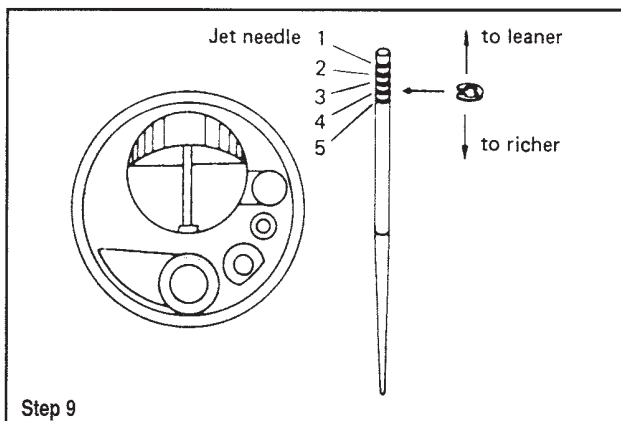


Step 7

8. Position a new float bowl gasket in place on the carburetor body. Install the float into the float bowl. Place the float bowl in position on the carburetor body, and then secure it with the two Phillips head screws.

9. If the E-clip on the jet needle is lowered, the carburetor will cause the powerhead to operate rich. Raising the E-clip will cause the powerhead to operate lean. Higher altitude raise E-clip to compensate for rarefied air. Standard E-clip setting is in the 3rd notch. Begin to assemble the throttle valve components by inserting the E-clip end of the jet needle into the throttle valve (the end with the recess for the throttle cable end). Next, place the needle retainer into the throttle valve over the E-clip and align the retainer slot with the slot in the throttle valve.

10. Reassemble the throttle valve assembly. Align the jet needle retainer should be positioned with the slot aligned.



Step 9

DT4 and DT5Y

See Figure 29

This type of carburetor has been used in various configurations for many years. Most of the changes are in jetting calibration and control linkages.

The needle valve seat is not replaceable. If it is damaged or worn, the carburetor must be replaced as a complete unit.

REMOVAL & INSTALLATION

1. Remove the engine cover.
2. Pull the fuel hose off the carburetor. Plug the fuel hose to prevent leakage.
3. Remove the choke knob from the control panel.
4. Loosen the two nuts and remove the carburetor from the engine.

To install:

5. Position a new float bowl gasket in place on the carburetor body. Install the float into the float bowl. Place the float bowl in position on the carburetor body, and then secure it with the two Phillips head screws.
6. Secure the carburetor in place by tightening the bolt and nut securely.
7. Install the chock knob.

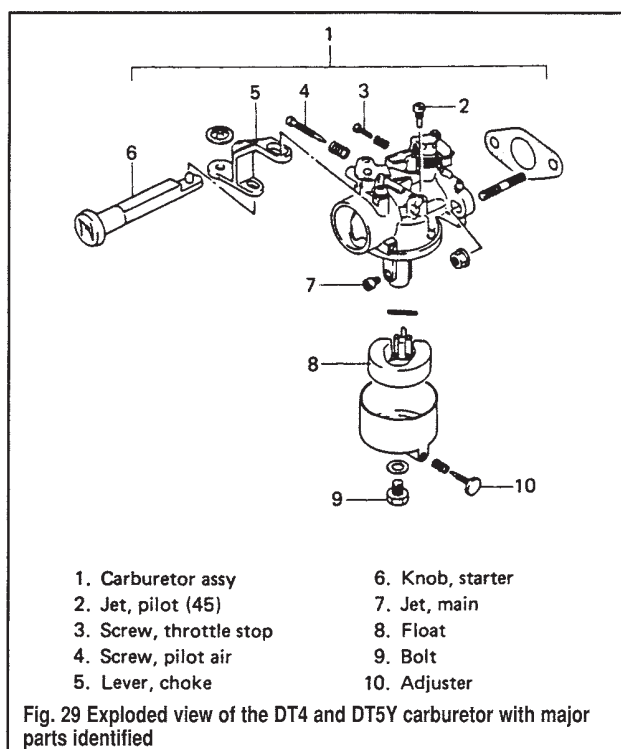


Fig. 29 Exploded view of the DT4 and DT5Y carburetor with major parts identified

Slowly tighten the idle speed screw until it barely seats, then back it out the same number of turns recorded during disassembly. If the number of turns was not recorded, back the screw out 1-3/4 turns as a rough adjustment. Idle speed should be as specified in the "Tune-Up Specifications" chart.

8. Secure the engine cover.

Mount the outboard unit in a test tank, or the boat in a body of water, or connect a flush attachment and hose to the lower unit. Start the engine and check the completed work. Allow the powerhead to warm to normal operating temperature. Adjust the idle speed to specification.

DISASSEMBLY

1. Remove the bolt and washer from the float bowl. Remove the float bowl and O-ring from the carburetor body. Discard the used O-ring.
2. Remove the float hinge pin and remove the float and pin assembly from the carburetor body.
3. Remove the inlet needle.

Do not force removal of the inlet needle, on some models the inlet needle is permanently installed in the valve seat.

4. Remove the main jet. Use jet removal tool or a wide blade screwdriver.
5. Remove the pilot (idle) jet.
6. Remove the air jet.
7. Turn in the pilot (idle) screw, counting the turns in (for reassembly later) until it lightly seats. Now, remove the pilot screw and spring.

CLEANING & INSPECTION

**CAUTION

Never dip rubber parts, plastic parts, diaphragms, or pump plungers in carburetor cleaner. These parts should be cleaned only in solvent, and then blown dry with compressed air.

Place all metal parts in a screen-type tray and dip them in carburetor cleaner until they appear completely clean, then blow them dry with compressed air.

Blow out all passages in the castings with compressed air. Check all parts and passages to be sure they are not clogged or contain any deposits. Never use a piece of wire or any type of pointed instrument to clean drilled passages or calibrated holes in a carburetor.

4-14 FUEL SYSTEM

Move the throttle shaft back and forth to check for wear. If the shaft appears to be too loose, replace the complete throttle body because individual replacement parts are not available.

Inspect the main body, air-horn, and venturi cluster gasket surfaces for cracks and burrs which might cause a leak. Check the float for deterioration. Check to be sure the float spring has not been stretched. If any part of the float is damaged, the unit must be replaced. Check the float arm needle contacting surface and replace the float if this surface has a groove worn in it.

Inspect the tapered section of the idle adjusting needles and replace any that have developed a groove. As previously mentioned, most of the parts which should be replaced during a carburetor overhaul are included in overhaul kits available from your local marine dealer. One of these kits will contain a matched fuel inlet needle and seat. This combination should be replaced each time the carburetor is disassembled as a precaution against leakage.

ASSEMBLY

1. Install a new carburetor O-ring into the carburetor body.
2. Apply an all-purpose lubricant to a new idle speed screw. Install the idle speed screw and spring.

➔ **The standard setting is: 1-1½ turns out.**

3. Install the main jet into the main nozzle and tighten it just snug with a screwdriver.
4. Slide a new needle valve into the groove of the float arm.
5. Lower the float arm into position with the needle valve sliding into the needle valve seat. Now, push the float pin through the holes in the carburetor body and hinge using a small awl or similar tool.
6. Hold the carburetor body in a perfect upright position. Check the float hinge adjustment. The vertical distance between the float chamber mating face and the float should be 0.47-0.55 in. (12-14mm). Carefully, bend the hinge, if necessary, to achieve the required measurement.

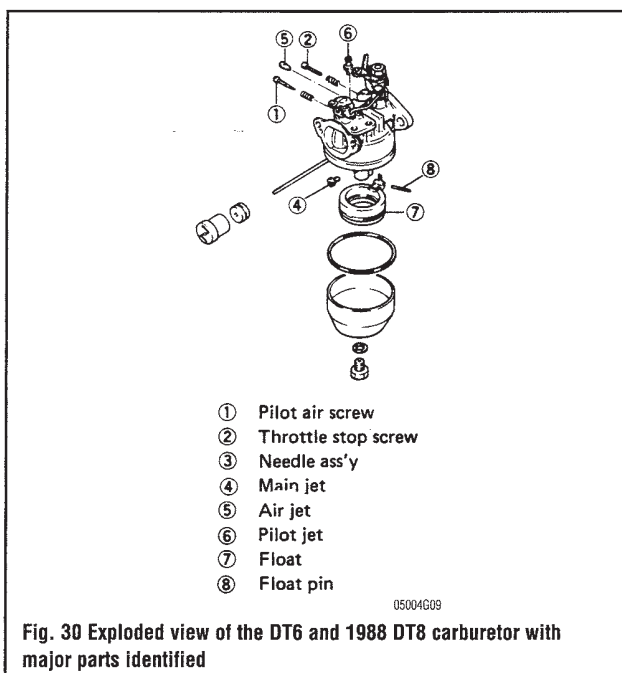
➔ **Make sure the gasket is removed when making the float height measurement.**

DT6 and 1988 DT8

➔ **See Figure 30**

REMOVAL & INSTALLATION

1. Remove the engine cover.



2. Pull the fuel hose off the carburetor. Plug the fuel hose to prevent leakage.
3. Remove the choke knob from the control panel.
4. Loosen the two nuts and remove the carburetor from the engine.

To install:

5. Secure the carburetor in place by tightening the bolt and nut securely.
 6. Install the choke knob.
- Slowly tighten the idle speed screw until it barely seats, then back it out the same number of turns recorded during disassembly. If the number of turns was not recorded, back the screw out 1-¾ turns as a rough adjustment. Idle speed should be as specified in the "Tune-Up Specifications" chart.
7. Secure the engine cover.
- Mount the outboard unit in a test tank, or the boat in a body of water, or connect a flush attachment and hose to the lower unit. Start the engine and check the completed work. Allow the powerhead to warm to normal operating temperature. Adjust the idle speed to specification.

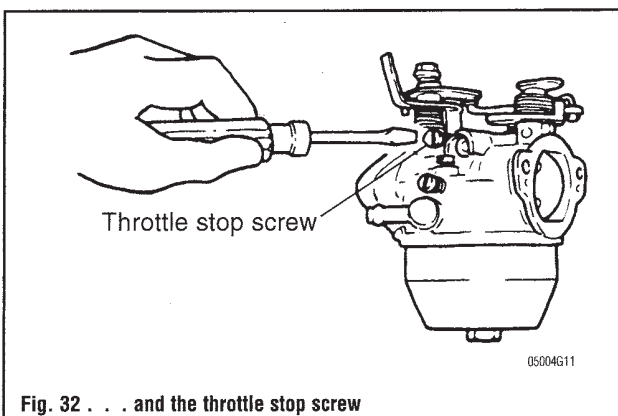
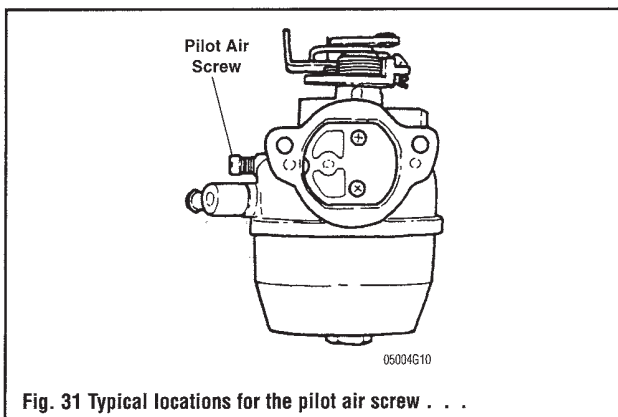
DISASSEMBLY

➔ **See Figures 31 and 32**

1. Remove the bolt and washer from the float bowl. Remove the float bowl and O-ring from the carburetor body. Discard the used O-ring.
2. Remove the float hinge pin and remove the float and pin assembly from the carburetor body.
3. Remove the inlet needle.

➔ **Do not force removal of the inlet needle, on some models the inlet needle is permanently installed in the valve seat.**

4. Remove the main jet. Use jet removal tool or a wide blade screwdriver.
5. Remove the pilot (idle) jet.
6. Remove the air jet.
7. Turn in the pilot (idle) screw, counting the turns in (for reassembly later) until it lightly seats. Now, remove the pilot screw and spring.



CLEANING & INSPECTION

♦ See Figures 33 and 34

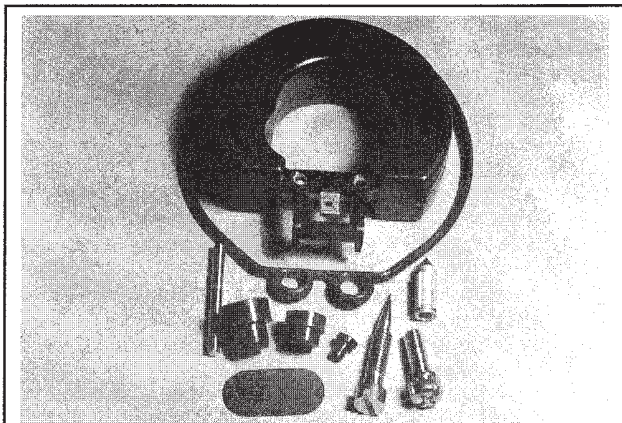
Never dip rubber parts, plastic parts, diaphragms, or pump plungers in carburetor cleaner. These parts should be cleaned only in solvent, and then blown dry with compressed air.

Place all metal parts in a screen-type tray and dip them in carburetor cleaner until they appear completely clean, then blow them dry with compressed air.

Blow out all passages in the castings with compressed air. Check all parts and passages to be sure they are not clogged or contain any deposits. Never use a piece of wire or any type of pointed instrument to clean drilled passages or calibrated holes in a carburetor.

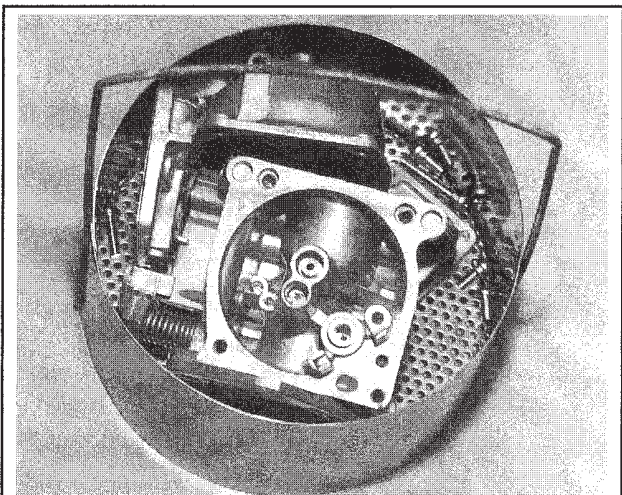
Move the throttle shaft back and forth to check for wear. If the shaft appears to be too loose, replace the complete throttle body because individual replacement parts are not available.

Inspect the main body, airhorn, and venturi cluster gasket surfaces for cracks and burrs which might cause a leak. Check the float for deterioration. Check to be sure the float spring has not been stretched. If any part of the float is damaged, the unit must be replaced. Check the float arm needle contacting surface and replace the float if this surface has a groove worn in it.



04704PB0

Fig. 33 Good shop practice dictates a carburetor rebuild kit be purchased and new parts, especially gaskets and O-rings be installed any time the carburetor is disassembled. This photo includes parts in a repair kit for the 6 hp, 8 hp, 9.9 hp and 15 hp carburetor



04704PB9

Fig. 34 Remove all rubber and plastic parts before immersing metal parts of the 6 hp, 8 hp, 9.9 hp and 15 hp carburetor in cleaning solution

Inspect the tapered section of the idle adjusting needles and replace any that have developed a groove. As previously mentioned, most of the parts which should be replaced during a carburetor overhaul are included in overhaul kits available from your local marine dealer. One of these kits will contain a matched fuel inlet needle and seat. This combination should be replaced each time the carburetor is disassembled as a precaution against leakage.

ASSEMBLY

1. Install a new carburetor O-ring into the carburetor body.
2. Apply an all-purpose lubricant to a new idle speed screw. Install the idle speed screw and spring.

➔The standard setting is:

- DT6: 1–1½ turns out.
 - DT8: ¾–1¼ turns out.
3. Install the main jet into the main nozzle and tighten it just snug with a screwdriver.
 4. Slide a new needle valve into the groove of the float arm.
 5. Lower the float arm into position with the needle valve sliding into the needle valve seat. Now, push the float pin through the holes in the carburetor body and hinge using a small awl or similar tool.
 6. Hold the carburetor body in a perfect upright position. Check the float hinge adjustment. The vertical distance between the float chamber mating face and the float should be as follows:
 - DT6 and DT8: 0.9–1.0 in. (22–26mm). Carefully, bend the hinge, if necessary, to achieve the required measurement.

➔Make sure the gasket is removed when making the float height measurement.

7. Position a new float bowl gasket in place on the carburetor body. Install the float into the float bowl. Place the float bowl in position on the carburetor body, and then secure it with the two Phillips head screws.

DT9.9, DT15 and 1989-97 DT8

♦ See Figure 35

The fuel pump is constructed as an integral component of the carburetor. The pump is a diaphragm type, operating with the pressure pulses inside the engine crankcase. These pressure pulses are characteristic of a two-stroke type engine. The crankcase pressure becomes positive during the downward stroke of the piston and negative during the upward stroke. In response to these pressure pulses, the diaphragm will flex cyclically to pump the fuel from the fuel tank to the carburetor float bowls.

When the engine is started, positive and negative pressures are produced alternately in the crankcase, passing into the pump body which is mounted on the carburetor itself and actuating the diaphragm in the pump housing. The diaphragm pulsing action causes the fuel from the fuel filter to flow from the inlet into the pump. Then, the fuel inside the fuel pump is sent from the discharge outlet to the carburetor, which it passes through a valve hole and then into the float bowl.

If the engine speed is increased, the diaphragm cycles are increased proportionally, supplying the correct amount of fuel needed for that particular engine speed.

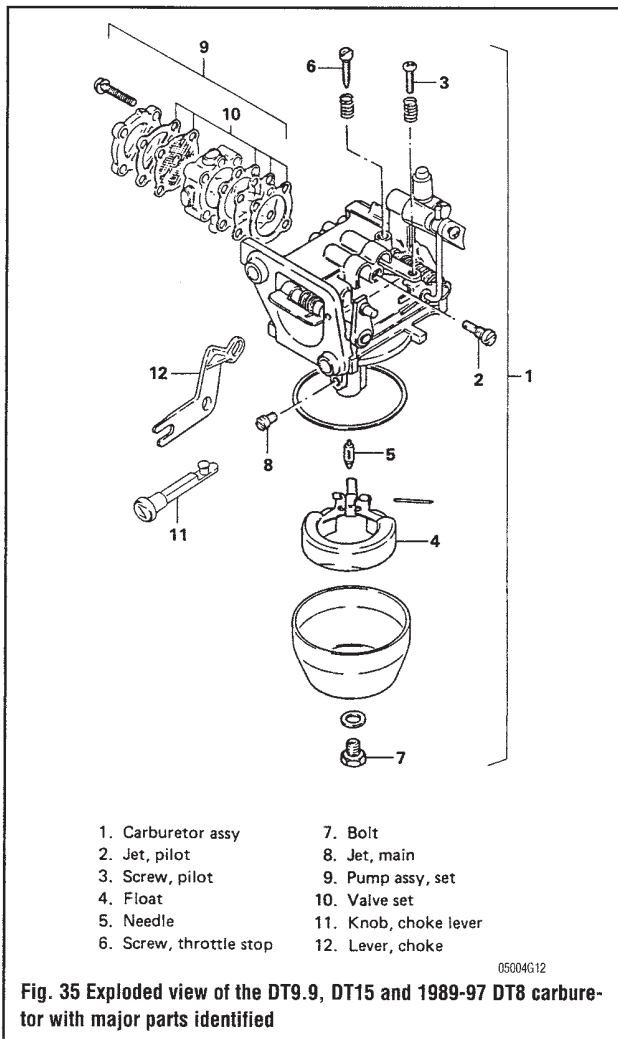
REMOVAL & INSTALLATION

1. Remove the engine cover.
2. Pull the fuel hose off the carburetor. Plug the fuel hose to prevent leakage.
3. Remove the choke knob from the control panel.
4. Loosen the two nuts and remove the carburetor from the engine.

To install:

5. Place a new carburetor mounting gasket on the powerhead studs. Install the carburetor and secure it in place with the washers and nuts. Tighten the nuts alternately and evenly.
6. Adjust the air screw setting. Baseline setting is: 1¼–1¾ turns out.
7. Install the choke knob onto the control panel.
8. Connect the fuel line onto the carburetor inlet fitting.
9. Install the engine cover.

4-16 FUEL SYSTEM

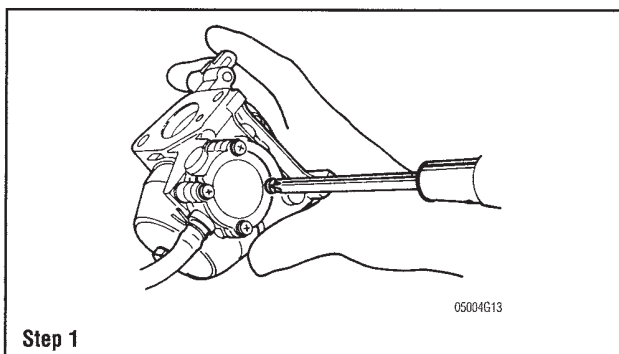


DISASSEMBLY

▶ See accompanying illustrations

1. Remove the fuel pump from the carburetor body by removing the screws.
2. Remove the bolt and washer from the float bowl. Remove the float bowl and O-ring from the carburetor body. Discard the used O-ring.
3. Remove the float hinge pin and remove the float and pin assembly from the carburetor body.
4. Remove the inlet needle.

➔The inlet needle valve seat is fixed to the carburetor body. If the seat is damaged, the carburetor body must be replaced..



5. Remove the main jet. Use jet removal tool or a wide blade screwdriver.
6. Remove the pilot (idle) jet with the proper tool.
7. Turn in the pilot (idle) screw, counting the turns in (for reassembly later) until it lightly seats. Now, remove the pilot screw and spring.
8. Clean and inspect all the parts.

CLEANING & INSPECTION

▶ See Figures 36 and 37

*** CAUTION

Never dip rubber parts, plastic parts, diaphragms, or pump plungers in carburetor cleaner. These parts should be cleaned only in solvent, and then blown dry with compressed air. Place all metal parts in a screen-type tray and dip them in carburetor cleaner until they appear completely clean, then blow them dry with compressed air.

Blow out all passages in the castings with compressed air. Check all parts and passages to be sure they are not clogged or contain any deposits. Never use a piece of wire or any type of pointed instrument to clean drilled passages or calibrated holes in a carburetor.

Move the throttle shaft back and forth to check for wear. If the shaft appears to be too loose, replace the complete throttle body because individual replacement parts are not available.

Inspect the main body, airhorn, and venturi cluster gasket surfaces for cracks and burrs which might cause a leak. Check the float for deterioration. Check to be sure the float spring has not been stretched. If any part of the float is damaged, the unit must be replaced. Check the float arm needle contacting surface and replace the float if this surface has a groove worn in it.

Inspect all O-rings, seals and gaskets. All of these components become hard with age and tend to become brittle and deteriorate. This affects their ability to seal properly, so its always a good idea to replace them anytime the carburetor is apart for service.

Inspect the tapered section of the idle adjusting needles and replace any that have developed a groove.

Inspect the fuel pump diaphragm for tears. Any damage to the diaphragm means it must be replaced.

As previously mentioned, most of the parts which should be replaced during a carburetor overhaul are included in overhaul kits available from your local marine dealer. One of these kits will contain a matched fuel inlet needle and

