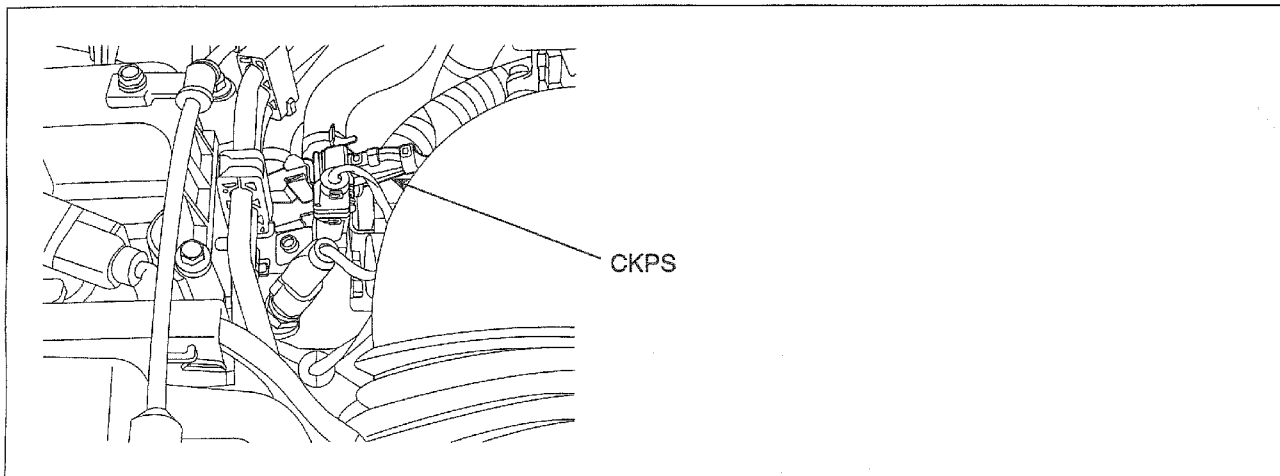


**DTC P0335 CRANKSHAFT POSITION SENSOR A CIRCUIT**

**COMPONENT LOCATION** E7F7F01D



EFRF005A

**GENERAL DESCRIPTION** EBDCEB4C

The Crankshaft Position Sensor (CKPS) is a hall effect type sensor that generates voltage using a sensor and a target wheel mounted on the crankshaft; there are 58 slots in the target wheel where one is longer than the others. When the slot in the wheel aligns with the sensor, the sensor voltage outputs low. When the metal (tooth) in the wheel aligns with the sensor, the sensor voltage outputs high. During one crankshaft rotation there are 58 rectangular signals and one longer signal. The ECM calculates engine RPM by using the sensor's signal and controls the injection duration and the ignition timing. Using the signal differences caused by the longer slot, the ECM identifies which cylinder is at top dead center.

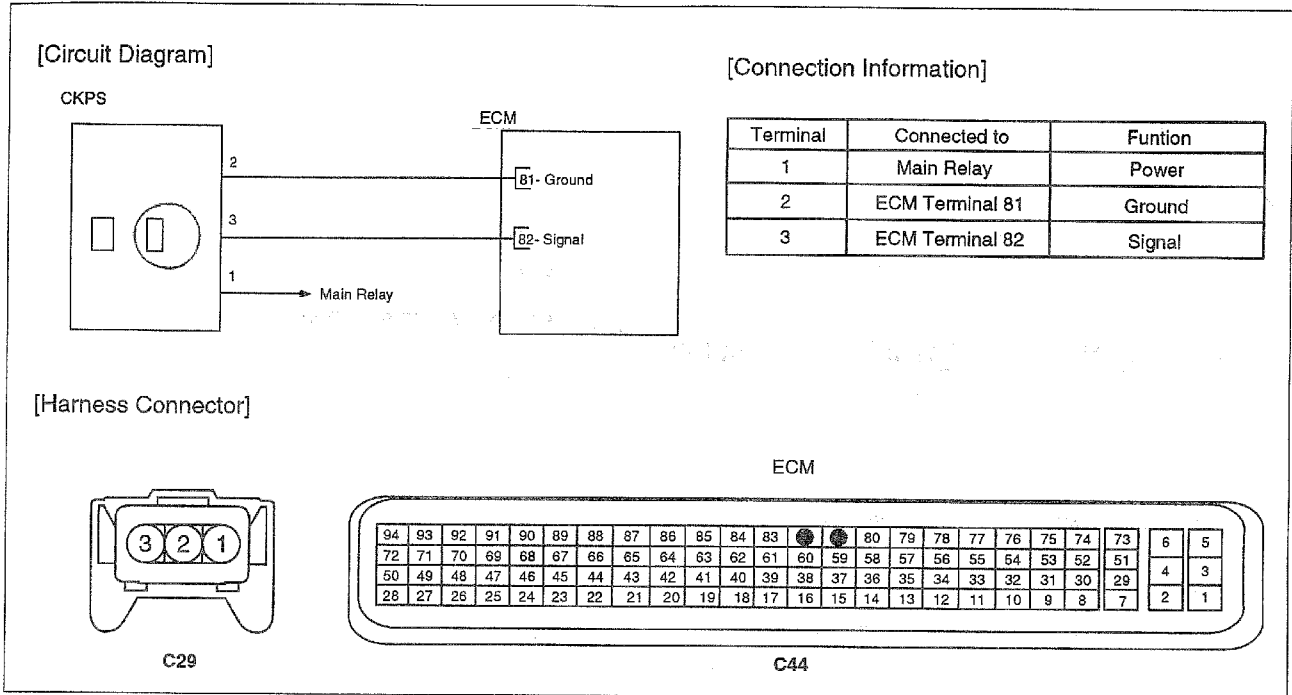
**DTC DESCRIPTION** E8379D04

The ECM sets DTC P0335 when the number of crankshaft teeth during one revolution is incorrect or crankshaft signal is missing while camshaft signal is detected.

**DTC DETECTING CONDITION** E18B693A

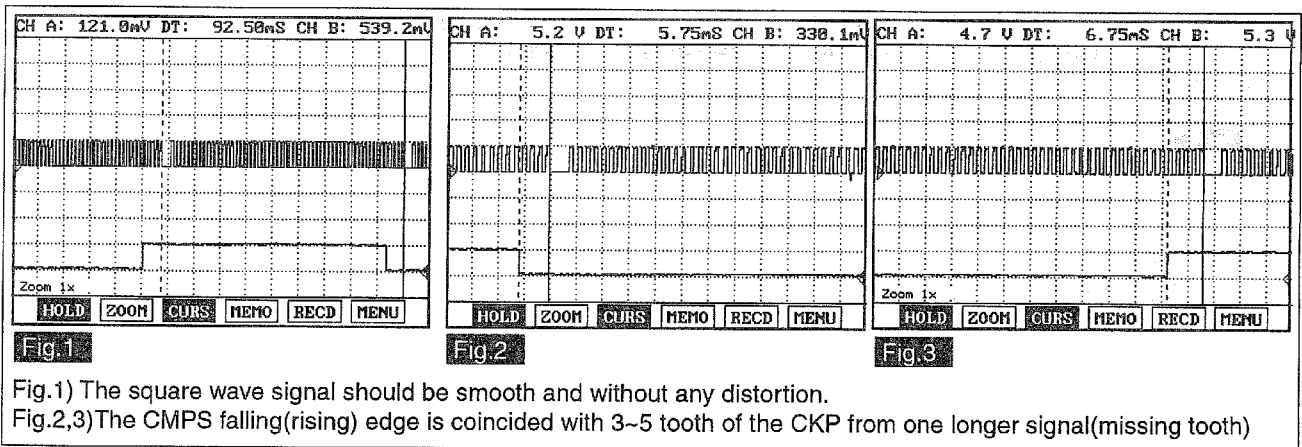
Item		Detecting Condition	Possible Cause
DTC Strategy		<ul style="list-style-type: none"> <li>To monitor failure in crankshaft signal during synchronization</li> </ul>	<ul style="list-style-type: none"> <li>Open or short in signal, ground or power supply circuit</li> <li>Contact resistance in connectors</li> <li>Damage to the connecting flange/flywheel</li> <li>Misadjust crankshaft and camshaft pulley position</li> <li>Faulty CKP sensor</li> </ul>
Enable Conditions	Case1	<ul style="list-style-type: none"> <li>Crankshaft acquisition synchronized</li> <li>512rpm &lt; Engine speed</li> </ul>	
	Case2	<ul style="list-style-type: none"> <li>Engine running</li> </ul>	
	Case3	<ul style="list-style-type: none"> <li>Crankshaft acquisition synchronized</li> </ul>	
Threshold Value	Case1	<ul style="list-style-type: none"> <li>Missing or additional teeth found during one engine revolution</li> </ul>	
	Case2	<ul style="list-style-type: none"> <li>tooth period out of range</li> </ul>	
	Case3	<ul style="list-style-type: none"> <li>Number of tolerated missing/additional teeth exceeded during one engine revolution</li> </ul>	
Diagnostic Time		<ul style="list-style-type: none"> <li>5 rev.</li> </ul>	

**SCHEMATIC DIAGRAM** E8F9ECA8



EFRF300K

**SIGNAL WAVEFORM AND DATA** EAD00B2A



EFRF200N

**MONITOR DTC STATUS** E7DBAF1A

1. Connect scan tool and select "Diagnostic Trouble Codes(DTCs)" mode
2. Press F4(DTAL) to select DTC information from the DTCs menu
3. Confirm that "DTC Readiness Flag" indicates "Complete". If not, drive the vehicle within conditions noted in the freeze frame data or enable conditions
4. Read "DTC Status" parameter

<p>To navigate to the "DTAL" menu</p> <p><b>01</b> HYUNDAI VEHICLE DIAGNOSIS :Select model and year</p> <p>▶ <b>02</b> ENGINE :Select engine</p> <p>▶ <b>03</b> DIAGNOSTIC TROUBLE CODES :Select F4(DTAL) on the function bar</p> <p><b>PART</b> <b>ERAS</b> <b>DTAL</b> <b>HELP</b></p> <p style="text-align: center;">↑</p>	<p style="text-align: center;"><b>1.4 AMBIENT CONDITIONS</b></p> <p>1. MIL STATUS</p> <p>2. DTC STATUS: PRESENT</p> <p>3. DTC READNESS FLAG : COMPLETE</p> <p>4. STATISTIC COUNTER : 1</p> <p>5. OP.HOUR AFTER DETECTION OF DTC</p> <p>6. OP.HOUR AFTER ERASURE OF DTC</p>
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EFRF200D

5. Is parameter displayed "History(Not Present) fault"?

**NOTE**

- History (Not Present) fault : DTC occurred but has been cleared.
- Present fault : DTC is occurring at present time.

**YES**

▶ Fault is intermittent caused by poor contact in the sensor's and/or ECM's connector or was repaired and ECM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

**NO**

▶ Go to next step as below

**TERMINAL AND CONNECTOR INSPECTION** E05A77FD

1. Many malfunctions in the electrical system are caused by poor harness(es) and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

**YES**

▶ Repair as necessary and go to "Verification of Vehicle Repair" procedure

**NO**

▶ Go to "Power Circuit Inspection" procedure