

## DRIVE AXLE TROUBLE SHOOTING

CONDITION & POSSIBLE CAUSE	CONDITION & POSSIBLE CAUSE
<p><b>General Knocking or Clunking</b></p> <ul style="list-style-type: none"> <li>Excessive differential side gear clearance.</li> <li>Worn rear axle pinion shaft.</li> <li>Worn case, or differential cross shaft in case.</li> <li>Excessive end play of axle shafts-to-differential cross shaft.</li> <li>Gear teeth mutilated.</li> <li>Improper axle shaft spline fit.</li> <li>Total axle backlash too great.</li> </ul> <p><b>Clunking During Initial Engagement</b></p> <ul style="list-style-type: none"> <li>Excessive differential side gear clearance.</li> <li>Excessive ring and pinion backlash.</li> <li>Worn or loose pinion shaft.</li> <li>Worn or damaged inboard joint.</li> </ul> <p><b>Gear Howl or Whine</b></p> <ul style="list-style-type: none"> <li>Improper pinion depth</li> <li>Improper ring gear backlash adjustment.</li> <li>Improper ring gear runout.</li> <li>Improper bearing preload.</li> </ul> <p><b>Clicking or Chatter on Turns</b></p> <ul style="list-style-type: none"> <li>Wrong lubricant in differential.</li> <li>Clutch plates worn.</li> <li>Worn or damaged outboard joints.</li> <li>Differential side gears or pinion worn.</li> </ul> <p><b>Knock or Click Approximately Every Second Revolution</b></p> <ul style="list-style-type: none"> <li>Brinelled rear wheel bearing.</li> </ul> <p><b>Grunt Noise on Stops</b></p> <ul style="list-style-type: none"> <li>Lack of lubricant in propeller shaft slip yoke.</li> </ul> <p><b>Groan in Forward or Reverse</b></p> <ul style="list-style-type: none"> <li>Wrong lubricant in differential.</li> </ul> <p><b>Knock in Drive Line in High Gear at 10 MPH</b></p> <ul style="list-style-type: none"> <li>Worn or damaged universal joints.</li> <li>Side gear hub counterbore in differential worn oversize.</li> </ul> <p><b>Ping, Snap or Click in Drive Line</b></p> <ul style="list-style-type: none"> <li>Loose upper or lower control arm bushing bolts.</li> <li>Loose companion flange.</li> </ul>	<p><b>Scraping Noise</b></p> <ul style="list-style-type: none"> <li>Slinger, companion flange or end yoke rubbing on rear axle carrier.</li> </ul> <p><b>Car Will Not Move</b></p> <ul style="list-style-type: none"> <li>Broken axle shaft.</li> <li>Broken pinion stem.</li> <li>Broken welds.</li> <li>Axle lock up.</li> </ul> <p><b>Axle Backlash</b></p> <ul style="list-style-type: none"> <li>Excessive ring and pinion clearance.</li> <li>Loose fitting differential pinion shaft.</li> <li>Excessive side gear-to-case clearance.</li> </ul> <p><b>Leakage at Differential or Driveshaft</b></p> <ul style="list-style-type: none"> <li>Rough outside surface on splined yoke.</li> <li>Defective transmission rear oil seal.</li> <li>Drive pinion seal or nut.</li> <li>Axle cover gasket, or axle shaft seal.</li> <li>Bad welds, or improper axle vent hose.</li> <li>Casing porosity.</li> </ul> <p><b>Roughness at Low Speeds</b></p> <ul style="list-style-type: none"> <li>U bolt clamp nuts too tight.</li> </ul> <p><b>Roughness, Shudder or Vibration Upon Heavy Acceleration</b></p> <ul style="list-style-type: none"> <li>Double cardan joint ball seats worn, and ball seat spring may be broken.</li> <li>Excessive joint angle.</li> <li>Sticking inboard joint assembly.</li> <li>Worn or damaged inboard or outboard joints.</li> </ul> <p><b>Roughness, Vibration or Body Boom Experienced at Any Speed</b></p> <ul style="list-style-type: none"> <li>Rough rear wheel bearings.</li> <li>Unbalanced or damaged propeller shaft.</li> <li>Unbalanced or damaged tires.</li> <li>Worn or damaged universal joints.</li> <li>Excessive U bolt torque.</li> <li>Bent or damaged drive shaft, or undercoating on drive shaft.</li> <li>Tight universal joints.</li> <li>Burrs or gouges on companion flange.</li> <li>Drive shaft or companion shaft runout too great.</li> <li>Drive shaft or companion flange unbalanced.</li> <li>Excessive looseness at slip yoke spline.</li> <li>Mis-indexed propeller shaft at companion flange.</li> </ul>