

DIFFERENTIAL SYSTEM

PRECAUTIONS

1. Before disassembly, clean the outside of the differential assembly and remove any sand or mud to prevent it from entering the inside of the assembly during disassembly or installation.
2. When disassembling a connecting part made of light alloy such as a differential carrier cover, lightly tap it in with a plastic hammer. Do not attempt to pry it off with a screw driver.
3. Always organize and arrange the disassembled parts properly to protect them from dust or other foreign matter.
4. Fully wash and dry each part before installing it, and apply differential gear oil. Do not use alkaline cleaner for aluminum or rubber parts or ring gear set bolts. In addition, do not clean rubber parts such as O-rings or oil seals with cleaning oils (such as solvent).
5. Sufficiently coat the sliding and rotating surfaces with differential gear oil before installation.
6. When securing parts in a vise, do not place the parts directly in the vice. Be sure to place aluminum plates between the parts and the vice.
7. Be extremely careful not to damage the contact surfaces of the case. Such damage may cause oil leaks.
8. Before applying sealant, remove the old adhesive or old sealant from the seal, and clean the area with a solvent.
9. Do not fill oil immediately after installing sealed parts. Wait at least an hour.
10. As it may cause oil leaks, do not scratch or damage the contact surfaces of the oil seal, O-ring, or gasket.
11. When tapping the oil seal into the end of the differential carrier, inspect the installation depth at 3 or more locations on the oil seal circumference. To prevent oil leakage, make sure that the difference between the maximum and minimum measurement values is within the standard value range.
12. When press-fitting an oil seal, be extremely careful not to damage the oil seal lip or its outer circumference.
13. When replacing a bearing, replace the outer and inner races as a set.

OPERATION CHECK

1. **INSPECT DIFFERENTIAL OIL**
 - (a) CHECK OIL LEVEL (See page DF-3 for the procedure.)
 - (b) CHECK FOR OIL LEAKS
 - (1) Visually inspect whether oil is leaking from the oil seal, differential carrier, plug, case fitting surface, or any other parts.



PROBLEM SYMPTOMS TABLE

Symptom	Suspected Area	See Page
Noise from the front differential	Oil level (low)	DF-3
	Ring gear or pinion gear (worn or chipped)	DF-12
	Misalignment of the backlash	DF-13
	Misalignment of the preload	DF-14
	Misalignment of the tooth contact pattern	DF-22
	Worn bearing	DF-12
Noises from the rear differential	Oil level (low)	DF-3
	Ring gear or pinion gear (worn or chipped)	DF-34
	Misalignment of the backlash	DF-35
	Misalignment of the preload	DF-46
	Misalignment of the tooth contact pattern	DF-46
	Worn bearing	DF-34
Oil leakage from the front differential	Oil level (high)	DF-3
	Carrier oil seal (worn or damaged)	DF-9
Oil leakage from the rear differential	Oil level (high)	DF-3
	Carrier oil seal (worn or damaged)	DF-32

