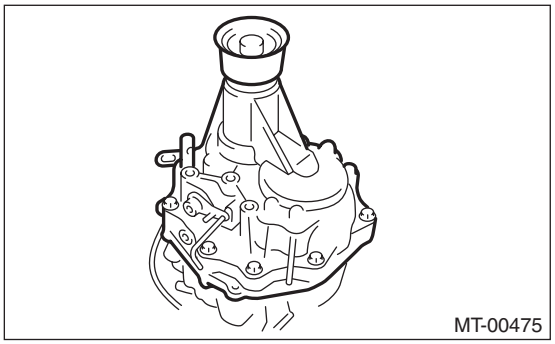
13.Extension Case

A: REMOVAL

1) Remove the manual transmission assembly from the vehicle. <Ref. to 6MT(TY85)-31, REMOVAL, Manual Transmission Assembly.>
2) Prepare the transmission for overhaul. <Ref. to 6MT(TY85)-38, Preparation for Overhaul.>
3) Remove the extension case.


MT-00475

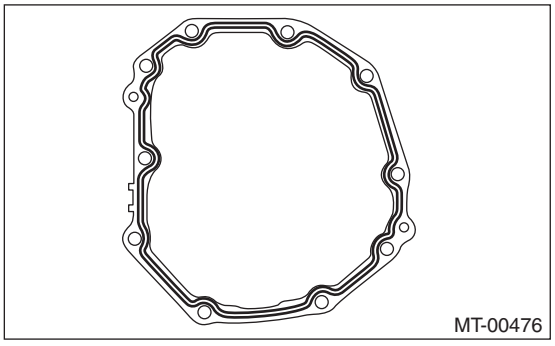
4) Remove any remaining liquid gasket from the extension case and transmission case.

B: INSTALLATION

1) Select the adjusting washer of the transfer driven gear, and attach it to the extension case. <Ref. to 6MT(TY85)-44, ADJUSTMENT, Extension Case.>
2) Install the taper roller bearing (extension case side) outer race to the extension case.

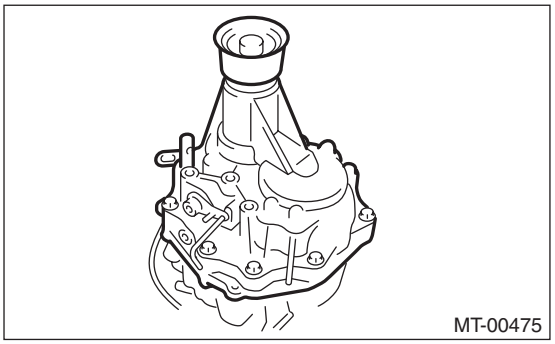
CAUTION:
Apply transmission gear oil onto sliding or revolving surfaces before installation.
3) Select the adjusting washer of the transfer drive gear, and attach it to the center differential.
4) Apply liquid gasket to the transmission case.

Liquid gasket:
THREE BOND 1215B or equivalent

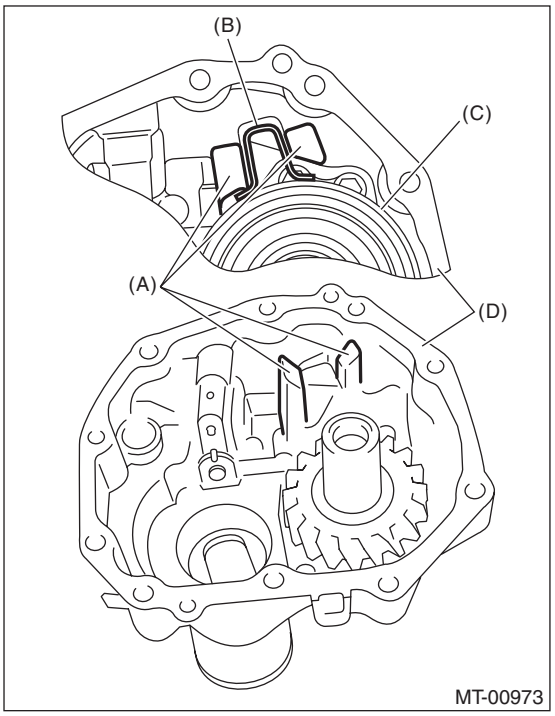

MT-00476

5) Install the extension case.

Tightening torque:
48 N·m (4.9 kgf-m, 35.4 ft-lb)


MT-00475

NOTE:
Insert the stopper section of the center differential between the oil guide.



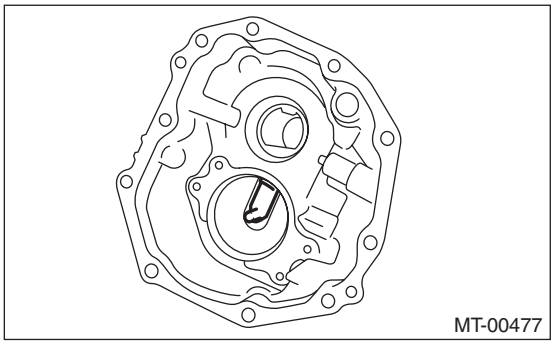
MT-00973

(A) Oil guide
(B) Stopper
(C) Center differential
(D) Extension case

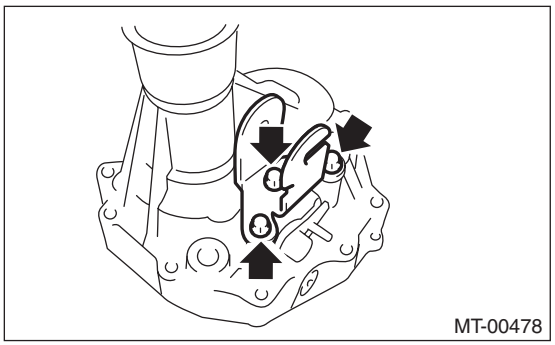
6) Install the manual transmission assembly to the vehicle. <Ref. to 6MT(TY85)-33, INSTALLATION, Manual Transmission Assembly.>

C: DISASSEMBLY

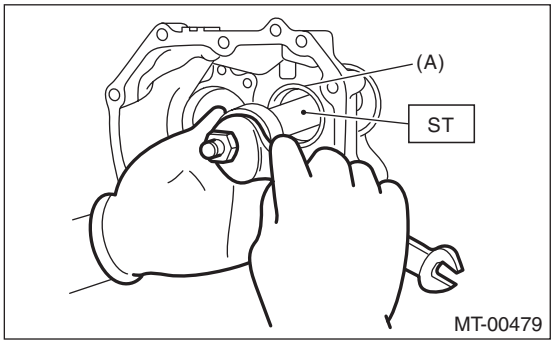
1) Remove the transfer drive gear. <Ref. to 6MT(TY85)-52, REMOVAL, Transfer Drive Gear.>
2) Remove the oil guide.



3) Remove the shift bracket.

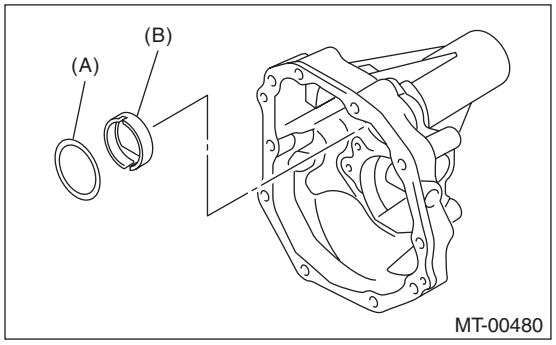


4) Using the ST, remove the taper roller bearing (extension case side) outer race.
ST 18758AA000 PULLER



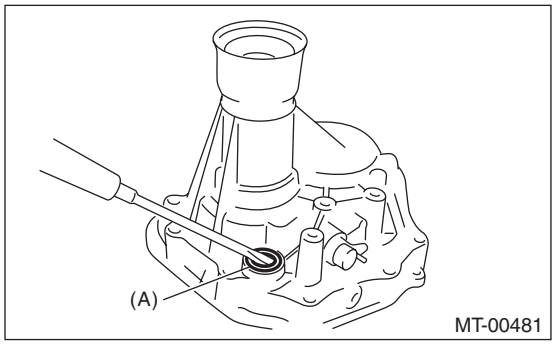
(A) Taper roller bearing (extension case side) outer race

5) Remove the adjusting washer and oil plate.



(A) Adjusting washer
(B) Oil plate

6) Remove the shifter arm oil seal.

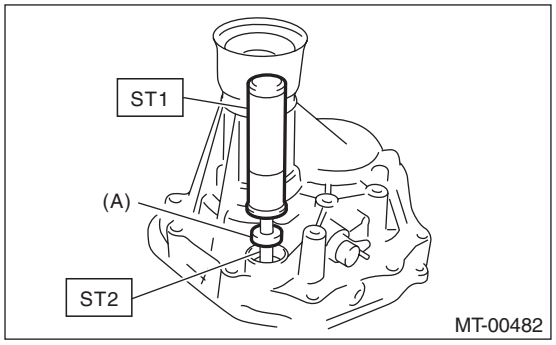


(A) Oil seal

7) Remove the reverse check system. <Ref. to 6MT(TY85)-49, REMOVAL, Reverse Check System.>
8) Remove the extension oil seal. <Ref. to 6MT(TY85)-27, REPLACEMENT, Oil Seal.>

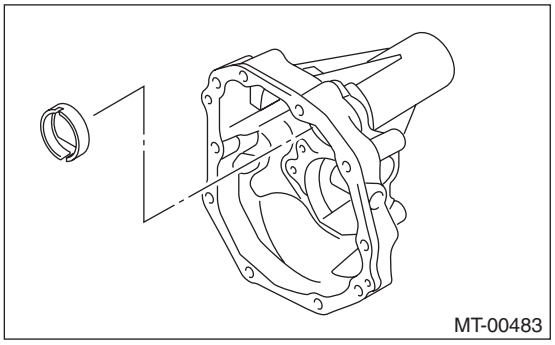
D: ASSEMBLY

1) Install the reverse check system. <Ref. to 6MT(TY85)-50, INSTALLATION, Reverse Check System.>
2) Install the extension case oil seal. <Ref. to 6MT(TY85)-27, REPLACEMENT, Oil Seal.>
3) Using the ST, install the shifter arm shaft oil seal.
ST1 18657AA000 INSTALLER
ST2 18671AA000 OIL SEAL GUIDE



(A) Oil seal

4) Install the oil plate.

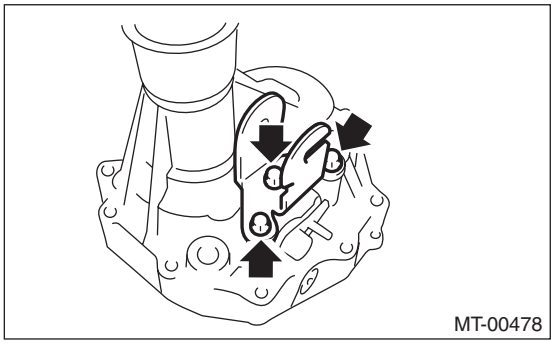


5) Select the adjusting washer of the bearing, and attach it to the extension case. <Ref. to 6MT(TY85)-44, ADJUSTMENT, Extension Case.>
6) Install the taper roller bearing (extension case side) outer race to the extension case.

CAUTION:
Apply transmission gear oil onto sliding or revolving surfaces before installation.

7) Install the shift bracket.

Tightening torque:
25 N·m (2.5 kgf-m, 18.4 ft-lb)



8) Attach the oil guide and the transfer driven gear. <Ref. to 6MT(TY85)-52, INSTALLATION, Transfer Drive Gear.>

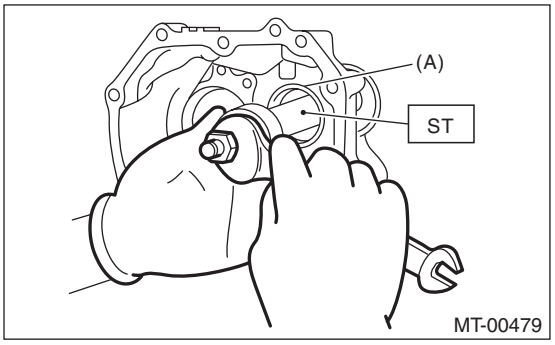
E: INSPECTION

1) Check to make sure there is no damage or cracks on the extension case. If damage or cracking is found, replace the extension case.
2) Inspect for oil leaks at the extension case and transmission case oil seals and mating surfaces. If there are oil leaks, replace the oil seal and liquid gasket.

F: ADJUSTMENT

1. TRANSFER DRIVEN GEAR BEARING ADJUSTING WASHER ADJUSTMENT

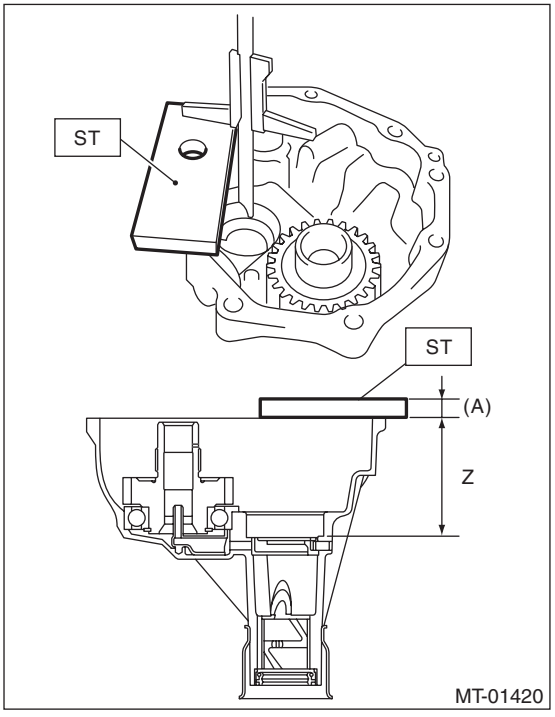
1) Using the ST, remove the taper roller bearing (extension case side) outer race from the extension case.
ST 18758AA000 PULLER



(A) Taper roller bearing (extension case side) outer race

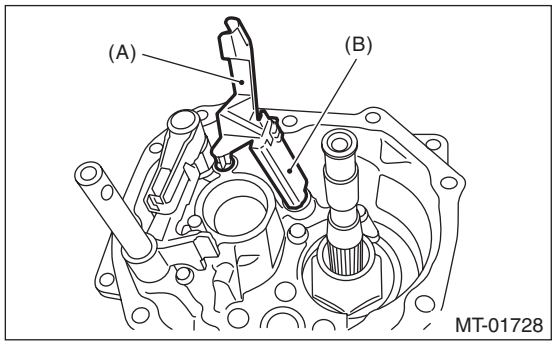
2) Remove the adjusting washer.
3) Measure depth "Z" between the extension case end area and the taper roller bearing (extension case side) contact area.
ST 398643600 GAUGE

NOTE:
When measuring depth "Z", subtract the thickness of the ST [15 mm (0.59 in)] from the measured value.



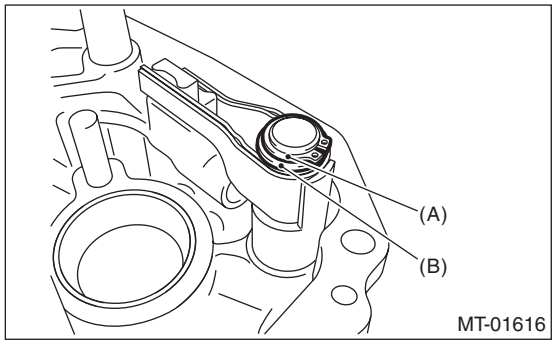
(A) 15 mm (0.59 in)

4) Remove the transfer driven gear. <Ref. to 6MT(TY85)-54, REMOVAL, Transfer Driven Gear.>
5) Remove the center differential. <Ref. to 6MT(TY85)-56, REMOVAL, Center Differential.>
6) Remove the oil guides G and H.



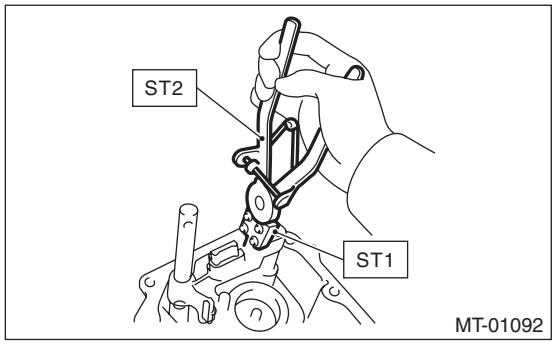
(A) Oil guide G
(B) Oil guide H

7) Remove the snap ring and flat washer from the selector arm area.

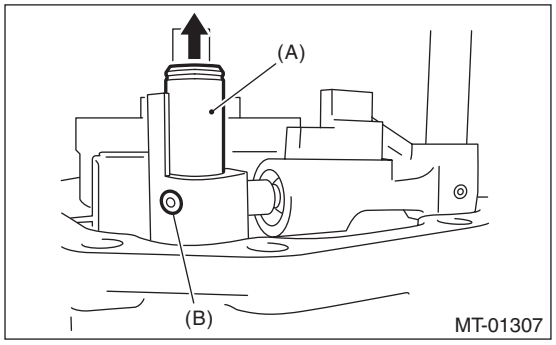


(A) Snap ring
(B) Flat washer

8) Using an ST, remove the neutral set spring and support.
ST1 18756AA000 CLAW
ST2 399893600 PLIER

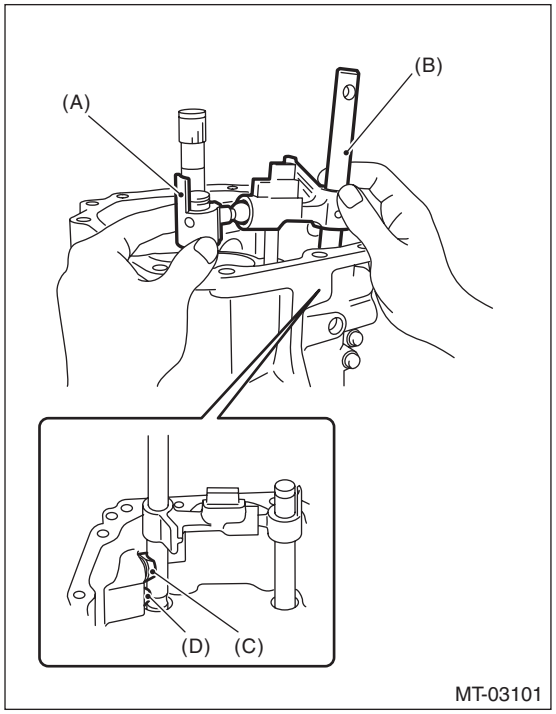


9) Lift the striking rod, and remove the straight pin.



(A) Striking rod
(B) Straight pin

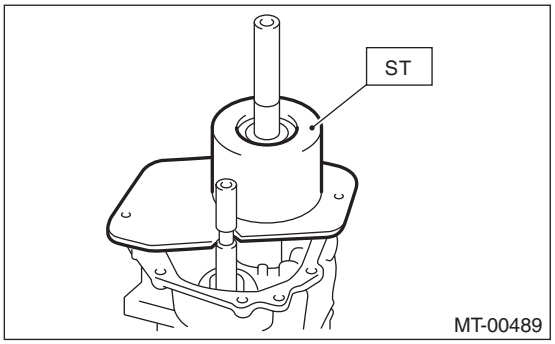
10) Remove the selector arm No. 2, shifter arm shaft, selector plunger, shift accent plunger and spring.



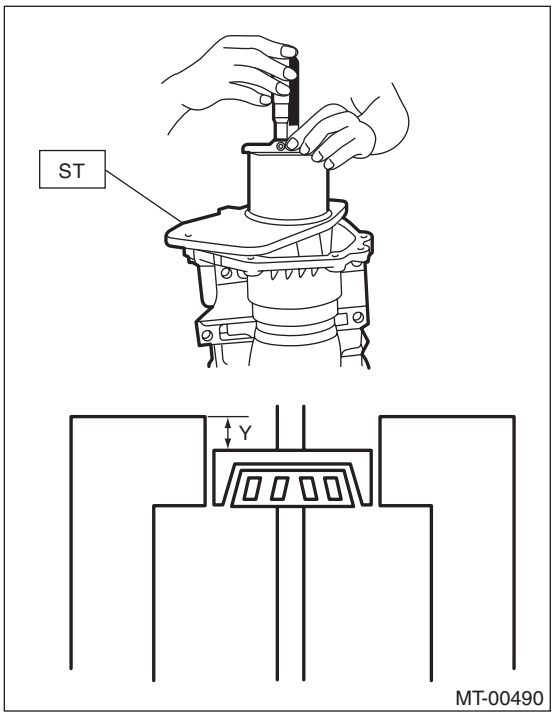
(A) Selector arm No. 2
(B) Shifter arm shaft
(C) Selector plunger
(D) Shift accent plunger

11) Attach the taper roller bearing (extension case side) to the transfer driven gear.

12) Set the ST.
ST 18831AA000 GAUGE



13) Turn the transfer driven gear 10 or more times to seat the bearing properly.
14) Measure depth "Y" between the end of the ST and the taper roller bearing (extension case side).
ST 18831AA000 GAUGE



15) Using the following calculation, calculate the transfer driven gear bearing adjusting washer value "t".
t = Z – (100 – Y) – {0.02 — 0.11 mm (0.0008 — 0.0043 in)}

t mm (in)	Transfer driven gear bearing adjusting washer thickness
Y mm (in)	Depth between the end of the ST and the taper roller bearing (extension case side)
Z mm (in)	Depth between the end of the extension case and the taper roller bearing (extension case side) contact area
0.02 — 0.11 mm (0.0008 — 0.0043 in)	Standard clearance between the adjusting washer and the taper roller bearing (extension case side)
100 mm (3.94 in)	Height of ST

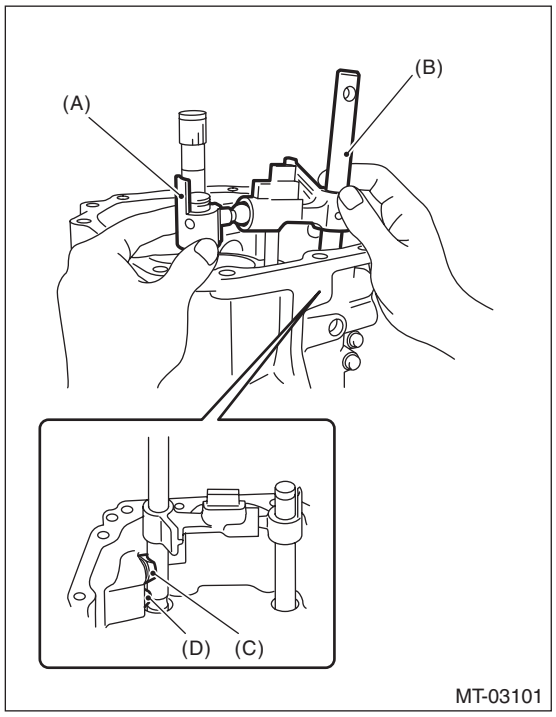
16) Refer to the calculated value "t" to select the closest adjusting washer from the following table.

Standard clearance between the adjusting washer and the taper roller bearing (extension case side)
0.02 — 0.11 mm (0.0008 — 0.0043 in)

NOTE:
Match to be within the standard clearance range.

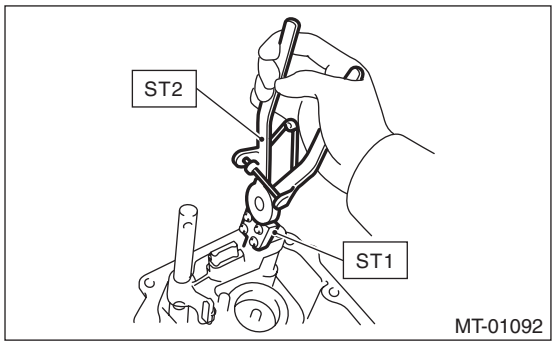
Adjusting washer (50 × 61 × t)	
Part No.	Thickness t mm (in)
803050060	0.50 (0.0197)
803050061	0.55 (0.0217)
803050062	0.60 (0.0236)
803050063	0.65 (0.0256)
803050064	0.70 (0.0276)
803050065	0.75 (0.0295)
803050066	0.80 (0.0315)
803050067	0.85 (0.0335)
803050068	0.90 (0.0354)
803050069	0.95 (0.0374)
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 (0.0570)

17) Install the selector arm No. 2, shifter arm shaft, selector plunger, shift accent plunger and spring.

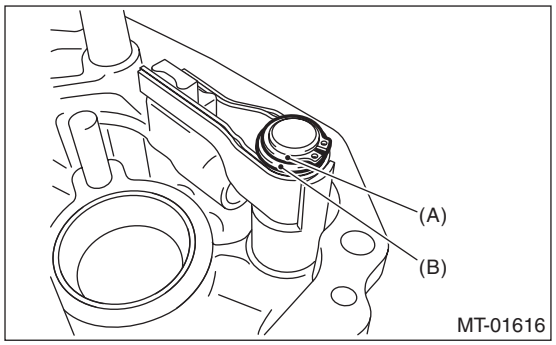


(A) Selector arm No. 2
(B) Shifter arm shaft
(C) Selector plunger
(D) Shift accent plunger

18) Install a new straight pin.
19) Using the ST, install the neutral set spring and support.
ST1 18756AA000 CLAW
ST2 399893600 PLIER



20) Install the flat washer and snap ring to the selector arm area.

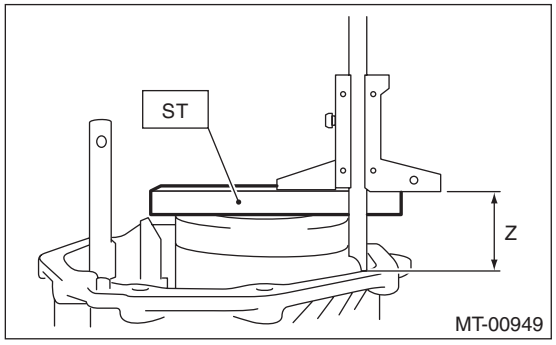


(A) Snap ring
(B) Flat washer

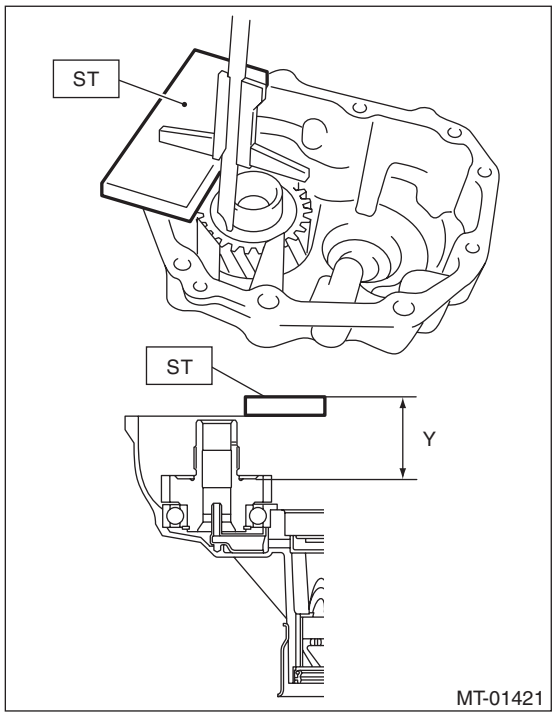
21) Install the center differential. <Ref. to 6MT(TY85)-56, INSTALLATION, Center Differential.>

2. TRANSFER DRIVE GEAR ADJUSTING WASHER SELECTION

1) Measure height “Z” between the transmission case end area and ST.
ST 398643600 GAUGE



2) Measure depth “Y” between the end of the ST and the transfer drive gear.
ST 398643600 GAUGE



3) Using the following calculation, calculate the transfer drive gear adjusting washer value “t”.
t = {Y – 15 mm (0.59 in)} – {Z – 15 mm (0.59 in)} – 0.75 — 0.95 mm (0.030 — 0.037 in)

t mm (in)	Transfer drive gear adjusting washer thickness
Y mm (in)	Depth between the end of the ST and the transfer drive gear
Z mm (in)	Height from the end of the transmission case to the end of the ST.
0.75 — 0.95 mm (0.030 — 0.037 in)	Standard clearance between the adjusting washer and transfer drive gear
15 mm (0.591 in)	Thickness of ST

4) Refer to the calculated value “t” to select the closest adjusting washer from the following table.

Standard clearance between the adjusting washer and transfer drive gear
0.75 — 0.95 mm (0.030 — 0.037 in)

NOTE:
Match to be within the standard clearance range.

Adjusting washer (36.3 × 52 × t)	
Part No.	Thickness mm (in)
803036070	0.80 (0.0315)
803036071	0.95 (0.0374)
803036072	1.10 (0.0433)
803036073	1.25 (0.0492)
803036074	1.40 (0.0551)
803036075	0.65 (0.0256)

5) Install the selected adjusting washer.