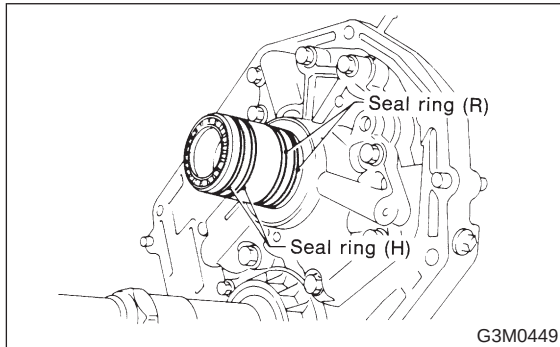


NOTE:

- Install the oil seal retainer and seal rings (R) and (H) after adjusting the drive pinion backlash and tooth contact.



16. Drive Pinion Shaft

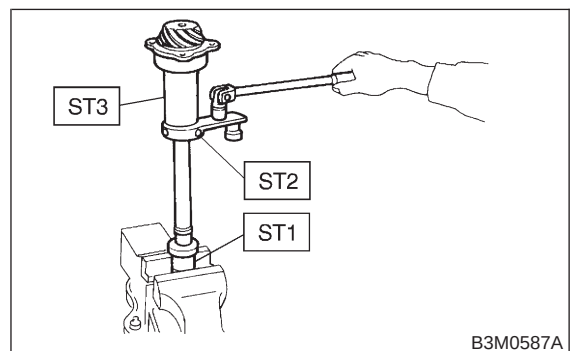
A: DISASSEMBLY

- 1) Straighten the staked portion of the lock nut, and remove the lock nut while locking the rear spline portion of the shaft with ST1, ST2 and ST3. Then pull off the drive pinion collar.

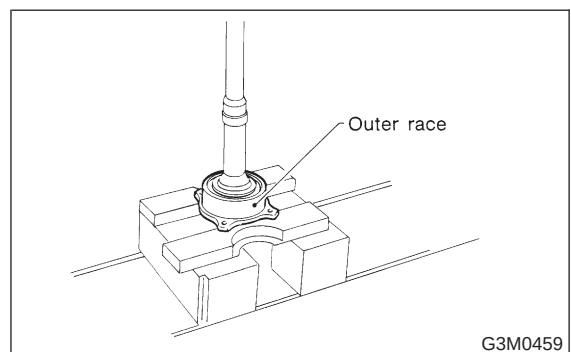
NOTE:

Remove the O-ring.

ST1	498937100	HOLDER
ST2	499787100	WRENCH
ST3	499757800	ADAPTER WRENCH

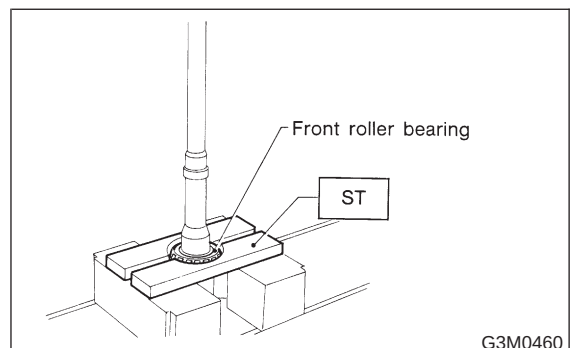


- 2) Using a press, separate the rear roller bearing and outer race from the shaft.



- 3) Using a press and ST, separate the front roller bearing from the shaft.

ST 498517000 REPLACER

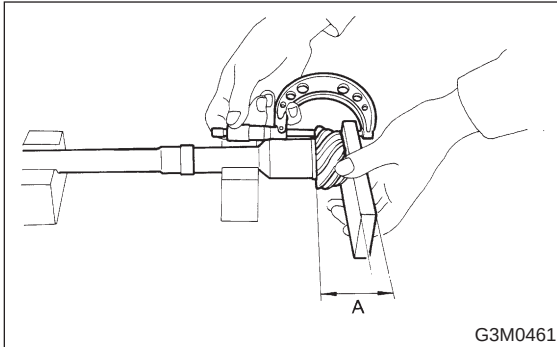


B: INSPECTION

Make sure that all component parts are free of harmful cuts, gouges, and other faults.

C: ASSEMBLY

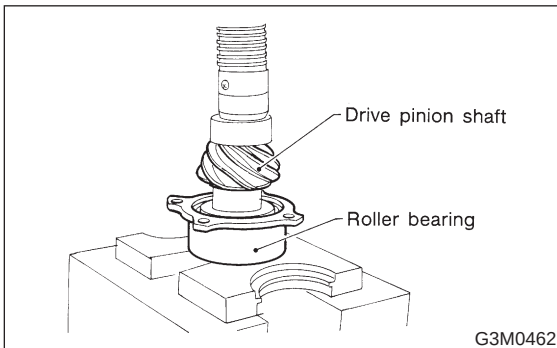
1) Measure dimension "A" of the drive pinion shaft.



2) Using a press, force-fit the roller bearing in position.

CAUTION:

Do not change the relative positions of the outer race and bearing cone.



3) After fitting the O-ring to the shaft, attach the drive pinion collar to the shaft.

CAUTION:

Be careful not to damage the O-ring.

4) Tighten the lock washer and lock nut with ST1, ST2 and ST3.

NOTE:

- Pay attention to the orientation of lock washer.
- Tightening torque using torque wrench is determined by the following equation:

$$T_1 = 72.2/L + 72.2 \times T$$

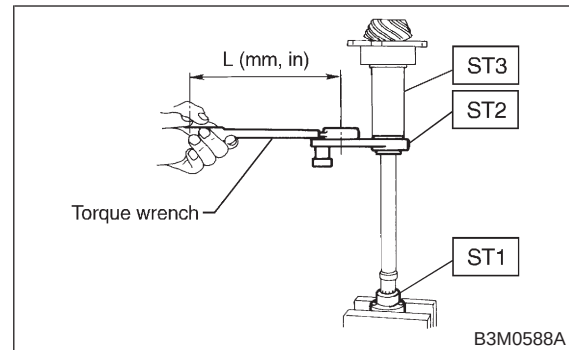
T: Actual tightening torque

- Install ST2 to torque wrench as straight as possible.

ST1	498937100	HOLDER
ST2	499787100	WRENCH
ST3	499787500	ADAPTER WRENCH

Actual tightening torque:

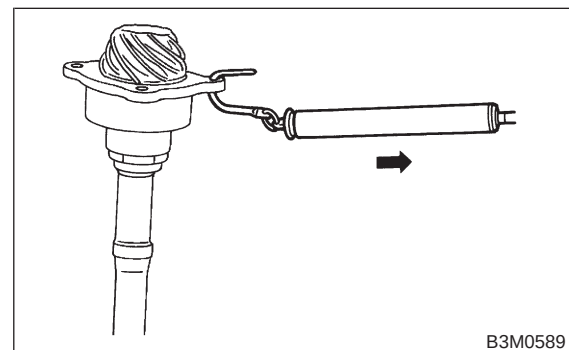
$$113 \pm 5 \text{ N}\cdot\text{m} (11.5 \pm 0.5 \text{ kg}\cdot\text{m}, 83.2 \pm 3.6 \text{ ft}\cdot\text{lb})$$



5) Measure the starting torque of the bearing. Make sure the starting torque is within the specified range. If out of the allowable range, replace the roller bearing.

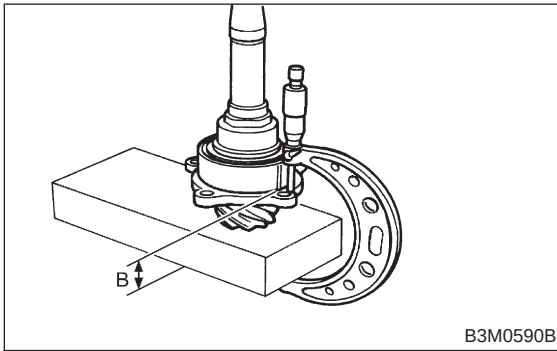
Starting torque:

$$0.3 - 2.0 \text{ N}\cdot\text{m} (0.03 - 0.2 \text{ kg}\cdot\text{m}, 0.2 - 1.4 \text{ ft}\cdot\text{lb})$$



6) Stake the lock nut securely at two places.

7) Measure dimension “B” of the drive pinion shaft.



8) Determine the thickness t (mm) of the drive pinion shim.

$$t = 6.5 \pm 0.0625 - (B - A)$$

NOTE:

The number of shims must be three or less.

Drive pinion shim	
Part No.	Thickness mm (in)
31451AA050	0.150 (0.0059)
31451AA060	0.175 (0.0069)
31451AA070	0.200 (0.0079)
31451AA080	0.225 (0.0089)
31451AA090	0.250 (0.0098)
31451AA100	0.275 (0.0108)