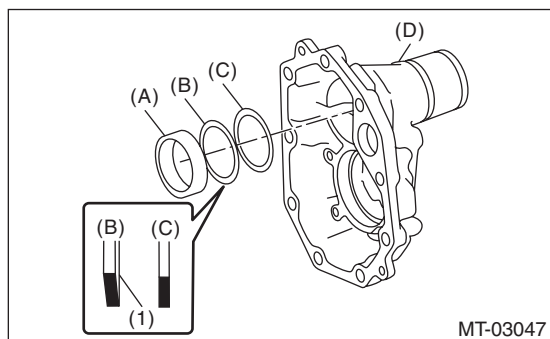
8) Calculate the adjusting washer thickness “t” using the following calculation.

$$t = X - W - (1.715 - 1.765 \text{ mm (0.0686 - 0.0706 in)})$$

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

Adjusting washer (61 × 50 × 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 adjusting washer, dish plate and bearing outer race (A) into the extension case.

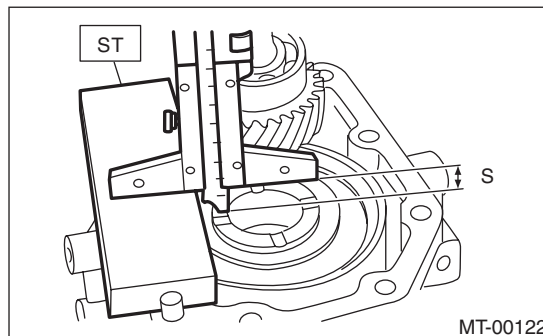


- (A) Bearing outer race
- (B) Dish plate
- (C) Thrust washer
- (D) Extension case

(1) Paint side

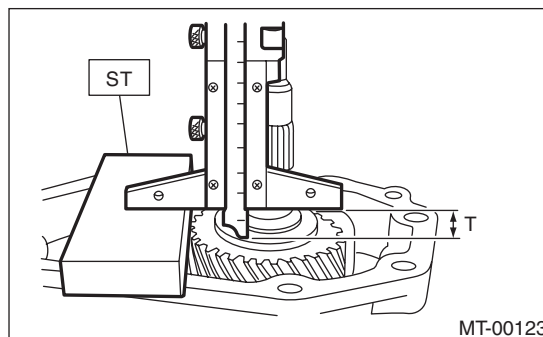
11) Measure the depth “S” between the transfer case + ST and the center differential.

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 drive gear

30 mm (1.18 in): Thickness of ST (× 2 pieces)

0.15 — 0.35 mm (0.0059 — 0.0138 in): Clearance

14) Select a suitable washer in the following table.

**Standard clearance:**

**0.15 — 0.35 mm (0.0059 — 0.0138 in)**

Adjusting 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)

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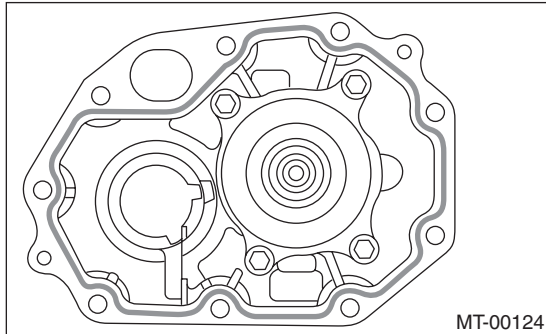
## MANUAL TRANSMISSION AND DIFFERENTIAL

15) Install the adjusting washer to center differential.

16) Apply a proper amount of liquid gasket to the transfer case mating surface.

### **Liquid gasket:**

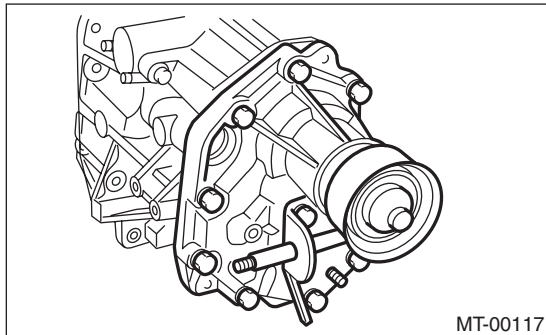
**THREE BOND 1215 (Part No. 004403007) or equivalent**



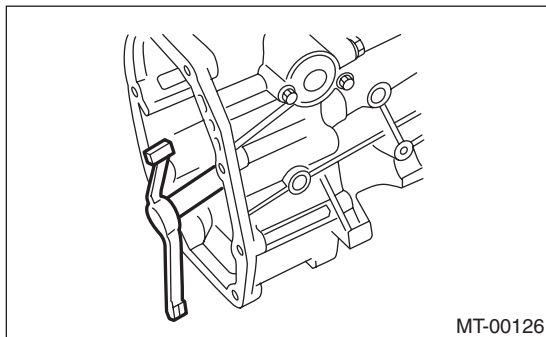
17) Attach the extension assembly to the transfer case.

### **Tightening torque:**

**40 N·m (4.1 kgf-m, 29.5 ft-lb)**



18) Attach the shifter arm to transfer case.

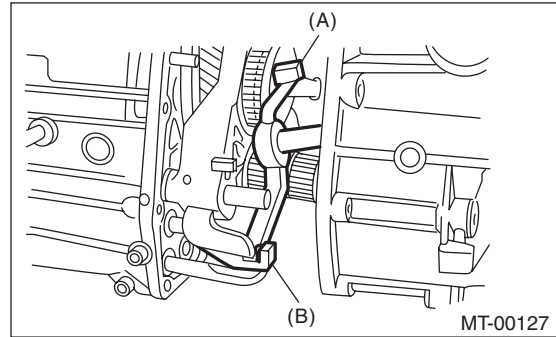


19) Attach the gasket.

### **NOTE:**

Use a new gasket.

20) Hang the shifter arm on 3rd-4th fork rod.



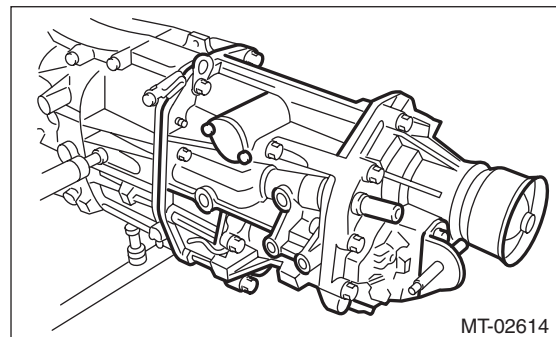
(A) Shifter arm

(B) 3rd-4th fork rod

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

### **Tightening torque:**

**24.5 N·m (2.5 kgf-m, 18.1 ft-lb)**



# Transfer Case and Extension Case Assembly

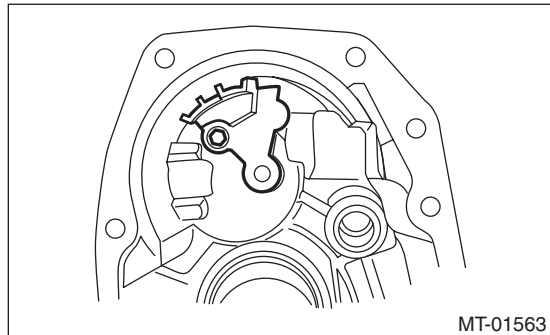
## MANUAL TRANSMISSION AND DIFFERENTIAL

### C: DISASSEMBLY

#### 1. TRANSFER CASE

1) Remove the reverse check sleeve assembly.  
<Ref. to 5MT-46, REMOVAL, Reverse Check Sleeve.>

2) Remove the oil guide.



3) Remove the oil seal.

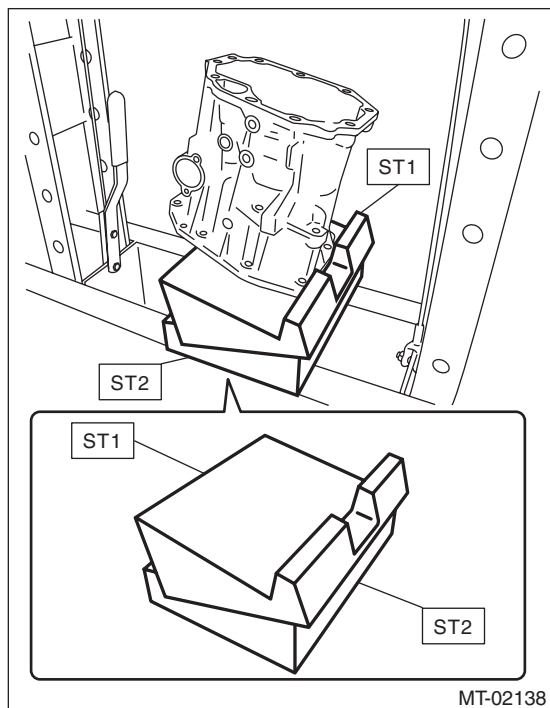
4) Set ST1, ST2 and transfer case to a press.

#### NOTE:

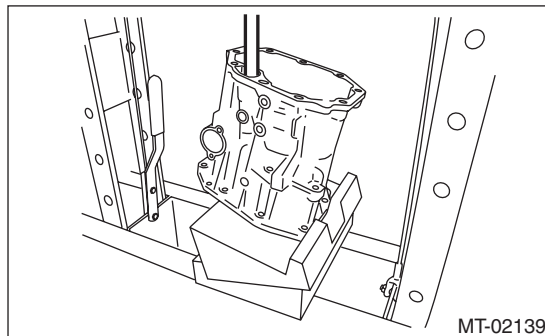
- Set the ST2 under ST1.
- Set the transfer case so that the hole for shifter arm is positioned vertically.

ST1 498267300 CYLINDER HEAD TABLE

ST2 498267200 CYLINDER HEAD TABLE



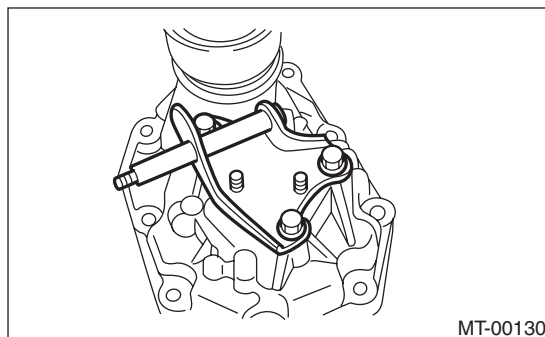
5) Using the round bar with diameter of 22 mm (0.87 in) or 23 mm (0.91 in), remove the roller bearing.



#### 2. EXTENSION CASE

1) Remove the transfer drive gear assembly. <Ref. to 5MT-41, REMOVAL, Transfer Drive Gear.>

2) Remove the shift bracket.



3) Remove the oil seal from the extension case.  
<Ref. to 5MT-31, Oil Seal.>

### D: ASSEMBLY

#### 1. EXTENSION CASE

1) Using the ST, install the oil seal to the extension case. <Ref. to 5MT-31, Oil Seal.>

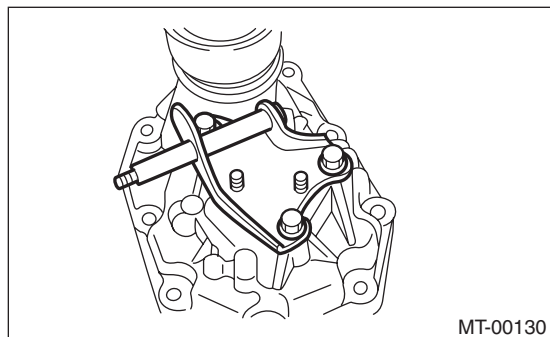
##### NOTE:

Use a new oil seal.

2) Install the shift bracket to extension case.

##### Tightening torque:

**24.5 N·m (2.5 kgf-m, 18.1 ft-lb)**



3) Install the transfer drive gear to the extension case. <Ref. to 5MT-41, INSTALLATION, Transfer Drive Gear.>

#### 2. TRANSFER CASE

1) Set the ST1, ST2, iron plate and the transfer case to the press.

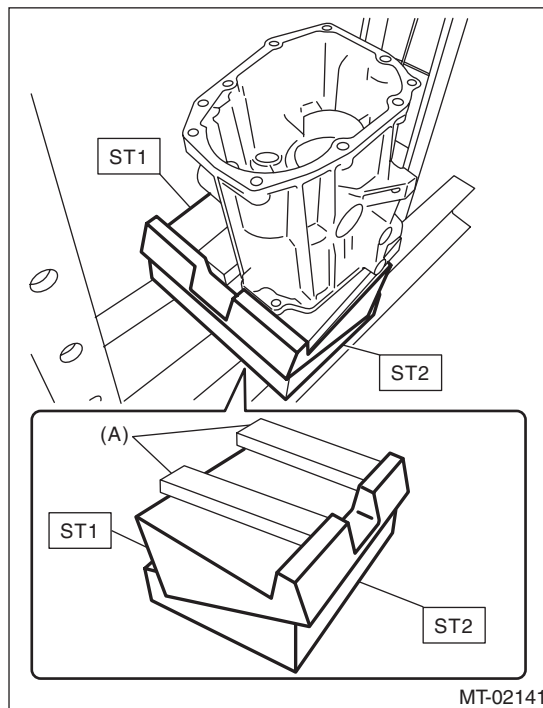
##### NOTE:

- Set the ST2 under ST1.
- Set the transfer case so that the hole for shifter arm is positioned vertically.
- Insert the iron plate which is thicker than the exposed length of the transfer case knock pin between the ST and transfer case.

- Set the iron plate so that the transfer case knock pin does not ride on the iron plate.

ST1 498267300 CYLINDER HEAD TABLE

ST2 498267200 CYLINDER HEAD TABLE



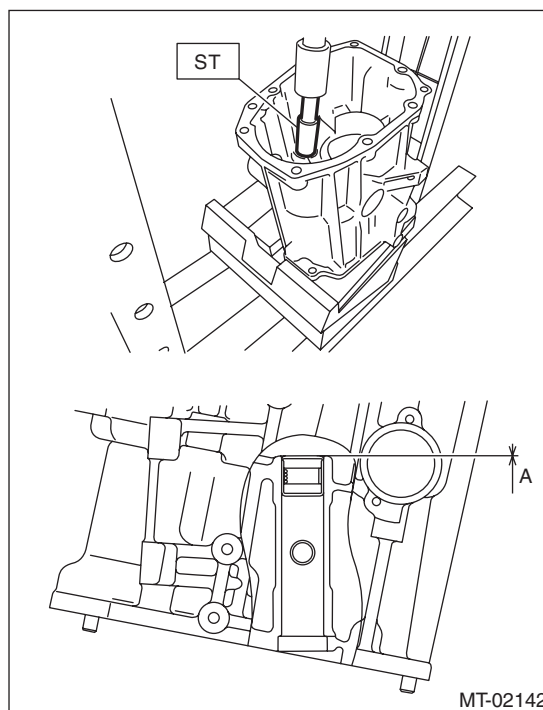
(A) Iron plate

2) Press-fit the roller bearing using the ST.

##### Press-fit depth of needle bearing:

**A:  $0 \pm 0.2$  mm ( $0 \pm 0.01$  in) from the end of transfer case**

ST 899864100 REMOVER



# Transfer Case and Extension Case Assembly

## MANUAL TRANSMISSION AND DIFFERENTIAL

3) Remove the iron plate, and turn over the transfer case.

**NOTE:**

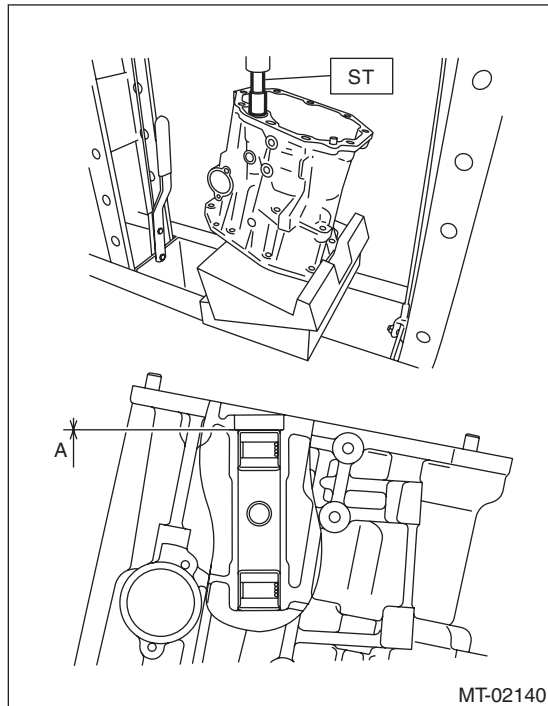
Set the transfer case so that the hole for shifter arm is positioned vertically.

4) Press-fit the roller bearing using the ST.

**Press-fit depth of needle bearing:**

**A:  $0\pm0.2$  mm ( $0\pm0.01$  in) from the end of transfer case**

ST 899864100 REMOVER



5) Install the shifter arm to the transfer case, and make sure that the shift arm moves smoothly.

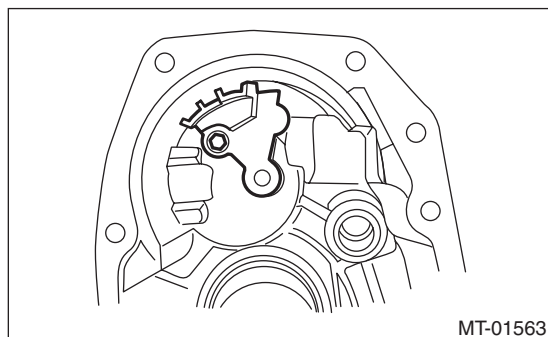
6) Install the oil guide to the transfer case.

**NOTE:**

Use a new installing bolt.

**Tightening torque:**

**6.4 N·m (0.7 kgf-m, 4.7 ft-lb)**



7) Install the reverse check sleeve assembly to the transfer case. <Ref. to 5MT-46, INSTALLATION, Reverse Check Sleeve.>

8) Install the oil seal.

**Press-fit depth of oil seal:**

**A:  $1\pm0.2$  mm ( $0.04\pm0.01$  in) from the end of transfer case**

