

CARBURETOR SERVICE PROCEDURE EVINRUDE-JOHNSON 2 BARREL CARBURETOR

Note: Some models of the Evinrude-Johnson 2 barrel carburetor may vary slightly in general design and appearance from others, but basic cleaning and adjustment procedure will remain the same.

1. DISASSEMBLY

Using the exploded view as a guide, disassemble carburetor only far enough to permit a thorough cleaning. Removal of choke or throttle valves is not necessary unless parts are damaged requiring repair or replacement.

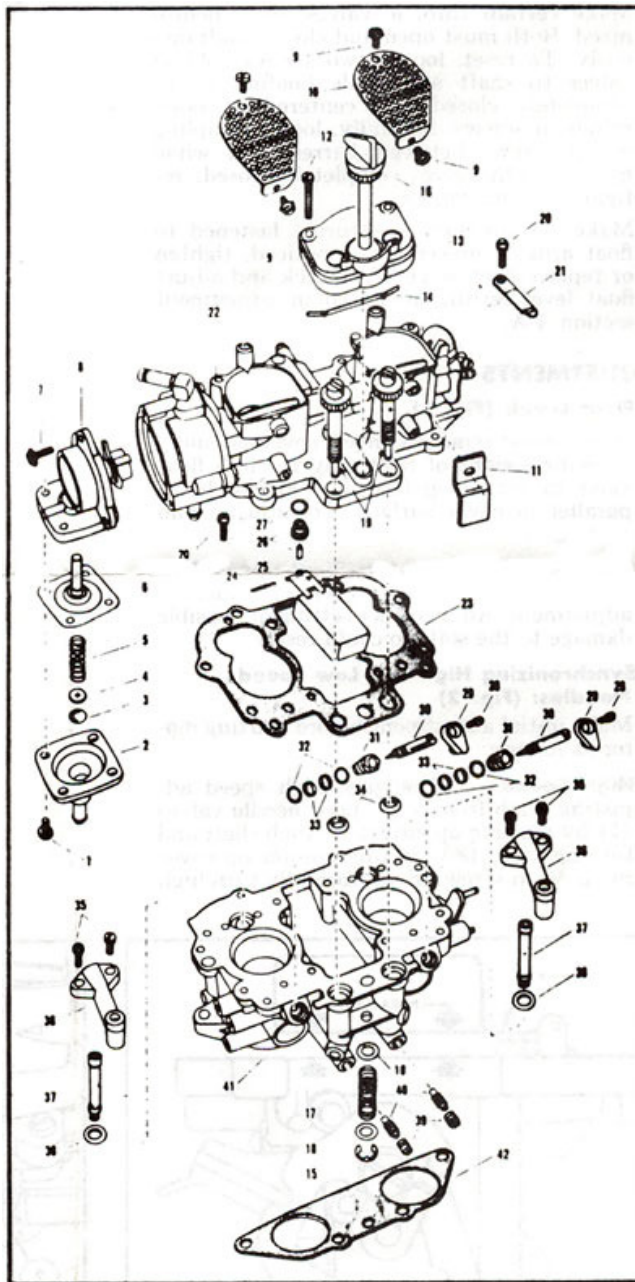
Caution: The Venturi assemblies (36) are precision set at the factory and should not be removed unless the proper fixture for aligning and reinstalling them is available. The correct position is critical, and fuel distribution to the engine cylinders will be affected if improperly located.

2. CLEANING

Soak parts in a regular carburetor cleaning solution, as directed by the manufacturer's instructions, long enough to remove all dirt, carbon or foreign matter. Do not soak any parts containing rubber, cork, leather or plastic, if they are to be re-used. Use a small bristle brush to aid in cleaning. Rinse parts in a suitable solvent and thoroughly blow out all parts and passages with dry compressed air.

Ref.No.	Nomenclature
1.	Screw
2.	Choke Cover Head
3.	Choke Valve
4.	Choke Valve Seat
5.	Diaphragm Spring
6.	Choke Diaphragm
7.	Screw
8.	Choke Spring and Cover
9.	Screw
10.	Intake Screen
11.	Choke Control Panel
12.	Cover Screw
13.	High Speed Needle
14.	Needle Valve Detent
15.	Retaining Ring
16.	High Speed Needle Valve
17.	Spring
18.	Washer
19.	High Speed Needle Valve
20.	Cover Screw
21.	Choke Control Spring
22.	Choke and Cover Assembly
23.	Cover to Body Gasket
24.	Float Hinge Pin
25.	Float and Arm Assembly
26.	Float Valve and Seat
27.	Washer
28.	Needle Valve Screw
29.	Low Speed Knob
30.	Low Speed Needle Valve
31.	Packing Nut
32.	Packing Washer
33.	Packing
34.	High Speed "O" Ring
35.	Venturi Screw
36.	Venturi Assembly
37.	High Speed Tube
38.	Venturi "O" Ring
39.	Drain Screw Plug
40.	Orifice Plug
41.	Carburetor Body
42.	Manifold to Carburetor Gasket

EXPLODED VIEW OF TYPICAL EVINRUDE-JOHNSON 2 BARREL CARBURETOR



3. REASSEMBLY

Reassemble carburetor in the reverse order of disassembly, paying particular attention to the following:

- A. Inspect tips of high and low speed needle valves (19 and 30). Replace if grooved or damaged from excessive tightening. Lightly bottom and back off valves as started in adjustment section 4-R.
- B. Make certain throttle valves are synchronized. Both must open and close simultaneously. To reset, loosen two screws holding valves to shaft and while holding valves completely closed and centered in bore, retighten screws. Secondly, loosen coupling clamp screws between barrels and while holding both valves completely closed, retighten clamp screws.
- C. Make certain float is securely fastened to float arm. If movement is noticed, tighten or replace float assembly. Check and adjust float level setting as stated in adjustment section 4-A.

4. ADJUSTMENTS

A. Float Level: (Fig. 1)

With gasket removed, invert cover assembly allowing weight of float only to close float valve in seat. Top face of float should be parallel to cover surface. To adjust, bend float arm.

Caution: Never force a resilient tipped float valve into its seat when checking or making adjustment. An incorrect setting or possible damage to the soft tip could result.

B. Synchronizing High and Low Speed Needles: (Fig. 2)

Make initial adjustment before starting motor as follows:

High Speed – Disengage high speed adjusting knob from high speed needle valves (1) by pushing up adjusting knob shaft and turning knob

180° resting pointer on cover ridge. With screw driver, carefully turn high speed needle valves (1) slowly inward until lightly seated (do not force). Then back each needle out ½ to 5/8 turn.

Low Speed – Remove low speed adjusting knobs. Loosen packing nuts and carefully turn each needle inward until lightly bottomed (do not force). Then back each needle out ¾ turn. Tighten packing nut.

C. Motor Running Adjustment: (Fig. 2)

Make adjustment with shroud in place. If motor is clamped to test tank, use correct test propeller and draw off exhaust fumes with vent fan. An accumulation of exhaust fumes under shroud will cause erratic operation.

1. Run motor until thermostat opens, indicated by a substantial discharge of water from exhaust housing water outlet.
2. Open throttle wide and turn inward one high speed needle (1) at a time until motor starts to slow down. Slowly turn needle outward until speed increases to maximum and motor runs smoothly. Pause about 20 seconds between each movement of needle to allow time for air/fuel mixture change to take effect.
3. Close throttle to idle position and turn inward until motor starts to run rough. Then, slowly open needle valve until motor runs smooth and even.
4. Open throttle wide to recheck high speed performance. "Touch up" high speed needles if necessary.
5. Close throttle to idle position and "touch up" low speed needles if necessary.
6. Carefully turn high speed adjusting knob 180° to engage gears. Center pointer on position "3". Recheck needle valve synchronization with knob, for best setting.
7. Carefully reinstall low speed knobs with pointers facing downward.

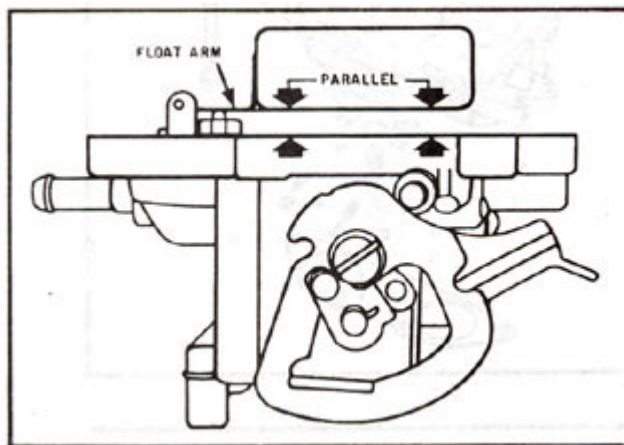


Figure 1

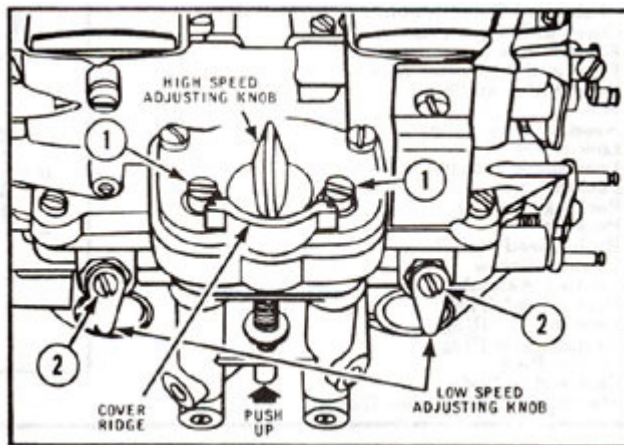


Figure 2