

REPAIR PROCEDURES

ON-VEHICLE INSPECTION

Inspect ignition coil assembly and Perform spark test

1. Check for DTCs.

NOTE:

- If a DTC is present, perform troubleshooting in accordance with the procedure for that DTC. (Refer to DTC INDEX)

2. Check if sparks occur.
 1. Remove the engine cover.
 2. Remove the ignition coils.
 3. Using a spark plug wrench, remove the spark plugs.
 4. Disconnect the injector extension connectors.
 5. Ground the spark plug to the engine.

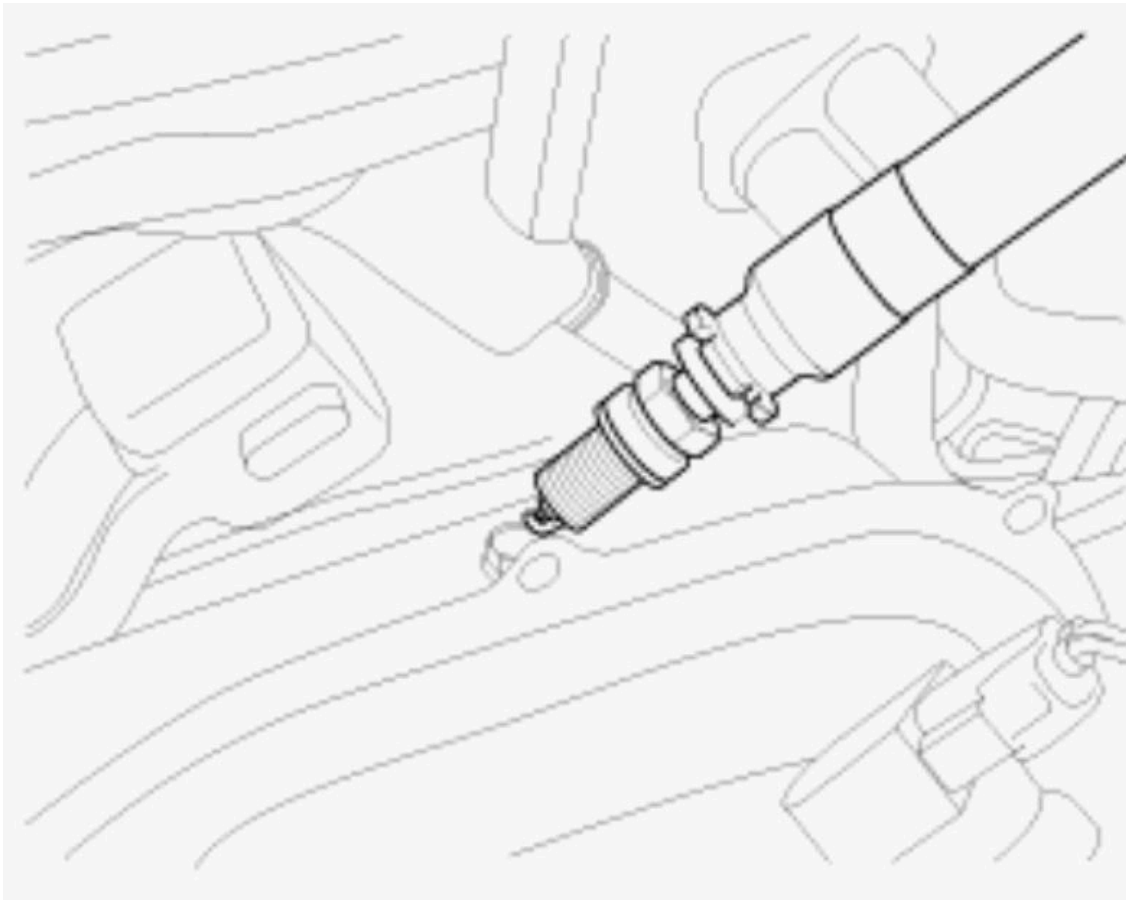


Fig. 1: Identifying Spark Plug To Engine Ground

Courtesy of KIA MOTORS AMERICA, INC.

6. Check if sparks occur at each spark plug while engine is being cranked.
3. If sparks do not occur, perform the following test.

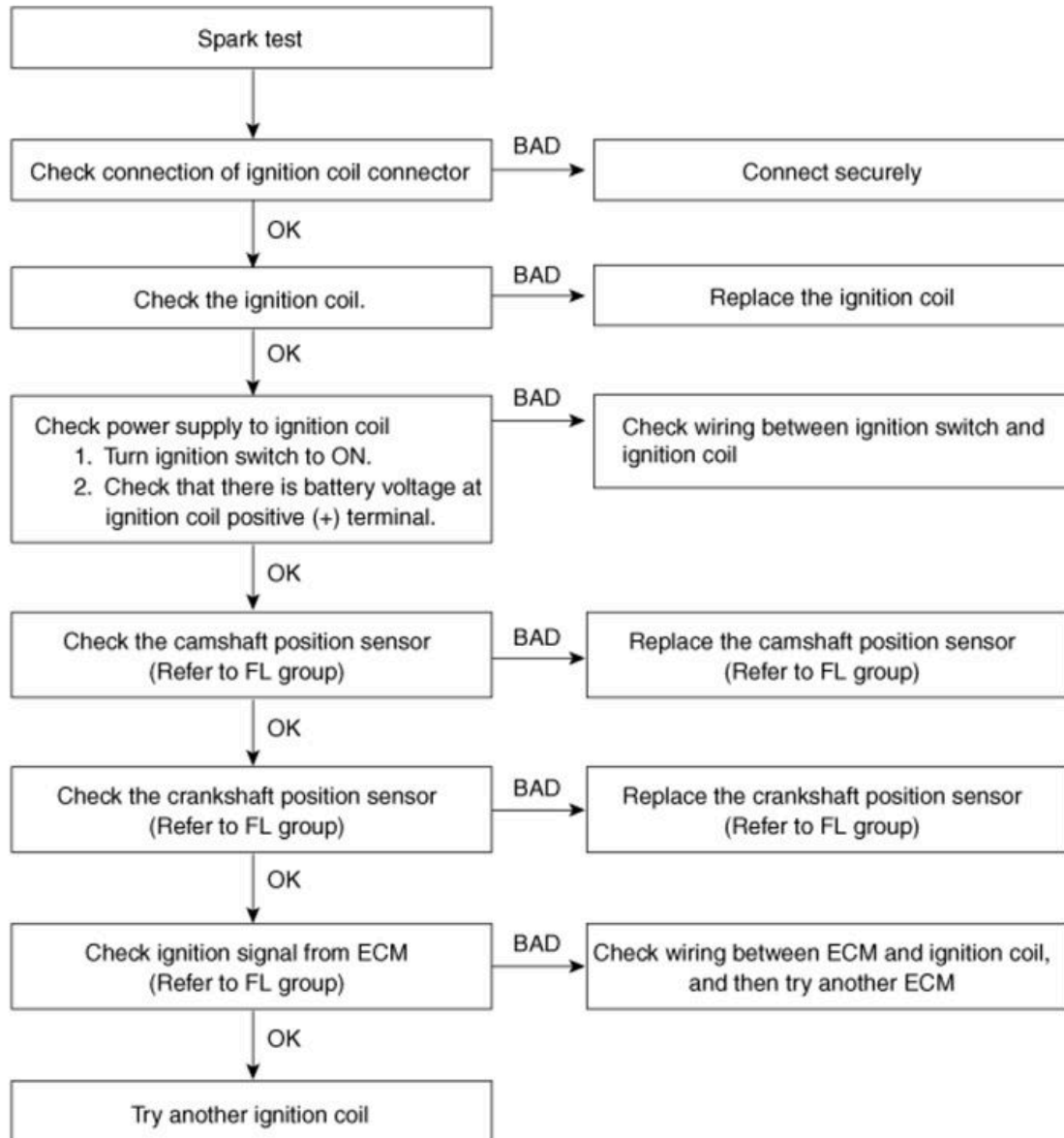


Fig. 2: Ignition Coil Inspection Flow Diagram
Courtesy of KIA MOTORS AMERICA, INC.

4. Using a spark plug wrench, install spark plugs.
5. Install the ignition coils.

IGNITION COIL

2014 Kia Sportage EX

2014 ENGINE Ignition System - 2.4L - Sportage

DESCRIPTION

An ignition coil is an induction coil in an engine's ignition system which transforms the battery's low voltage to the high voltage needed to create an electric spark in the spark plugs to ignite the fuel. Coils have an internal resistor while others rely on a resistor wire or an external resistor to limit the current flowing into the coil from the battery 12 V supply.

SPECIFICATIONS

IGNITION COIL SPECIFICATIONS TABLE

Item	Specification
Primary Coil Resistance (ohms)	$0.62 \pm 10\%$ [20°C (68°F)]
Secondary Coil Resistance (kohms)	$7.0 \pm 15\%$ [20°C (68°F)]

SCHEMATIC DIAGRAMS

Circuit Diagram

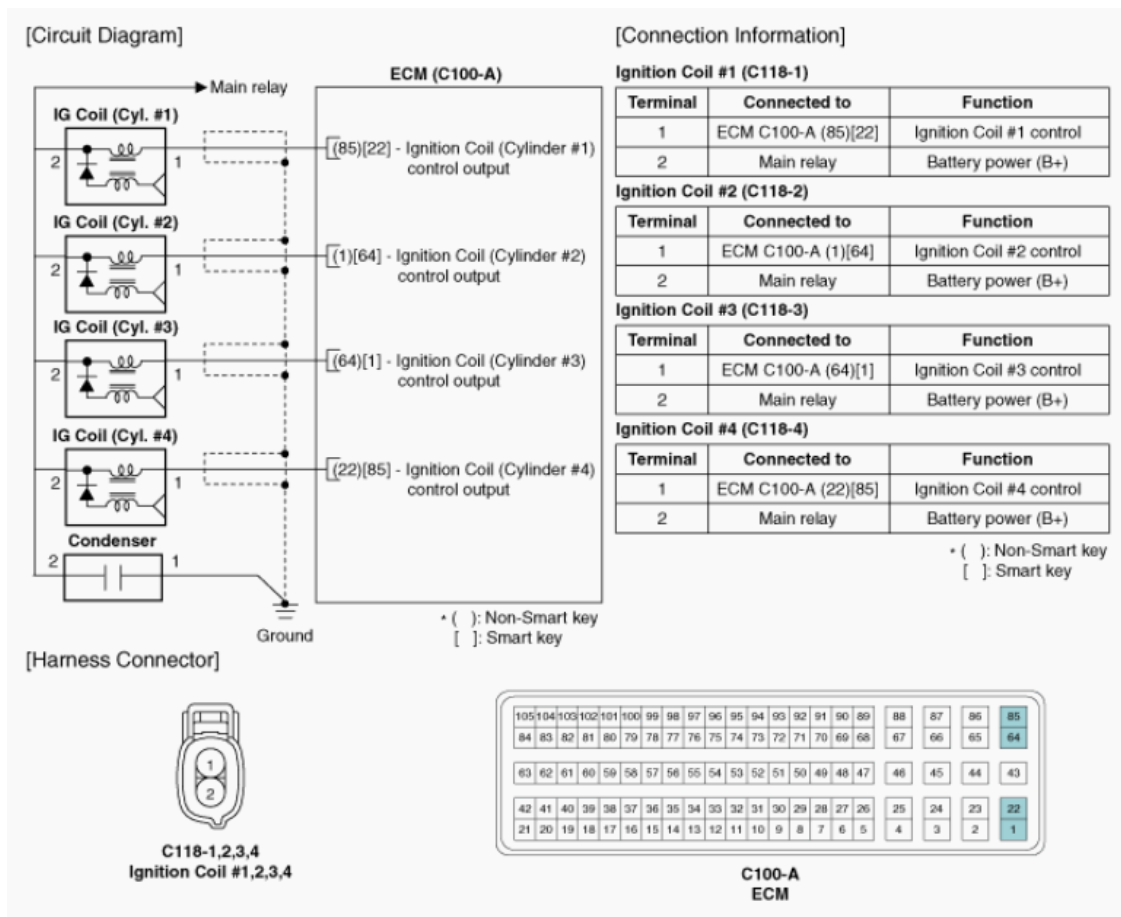


Fig. 3: Ignition Coil - Circuit Diagram
Courtesy of KIA MOTORS AMERICA, INC.

REPAIR PROCEDURES

Removal

1. Disconnect the battery negative terminal.
2. Remove the engine cover.
3. Disconnect the ignition coil connector (A).

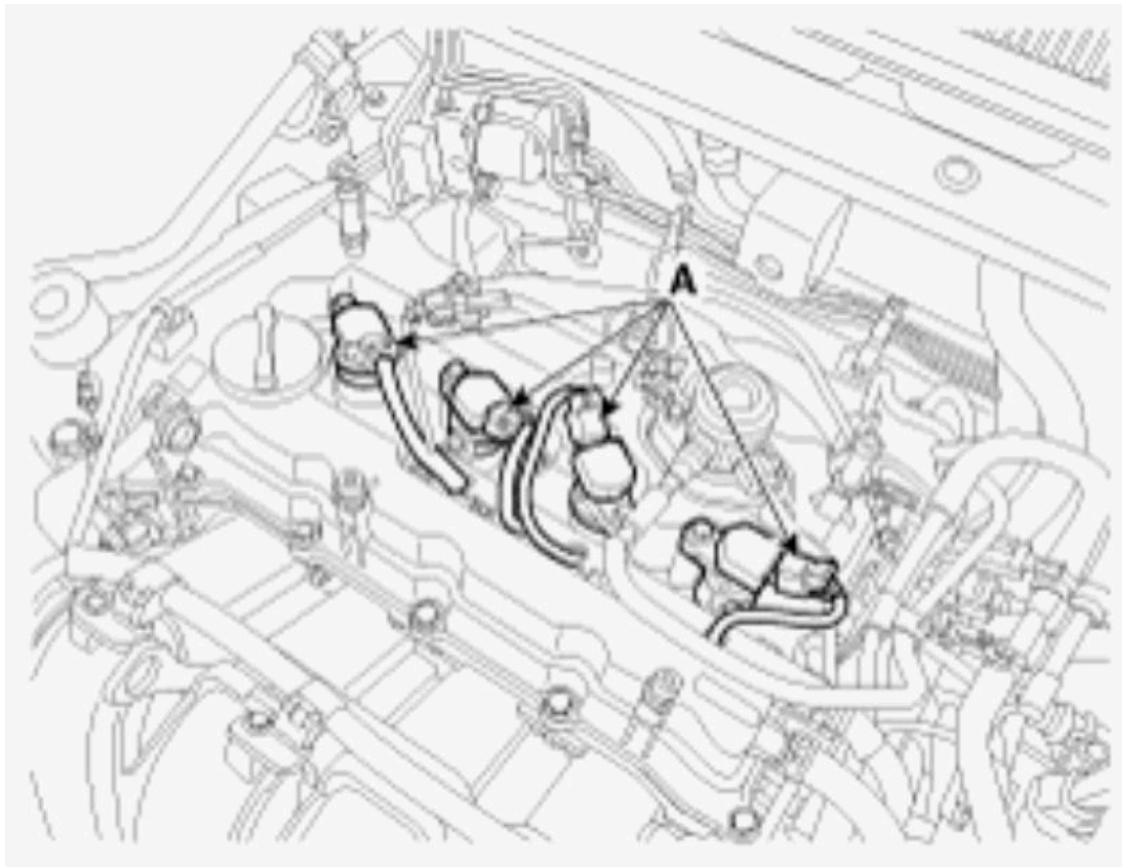


Fig. 4: Identifying Ignition Coil Connectors (A)
Courtesy of KIA MOTORS AMERICA, INC.

NOTE:

- When removing the ignition coil connector, pull the lock pin (A) and push the clip (B).

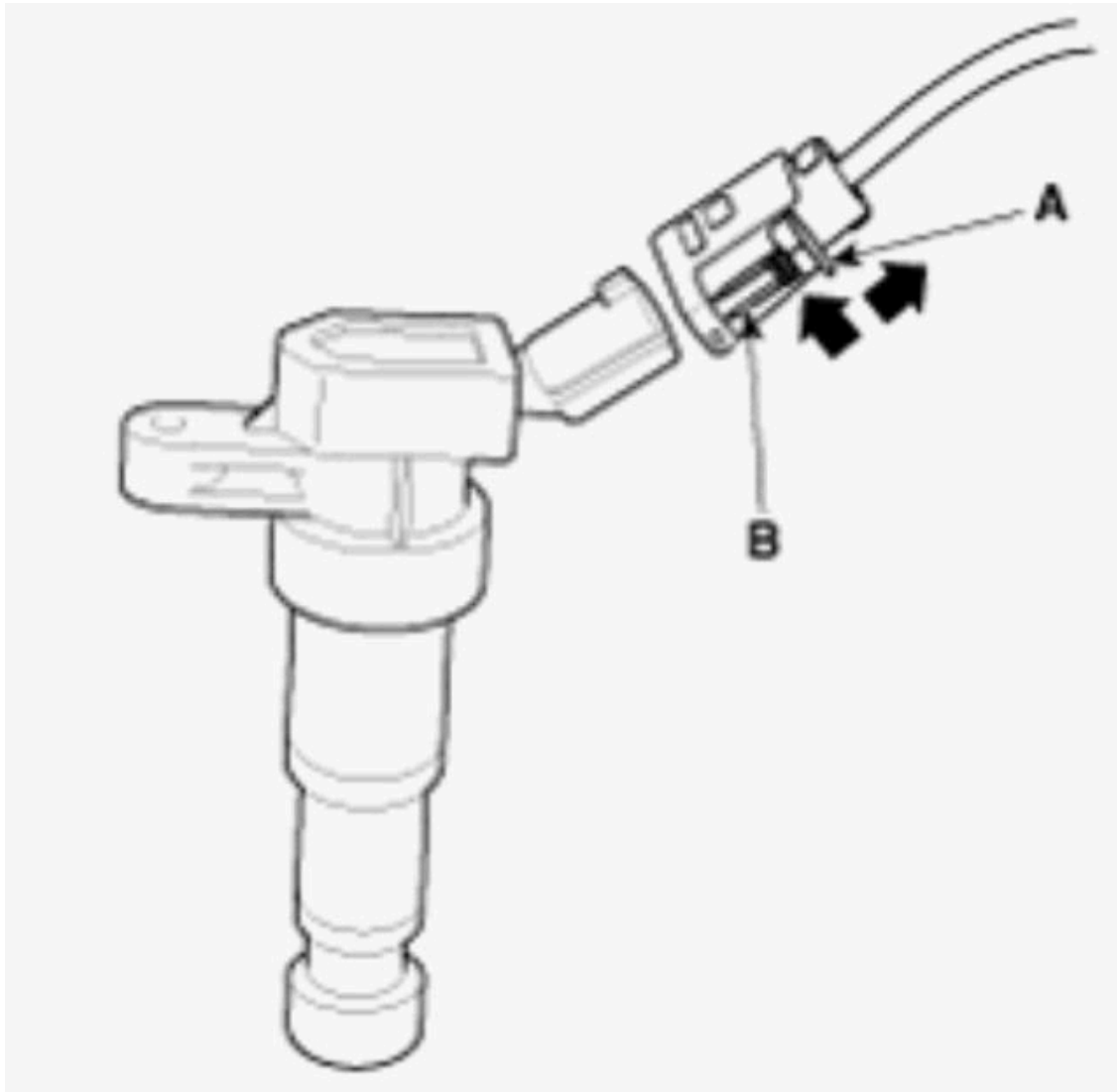


Fig. 5: Identifying Lock Pin (A) & Push Clip (B)
Courtesy of KIA MOTORS AMERICA, INC.

4. Remove the ignition coil (A).



Fig. 6: Removing Ignition Coils (A)
Courtesy of KIA MOTORS AMERICA, INC.

Installation

1. Install in the reverse order of removal.

Ignition coil installation bolts:

9.8 ~ 11.8 N.m (1.0 ~ 1.2 kgf.m, 7.2 ~ 8.7 Ib-ft)

Inspection

1. Measure the primary coil resistance between terminals (+) and (-).

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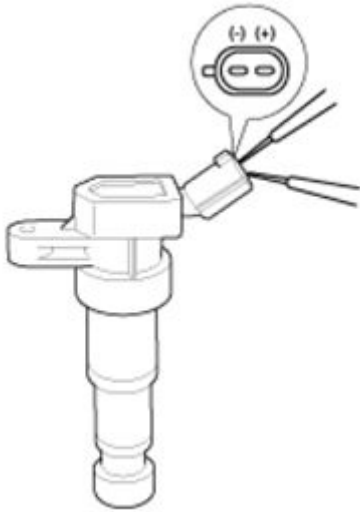


Fig. 7: Measuring Primary Coil Resistance Between Terminals (+) & (-)
Courtesy of KIA MOTORS AMERICA, INC.

Standard value: 0.62ohms \pm 10%