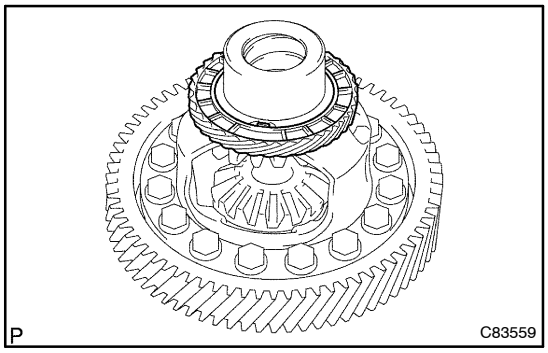
DIFFERENTIAL CASE ASSY (E354)

4103Z–02

OVERHAUL

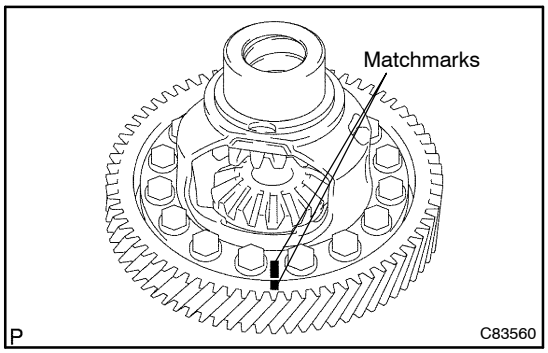
HINT:

COMPONENTS: See page 41–1



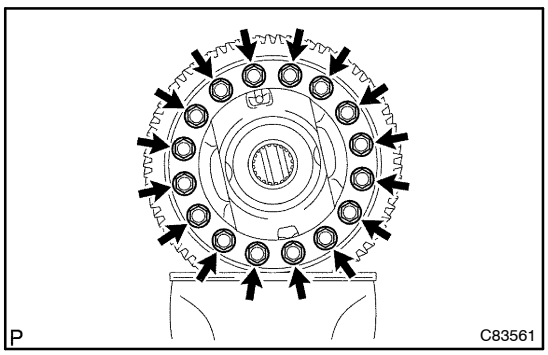
1. REMOVE SPEEDOMETER DRIVE (MTM) GEAR

(a) Remove the speedometer drive (MTM) gear from front differential case assy.

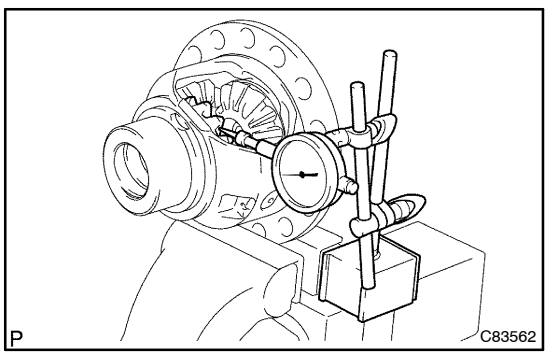


2. REMOVE FRONT DIFFERENTIAL RING GEAR

(a) Place machmarks on the front differential ring gear and from the front differential case.



(b) Remove the 16 bolts. Using a plastic hammer, remove the front differential case.

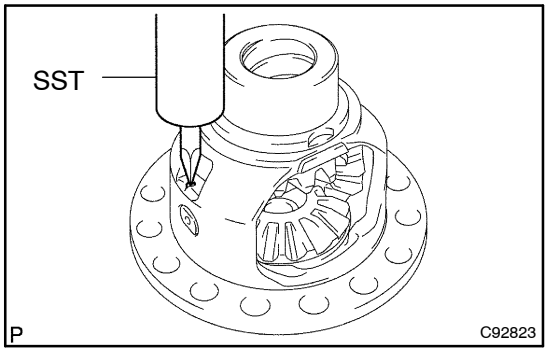


3. INSPECT FRONT DIFFERENTIAL SIDE GEAR BACKLASH

(a) Fixing the front differential pinion to the front differential case side. Using a dial indicator, measure the front differential side gear backlash.

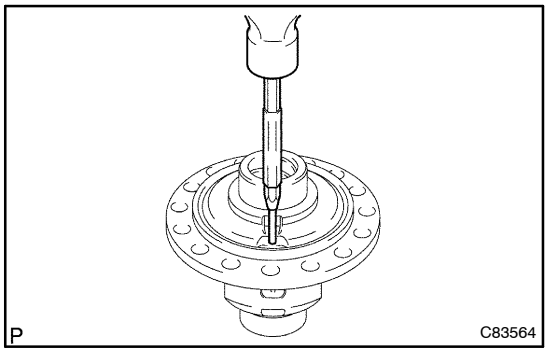
Standard backlash:

0.05 – 0.20 mm (0.0020 – 0.0079 in.)

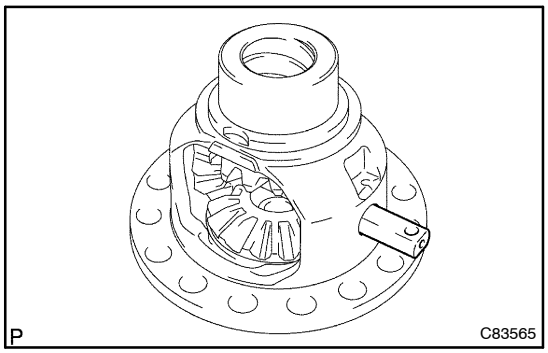


4. REMOVE FRONT DIFFERENTIAL PINION SHAFT STRAIGHT PIN

(a) Using SST and a hammer, unstake the stacked part of the front differential case.
SST 09930–00010

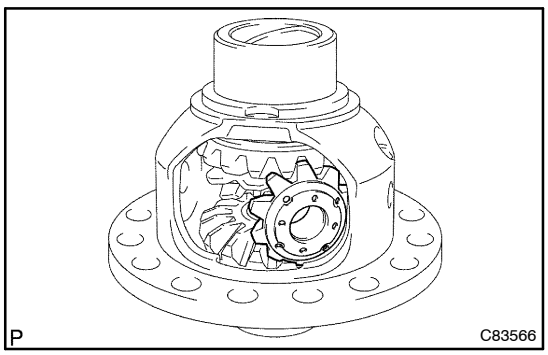


(b) Using a pin punch and a hammer, remove the front differential pinion shaft straight pin from the front differential case.



5. REMOVE FRONT DIFFERENTIAL PINION SHAFT NO.1

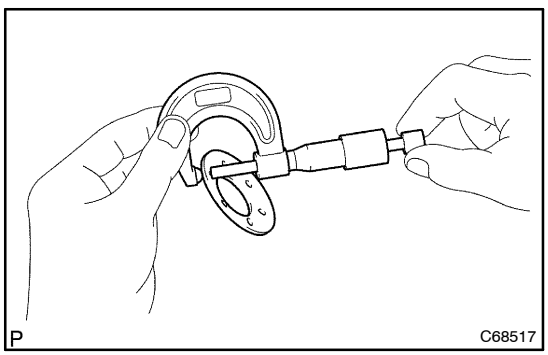
(a) Remove the front differential pinion shaft No.1 to the front differential case.



6. REMOVE FRONT DIFFERENTIAL SIDE GEAR

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

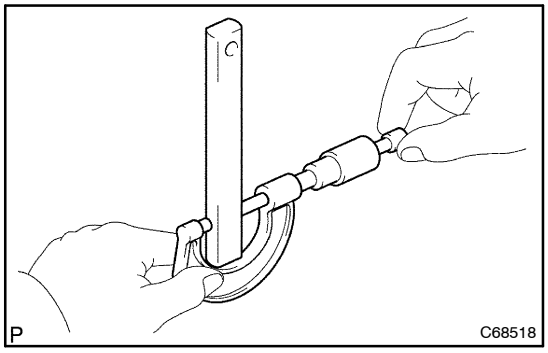
HINT:
Revolving front differential pinion, remove the 2 pinion thrust washers and side gear thrust washers.



7. INSPECT FRONT DIFFERENTIAL PINION THRUST WASHER

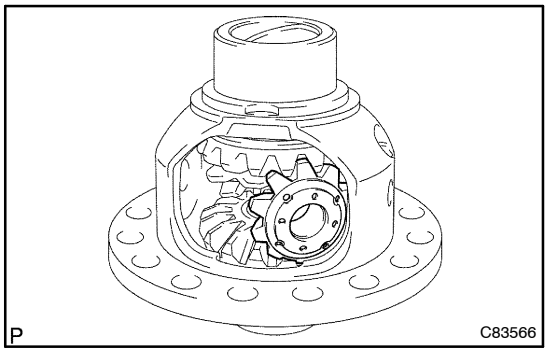
(a) Using a micrometer, measure the thickness of the front differential pinion thrust washer.
Minimum thickness: 0.90 mm (0.0354 in.)

If the thickness smaller than the minimum, replace the front differential pinion thrust washer.



8. INSPECT FRONT DIFFERENTIAL PINION SHAFT NO.1

(a) Using a micrometer, measure the outer diameter of the front differential pinion shaft No.1.
Minimum thickness: 17.975 mm (0.70768 in.)



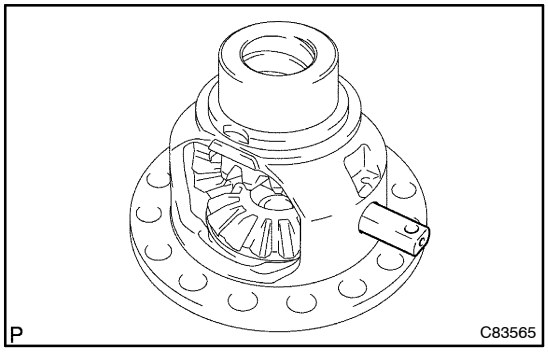
9. INSTALL FRONT DIFFERENTIAL SIDE GEAR

(a) Coat the rotating surface of the front differential side gear with gear oil.
(b) Install the 2 front differential side gear thrust washers to the 2 front differential side gears.

HINT:
Install the front differential side gear as thick as the removed one.

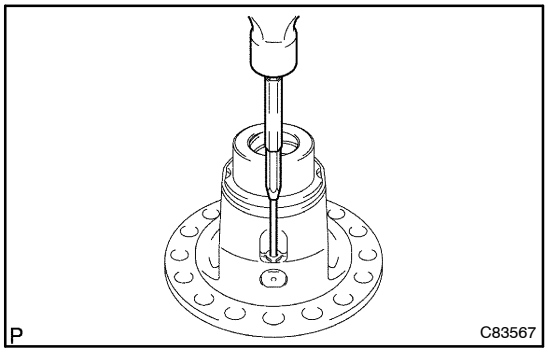
(c) Install the 2 front differential side gears, 2 front differential pinions and 2 front differential side gear thrust washers to the front differential case.

HINT:
Revolving the front differential pinion, install the 2 front differential pinions with front differential washers.



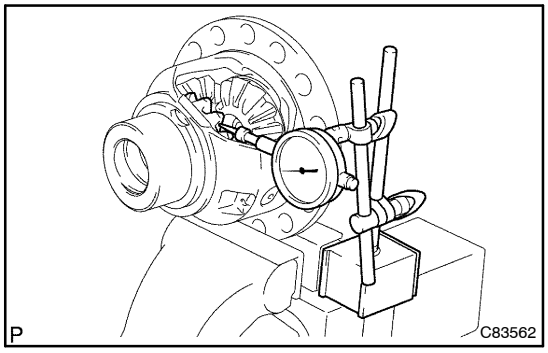
10. INSTALL FRONT DIFFERENTIAL PINION SHAFT NO.1

(a) Coat the rotating surface of the front differential pinion shaft No.1 with gear oil.
(b) Install the front differential pinion shaft No.1 to the front differential case so that the hole for the front differential pinion shaft straight pin is aligned with the hole in the front differential case.



11. INSTALL FRONT DIFFERENTIAL PINION SHAFT STRAIGHT PIN

(a) Using a pin punch and a hammer, install the front differential pinion shaft straight pin to the front differential case.

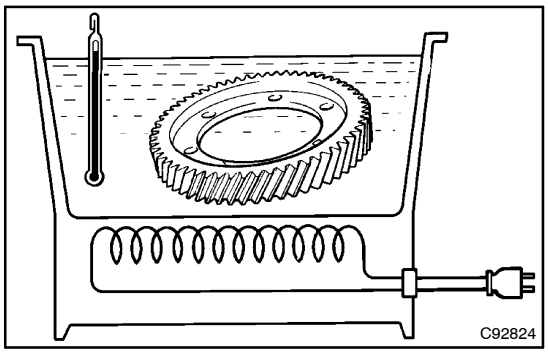


12. ADJUST FRONT DIFFERENTIAL SIDE GEAR BACKLASH

(a) Hold the front differential pinion to the front differential case side. Using a dial indicator, measure the front differential side gear backlash.
Standard backlash: 0.05 – 0.2 mm (0.0020 – 0.0079 in.)

(b) If the backlash is out of the specification, select the front differential side gear thrust washer and adjust it.
Thrust washer: mm (in.)

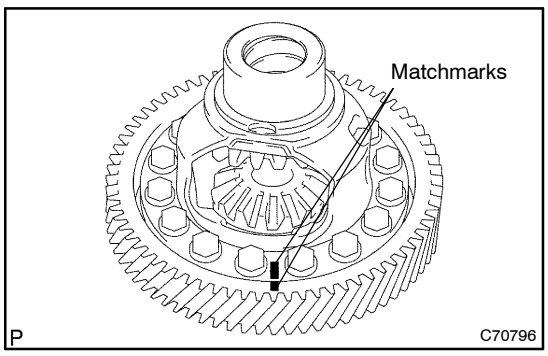
Part No.	Thickness	Mark
41361–28230	1.00 (0.394)	1
41361–28240	1.10 (0.433)	2
41361–28250	1.20 (0.472)	3
41361–28260	1.30 (0.512)	4



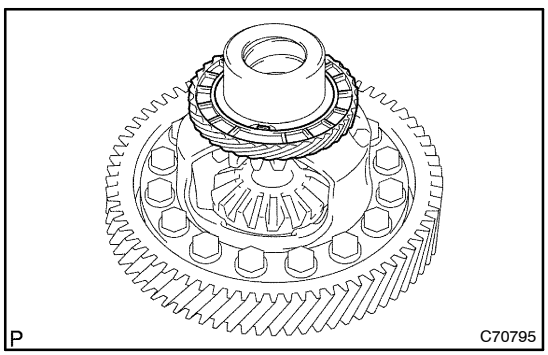
13. INSTALL FRONT DIFFERENTIAL RING GEAR

(a) Using a heater, heat the front differential ring gear to 90 – 100 °C (194.0 – 230.0 °F).

(b) Clean the contact surface differential case.



(c) Aligning the matchmarks, quickly install the front differential ring gear to the front differential case.
Torque: 106 N·m (1,081 kgf·cm, 78 ft·lbf)



14. INSTALL SPEEDOMETER DRIVE (MTM) GEAR

(a) Install the speedometer drive (MTM) gear to the front differential case.