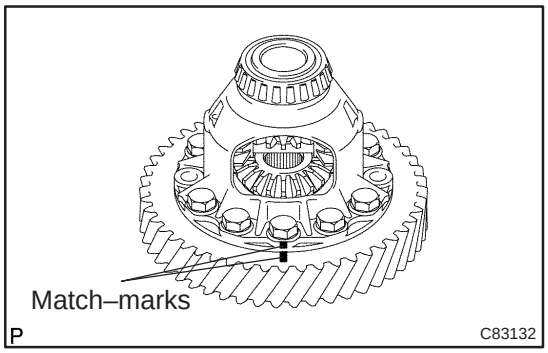
FRONT DIFFERENTIAL ASSY (U241E)

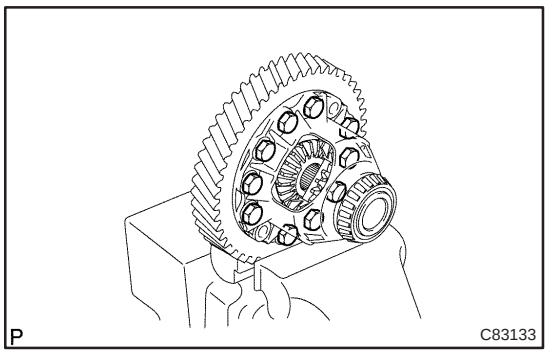
OVERHAUL

4006W–01

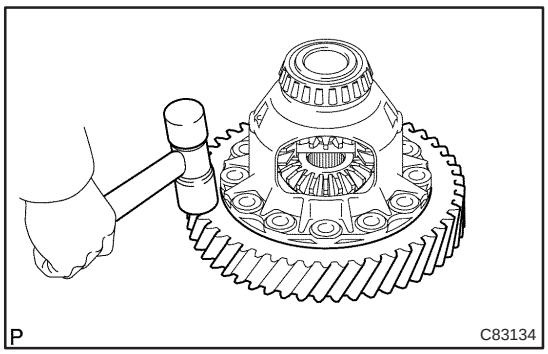


1. REMOVE FRONT DIFFERENTIAL RING GEAR

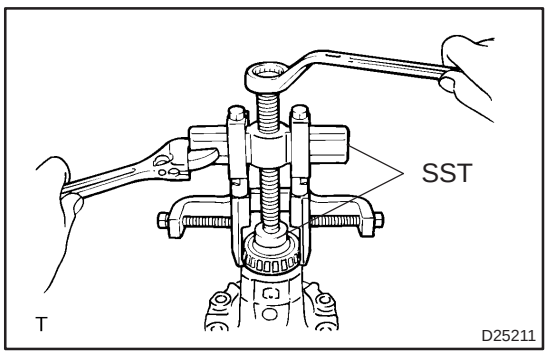
(a) Place the match–marks on the ring gear and differential case.



(b) Remove the 10 bolts.



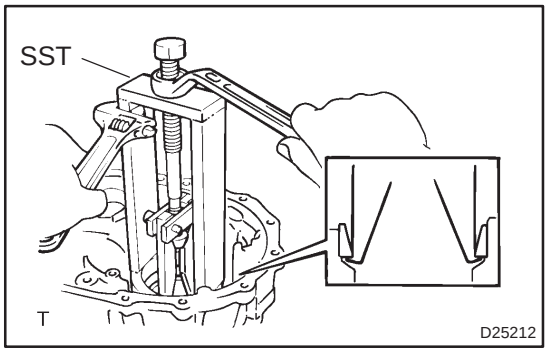
(c) Using a plastic hammer, tap on the ring gear to remove it from the case.



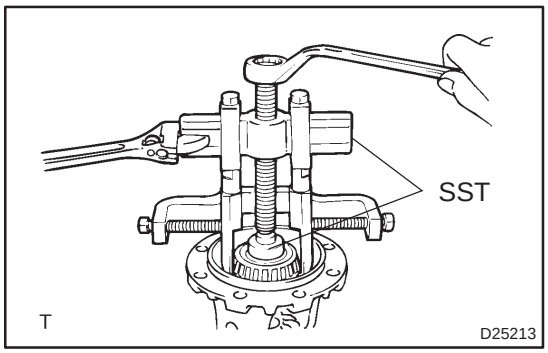
2. REMOVE FR DIFFERENTIAL CASE FRONT TAPERED ROLLER BEARING

(a) Using SST, remove the front differential case tapered roller bearing front inner race from the differential case.

SST 09950–40011 (09951–04020, 09952–04010, 09953–04020, 09954–04010, 09955–04061, 09957–04010, 09958–04011), 09950–60010 (09951–00340)

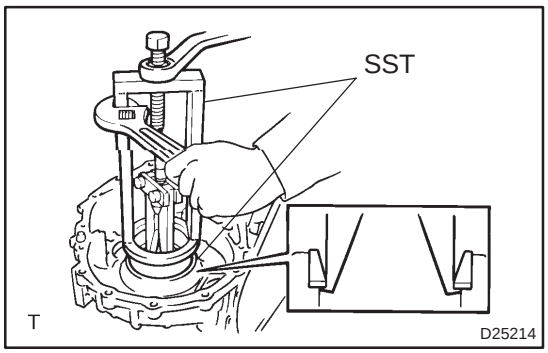


(b) Using SST, remove the front differential case tapered roller bearing front outer race and differential case washer.
SST 09387–00040 (09387–01030, 09387–01040, 09387–02010, 09387–02020)

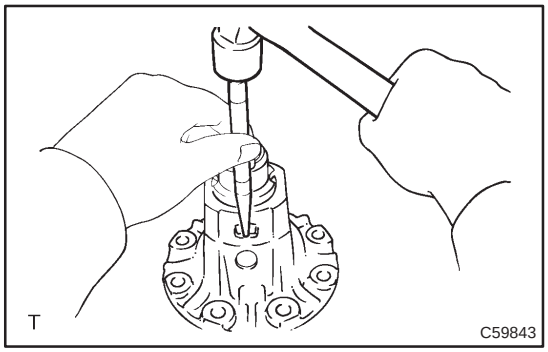


3. REMOVE FR DIFFERENTIAL CASE REAR TAPERED ROLLER BEARING

(a) Using SST, remove the front differential case tapered roller bearing rear inner race from the differential case.
SST 09950–40011 (09951–04020, 09952–04010, 09953–04020, 09954–04010, 09955–04061, 09957–04010, 09958–04011), 09950–60010 (09951–00340)

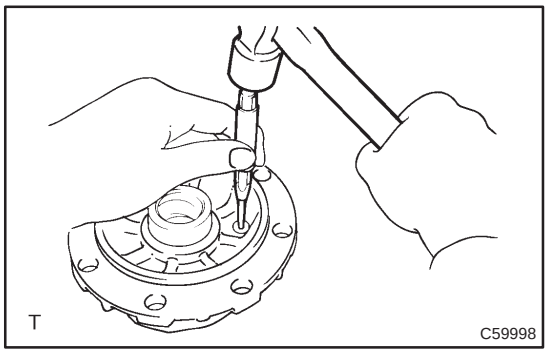


(b) Using SST, front differential case tapered roller bearing rear outer race and differential case washer.
SST 09387–00040 (09387–01030, 09387–01040, 09387–02010, 09387–02020)

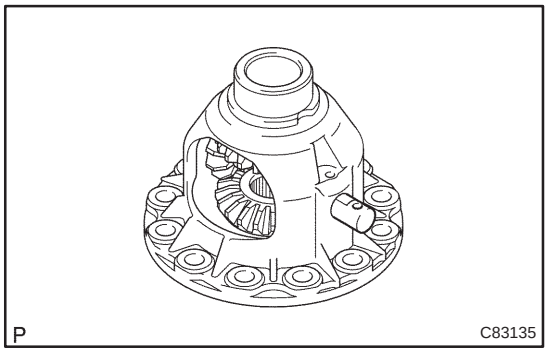


4. REMOVE FRONT DIFFERENTIAL PINION SHAFT STRAIGHT PIN

(a) Using a punch and a hummer, loosen the staked part of the differential case.

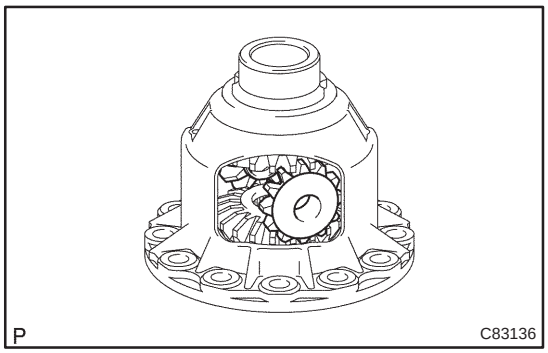


(b) Using a pin punch (5 mm), drive out the pin from ring gear side.



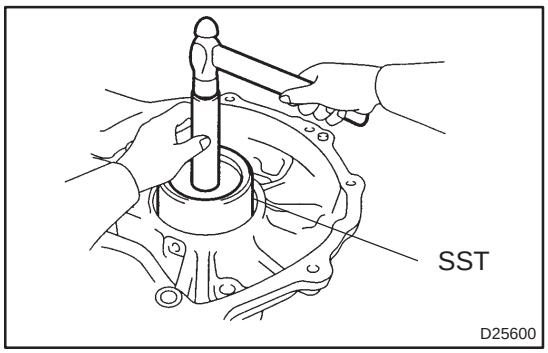
5. REMOVE FRONT DIFFERENTIAL PINION SHAFT NO.1

(a) Remove the front differential pinion shaft No. 1 from the differential case.



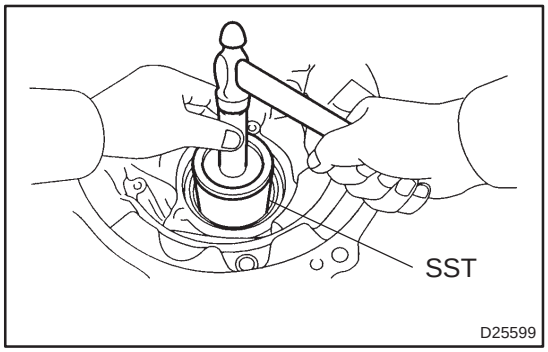
6. REMOVE FRONT DIFFERENTIAL SIDE GEAR

(a) Remove the 2 front differential pinions, 2 pinion thrust washers, 2 front differential side gears and 2 side gear thrust washers from the differential case.



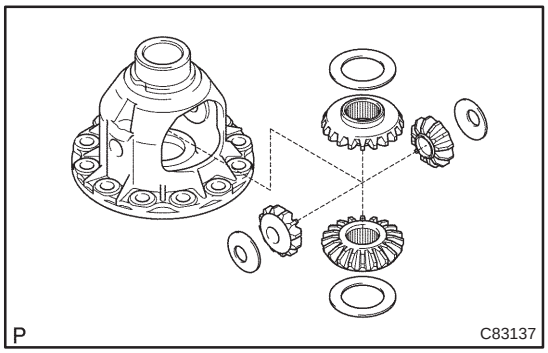
7. REMOVE DIFFERENTIAL SIDE BEARING RETAINER OIL SEAL

(a) Place the transaxle case in vise.
(b) Using SST, remove the oil seal.
SST 09308–00010



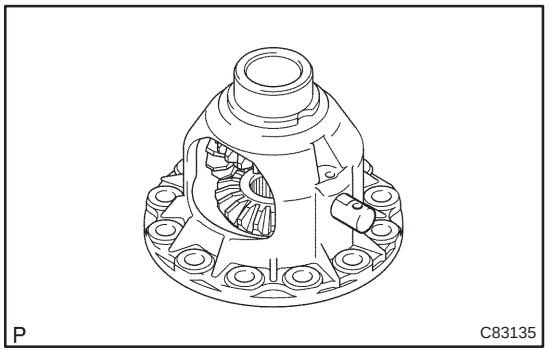
8. REMOVE TRANSAXLE HOUSING OIL SEAL

(a) Place the transaxle housing in vise.
(b) Using SST, remove the oil seal.
SST 09308–00010



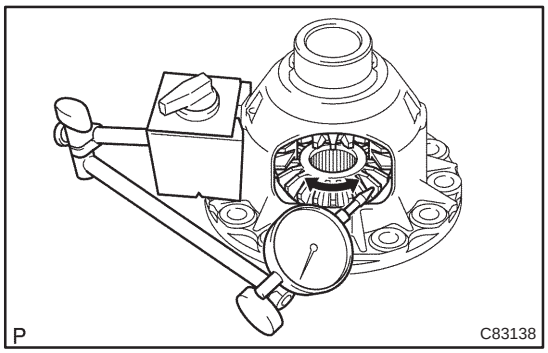
9. INSTALL FRONT DIFFERENTIAL SIDE GEAR

(a) Coat the 2 front differential side gears, 2 side gear thrust washers, 2 front differential pinions and 2 pinion thrust washers with ATF and install them to the differential case.



10. INSTALL FRONT DIFFERENTIAL PINION SHAFT NO.1

(a) Coat the front differential pinion shaft No. 1 with ATF and install it to the differential case.

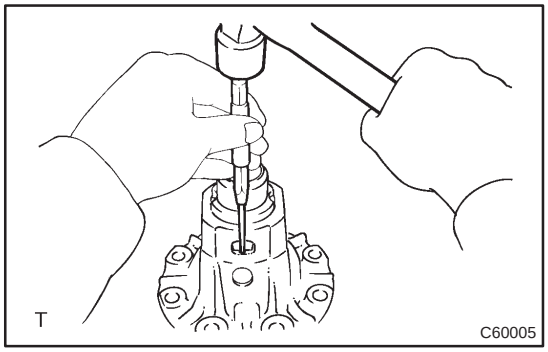


11. INSPECT FRONT DIFFERENTIAL SIDE GEAR BACKLASH

(a) Using a dial indicator, inspect the backlash of the side gear.

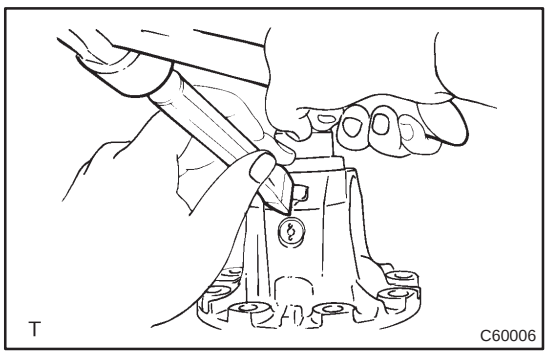
Standard backlash:
0.05 – 0.20 mm (0.0020 – 0.0079 in.)
Thrust washer thickness:

Mark	Thickness
–	1.0 mm (0.0394 in.)
–	1.1 mm (0.0433in.)
–	1.2 mm (0.0472 in.)
–	1.3 mm (0.0512 in.)

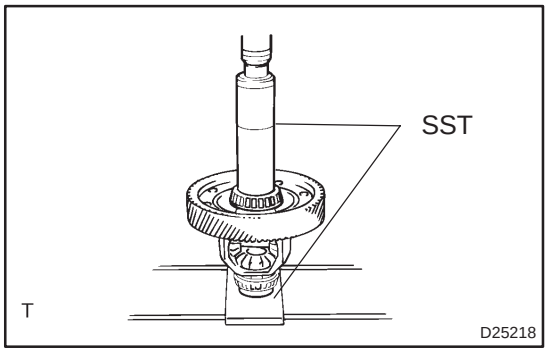


12. INSTALL FRONT DIFFERENTIAL PINION SHAFT STRAIGHT PIN

(a) Using a pin punch and hammer, install the pinion shaft straight pin.

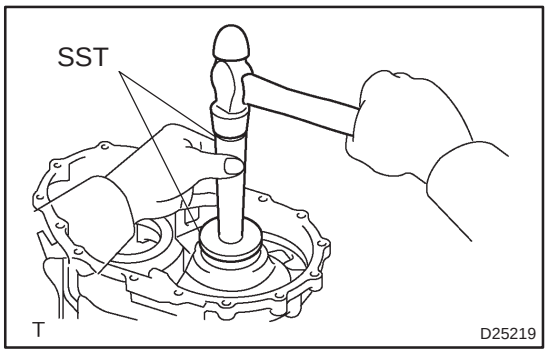


(b) Using a chisel and hammer, stake the differential case.

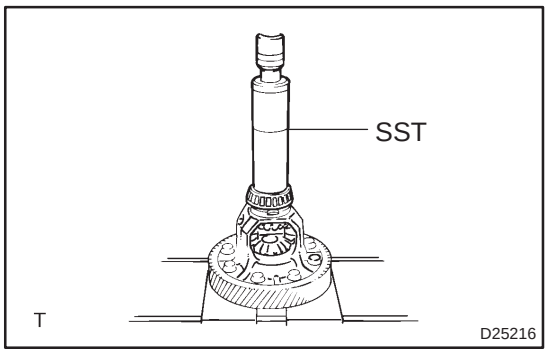


13. INSTALL FR DIFFERENTIAL CASE REAR TAPERED ROLLER BEARING

(a) Using SST and a press, install the front differential case tapered roller bearing rear inner race to the differential case.
SST 09608–06041

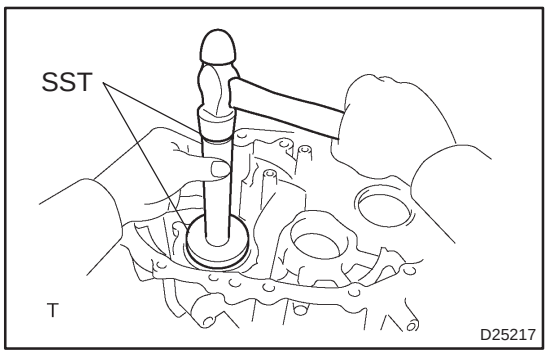


(b) Using SST and a hammer, install the case washer and front differential case tapered roller bearing rear outer race to the transaxle case.
SST 09950–60020 (09951–00710), 09950–70010 (09951–07100)

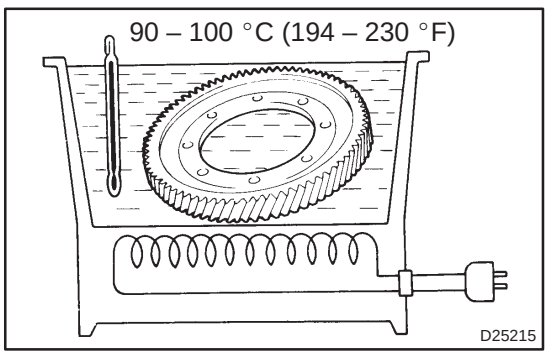


14. INSTALL FR DIFFERENTIAL CASE FRONT TAPERED ROLLER BEARING

(a) Using SST and a press, install the front differential case tapered roller bearing front inner race to the differential case.
SST 09608–06041

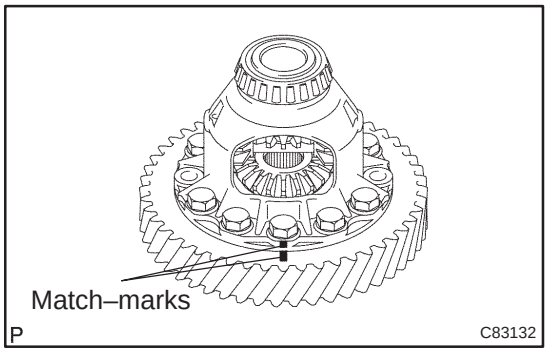


(b) Using SST and a hammer, install the front differential case tapered roller bearing front outer race to the transaxle housing.
SST 09950–60020 (09951–00680), 09950–70010 (09951–07100), 09950–60010 (09951–00340)

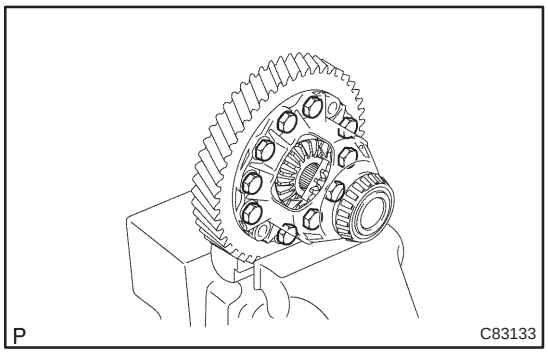


15. INSTALL FRONT DIFFERENTIAL RING GEAR

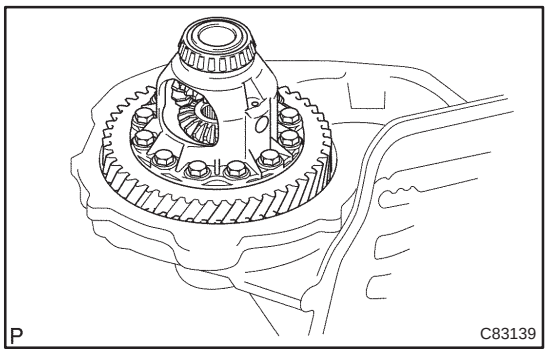
(a) Using ATF and hear, hear the front differential ring gear to 90 – 110 °C (194.0 – 230.0 °F).
(b) Clean the contact surface of the front differential case.



(c) Set the match–marks, install the front differential ring gear case quickly.



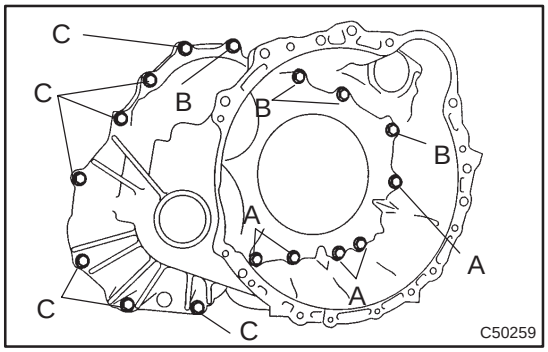
(d) Tighten the 10 bolts.
Torque: 95 N·m (969 kgf·cm, 70 ft·lbf)



16. INSPECT TAPERED POLLER BEARING PRELOAD

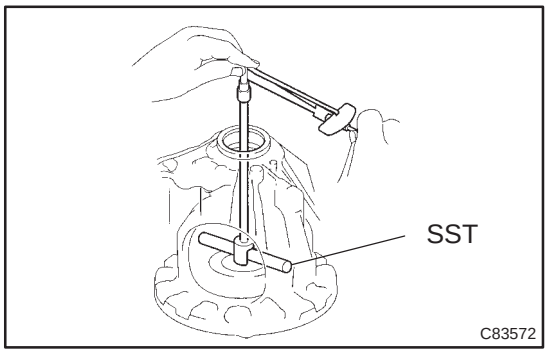
(a) Install the differential assy to the transaxle case.

(b) Install the transaxle housing to the transaxle case.

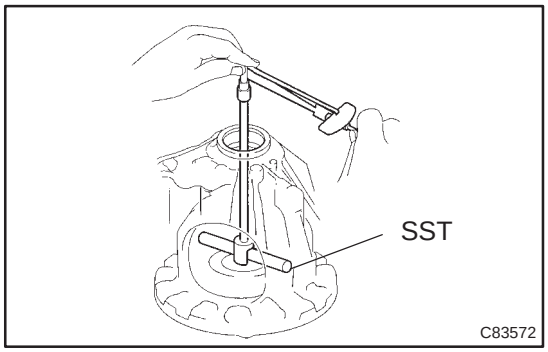


(c) Install the 16 bolts.
Torque:
Bolt A, B: 29.4 N·m (300 kgf·cm, 21.7 ft·lbf)
Bolt C: 22.1 N·m (225 kgf·cm, 16.3 ft·lbf)

Bolt	Bolt length (mm)
A, B	42
C	50

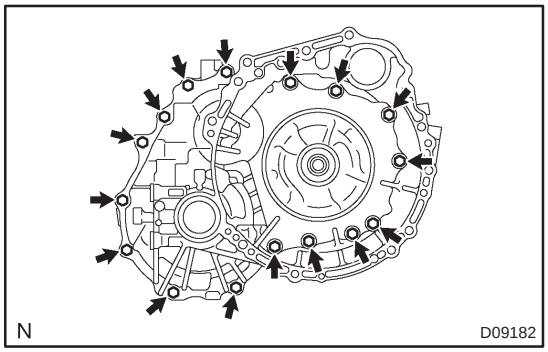


(d) Using SST, turn the differential assy.
SST 09564–32011

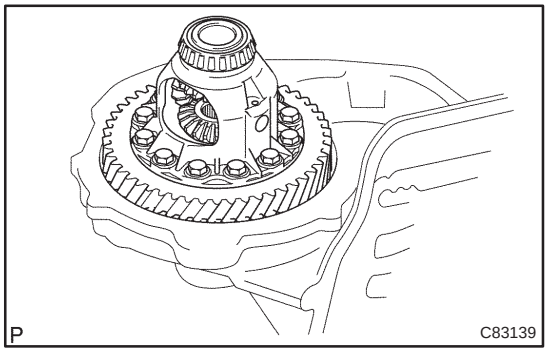


(e) Using SST and torque wrench, measure the preload of the differential assy.
SST 09564–32011
Preload
New bearing:
0.20 – 0.69 N·m (2.0 – 7.0 kgf·cm, 1.8 – 6.1 in.·lbf)
Used bearing:
0.10 – 0.35 N·m (1.0 – 3.6 kgf·cm, 0.9 – 3.1 in.·lbf)
Adjusting shim thickness: mm (in.)

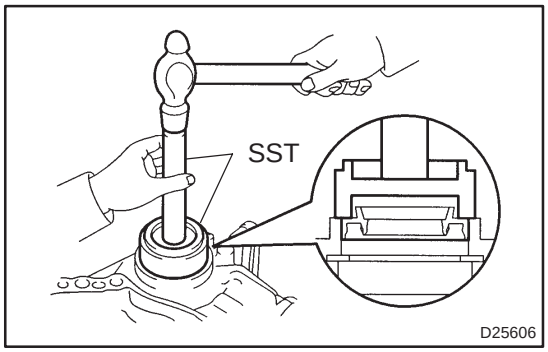
Mark	Thickness
0	1.90 (0.074)
1	1.95 (0.077)
2	2.00 (0.079)
3	2.05 (0.081)
4	2.10 (0.083)
5	2.15 (0.085)
6	2.20 (0.087)
7	2.25 (0.089)
8	2.30 (0.091)
9	2.35 (0.093)
A	2.40 (0.094)
B	2.45 (0.096)
C	2.50 (0.098)
D	2.55 (0.100)
E	2.60 (0.102)
F	2.65 (0.104)
G	2.70 (0.106)
H	2.75 (0.108)
J	2.80 (0.110)



(f) Remove the 16 bolts.
(g) Using a practice hammer, remove the transaxle housing.



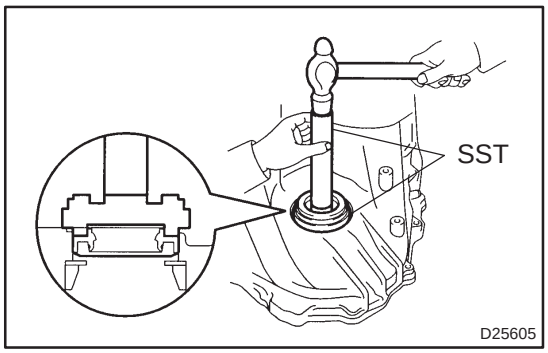
(h) Remove the differential assy.



17. INSTALL TRANSAXLE HOUSING OIL SEAL

(a) Using SST, drive into a new oil seal.
SST 09350–32014 (09351–32150), 09950–70010 (09951–07150)

(b) Coat the rip of oil seal with a little MP grease.



18. INSTALL DIFFERENTIAL SIDE BEARING RETAINER OIL SEAL

(a) Using SST, drive into a new oil seal.
SST 09350–32014 (09351–32150), 09950–70010 (09951–07150)

(b) Coat the rip of the oil seal with a little MP grease.