

**DIAGNOSIS AND TESTING (Continued)**

**Timing — Early/Late (Cont'd)**

Possible Component	Reference/Action														
—Tire size change	—Refer to the specification decal and verify vehicle has original equipment. Changes in tire size and chain ratio will affect shift timing.														
—Chain ratio change —Speedometer Gear															
<b>Fluid</b> —Improper level	—Adjust fluid to proper level.														
<b>Main Controls</b> —Bolts not tightened to specification —Gaskets—damaged, off location —Valves, Accumulators, Seals, Springs, Clips—damaged, missing, misassembled	—Retighten bolts to specification. —Inspect for damage. Replace. —Inspect for damage and contamination. Service as required.  —Refer to the appropriate shift for further diagnosis:														
	<table border="1"> <thead> <tr> <th>Shift</th> <th>Routine</th> </tr> </thead> <tbody> <tr> <td>1-2</td> <td>220/320</td> </tr> <tr> <td>2-3</td> <td>221/321</td> </tr> <tr> <td>3-4</td> <td>222/322</td> </tr> <tr> <td>4-3</td> <td>223/323</td> </tr> <tr> <td>3-2</td> <td>224/324</td> </tr> <tr> <td>2-1</td> <td>225/325</td> </tr> </tbody> </table>	Shift	Routine	1-2	220/320	2-3	221/321	3-4	222/322	4-3	223/323	3-2	224/324	2-1	225/325
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	<b>CD8088-A</b>														

TD 10625A

**Timing Erratic**

Possible Component	Reference/Action
<b>212 — ELECTRICAL ROUTINE</b>	
<b>Powertrain Control System</b> —Electrical Inputs/Outputs, Vehicle Wiring Harnesses, Powertrain Control Module (PCM), Shift Solenoids, MLP, TCC, TSS and TOT Sensor	—Run On-Board Diagnostic. —Refer to Powertrain Control/Emissions Diagnosis Manual <sup>7</sup> for diagnosis. Perform Service Manual Pinpoint Tests A, B, C, D and F using the Transmission Tester (007-00085) and the MLP Tester (D89T-700 10-A) as outlined. Service as required. Clear codes. Road Test and rerun On-Board Diagnostic.
<b>312 — HYDRAULIC/MECHANICAL ROUTINE</b>	
<b>Fluid</b> —Improper level	—Adjust fluid to proper level.
<b>Main Control</b> —Bolts not tightened to specifications —Gaskets—damaged, off location —Valves, Accumulators, Seals, Clips, Intermediate Clutch Shuttle Valve—stuck, damaged	—Retighten bolts to specifications. —Inspect for damage. Replace as required —Inspect for damage. Service as required.
<b>Vehicle Speed Input</b> —Speedometer Gear—DRIVE—damaged  —Speedometer Gear—DRIVEN—Gear and Shaft Assembly —Differential Assembly—damaged or missing	—Refer to Service Manual for teardown information on these gears. Also refer to the appropriate shift routines as noted below.

(Continued)

<sup>7</sup> Can be purchased as a separate item.