

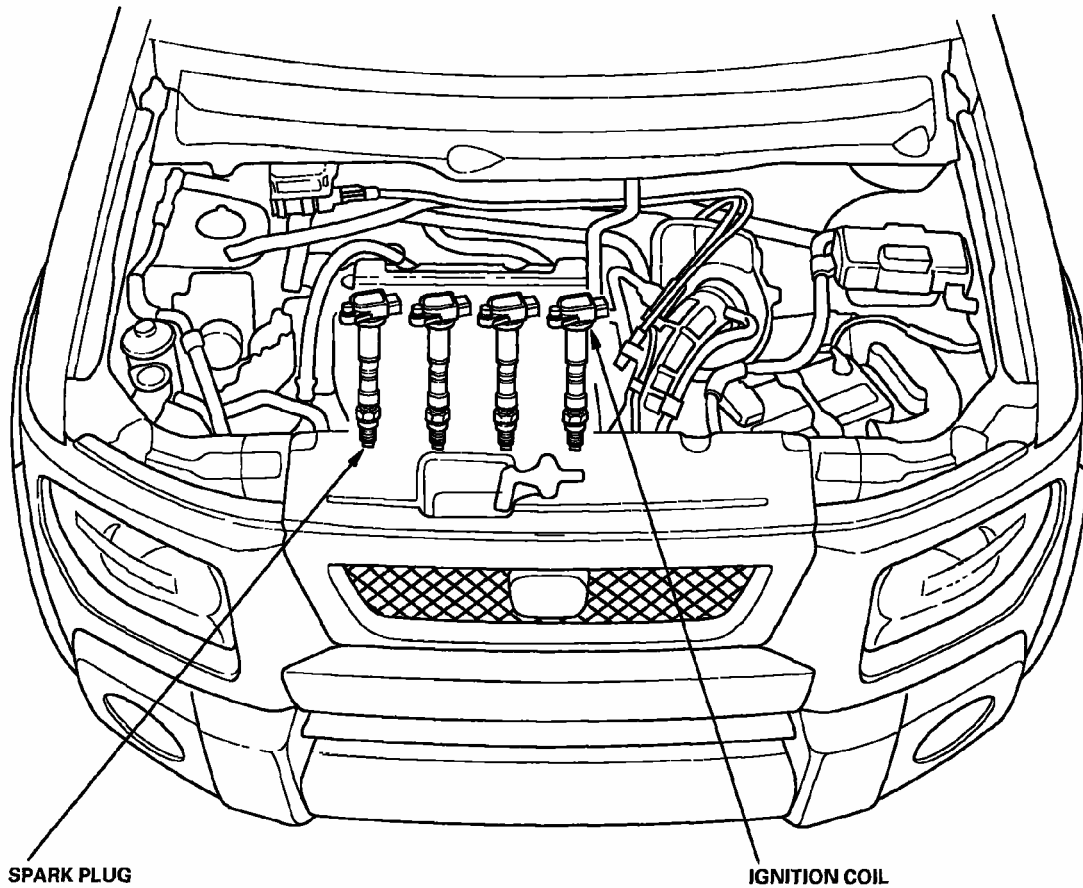
**2004 Honda Element DX**

2003-06 ENGINE Ignition System - Element

**2003-06 ENGINE**

**Ignition System - Element**

**COMPONENT LOCATION INDEX**



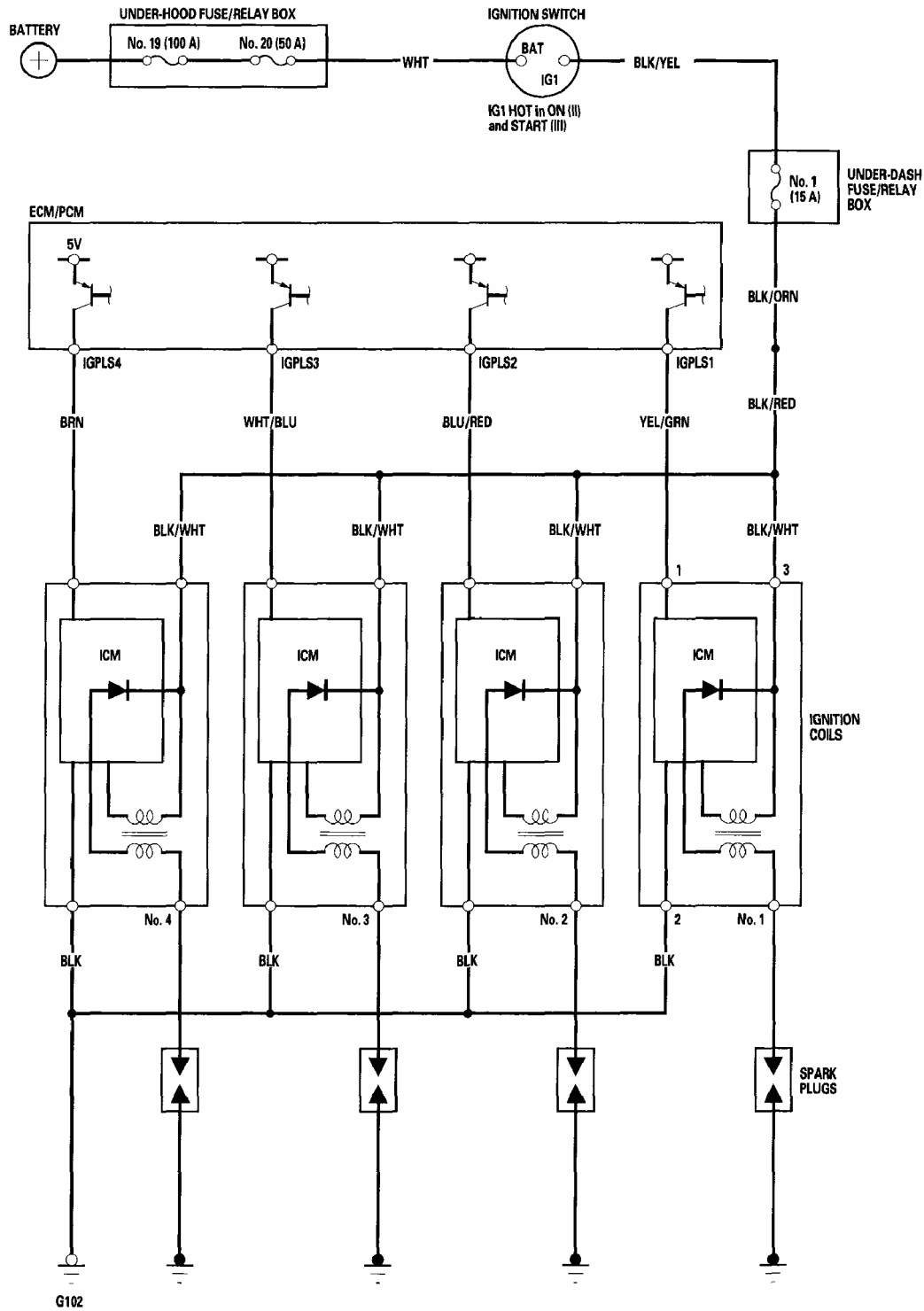
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**Fig. 1: Identifying Components Location**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

**CIRCUIT DIAGRAM**

# 2004 Honda Element DX

## 2003-06 ENGINE Ignition System - Element



ICM : Ignition Control Module  
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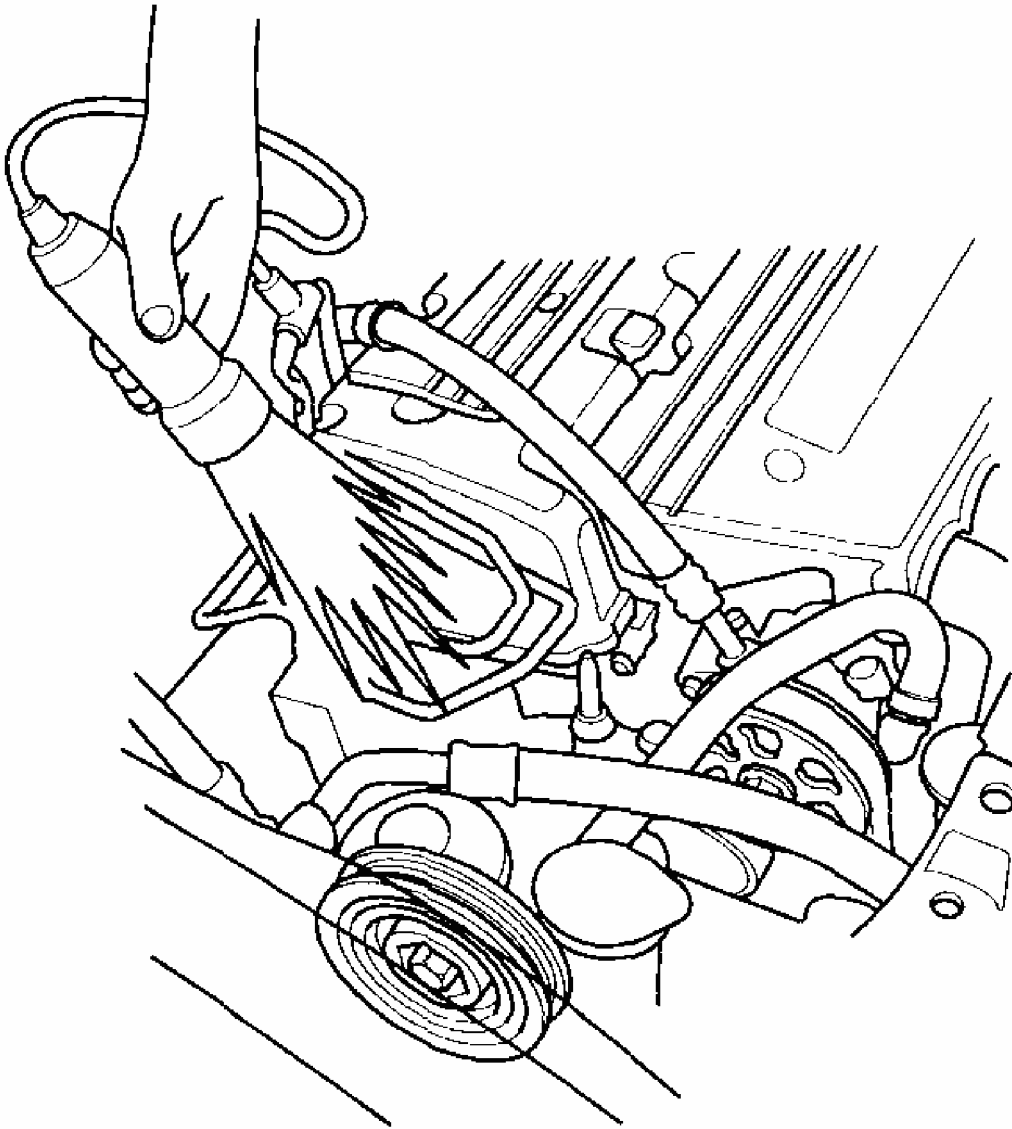
**Fig. 2: Circuit Diagram Ignition System**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

### IGNITION TIMING INSPECTION

## 2004 Honda Element DX

2003-06 ENGINE Ignition System - Element

1. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC) (see step 2 on **HOW TO USE THE HDS (HONDA DIAGNOSTIC SYSTEM)** ), and check for DTCs. If a DTC is present, diagnose and repair the cause before inspecting the ignition timing.
2. Start the engine. Hold the engine speed at 3,000 RPM without load (in Park or Neutral) until the radiator fan comes on, then let it idle.
3. Check the idle speed (see **IDLE SPEED INSPECTION** ).
4. Jump the SCS line with the HDS.
5. Free the service loop from the wire harness, then connect the timing light to the service loop.



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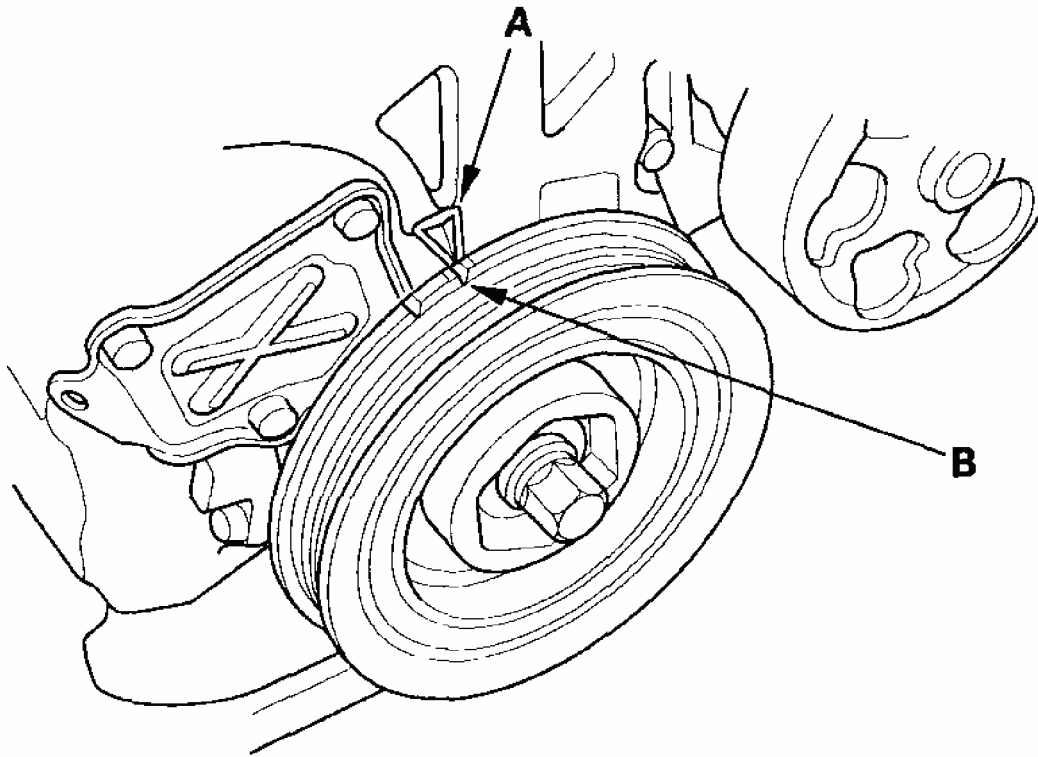
**Fig. 3: Connecting Timing Light To Service Loop**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Aim the light toward the pointer (A) on the cam chain case. Check the ignition timing under a no load condition (headlights, blower fan, rear window defogger, and air conditioner are turned off).

### **Ignition Timing**

**M/T: 8°+/-2° BTDC (RED mark (B)) at idle in Neutral**

**A/T:  $8^{\circ}\pm 2^{\circ}$ BTDC (RED mark (B)) at idle in Park or Neutral**



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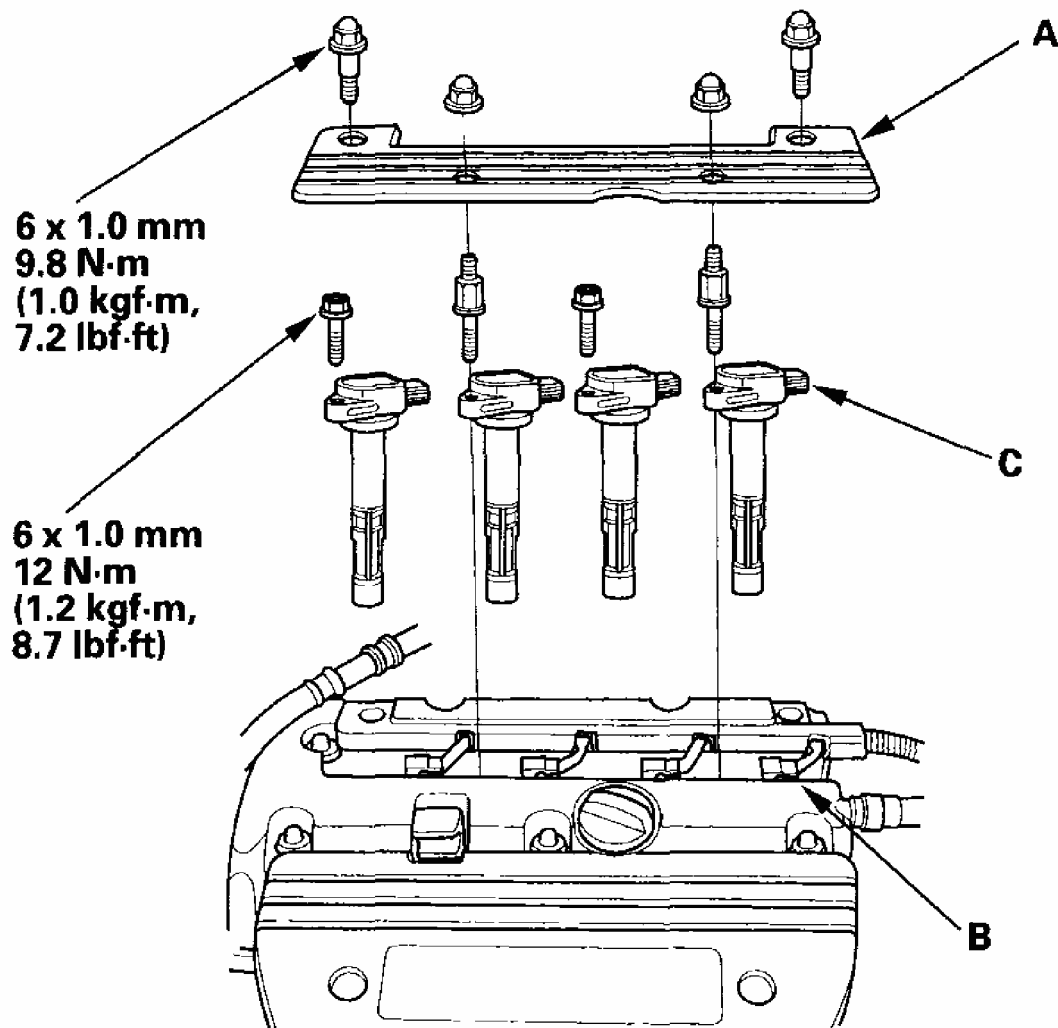
**Fig. 4: Identifying Timing Pointer**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. If the ignition timing differs from the specification, update the engine control module (ECM)/powertrain control module (PCM) if it does not have the latest software (see **ECM/PCM UPDATING AND SUBSTITUTION FOR TESTING**), or substitute a known-good ECM/PCM (see **HOW TO SUBSTITUTE THE ECM/PCM**), then recheck. If the system works properly, and the ECM/PCM was substituted, replace the original ECM/PCM (see **ECM/PCM REPLACEMENT**).
8. Disconnect the HDS and the timing light.
9. Secure the service loop to the wire harness with wire ties.

## IGNITION COIL REMOVAL/INSTALLATION

1. Remove the ignition coil cover (A), disconnect the ignition coil connectors (B), then remove the ignition coils (C).



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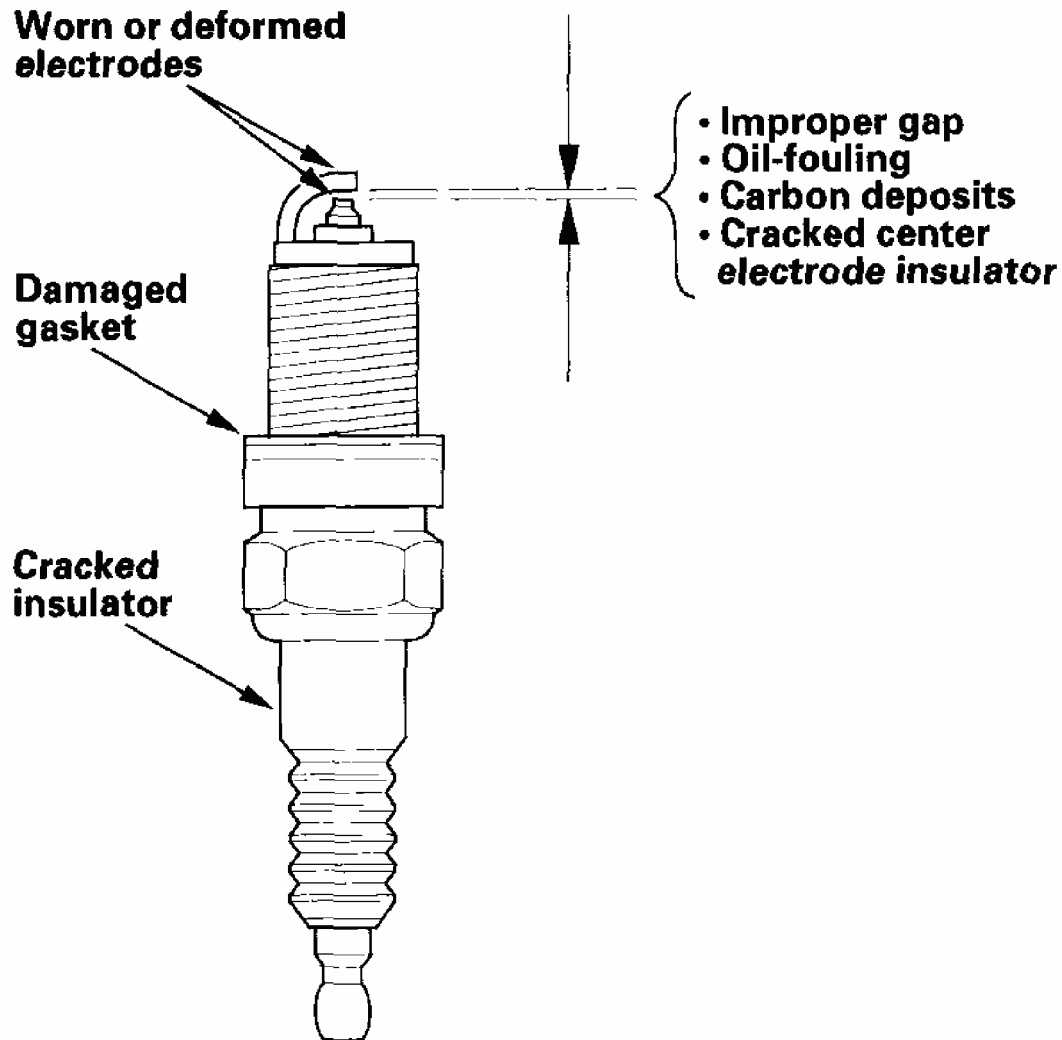
**Fig. 5: Removing Ignition Coils & Torque Specifications**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

## SPARK PLUG INSPECTION

1. Inspect the electrodes and ceramic insulator.
  - Burned or worn electrodes may be caused by:
    - Advanced ignition timing
    - Loose spark plug
    - Plug heat range too hot
    - Insufficient cooling

- Fouled plug may be caused by:
  - 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



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**Fig. 6: Inspecting Electrodes And Ceramic Insulator**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

**NOTE:**

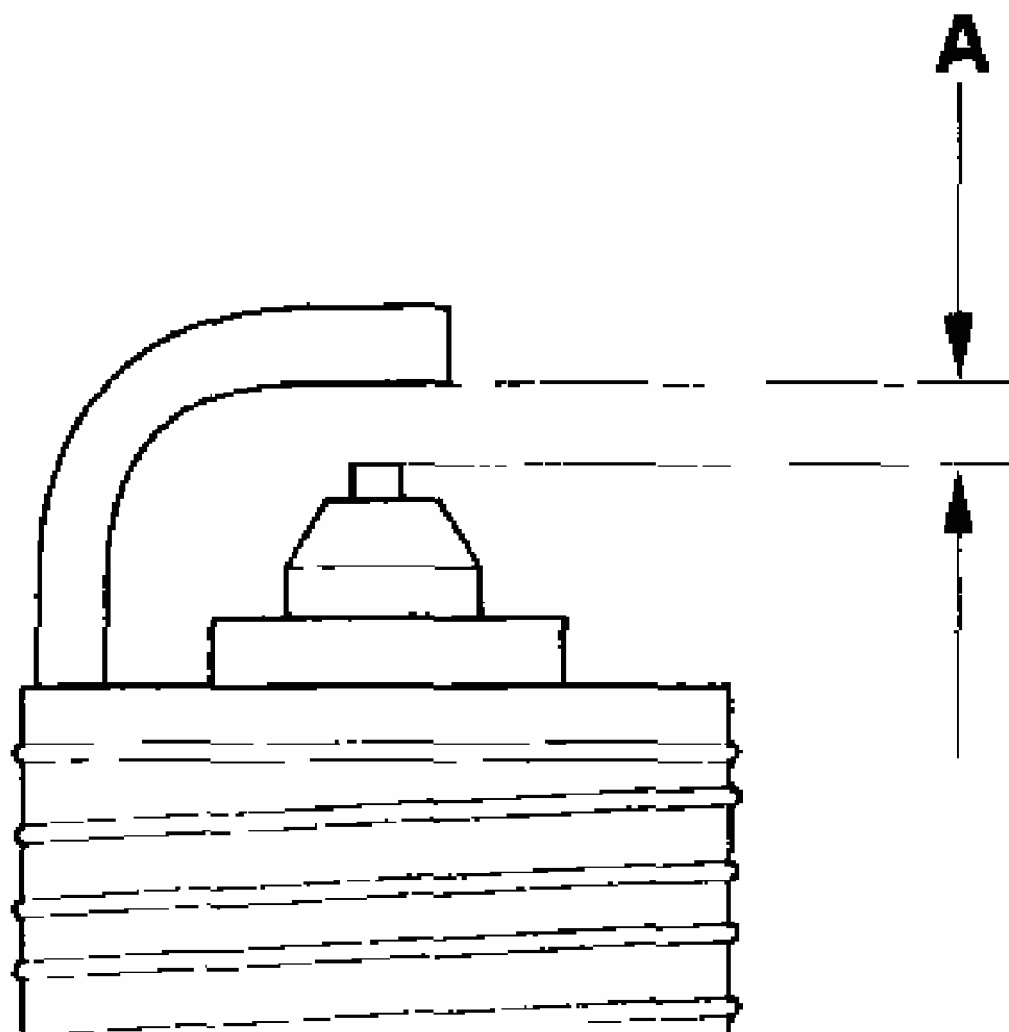
- Do not use a wire brush or scrape the iridium electrode since this will damage the electrode.
- Use a chemical cleaner such as Carb Spray to clean contamination on the electrode.
- When using a sand blaster spark plug cleaner, do not clean for more than 20 seconds to avoid damaging the electrode.

3. Do not adjust the gap (A) of iridium tip plugs; replace the spark plug if the gap is out of specification.

**Electrode Gap**

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





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**Fig. 7: Measuring Gap**

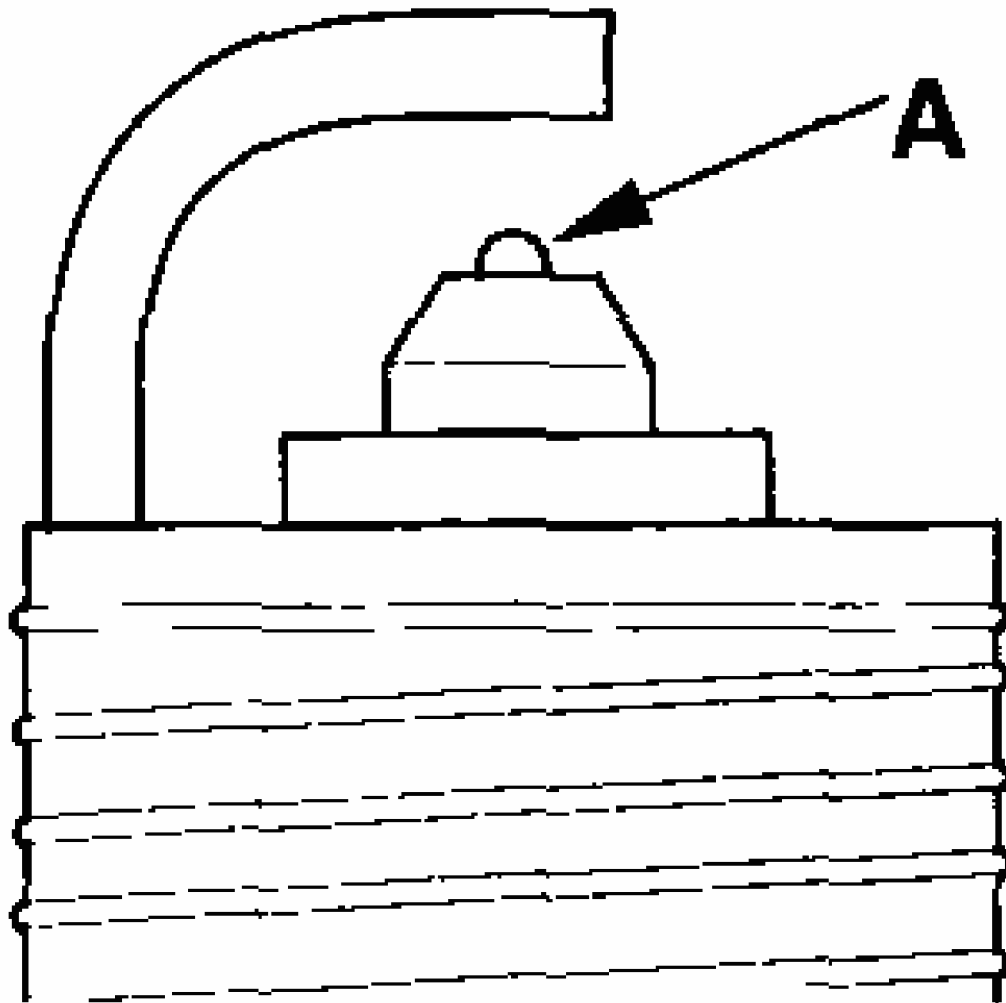
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Replace the plug at the specified interval or if the center electrode is rounded (A). Use only the spark plugs as listed.

**Spark Plugs**

**IZFR6K11 (NGK)**

**SKJ20DR-M11 (DENSO)**



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**Fig. 8: Identifying Center Electrode**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Apply a small amount of anti-seize compound to the plug threads, and screw the plugs into the cylinder head, finger-tight. Then torque them to 18 N.m (1.8 kgf.m, 13 lbf.ft).