



Differential

Troubleshooting

NOTE: Most problems in the unit are to be diagnosed by identifying noises from the gears or bearings. Care should be taken during diagnosis not to confuse differential noises with those from other drivetrain components.

[Noise symptoms will be most prominent]

Symptom	Probable Cause	Remedy
Consistent noise during cruising	• Lack of oil • Foreign matter stuck in gears, etc. • Improper tooth contact between ring gear and drive pinion • Worn or damaged side bearing • Deformed ring gear or differential carrier	• Replenish oil • Clean and inspect • Adjust or replace • Replace any damaged or faulty parts
Gear noises while accelerating	• Lack of oil • Foreign matter stuck in gears, etc. • Improper drive pinion preload • Chipped or damaged gears	• Replenish oil • Clean and inspect • Adjust • Replace
Gear noises while coasting or accelerating	• Improper drive pinion preload • Damaged or chipped gears	Adjust or replace
Bearing noises while accelerating or coasting/deceleration	Cracked or damaged drive pinion bearing or side bearing	Replace
Abnormal noises when rounding a curve	• Worn (excessive play) or damaged side bearing • Damaged side gear, pinion, or pinion shaft	Replace
Abnormal noises during acceleration or when first driving away from a stop	• Excessive backlash between ring gear and drive pinion • Improper ring gear or drive pinion preload • Excessive pinion backlash • Worn differential splines • Loose companion flange nuts and other fasteners	• Adjust • Adjust or replace • Recheck torque or replace
Oil leak	• Oil level too high • Clogged breather hole • Loose case cover or inadequate sealing • Worn or damaged oil seal	• Lower to proper level • Clean or replace • Recheck torque or apply sealant • Replace
Overheating	• Lack of oil • Insufficient ring gear-to-pinion backlash • Excessive ring gear or drive pinion preload	• Replenish • Adjust • Adjust or replace