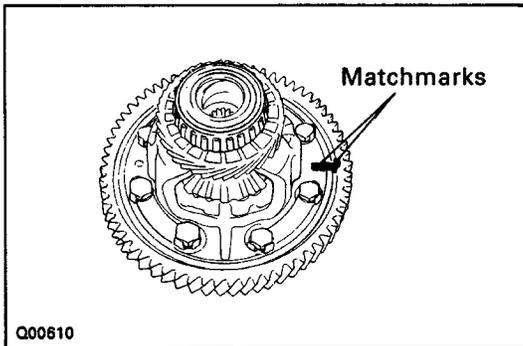
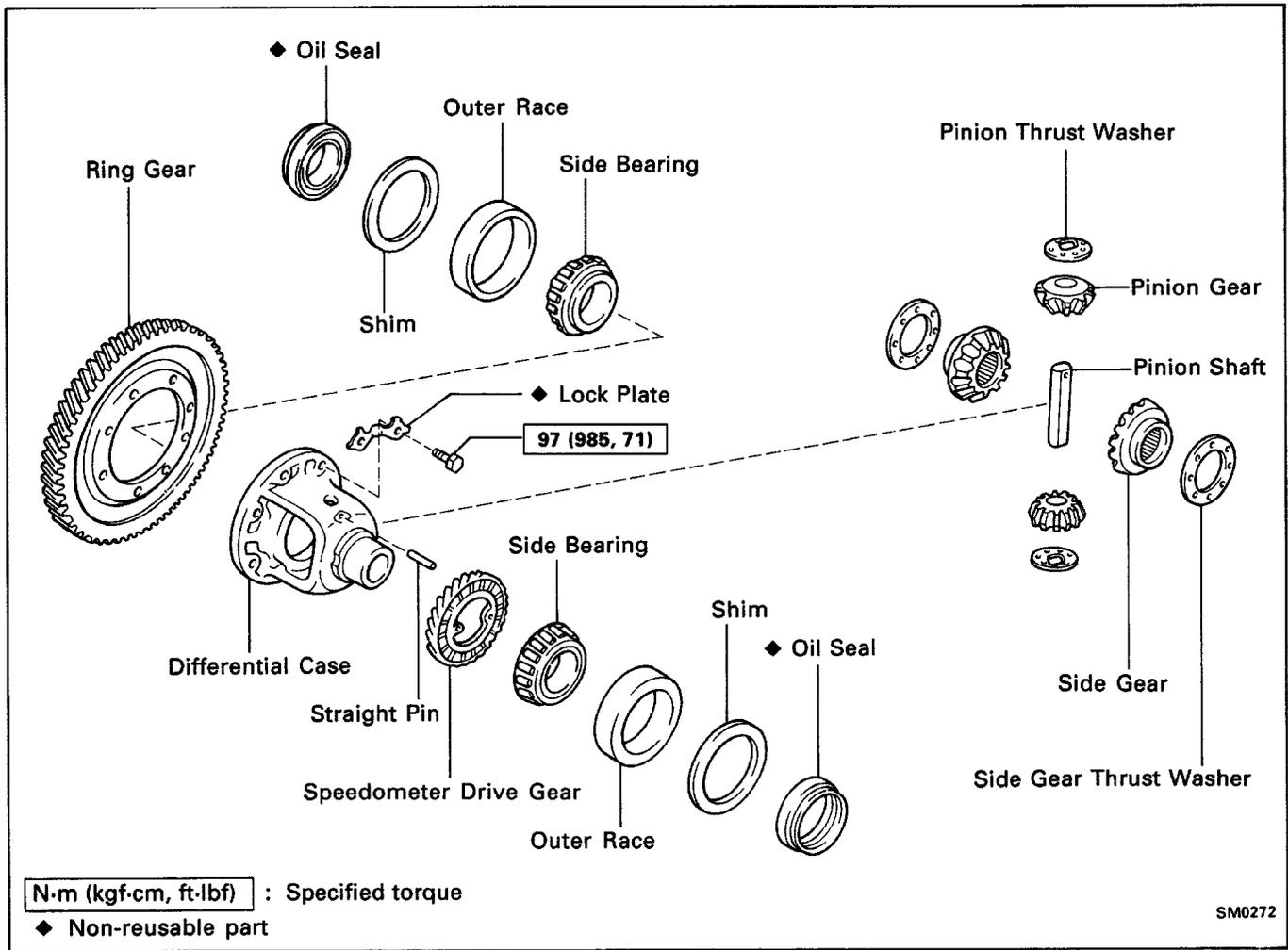


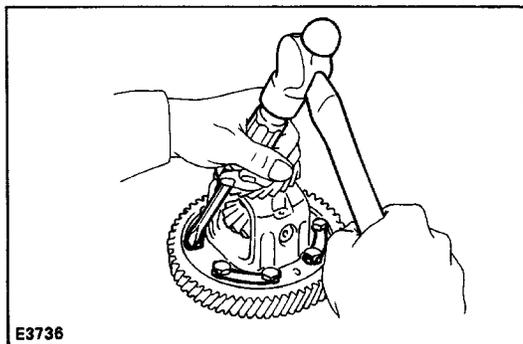
# Differential Case COMPONENTS



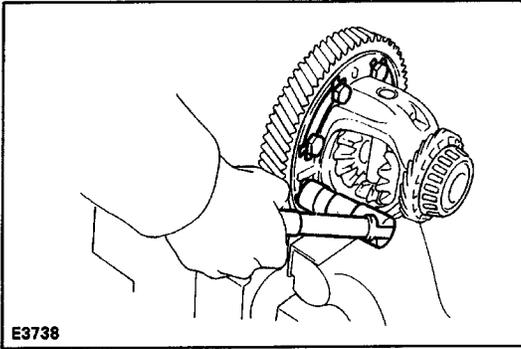
## DISASSEMBLY OF DIFFERENTIAL CASE

### 1. REMOVE RING GEAR

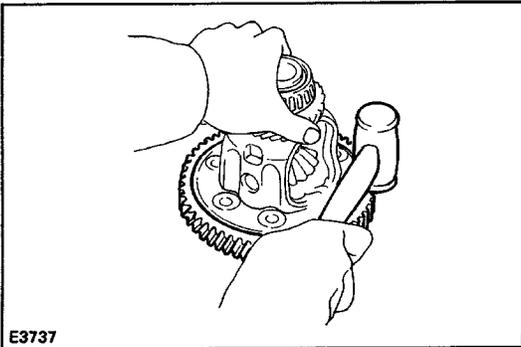
(a) Place matchmarks on the ring gear and the case.



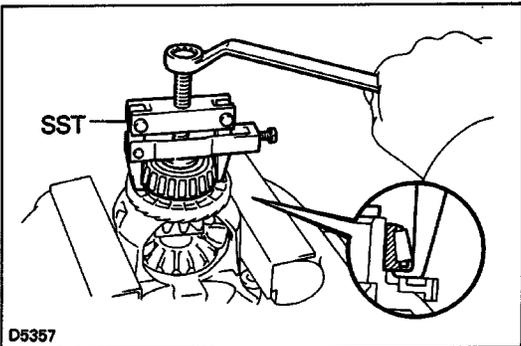
(b) Loosen the staked part of the lock plate.



(c) Remove the eight bolts and four lock plates.



(d) Using a copper hammer, tap on the ring gear to remove it from the case.



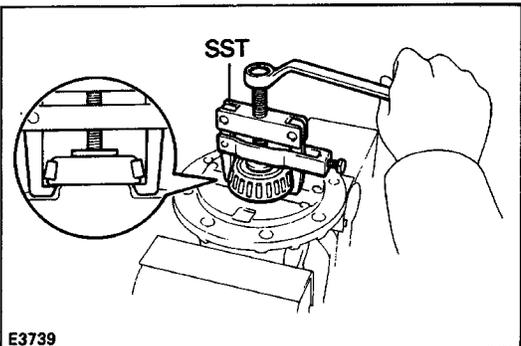
**2. (SPEEDOMETER DRIVE GEAR SIDE)  
REMOVE SIDE BEARING FROM DIFFERENTIAL CASE**

(a) Using SST, remove the side bearing.

SST 09502-10012

HINT: Apply the claw of the SST to the bearing inner race at the position where the speedometer drive gear is indented.

(b) Remove the speedometer drive gear.

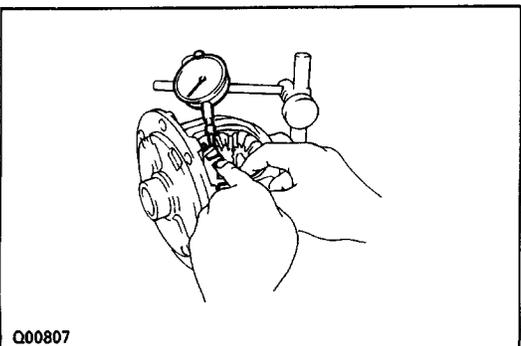


**3. (RING GEAR SIDE)  
REMOVE SIDE BEARING FROM DIFFERENTIAL CASE**

Using SST, remove the side bearing.

SST 09502-10012

HINT: Apply the claw of the SST to the bearing inner race at the position where the differential case is indented.

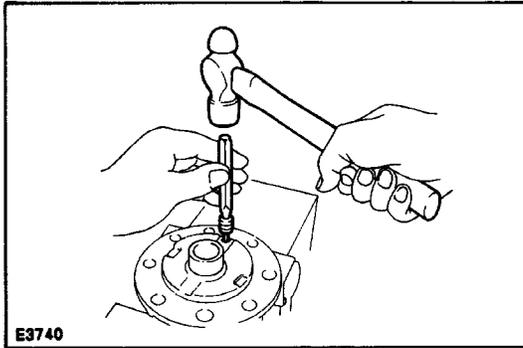


**4. INSPECT SIDE GEAR BACKLASH**

(a) Using a dial indicator, measure the backlash of one side gear while holding one pinion toward the case.

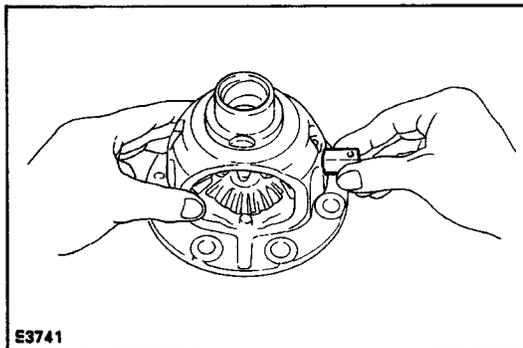
**Standard backlash: 0.05–0.20 mm  
0.0020–0.0079 in.)**

If the backlash does not meet specification, install the correct thrust washer to the side gears.

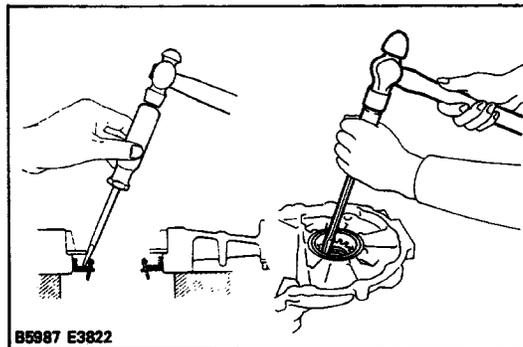


## 5. DISASSEMBLY DIFFERENTIAL CASE

- (a) Using a pin punch and hammer, drive out the pinion shaft lock pin.



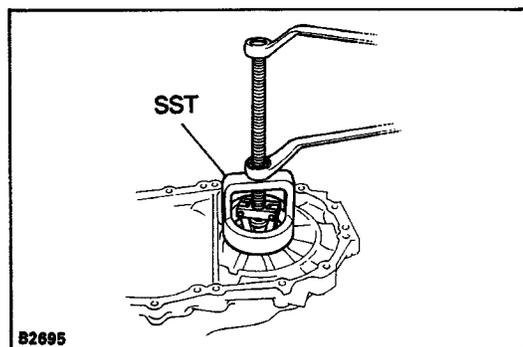
- (b) Remove the pinion shaft from the case.  
 (c) Remove the two pinions and two side gears with the four thrust washers from each gear.



## 6. (TRANSMISSION CASE SIDE)

### IF NECESSARY, REPLACE OIL SEAL AND SIDE BEARING OUTER RACE

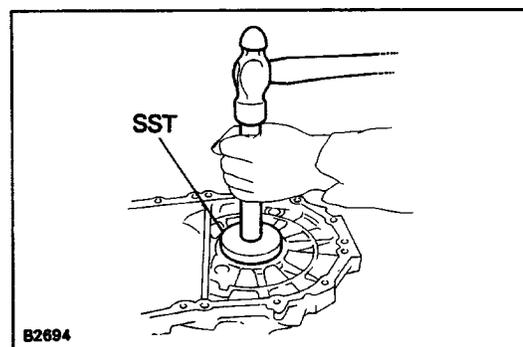
- (a) Using a screwdriver and hammer, drive out the oil seal.



- (b) Using SST, pull out the outer-race and shim.

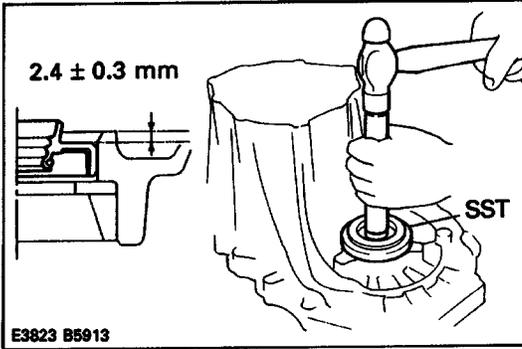
SST 09612-65014

- (c) Place the shim into the case.

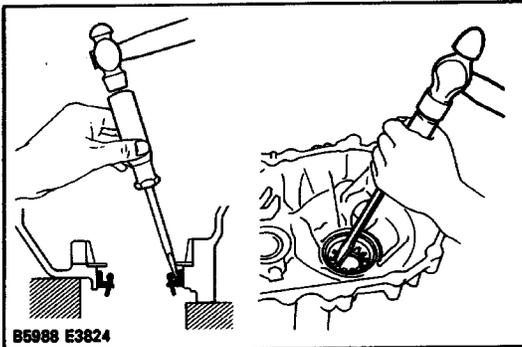


- (d) Using SST and a hammer-, drive in a new outer race.

SST 09608-20012 (09608-03020, 09608-03090)

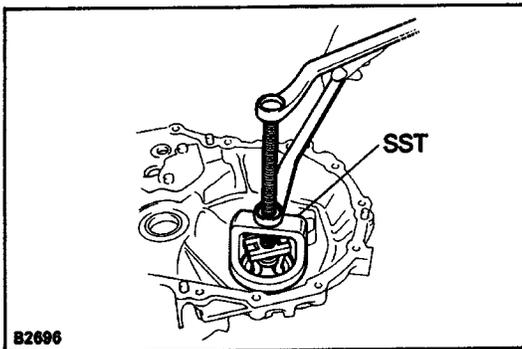


- (e) Using SST and a hammer, drive in a new oil seal.  
SST 09350-32014 (09351-32111, 09351-32130)  
**Drive in depth: 2.1-2.7 mm (0.083-0.106 in.)**
- (f) Coat the lip of the oil seal with MP grease.

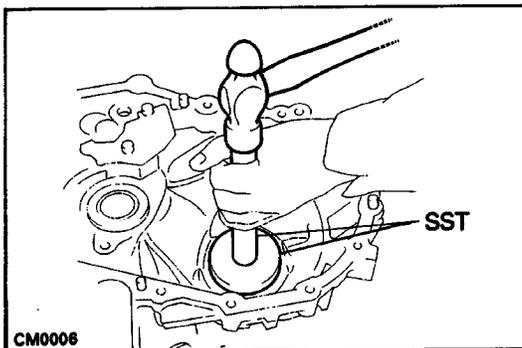


**7. (TRANSAXLE CASE SIDE)  
IF NECESSARY, REPLACE OIL SEAL AND SIDE  
BEARING OUTER RACE**

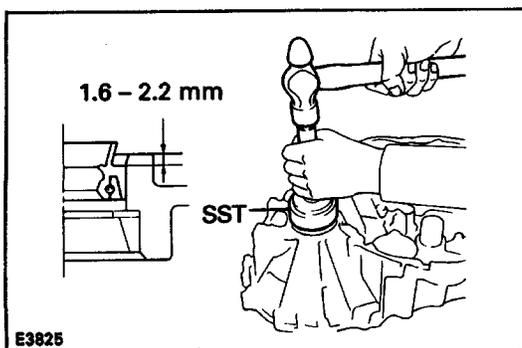
- (a) Using a screwdriver and hammer, drive out the oil seal.



- (b) Using SST, pull out the outer race and shim.  
SST 09612-65014
- (c) Place the shim into the case.



- (d) Using SST and a hammer, drive in a new outer race.  
SST 09608-20012 (09608-03020, 09608-03060)



- (e) Using SST and a hammer, drive in a new oil seal.  
SST 09350-32014 (09351-32130, 09351-32150)  
**Drive in depth: 1.6-2.2 mm (0.063-0.087 in.)**
- (f) Coat the lip of the oil seal with MP grease.

## ASSEMBLY OF DIFFERENTIAL CASE

(See page [MT-44](#))

### 1. ASSEMBLE DIFFERENTIAL CASE

- (a) Install the correct thrust washers and side gear.

Referring to the table below, select thrust washers which will ensure that the backlash is within specification. Try to select washers of the same size for both sides.

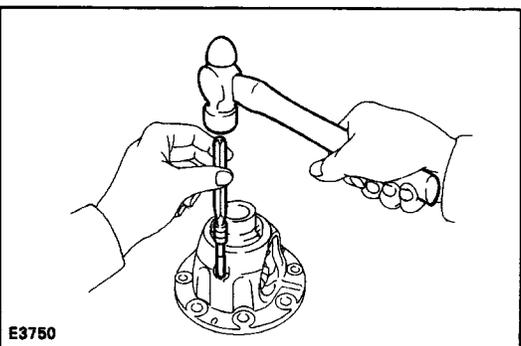
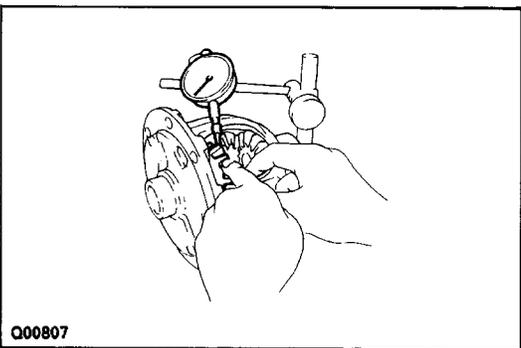
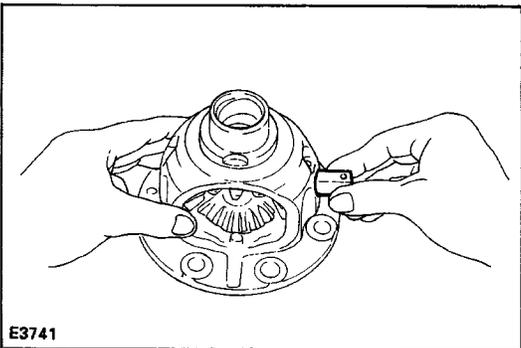
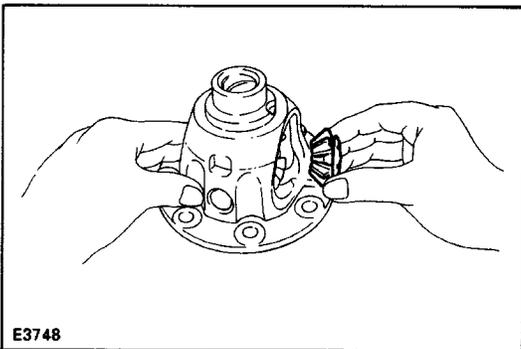
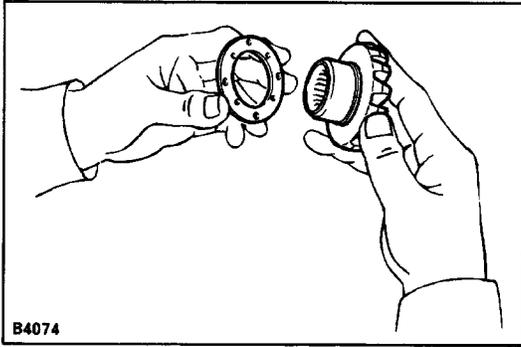
**Standard backlash: 0.05–0.20 mm**

**(0.0020–0.0079 in.)**

Thrust washer thickness

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)

Install the thrust washers and side gears in the differential case.



- (b) Install the pinion shaft.

- (c) Using a dial indicator, check the side gear backlash.

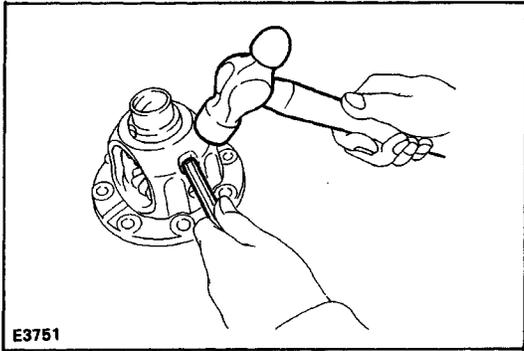
Measure the side gear backlash while holding one pinion gear toward the case.

**Standard backlash: 0.05–0.20 mm**

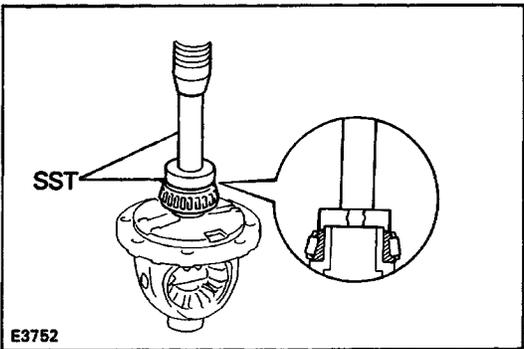
**(0.0020–0.0079 in.)**

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

- (d) Using a pin punch and hammer, drive the lock pin through the case and hold in the pinion shaft.



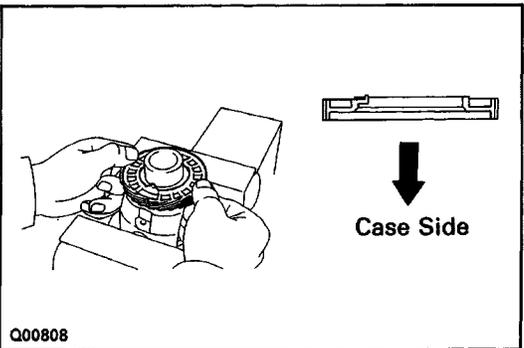
(e) Stake the differential case.



**2. (RING GEAR SIDE)**

**INSTALL SIDE BEARING**

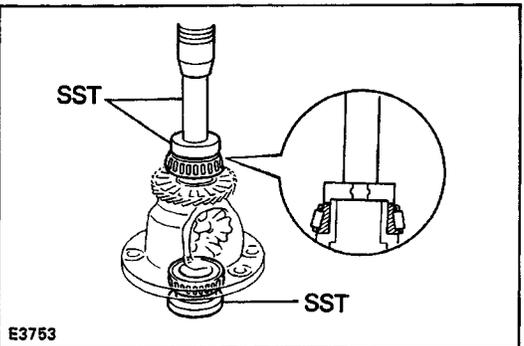
Using SST and a press, install the side bearing.  
SST 09550-10012 (09252-10010, 09556-10010)



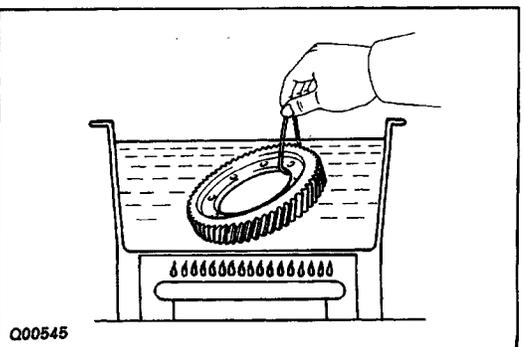
**3. (SPEEDOMETER DRIVE GEAR SIDE)**

**INSTALL SIDE BEARING**

(a) Install the speedometer drive gear.

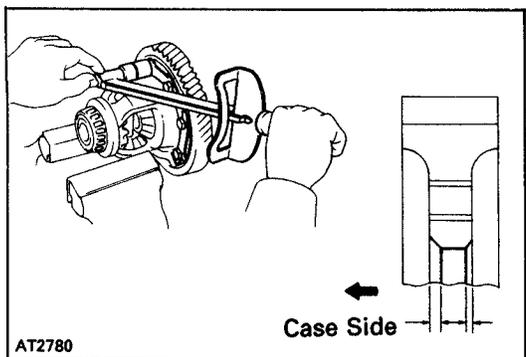


(b) Using SST and a press, install the side bearing.  
SST 09550-10012 (09252-10010, 09556-10010, 09560-10010)



**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) After the moisture on the ring gear has completely evaporated, quickly install the ring gear to the differential case.



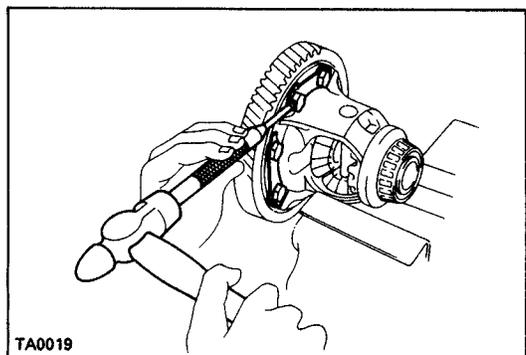
HINT: Align the matchmarks on the differential case and contact the ring gear.

(d) Temporarily install the four lock plates and eight bolts.

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

(e) After the ring gear has cooled sufficiently, torque the ring gear set bolts.

**Torque: 97 N-m (985 kgf-cm, 71 ft-lbf)**



(f) Using a hammer and drift punch, stake the locking plates.

HINT: Stake one claw flush with the flat surface of the nut. For the claw contacting the protruding portion of the nut, stake only the half on the tightening side.

### 5. MEASURE DIFFERENTIAL SIDE BEARING PRELOAD

(a) Install the differential to the transaxle case.

(b) Install the transmission case.

(c) Install and torque the case bolts.

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

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

SST 09564-32011

**Preload (at starting:**

**New bearing**

**0.8–1.6 N-m**

**(8–16 kgf-cm, 6.9–13.9 in.-lbf)**

**Reused bearing**

**0.5–1.0 N-m**

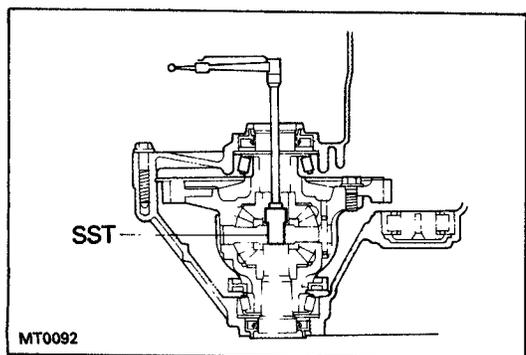
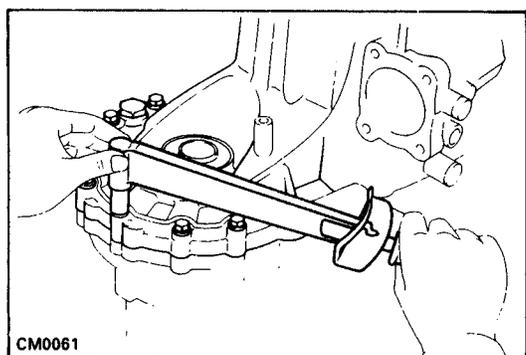
**(5–10 kgf-cm, 4.3–8.7 in.-lbf)**

if the preload is not within specification, remove the transmission case side outer race of the side bearing with SST.

(See page [MT-46](#), 47)

Select another shim.

HINT: The preload will change about 0.3–0.4 N-m (3–4 kgf-cm, 2.6–3.5 in.-lbf) with each shim thickness.



Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
A	2.10 (0.0827)	L	2.60 (0.1024)
B	2.15 (0.0846)	M	2.65 (0.1043)
C	2.20 (0.0866)	N	2.70 (0.1063)
D	2.25 (0.0886)	P	2.75 (0.1083)
E	2.30 (0.0906)	Q	2.80 (0.1102)
F	2.35 (0.0925)	R	2.85 (0.1122)
G	2.40 (0.0945)	S	2.90 (0.1142)
H	2.45 (0.0965)	T	2.95 (0.1161)
J	2.50 (0.0984)	U	3.00 (0.1181)
K	2.55 (0.1004)		