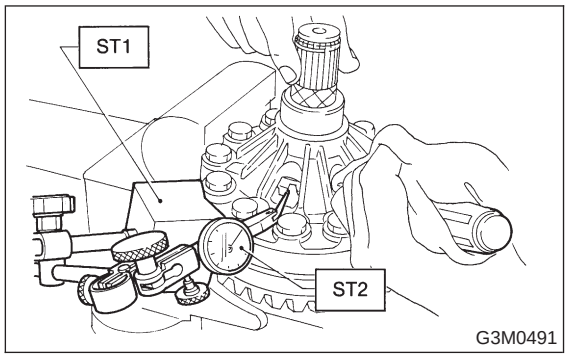
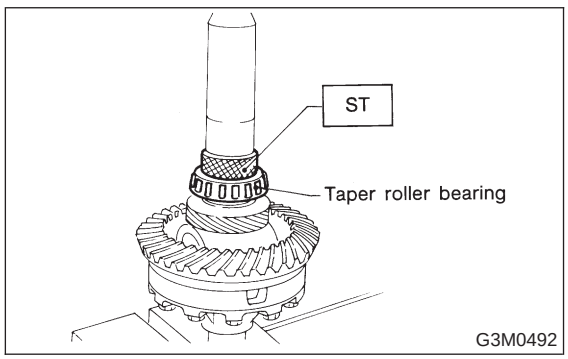
4) Measurement of backlash (Selection of washer)
Measure the gear backlash with ST1 and ST2, and insert ST2 through the access window of the case.
ST1 498247001 MAGNET BASE
ST2 498247100 DIAL GAUGE

NOTE:
Measure the backlash by applying a pinion tooth between two bevel gear teeth.

Standard value:
0.13 — 0.18 mm (0.0051 — 0.0071 in)



5) Using ST, install taper roller bearing.
ST 398487700 DRIFT

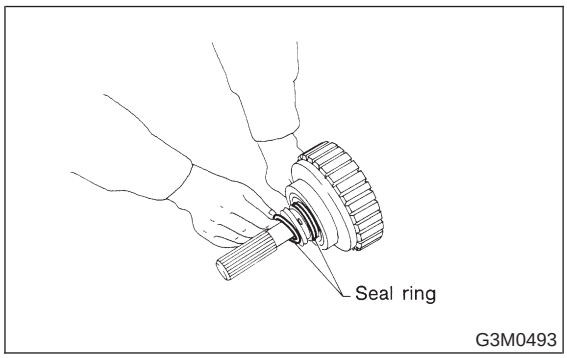


20. Transfer Clutch

A: DISASSEMBLY

1) Remove the seal ring.

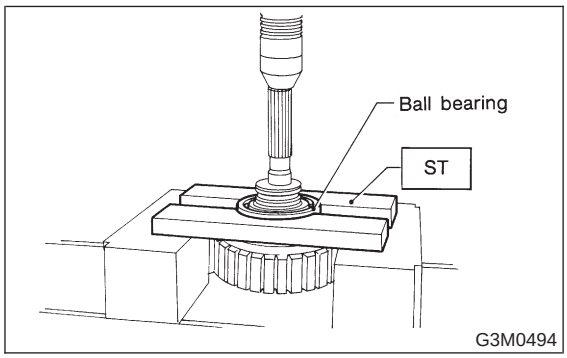
CAUTION:
Be careful not to damage the seal ring.



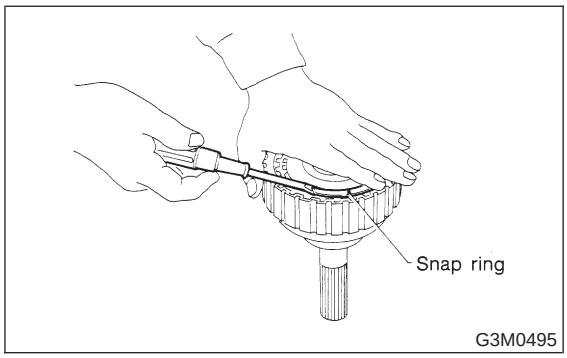
2) Using a press and ST, remove the ball bearing.

CAUTION:
Do not reuse the bearing.

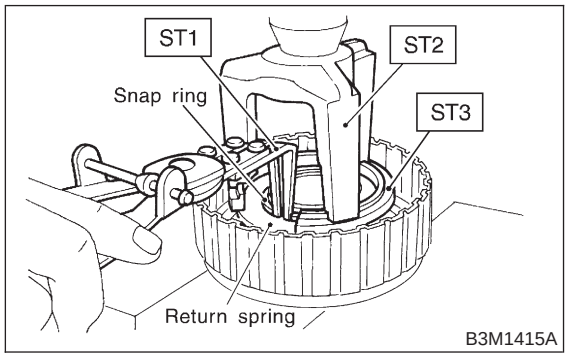
ST 498077600 REMOVER



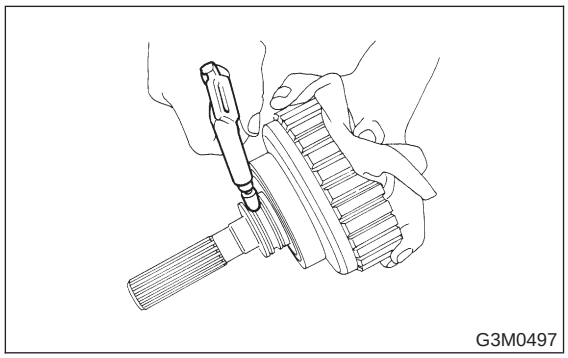
3) Remove the snap ring, and take out the pressure plate, drive plates, and driven plates.



4) Remove the snap ring with ST1, ST2 and ST3, and take out the return spring and transfer clutch piston seal.
ST1 399893600 PLIERS
ST2 398673600 COMPRESSOR
ST3 398623600 SEAT



5) Apply compressed air to the rear drive shaft to remove the piston.

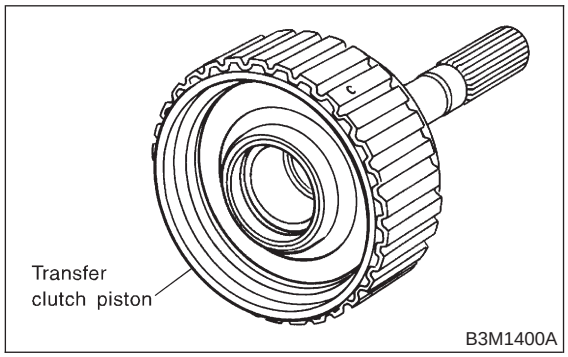


B: INSPECTION

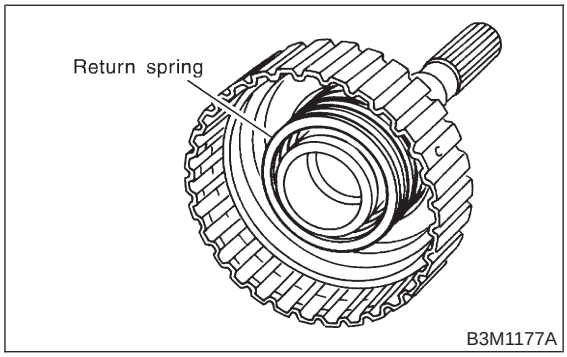
1) Check the drive plate facing for wear and damage.
2) Check the snap ring for wear, return spring for permanent set and breakage, and return spring for deformation.
3) Check the lathe cut ring for damage.

C: ASSEMBLY

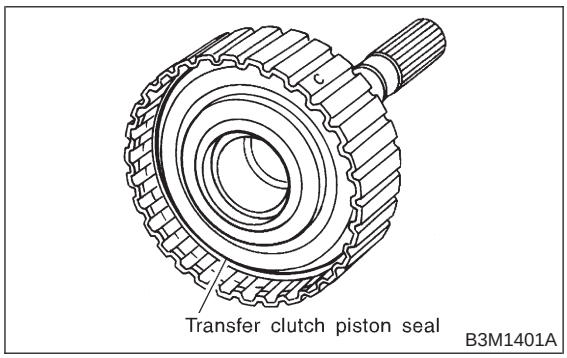
1) Install the transfer clutch piston.



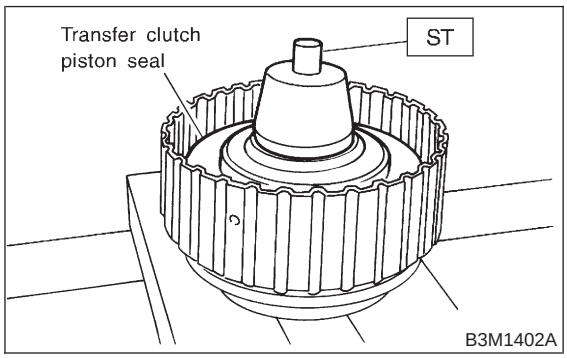
2) Install return spring to transfer piston.



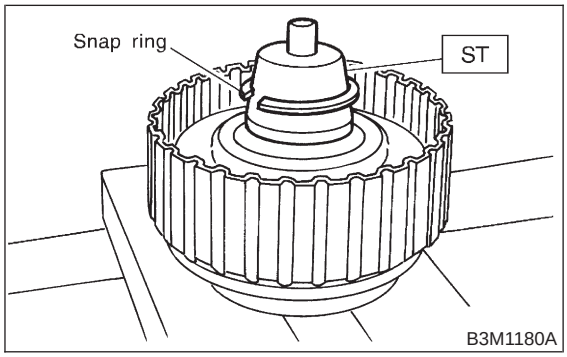
3) Install transfer clutch piston seal.



4) Install ST to rear drive shaft.
ST 499257300 SNAP RING OUTER GUIDE



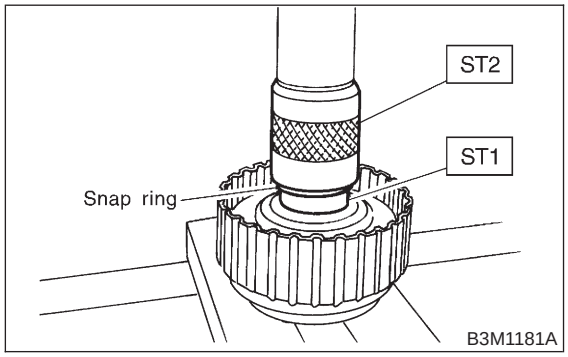
5) Install snap ring to ST.
ST 499257300 SNAP RING OUTER GUIDE



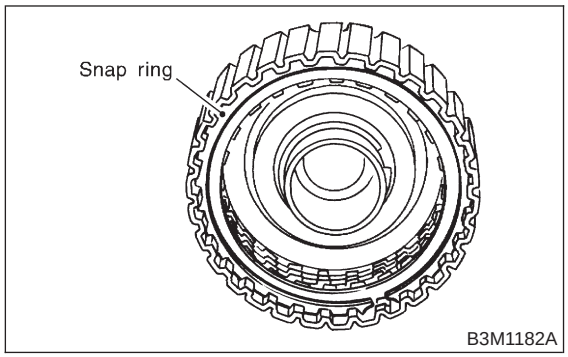
6) Using ST1 and ST2, install snap ring to rear drive shaft.

NOTE:
After installing snap ring, remove ST1 and ST2.

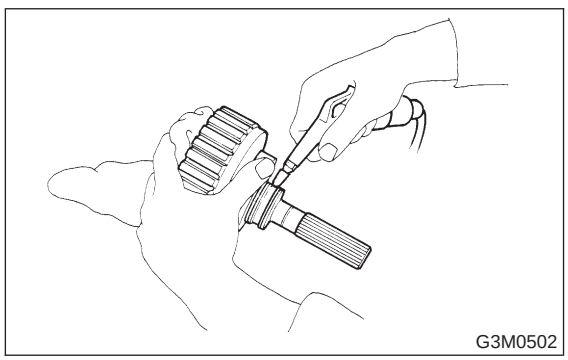
ST1 499257300 SNAP RING OUTER GUIDE
ST2 499247400 INSTALLER



7) Install the driven plates, drive plates, pressure plate and snap ring.



8) Apply compressed air to see if the assembled parts move smoothly.



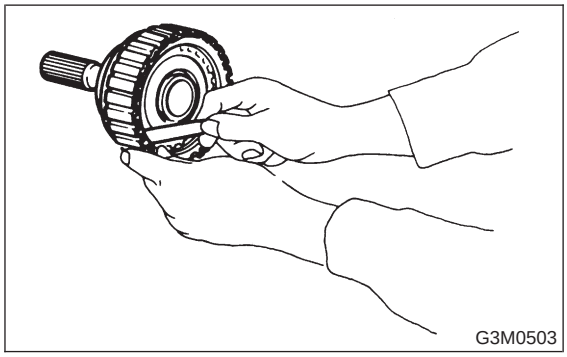
9) Check the clearance.

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

If the clearance is not within the specified range, select a proper pressure plate.

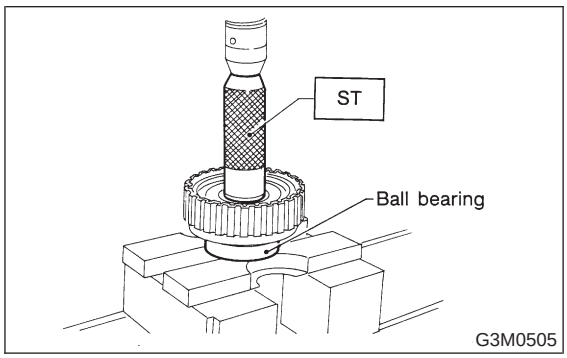
Standard value:
0.2 — 0.6 mm (0.008 — 0.024 in)

Allowable limit:
1.6 mm (0.063 in)



Available pressure plates	
Part No.	Thickness mm (in)
31593AA151	3.3 (0.130)
31593AA161	3.7 (0.146)
31593AA171	4.1 (0.161)
31593AA181	4.5 (0.177)

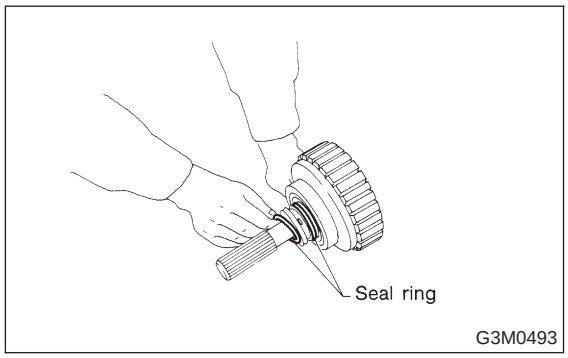
10) Press-fit the ball bearing with ST.
ST 899580100 INSTALLER



11) Coat the seal ring with vaseline, and install it in the seal ring groove of the shaft.

CAUTION:
Do not expand the seal ring excessively when installing.

ST 899580100 INSTALLER

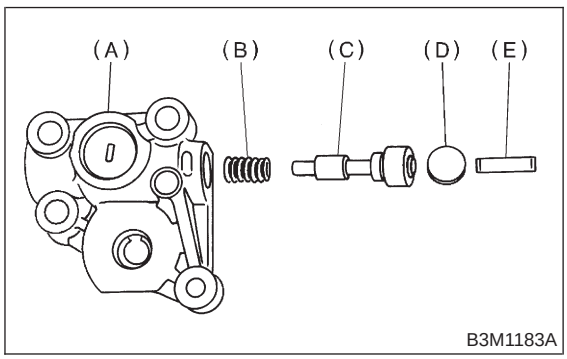


21. Transfer Valve Body

A: DISASSEMBLY

1) Separate duty solenoid C (transfer) and transfer valve body.
2) Remove the stopper plate and pry out the plug with a screwdriver. Then extract the spring and transfer control valve together.

CAUTION:
Be careful not to damage the valve and valve body.



(A) Transfer valve body
(B) Return spring
(C) Transfer control valve
(D) Plug
(E) Stopper plate

B: INSPECTION

Check each component for harmful cuts, damage, or other faults.

C: ASSEMBLY

To assemble, reverse the removal sequence.

NOTE:
Make sure the valve slides smoothly after assembling.