

2011-12 ENGINE

Ignition System - Odyssey

COMPONENT LOCATION INDEX

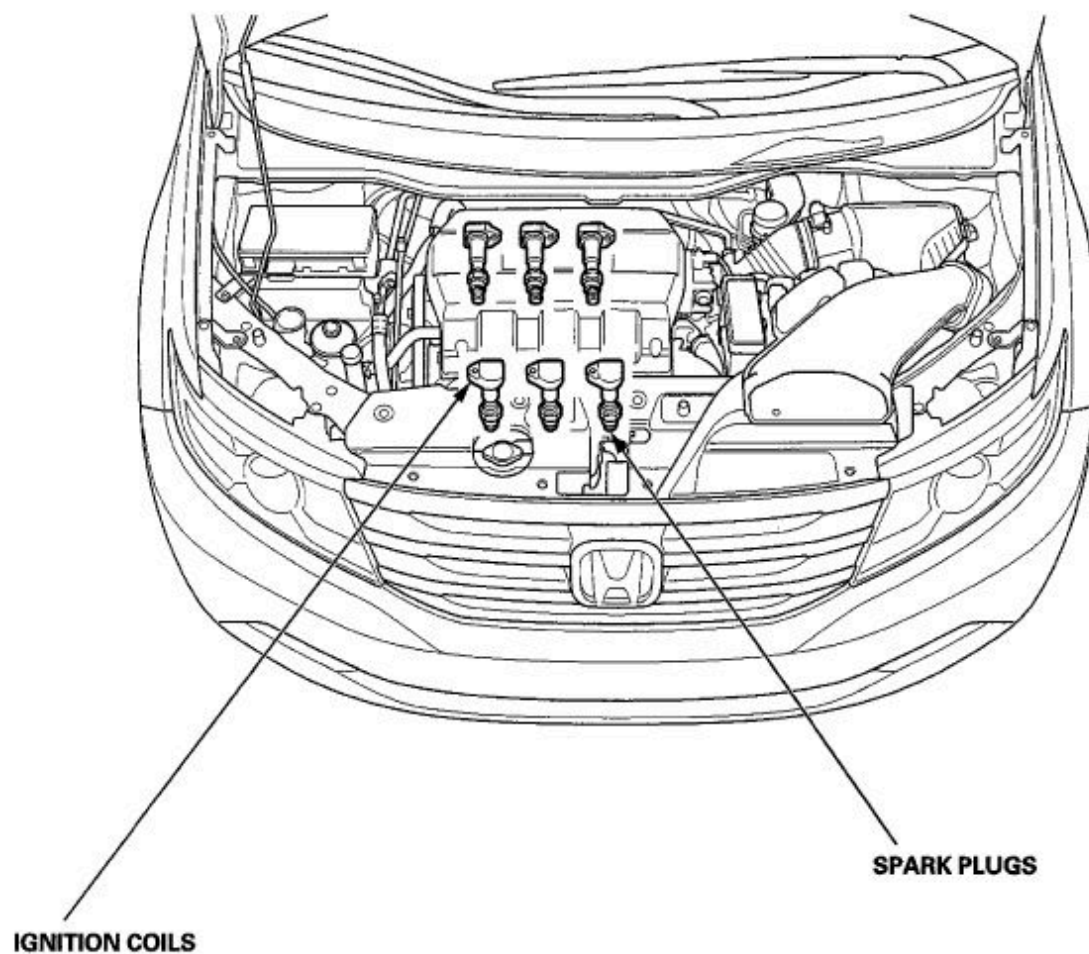


Fig. 1: Identifying Ignition System Replacement Components
Courtesy of AMERICAN HONDA MOTOR CO., INC.

IGNITION TIMING INSPECTION

1. Connect the HDS to the DLC (see step 2 on **HOW TO USE THE HDS (HONDA DIAGNOSTIC SYSTEM)**).
2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the vehicle and the PCM. If it does not communicate, troubleshoot the DLC circuit (see **DLC CIRCUIT TROUBLESHOOTING**).
4. Check for DTCs (see **HOW TO USE THE HDS (HONDA DIAGNOSTIC SYSTEM)**). If a DTC is

present, diagnose and repair the cause before continuing with this test.

5. Start the engine. Hold the engine speed at 3,000 RPM with no load (in P or N) until the radiator fan comes on, then let it idle.
6. Check the idle speed (see **IDLE SPEED INSPECTION**).
7. Jump the SCS line with the HDS.
8. Connect the timing light to the No. 1 ignition coil harness.

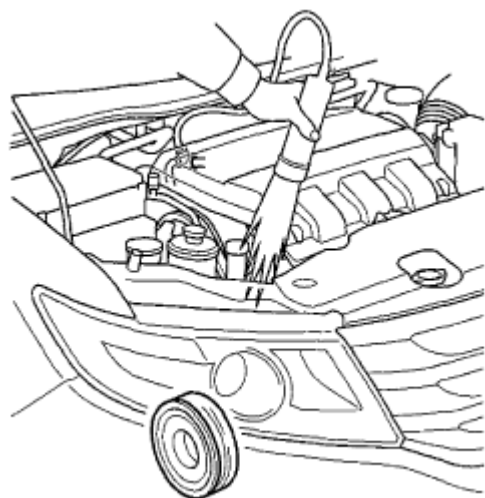


Fig. 2: Connecting Timing Light To No. 1 Ignition Coil Harness
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Aim the light toward the pointer (A) on the timing belt lower cover. Check the ignition timing under a no load condition (headlights, blower fan, rear window defogger, and air conditioner are turned off).

NOTE: The other pointer (B) is not used.

Ignition Timing

10±2 °BTDC (RED mark (C)) at idle in P or N

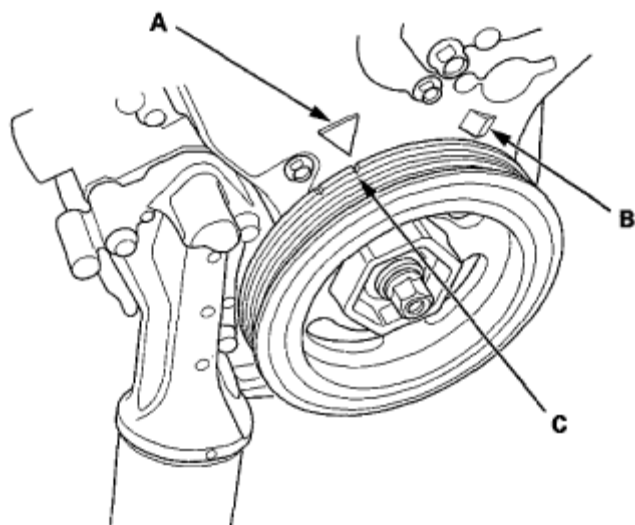


Fig. 3: Identifying Pointers And Red Mark
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. If the ignition timing differs from the specification, check the cam timing. If the cam timing is OK, update the PCM if it does not have the latest software (see **PCM UPDATE**), or substitute a known-good PCM (see **SUBSTITUTING THE PCM**), then recheck. If the system works properly, and the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**).
11. Disconnect the HDS and the timing light.

IGNITION COIL AND SPARK PLUG REMOVAL/INSTALLATION

1. Remove the engine cover (see step 7 on **ENGINE REMOVAL**).
2. Disconnect the ignition coil connectors (A), then remove the ignition coils (B).

FRONT

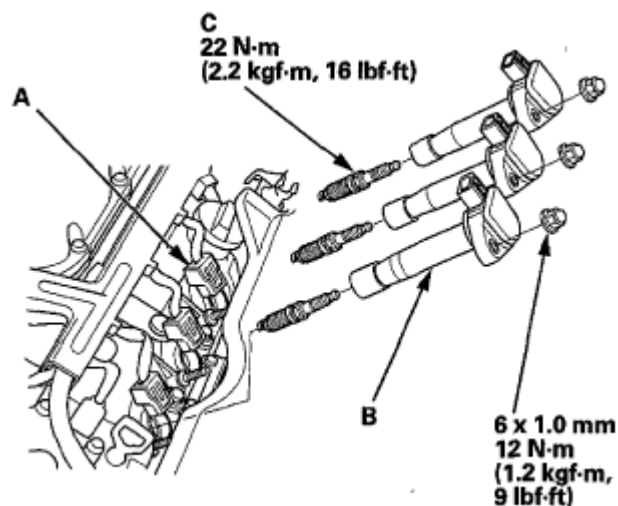
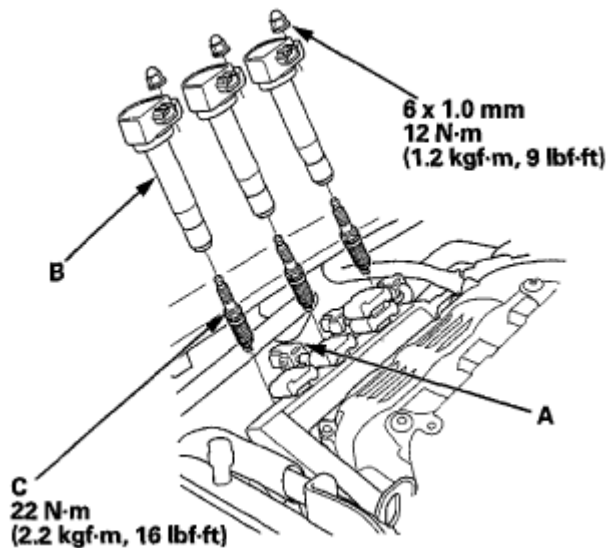


Fig. 4: Identifying Ignition Coil Connectors And Ignition Coils With Torque Specifications (FRONT)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

REAR**Fig. 5: Identifying Ignition Coil Connector And Ignition Coils With Torque Specifications (REAR)**
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the spark plugs (C) and inspect them (see **SPARK PLUG INSPECTION**).
4. Apply a small amount of anti-seize compound to the plug threads, and screw the plugs into the cylinder head, finger-tight, then tighten the plugs to the specified torque.

Specified Torque:

22 N.m (2.2 kgf.m, 16 lbf.ft)

5. Install the ignition coils in the reverse order of removal.

SPARK PLUG INSPECTION (2011 MODEL)

1. Remove the ignition coils and the spark plugs (see **IGNITION COIL AND SPARK PLUG REMOVAL/INSTALLATION**).
2. Inspect the electrodes and the ceramic insulator:
 - Burned or worn electrodes may be caused by these conditions:
 - Advanced ignition timing
 - Loose spark plug
 - Plug heat range too hot

- Insufficient cooling
- Fouled plugs may be caused by these conditions:
 - Retarded ignition timing
 - Oil in combustion chamber
 - Incorrect spark plug gap
 - Plug heat range too cold
 - Excessive idling/low speed running
 - Clogged air cleaner element
 - Deteriorated ignition coils

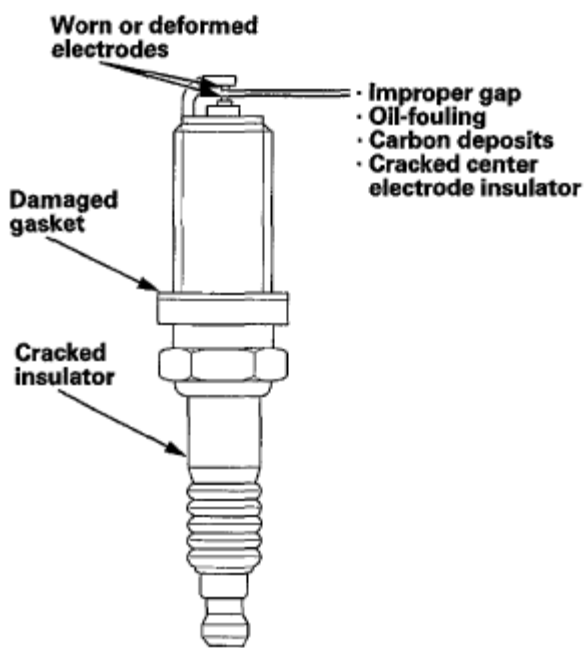


Fig. 6: Inspecting Spark Plug
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. If the spark plug electrode is dirty or contaminated, clean the electrode with a plug cleaner.

NOTE:

- Do not use a wire brush or scrape the iridium electrode since this will damage the electrode.
- When using a sand blaster spark plug cleaner, do not clean for more than 20 seconds to avoid damaging the electrode.

4. Replace the plug at the specified interval, or if the center electrode (A) is rounded, or if the spark plug gap (B) is out of specification. Use only the spark plugs listed.

NOTE:

Do not adjust the gap of iridium tip plugs.

Spark Plugs

NGK: DILZKR7A11G

Electrode Gap

Standard (New): 1.0-1.1 mm (0.039-0.043 in)

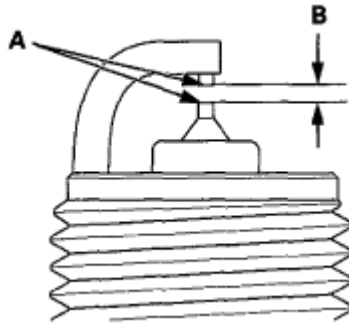


Fig. 7: Identifying Spark Plug Gap

Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Install the spark plugs and the ignition coils (see **IGNITION COIL AND SPARK PLUG REMOVAL/INSTALLATION**).

SPARK PLUG INSPECTION (2012 MODEL)

1. Remove the ignition coils and the spark plugs (see **IGNITION COIL AND SPARK PLUG REMOVAL/INSTALLATION**).
2. Inspect the electrodes and the ceramic insulator:
 - Burned or worn electrodes may be caused by these conditions:
 - Advanced ignition timing
 - Loose spark plug
 - Plug heat range too hot
 - Insufficient cooling
 - Fouled plugs may be caused by these conditions:
 - Retarded ignition timing
 - Oil in combustion chamber
 - Incorrect spark plug gap
 - Plug heat range too cold
 - Excessive idling/low speed running
 - Clogged air cleaner element
 - Deteriorated ignition coils

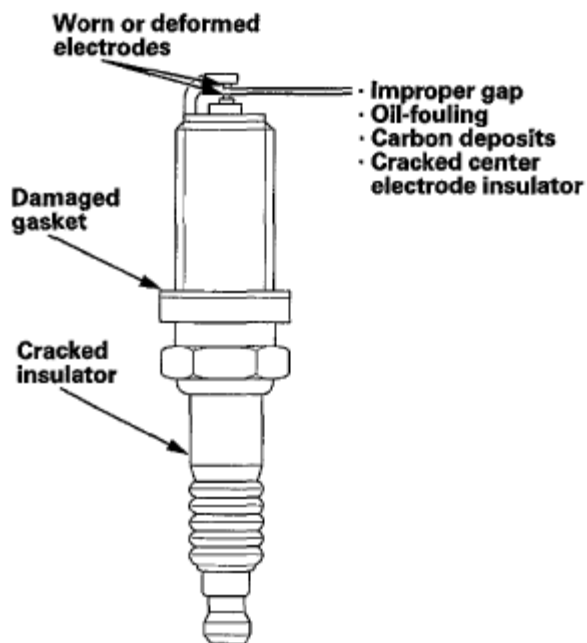


Fig. 8: Inspecting Spark Plug
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Replace the plug at the specified interval, or if the center electrode (A) is rounded, or if the spark plug gap (B) is out of specification. Use only the spark plugs listed.

NOTE: Do not adjust the gap of iridium tip plugs.

NOTE: Do not use plug cleaner.

Spark Plugs

NGK: DILZKR7A11G

Electrode Gap

Standard (New): 1.0-1.1 mm (0.039-0.043 in)

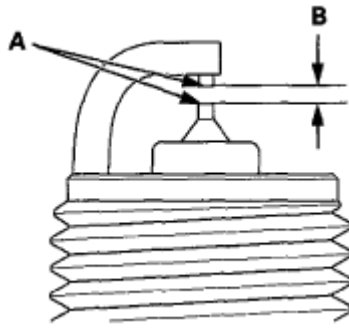


Fig. 9: Identifying Spark Plug Gap

Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the spark plugs and the ignition coils (see **IGNITION COIL AND SPARK PLUG REMOVAL/INSTALLATION**).