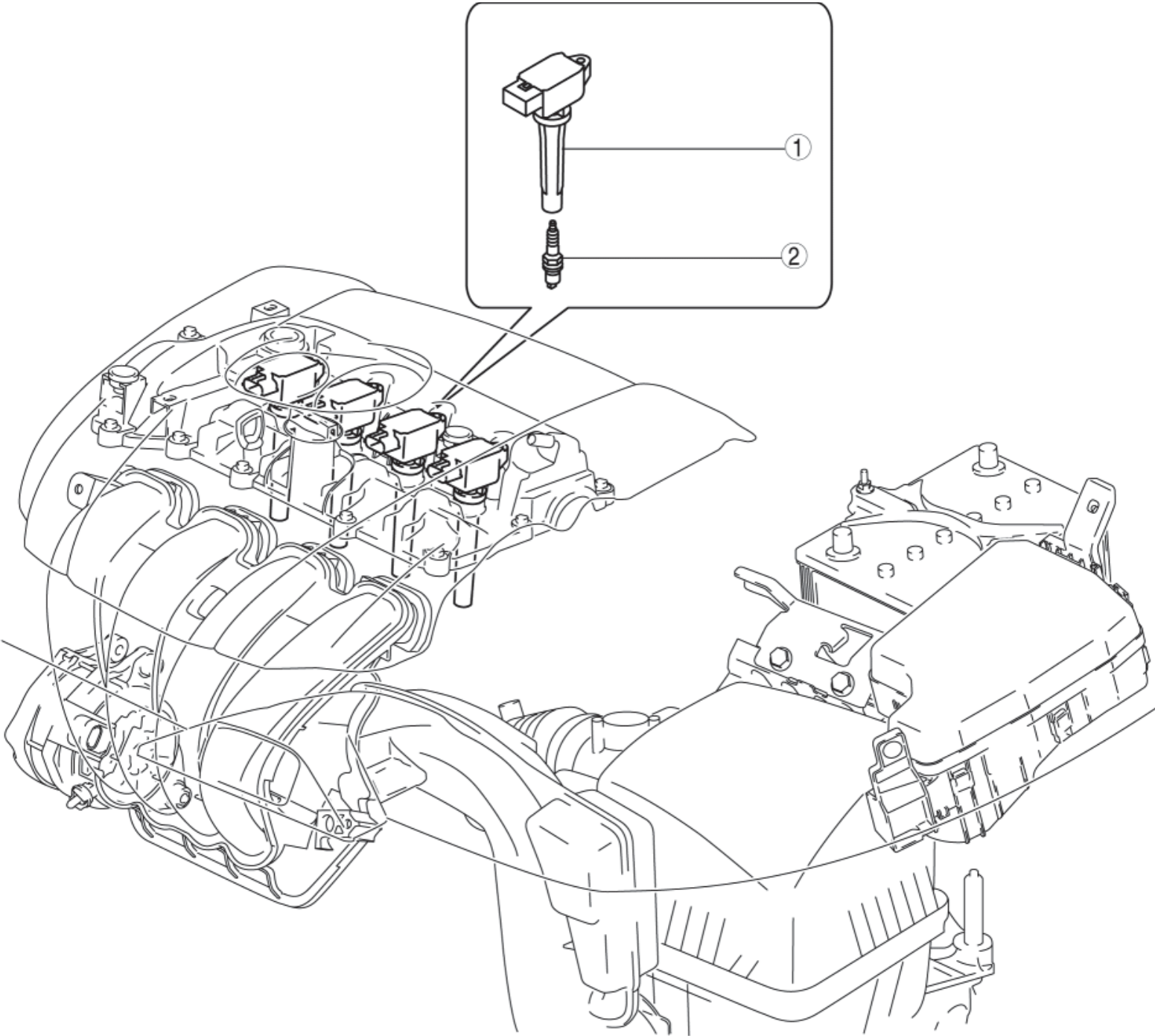


< Previous   Next >

2013 - CX-5 - Engine

IGNITION SYSTEM LOCATION INDEX [SKYACTIV-G 2.0]



1 Ignition coil  
(See **IGNITION COIL/ION SENSOR REMOVAL/INSTALLATION [SKYACTIV-G 2.0].**)  
(See **IGNITION COIL INSPECTION [SKYACTIV-G 2.0].**)

2Spark plug

(See **SPARK PLUG REMOVAL/INSTALLATION [SKYACTIV-G 2.0].**)

(See **SPARK PLUG INSPECTION [SKYACTIV-G 2.0].**)

[< Previous](#)   [Next >](#)

[Back to Top](#)

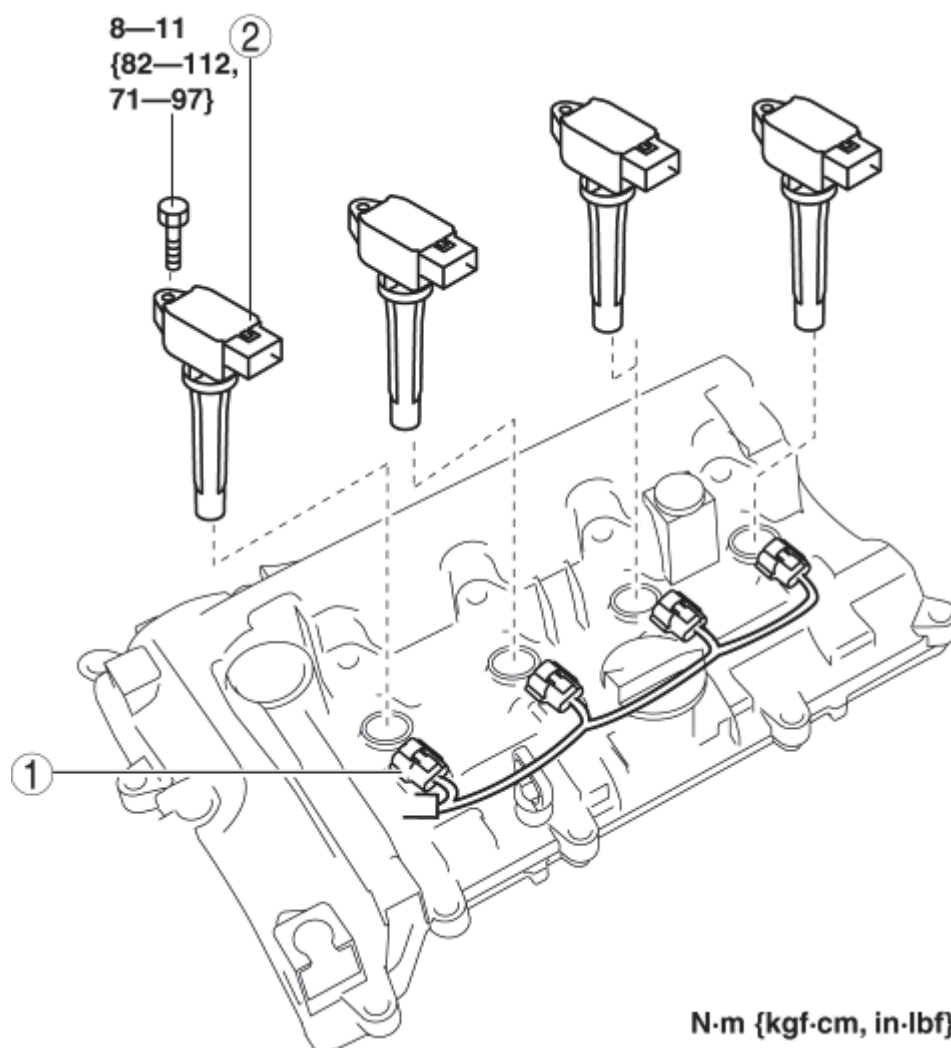
© 2012 Mazda North American Operations, U.S.A.

[< Previous](#)   [Next >](#)

## 2013 - CX-5 - Engine

### IGNITION COIL/ION SENSOR REMOVAL/INSTALLATION [SKYACTIV-G 2.0]

1. Disconnect the negative battery cable. (See **NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].**)
2. Remove the plug hole plate. (See **PLUG HOLE PLATE REMOVAL/INSTALLATION [SKYACTIV-G 2.0].**)
3. Remove in the order indicated in the table.
4. Install in the reverse order of removal.



1 Connector

2 Ignition coil



[< Previous](#)   [Next >](#)

© 2012 Mazda North American Operations, U.S.A.

[Back to Top](#)

[< Previous](#)   [Next >](#)

## 2013 - CX-5 - Engine

### IGNITION COIL INSPECTION [SKYACTIV-G 2.0]

#### Ignition Coil Inspection

1. Perform the spark test and identify the malfunctioning cylinder. (See **ENGINE CONTROL SYSTEM OPERATION INSPECTION [SKYACTIV-G 2.0].**)
2. Replace the ignition coil of the malfunctioning cylinder with that of a normal cylinder, and perform the spark test again. (See **ENGINE CONTROL SYSTEM OPERATION INSPECTION [SKYACTIV-G 2.0].**)
  - If the spark is not normal due to a malfunctioning ignition coil, replace that ignition coil.
  - It is unlikely that all four ignition coils fail to operate properly. To prevent replacing a normal component, perform the above procedure, identify the malfunctioning ignition coil, and replace it.

[< Previous](#)   [Next >](#)

[Back to Top](#)

© 2012 Mazda North American Operations, U.S.A.

[< Previous](#)   [Next >](#)

## 2013 - CX-5 - Engine

### SPARK PLUG REMOVAL/INSTALLATION [SKYACTIV-G 2.0]

#### CAUTION:

- If a spark plug that is not as specified is installed, engine performance will be deteriorated. Install only the specified spark plug when replacing.

1. Disconnect the negative battery cable. (See **NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0].**)
2. Remove the plug hole plate. (See **PLUG HOLE PLATE REMOVAL/INSTALLATION [SKYACTIV-G 2.0].**)
3. Remove the ignition coils. (See **IGNITION COIL/ION SENSOR REMOVAL/INSTALLATION [SKYACTIV-G 2.0].**)
4. Remove the spark plugs using a plug-wrench.
5. Install in the reverse order of removal.

#### Tightening torque

- 15—20 N·m {1.6—2.0 kgf·m, 12—14 ft·lbf}

[< Previous](#)   [Next >](#)

[Back to Top](#)

© 2012 Mazda North American Operations, U.S.A.

[< Previous](#)   [Next >](#)

## 2013 - CX-5 - Engine

### SPARK PLUG INSPECTION [SKYACTIV-G 2.0]

#### Specification

##### Spark plug type

- PE01-18-110, PE02-18-110, PE5R-18-110, PE5S-18-110

#### Plug Gap Inspection

##### CAUTION:

1. To avoid possible damage to the tip, do not adjust the plug gap.
  2. To prevent damaging the tip, use a wire type plug gap gauge when inspecting the plug gap.
1. Measure the spark plug gap using a wire type plug gap gauge.
    1. If not within the standard specification, replace the spark plug.

##### Spark plug gap (PE01-18-110, PE02-18-110)

- Standard: 0.75—1.10 mm {0.030—0.043 in}
- New spark plug (reference): 0.75—0.85 mm {0.030—0.033 in}

##### Spark plug gap (PE5R-18-110, PE5S-18-110)

- Standard: 1.05—1.40 mm {0.0414—0.0551 in}
- New spark plug (reference): 1.05—1.15 mm {0.0414—0.0452 in}

#### Cleaning

##### CAUTION:

1. Carbon may adhere to the tip of the spark plug during vehicle delivery or repeated short distance driving during the winter time. If there is any malfunction such as rough idling or start difficulty due to carbon adhesion causing plug fouling, burn off the carbon by performing no-load racing of the engine.
2. When performing the no-load racing, apply the side brake and foot brake, move the shift lever to neutral (MTX), or the selector lever to P position (ATX) to prevent an accident and serious injury.

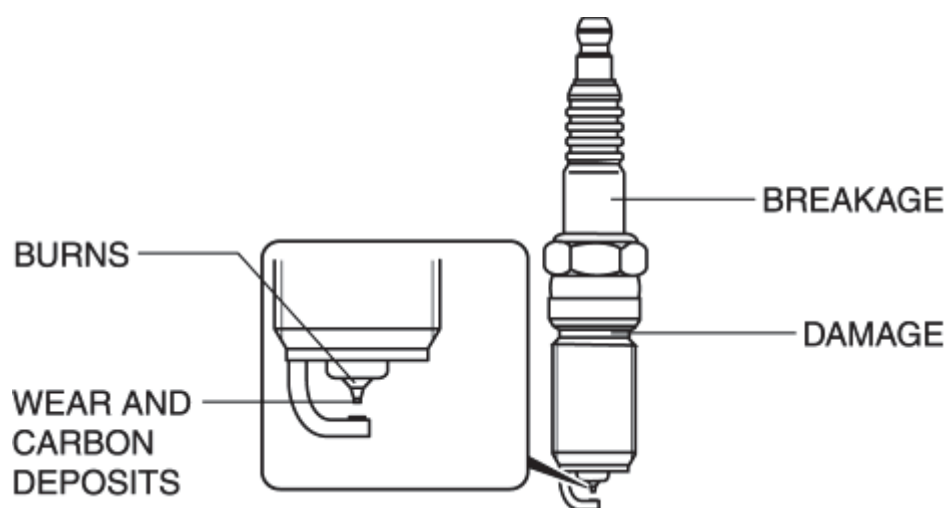
3. To avoid possible damage to the spark plug tip, do not use a wire brush for cleaning.

#### NOTE:

1. To avoid possible damage to the tip, use gasoline to clean the spark plugs after removing dirt.
  2. If the accelerator pedal is depressed continuously for a specified time, the engine speed may decrease to the idle speed. This is due to the PCM control operation, which prevents overheating, and it does not indicate a malfunction.
  3. Do not perform no-load racing at high engine speed continuously for **10 s or more**.
1. If there is carbon adhering to the spark plug, perform no-load racing at **4,000 rpm** for **2 min, 2 times**.

#### Visual Inspection

1. Inspect the following items:

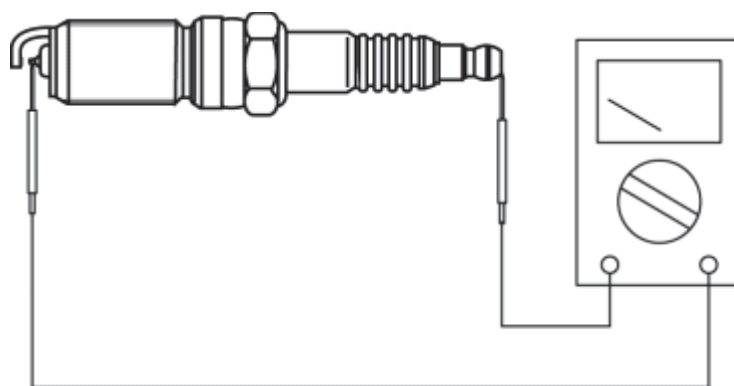


- If any of the following malfunctions are indicated, replace the spark plug.
  - Insulator breakage
  - Worn electrode
  - Damaged gasket
  - Badly burned insulator (sparking side)

#### Resistance Inspection

1. Measure the resistance of the spark plug using a tester as shown in the figure.





- If not within specification, replace the spark plug.

**Spark plug resistance [25°C {77 °F}]**

1. 3.0—7.5 kilohms

[< Previous](#) [Next >](#)

[Back to Top](#)

© 2012 Mazda North American Operations, U.S.A.