

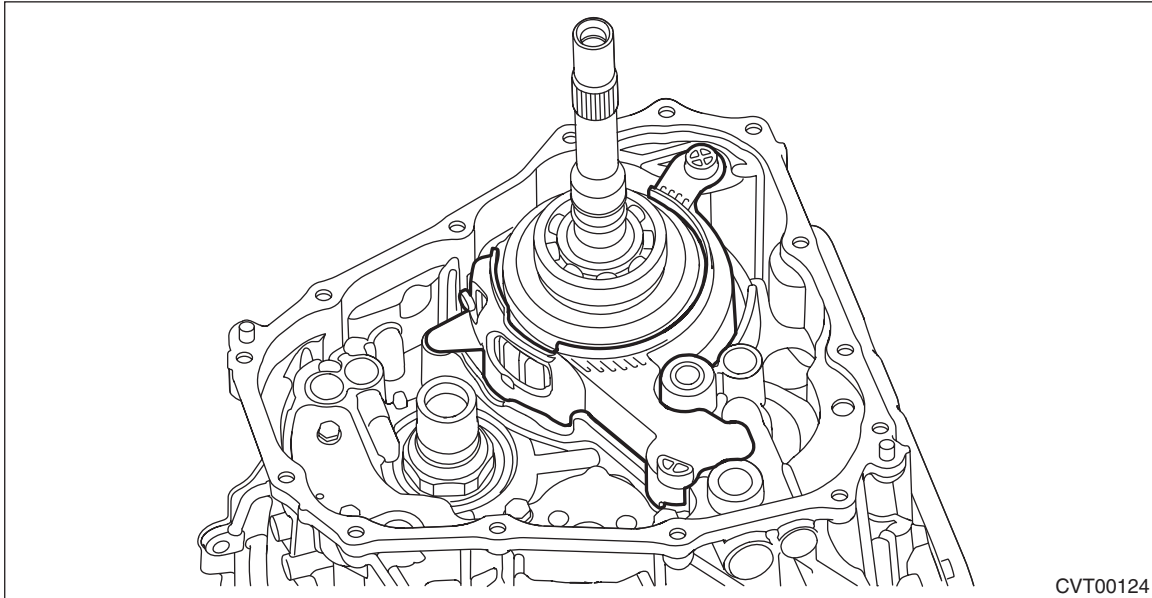
Output Clutch Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

39. Output Clutch Assembly

A: REMOVAL

- 1) Remove the transmission assembly from the vehicle. <Ref. to CVT(TH58A)-63, REMOVAL, Automatic Transmission Assembly.>
- 2) Remove the sensor cover. <Ref. to CVT(TH58A)-143, REMOVAL, Transmission Harness.>
- 3) Remove the secondary pressure sensor harness connector, and remove the harness clip. <Ref. to CVT(TH58A)-143, REMOVAL, Transmission Harness.>
- 4) Remove the extension case. <Ref. to CVT(TH58A)-182, REMOVAL, Extension Case.>
- 5) Remove the transfer clutch assembly. <Ref. to CVT(TH58A)-186, REMOVAL, Transfer Clutch.>
- 6) Remove the transfer driven gear assembly. <Ref. to CVT(TH58A)-200, REMOVAL, Transfer Driven Gear.>
- 7) Remove the transfer drive gear assembly. <Ref. to CVT(TH58A)-203, REMOVAL, Transfer Drive Gear.>
- 8) Remove the parking pawl. <Ref. to CVT(TH58A)-208, REMOVAL, Parking Pawl.>
- 9) Remove the transmission control device. <Ref. to CVT(TH58A)-210, REMOVAL, Transmission Control Device.>
- 10) Remove the drive motor assembly. <Ref. to CVT(TH58A)-217, REMOVAL, Drive Motor Assembly.>
- 11) Remove the front wheel speed sensor. <Ref. to CVT(TH58A)-108, REMOVAL, Front Wheel Speed Sensor.>
- 12) Remove the oil baffle.

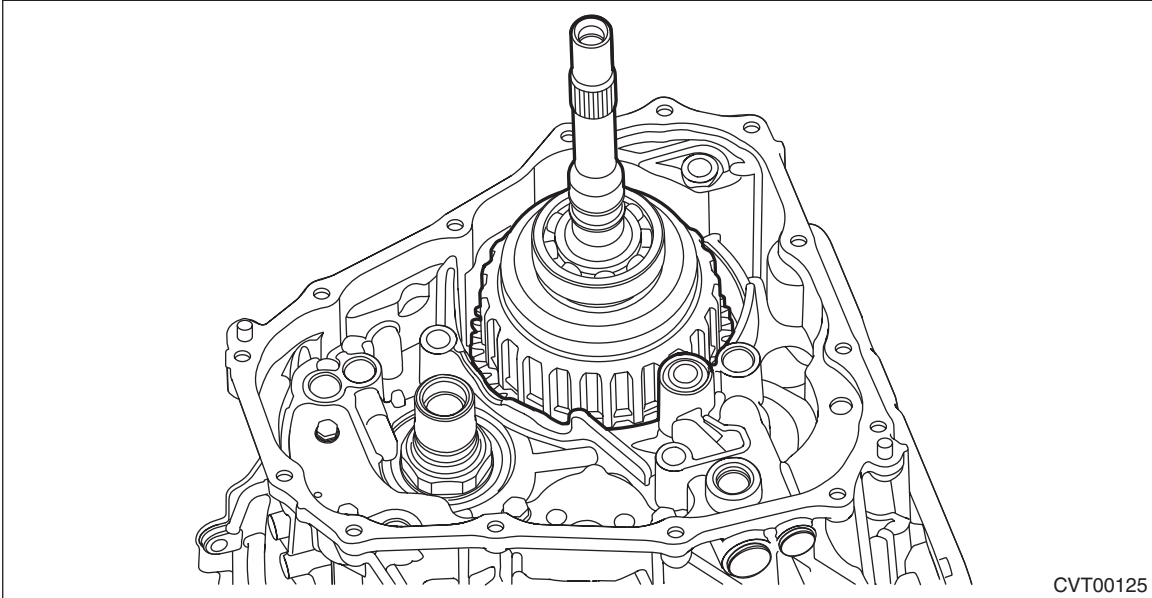


CVT00124

Output Clutch Assembly

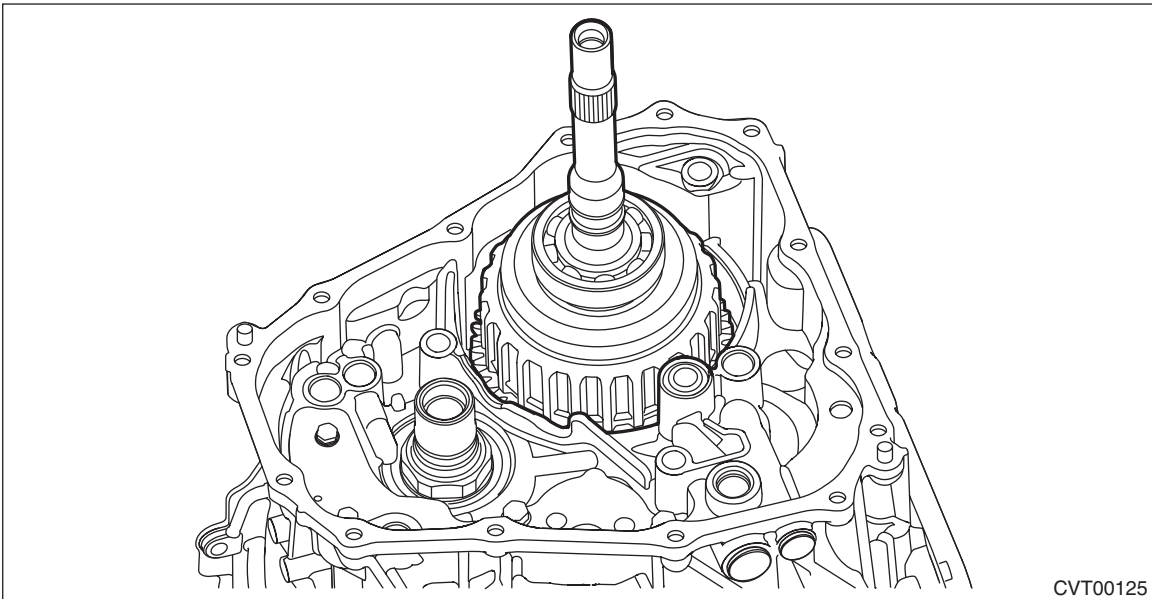
CONTINUOUSLY VARIABLE TRANSMISSION

13) Remove the output clutch assembly.



B: INSTALLATION

1) Install the output clutch assembly.



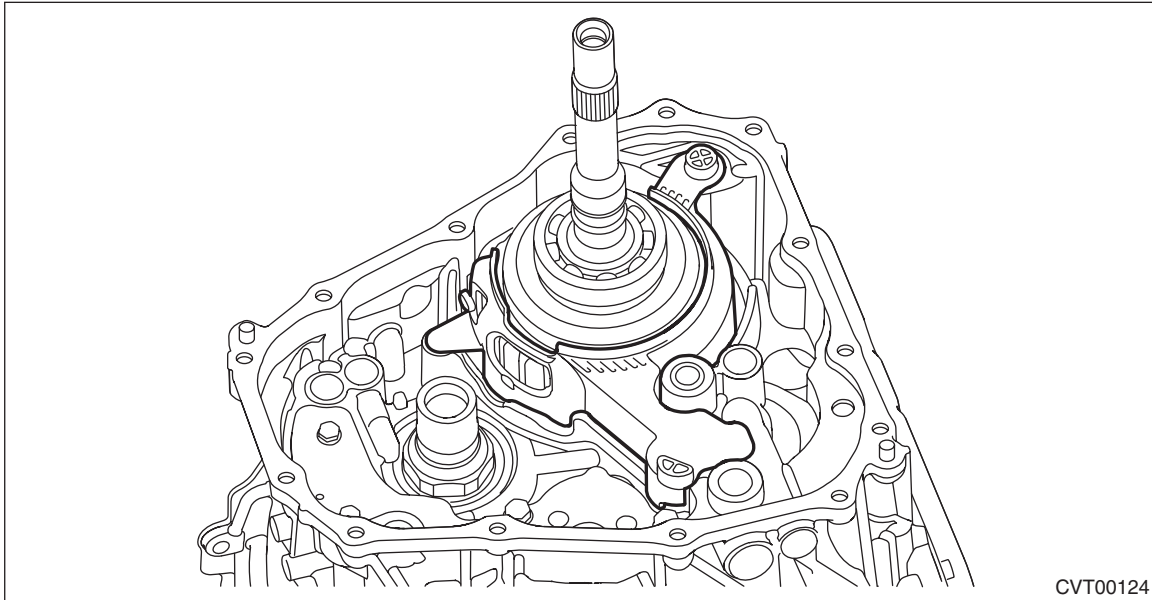
2) Select the reduction driven gear shim. <Ref. to CVT(TH58A)-243, ADJUSTMENT, Output Clutch Assembly.>

3) Attach the selected reduction driven gear shim to drive motor assembly with vaseline.

Output Clutch Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

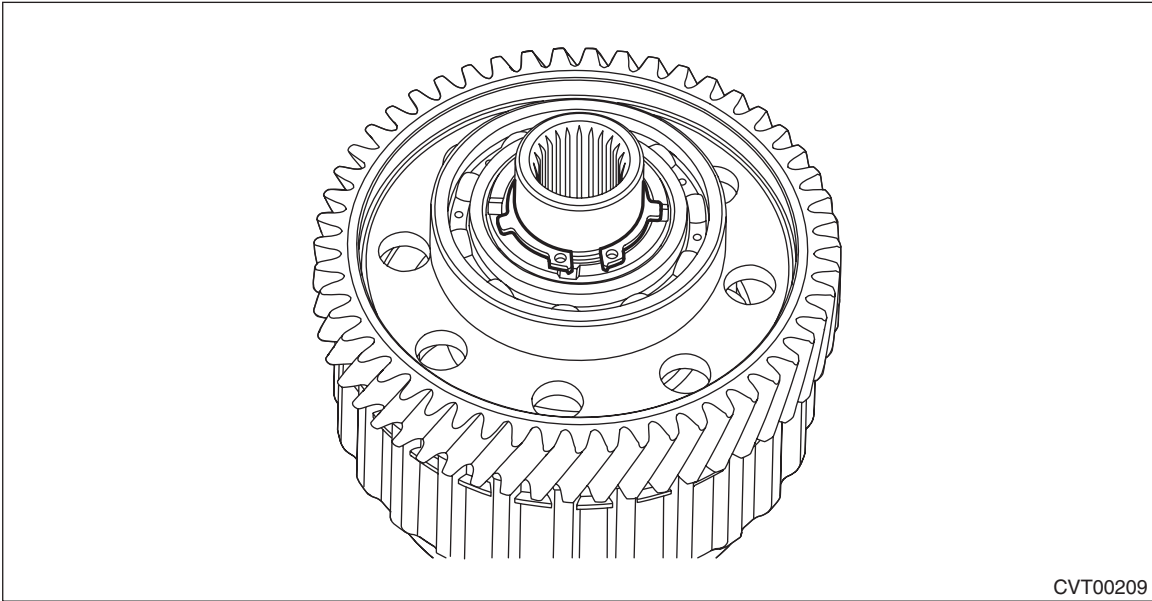
4) Install the oil baffle.



- 5) Install the front wheel speed sensor. <Ref. to CVT(TH58A)-108, REMOVAL, Front Wheel Speed Sensor.>
- 6) Install the drive motor assembly. <Ref. to CVT(TH58A)-221, INSTALLATION, Drive Motor Assembly.>
- 7) Install the transmission control device. <Ref. to CVT(TH58A)-213, INSTALLATION, Transmission Control Device.>
- 8) Install the parking pawl. <Ref. to CVT(TH58A)-208, INSTALLATION, Parking Pawl.>
- 9) Install the transfer drive gear. <Ref. to CVT(TH58A)-204, INSTALLATION, Transfer Drive Gear.>
- 10) Install the transfer driven gear assembly. <Ref. to CVT(TH58A)-201, INSTALLATION, Transfer Driven Gear.>
- 11) Install the extension case. <Ref. to CVT(TH58A)-183, INSTALLATION, Extension Case.>
- 12) Install the secondary pressure sensor harness connector, and then install the harness clip. <Ref. to CVT(TH58A)-151, INSTALLATION, Transmission Harness.>
- 13) Install the sensor cover. <Ref. to CVT(TH58A)-151, INSTALLATION, Transmission Harness.>
- 14) Install the transmission assembly to the vehicle. <Ref. to CVT(TH58A)-77, INSTALLATION, Automatic Transmission Assembly.>

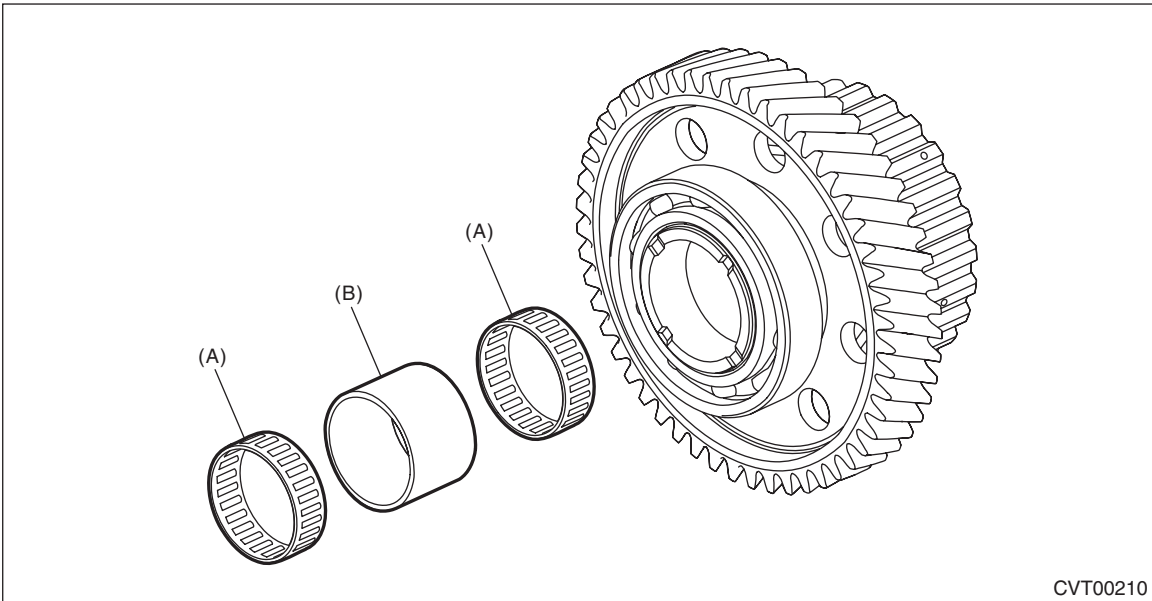
C: DISASSEMBLY

1) Remove the snap ring.



CVT00209

2) Remove the reduction driven gear assembly needle bearing and reduction driven gear bushing.



CVT00210

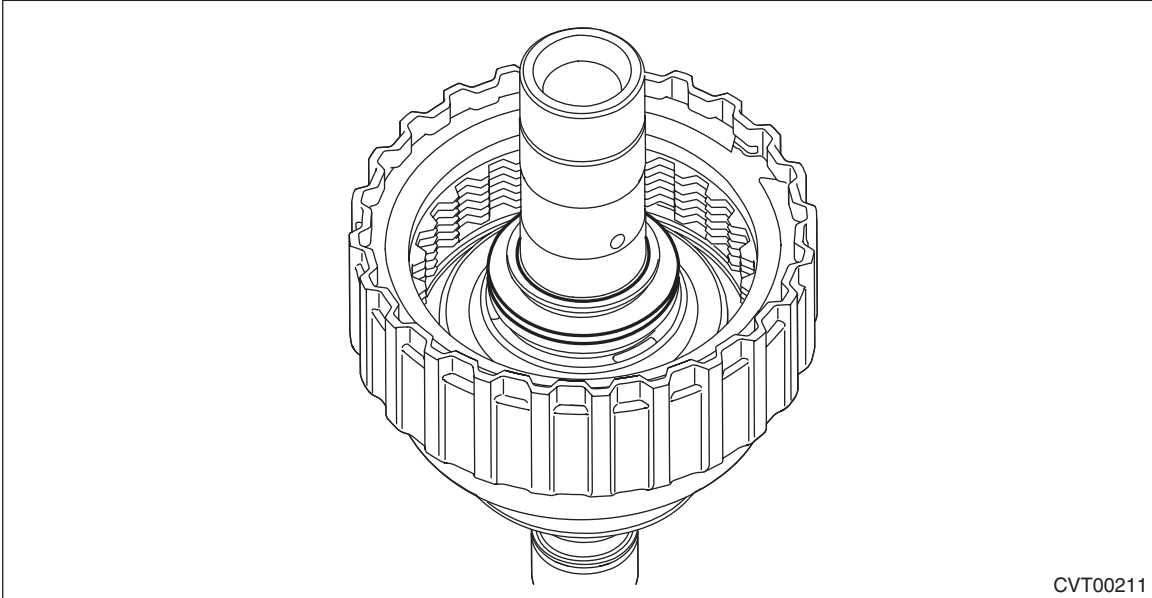
(A) Needle bearing

(B) Reduction driven gear bushing

Output Clutch Assembly

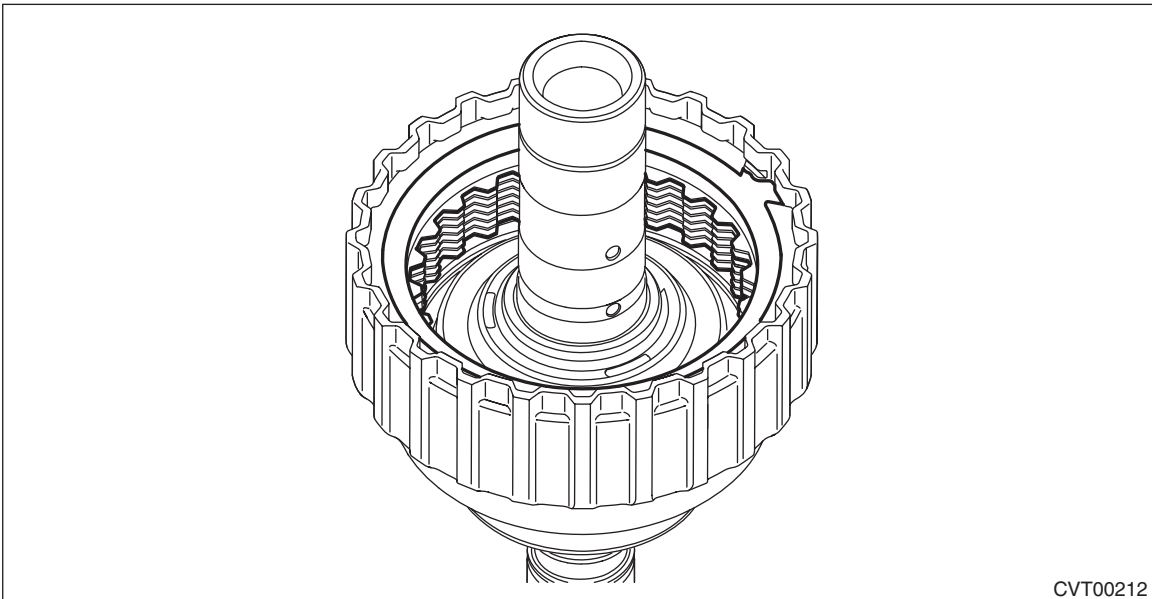
CONTINUOUSLY VARIABLE TRANSMISSION

3) Remove the thrust bearing and thrust washer.



4) Remove the snap ring.

5) Remove the retaining plate, drive plate, driven plate and dish plate.



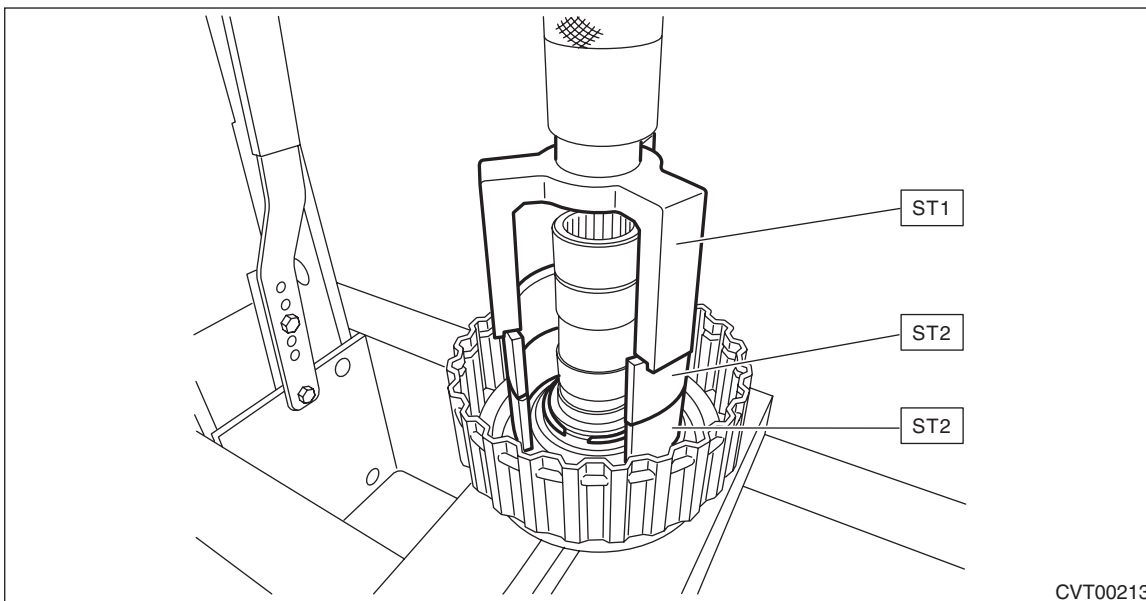
Output Clutch Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

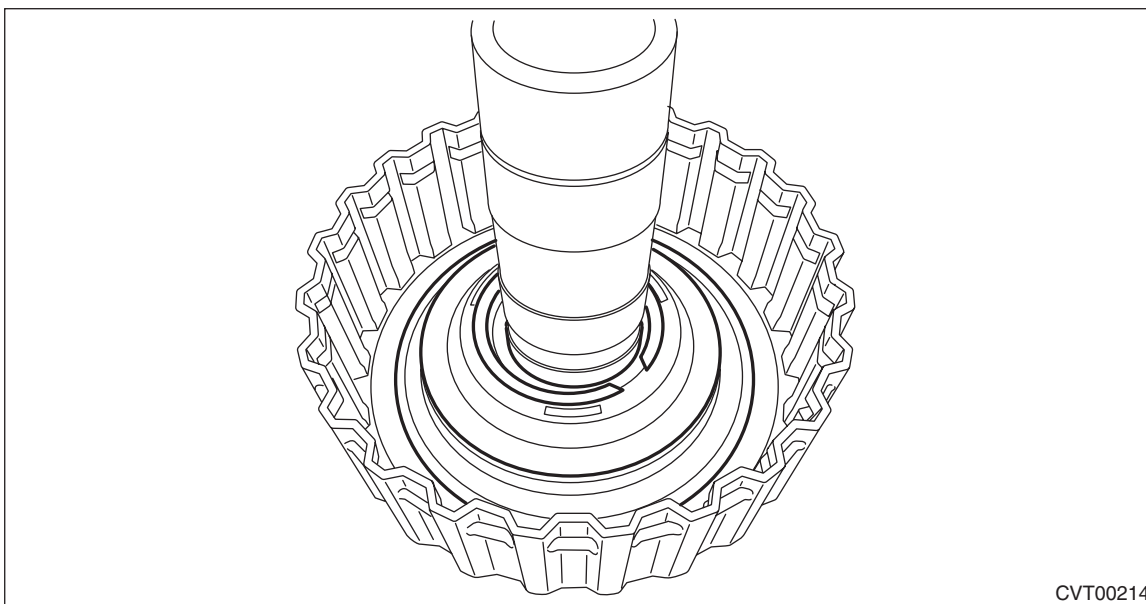
6) Compress the return spring using the ST to remove the snap ring.

ST1 18769AA010 COMPRESSOR SPECIAL TOOL

ST2 398673600 COMPRESSOR



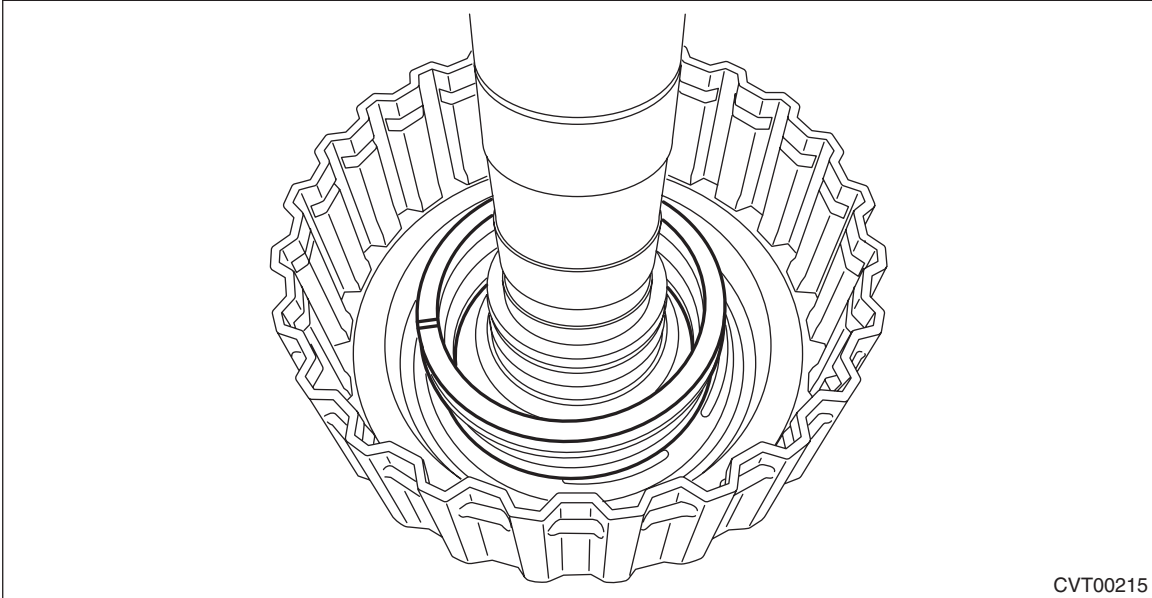
7) Remove the chamber COMPL and snap ring.



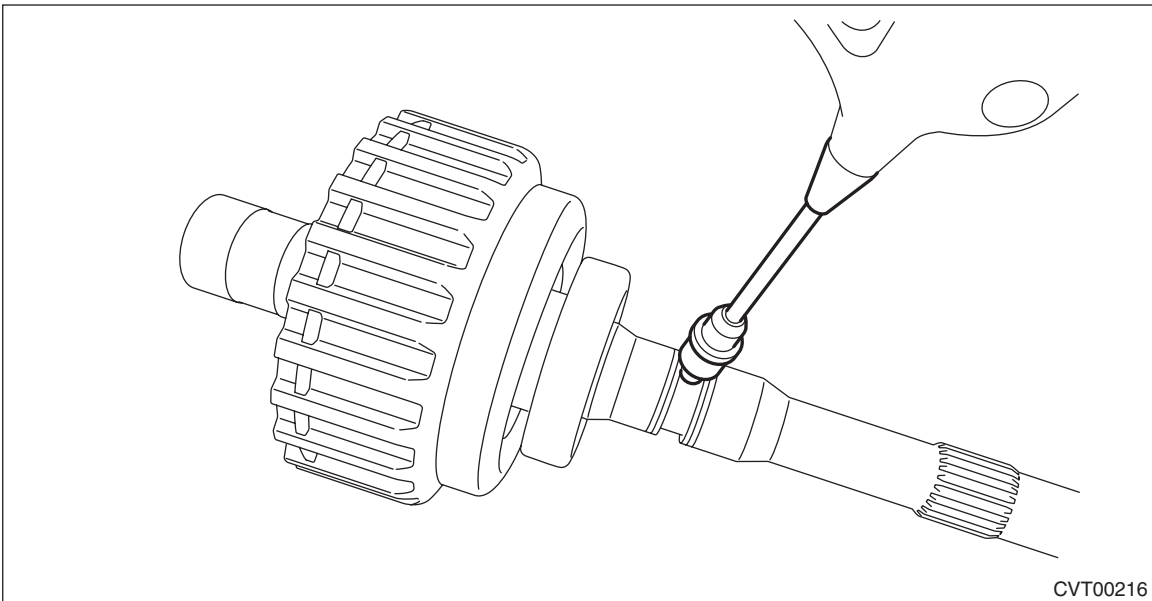
Output Clutch Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

8) Remove the return spring.



9) Remove the clutch piston by blowing compressed air intermittently from the shaft hole.



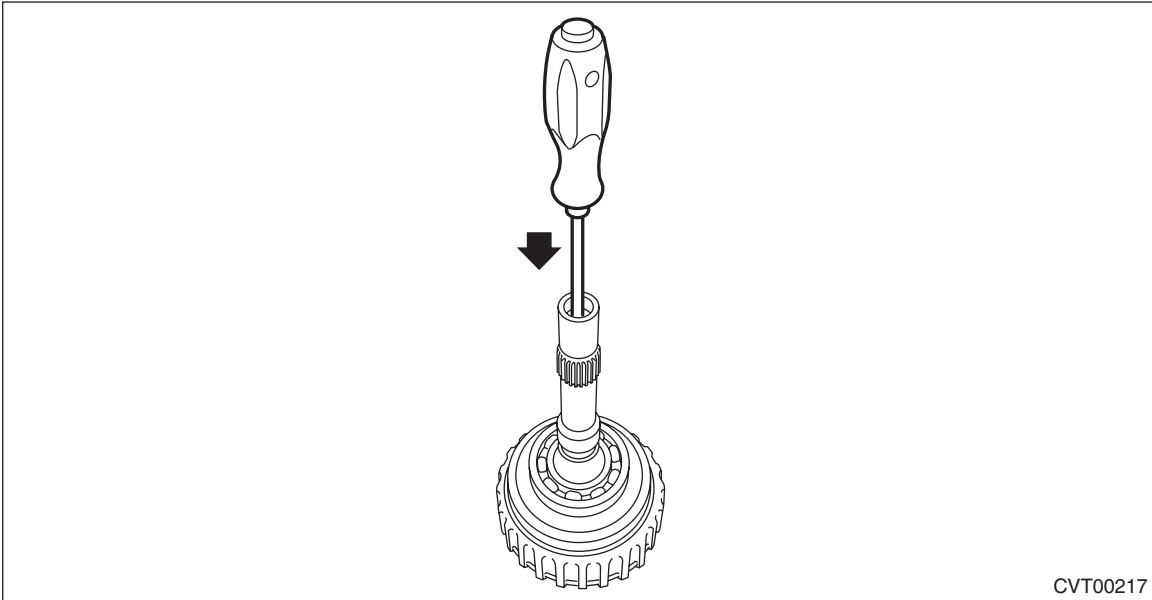
Output Clutch Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

10) Using a round bar with diameter of 5 mm (0.2 in), remove the oil pipe assembly.

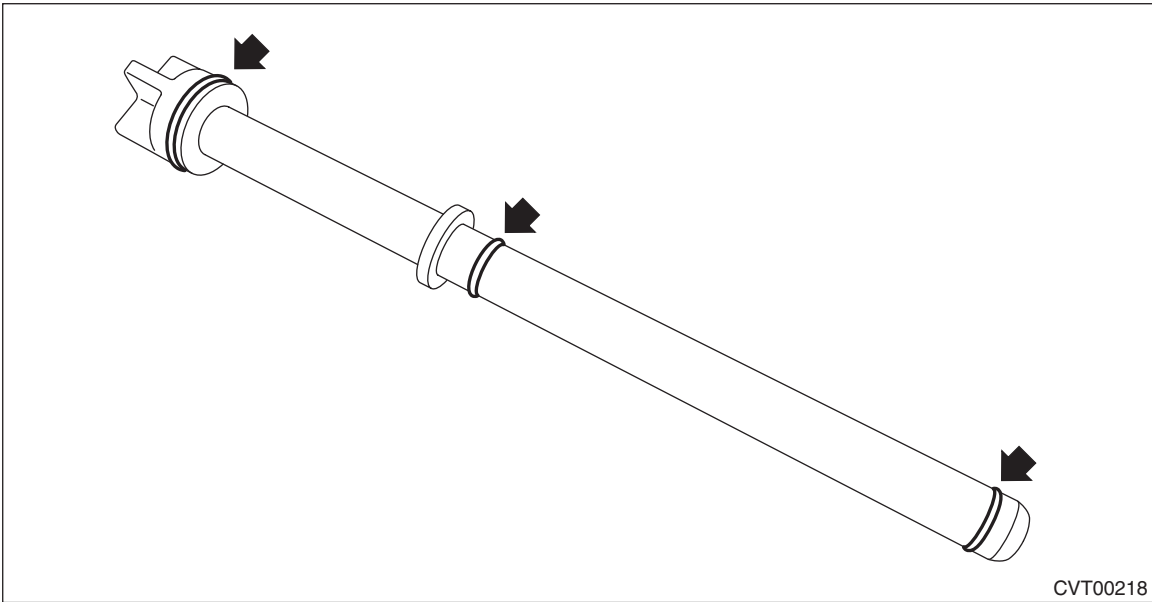
NOTE:

Apply vinyl tape to the tip of round bar.



CVT00217

11) Remove the O-ring from the oil pipe assembly.



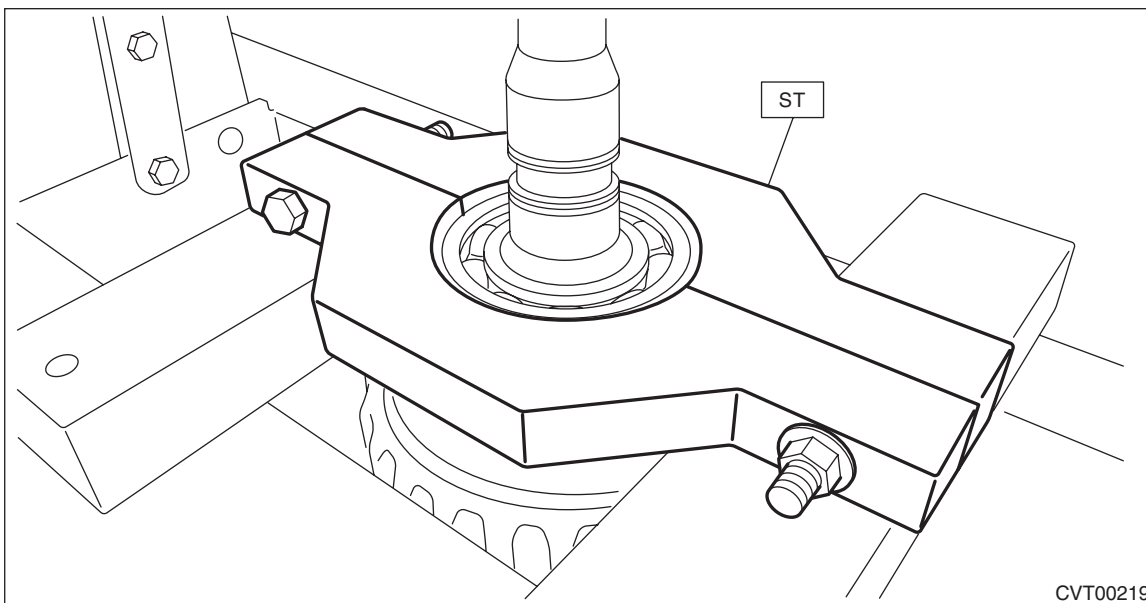
CVT00218

Output Clutch Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

12) Remove the ball bearing using ST.

ST 498077300 REMOVER



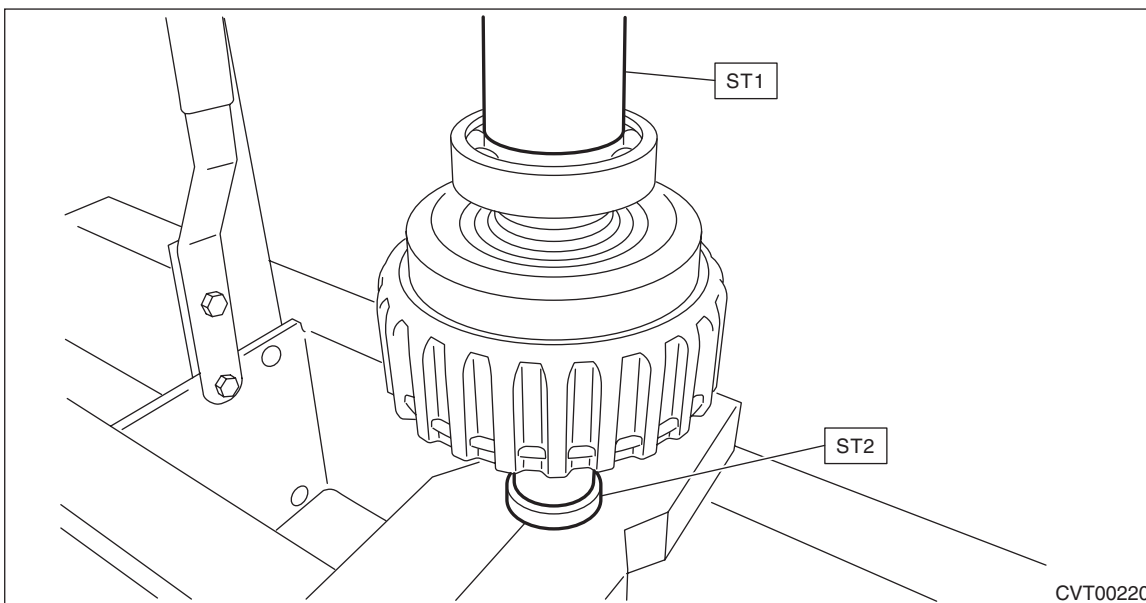
CVT00219

D: ASSEMBLY

1) Using the ST, install the ball bearing.

ST1 499277100 BUSHING 1-2 INSTALLER

ST2 398497701 SEAT



CVT00220

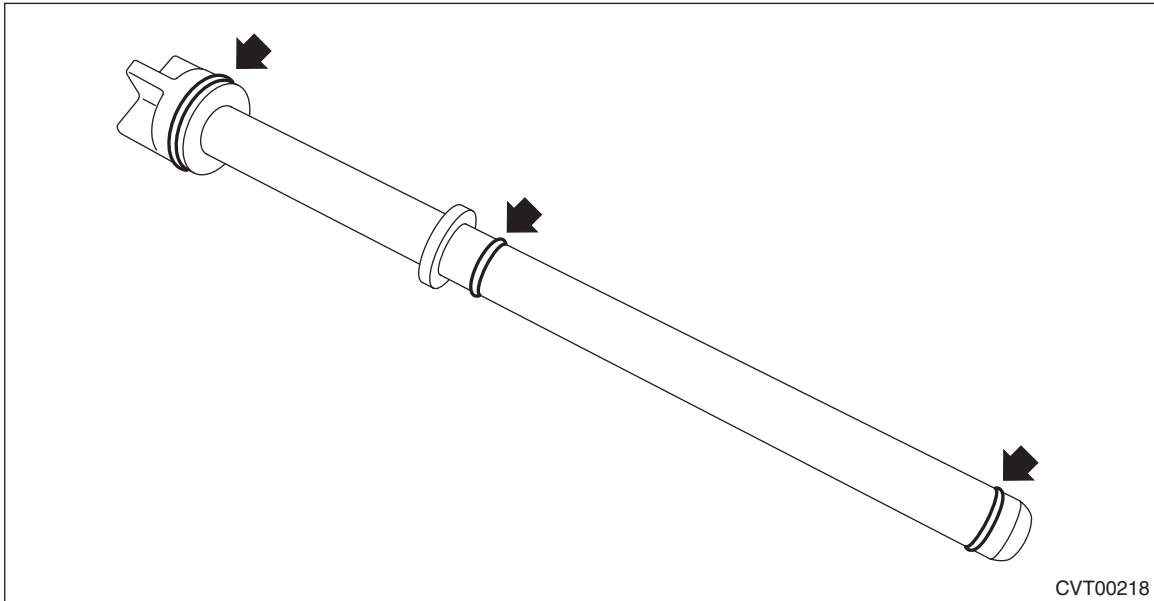
Output Clutch Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

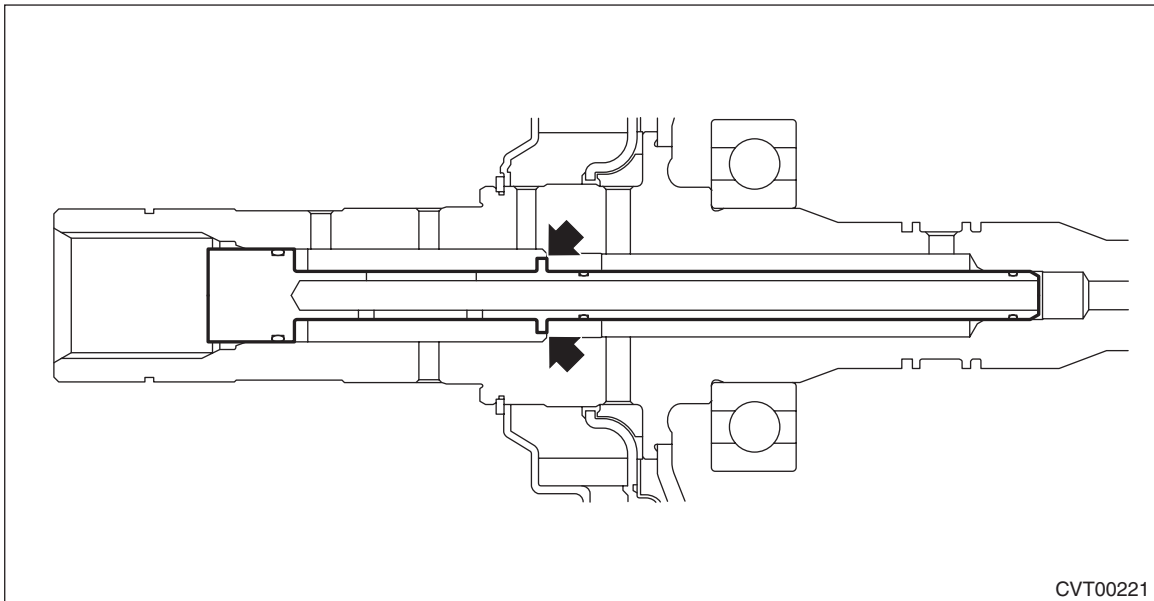
2) Install the O-ring to the oil pipe assembly.

NOTE:

- Use new O-rings.
- Apply CVTF to the O-ring.



3) Insert the oil pipe assembly into the shaft, and press into the end.



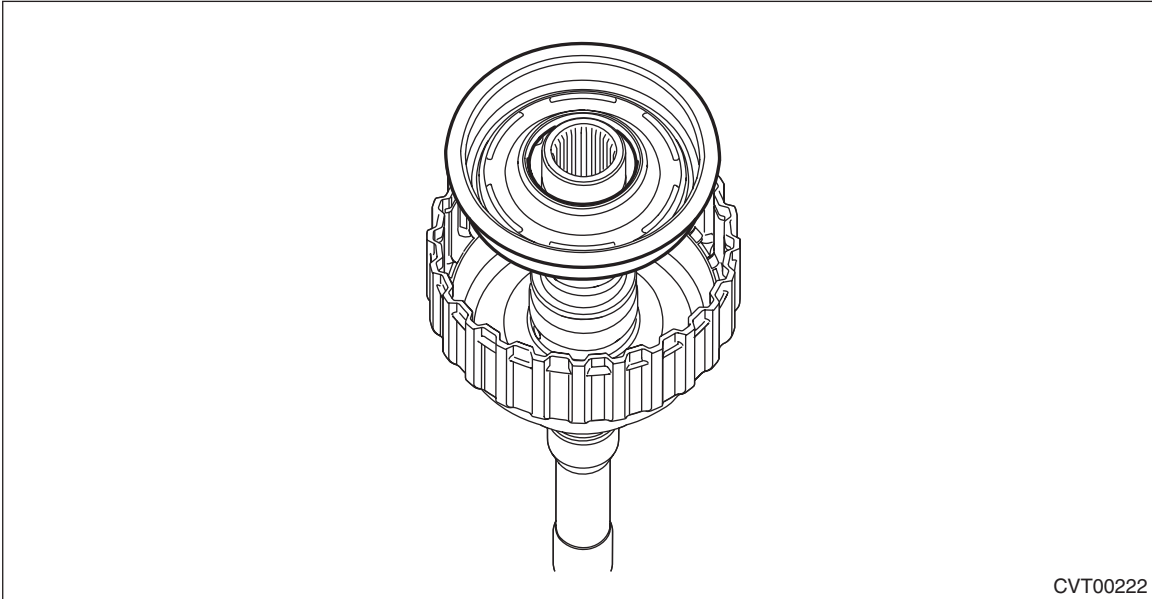
Output Clutch Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

4) Install the output clutch piston to the clutch drum.

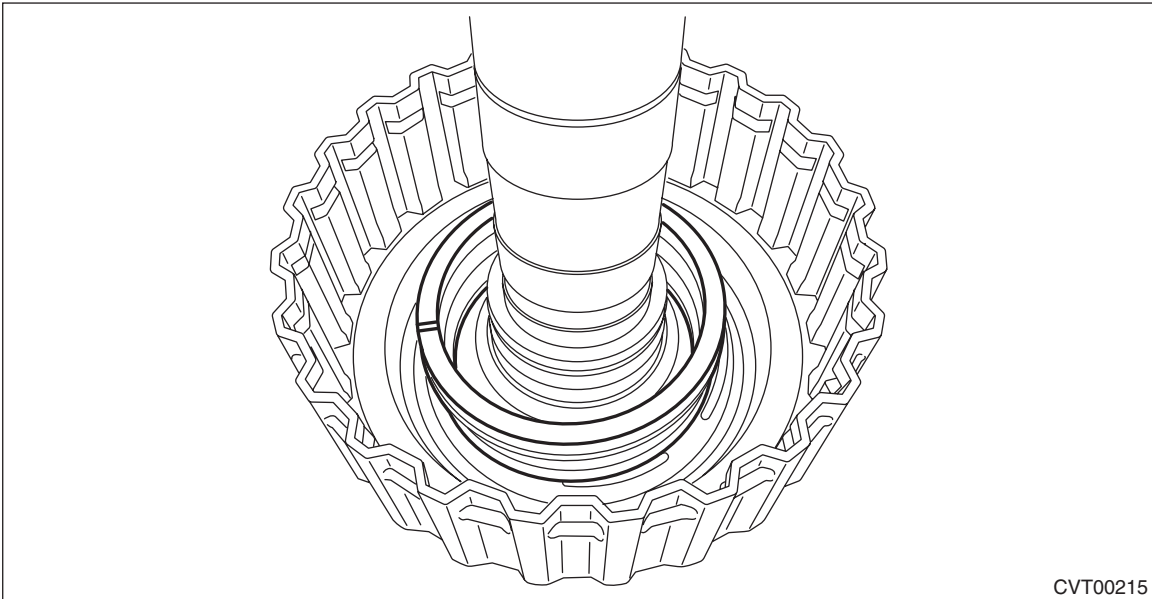
NOTE:

- Apply CVTF to the sealing area of the output clutch piston.
- Insert it all the way to the end.



CVT00222

5) Install the return spring.



CVT00215

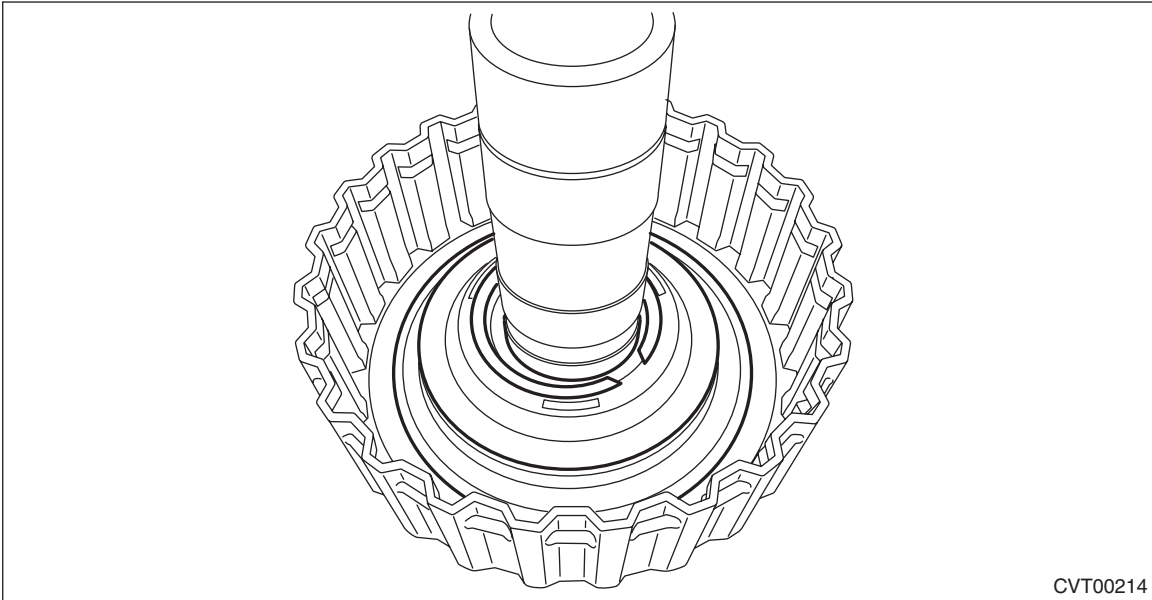
Output Clutch Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

6) Install the chamber COMPL and snap ring.

NOTE:

Apply CVTF to the sealing area of chamber COMPL.

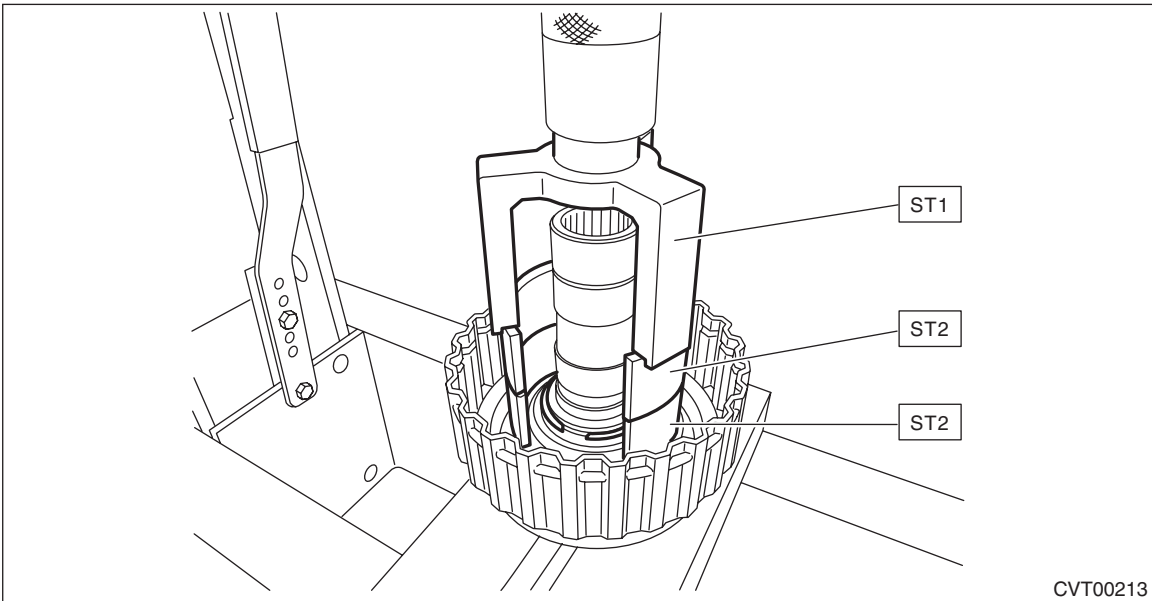


CVT00214

7) Compress the return spring using the ST to install the snap ring.

ST1 18769AA010 COMPRESSOR SPECIAL TOOL

ST2 398673600 COMPRESSOR

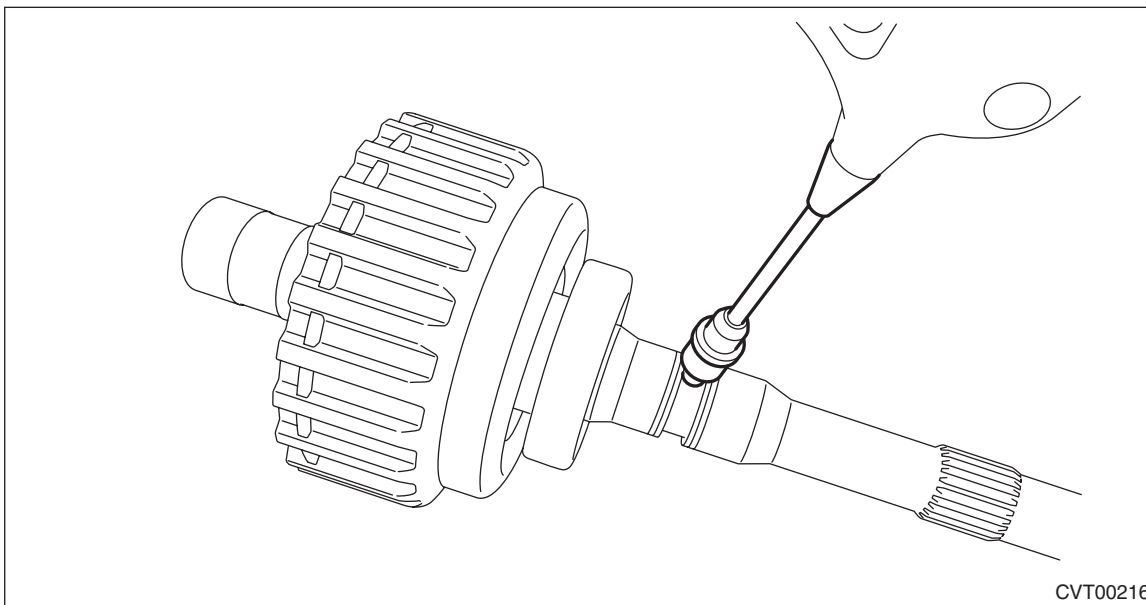


CVT00213

Output Clutch Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

8) Check the operation of clutch piston by blowing compressed air intermittently from the shaft hole.



9) Place the driven plate, drive plate and retaining plate neatly in this order on surface table.

10) Set the dial gauge to retaining plate, and read its scale.

NOTE:

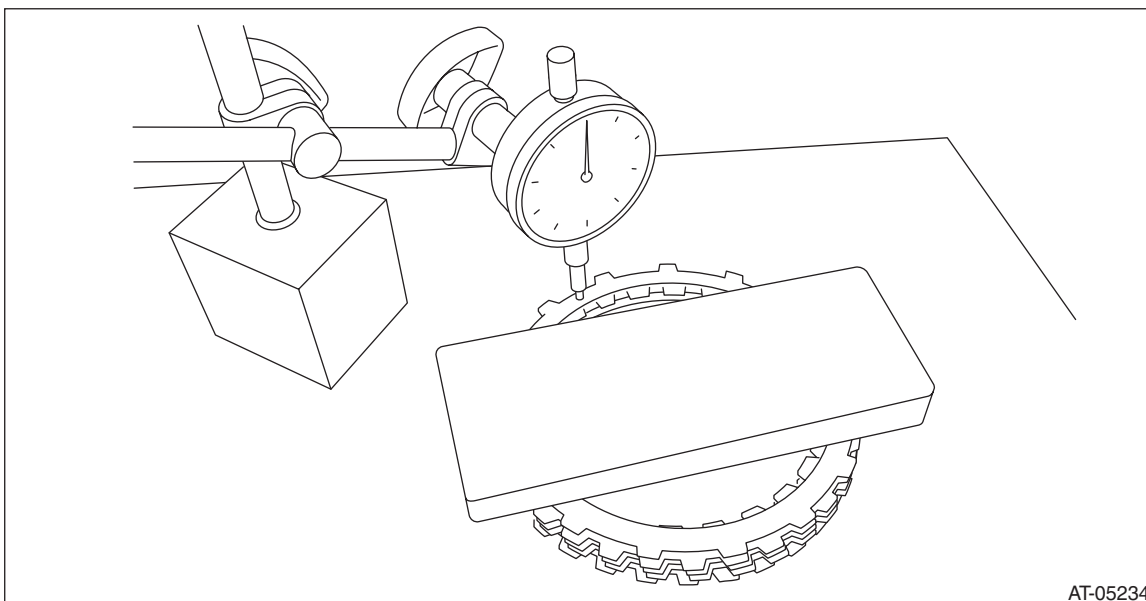
The value, which is read in the gauge at this time, is zero point.

11) Scale and record the weight “Z” of a flat board which will be put on retaining plate.

NOTE:

- Use a stiff board which does not bend against load as a flat board to be put on retaining plate.
- Use a flat board weighing less than 135 N (13.8 kgf, 30.4 lb).

12) Put the flat board on retaining plate.



13) Using the following formula, read the push/pull gauge, and calculate “N”.

$$N = 135 - 162 \text{ N (13.8 - 16.5 kgf, 30.4 - 36.4 lb)} - Z$$

135 — 162 N (13.8 — 16.5 kgf, 30.4 — 36.4 lb): Load on the clutch plate

Z: Flat board weight

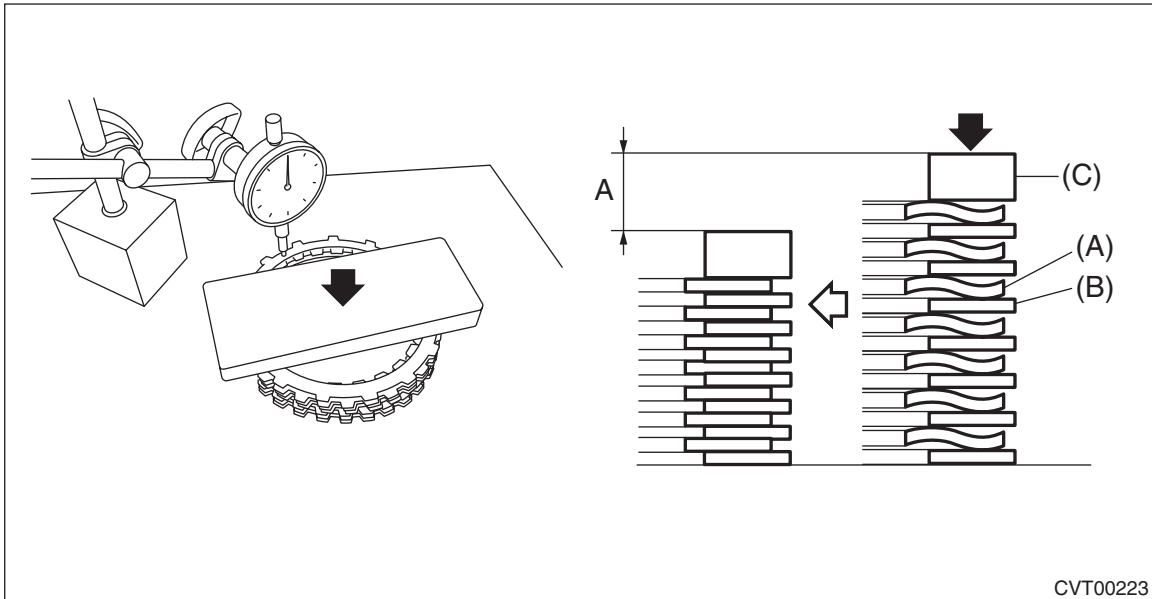
Output Clutch Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

14) Press the center of retaining plate by applying a force of “N” using push/pull gauge, and then measure and record the compression amount “A”.

NOTE:

Measure at four points with a 90° interval and calculate the average.

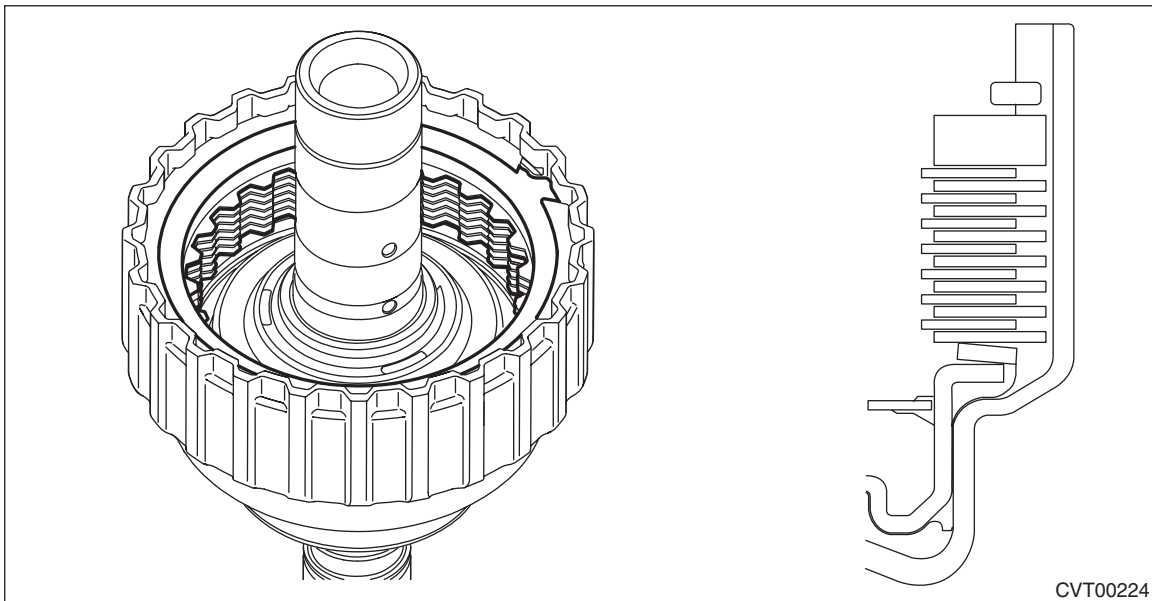


- (A) Drive plate
- (B) Driven plate
- (C) Retaining plate

15) Install the dish plate, drive plate, driven plate, retaining plate and snap ring to the driven shaft.

NOTE:

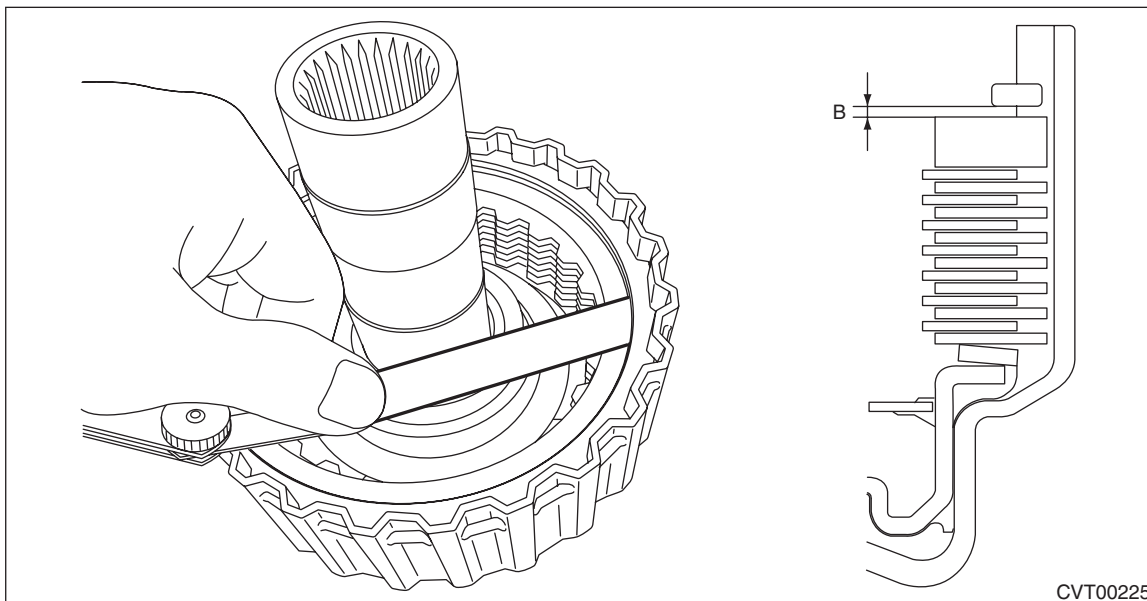
Install the dish plate in the correct direction.



Output Clutch Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

16) Measure and record the clearance “B” between the retaining plate and snap ring.



17) Piston stroke calculation

Calculate with A and B dimensions recorded before. If it exceeds the limit, replace with a new drive plate and adjust within the initial standard value.

$$S \text{ mm (in)} = A + B$$

S: Piston stroke

A: Amount of drive plate compression

B: Clearance between retaining plate and snap ring

Initial standard:

2.65 — 3.05 mm (0.104 — 0.12 in)

Limit thickness:

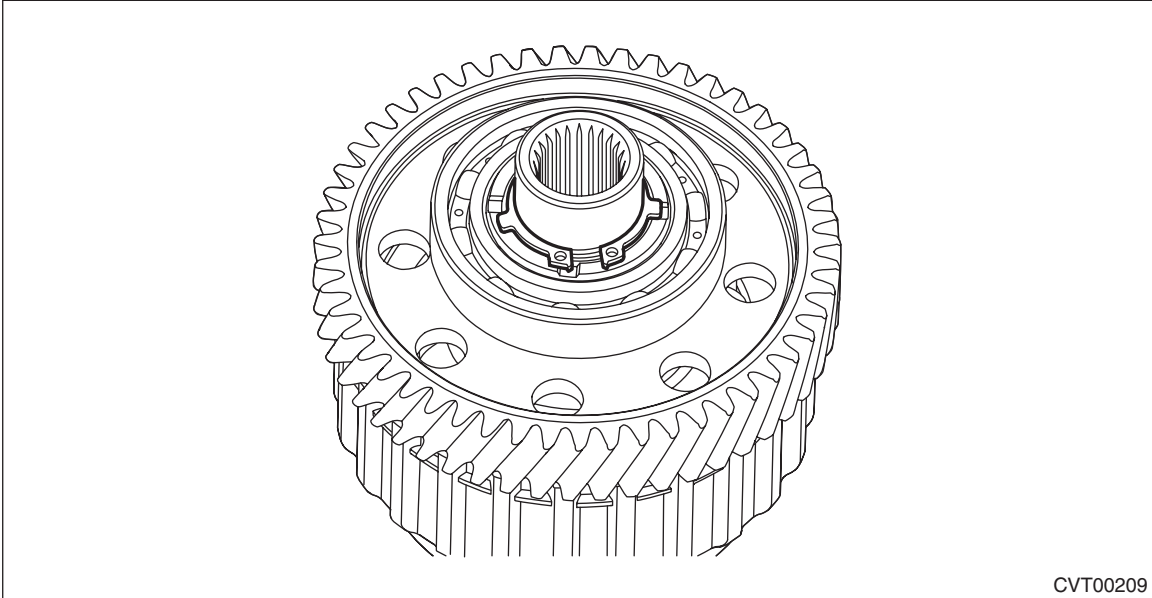
4.05 mm (0.159 in)

Retaining plate	
Part No.	Thickness mm (in)
31567AB840	5.3 (0.209)
31567AB850	5.5 (0.217)
31567AB860	5.7 (0.224)
31567AB870	5.9 (0.232)
31567AB880	6.1 (0.240)

18) Install the snap ring to the reduction driven gear assembly.

19) Install the reduction driven gear assembly, needle bearing and reduction driven gear bushing to the output clutch assembly.

20) Install the snap ring.



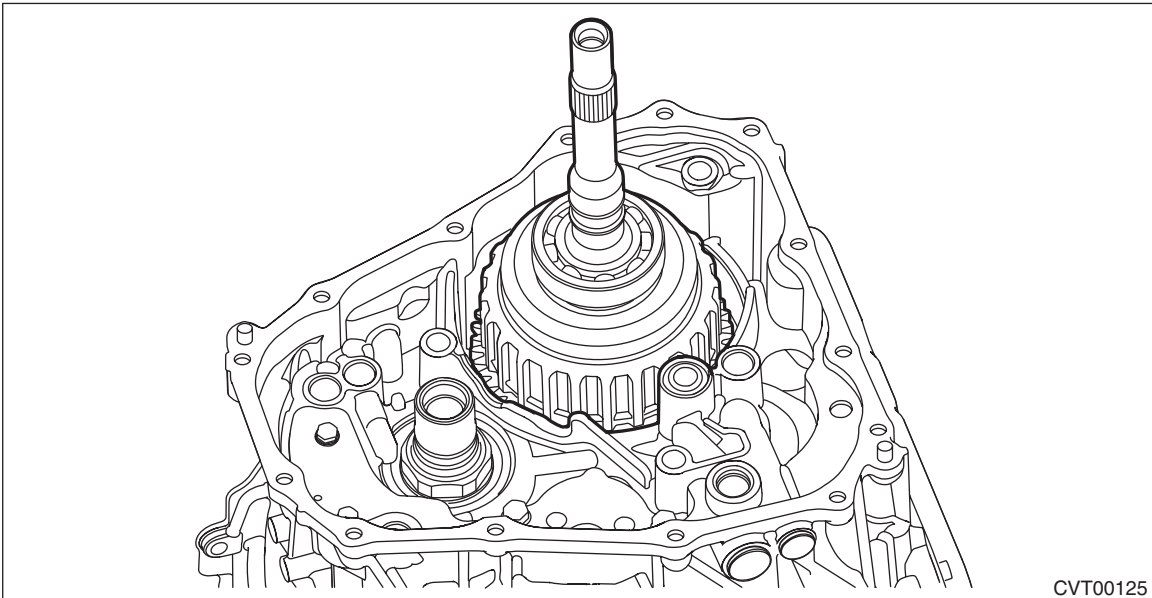
CVT00209

E: INSPECTION

- Inspect the drive plate facing for wear and damage.
- Check the driven plate for discoloration (burnt color).
- Check for worn snap ring, fatigue or damaged return spring or deformed spring retainer.
- Make sure the clearance between retaining plate and snap ring of output clutch is within the limit. If it exceeds the limit, replace with a new drive plate and select and adjust the retaining plate within the initial standard value. <Ref. to CVT(TH58A)-236, ASSEMBLY, Output Clutch Assembly.>

F: ADJUSTMENT

1) Install the output clutch assembly.



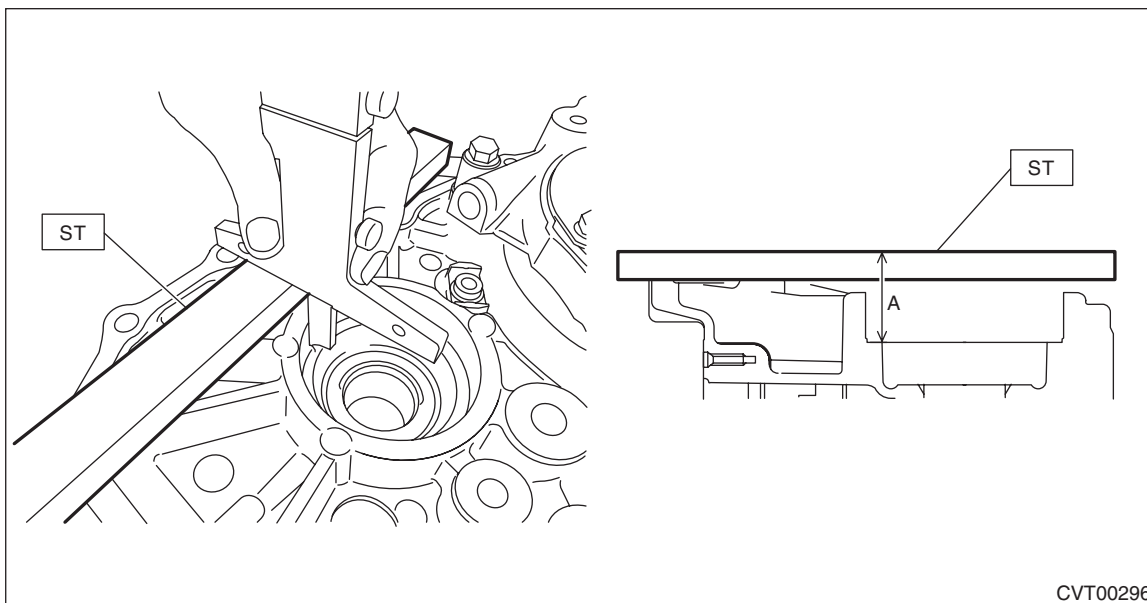
CVT00125

Output Clutch Assembly

CONTINUOUSLY VARIABLE TRANSMISSION

2) Measure the height "A" from the ST upper face to the ball bearing catch surface.

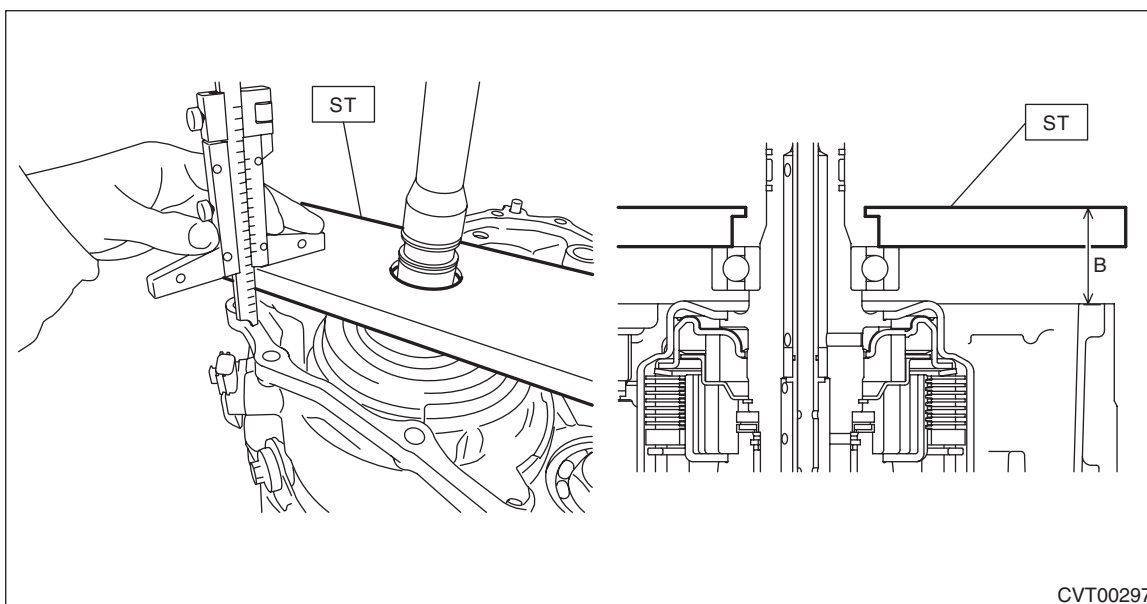
ST 499575400 GAUGE



CVT00296

3) Measure the height "B" from the ST to the mating surface of the transmission case.

ST 499575600 GAUGE



CVT00297

4) Obtain the thickness of reduction driven gear shim using the following formula to select zero to three reduction driven gear shims.

$$T \text{ (mm)} = A - B - (0.05 - 0.25)$$

$$[T \text{ (in)} = A - B - (0.002 - 0.01)]$$

T: Shim thickness

A: Height from the ST upper face to the ball bearing catch surface

B: Height from ST to transmission case mating surface

0.05 — 0.25 mm (0.002 — 0.01 in): Clearance

Reduction driven gear shim	
Part No.	Thickness mm (in)
33279AA090	0.3 (0.012)
33279AA100	0.4 (0.016)
33279AA110	0.5 (0.020)