THE PREVENTIVE MAINTENANCE SERIES

Mike Dawson

Electric Fuel Pump Installation Addendum

Since the article last month on electric fuel pumps I have completed two new installations and serviced one that had been installed for a longer period of time. The following are recommendations I would add for safety and maintenance:

1. After installing two of the pass-through plates in stock pumps and using two modified fuel line relocations to work with electric pumps, there is no question that using the stock pump with the pass-through plate is the easiest installation. The only benefit to removing the stock pump is easier access to the oil pressure sender and a little more clearance when removing and installing the power train – neither of which we hope to be doing very often!

2. An electric fuel pump installed near the tank will change the function of the line from the new pump to the engine compartment from what was originally a vacuum line to a pressure line. Located next to the starter is a short rubber fuel line connector to accommodate engine vibration. These rubber lines are often forgotten and since they are now under pressure should be carefully inspected or changed. The starter creates sparks at the brushes so leaking fuel could be a fire issue.

At that same point check the end of the steel lines that connect to the rubber hose. They originally had an expanded area (bump) near the end to aid in sealing inside the hose. Be sure someone has not cut off the line to install an inline filter leaving the steel line smooth at one or both ends. Again, this area is now under pressure, not vacuum. If the lines are smooth, you can expand them slightly by using the first step only of a double flare. Leave slightly more tubing exposed where you install the mandrel and only tighten the tool halfway.

3. Most new electric fuel pumps come with a small pre-filter to protect the pump. If you have an older (or original) fuel tank it would be a good idea to check the filter that is on the gas tank pickup. An easy way is to use a drain pan and pull off the rubber line at the tank and observe the flow in to the pan. Let it run for five seconds and if there is no reduction in flow over that time period the filter is good. It is always possible that someone before you has removed the tank filter so keep that in mind. And look at the fuel removed for rust flakes. You can replace the small pre-filter that comes on the electric pump with a larger visible filter to better monitor the fuel condition. I used a Wix filter (33002) and a 1/8 NPT by 5/16 fitting which fits the electric pump.

4. Adding an inertia switch in the trunk or under dash to shut off the pump in case of a crash is a good idea. I found a two wire switch (fits Ford products) on eBay that cost less than $20 with free shipping. Since the switches are protected and seldom have to function, I feel a used switch is not much of a gamble. New switches are available at various prices upwards. As in all electrical connections, solder and use shrink fit tubing.