

# FUEL MODULES UNIQUE INNOVATIONS



New vent valve design that controls fuel vapor and is retained by a locking ring



**COMPETITORS** Old type vent valve is used and simply pushed into the plastic which can easily fall under vibration



**Pump-mounted noise insulator** to prevent undesired noises when operating



**COMPETITORS** Pump mounted on rubber which hardens with time and transfers undesired noise to vehicle body

Fuel bowl housing with additional material for increased durability and robustness

**COMPETITORS** Fuel bowl housing with less material that will harden and break if manipulation is necessary, such as fuel tank replacement



**Rubber insulators** stabilize the part in the tank to reduce vibration

**COMPETITORS** No rubber insulators causes excess vibration that will be transmitted as noise throughout the vehicle



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# FUEL MODULES UNIQUE INNOVATIONS

Hall Start Par



**Secure clamps** found at both ends of fuel pump outlet hoses to prevent them from coming off under high pressure conditions



**COMPETITORS** No clamps to secure hose which can come off in case of high pressure build-up or surge caused by a bad regulator or dirty fuel filter

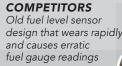


Larger float has better buoyancy which increases fuel gauge accuracy

**COMPETITORS** Smaller float causes unstable reading due to deficient buoyancy

\* Competitive product compared in this study is not representative of all aftermarket competitors' products.

Fuel level sensor improvements with palladium-silver material and five fingers to increase durability and reading accuracy







## **Technical Notice**

### MODULE AND HANGER ASSEMBLY INSTALLATION INSTRUCTIONS

#### CAUTION

When fuel is involved, work in a well-ventilated area away from sparks and open flames. To reduce risk of fire and personal injury, depressurize the fuel system before servicing fuel system components.

#### To avoid damage to the Modules or Hanger Assemblies, read instructions completely before attempting any operation.

#### A. Fuel Pressure Depressurization

Before working on the fuel system components it is necessary to relieve the fuel system pressure. Failure to follow these procedures may result in personal injury or fire hazard from fuel spray.

- 1. Remove the fuel filler cap to release tank pressure.
- 2. Remove the fuel pump fuse from the fuse block or follow original manufacturer procedures.
- 3. Start engine and run until the fuel line is depressurized.
- 4. Place the ignition switch in the "OFF" position and reinstall the fuse or other actions as per manufacturer.
- 5. Disconnect the negative (-) battery cable.

#### B. Fuel Tank and Hanger Assembly or Fuel Module Removal

Insert a gasoline transfer pump hose into the filler neck all the way until the hose is resting at the bottom of the tank and completely drain the tank of all fuel. Store the fuel in an approved container.

- 1. Raise the car.
- 2. Disconnect electrical connectors from module/hanger assembly unit. (Ensure condition or repair terminals)
- 3. Disconnect fuel lines from module/hanger assembly and tank.
- 4. Remove the filler neck and vent hoses from the tank.
- 5. Remove any skid plates or shields that may interfere with the removal of the tank.
- 6. Support the tank and remove the retaining straps.
- 7. Carefully lower the fuel tank.
- 8. Clean the area around the module/hanger assembly of any loose dirt to avoid contaminating fuel.
- 9. Remove the retaining ring by using the appropriate tool and carefully remove the sender unit and tank seal.
- 10. Visually inspect inside of tank and clean if necessary.

#### C. Fuel Tank and Hanger Assembly or Fuel Module Installation

- 1. Carefully position the new o-ring around the tank opening or on the module. (May need to slightly lubricate seal to facilitate Installation)
- 2. Install hanger / module assembly in the tank while paying attention not to damage the float arm and strainer.



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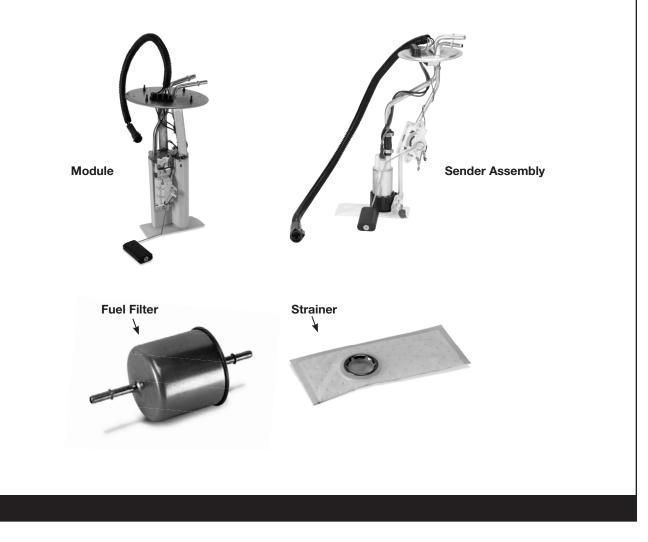
### MODULE AND HANGER ASSEMBLY INSTALLATION INSTRUCTIONS

- 3. Install the lock ring.
- 4. Use reverse procedure for fuel tank installation as mentioned in section B under removal.
- 5. Lower vehicle, reconnect the battery negative (-) terminal.
- 6. Refill fuel tank completely with new or filtered clean fuel.
- 7. Cycle the key ON several times without starting the engine with intervals of 10 sec. between cycles. This will pre-charge the fuel system.
- 8. Inspect system for fuel leaks. Correct any leaks if necessary.
- 9. Clear the electronic control system of any trouble codes that may result from the fuel pump replacement. Use the specific vehicle service manual for assistance.

#### WARNING:

Contamination is the leading cause of fuel pump failure. Avoiding cleaning the fuel tank and the installation of a NEW FILTER and STRAINER may allow contaminants to enter the pump and void warranty.

Fuel pumps are not designed to be RUN DRY. Dry running a fuel pump for more than 3 seconds may cause permanent damage to the pump and void the warranty.



Learn more about fuel system parts on our website.