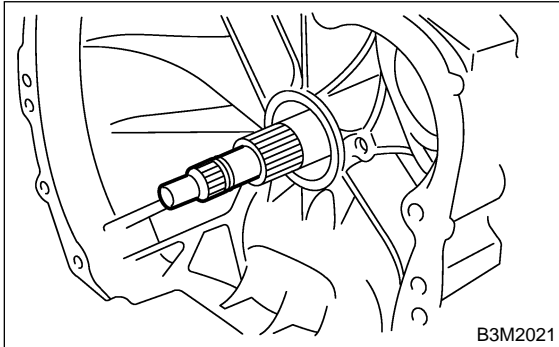


## 25. One-way Clutch SS10215

### A: REMOVAL SS10215A18

- 1) Extract the torque converter clutch assembly. <Ref. to AT-35, REMOVAL, Torque Converter Clutch Assembly.>
- 2) Remove the input shaft.



- 3) Disconnect the air breather hose. <Ref. to AT-28, REMOVAL, Air Breather Hose.>
- 4) Disconnect transmission harness connector from stay.

**NOTE:**

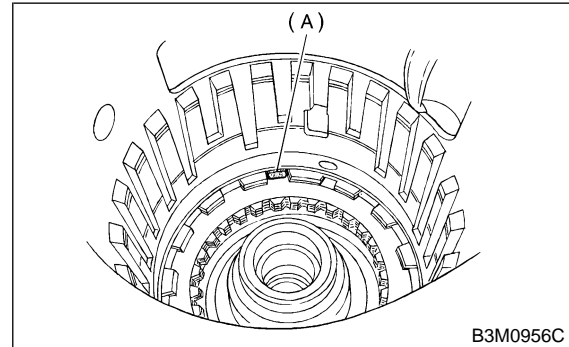
Lift-up lever behind the connector and disconnect it from stay.

- 5) Disconnect inhibitor switch connector from stay.
- 6) Remove the oil charger pipe. <Ref. to AT-29, REMOVAL, Oil Charger Pipe.>
- 7) Remove the oil cooler inlet and outlet pipes. <Ref. to AT-30, REMOVAL, Oil Cooler Pipes.>
- 8) Separation of torque converter clutch case and transmission case. <Ref. to AT-58, REMOVAL, Torque Converter Clutch Case.>
- 9) Separate transmission case and extension case sections. <Ref. to AT-36, REMOVAL, Extension Case.>
- 10) Remove the reduction driven gear. WITHOUT VTD <Ref. to AT-48, WITHOUT VTD, REMOVAL, Reduction Driven Gear.> WITH VTD <Ref. to AT-48, WITH VTD, REMOVAL, Reduction Driven Gear.>
- 11) Remove the reduction drive gear. <Ref. to AT-48, REMOVAL, Reduction Drive Gear.>
- 12) Remove control valve assembly. <Ref. to AT-81, REMOVAL, Control Valve Body Assembly.>
- 13) Remove the oil pump housing. <Ref. to AT-62, REMOVAL, Oil Pump.>
- 14) Take out the high clutch and reverse clutch assembly. <Ref. to AT-87, REMOVAL, High Clutch and Reverse Clutch.>
- 15) Take out the thrust needle bearing, planetary gear assembly. <Ref. to AT-92, REMOVAL, Planetary Gear and Low Clutch.>

- 16) Take out 2-4 brake return spring, piston and piston retainer. <Ref. to AT-100, REMOVAL, 2-4 Brake.>
- 17) Pull out leaf spring.

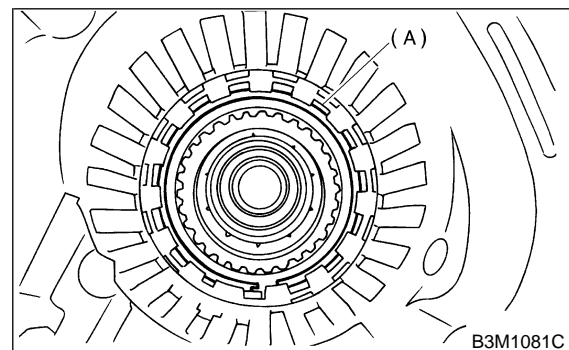
**NOTE:**

Be careful not to bend leaf spring during removal.



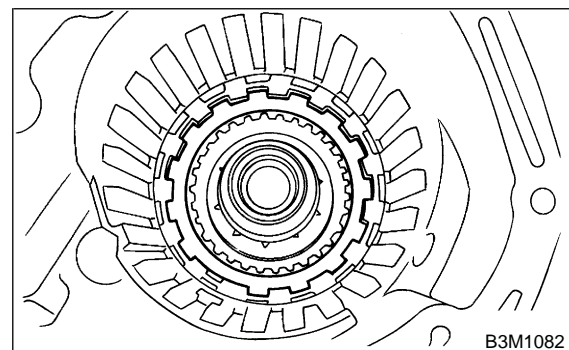
(A) Leaf spring

- 18) Remove snap ring.

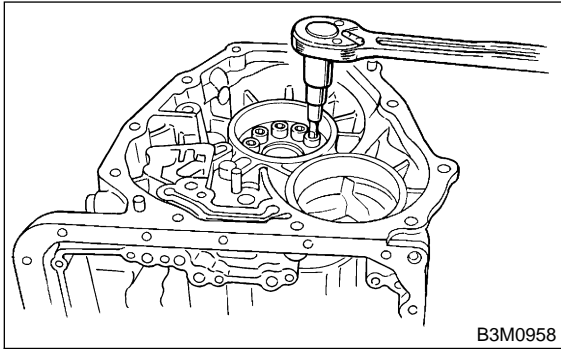


(A) Snap ring

- 19) Take out retaining plate, drive plate, driven plate and dish plate.



20) Turn the transmission case upside down, and then take out the socket bolts while holding the one-way clutch inner race with hand.



## B: INSTALLATION

S510215A11

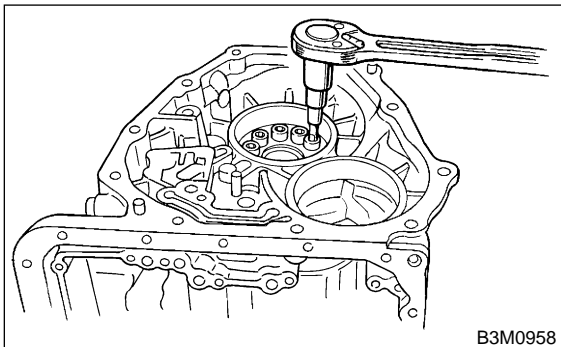
- 1) Install the one-way clutch inner race, spring retainer and return spring.
- 2) Tighten socket head bolts from the rear side of the transmission case.

### **Tightening torque:**

**25 N·m (2.5 kgf-m, 18.1 ft-lb)**

### **NOTE:**

Be sure to tighten evenly.



- 3) Install thrust needle bearing.

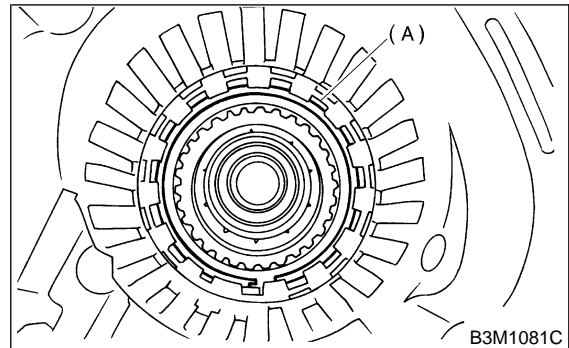
### **NOTE:**

Place transmission case with the front facing up.

- 4) Installation of the low & reverse brake: Install dish plate, driven plates, drive plates, and a retaining plate, and secure with a snap ring.

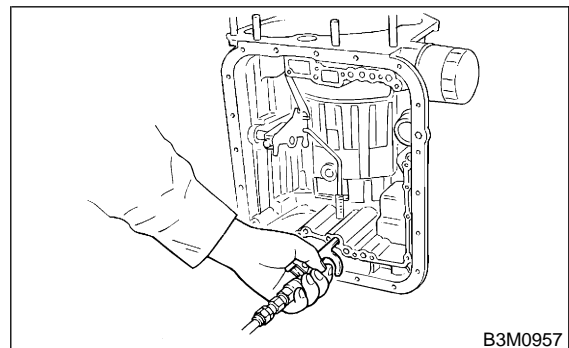
### **NOTE:**

Pay attention to the orientation of the dish plate.



(A) Snap ring

- 5) Apply compressed air intermittently to check for operation.



- 6) Check the clearance and select retaining plate. <Ref. to AT-110, INSPECTION, Low and Reverse Brake.>

- 7) Install 2-4 brake. <Ref. to AT-101, INSTALLATION, 2-4 Brake.>

- 8) Install planetary gear and low clutch assembly to transmission case.

Install carefully while rotating the low clutch and planetary gear assembly slowly paying special attention not to damage the seal ring. <Ref. to AT-93, INSTALLATION, Planetary Gear & Low Clutch.>

- 9) Install the high clutch assembly. <Ref. to AT-88, INSTALLATION, High Clutch and Reverse Clutch.>

- 10) Install the oil pump housing assembly. <Ref. to AT-63, INSTALLATION, Oil Pump.>

- 11) Install control valve assembly and oil pan. <Ref. to AT-82, INSTALLATION, Control Valve Body Assembly.>

- 12) Install the torque converter clutch case assembly. <Ref. to AT-59, INSTALLATION, Torque Converter Clutch Case.>

- 13) Install reduction drive gear.

# ONE-WAY CLUTCH

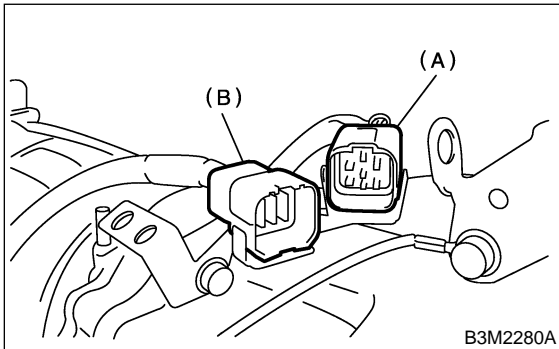
Automatic Transmission

- 14) Install reduction driven gear.  
WITHOUT VTD <Ref. to AT-48, WITHOUT VTD, INSTALLATION, Reduction Driven Gear.>  
WITH VTD <Ref. to AT-49, WITH VTD, INSTALLATION, Reduction Driven Gear.>
- 15) Install the extension case to the transmission case. <Ref. to AT-36, INSTALLATION, Extension Case.>
- 16) Install the rear vehicle speed sensor.

## Tightening torque:

**7 N·m (0.7 kgf-m, 5.1 ft-lb)**

- 17) Insert inhibitor switch and transmission connector into stay.



- (A) Transmission harness
- (B) Inhibitor switch harness

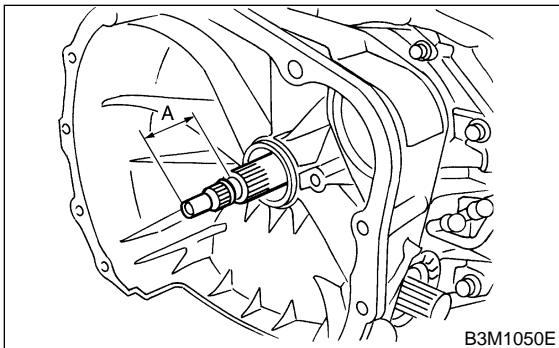
- 18) Install air breather hose. <Ref. to AT-28, INSTALLATION, Air Breather Hose.>
- 19) Install the oil cooler pipes. <Ref. to AT-30, INSTALLATION, Oil Cooler Pipes.>
- 20) Install the oil charger pipe with O-ring. <Ref. to AT-29, INSTALLATION, Oil Charger Pipe.>
- 21) Insert the input shaft while turning lightly by hand.

## CAUTION:

**Be careful not to damage the bushing.**

## Normal protrusion A:

**50 — 55 mm (1.97 — 2.17 in)**

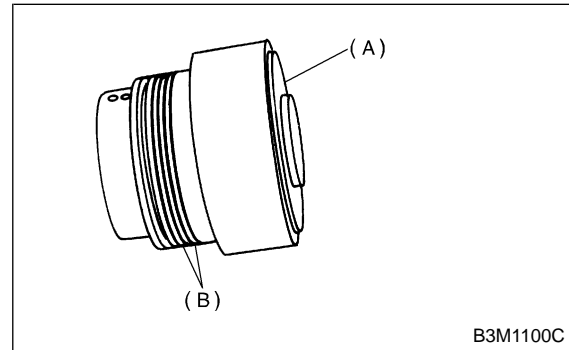


- 22) Install the torque converter clutch assembly. <Ref. to AT-35, INSTALLATION, Torque Converter Clutch Assembly.>

## C: DISASSEMBLY S510215A06

### 1. ONE-WAY CLUTCH INNER RACE S510215A0601

- 1) Remove seal rings.



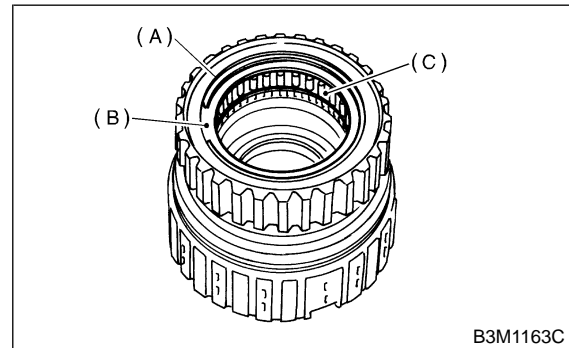
- (A) One way clutch inner race
- (B) Seal rings

- 2) Using ST, remove needle bearing.  
ST 398527700 PULLER ASSY

### 2. ONE-WAY CLUTCH OUTER RACE

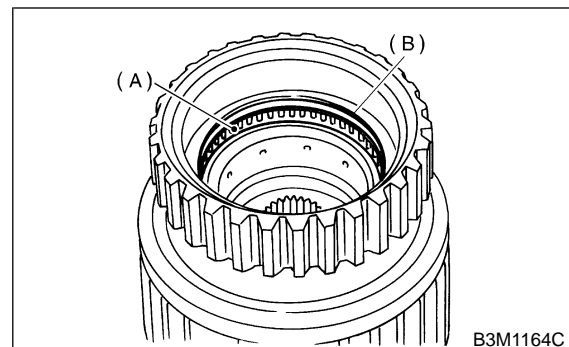
S510215A0602

- 1) Remove the one-way clutch after taking out the snap ring.



- (A) Snap ring
- (B) Plate
- (C) One-way clutch

- 2) Remove the needle bearing after taking out the snap ring.



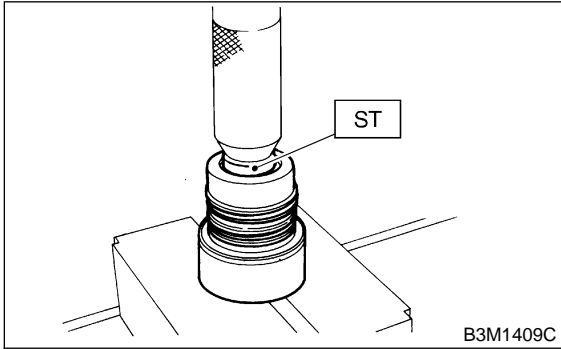
- (A) Needle bearing
- (B) Snap ring

## D: ASSEMBLY SS10215A02

### 1. ONE-WAY CLUTCH INNER RACE SS10215A0201

1) Using a press and ST, install the needle bearing to the inner race.

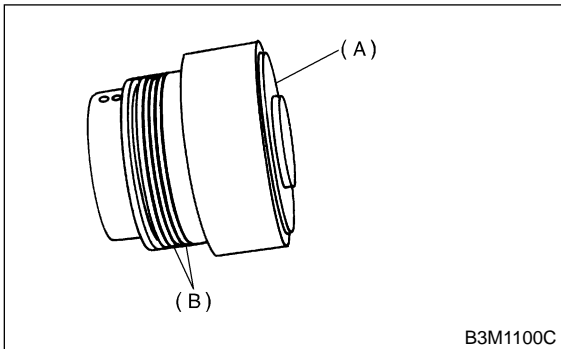
ST 398497701 INSTALLER



2) Install two seal rings to one-way clutch inner race.

**NOTE:**

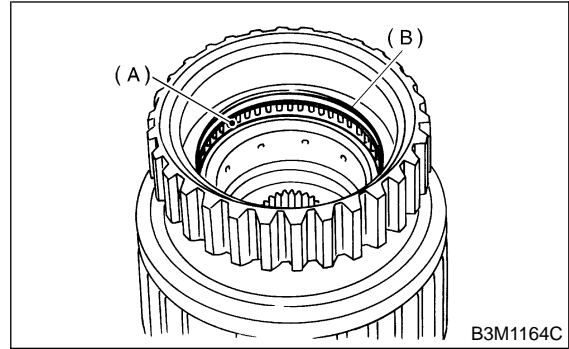
Apply vaseline to the groove of the inner race and to the seal ring after installation, so that the seal ring will not expand.



- (A) One-way clutch inner race
- (B) Seal rings

### 2. ONE-WAY CLUTCH OUTER RACE SS10215A0202

1) Install the needle bearing, and secure with the snap ring.

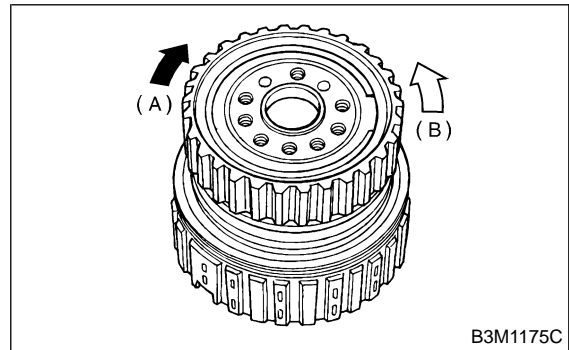


- (A) Needle bearing
- (B) Snap ring

2) Install the one-way clutch, one-way clutch inner race and plate, and secure with the snap ring.

**NOTE:**

Set the inner race. Make sure that the forward clutch is free in the clockwise direction and locked in the counterclockwise direction, as viewed from the front of the vehicle.



- (A) Locked
- (B) Free

## E: INSPECTION SS10215A10

- Make sure the snap ring is not worn and the seal rings are not damaged.
- Measure the total end play and adjust to within specifications. <Ref. to AT-66, ADJUSTMENT, Oil Pump.>