

What's New?

3 Step Purge Pump Carburetor Testing

Until you read this, don't touch a screw on that carburetor!

Carburetors found on today's hand held equipment are much more complex than those in earlier years. Many STIHL units now have carburetors equipped with a purge pump to allow the engine to start with less effort. The purge pump simply purges air from the fuel system and replaces it with fresh fuel from the tank.

In order for the purge pump to operate effectively, it has to place the entire fuel system under a slight vacuum to draw fuel from the tank. Any passageway from the metering chamber to the venturi has to be sealed or the purge pump will not operate.

Following a few simple tests, which are outlined in the "How to" section of this Tech Tips, can help you evaluate the condition of the carburetor and save you valuable time at the bench.



Along with the new carburetor procedures comes a new tool -- the 506QC Irwin Quick Clamp -- that has been modified to test the purge primer carburetors. This clamp has been drilled and an impulse fitting, 0000 988 5211, added so a pressure and vacuum tester can be connected. CDC·BME has this clamp already modified, in stock and ready for your order. Part number is: 506QC.

This clamp is a must for the "How To" procedure inside this edition of TechTips.



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Tech Service Tips

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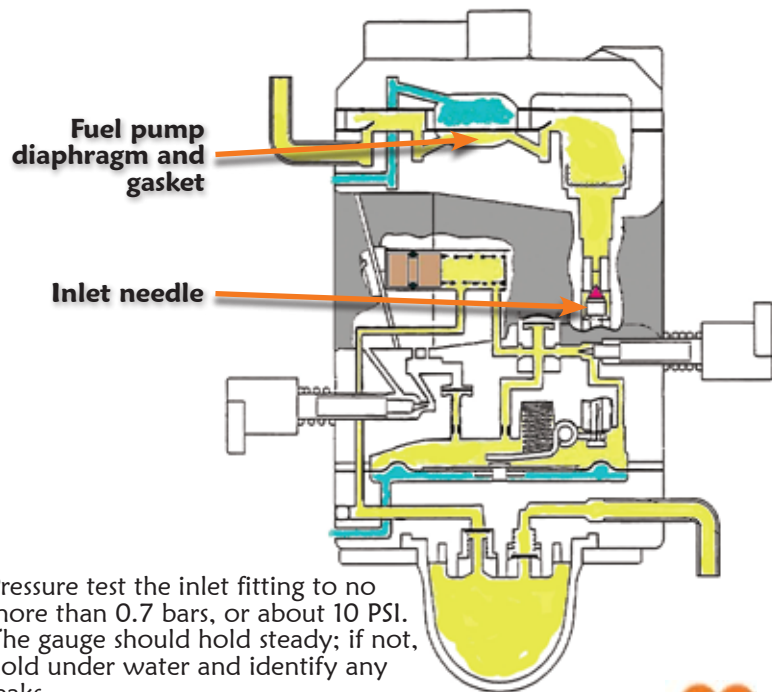
The Three Steps...

Once the carburetor is removed from the unit, and before any screws are removed, visually inspect the carb for obvious signs of external body damage or wear, and check the throttle shaft for wear. Any faults found here is good justification for replacement.

1

Step One is testing:

- Fuel pump diaphragm and gasket
- Inlet needle



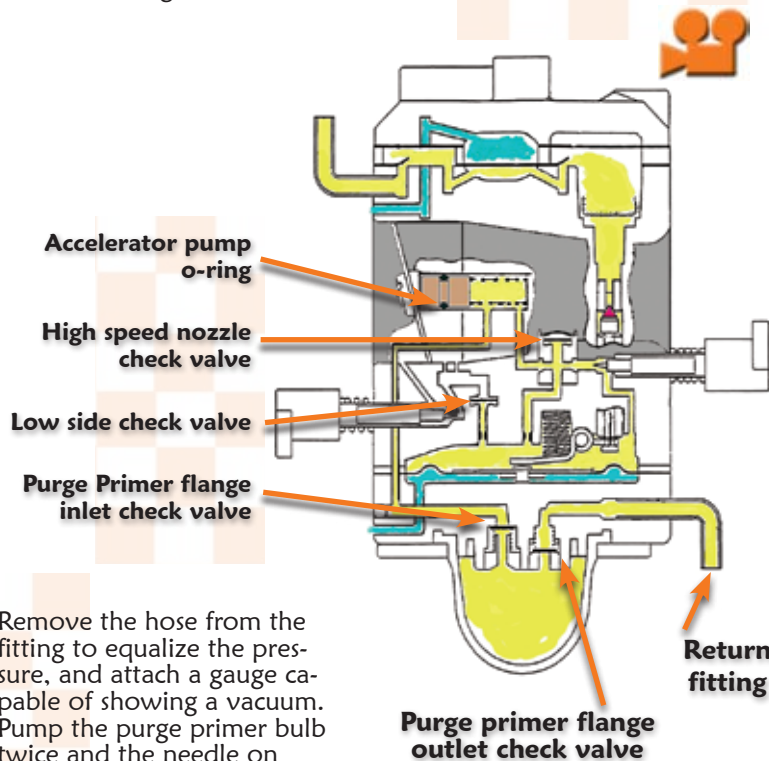
Pressure test the inlet fitting to no more than 0.7 bars, or about 10 PSI. The gauge should hold steady; if not, hold under water and identify any leaks.

- If bubbles come from the venturi, the inlet needle is leaking.
- If bubbles come from the fuel pump cover, the cover may be warped, the carb body may be damaged, or the gasket may be leaking.



2

If the carb passes step 1, while the inlet side is still under pressure, pump the purge primer bulb and the gauge should show a drop in pressure with each squeeze. If not, the carb has an internal air leak or the purge primer flange has a fault.



Remove the hose from the fitting to equalize the pressure, and attach a gauge capable of showing a vacuum. Pump the purge primer bulb twice and the needle on the gauge should indicate a slight vacuum and the needle should hold steady under vacuum for at least 1 second.

If the needle will not show a vacuum, or it drops down below zero and then rises up immediately, the carb has a leaking purge primer check valve, accelerator pump "O"-ring if present, or a leaking metering chamber check valve. Faults here would be good justification for a carb replacement.

3

If the carb passed Step 1 and Step 2, now connect a pressure gauge to the return fitting and pump the purge primer bulb.

The gauge should show pressure building with each squeeze, and should hold. A fault here would require replacement of the primer flange.



After completing all three steps, disassemble the carburetor. Any faults from Step 2 can be identified by using the 506QC Clamp. This is demonstrated online in the Check Valve Test video.

...this and that.....

Important Warranty Dates*

All extended warranty periods apply to original purchaser against defects in material and/or workmanship.

Ignition Module Warranty

Chain Saws

July 1, 1986 – June 30, 1995
Lifetime on Parts & Labor

Trimmers, Brushcutters, Blowers & Sprayers

January 1, 1989 – June 30, 1995
Lifetime on Parts & Labor

All Units

July 1, 1995 – February 28, 2003
Lifetime on Parts; Normal Powerhead Warranty for Labor

All Units

March 1, 2003 – Current
Parts – 5 Years; Labor – 2 Years

Drive Shaft Warranty

Flexible Shafts Only (except FR 106)

October 1, 1993 – June 30, 1995
Lifetime on Parts & Labor

All Trimmer & Brushcutter Drive Shafts

July 1, 1995 – Current
Lifetime on Parts & Labor

Clutch Shoes

All FS, FC, HT, KM, MM, KW, HS, HL, FH & BT

January 1, 2000 – Current
Lifetime on Parts & Labor

★ refer to Warranty Policies & Procedures Manual
All dates refer to the date of retail purchase.