2012 - Mazda6 - Engine

CRANKSHAFT POSITION (CKP) SENSOR INSPECTION [MZR 2.5]

Air Gap Inspection

1. Verify that the CKP sensor is securely installed.

2. Using a thickness gauge, measure the air gap between the plate projections at the back of crankshaft pulley and the CKP sensor.

- If not within the specification, inspect the plate projections for cracks or bending.
  - If there is any malfunction, replace the crankshaft pulley. (See **FRONT OIL SEAL REPLACEMENT [MZR 2.5]**.)

Air gap

- 0.5—1.5 mm {0.02—0.05 in}

Visual Inspection

1. Disconnect the negative battery cable. (See **BATTERY REMOVAL/ INSTALLATION [MZR 2.5]**.)

2. Perform the following procedure for easier access.

   a. Remove the aerodynamic under cover No.2. (See **AERODYNAMIC UNDER COVER NO.2 REMOVAL/ INSTALLATION**.)

   b. Remove the splash shield. (See **SPLASH SHIELD REMOVAL/ INSTALLATION**.)

3. Disconnect the CKP sensor connector.

4. Remove the CKP sensor. (See **CRANKSHAFT POSITION (CKP) SENSOR REMOVAL/ INSTALLATION [MZR 2.5]**.)

5. 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:

- Water penetrating the connector will cause sensor malfunction. To prevent this, be careful not to damage the wiring harnesses or the waterproof connector so as to cause water penetration.

1. Idle the engine.

2. Measure the crankshaft position signal and verify that rectangular waves are produced. (See **PCM INSPECTION [MZR 2.5]**.)

- If not as specified, replace the CKP sensor. (See **CRANKSHAFT POSITION (CKP) SENSOR REMOVAL/INSTALLATION [MZR 2.5]**.)

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