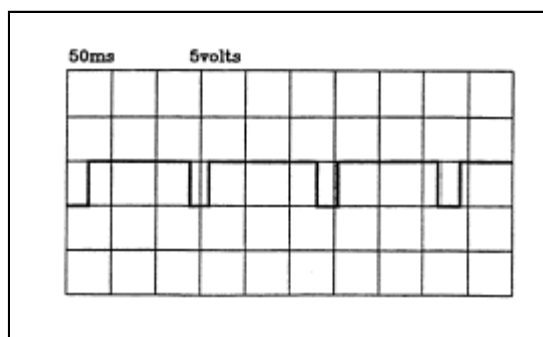**Sportage [AL] > 2000 > Engine > 2.0 DOHC**

## Diagnostic Trouble Code Diagnosis Charts

| P0342 | Camshaft position (phase) sensor low input |
|---|---|
| Threshold Value ~ # of CMP sensor signals during 2 crankshaft revolutions: >1<br>Enable Conditions ~ Engine speed: >600 RPM<br>Time Requirements ~ Continuous<br>MIL Illumination ~ 2 driving cycle | **Related Items**<br>⇨ Short to GND between Cam Position (Phase) Sensor (CMP)(C118-2) and ECM (C211-44).<br>⇨ Faulty CMP Sensor. |

| STEP | INSPECTION | Y/N | ACTION |
|---|---|---|---|
| 1 | **IMPORTANT! Record all freeze frame data before disconnecting any connectors of clearing code(s). With ignition off, disconnect C118 from CMP and C211 from ECM. Connect adapter cable #K99U-2106-G17 to BOB and connect vehicle C211 to adapter cable. Measure resistance to GND at BOB pin 44 (infinite resistance). Is resistance infinite?** | **YES** | **Go to step 2.** |
| | | NO | Locate source of short to GND and repair as necessary. |
| 2 | Measure resistance from CMP Sensor pigtail (C118-2) to GND (infinite resistance). Is resistance infinite? | YES | Go to step 3. |
| | | NO | Replace CMP Sensor. |
| 3 | Reconnect C118 to CMP and connect adapter cable C211 to ECM. Set up KIA Data Pro for use as a single channel oscilloscope (refer to KIA Data Pro Program Card Operators Manual section 4 for set up procedures).<br>Make sure internal NI-CAD battery is fully charged or use adapter cable to power scan tool. Do not connect scan tool to OBD-II DLC for power source as this may affect waveform. Connect positive lead to BOB pin 44 and negative lead to GND. Set scope time (F1) to 50ms and voltage (F2) to 5v. Start engine and allow to idle at operating temperature. Pattern should be similar to sample:<br>Is pattern similar to sample? | YES | While still monitoring waveform, wiggle test harness between CMP Sensor and C211. If pattern becomes broken or is eliminated, repair or replace harness as necessary. |
| | | NO | Replace CMP Sensor. |
| 4 | Clear codes and return vehicle to original condition. Verify any repairs by driving vehicle with KIA Data Pro connected to OBD-II connector and monitoring for pending codes (refer to section 3 of the KIA Data Pro Generic OBD-II Program Card reference manual). | | |

## Diagnostic Trouble Code Diagnosis Charts

| P0343 | Camshaft position (phase) sensor high input |
|---|---|
| **Threshold Value ~ No signal from camshaft position sensor for >200 crankshaft revolutions**<br>**Enable Conditions ~ Engine speed: >600 RPM**<br>**Time Requirements ~ Continuous**<br>**MIL Illumination ~ 2 driving cycle** | **Related Items**<br>⇨ Open or short to B+ between Cam Position (Phase) Sensor (CMP)(C118-2) and ECM (C211-44).<br>⇨ Open between CMP Sensor (C118-3) and GND.<br>⇨ Open between EGI Main Relay (pin #1) and CMP Sensor (C118-1).<br>⇨ Missing sensor pin on exhaust cam.<br>⇨ Faulty CMP Sensor. |

| STEP | INSPECTION | Y/N | ACTION |
|---|---|---|---|
| 1 | **IMPORTANT! Record all freeze frame data before disconnecting any connectors or clearing code(s). With ignition off, disconnect C118 from CMP and C211 from ECM. Connect adapter cable #K99U-2106-G17 to BOB and connect vehicle C211 to adapter cable (leave adapter cable disconnected from ECM). Measure resistance between C118-2 and BOB pin 44 (less than 1 ohm). Is resistance less than 1 ohm?** | YES | Go to step 2. |
| | | NO | Locate source of open or high resistance. Repair as necessary. |
| 2 | Measure resistance between C118-3 and GND (< 1 ohm). Is measured resistance less than 1 ohm? | YES | Go to step 3. |
| | | NO | Locate source of open or high resistance between C118-3 and GND. Repair as necessary. |
| 3 | Torn ignition on (engine off) and measure voltage at BOB pin 44 (0v). Is measured voltage 0v? | YES | Go to step 4. |
| | | NO | Locate source of short to B+ between CMP and C211-44. Repair as necessary. |
| 4 | Turn ignition off and connect adapter cable C211 to ECM. Turn ignition on (engine off) and measure voltage at C118-1 (B+). Is measured voltage B+? | YES | Go to step 5. |
| | | NO | Check for voltage at EGI Main Relay (pin 1). If voltage is low or absent, replace relay and retest. If B+ is present at relay but not at C118-1, locate source of open or high resistance and repair as necessary. |
| 5 | Turn ignition off, reconnect C118 to CMP and set up KIA Data Pro for use as a single channel oscilloscope (refer to KIA Data Pro Program Card Operators Manual section 4 for set up procedures). Make sure internal NI-CAD battery is fully charged or use adapter cable to power scan tool. Do not connect scan tool to OBD-II DLC for power source as this may affect wave form. Connect positive lead to BOB pin 44 and negative lead to GND. Set scope time (F1) to 50ms and voltage (F2) to 5v. Start engine and allow to idle at operating temperature. Pattern should be similar to sample: Is pattern similar to sample? | YES | While still monitoring waveform, wiggle test harness between CMP Sensor and C211. If pattern becomes broken or is eliminated, repair or replace harness as necessary. |
| | | NO | Remove CMP sensor mounting bracket and check exhaust cam for sensor pin. If pin is missing, replace exhaust cam. If pin is intact, replace CMP Sensor. |
| 6 | Clear codes and return vehicle to original condition. Verify any repairs by driving vehicle with KIA Data Pro connected to OBD-II connector and monitoring for pending codes (refer to section 3 of the KIA Data Pro Generic OBD-II Program Card reference manual). | | |

50ms    5volts