## DRIVE AXLE TROUBLE SHOOTING

*NOTE — This is a general trouble shooting guide. When using this guide, locate the condition in column one that corresponds to your problem and determine the possible causes in column two. Match the number of the possible cause with the same number in column three, and you will have the suggested correction.*

| CONDITION | POSSIBLE CAUSE | CORRECTION |
|---|---|---|
| ► Rear wheel noise | 1) Wheel loose<br>2) Faulty, worn wheel bearings | 1) Tighten lug nuts<br>2) Replace bearings |
| ► Axle shaft noise | 1) Misaligned axle housing<br>2) Bent or sprung axle<br>3) Pinion bearing end play<br>4) Excessive ring gear backlash<br>5) Incorrect pinion bearing adjustment<br>6) Loose companion flange nut<br>7) Incorrect wheel bearing adjustment<br>8) Scuffed tooth contact surfaces | 1) Check alignment and correct<br>2) Replace axle shaft<br>3) Check pinion bearing preload<br>4) Check backlash and adjust<br>5) Adjust pinion bearings<br>6) Tighten nut to specification<br>7) Adjust wheel bearings<br>8) Adjust or replace gears |
| ► Rear axle breakage | 1) Incorrect wheel bearing adjustment<br>2) Misaligned axle housing<br>3) Vehicle overloaded<br>4) Clutch grabs | 1) Replace axle, adjust bearing<br>2) Replace shaft and correct alignment<br>3) Replace axle, reduce vehicle load<br>4) Replace axle, repair clutch |
| ► Differential case breakage | 1) Incorrect differential bearing adjustment<br>2) Excessive ring gear clearance<br>3) Vehicle overloaded<br>4) Erratic clutch operation | 1) Check gears and bearings for damage, reassemble and adjust bearings<br>2) Check gears and bearings for damage, reassemble and adjust bearings<br>3) Check gears and bearings for damage, reduce vehicle load<br>4) Check gears and bearings for damage, avoid erratic clutch use |
| ► Broken differential side gear | 1) Excessive housing deflection<br>2) Worn thrust washers<br>3) Misaligned axle housing | 1) Replace damaged gears, check other gears for damage and check axle housing alignment<br>2) Replace damaged gears, check other gears for damage and replace worn thrust washers<br>3) Replace damaged gears, check other gears for damage and check axle housing alignment |
| ► Differential gears scored | 1) Insufficient lubricant<br>2) Incorrect lubricant<br>3) One wheel spins excessively | 1) Replace scored gears and fill rear axle to capacity with correct lubricant<br>2) Replace scored gears, clean housing and fill rear axle to capacity with correct lubricant<br>3) Replace scored gears and service as necessary |
| ► Ring gear and pinion tooth breakage | 1) Vehicle overloaded<br>2) Erratic clutch operation<br>3) Ice spotted pavement<br>4) Normal fatigue<br>5) Incorrect adjustment | 1) Replace gears, reduce vehicle load<br>2) Replace gears and avoid erratic clutch operation<br>3) Replace gears<br>4) Replace gears and examine other components for fatigue<br>5) Replace gears and examine other components for wear. Make sure ring gear backlash is correct |

## DRIVE AXLE TROUBLE SHOOTING (Cont.)

| CONDITION | POSSIBLE CAUSE | CORRECTION |
|---|---|---|
| ► Rear axle noise | 1) Insufficient lubricant | 1) Fill rear axle to capacity with correct lubricant |
| | 2) Incorrect ring gear and pinion adjustment | 2) Check tooth contact pattern |
| | 3) Worn ring gear or pinion teeth | 3) Check tooth contact pattern and replace ring gear and pinion if necessary |
| | 4) Loose pinion bearings | 4) Adjust pinion bearings |
| | 5) Loose differential gear bearings | 5) Adjust differential gear bearings |
| | 6) Misaligned ring gear | 6) Check ring gear runout |
| | 7) Loose carrier bolts | 7) Tighten to specification |
| ► Loss of lubricant | 1) Lubricant level to high | 1) Drain to correct level |
| | 2) Worn axle shaft seals | 2) Replace seals |
| | 3) Cracked housing | 3) Replace or repair housing |
| | 4) Worn drive pinion seal | 4) Replace seal |
| | 5) Scored or worn companion flange | 5) Replace flange and seal |
| ► Unit overheats | 1) Lubricant level low | 1) Fill axle to capacity with correct lubricant |
| | 2) Incorrect lubricant | 2) Drain axle and refill to capacity with correct lubricant |
| | 3) Bearings adjusted too tight | 3) Readjust bearings |
| | 4) Insufficient ring gear to pinion clearance | 4) Readjust ring gear and pinion backlash and check ring and pinion for wear or scoring |