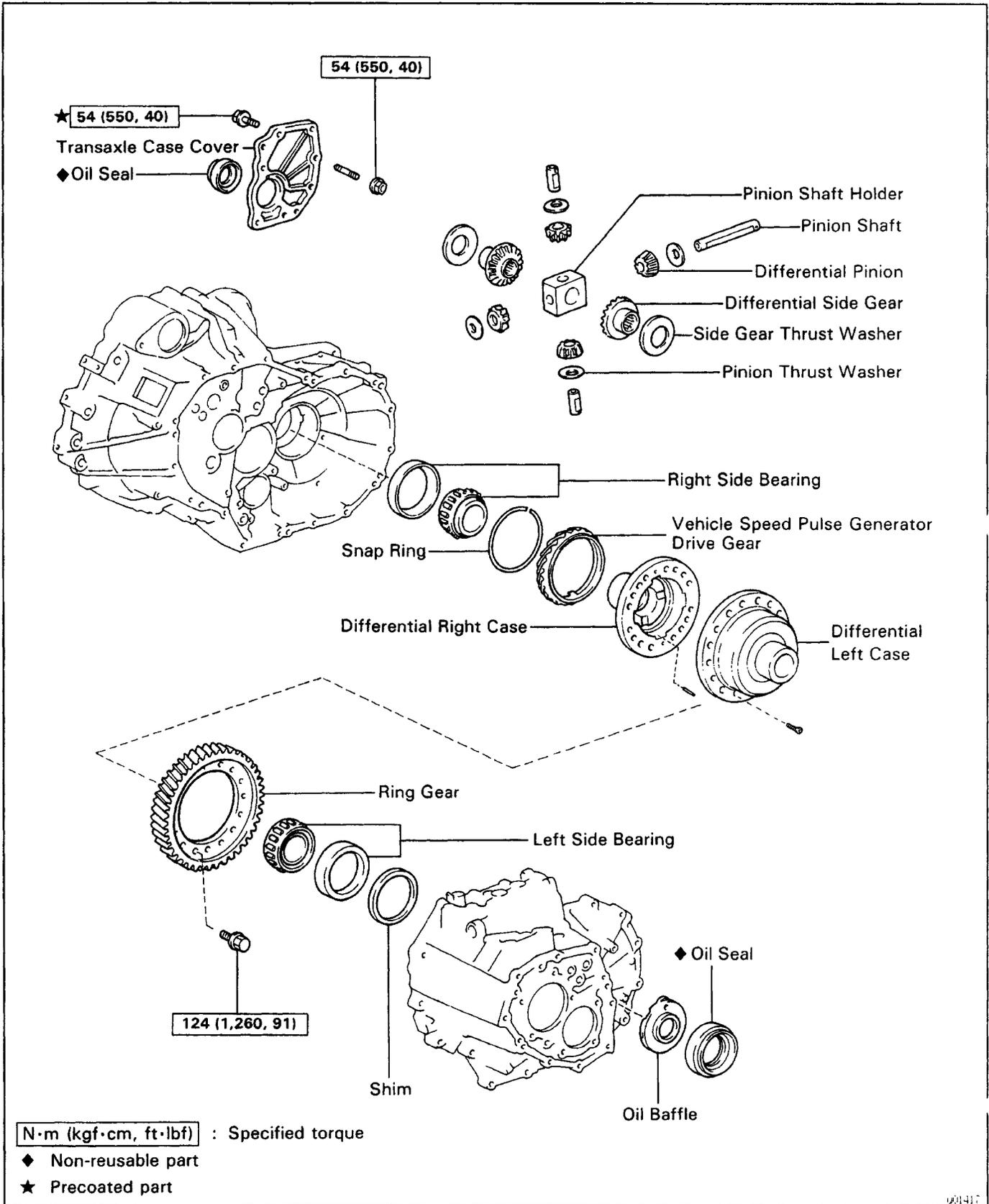


DIFFERENTIAL CASE (Viscous Coupling LSD Type) COMPONENTS

MX01K-03

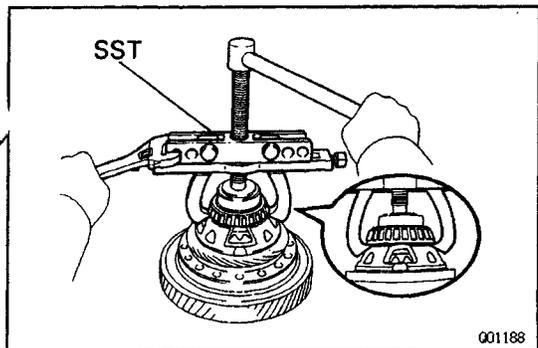


MX050-01

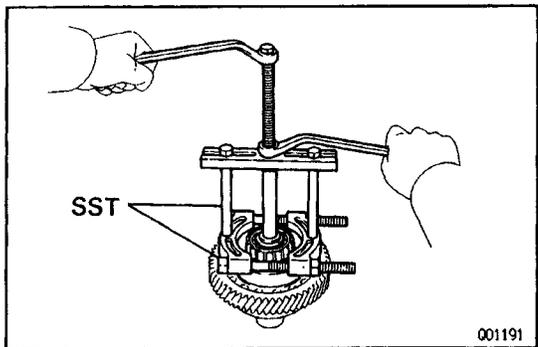
DIFFERENTIAL CASE DISASSEMBLY

1. REMOVE SIDE BEARING

- (a) Using SST, remove the RH side bearing.
SST 09950-20017

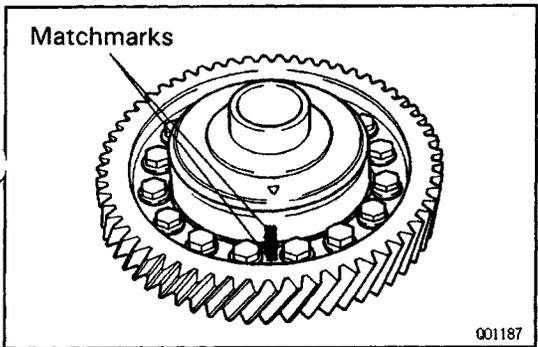


- (b) Using SST, remove the LH side bearing.
SST 09950-00020, 09950-00030

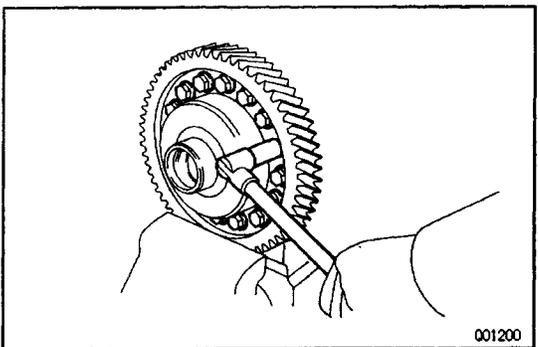


2. REMOVE RING GEAR

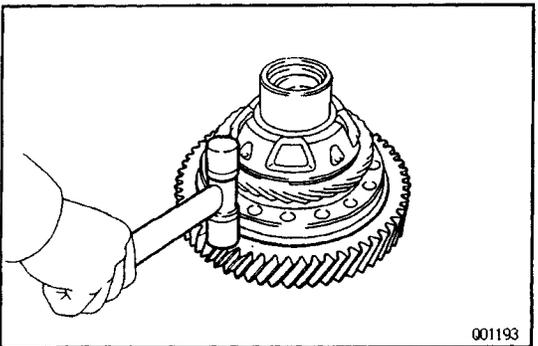
- (a) Place the matchmarks on both the differential case and ring gear.

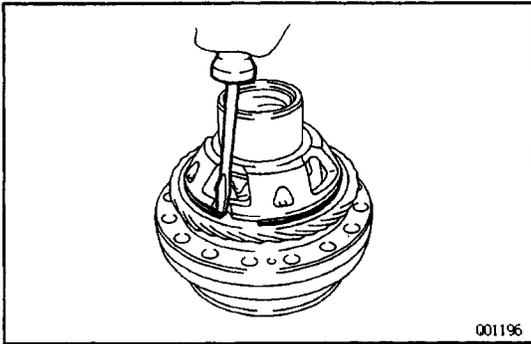


- (b) Remove the sixteen bolts.



- (c) Using a plastic hammer, tap out the ring gear.

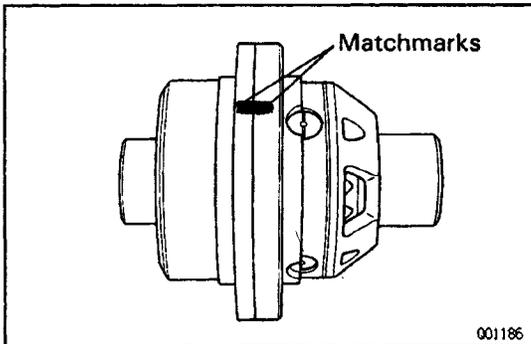




001196

3. REMOVE VEHICLE SPEED PULSE GENERATOR DRIVE GEAR

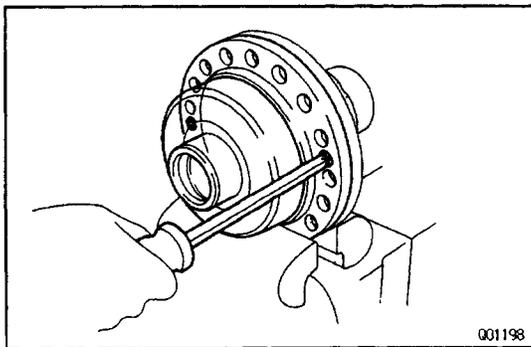
- (a) Using a screwdriver, remove the snap ring.
- (b) Remove the vehicle speed pulse generator drive gear.



001186

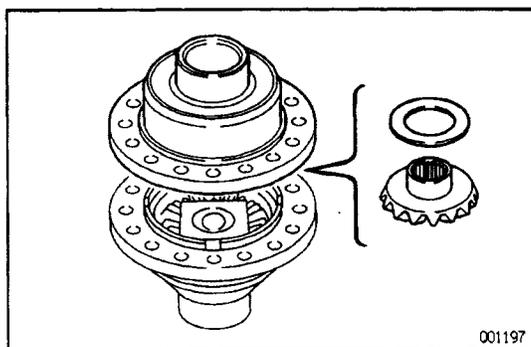
4. DISASSEMBLE DIFFERENTIAL CASE

- (a) Place the matchmarks on the differential right and left case.



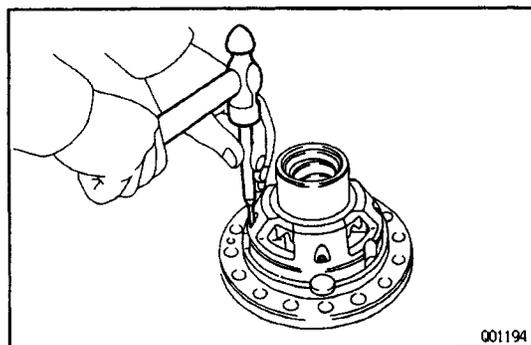
001198

- (b) Remove the two screws.



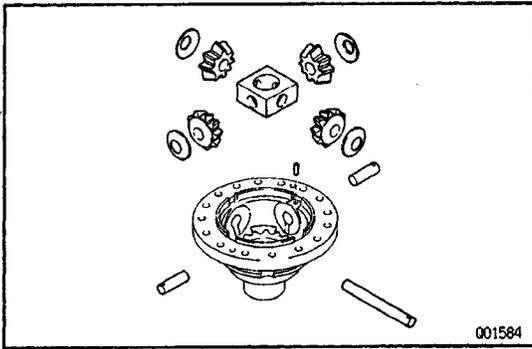
001197

- (c) Disassemble the differential case, side gear and thrust washer.

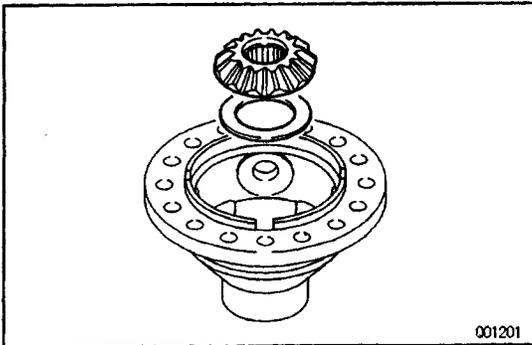


001194

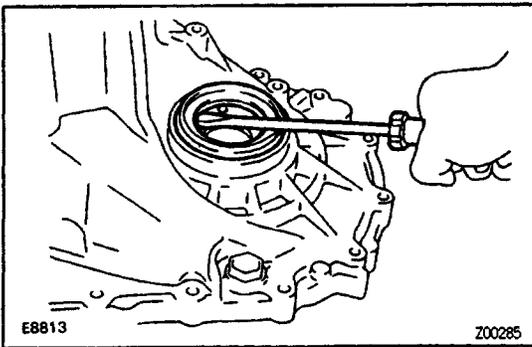
- (d) Using a pin punch, drive out the three slotted spring pin.



- (e) Remove the three pinion shafts, four pinion gears, four pinion washers and shaft holder.



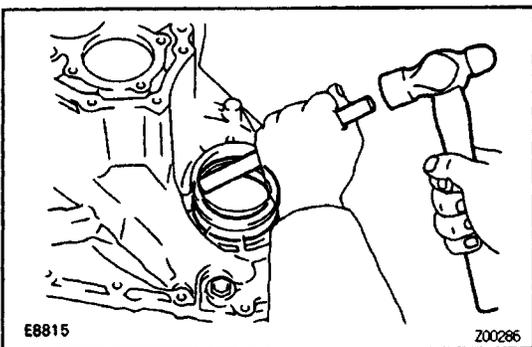
- (f) Remove the side gear and thrust washer from the differential right case.



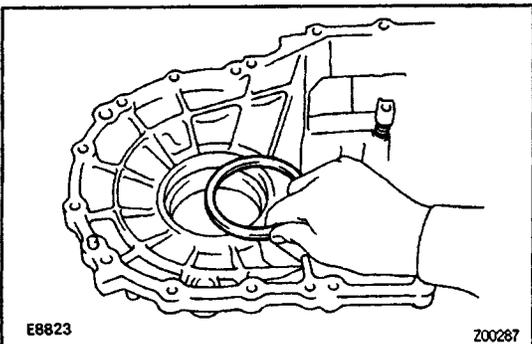
5. (Transmission Case Side)

IF NECESSARY, REPLACE OIL SEAL AND TAPER ROLLER BEARING OUTER RACE

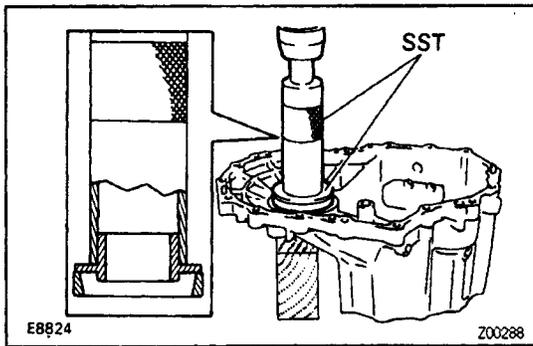
- (a) Using a screwdriver, remove the oil seal.
 (b) Remove the transmission oil baffle.



- (c) Using a brass bar and hammer, drive out the bearing outer race lightly and evenly.
 (d) Remove the shim.

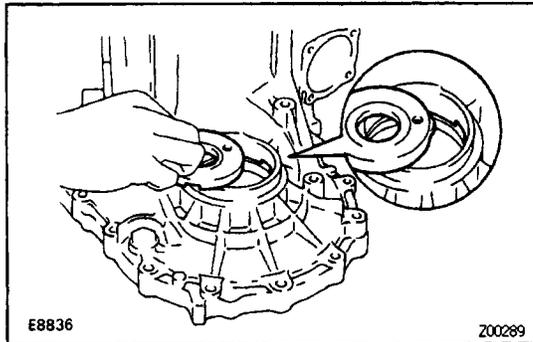


- (e) Install the shim.
 (See page [MX2-72](#))
 HINT: First select and install a shim of lesser thickness than before.



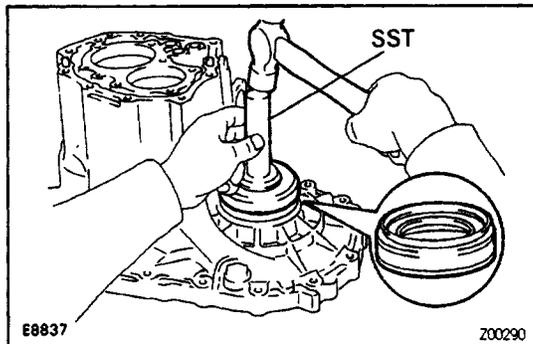
(f) Using SST and a press, install the taper roller bearing outer race.

SST 09316-60010 (09316-00010, 09316-00040)



(g) Install the transmission oil baffle.

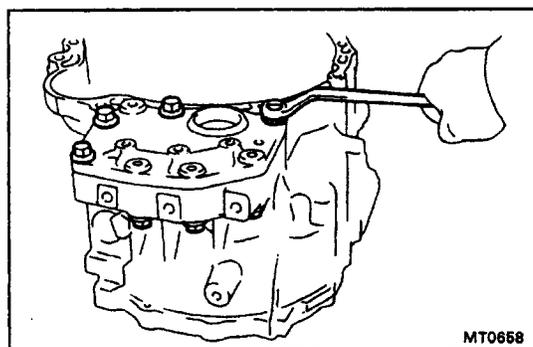
HINT: Install the transmission oil baffle protection into the case side cutout.



(h) Using SST and a hammer, drive in a new oil seal.

SST 09223-15010

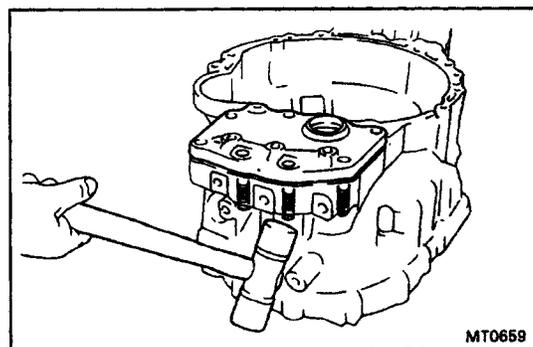
(i) Coat the lip of oil seal with MP grease.



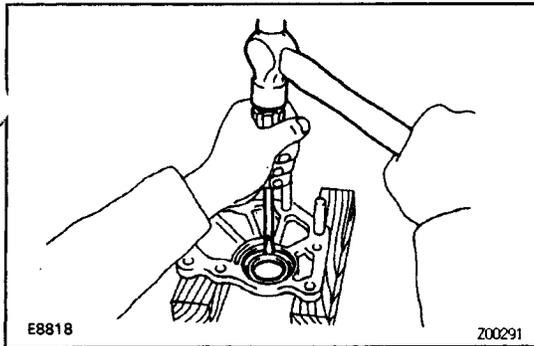
6. (Transaxle Cse Side)

IF NECESSARY, REPLACE OIL SEAL AND TAPE ROLLER BEARING OUTER RACE

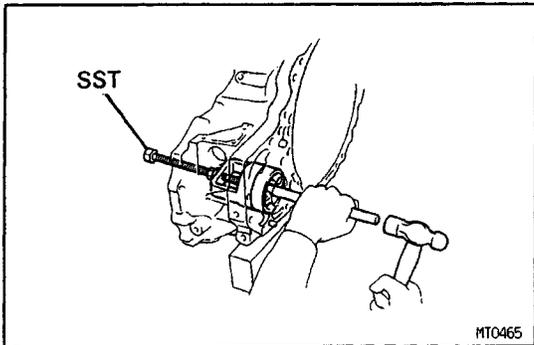
(a) Remove the four bolts and three nuts.



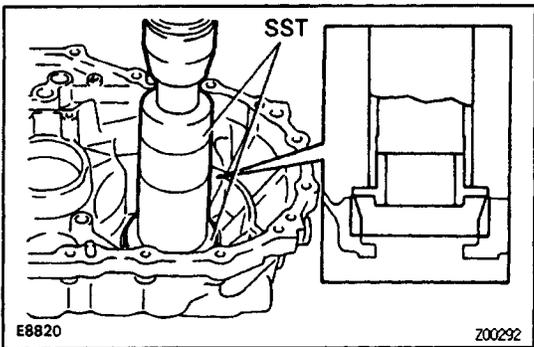
(b) Using a plastic hammer, tap the stud bolts and remove the transaxle case cover.



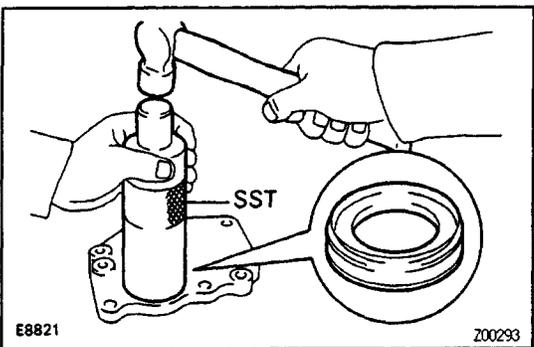
(c) Using a screwdriver and hammer, drive out the oil seal.



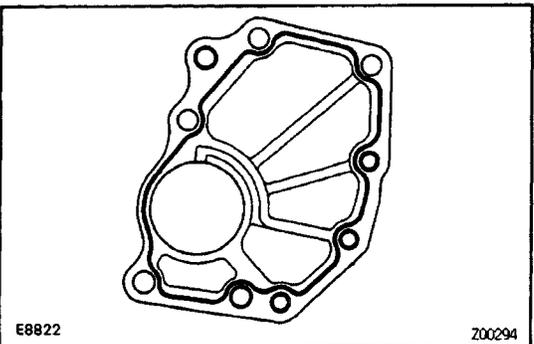
(d) Using SST, brass bar and hammer, remove the taper roller bearing outer race.
SST 09612-65014



(e) Using SST and a hammer, install the taper roller bearing.
SST 09316-60010 (09316-00010, 09316-00040)



(f) Using SST and a hammer, drive in a new oil seal.
SST 09316-60010 (09316-00010)
(g) Coat the lip of oil seal with MP grease.

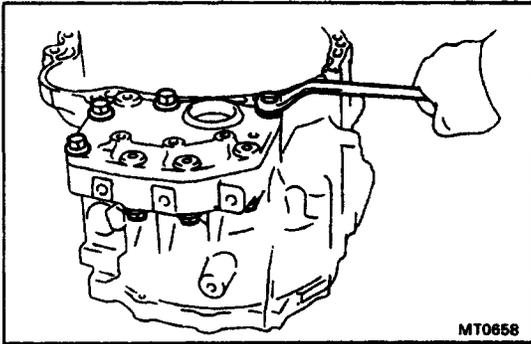


(h) Remove any packing material and be careful not to drop oil on the contacting surfaces of the transaxle case or case cover.

(i) Apply seal packing to the transaxle case cover as shown in the figure.

Seal packing: Part No. 08826-00090, THREE BOND 1281 or equivalent

HINT: Install the transaxle case cover as shown as the seal packing is applied.



(j) Apply sealant to the bolt threads.

Sealant:

**Part No.08833-00080. THREE BOND 1344, LOC-
TITE 242 or equivalent**

(k) Install and torque the four bolts and three nut.

Torque: 54 N-m (550 kgf.cm, 40 ft.lbf)

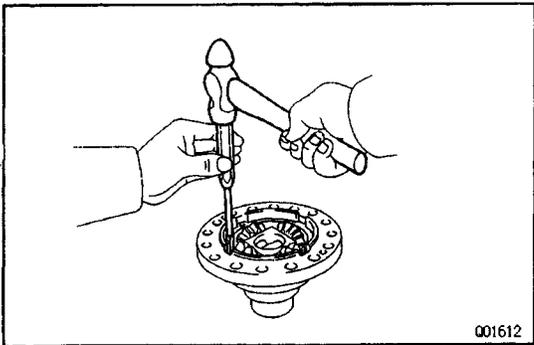
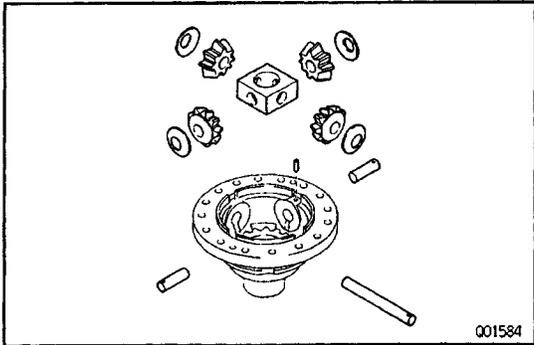
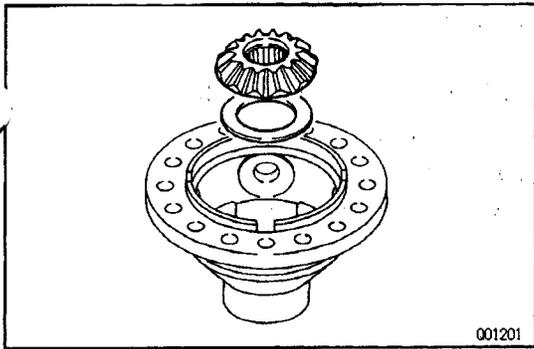
DIFFERENTIAL CASE ASSEMBLY

(See page MX2-72).

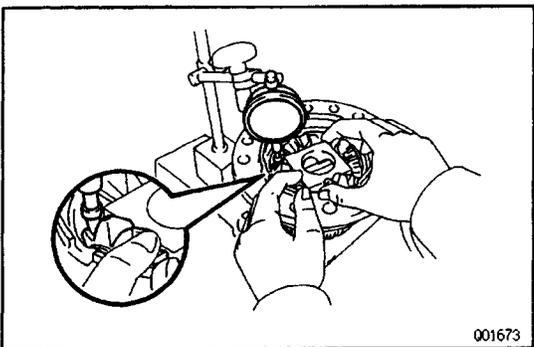
1. ASSEMBLE DIFFERENTIAL CASE

HINT: Coat all of the sliding and rotating surface with gear oil before assembly.

- (a) Install the thrust washer and differential side gear to the differential right case.
- (b) Install the three pinion shafts, four pinions, four pinion washers and shaft holder.



- (c) Using a pin punch, drive in the three slotted spring pin to the differential right case.



- (d) Using a dial indicator, measure the backlash of one pinion gear while holding the No.2 differential case.

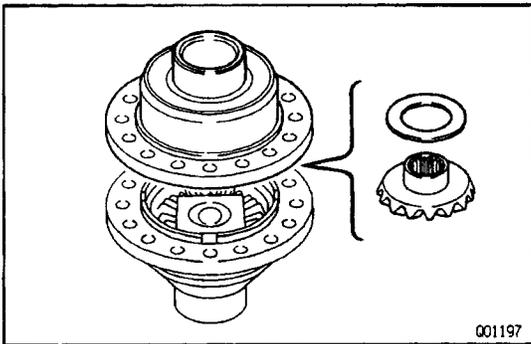
Standard backlash:

0.05–0.20 mm (0.0020–0.0079 in.)

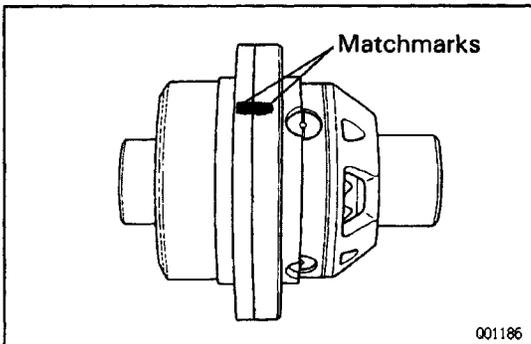
HINT: Push the pinion gear of the left side of the differential case.

- (e) Install the side gear, pinion shafts and shaft holder with four pinions to the right side of the differential case.
And check the side gear backlash.
- (f) Referring to the table below, select the thrust washer which will ensure that the backlash is within specification. Try to select a washer of the same size.

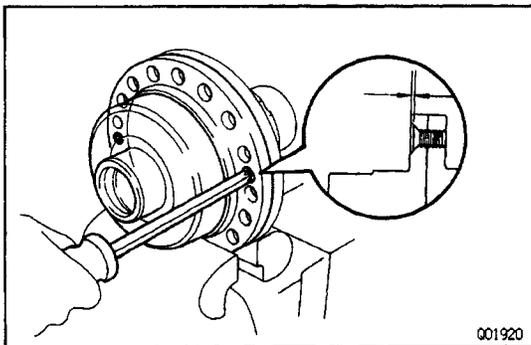
Thickness mm (in.)	Thickness mm (in.)
0.80 (0.0315)	1.20 (0.0472)
0.90 (0.0354)	1.30 (0.0512)
1.00 (0.0394)	1.40 (0.0551)
1.10 (0.0433)	



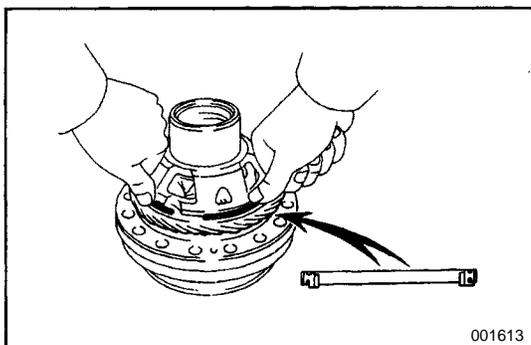
- (g) Assemble the differential case, side gear and thrust washer.



- (h) Align the matchmarks on the differential cases.

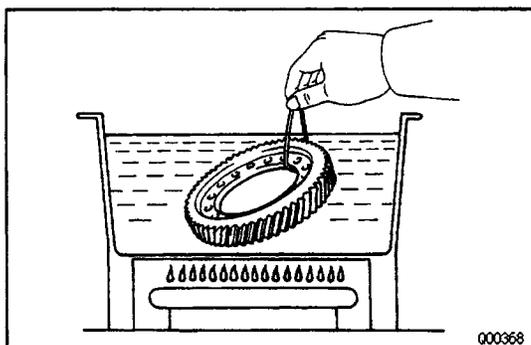


- (i) Install and tighten the two screws.



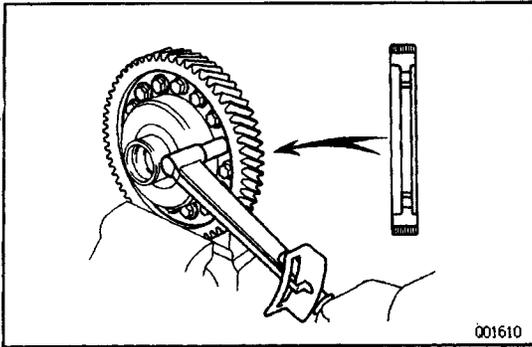
2. INSTALL VEHICLE SPEED PULSE GENERATOR DRIVE GEAR

- (a) Install the vehicle speed pulse generator drive gear to the differential right case.
 (b) install the snap ring.



3. INSTALL RING GEAR

- (a) Clean the contact surface of the differential case and the threads of the ring gear and 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.



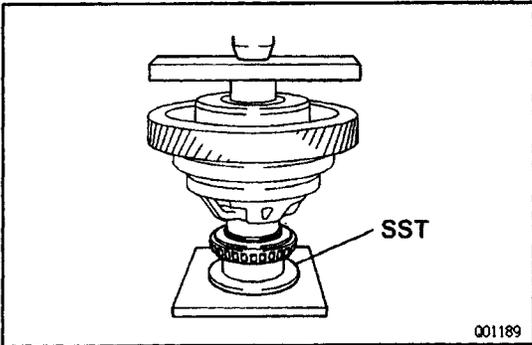
HINT: Align the matchmarks on the differential left case and contact the ring gear.

- (d) Temporarily install the sixteen bolts.

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

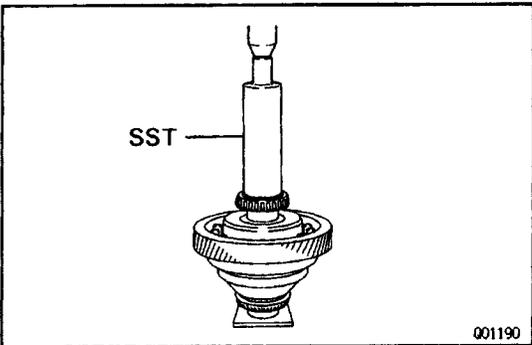
- (e) After the ring gear has cooled sufficiently, torque the ring gear set bolts.

Torque: 124 N-m (1,260 kgf-cm, 91 ft-lbf)



4. INSTALL SIDE BEARING

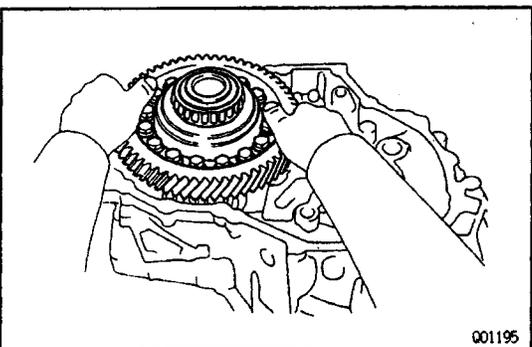
- (a) Using SST and a press, install the RH side bearing.
SST 09316-20011



- (b) Using SST and a press, install the LH side bearing.
SST 09316-60010 (09316-00010)

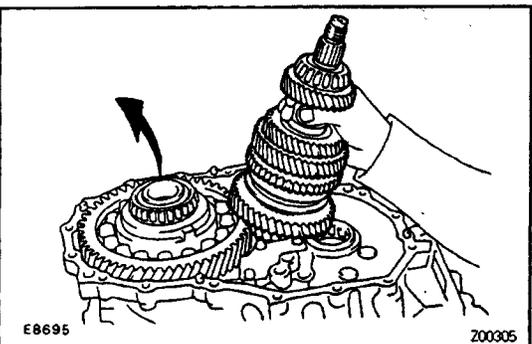
5. ADJUST OUTPUT SHAFT ASSEMBLY PRELOAD

(See page [MX2-85](#) to [MX2-87](#))



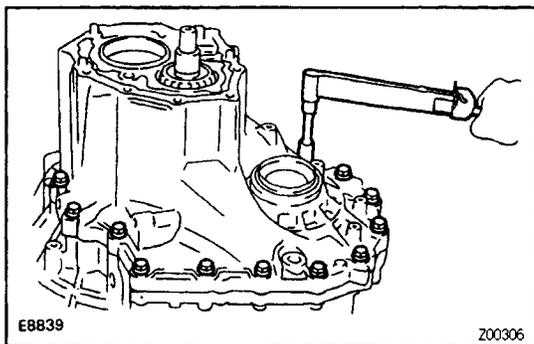
6. INSTALL DIFFERENTIAL CASE ASSEMBLY

Install the differential case assembly to the transaxle case.



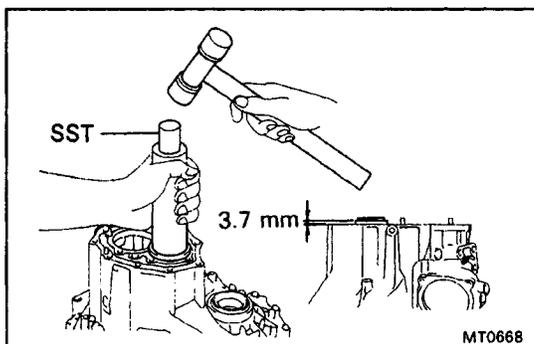
7. INSTALL OUTPUT SHAFT ASSEMBLY

Lift up the differential case, install the input shaft assembly.



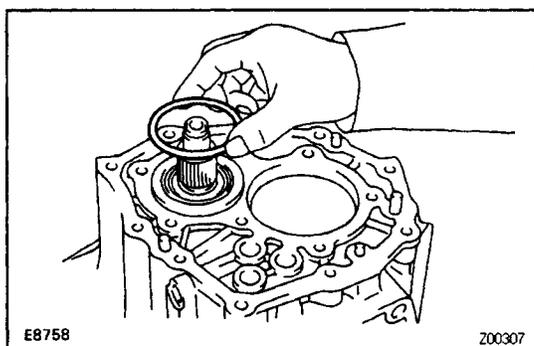
8. INSTALL TRANSMISSION CASE

- (a) Install the transmission case.
HINT: If necessary, tap on the case with a plastic hammer.
- (b) Install and torque the seventeen bolts.
Torque: 29 N-m (300 kgf-cm, 22 ft-lbf)



9. INSTALL OUTPUT SHAFT REAR TAPERED ROLLER BEARING OUTER RACE

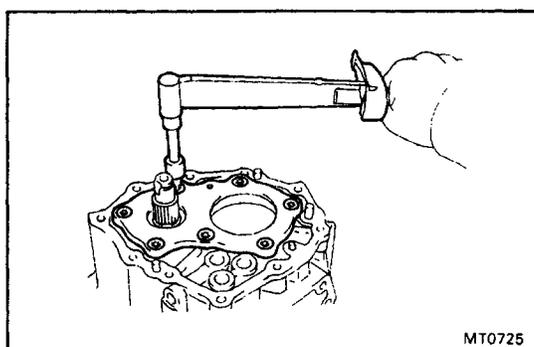
- Using SST and a hammer, install the output shaft rear tapered roller bearing outer race.
SST 09316-60010 (09316-00010)



10. INSTALL SHIM

(See page [MX2-85](#) to [MX2-87](#))

HINT: Install the previously selected shim.

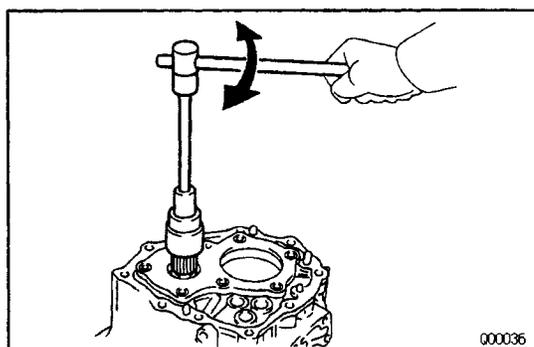


11. INSTALL REAR BEARING RETAINER

Using a torx wrench, install and torque the seven torx screws.

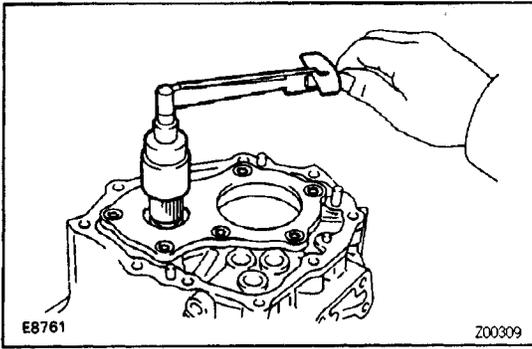
Torx wrench T45 09042-00050

Torque: 42.N.m (430 kgf-cm, 31 ft-lbf)



12. ADJUST DIFFERENTIAL CASE SIDE BEARING PRELOAD

- (a) Install the new lock nut to the output shaft.
- (b) Turn the output shaft right and left two or three times to allow the bearings to settle.



(c) Using a small torque wrench, measure the preload.

Preload (at starting):

New bearing (Add output shaft preload)

0.2–0.4 N·m (2.0–4.1 kgf·cm, 1.7–3.6 in.-lbf)

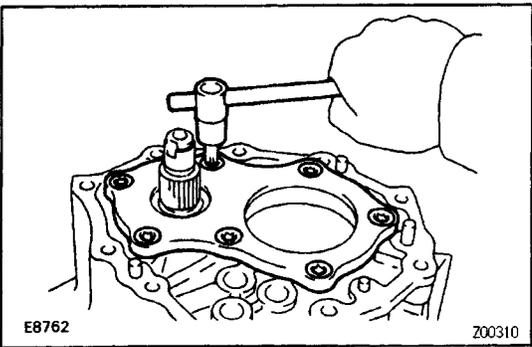
Reused bearing (Add output shaft preload)

0.1–0.2 N·m (1.3–2.5 kgf·cm, 1.1–2.2 in.-lbf)

If the preload is not within specification, select the thrust washers.

HINT: The total preload will change about 0.1–0.2 N·m (1–2 kgf·cm, 0.9–1.7 ft-lbf) with each shire thickness.

Mark	Thickness mm (in.)	Mark	Thickness mm (in.)
0	2.00 (0.0787)	9	2.45 (0.0965)
1	2.05 (0.0807)	A	2.50 (0.0984)
2	2.10 (0.0827)	B	2.55 (0.1004)
3	2.15 (0.0846)	C	2.60 (0.1024)
4	2.20 (0.0866)	D	2.65 (0.1043)
5	2.25 (0.0886)	E	2.70 (0.1063)
6	2.30 (0.0906)	F	2.75 (0.1083)
7	2.35 (0.0925)	G	2.80 (0.1102)
8	2.40 (0.0945)	H	2.85 (0-1122)

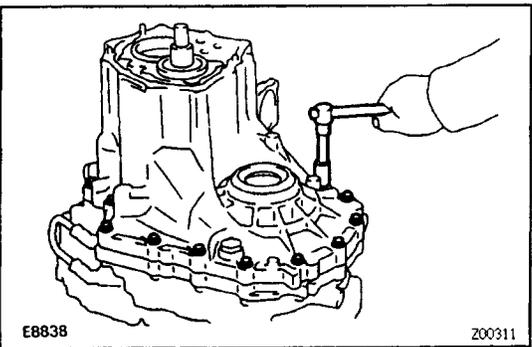


13. REMOVE REAR BEARING RETAINER

Using torx wrench, remove the seven torx screws and rear bearing retainer.

Torx wrench T45 09042-00050

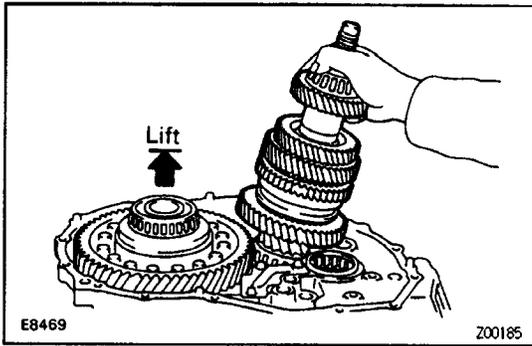
14. REMOVE SHIM



15. REMOVE TRANSMISSION CASE

(a) Remove the seventeen bolts.

(b) Using a plastic hammer, tap off the transmission case.



16. REMOVE OUTPUT SHAFT ASSEMBLY
17. REMOVE DIFFERENTIAL CASE ASSEMBLY