

# Differential Assembly

## Inspection

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

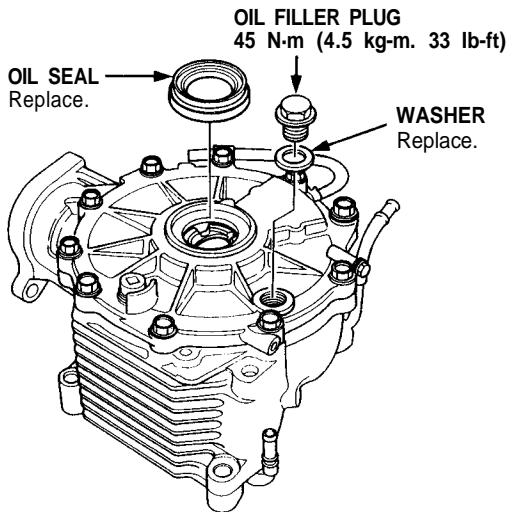
- Backlash
- Total bearing preload
- Gear tooth contact

### NOTE:

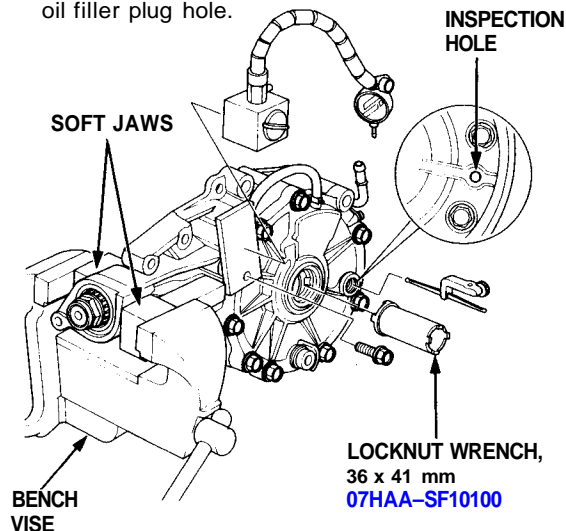
- Be sure the differential is at room temperature before inspecting.
- Record the results of the preliminary inspections as this information will become helpful during reassembly.

### Backlash

1. Remove the oil filler plug and the oil seal.



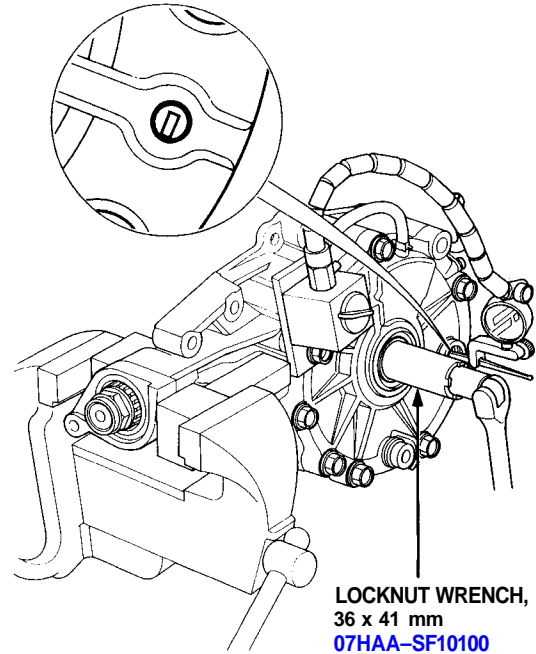
2. Hold the differential case using a bench vise with soft jaws.
3. Align the differential gear inspection hole with the oil filler plug hole.



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)**

The difference between the measurements must not exceed 0.06 mm (0.002 in).



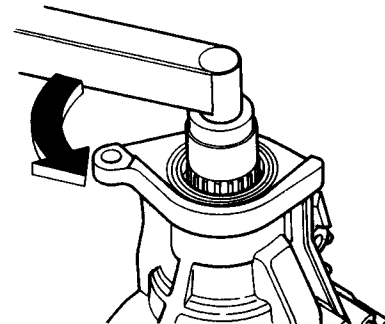
### Total bearing preload

5. Remove the pinion cover oil seal, and then use a dial-type torque wrench on the drive pinion to measure the total bearing 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)

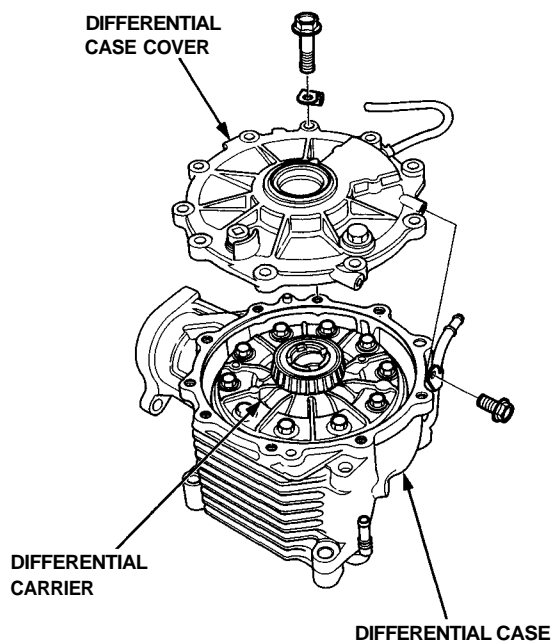




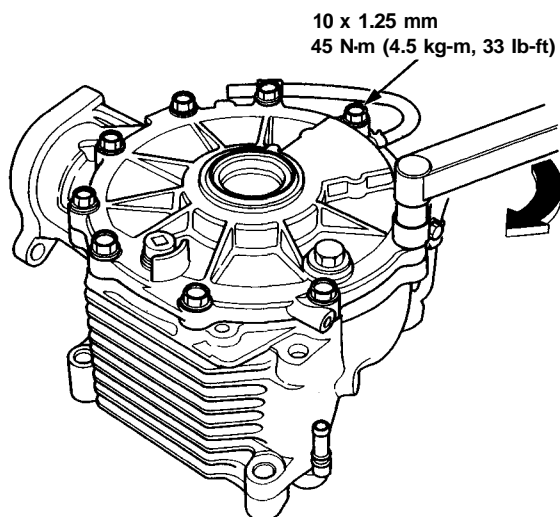
### Gear tooth contact

6. Remove the bolts in a crisscross pattern in several steps, then remove the differential case cover and differential carrier. Clean and paint the ring gear teeth lightly and evenly with Prussian Blue (on both sides of each tooth).

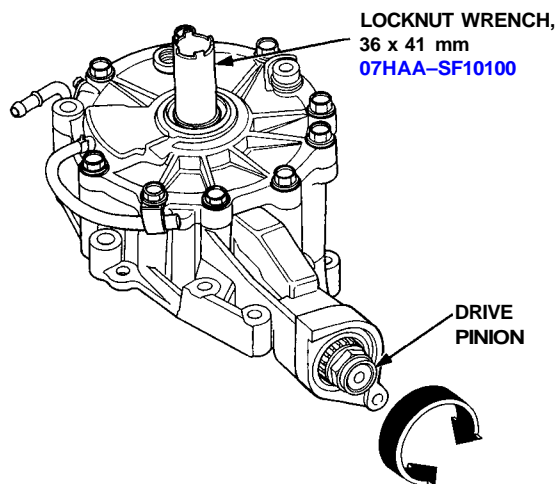
NOTE: Loosen the bolts in a crisscross pattern in several steps.



7. Reinstall the differential case cover, then torque the bolts in a crisscross pattern in several steps.

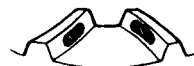


8. Install the special tool as shown. Rotate the ring gear one full turn in both directions while applying resistance to the drive pinion.



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

### CORRECT TOOTH CONTACT



### TOE CONTACT



### HEEL CONTACT



### FLANK CONTACT



### FACE CONTACT

