



M-9407-D46 Fuel Pump INSTRUCTION SHEET

NO PART OF THIS DOCUMENT MAY BE REPRODUCED WITHOUT PRIOR AGREEMENT AND WRITTEN PERMISSION OF FORD RACING PERFORMANCE PARTS

Please contact the Tech "Hot Line" for the most current instruction information (586) 468-1356

!!! PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY PRIOR TO INSTALLATION !!!

OVERVIEW:

The following information describes the procedure for the installation of the M-9407-D46 fuel pump in a 1998 Mustang. The installation of this pump requires the temporary removal of the fuel tank from the vehicle. It is highly recommended that this installation be performed on a hoist. If a hoist is not available, it may be performed using a floor jack and jack stands.

!!! WARNING: JACK STANDS MUST BE USED ON A LEVEL SURFACE AND BE SECURELY SEATED. FAILURE TO DO SO MAY RESULT IN PERSONAL INJURY OR VEHICLE DAMAGE !!!

!!! WARNING: DO NOT SMOKE, CARRY LIGHTED TOBACCO OR AN OPEN FLAME OF ANY TYPE WHEN WORKING ON OR NEAR ANY FUEL RELATED COMPONENT. HIGHLY FLAMMABLE MIXTURES ARE ALWAYS PRESENT AND MAY BE IGNITED, RESULTING IN POSSIBLE PERSONAL INJURY !!!

!!! WARNING: FUEL SUPPLY TUBES ON VEHICLES WITH FUEL INJECTED ENGINES WILL REMAIN PRESSURIZED FOR LONG PERIODS OF TIME AFTER ENGINE SHUTDOWN. THE PRESSURE MUST BE RELIEVED BEFORE SERVICING THE FUEL SYSTEM OR POSSIBLE PERSONAL INJURY MAY OCCUR !!!

SECTION 1: FUEL TANK REMOVAL

- STEP 1.1:** Disconnect battery.
- STEP 1.2:** Relieve fuel system pressure by removing gas cap and venting fuel rail using Schrader valve located on fuel rail.
- STEP 1.3:** Drain fuel from fuel tank.
- STEP 1.4:** Raise vehicle and support.
- STEP 1.5:** Remove screw retaining the fuel tank fill pipe retainer to the fuel tank flange and remove filler pipe from tank. (save screw for re-assembly)
- STEP 1.6:** For enhanced evaporative emission vehicles, disconnect vapor control valve assembly signal tube connection to fuel filler pipe signal tube.
- STEP 1.7:** Disconnect clamp at fuel tank connecting vent hose to fuel tank.

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- STEP 1.8:** Place a support under the fuel tank and remove the bolts from the right and left side fuel tank support strap.
- STEP 1.9:** With fuel tank still supported, swing the support straps out of the way.
- STEP 1.10:** Partially remove the fuel tank and disconnect the fuel supply tube and electrical connector from the fuel pump.
- STEP 1.11:** Remove fuel tank from vehicle.

SECTION 2: FUEL PUMP MODULE REMOVAL

- STEP 2.1:** Remove any dirt that has accumulated around the fuel pump module (FPM) retaining flange.
- STEP 2.2:** Remove the bolts which retain the fuel pump sender plate to the fuel tank. Save bolts for re-assembly.
- STEP 2.3:** Pull FPM sender plate up out of the fuel tank until locking tabs for FPM are accessible. Reach through the fuel pump opening, squeeze both locking tabs together and remove FPM from fuel tank.
- STEP 2.4:** Remove rubber gasket and discard.

SECTION 3: FUEL PUMP INSTALLATION

- STEP 3.1:** Ensure fuel is drained from FPM.
- STEP 3.2:** Disconnect electrical connector to fuel pump motor by depressing lock and pulling connector upwards. Care should be taken not to break the clip.
- STEP 3.3:** Remove (2) self-tapping screws that retain the fuel pump manifold to the FPM cover with a 4.5mm or 3/16" socket or nut-driver. Save the screws for re-installation.
- STEP 3.4:** Remove the fuel pump manifold and hose assembly by releasing the clamp from the nipple on the retaining flange and pulling the manifold upward off of the fuel pump. Discard this assembly.
- STEP 3.5:** Remove (3) self-tapping screws that retain the FPM cover with a 4.5mm or 3/16" socket or nut-driver. Save screws for re-installation.
- STEP 3.6:** Remove cover from FPM by gently lifting off FPM cup.

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- STEP 3.7:** Remove pump from FPM cup and remove (2) rubber isolators and pump sock (to be re-used on new fuel pump). Pump filter sock is retained to fuel pump by a light interference fit. To remove, hold plastic base near ferrule and gently rock back and forth while pulling away from pump motor.
- STEP 3.8:** Install (2) rubber isolators and pump sock onto new fuel pump.
- STEP 3.9:** Place fuel pump into FPM cup and replace FPM cover. Ensure that brass pump outlet tube and white plastic tube are guided into gray rubber seals in FPM cover.
- STEP 3.10:** Replace (3) screws and torque to 1Nm (8.5 in. lbs.)
- STEP 3.11:** Install hose end of new fuel pump manifold assembly to FPM flange nipple with the provided clamp. Note: Two (2) clamps have been provided in the event that one gets damaged during installation.
- STEP 3.12:** Attach the manifold portion of the assembly to the fuel pump by pressing it downward on the two (2) nipples.
- STEP 3.13:** Fasten the manifold to the FPM cover with the two (2) original self-tapping screws. Torque to 1 Nm (8.5 in. lbs.).
- STEP 3.14:** Plug electrical connector into fuel pump.

SECTION 4: FUEL PUMP MODULE RE-INSTALLATION

- STEP 4.1:** Clean FPM retaining flange, fuel tank mounting surface and seal ring groove.
- STEP 4.2:** Install new rubber gasket (provided) onto FPM retaining flange by aligning the tabs in the gasket with the flange and pushing the tabs through the hole. To seat the gasket, pull the tabs from the top side of the flange to lock them into place.
- STEP 4.3:** Carefully re-install FPM into fuel tank. NOTE: Make sure that filter, hoses and float rod are not damaged or binding.
- STEP 4.4:** Align FPM and fuel tank retainer and push FPM into the retainer. NOTE: A definite "CLICK" will be heard when the tabs on the FPM engage the fuel tank retainer. Pull up on the FPM to make sure that both tabs are engaged.
- STEP 4.5:** Re-install fuel pump sender plate with original hardware and tighten bolts to 9-12 Nm (80-109 in. lbs.).

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SECTION 5: FUEL TANK RE-INSTALLATION

- STEP 5.1:** Connect all required fuel tube, fuel return tube, vapor vent and electrical connectors which will be inaccessible after fuel tank is installed.
- STEP 5.2:** Replace or install all body mounted fuel tank shields that may have been removed.
- STEP 5.3:** Place fuel tank in proper position under body and support. NOTE: At this point you may wish to tape any wiring or hoses to the tank to ensure that they do not get pinched during installation.
- STEP 5.4:** Lubricate the fuel tank filler pipe with water based tire mounting lubricant and install the fuel tank onto the filler pipe and bring fuel tank into final position.
- STEP 5.5:** Re-install filler pipe retainer bolt and tighten to 7.3-9.0 Nm (5-79 in. lbs.).
- STEP 5.6:** Position both tank support straps and start the retaining bolts.
- STEP 5.7:** Check to see that the fuel tank heat shields are installed and that hoses and wiring on the top of the fuel tank will not be pinched when the straps are tightened.
- STEP 5.8:** Tighten the fuel tank retaining bolts to 30-40 Nm (22-29 ft. lbs.).
- STEP 5.9:** Reconnect the fuel hoses and tubes.
- STEP 5.10:** Tighten the vent tube clamp to 1.8-2.6 Nm (16-23 in. lbs.).

SECTION 6: FINAL STEPS

- STEP 6.1:** Lower vehicle.
- STEP 6.2:** Reconnect battery.
- STEP 6.3:** Install a minimum of 10 gallons of fuel, replace the gas cap and check for leaks. Correct any problems before proceeding.
- STEP 6.4:** Turn ignition switch to RUN position for three (3) seconds repeatedly (5-10 times). This will pressurize the fuel system. Check for leaks. Correct any problems before operating vehicle.

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