
Spark Plug Wire

Material

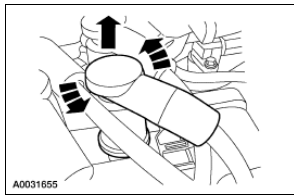
Item	Specification
Silicone Dielectric Compound D7AZ-19A331-A or equivalent	ESE-M1C171-A

Removal and Installation

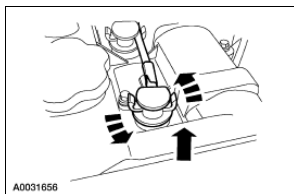
⚠ CAUTION: Do not pull on the spark plug wire as it may separate from the spark plug wire connector inside the spark plug wire boot.

NOTE: Wipe the spark plug wire sets with a clean, damp cloth before inspecting them. Without removing the spark plug wire sets from the spark plugs or ignition coils, inspect them for visible damage such as cuts, pinches, or cracked or torn boots.

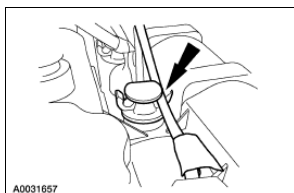
1. Remove the spark plug wire by slightly twisting while pulling upwards.



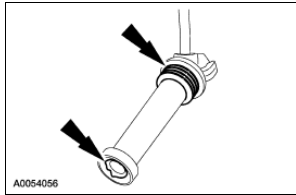
2. Remove the spark plug wire by slightly twisting while pulling upwards.



3. Disconnect the spark plug wire if routed through another spark plug wire.



4. To install, reverse the removal procedure.
 - Apply silicone dielectric compound to the locations shown.

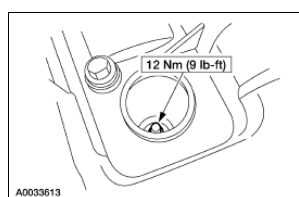


Spark Plug

Removal and Installation

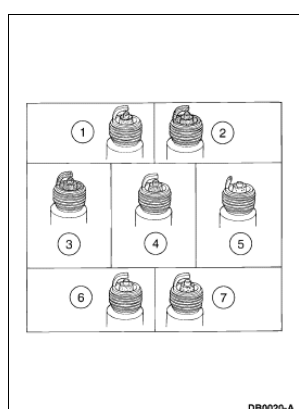
1. Remove the spark plug wire from the spark plug. For additional information, refer to [Spark Plug Wire](#) in this section.
2. **NOTE:** Remove foreign material with compressed air.

Remove the spark plug.

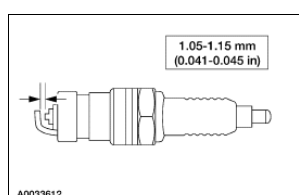


3. Inspect the spark plugs.

Item	Description
1	Deposits Bridging Spark Plug Gap
2	Wet Black Deposits (Oil Fouling)
3	Dry Black Deposits (Carbon Fouling)
4	Normal Spark Plug
5	Pre-Ignition
6	Overheating
7	Fused Spot Deposits



4. Check and adjust the spark plug gap as necessary.



5. To install, reverse the removal procedure.

General Specifications

Item	Specification
Base ignition timing (not adjustable)	10 degrees BTDC
Firing order	1-4-2-5-3-6
Spark plug gap	1.07-1.17 mm (0.042-0.046 in)
Original spark plug	AWSF32PG or AWSF32P
Replacement spark plug	AWSF32PP
Lubricant	
Silicone Brake Caliper Grease and Dielectric Compound D7AZ-19A331-A (Motorcraft WA-10)	ESA-M1C171-A

Torque Specifications

Description	Nm	lb-ft	lb-in
Ignition coil screws	6		53
Spark plugs	15	11	

Engine Ignition

The electronic ignition (EI) system for the 3.0L engine consists of the following components:

- Ignition coil (12029)
- Spark plugs (12405)
- Spark plug wires (12286)
- Radio ignition interference capacitor (18801)

The ignition coil:

- is controlled by the powertrain control module (PCM)(12A650).
- each ignition coil fires two spark plugs.

The spark plug:

- ignites the fuel and air mixture.
- is different for the RH and LH sides.

The spark plug wire:

- carries high voltage pulses from the ignition coil to the spark plugs.

Refer to the Powertrain Control/Emissions Diagnosis (PC/ED) manual for additional information on ignition coil matched pairs.

Engine Ignition

Refer to the Powertrain Control/Emissions Diagnosis (PC/ED) manual for diagnosis and testing of the electronic ignition (EI) system.

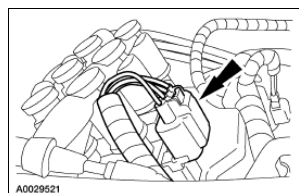
Ignition Coil Pack

Material

Item	Specification
Silicone Brake Caliper Grease and Dielectric Compound D7AZ-19A331-A	ESA-M1C171-A

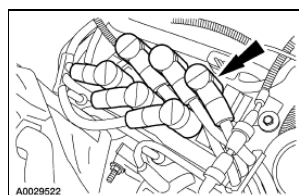
Removal and Installation

1. Disconnect the ignition coil electrical connector.

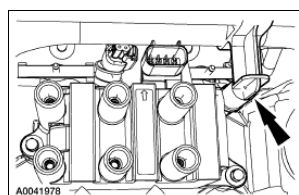


2. **⚠ CAUTION:** Do not pull on the spark plug wire as it may separate from the spark plug wire connector inside the spark plug wire boot.

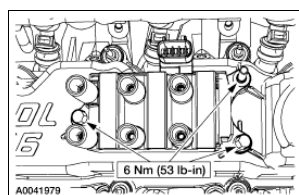
Disconnect the spark plug wires by twisting while pulling upward.



3. Disconnect the heater hose support from the stud.



4. Remove the two bolts, one stud and the ignition coil.




5. Wipe the ignition coil towers with a clean cloth dampened with soap and water.

6. To install, reverse the removal procedure.
 - Use a small, clean tool to coat the entire interior surface of the boot with silicone brake caliper grease.
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Spark Plug Wires

Special Tool(s)

 ST1394-A	Remover, Spark Plug Wire 303-106 (T74P-6666-A)
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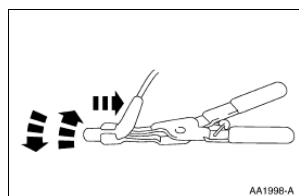
Material

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Silicone Brake Caliper Grease and Dielectric Compound D7AZ-19A331-A	ESA-M1C171-A

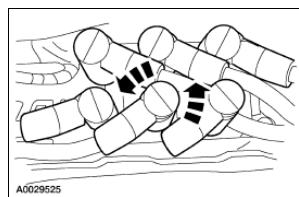
Removal and Installation

⚠ CAUTION: Do not pull on the spark plug wire as it may separate from the spark plug wire connector inside the spark plug wire boot.

1. Use the Spark Plug Wire Remover to grasp and twist the spark plug wire boot back and forth on the spark plug insulator to release the connectors.



2. Disconnect the spark plug wires from the ignition coil (12029) by twisting while pulling upward.



3. Open the spark plug wire separators and remove the spark plug wires.
4. **⚠ CAUTION:** Correct installation of the spark plug wires is critical to vehicle operation. If one spark plug wire is not correctly installed on the spark plug (12405) or ignition coil, both spark plugs connected to that segment of the ignition coil may not fire under load.

NOTE: Wipe the spark plug wires with a clean, damp cloth prior to inspection.

To install, reverse the removal procedure.

- Use a small, clean tool to coat the entire interior surface of the boots with silicone brake caliper grease.

