FUEL PUMP TECHNICAL BULLETIN

Mis-Diagnosis of Fuel System Components

Today's electronic fuel delivery systems are highly complex involving not only numerous fuel system components but other sensing devices that impact the vehicle performance. Mis-diagnosis of the root cause of engine performance problems as well as improper installation is the leading reason that fuel system components are returned as "warranty". There are numerous sensors, regulators, relays, fuel lines, injectors, filters, electrical connectors, and valves operating in conjunction with the vehicle's fuel pump and ECU in order to insure that the vehicle starts and runs properly. Failure or under-performance of any of these various components may be diagnosed incorrectly as a "fuel pump failure" when, in fact, the pump itself may still be functioning.

I addition to component failures the fuel in the vehicle itself, full of dirt and contaminants, can lead to failure of the old pump as well as create a "no-start" condition or premature failure of a new pump. Furthermore using E85 fuels in vehicles that are not designed to accept them may result in premature pump and/or component failure.

Air and fuel must be combined in the correct proportions in order to provide the proper combustion leading to a proper performance. Operating or installing fuel pumps with low fuel levels or kinked or damaged lines can inhibit the flow of fuel and starve the pump.

The well-educated and experienced professional technician will be acquainted with most of the pitfalls of fuel delivery system issues and, with the proper tools, can diagnose the specific cause of poor performance or fuel system failure. Those parts installers that are not intimately acquainted with the systems and/or do not have the appropriate tools (or knowledge) on proper diagnosis to determine the root cause of the problem will more than likely fall into the "change and pray" category of "parts changers". The result will be unnecessary comebacks of fuel pumps and modules that are alleged as "defective" or "warranty" that, in fact, perform perfectly as originally intended.

Pilot Automotive with it's APEX Brand provides the highest quality and high value fuel pumps and assemblies available. Each unit is individually tested for performance multiple times during the manufacturing and assembly process as well as during final inspection prior to packaging. While insuring that the units meet the specifications required for the vehicle for which it was intended we also provide and array of service bulletins, instructions and information that , if utilized, will prevent the unnecessary return of fully functional fuel pumps and assemblies.

Key Features

Each fuel pump and module matches the form, fit, and function of the OE pump.

Every Pilot APEX fuel pump and module is 100% factory tested during assembly and before packaging.

Each fuel pump and module comes with the required components to complete the installation.

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Avoiding Comebacks

Insure that the product is actually the one that you sold. Numerous times installers return products that you did not sell them in the first place. All pumps and modules are clearly identified with the Pilot logo. Warranty returns should be accompanied by a detailed explanation of what the technician encountered and the Pilot warranty claim card supplied with the new pumps must be completely filled out and attached to the pump box when returned. “no good” or “not working” are not valid explanations. Additionally, check the unit itself to see if it looks like it has actually been installed or conversely, looks like it’s been on a vehicle for a very long time. Telltale signs of non-installation would include the additional components supplied with the new pump and connectors are still in the bag supplied with the pump.

Certain GM modules are supplied with connectors as required. In some cases the connector design on the module has been modified requiring that the provided harness must be installed since the connector is dissimilar to the original on the vehicle. If the unit is returned with the new connector still in the bag or the unit is returned with the module connector being different than the harness itself (i.e. doesn’t fit) then the unit has not been properly installed.

Beware of customer abuse! If the customer has made any attempt to modify the unit, cut or splice wires within the unit, it is not a valid warranty.

Insure that the module contains all of the original components it was sold with. Since your modules and pumps are supplied with OEM like pressure regulators and premium sensors based on the original design, insure that these have not been removed from the assembly and returned as “warranty”.

When selling fuel pumps insure that you have sold a new replacement strainer if applicable. In the event the unit is returned without the strainer, or, if the strainer is new, then the original strainer was not replaced and therefore may be the cause of the pump malfunction. If the unit is returned with a clogged strainer this may be the cause of the pump malfunction. If the pump is returned with a clogged strainer this is an indication that there is excessive debris in the fuel tank and fuel system. On installation of a new fuel pump or assembly the old fuel should be drained from the tank and the tank should be inspected for debris such as rust or other contaminants. If there is excessive rust or other contamination in the tank, the tank should be thoroughly cleaned and completely dried and new fuel placed in the tank. Engine compartment and in-line fuel filters require regular maintenance and should be changed in accordance with the vehicle manufactures recommendations.