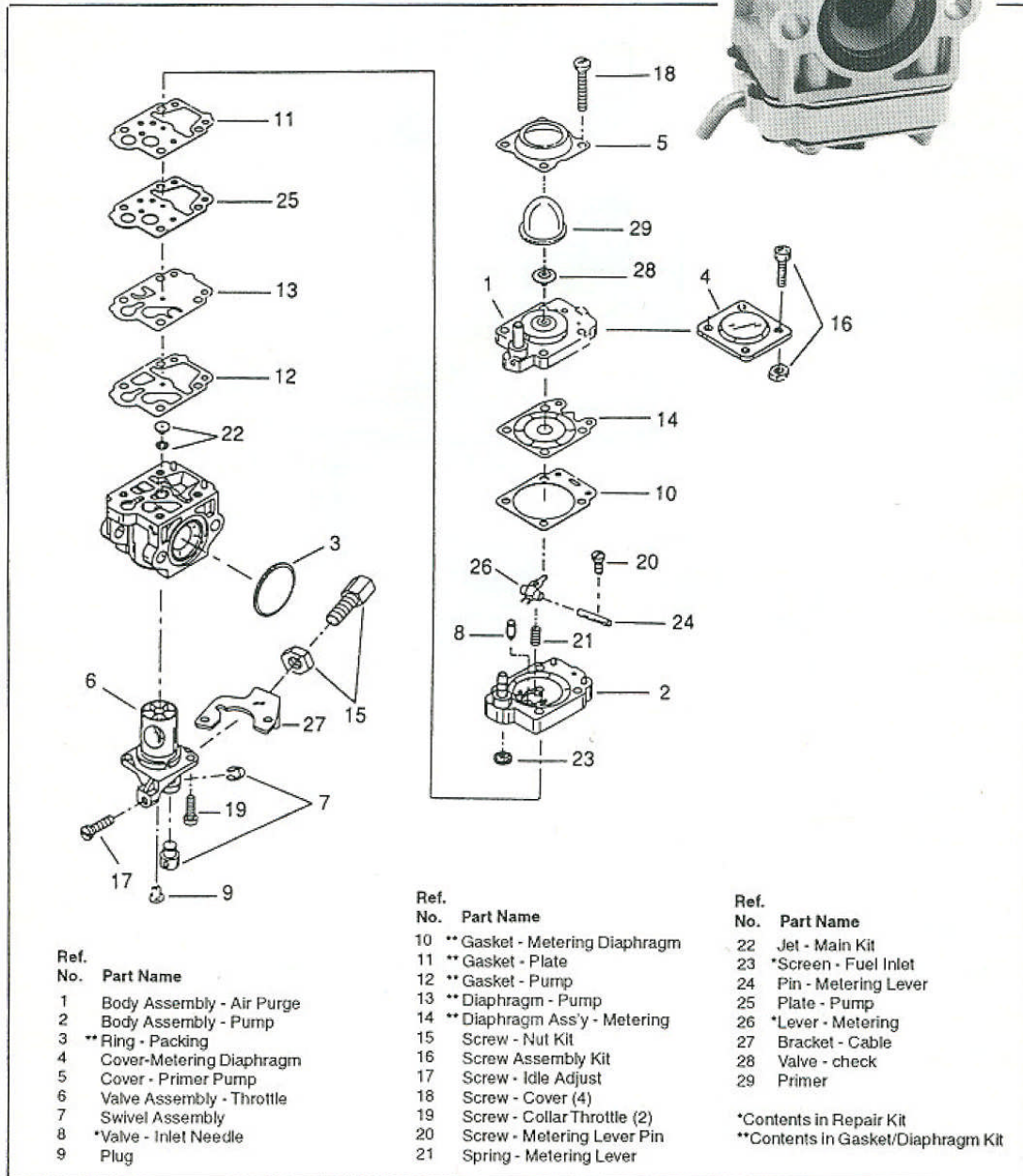
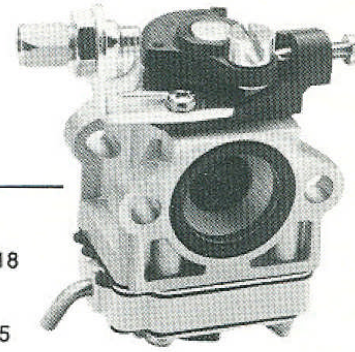




**TRIMMER AND  
BLOWER  
CARBURETORS  
SERVICE MANUAL**

**WYJ series**



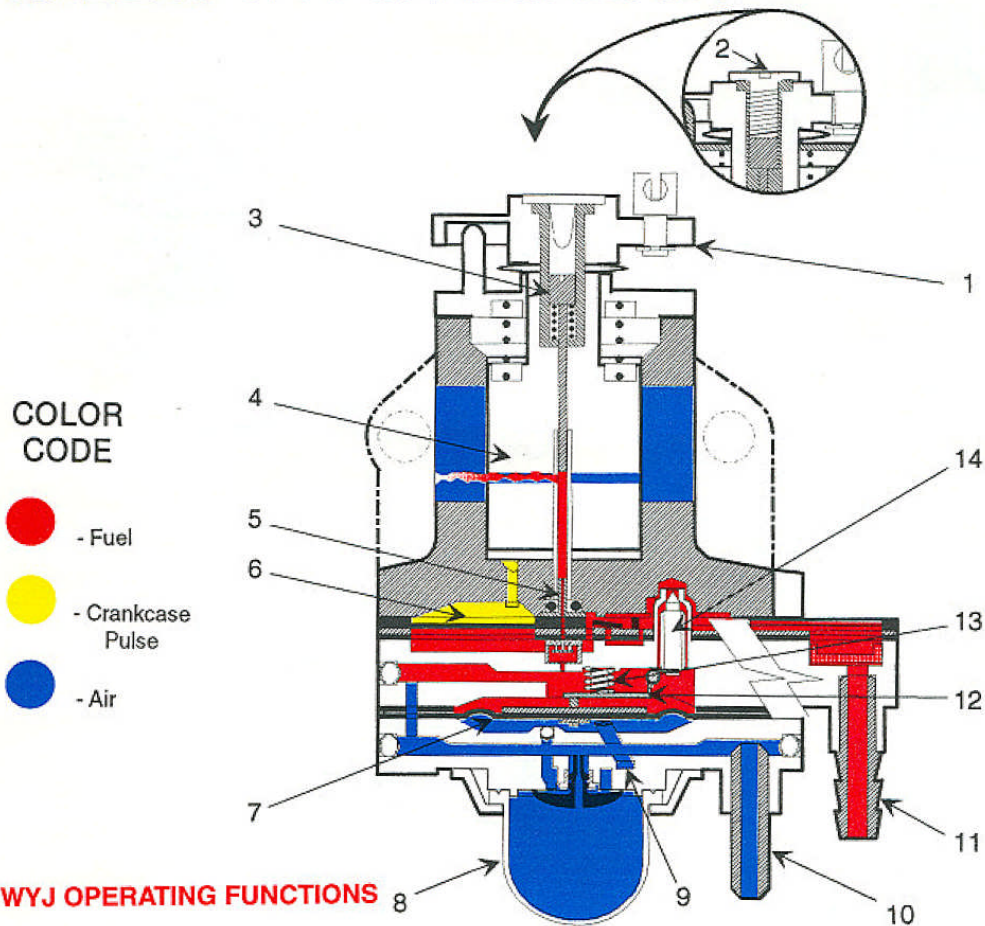
Ref. No.	Part Name
1	Body Assembly - Air Purge
2	Body Assembly - Pump
3	**Ring - Packing
4	Cover-Metering Diaphragm
5	Cover - Primer Pump
6	Valve Assembly - Throttle
7	Swivel Assembly
8	*Valve - Inlet Needle
9	Plug

Ref. No.	Part Name
10	**Gasket - Metering Diaphragm
11	**Gasket - Plate
12	**Gasket - Pump
13	**Diaphragm - Pump
14	**Diaphragm Ass'y - Metering
15	Screw - Nut Kit
16	Screw Assembly Kit
17	Screw - Idle Adjust
18	Screw - Cover (4)
19	Screw - Collar Throttle (2)
20	Screw - Metering Lever Pin
21	Spring - Metering Lever

Ref. No.	Part Name
22	Jet - Main Kit
23	*Screen - Fuel Inlet
24	Pin - Metering Lever
26	*Lever - Metering
27	Bracket - Cable
28	Valve - check
29	Primer

\*Contents in Repair Kit  
\*\*Contents in Gasket/Diaphragm Kit

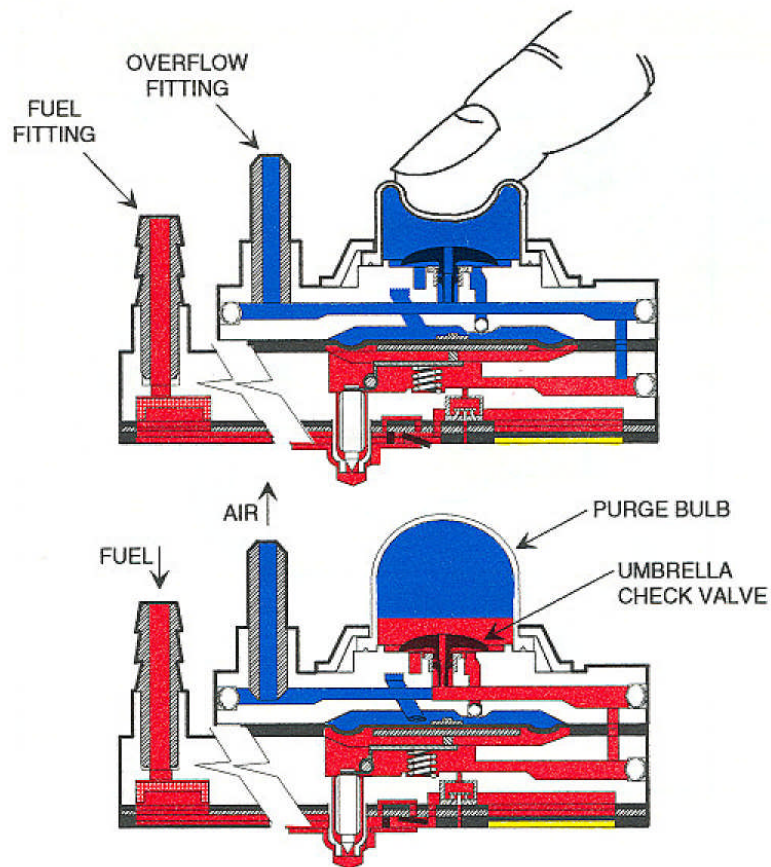
# WALBRO WYJ CARBURETOR



## WYJ OPERATING FUNCTIONS

1. Throttle Lever Ass'y: Controls throttle barrel operation from idle to wide open throttle position.
2. Idle Adjustment Needle: Fine tunes inner idle needle. This needle is preset at 1 turn open by manufacturer.
3. Inner Idle Needle: Controls fuel delivery at idle, part-throttle and wide open throttle positions.
4. Throttle Barrel: Regulates amount of air allowed to mix with fuel at idle, part-throttle and wide open throttle positions.
5. Main Jet: Meters correct amount of fuel to be delivered to nozzle at all positions.
6. Crankcase Pulse: Positive and negative crankcase pulses enter here to activate fuel pump.
7. Metering Diaphragm Ass'y: Low pressure received from crankcase allows metering diaph. to activate metering lever.
8. Purge Bulb: Forces air out of system when depressed, and draws fuel in from tank when released.
9. Atmospheric Vent Hole: Allows atmospheric pressure onto dry side of metering diaphragm assembly.
10. Fuel Inlet Fitting; Fuel from gas tank enters carburetor through this fitting.
11. Overflow Tube: Discharges fuel from purge area to tank.
12. Metering Lever: Lifts inlet needle off seat.
13. Metering Lever Spring: Transmits force to metering lever.
14. Inlet Needle: Regulates amount of fuel delivered to the metering chamber.

## WYJ AT START POSITION (PURGE & PRIME)



### WYJ AT START POSITION (PURGE)

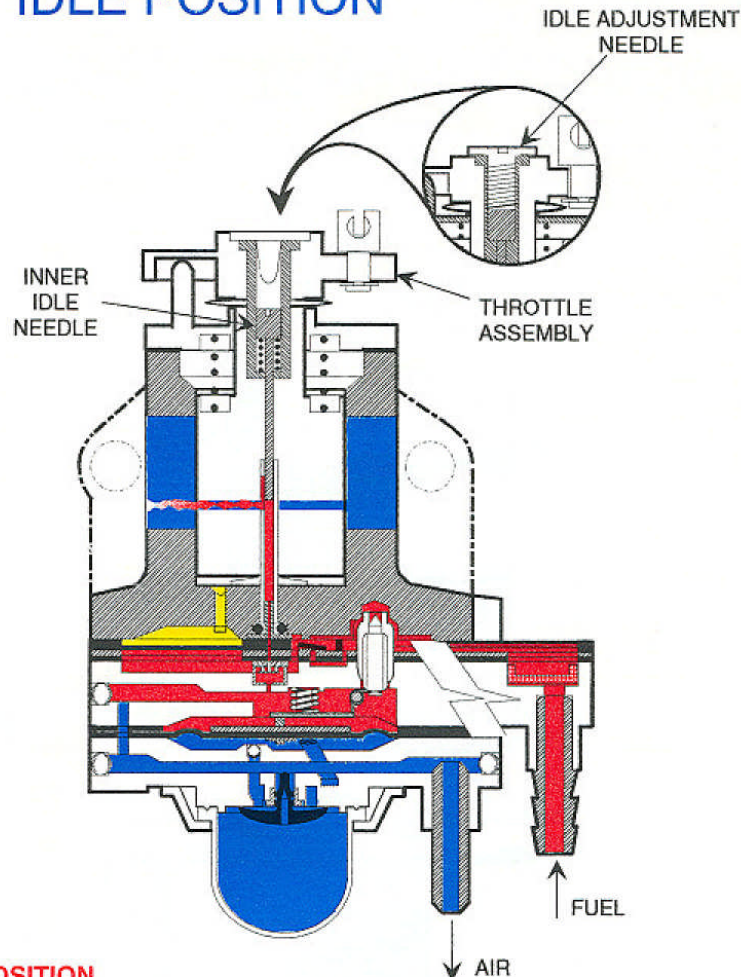
Some WYJ carburetors have as an option a purge system. This purge system allows the customer to purge the metering system of air and replace it with fuel for easier starting.

### WYJ STARTING PROCEDURE

By depressing the purge bulb 4-5 times, air is forced through the umbrella check valve. This air passes through the pump body and out the overflow tube. Each time the bulb is released, the umbrella check valve is drawn closed. An orifice bypassing the check valve allows fuel to be drawn up from the fuel tank, through the carburetor fuel pump, metering system and into the primer bulb. Once the primer bulb is at least 1/4 filled with fuel, the engine is ready for the choke position and the engine can be started.



# WYJ AT IDLE POSITION



## WYJ AT IDLE POSITION

The WYJ carburetor has two idle adjustment design options. Option #1 allows for the inner idle needle to be adjusted and a white plastic cap placed on top to conceal the needle. Option #2 is with the same inner idle needle but also contains a black idle screw located above the needle for a fine tune adjustment. Please read the following instructions for correct adjustment of the WYJ at the idle position.

### WYJ IDLE ADJUSTMENT PROCEDURE (WYJ WITH PLASTIC PLUG)

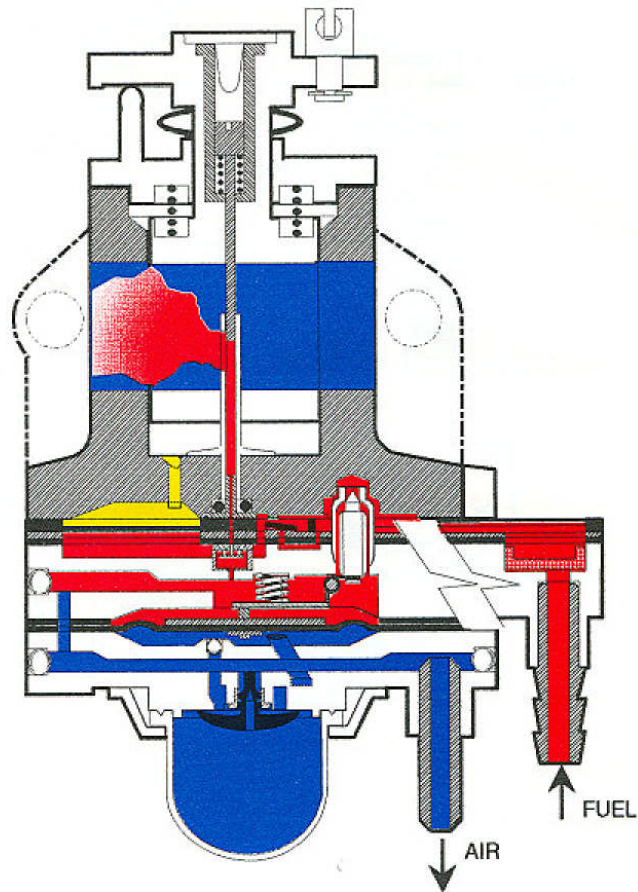
1. Remove the plastic plug located directly above the inner idle needle.
2. Using a 2.5mm wide flathead screwdriver, turn out the inner idle needle until threads disengage.
3. Turn inner idle needle clockwise 10-12 turns very slowly.
4. Start engine.
5. With the engine in the idle position, continue turning the inner idle needle clockwise. The idle RPM should increase (lean) until the peak lean idle RPM is obtained. Turn inner idle needle counterclockwise (rich) until optimum idle is obtained.  
Please note that carburetors and engine applications will vary, therefore the needle setting may vary also.
6. Adjust the idle speed screw to the correct idle RPM. Check idle, progression and wide open throttle, shut off engine.
7. Reinstall the white plastic plug.

### WYJ IDLE ADJUSTMENT PROCEDURE (WYJ WITH IDLE SCREW)

1. Start engine and place throttle in the idle position.
2. The black idle needle is preset to a 1 turn open setting. Adjust this needle to a good optimum idle setting.
3. Repeat step 6. and shut off engine.

**NOTE:** Do not attempt to adjust the inner idle needle. It is glued into place and should not be moved.

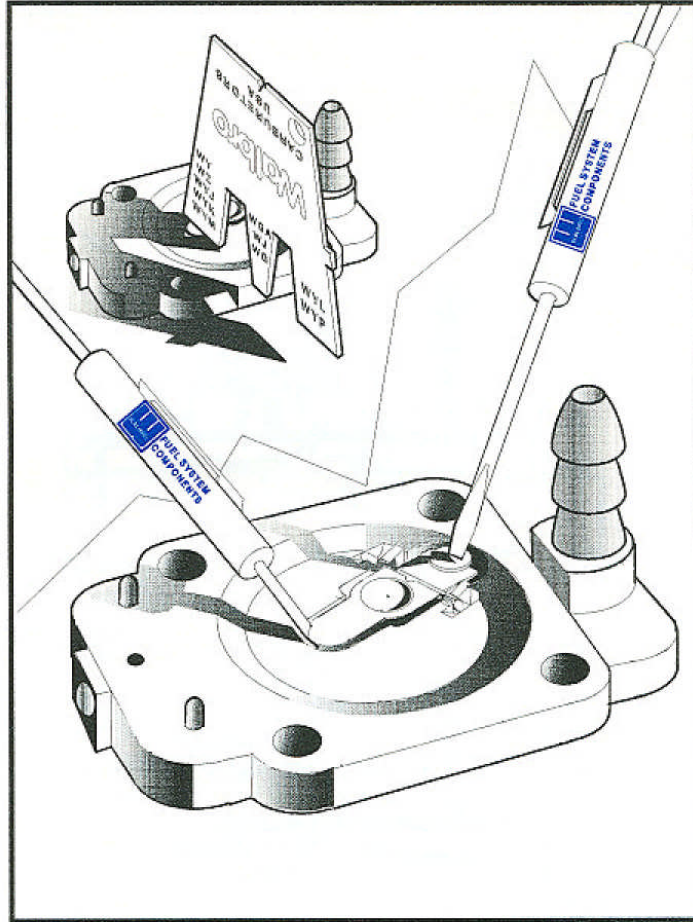
## WYJ AT THE WIDE OPEN THROTTLE POSITION



### WYJ AT WIDE OPEN THROTTLE POSITION

With the WYJ at the wide open throttle position, the throttle lever will be at the highest side of the ramp. This will allow the idle needle to be pulled away from the nozzle outlet and allow enough fuel to be fed to the engine at W.O.T. The barrel will be fully open allowing as much air as permitted to enter from the choke side and flow into the engine.

Fuel at the wide open throttle position enters the nozzle thru a pressed in main jet. This main jet is selected by Walbro Engineering to match the performance of the engine. Based on your altitude or performance requirements, you may have to replace the jet with an appropriate sized jet.



### **METERING LEVER SETTING PROCEDURE**

The correct metering lever setting is important in order to obtain the correct fuel delivery at idle, part-throttle and wide open throttle positions. The procedure is as follows:

1. Place a screwdriver on the head of the inlet needle. Do not apply pressure, just keep the needle stable. (See Fig. 1.)
2. To obtain a leaner setting, apply enough pressure on the opposite end of the lever with a second screwdriver (See Fig. 1.)
3. To obtain a richer setting, place your second screwdriver beneath the lever and bend the lever up to contact the metering diaphragm earlier.
4. Place the appropriate side of the metering lever gage and slide it over the lever.
5. The gage should pass over the lever while making slight contact as you pass it over.

