

**Indmar Products
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SERVICE ADVISORY

Date: 9/12/03

Advisory #SV2003-2

SUBJECT:P/N 501006 HVLP FUEL PUMP MAINTENANCE

Gasoline Breakdown and Varnishing Inside Fuel Pump

This fuel pump has been very reliable and there have been very few warrantable failures of this pump.

To date, analysis of the great majority of these pumps that have been returned to Indmar for warranty has revealed that the customer has allowed old gasoline to set for long periods in the fuel pump without operation. Old gasoline can break down and form varnish and other gumming byproducts in the pump and other fuel system components.

The varnish and other byproducts formed by the breakdown of gasoline in the fuel pump can cause sticking of the vanes inside the impeller of the pump. This is a **MAINTENANCE** problem and **NOT** a defect in the pump itself.

Some of the symptoms of this condition are:

1. Intermittent delivery of fuel or low fuel volume delivery by the pump.
2. No delivery of fuel by the pump even though the pump motor can be heard electrically operating.
3. Pump can be heard operating but no fuel delivery. When pump is tapped with a wrench or other object, it starts pumping again.

The **SOLUTION** for these fuel pump maintenance problems is to remove the fuel pump from the engine, disassemble the impeller assembly and chamber, clean the chamber, impeller and its vanes, reassemble the pump and reinstall the pump on the engine.

PROCEDURE TO CLEAN FUEL PUMP IMPELLER, VANES & SCREEN:

****ATTENTION: READ THIS COMPLETE AND ENTIRE SERVICE ADVISORY FROM BEGINNING TO END AND UNDERSTAND EACH OF THE STEPS BEFORE PROCEEDING WITH FUEL PUMP SERVICING OR CALLING INDMAR WITH QUESTIONS.***

Removal of Fuel Pump from Engine:

1. Disconnect ALL electrical connections and fuel lines from fuel pump and remove fuel pump from engine before disassembly and cleaning of pump!

Disassembly of Fuel Pump:

1. Remove the 3 bolts and lock washers that hold the top cover plate over the impeller assembly. These bolts are located below the rubber mounting grommets at the top of the fuel pump.



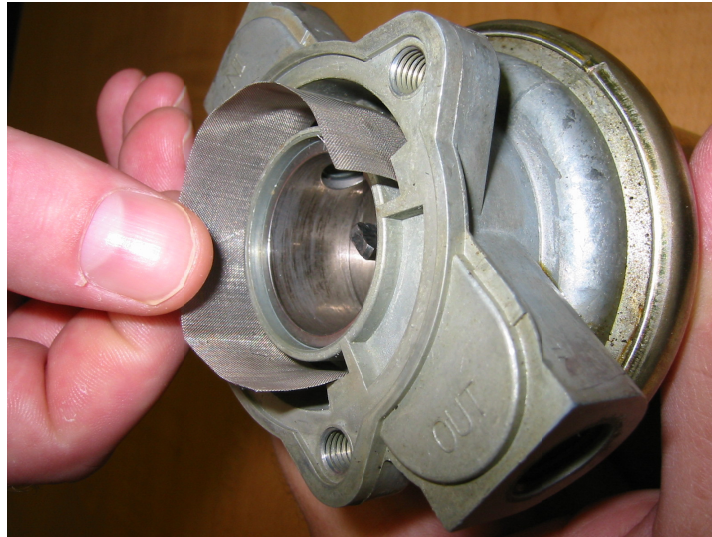
2. Remove the top cover plate, rubber seal and metal disc from atop the impeller assembly.



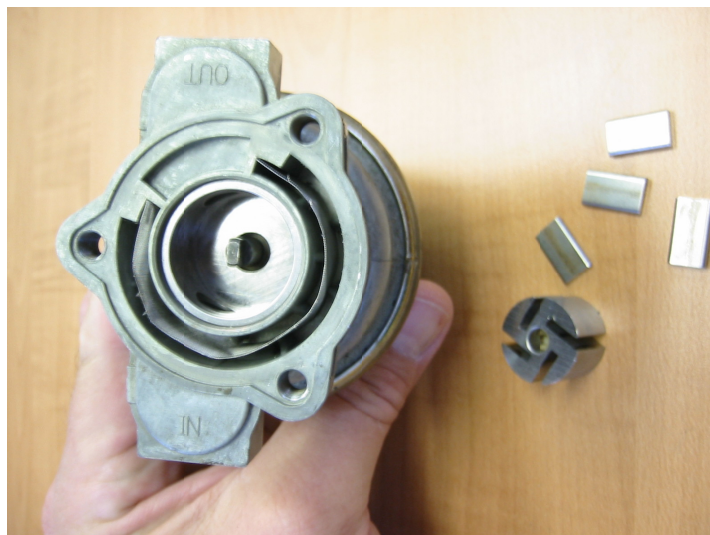
3. Remove impeller and 4 vanes from pump by inverting pump and tapping pump body gently. (NOTE: vanes and impeller should fall freely from pump body. Varnish and gums formed by gasoline breakdown may cause impeller and vanes to stick inside pump body. Tapping the pump body should free impeller and vanes to fall out.)



4. Remove screen filter inside pump body by gently lifting straight out or upwards.

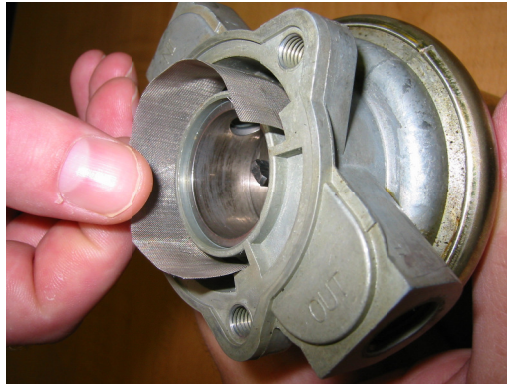


5. Clean impeller body, 4 vanes, screen filter and inside of pump body chamber of all varnish, gum and trash with carburetor cleaner or other suitable cleaning solvent.



REASSEMBLY OF FUEL PUMP:

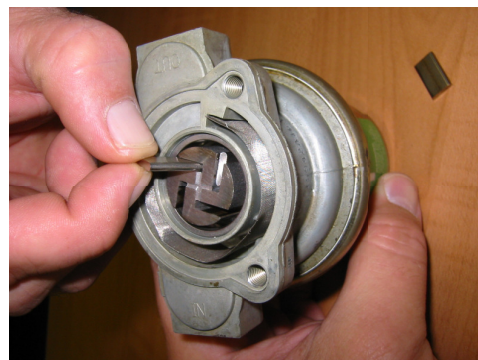
1. After cleaning, insert screen filter back into slot in fuel pump body.



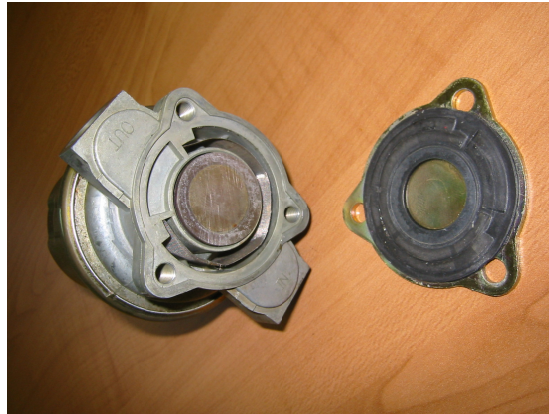
2. Insert impeller body (center slot down) into pump body.



3. Insert the 4 impeller vanes into impeller body slots and insure that each vane is free to move outward within their slots by centrifugal force. (NOTE: both sides and edges of impeller vanes are interchangeable and can be reassembled with either edge out.)



4. Insert metal disc on top of impeller assembly.



5. Install top cover with rubber seal over impeller assembly and install 3 bolts and lock washers tight to seal.

6. Check pump operation with 12 volt DC source. Pump will intake air and pump air out the outlet if impeller vanes are clean and free to move in their respective slots.

7. Reinstall fuel pump on engine.

8. Reconnect ALL fuel lines and electrical connections to fuel pump and check for leaks.

9. Add STA-BIL fuel stabilizer to engine gasoline supply and run engine to circulate fuel stabilizer throughout fuel system. This is a preventative maintenance step that will help avoid repeating this problem. This step is particularly important when winterizing the boat or when the engine will not be in use for prolonged periods of time!

NOTE: This is a maintenance procedure and NOT A WARRANTY ISSUE.
Varnish and gums produced by old gasoline breakdown are
NOT DEFECTS IN MATERIALS OR WORKMANSHIP!