

CRANKSHAFT POSITION (CKP) SENSOR INSPECTION [SKYACTIV-D 2.2]

id0140z7800500

Visual Inspection

Caution

- If foreign matter such as metal shavings adhere to the CKP sensor, it can cause abnormal output from the sensor because of flux turbulence, which can negatively affect the engine control. Verify that there is no foreign matter on the CKP sensor when replacing.

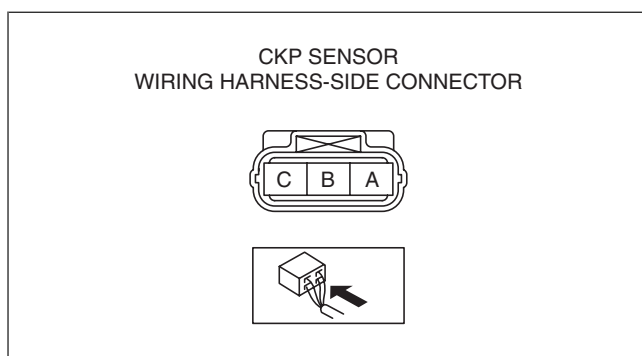
1. Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-D 2.2].)
2. Lift up the vehicle.
3. Remove the service hole cover (installed to front under cover No.2) used to remove the oil filter. (See OIL FILTER REPLACEMENT [SKYACTIV-D 2.2].)
4. Remove the splash shield. (See SPLASH SHIELD REMOVAL/INSTALLATION.)
5. Disconnect the CKP sensor connector.
6. Remove the CKP sensor. (See CRANKSHAFT POSITION (CKP) SENSOR REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)
7. Verify that there are no metal shavings on the sensor.
 - If there is a malfunction, remove any metal shavings that are adhering.

Voltage Inspection

Caution

- If foreign matter such as metal shavings adhere to the CKP sensor, it can cause abnormal output from the sensor because of flux turbulence, which can negatively affect the engine control. Verify that there is no foreign matter on the CKP sensor when replacing.
- Do not assemble the CKP sensor or change the installation position using any method other than the following. Otherwise, it could negatively affect engine control, such as the ignition timing and fuel injection.
- If the wiring harnesses or waterproof connectors are damaged, water penetrating the connector will cause a sensor malfunction. To prevent this, be careful not to damage wiring harnesses or waterproof connectors.

1. Idle the engine.
2. Measure the CKP sensor output voltage using the oscilloscope.
 - If not as specified, replace the CKP sensor. (See CRANKSHAFT POSITION (CKP) SENSOR REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)



| Terminal | Voltage (V) | Condition |
|----------|-------------|---------------------|
| B | Below 1.0 | Under any condition |
| C | Above 4.5 | High output* |
| | Below 0.8 | Low output* |

| Terminal | Voltage (V) | Condition |
|----------|-------------|---------------------|
| A | Approx. 5.0 | Under any condition |

* : Output voltage varies with crankshaft rotation.