

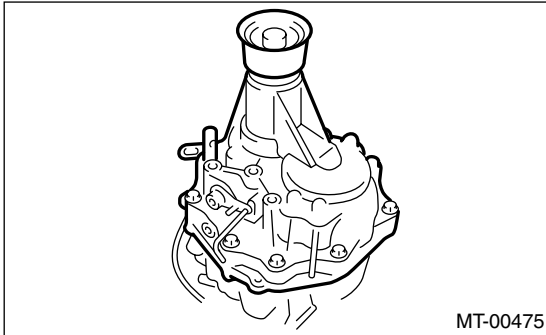
EXTENSION CASE

MANUAL TRANSMISSION AND DIFFERENTIAL

12.Extension Case

A: REMOVAL

- 1) Remove the manual transmission assembly from vehicle. <Ref. to 6MT-35, REMOVAL, Manual Transmission Assembly.>
- 2) Prepare the transmission for overhaul. <Ref. to 6MT-40, Preparation for Overhaul.>
- 3) Remove the extension case.



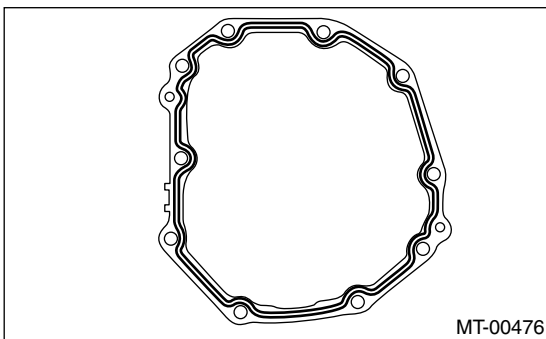
- 4) Completely remove the remaining liquid gasket from the extension case and transmission case.

B: INSTALLATION

- 1) Select the transfer driven gear thrust washer, and then install it to extension case. <Ref. to 6MT-49, ADJUSTMENT, Extension Case.>
- 2) Apply oil lightly to the outer periphery of bearing cone, and then install it to extension case.
- 3) Select the thrust washer of transfer drive gear, and then install it to center differential.
- 4) Apply liquid gasket to the transmission case.

Liquid gasket:

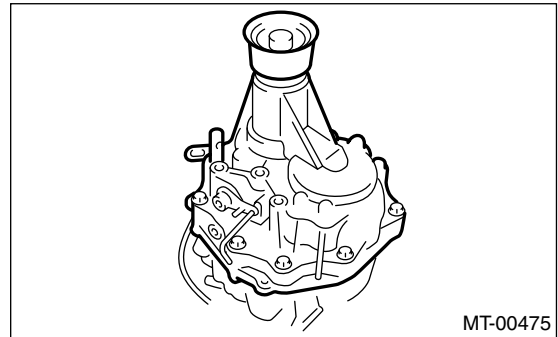
THREE BOND 1215 (Part No. 004403007)



- 5) Install the extension case.

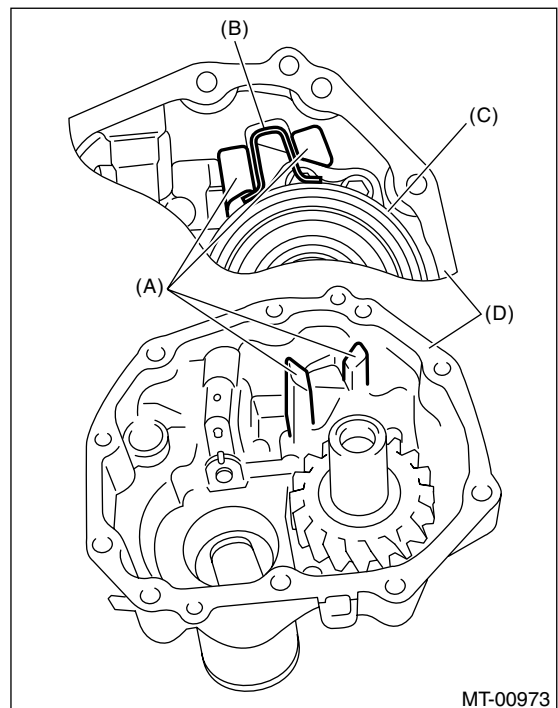
Tightening torque:

48 N·m (4.9 kgf·m, 35.4 ft·lb)



NOTE:

Insert the stopper portion of center differential between extension guides.



- (A) Extension guides
- (B) Stopper
- (C) Center differential
- (D) Extension case

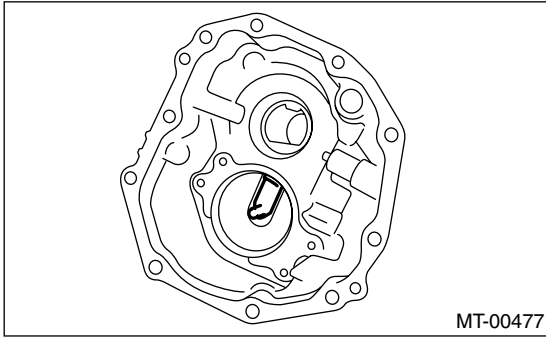
- 6) Install the manual transmission assembly to vehicle. <Ref. to 6MT-37, INSTALLATION, Manual Transmission Assembly.>

EXTENSION CASE

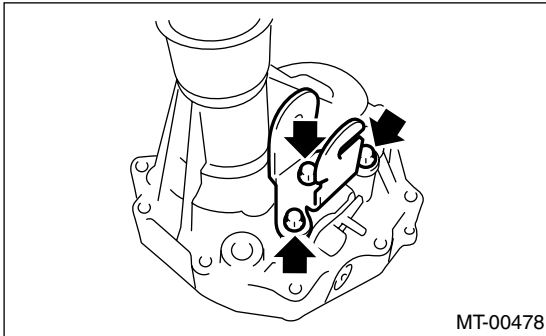
MANUAL TRANSMISSION AND DIFFERENTIAL

C: DISASSEMBLY

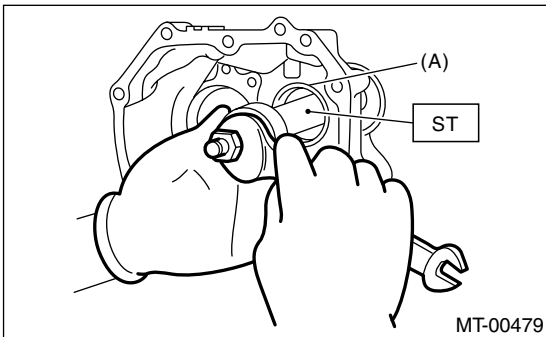
- 1) Remove the transfer drive gear. <Ref. to 6MT-56, REMOVAL, Transfer Drive Gear.>
- 2) Remove the extension guide.



- 3) Remove the shift bracket.

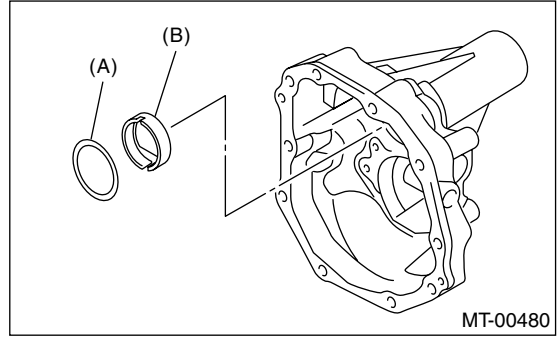


- 4) Using the ST, remove the bearing cone.
ST 18758AA000 PULLER



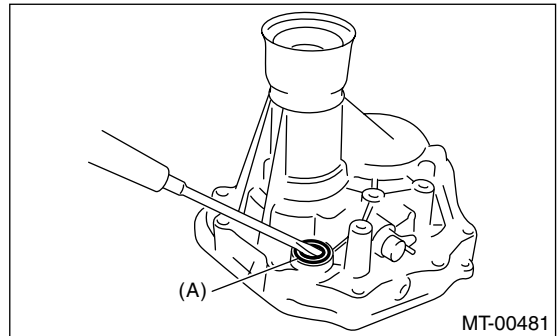
(A) Bearing cone

- 5) Remove the thrust washer and oil plate.



(A) Thrust washer
(B) Oil plate

- 6) Remove the shifter arm oil seal.



(A) Oil seal

- 7) Remove the reverse checking system. <Ref. to 6MT-53, REMOVAL, Reverse Checking System.>
- 8) Remove the extension oil seal. <Ref. to 6MT-31, REPLACEMENT, Oil Seal.>

EXTENSION CASE

MANUAL TRANSMISSION AND DIFFERENTIAL

D: ASSEMBLY

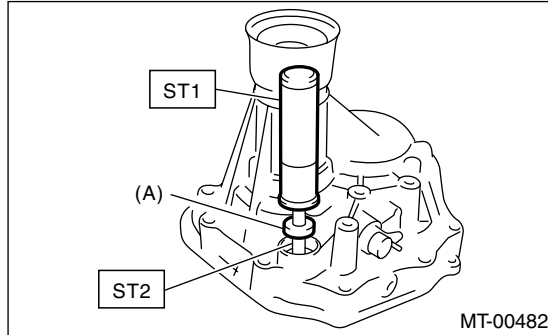
1) Install the reverse checking system. <Ref. to 6MT-54, INSTALLATION, Reverse Checking System.>

2) Install the extension case oil seal. <Ref. to 6MT-31, REPLACEMENT, Oil Seal.>

3) Using the ST, install the shifter arm oil seal.

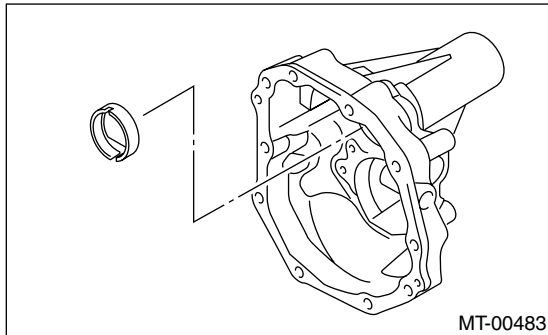
ST1 18657AA000 INSTALLER

ST2 18671AA000 OIL SEAL GUIDE



(A) Oil seal

4) Install the oil plate.



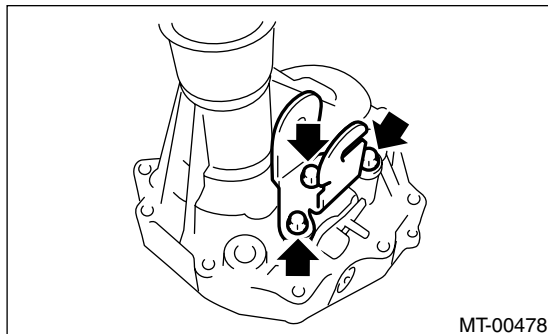
5) Select the bearing thrust washer, and then install it to extension case. <Ref. to 6MT-49, ADJUSTMENT, Extension Case.>

6) Apply oil lightly to the outer periphery of bearing cone, and then install it to extension case.

7) Install the shift bracket.

Tightening torque:

25 N·m (2.5 kgf·m, 18.1 ft·lb)



8) Install the extension guide, and then install the transfer driven gear. <Ref. to 6MT-56, INSTALLATION, Transfer Drive Gear.>

E: INSPECTION

1) Make sure there is no damage or crack on extension case. If there is damage or crack, replace the extension case.

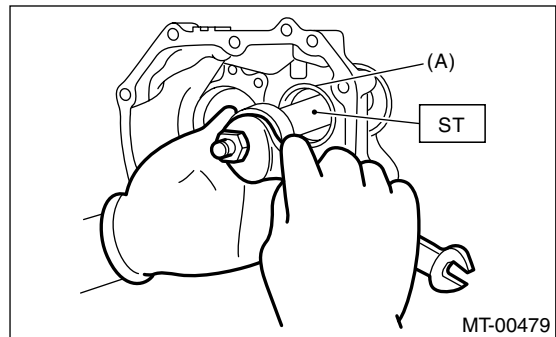
2) Check each oil seal and joint part of extension case and transmission case for oil leakage. If there is oil leakage, replace the oil seal and liquid gasket.

F: ADJUSTMENT

1. TRANSFER DRIVEN GEAR BEARING THRUST WASHER ADJUSTMENT

1) Using the ST, remove the bearing cone from extension case.

ST 18758AA000 PULLER



(A) Bearing cone

2) Remove the thrust washer.

EXTENSION CASE

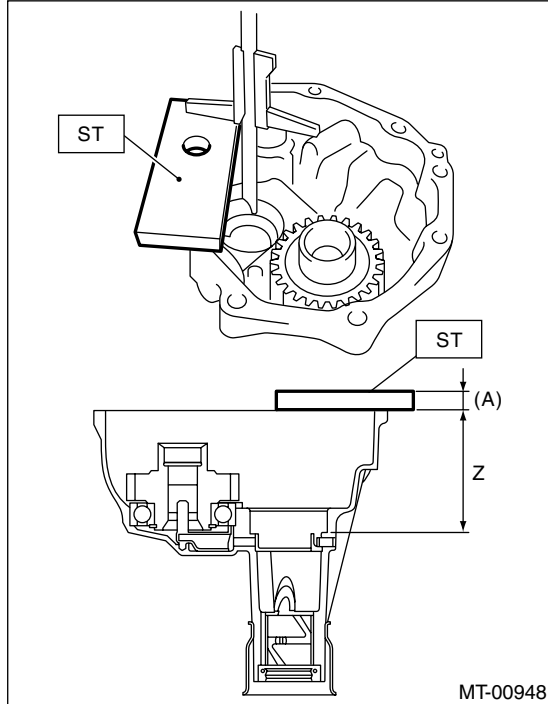
MANUAL TRANSMISSION AND DIFFERENTIAL

3) Measure the depth "Z" between end of extension case and contact point of bearing cone.

ST 499575500 GAUGE

NOTE:

To measure the depth "Z", subtract the thickness of ST [15 mm (0.59 in)] from the measured value.

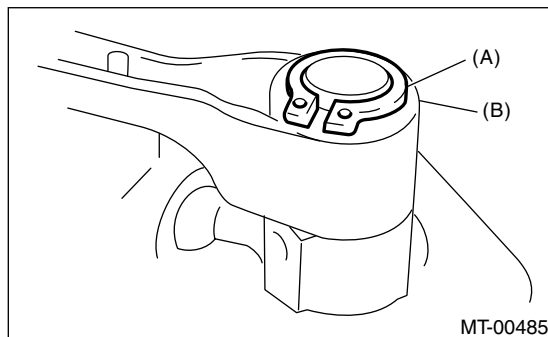


(A) 15 mm (0.59 in)

4) Remove the transfer driven gear. <Ref. to 6MT-58, REMOVAL, Transfer Driven Gear.>

5) Remove the center differential. <Ref. to 6MT-60, REMOVAL, Center Differential.>

6) Remove the snap ring and support from selector arm part.



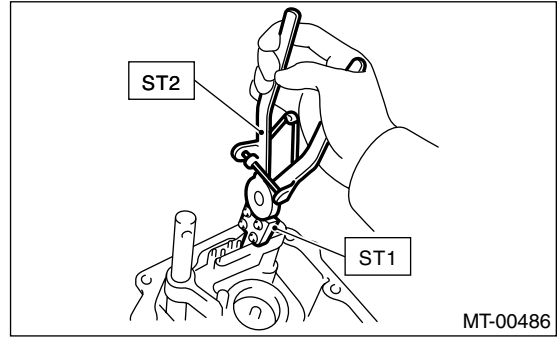
(A) Snap ring

(B) Support

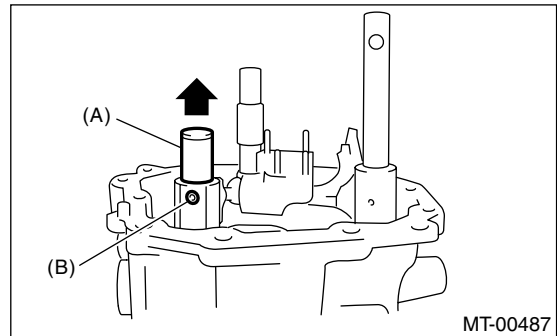
7) Using the ST, remove the neutral set spring and support.

ST1 18756AA000 CLAW

ST2 399863600 PLIERS



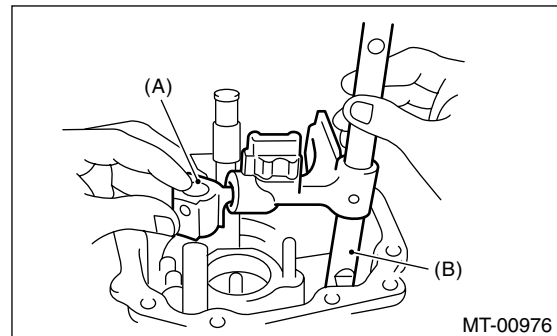
8) Lift-up the striking rod and remove the spring pin.



(A) Striking rod

(B) Spring pin

9) Remove the selector arm No. 2 and shifter arm.



(A) Selector arm No. 2

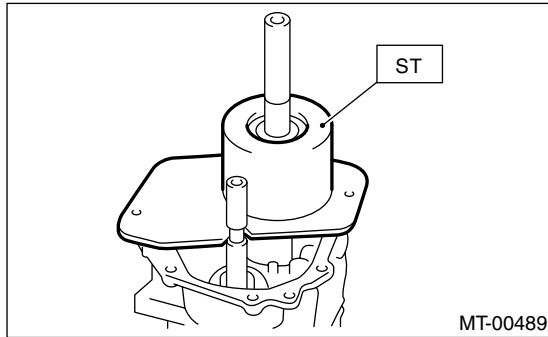
(B) Shifter arm

10) Install the bearing cone to transfer driven gear.

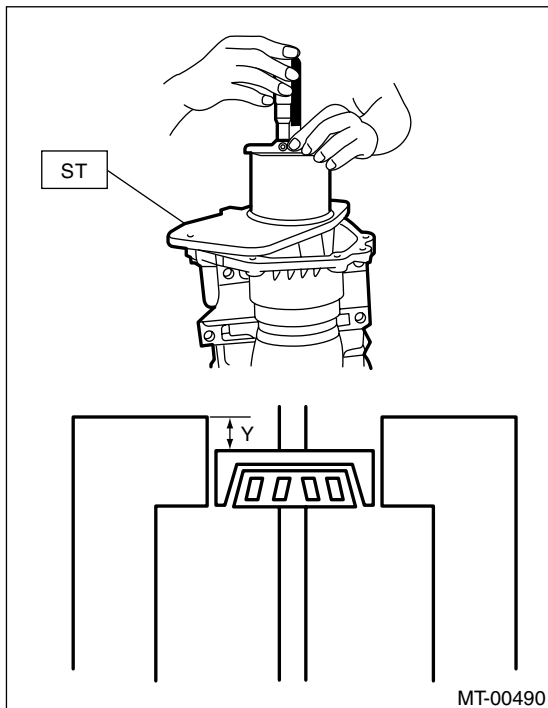
EXTENSION CASE

MANUAL TRANSMISSION AND DIFFERENTIAL

- 11) Set the ST.
ST 18831AA000 GAUGE



- 12) Rotate the transfer driven gear approx. ten times to get the bearing accustomed.
13) Measure the depth "Y" between end of ST and bearing cone.
ST 18831AA000 GAUGE



- 14) Calculate the value "t" of transfer driven gear bearing thrust washer using the following equation.
 $t = Z - (100 - Y) - \{-0.04 \text{ to } 0.11 \text{ mm } (-0.0016 \text{ to } 0.0043 \text{ in})\}$

t mm (in)	Thickness of transfer driven gear bearing thrust washer.
Y mm (in)	Depth from end of ST to bearing cone.
Z mm (in)	Depth from end of extension case to contact point of bearing cone.
-0.04 — 0.11 mm (-0.0016 — 0.0043 in)	Standard clearance between thrust washer and taper roller bearing.
100 mm (3.94 in)	Height of ST.

- 15) Select the nearest thrust washer from the following table, according to the calculated value "t".

Standard clearance between thrust washer and taper roller bearing:

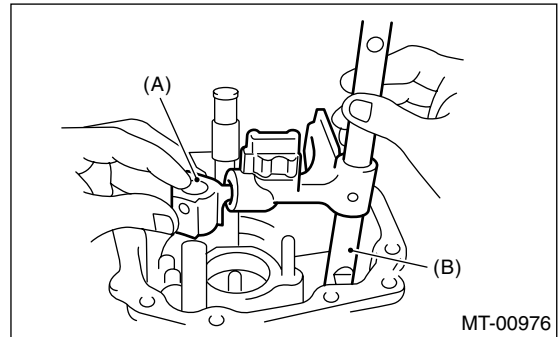
$$-0.04 \text{ — } 0.11 \text{ mm } (-0.0016 \text{ — } 0.0043 \text{ in})$$

NOTE:

Make clearance within standard.

Thrust washer (50 × 61 × t)	
Part No.	Thickness mm (in)
803050060	0.50 (0.0197)
803050062	0.60 (0.0236)
803050064	0.70 (0.0276)
803050066	0.80 (0.0315)
803050068	0.90 (0.0354)
803050070	1.00 (0.0394)
803050072	1.10 (0.0433)
803050074	1.20 (0.0472)
803050076	1.30 (0.0512)
803050078	1.40 (0.0551)

- 16) Install the selector arm No. 2 and shifter arm.

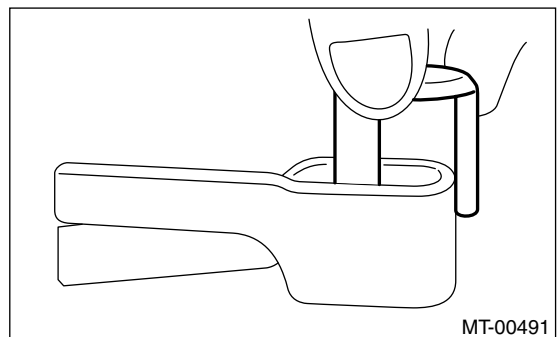


- (A) Selector arm No. 2
(B) Shifter arm

- 17) Install a new spring pin.
18) Install the support to neutral set spring.

NOTE:

Make sure to install the support in proper direction.

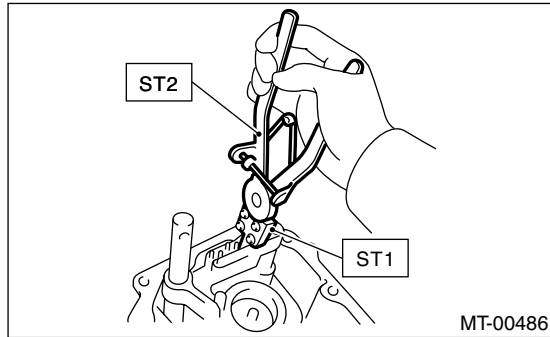


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19) Using the ST, install the neutral set spring and support.

ST1 18756AA000 CLAW
ST2 399863600 PLIERS

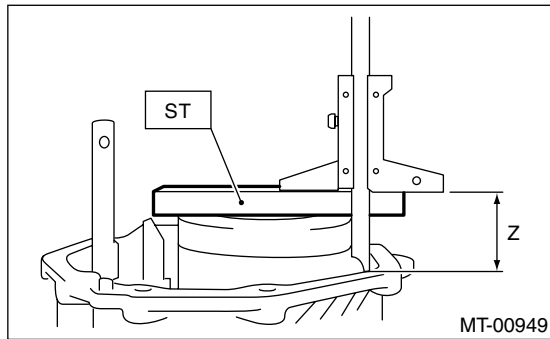


20) Install the snap ring.
21) Install the center differential.

2. SELECTING THE TRANSFER DRIVE GEAR THRUST WASHER

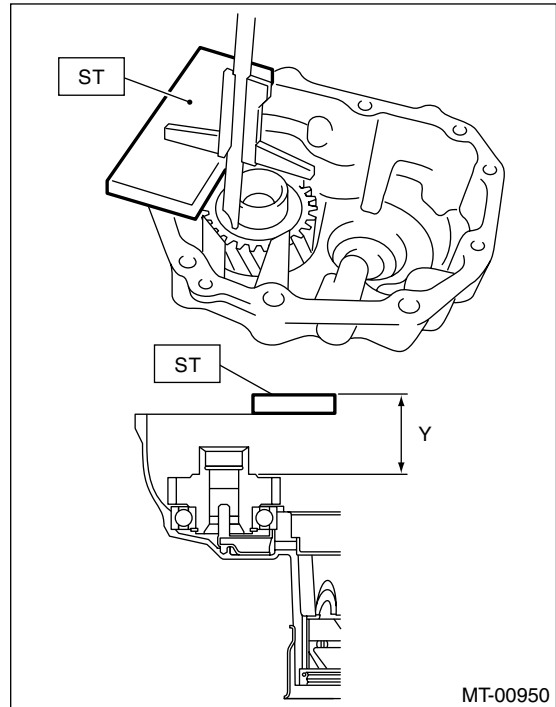
1) Measure the height “Z” between end of transmission case and end of ST.

ST 499575500 GAUGE



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

ST 499575500 GAUGE



3) Calculate the value “t” of transfer drive gear thrust washer using the following equation.

$$t = \{Y - 15 \text{ mm (1.18 in)}\} - \{Z - 15 \text{ mm (1.18 in)}\} - 0.45 \text{ to } 0.65 \text{ mm (0.018 to 0.026 in)}$$

t mm (in)	Thickness of transfer drive gear thrust washer
Y mm (in)	Depth from end of ST to transfer drive gear
Z mm (in)	Height from end of transmission case to the end of ST
0.45 — 0.65 mm (0.018 — 0.026 in)	Standard clearance between thrust washer and transfer drive gear.
15 mm (1.18 in)	Thickness of ST

4) Select the nearest thrust washer from the following table, according to the calculated value “t”.

Standard clearance between thrust washer and transfer drive gear:

0.45 — 0.65 mm (0.018 — 0.026 in)

Thrust 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 thrust washer.