Lucas High Pressure Fuel Pump Problem

By Walter Loeliger WINTER 1996

After checking all possible electrical circuit problems, like grounding, corroded connections, etc. etc., I still encountered a problem: after a drive my Mistral Spyder would not re-start until it cooled down. By listening to the sound of the pump motor with the ignition swftched on, I noticed that it would not turn at a high enough RPM to produce the 100 psi pressure required for the injection system to work. After removing the pump motor several times and checking its operation and studying all possible faults, I came to the conclusion that the problem must hide in the self-aligning bronze bushing (in the domed housing of the motor). Here is my crude solution, which worked.

First you need an approximately 30 inch long flat screwdriver, (the kind used for lower radiator hose clamps). It is easy to remove the motor from the pump this way, if is mounted in the car (Mistral). There are four screws, but only two are holding the motor housing together. Remove the motor from the pump. (The white lead is ground and the black lead is positive.) Separate the domed housing from the motor. Leave the two leads in place. Insert a 3/8” dia. x about 6” long pin into the bronze ball bushing inside the dome and see how hard it is to do any alignment with the pin. You will find that there is a lot of friction to overcome. This friction causes the motor shaft to bind in the bushing if misaligned, and reduces the top performance of the motor. Remove the three screws and the spring tension washer from the dome and bend each lip of the washer equally with a small flat nosed plier a little at the time, so that when mounted in place again the swivel action of the ball bronze bushing becomes easy, with a minimal amount of friction and without having any kind of play. Lubricate both bushings with a light oil and assemble the motor. Connect it to a 12v dc source. While listening to the sound, tap the sides of the housing hard with a rubber mallet until you hear an RPM increase. That's when the bushing has aligned itself. At that point the motor is re-installed to the pump, taking great care to match the drive dog with the slotted (loose) piece of the pump shaft. Whenever you want to remove the motor, you don't want to separate the motor housing; therefore I changed the two motor housing screws to cross-slotted screws and left the two motor to pump screws with slotted heads. This way I know which two screws detach the motor from the pump without disturbing the motor shaft alignment. My Mistral pump works perfectly now.

Happy motoring.