

## REASSEMBLY

### 1. ASSEMBLE DIFFERENTIAL CASE

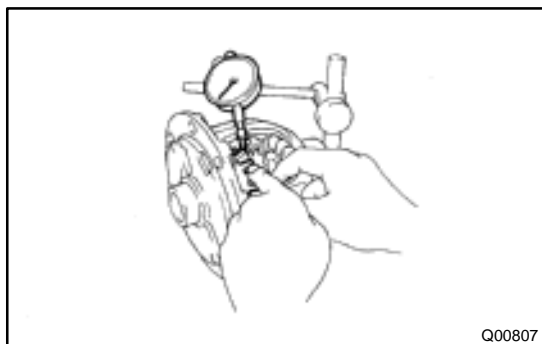
- (a) Install the correct thrust washers and side gears. Refer to the table below, select thrust washers which will ensure that the backlash is within the specification. Try to select washers of the same size for both sides.

**Standard backlash:**

**0.05 – 0.20 mm (0.0020 – 0.0079 in.)**

Thickness mm (in.)	Thickness mm (in.)
0.95 (0.0374)	1.10 (0.0433)
1.00 (0.0394)	1.15 (0.0453)
1.05 (0.0413)	1.20 (0.0472)

- (b) Install the thrust washers and side gears in the differential case.  
 (c) Install the pinion shaft.



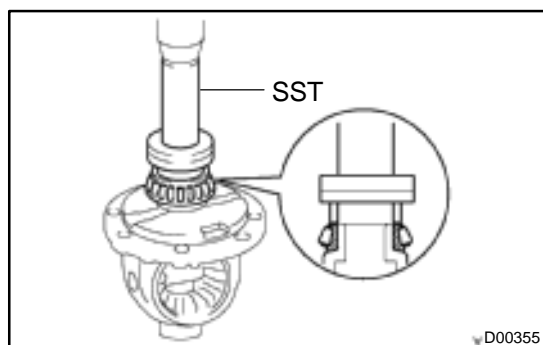
- (d) Using a dial indicator, check the side gear backlash. Measure the side gear backlash while holding one pinion toward the differential case.

**Standard backlash:**

**0.05 – 0.20 mm (0.0020 – 0.0079 in.)**

If the backlash is not within the specification, install a thrust washer of different thickness.

- (e) Using a pin punch and a hammer, tap in the straight pin through the differential case and hole in the pinion shaft.  
 (f) Using a chisel and a hammer, caulk the pin holes around the circumference of the differential case.



### 2. Ring Gear Side:

#### INSTALL TAPERED ROLLER BEARING

Using SST and a press, press in a new tapered roller bearing.

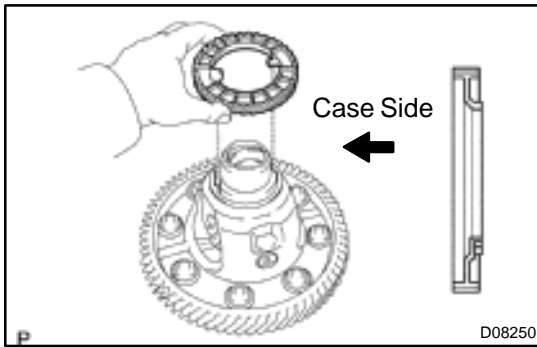
SST 09350-32014 (09351-32120, 09351-32140)

#### NOTICE:

**When replacing the tapered roller bearing outer race, replace the tapered roller bearing along with it.**

#### HINT:

Set SST to the bearing inner race securely.

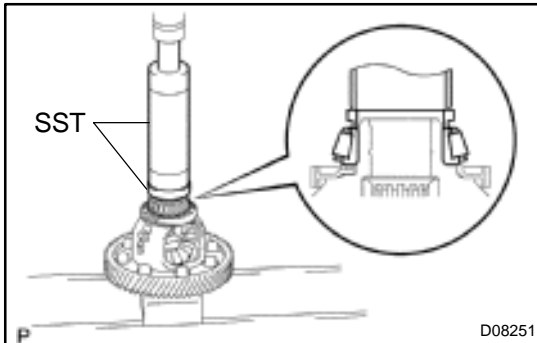


### 3. Vehicle Speed Sensor Drive Gear Side: INSTALL TAPERED ROLLER BEARING

- (a) Place the vehicle speed sensor drive gear in position to stop turning, and install the vehicle speed sensor drive gear.

**NOTICE:**

Be sure to install the vehicle speed sensor drive gear in the correct direction, as shown in the illustration.



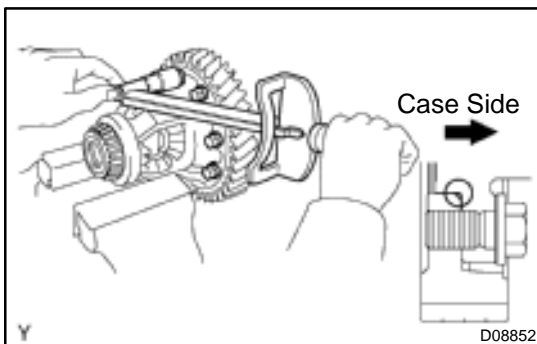
- (b) Using SST and a press, press in a new side bearing.  
SST 09316-60011 (09316-00011), 09350-32014 (09351-32120)

**NOTICE:**

When replacing the tapered roller bearing outer race, replace the tapered roller bearing along with it.

**HINT:**

Set SST to the bearing inner race securely.



### 4. INSTALL RING GEAR ON DIFFERENTIAL CASE

- (a) Clean the contact surface of the differential case.  
(b) Heat the ring gear in boiling water.  
(c) Carefully take the ring gear out of the water.  
(d) After the moisture on the ring gear has completely evaporated, quickly install the ring gear to the differential case.

**HINT:**

Align the matchmarks on the differential case and contact the ring gear.

- (e) Temporarily install the 8 set bolts.

**CAUTION:**

The ring gear set bolts should not be tightened until the ring gear has cooled sufficiently.

- (f) After the ring gear has cooled sufficiently, torque the ring gear set bolts uniformly at a time.

**Torque:**

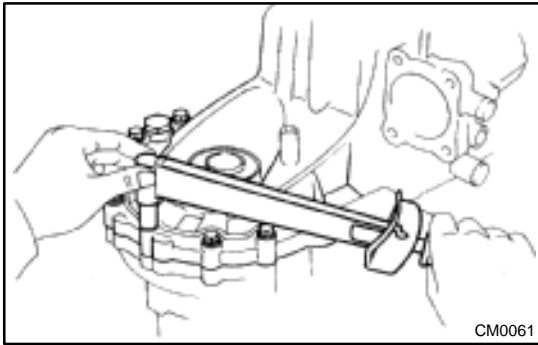
w/o LSD: 77 N·m (790 kgf·cm, 57 ft·lbf)

w/ LSD: 101 N·m (1,030 kgf·cm, 74 ft·lbf)

### 5. INSPECT DIFFERENTIAL TAPERED ROLLER BEARING PRELOAD (IN CASE THAT w/o LSD)

**NOTICE:**

- Perform this only when replacing the tapered roller bearing and outer race of the differential case.
- The thickness of the shim installed on the transmission should be selected from the thin ones.



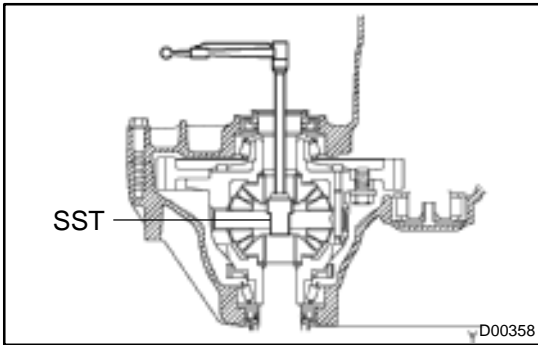
- (a) Install the differential case assembly to the transaxle case.

**NOTICE:**

**Place it gently to protect the diff side bearing from being damaged.**

- (b) Install the transmission case to the transaxle case with the 16 bolts.

**Torque: 29 N·m (300 kgf·cm, 22 ft·lbf)**



- (c) Using SST and a torque wrench, turn the differential case assembly right and left 2 or 3 times to allow the bearings to settle.

SST 09564-32011

- (d) Using SST and a torque wrench, measure the preload.

SST 09564-32011

**Preload (at starting):**

**New bearing**

**0.78 – 1.57 N·m (7.96 – 16.0 kgf·cm, 0.58 – 1.16 in.-lbf)**

**Reused bearing**

**0.49 – 0.98 N·m (5.0 – 10.0 kgf·cm, 0.36 – 0.72 in.-lbf)**

If the preload is not within the specification and when there is a clearance, remove the transmission case side outer race of the tapered roller bearing with SST (See page MX-47), and select the thick shim. Then, exchange the shim and measure the preload again.

**HINT:**

The preload will change by about 0.3 – 0.4 N·m (3 – 4 kgf·cm, 2.6 – 3.5 in.-lbf) corresponding to a change of 0.05 mm (0.0020 in.) in shim thickness.

Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
AA	2.10 (0.0827)	LL	2.60 (0.1024)
BB	2.15 (0.0846)	MM	2.65 (0.1043)
CC	2.20 (0.0866)	NN	2.70 (0.1063)
DD	2.25 (0.0886)	PP	2.75 (0.1083)
EE	2.30 (0.0906)	QQ	2.80 (0.1102)
FF	2.35 (0.0925)	RR	2.85 (0.1122)
GG	2.40 (0.0945)	SS	2.90 (0.1142)
HH	2.45 (0.0965)	TT	2.95 (0.1161)
JJ	2.50 (0.0984)	UU	3.00 (0.1181)
KK	2.55 (0.1004)	–	–

**6. INSPECT DIFFERENTIAL TAPERED ROLLER BEARING PRELOAD (IN CASE THAT w/ LSD)**

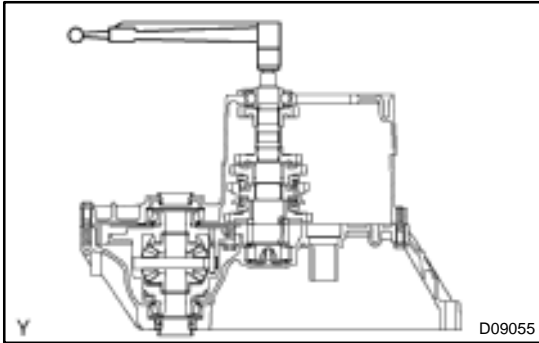
**NOTICE:**

- Perform this only when replacing the tapered roller bearing and outer race of the differential case.
- The thickness of the shim installed on the transmission should be selected from the thin ones.

- (a) Assemble the differential case assembly and output shaft assembly on the transaxle case, then on top of that, assemble the transmission case with the 16 bolts.

**Torque: 29 N·m (300 kgf·cm, 22 ft·lbf)**

- (b) Install the snap ring in the outer groove of the output shaft center bearing.



- (c) Using a socket wrench (27 mm) and a torque wrench, turn the output shaft right and left 2 or 3 times to allow the bearings to settle.

- (d) Using a socket wrench (27 mm) and a torque wrench, measure the preload.

**Preload (at starting):**

**New bearing**

**0.17 – 0.35 N·m (1.73 – 3.57 kgf·cm, 0.13 – 0.26 in·lbf)**

**Reused bearing**

**0.11 – 0.22 N·m (1.12 – 2.24 kgf·cm, 0.08 – 0.16 in·lbf)**

If the preload is not within the specification and when there is a clearance, remove the transmission case side outer race of the tapered roller bearing with SST (See page MX-47), and select the thick shim. Then, exchange the shim and measure the preload again.

HINT:

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