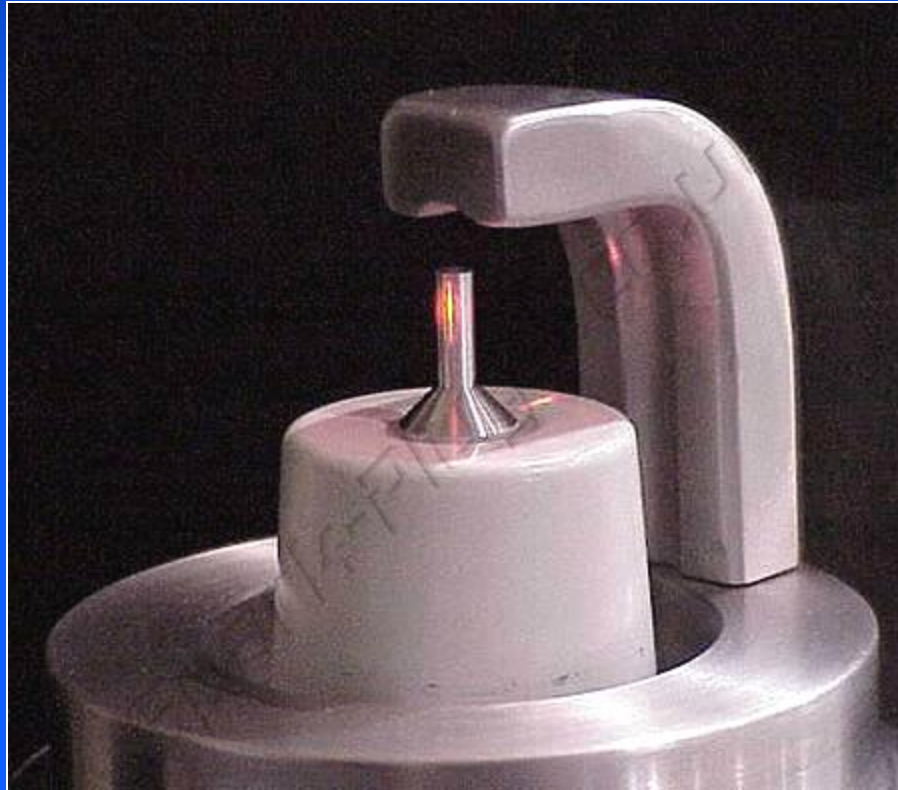
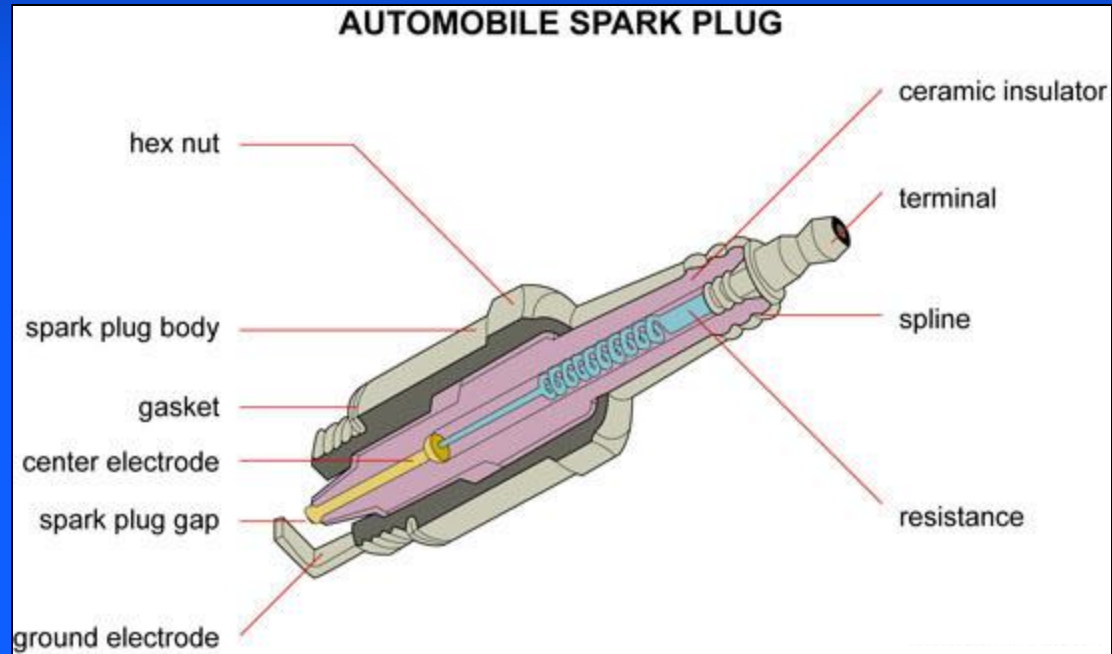


# Spark Plugs



Spark Plugs **ignite** the air fuel mixture in the engine.

≈10,000 volts jumps the gap between the **center electrode** & **ground electrode**

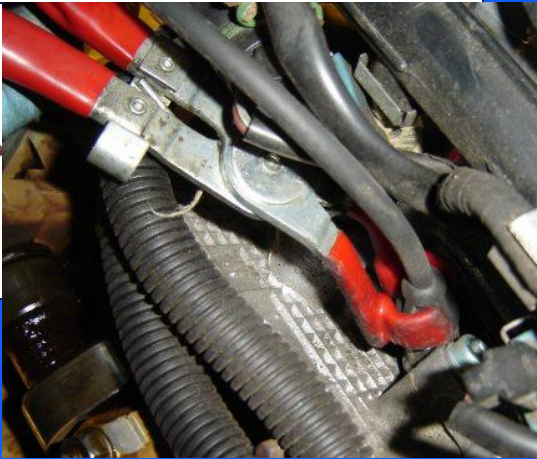


# Removing Spark Plugs

1. Remove plug wire by twisting off the spark plug wire boot

Don't pull the plug wire!

The "spark plug wire pullers" makes wire removal easier



Remove one spark plug at a time, or mark the plug wires so they can be installed in the same location!

- use compressed air to blow out debris from around the spark plug
- use a **spark plug socket** & ratchet to remove the plug...

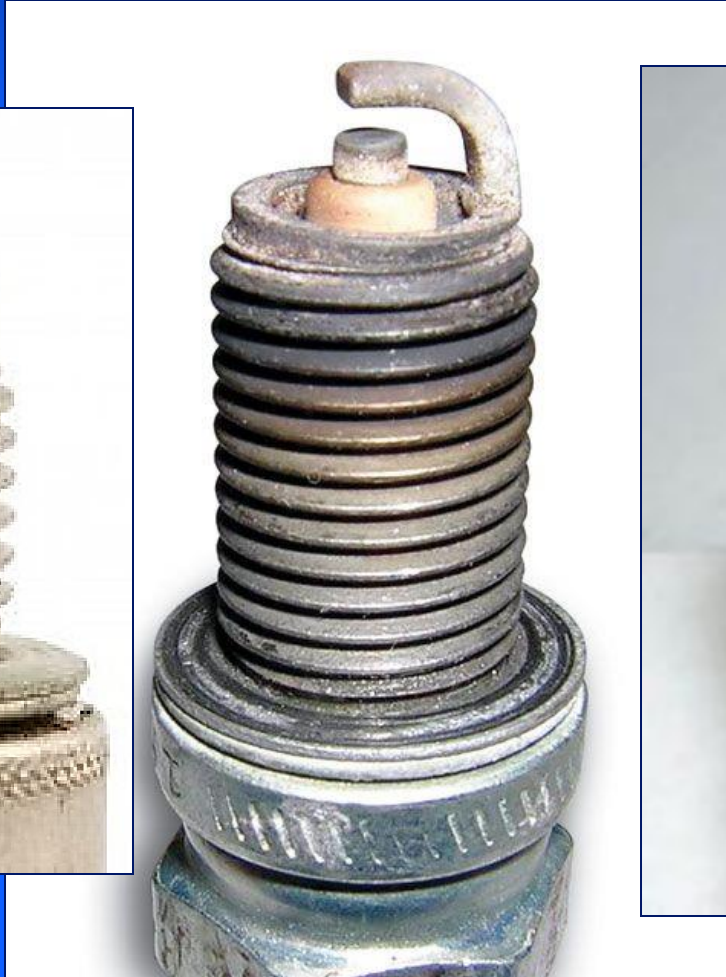


note the hex at the top & the rubber insert which differentiates this socket from standard sockets



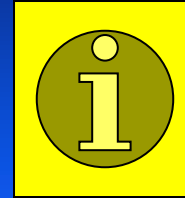
# Spark Plugs

check for electrode wear...



# Inspecting the Plugs

Inspect for abnormal deposits...



Oil Fouled

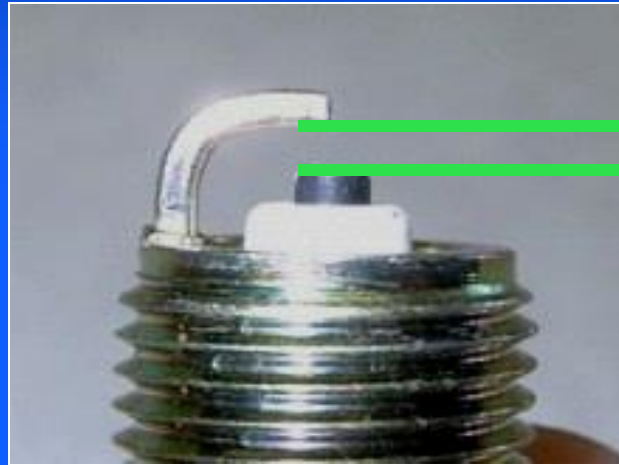


Fuel Fouled



# Gapping New Spark Plugs


locate the spark plug gap specifications



➤ use the under-hood tune-up decal or consult Mitchell



## ➤ under-hood tune-up decal

**Ford Motor Company**  
**IMPORTANT VEHICLE INFORMATION**

This vehicle is equipped with electronic engine control systems. Engine idle speed, idle mixture, and ignition timing are not adjustable. See Powertrain Control/ Emissions Diagnosis Manual for additional information.

Use SAE 5W-30 AMERICAN PETROLEUM INSTITUTE CERTIFIED OILS for GASOLINE ENGINES.

ATTENTION: Dynamometer testing of this vehicle must be conducted on a four-wheel drive speed synchronized dynamometer.

This vehicle conforms to U.S. EPA and California regulations applicable to 1997 model year new light-duty trucks certified for sale in California.

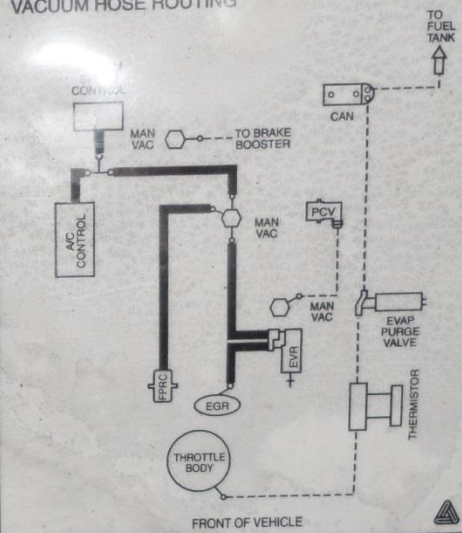
OBD II certified and certified to meet:


Exhaust Emissions Standards Certification	Standard Category
	CARB Tier 1

F7AE-9C485-  
**S Y S**

**Catalyst**

Spark Plug: AGRF - 22PP Gap: .052 -.056  
4.0L - VFM1045AYPBA  
VFM4.028G1GK - TWC(2) / HO2S / EVR / SFI

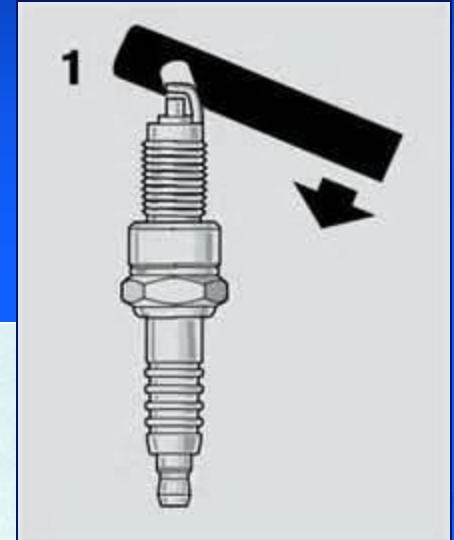
**VACUUM HOSE ROUTING**  
  
FRONT OF VEHICLE

  
4028G1GY



# Gapping the plugs

- use a plug gapping tool to set the gap
- the “L” shaped ground electrode is bent carefully
- do not use feeler gauges



# Corroded or Carbonized Threads ?

- use a thread chaser
- stripped threads require a Heli-Coil insert



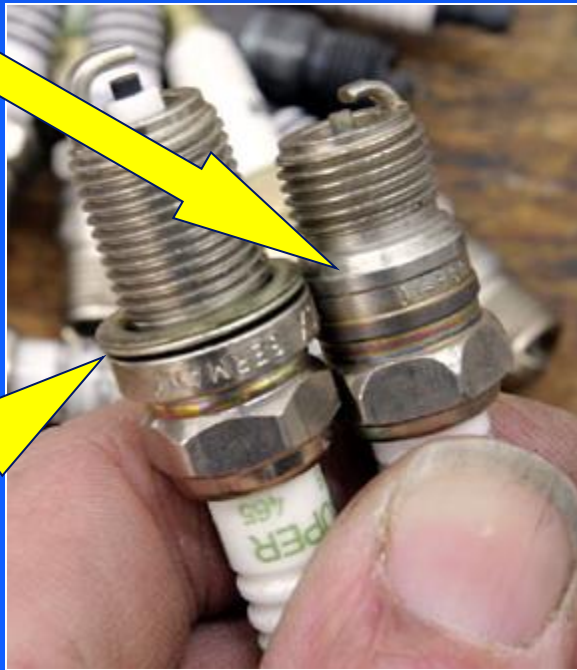
# Installing the plugs...



# Tightening the plugs...

- use a torque wrench or a socket & ratchet to tighten securely

Tapered seat: install by hand then tighten additional  $\frac{1}{16}$  to  $\frac{1}{8}$  turn



Gasket type: install by hand then tighten additional  $\frac{1}{4}$  to  $\frac{1}{2}$  turn



# Types of plugs...

