

DIAGNOSIS AND TESTING (Continued)

POWER STEERING DIAGNOSIS (Continued)

CONDITION	POSSIBLE SOURCE	ACTION
<ul style="list-style-type: none"> <li>● Poor Returnability — Sticky Feel: Condition Where The Steering Fails To Return To Center Following A Turn Without Manual Effort From The Driver. In Addition, When The Driver Returns The Steering To Center, It May Have A Sticky Or Catchy Feel.</li> </ul>	<ul style="list-style-type: none"> <li>● Misaligned steering column or column flange rubbing steering wheel and /or flange.</li> <li>● Check rotational torque of intermediate shaft joints.</li> <li>● Tight inner tie rod ball joints.</li> <li>● Tight inner tie rod end ball studs.</li> <li>● Binding in valve assembly.</li> <li>● Bent or damaged rack.</li> <li>● Bent or damaged subframe.</li> <li>● Column bearing binding.</li> <li>● Tight suspension struts or lower control arm ball joints.</li> <li>● Improper wheel alignment.</li> <li>● Contamination in system.</li> <li>● Improper yoke clearance (tight).</li> </ul>	<ul style="list-style-type: none"> <li>● Align column.</li> <li>● If binding, replace intermediate shaft.</li> <li>● Replace tie rod as required.</li> <li>● Replace tie rod end assemblies.</li> <li>● Replace input shaft valve assembly.</li> <li>● Replace rack assembly.</li> <li>● Replace as necessary.</li> <li>● Replace bearing.</li> <li>● Adjust or replace as required.</li> <li>● Set to specification.</li> <li>● Flush power steering system.</li> <li>● Set to specification.</li> </ul>
<ul style="list-style-type: none"> <li>● Heavy Steering Efforts — Poor or Loss of Assist: Condition Where A Heavy Effort And Poor Assist Condition Is Recognized By The Driver While Turning Corners And Especially While Parking. A Road Test Will Verify This Condition.</li> </ul>	<ul style="list-style-type: none"> <li>● Leakage / loss of fluid.</li> <li>● Low pump fluid.</li> <li>● Valve seal cut or twisted.</li> <li>● Damaged / worn Teflon® piston seal.</li> <li>● Loose / missing rubber backup piston O-ring.</li> <li>● Loose rack piston.</li> <li>● Gear assembly oil passages restricted.</li> <li>● Bent / damaged rack assembly.</li> <li>● Pump external leakage.</li> <li>● Improper drive belt tension.</li> <li>● Hose or cooler external leakage.</li> <li>● Improper engine idle speed.</li> <li>● Pulley loose or warped.</li> <li>● Pump / flow pressure not to specification.</li> <li>● Hose cooler line restrictions.</li> </ul>	<ul style="list-style-type: none"> <li>● Refer to external leakage diagnosis for service.</li> <li>● Fill as necessary.</li> <li>● Replace seal.</li> <li>● Replace seal.</li> <li>● Replace / install O-ring.</li> <li>● Replace rack assembly.</li> <li>● Clear / service as required.</li> <li>● Replace rack assembly.</li> <li>● Service per Pump Diagnosis.</li> <li>● Readjust belt tension.</li> <li>● Replace as necessary.</li> <li>● Readjust idle.</li> <li>● Replace pulley.</li> <li>● Refer to Pump Service Diagnosis.</li> <li>● Clear or replace as required.</li> </ul>

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FORD INTEGRAL POWER RACK-AND-PINION STEERING GEAR

CONDITION	POSSIBLE SOURCE	ACTION
<ul style="list-style-type: none"> <li>● Hissing Sound</li> </ul> <p>NOTE: There is some noise in all power steering systems. One of the most common is a hissing sound most evident at standstill parking. There is no relationship between this noise and the performance of the steering gear.</p> <p>CAUTION: Do not hold steering wheel at full lock more than five seconds, as damage to power steering pump may result.</p>	<ul style="list-style-type: none"> <li>● Hiss may be expected when the steering wheel is at the end of travel or when turning at standstill.</li> </ul>	<ul style="list-style-type: none"> <li>● Hiss is a normal characteristic of rotary steering gears and in no way affects steering. Do not replace the rack assembly unless the hiss is extremely objectionable. A replacement rack will also exhibit a slight noise and is not always a cure for the condition. Investigate for a grounded column or a loose boot at the dash panel. Any metal-to-metal contact will transmit valve hiss into the passenger compartment through the steering column. Verify clearance between flexible coupling components. Ensure steering column shaft and gear are aligned so flexible coupling rotates in a flat plane and is not distorted as shaft rotates.</li> </ul>

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