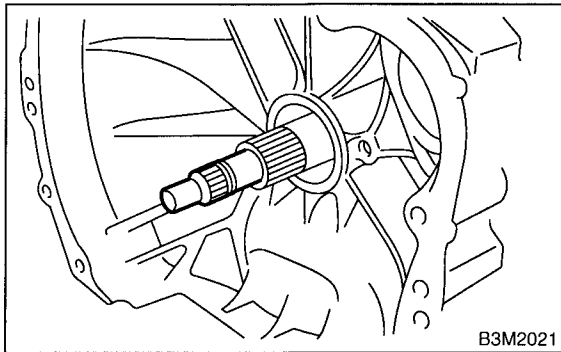


## 26. One-way Clutch SS10215

### A: REMOVAL SS10215A18

- 1) Extract the torque converter clutch assembly. <Ref. to AT-34 REMOVAL, Torque Converter Clutch Assembly.>
- 2) Remove the input shaft.



- 3) Disconnect transmission harness connector from stay.

**NOTE:**

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

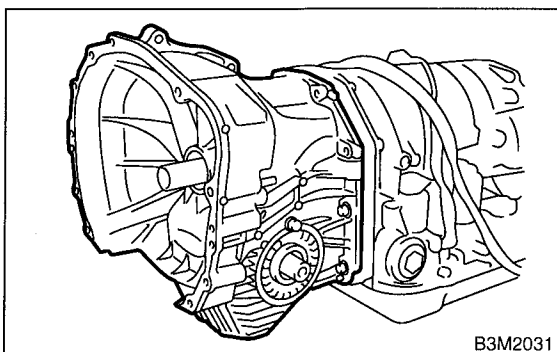
- 4) Disconnect inhibitor switch connector from stay.
- 5) Disconnect the air breather hose. <Ref. to AT-27 REMOVAL, Air Breather Hose.>
- 6) Remove the oil charger pipe. <Ref. to AT-28 REMOVAL, Oil Charger Pipe.>
- 7) Remove the oil cooler inlet and outlet pipes. <Ref. to AT-29 REMOVAL, Oil Cooler Pipes.>
- 8) Separation of torque converter clutch case and transmission case sections

**CAUTION:**

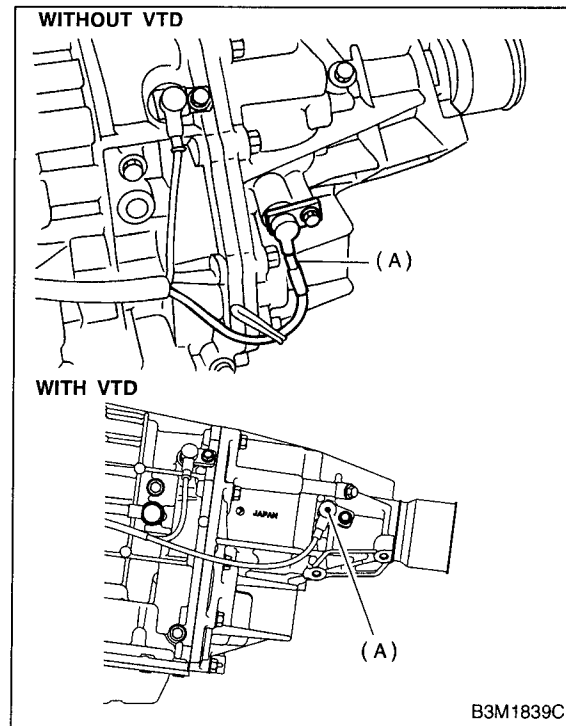
- Be careful not to damage the oil seal and bushing inside the torque converter clutch case by the oil pump cover.
- Be careful not to lose the rubber seal.

**NOTE:**

Separate these cases while tapping lightly on the housing.



- 9) Remove rear vehicle speed sensor.



(A) Rear vehicle speed sensor

- 10) Separate transmission case and extension case sections. <Ref. to AT-36 REMOVAL, Extension Case.>

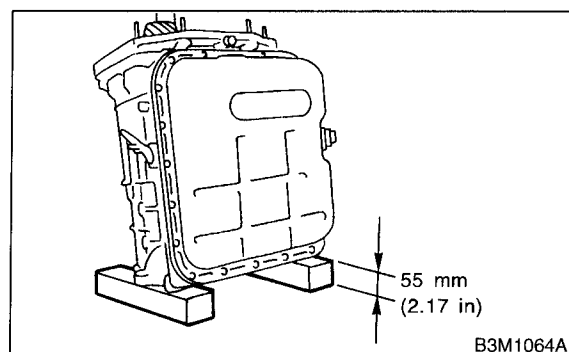
- 11) Remove the reduction driven gear. WITHOUT VTD <Ref. to AT-48 WITHOUT VTD, REMOVAL, Reduction Driven Gear.> WITH VTD <Ref. to AT-48 WITH VTD, REMOVAL, Reduction Driven Gear.>

- 12) Remove the reduction drive gear. <Ref. to AT-47 REMOVAL, Reduction Drive Gear.>

- 13) Place two wooden blocks on the workbench, and stand the transmission case with its rear end facing down.

**CAUTION:**

- Be careful not to scratch the rear mating surface of the transmission case.
- Note that the parking rod and drive pinion protrude from the mating surface.



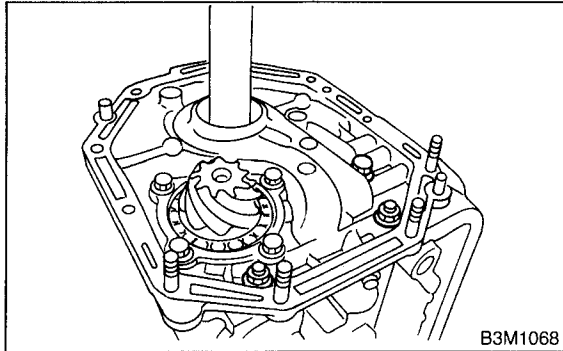
# ONE-WAY CLUTCH

Automatic Transmission

- 14) Remove oil pan.
- 15) Remove control valve assembly. <Ref. to AT-83 REMOVAL, Control Valve Body.>
- 16) Remove the oil pump housing.

### CAUTION:

Be careful not to lose the total end play adjusting thrust washer.



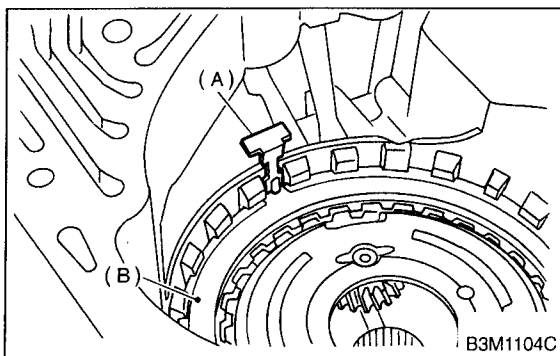
- 17) Take out the high clutch and reverse clutch assembly. <Ref. to AT-89 REMOVAL, High Clutch and Reverse Clutch.>
- 18) Pull out leaf spring.

### CAUTION:

Be careful not to bend leaf spring during removal.

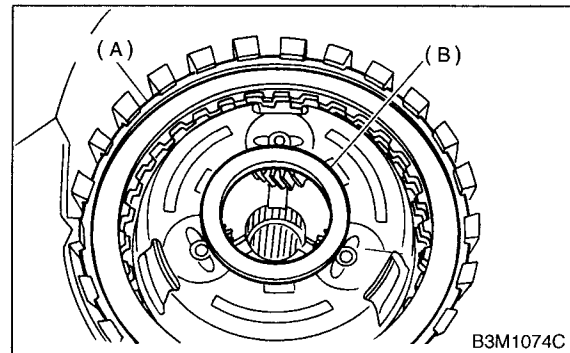
### NOTE:

Remove it while pressing down on lower leaf spring.



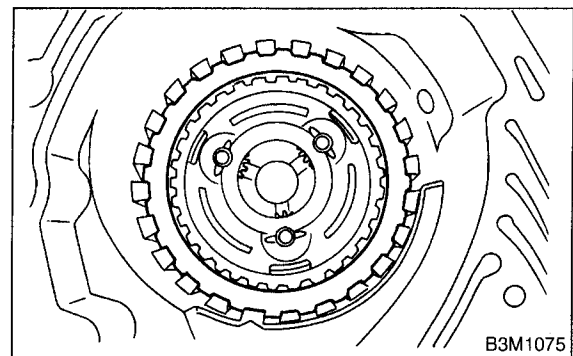
- (A) Leaf spring
- (B) Retaining plate

- 19) Remove snap ring and thrust needle bearing.

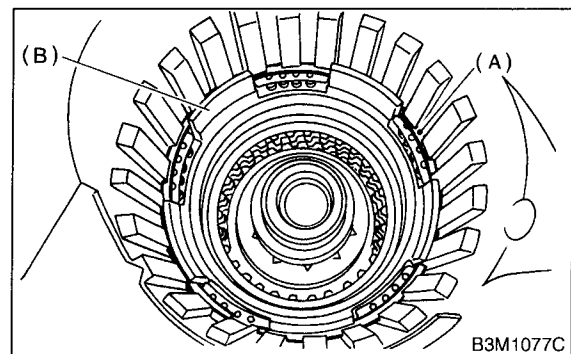


- (A) Snap ring
- (B) Thrust needle bearing

- 20) Take out retaining plate, drive plate and driven plate of 2-4 brake.



- 21) Take out the thrust needle bearing, planetary gear assembly. <Ref. to AT-95 REMOVAL, Planetary Gear and Low Clutch.>
- 22) Remove snap ring.



- (A) Snap ring
- (B) 2-4 brake piston

- 23) Take out 2-4 brake return spring, piston and piston retainer. <Ref. to AT-104 REMOVAL, 2-4 Brake.>

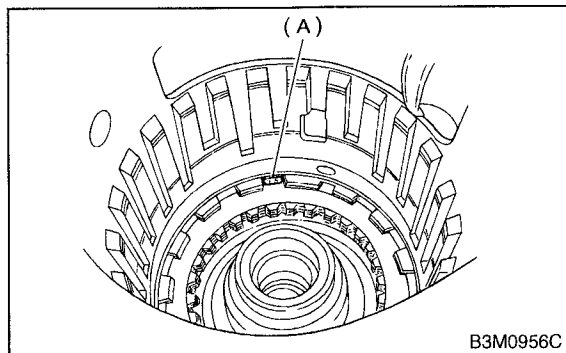
# ONE-WAY CLUTCH

## Automatic Transmission

24) Pull out leaf spring.

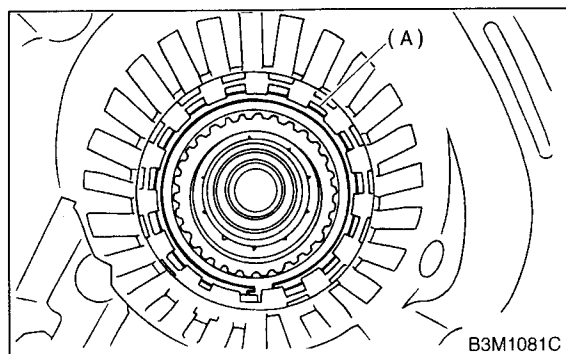
**CAUTION:**

Be careful not to bend leaf spring during removal.



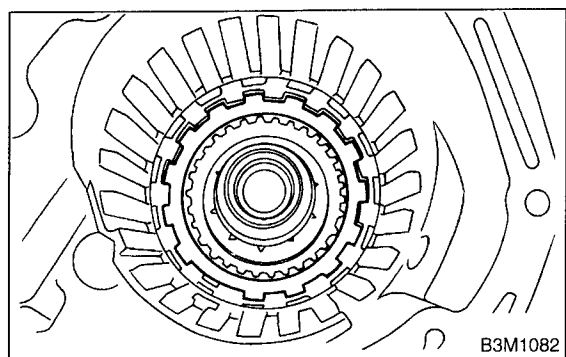
(A) Leaf spring

25) Remove snap ring.

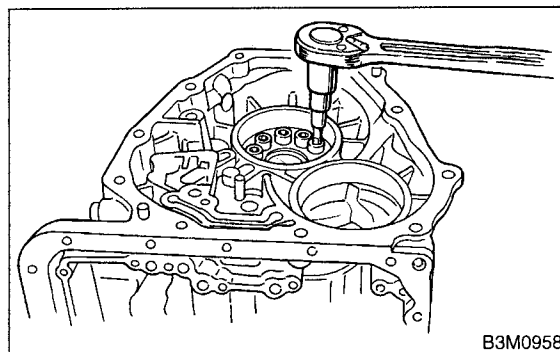


(A) Snap ring

26) Take out retaining plate, drive plate, driven plate and dish plate.



27) 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 SS10215A11

1) Install the one-way clutch inner race, spring retainer and return spring.

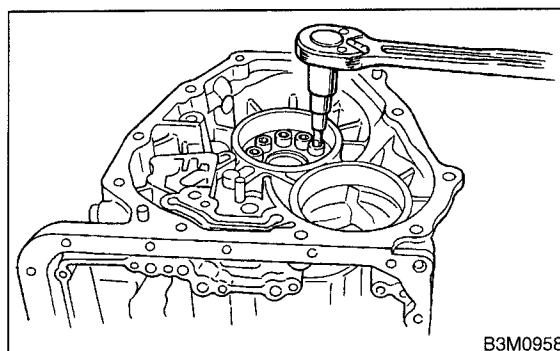
2) Tighten eight socket head bolts from the rear side of the transmission case.

**Tightening torque:**

**25 N·m (2.5 kgf·m, 18.1 ft·lb)**

**CAUTION:**

Be sure to tighten evenly.



3) Install thrust needle bearing.

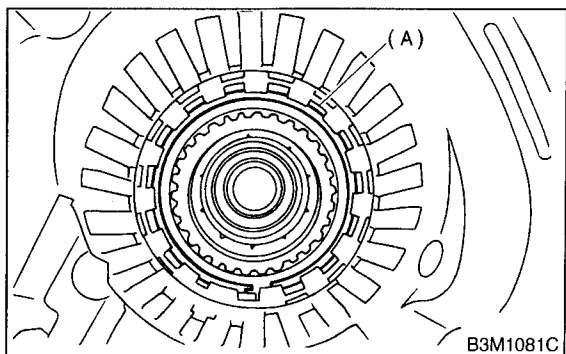
**NOTE:**

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.

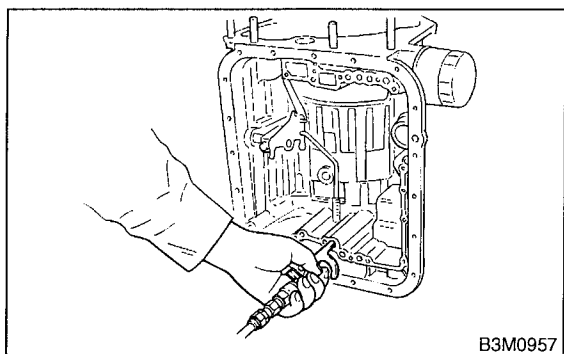
**NOTE:**

Pay attention to the orientation of the dish plate.



(A) Snap ring

5) Apply compressed air intermittently to check for operation.

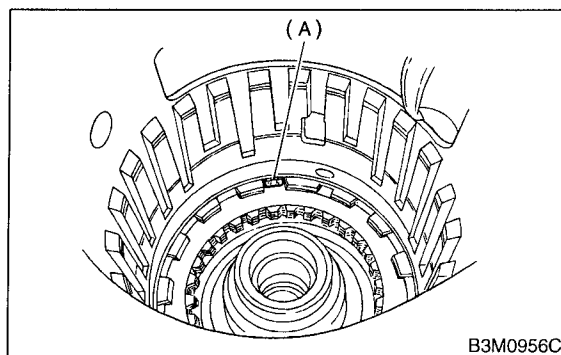


Available retaining plates	
Part No.	Thickness mm (in)
31667AA320	4.2 (0.165)
31667AA330	4.5 (0.177)
31667AA340	4.8 (0.189)
31667AA350	5.1 (0.201)
31667AA360	5.4 (0.213)
31667AA370	5.7 (0.224)
31667AA380	6.0 (0.236)

7) Install leaf spring of low and reverse brake.

**CAUTION:**

Pay attention to the direction and position of leaf spring during installation.

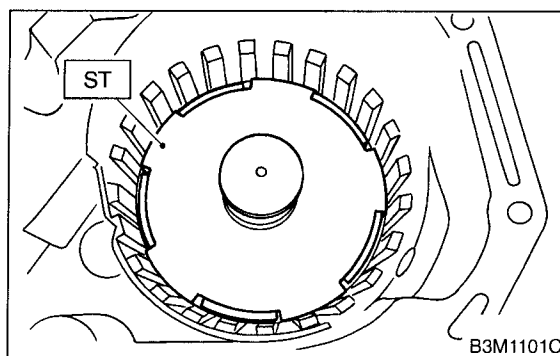


(A) Leaf spring

8) Install 2-4 brake piston, retainer and return spring to transmission case. <Ref. to AT-106 INSTALLATION, 2-4 Brake.>

9) Position snap ring in transmission. Using ST, press the snap ring into place.

ST 498677100 COMPRESSOR



10) 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-96 INSTALLATION, Planetary Gear & Low Clutch.>

6) Check the clearance. (Selection of retaining plate)

**NOTE:**

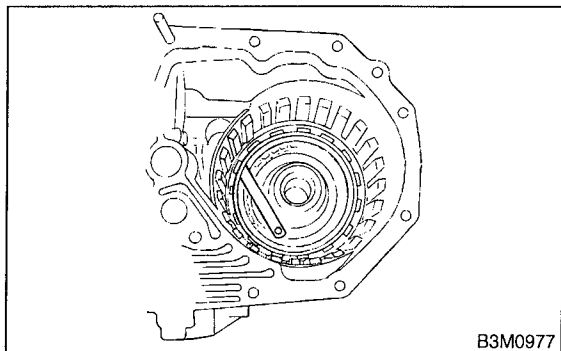
Before measuring clearance, place the same thickness of shim on both sides to prevent retaining plate from tilting.

**Standard value:**

0.7 — 1.2 mm (0.028 — 0.047 in)

**Allowable limit:**

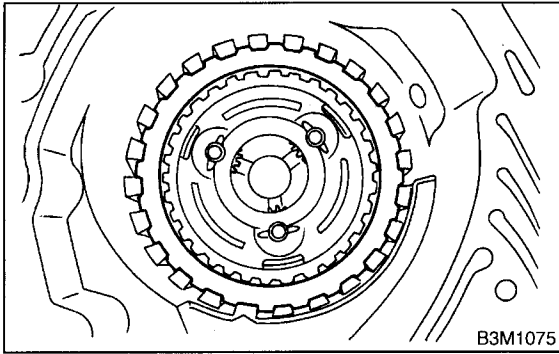
2.2 mm (0.087 in)



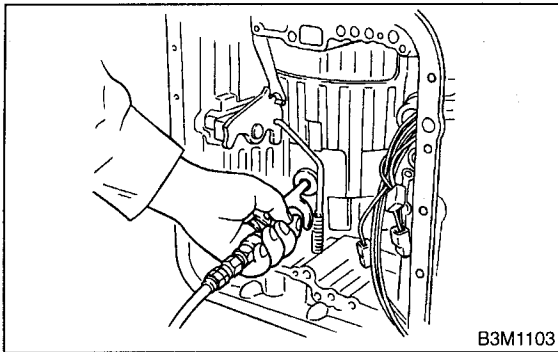
# ONE-WAY CLUTCH

## Automatic Transmission

11) Install pressure plate, drive plate, driven plate, retaining plate and snap ring.



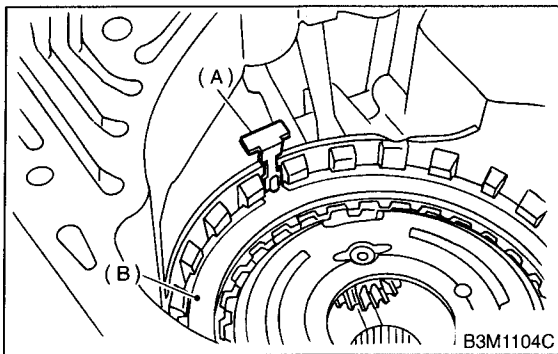
12) After all 2-4 brake component parts have been installed, blow in air intermittently and confirm the operation of the brake.



13) Install leaf spring of 2-4 brake.

### NOTE:

Be careful not to mistake the location of the leaf spring to be inserted.

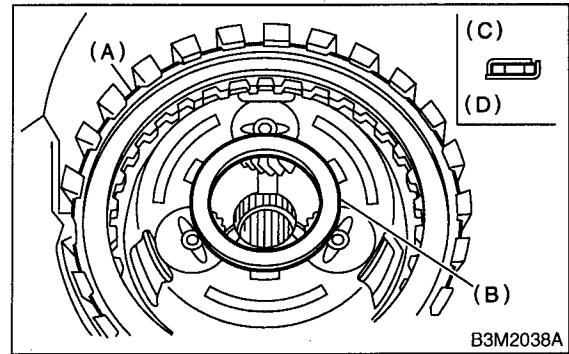


- (A) Leaf spring
- (B) Retaining plate

14) Install snap ring and thrust needle bearing.

### NOTE:

Install thrust needle bearing in the correct direction.

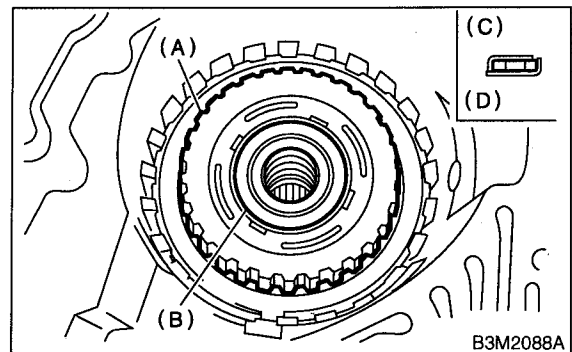


- (A) Snap ring
- (B) Thrust needle bearing
- (C) Up side
- (D) Down side

15) Install front sun gear and thrust needle bearing.

### NOTE:

Install thrust needle bearing in the correct direction.



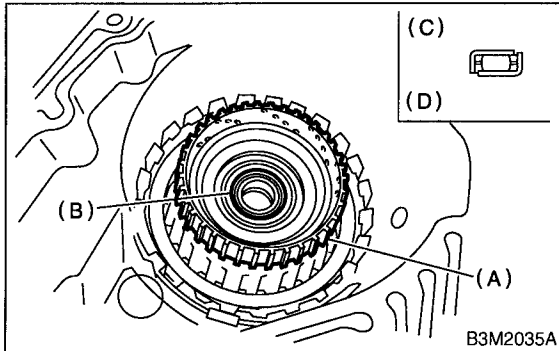
- (A) Front sun gear
- (B) Thrust needle bearing
- (C) Up side
- (D) Down side

16) Install the high clutch hub and thrust needle bearing.

Attach the thrust needle bearing to the hub with vaseline and install the hub by correctly engaging the splines of the front planetary carrier.

**NOTE:**

Install thrust needle bearing in the correct direction.



- (A) High clutch hub
- (B) Thrust needle bearing
- (C) Up side
- (D) Down side

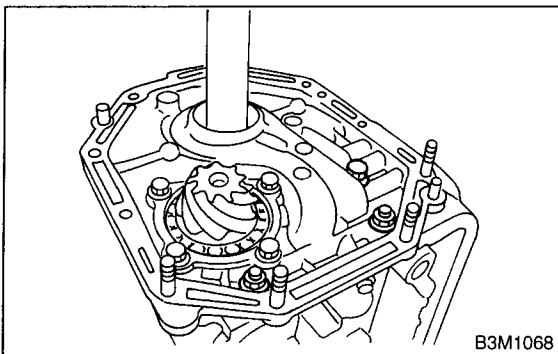
17) Install the high clutch assembly. <Ref. to AT-90 INSTALLATION, High Clutch and Reverse Clutch.>

18) Install the oil pump housing assembly.

19) Secure the housing with two nuts and the bolt.

**Tightening torque:**

**T: 41 N·m (4.2 kgf-m, 30.4 ft-lb)**



20) Install control valve assembly. <Ref. to AT-84 INSTALLATION, Control Valve Body Assembly.>

21) Install oil pan.

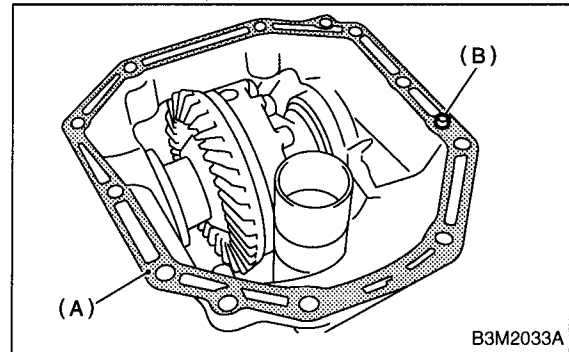
22) Apply proper amount of liquid gasket to the entire torque converter clutch case mating surface.

**Liquid gasket:**

**THREE BOND 1215**

**NOTE:**

Make sure that the rubber seal and seal pipe are fitted in position.



- (A) THREE BOND (Part No. 1215)
- (B) Rubber seal

23) Install the torque converter clutch case assembly to the transmission case assembly, and secure with six bolts and four nuts.

**CAUTION:**

**When installing, be careful not to damage the torque converter clutch case bushing and oil seal.**

**Tightening torque:**

**41 N·m (4.2 kgf-m, 30.4 ft-lb)**

24) Install reduction drive gear.

25) 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.>

# ONE-WAY CLUTCH

Automatic Transmission

26) Install the extension case to the transmission case. <Ref. to AT-36 INSTALLATION, Extension Case.>

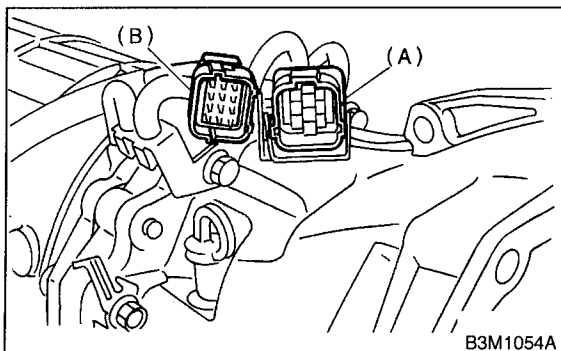
27) Install the rear vehicle speed sensor.

### Tightening torque:

**7 N·m (0.7 kgf-m, 5.1 ft-lb)**

28) Install air breather hose. <Ref. to AT-27 INSTALLATION, Air Breather Hose.>

29) Insert inhibitor switch and transmission connector into stay.



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

30) Install the oil cooler pipes. <Ref. to AT-29 INSTALLATION, Oil Cooler Pipes.>

31) Install the oil charger pipe with O-ring. <Ref. to AT-28 INSTALLATION, Oil Charger Pipe.>

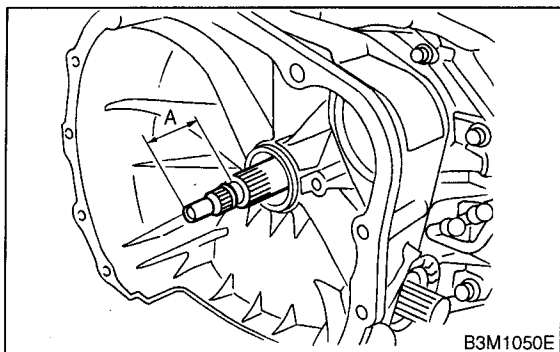
32) Insert the input shaft while turning lightly by hand.

### CAUTION:

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

### Normal protrusion A:

**50 — 55 mm (1.97 — 2.17 in)**

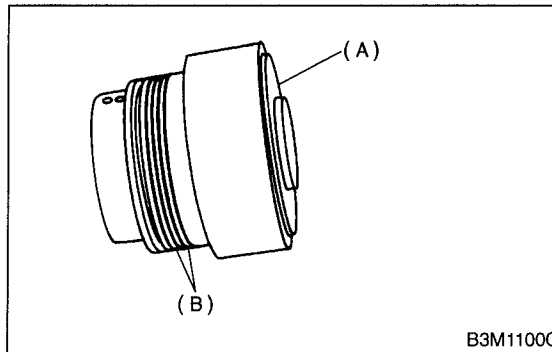


33) Install the torque converter clutch assembly. <Ref. to AT-34 INSTALLATION, Torque Converter Clutch Assembly.>

## C: DISASSEMBLY SS10215A06

### 1. ONE-WAY CLUTCH INNER RACE SS10215A0601

1) Remove seal rings.



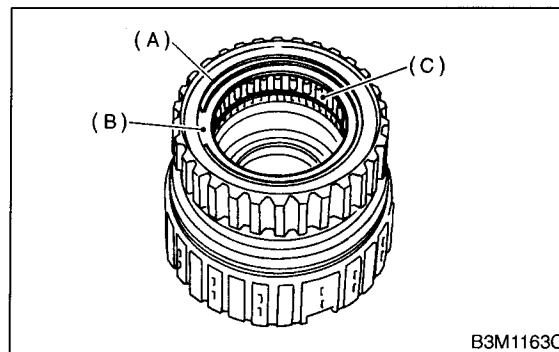
- (A) One way clutch inner race
- (B) Seal rings

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

### 2. ONE-WAY CLUTCH OUTER RACE

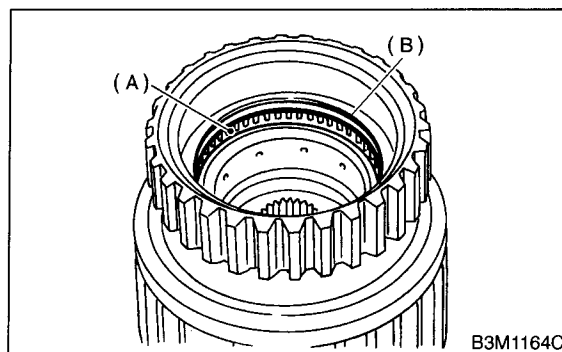
SS10215A0602

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.

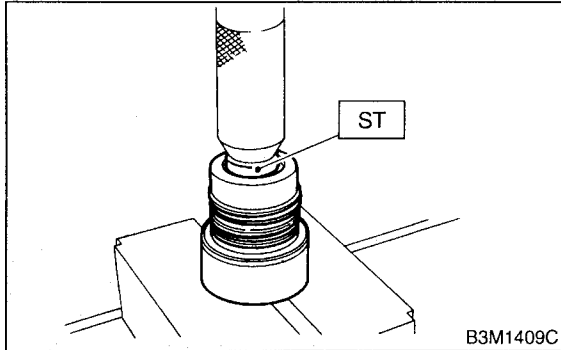


- (A) Needle bearing
- (B) Snap ring

## D: ASSEMBLY SS10215A02

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

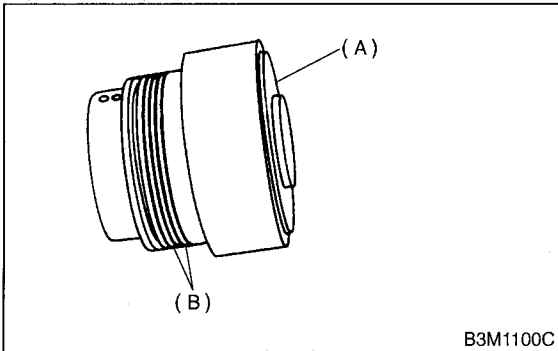
- 1) Using a press and ST, install the needle bearing to the inner race.  
ST 398497701 INSTALLER



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

**NOTE:**

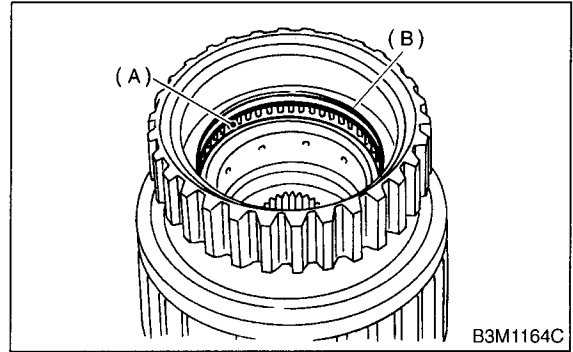
Apply vaseline to the groove of the inner race and to the seal ring after installation, so that the seal ring will not expand.



- (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.

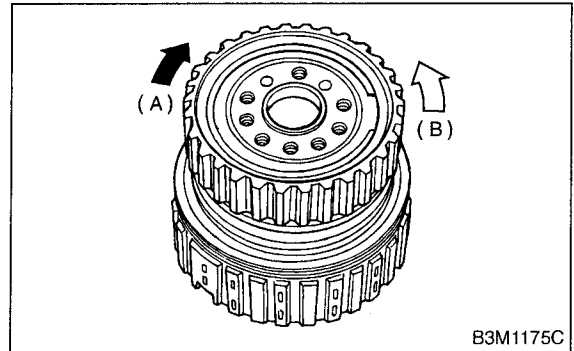


- (A) Needle bearing  
(B) Snap ring

- 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-68 ADJUSTMENT, Oil Pump.>