

Differential Assembly

Inspection

To establish a starting point before disassembly, it is necessary to inspect the following:

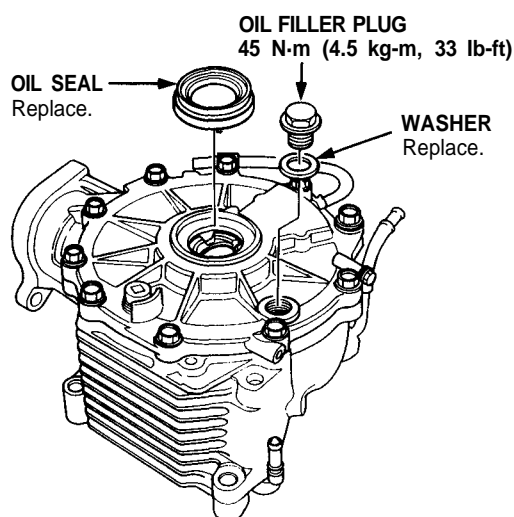
- Backlash
- Total bearing preload
- Gear tooth contact

NOTE:

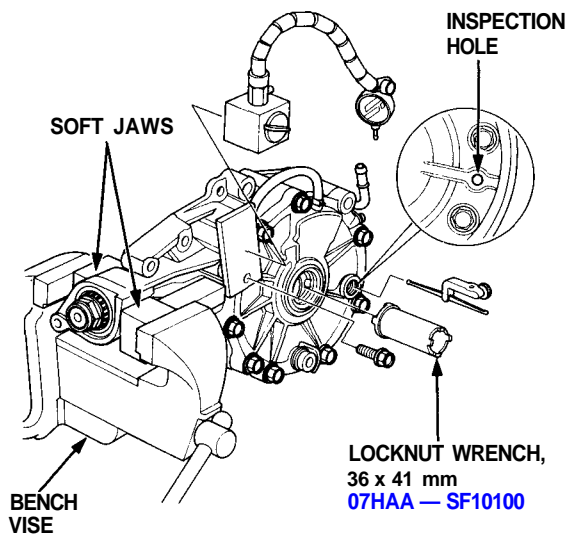
- Be sure the differential is at room temperature before inspecting.
- Record the results of the preliminary inspections as this information will become helpful during reassembly.

Backlash

1. Remove the oil filler plug and oil seal.

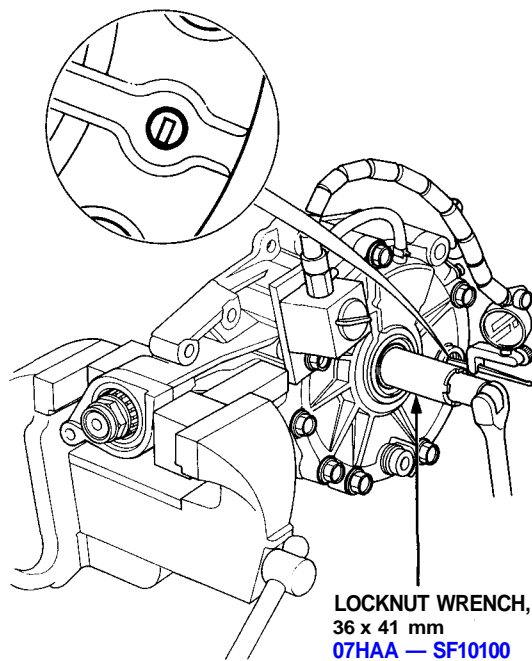


2. Hold the differential case using a bench vice with soft jaws.
3. Align the differential gear inspection hole with the oil filler plug hole.



4. Measure backlash in three to four locations equally spaced on the differential carrier, using the special tools as shown.

Standard: 0.06 — 0.14 mm (0.002 — 0.006 in)

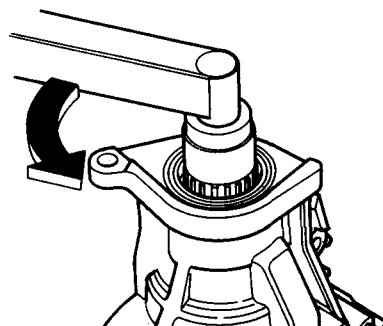


Total bearing preload

5. Use a dial-type torque wrench on the drive pinion to measure the total preload.

Standard:

M/T: 1.37 — 2.00 N-m
(13.7 — 20.0 kg-cm, 11.9 — 17.4 lb-in)
A/T: 2.41 — 3.04 N-m
(24.1 — 30.4 kg-cm, 21.0 — 26.4 lb-in)

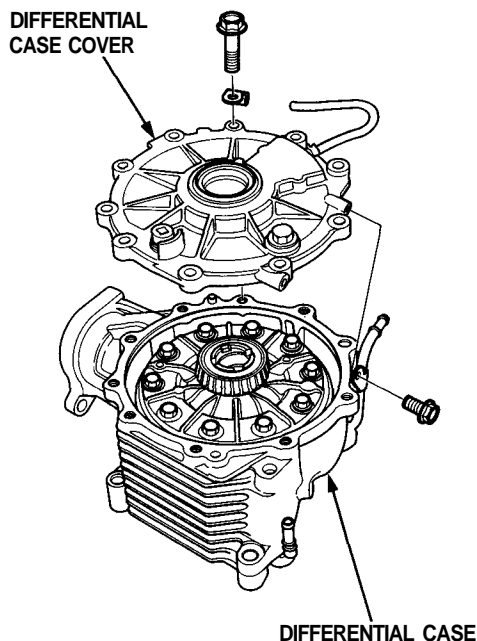




Gear tooth contact

6. Remove the differential case cover. Clean and paint the ring gear teeth lightly and evenly with Prussian Blue (on both sides of each tooth).

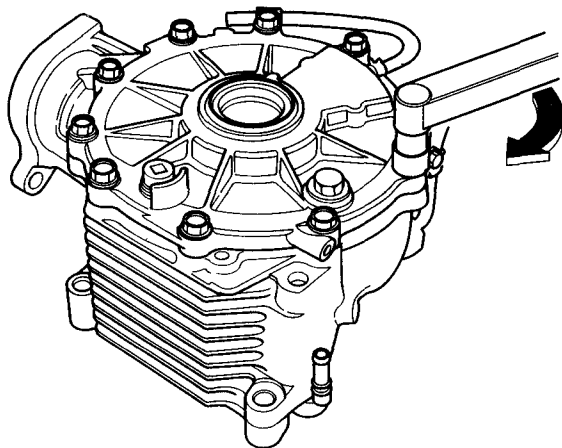
NOTE: Loosen the bolts in a crisscross pattern in several steps.



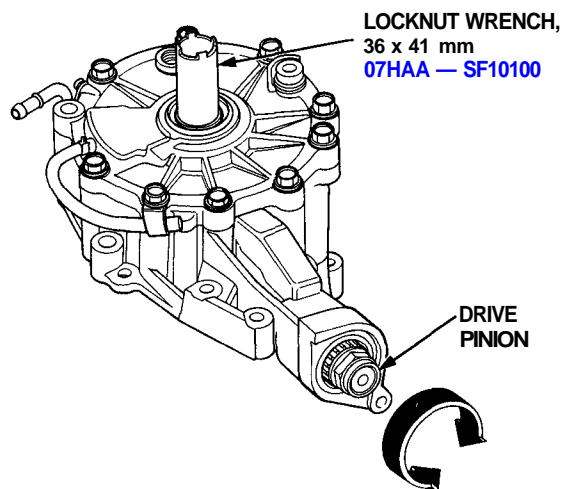
7. Reinstall the differential case cover and torque the bolts.

NOTE: Torque the bolts in a crisscross pattern in several steps.

Torque: 45 N·m (4.5 kg·m, 33 lb·ft)



8. Install the special tool as shown. Rotate the ring gear one full turn in both directions while applying resistance to the drive pinion.



9. Remove the differential case cover and check the tooth contact pattern.

CORRECT TOOTH CONTACT



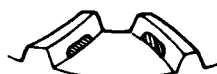
TOE CONTACT



HEEL CONTACT



FLANK CONTACT



FACE CONTACT

