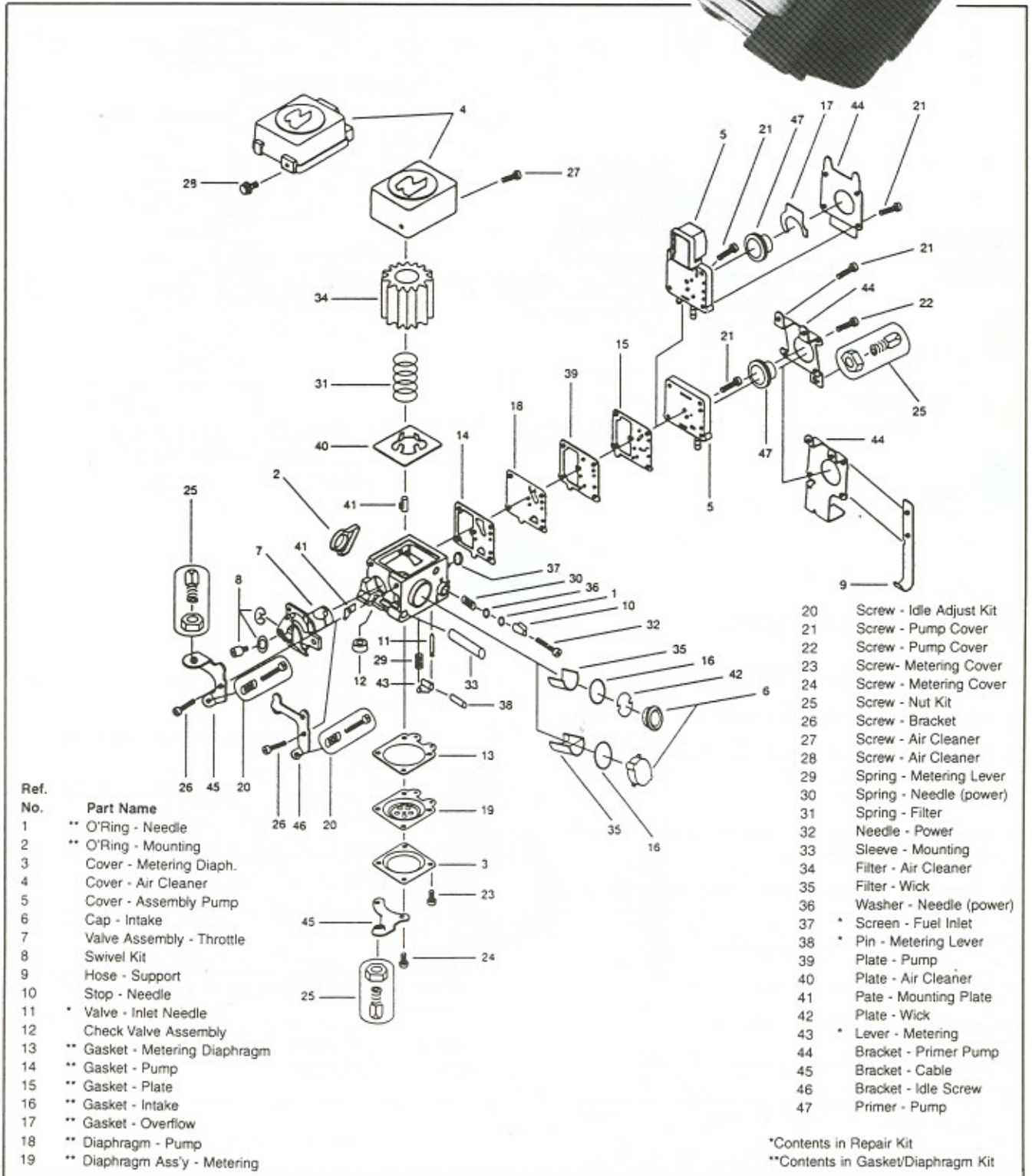


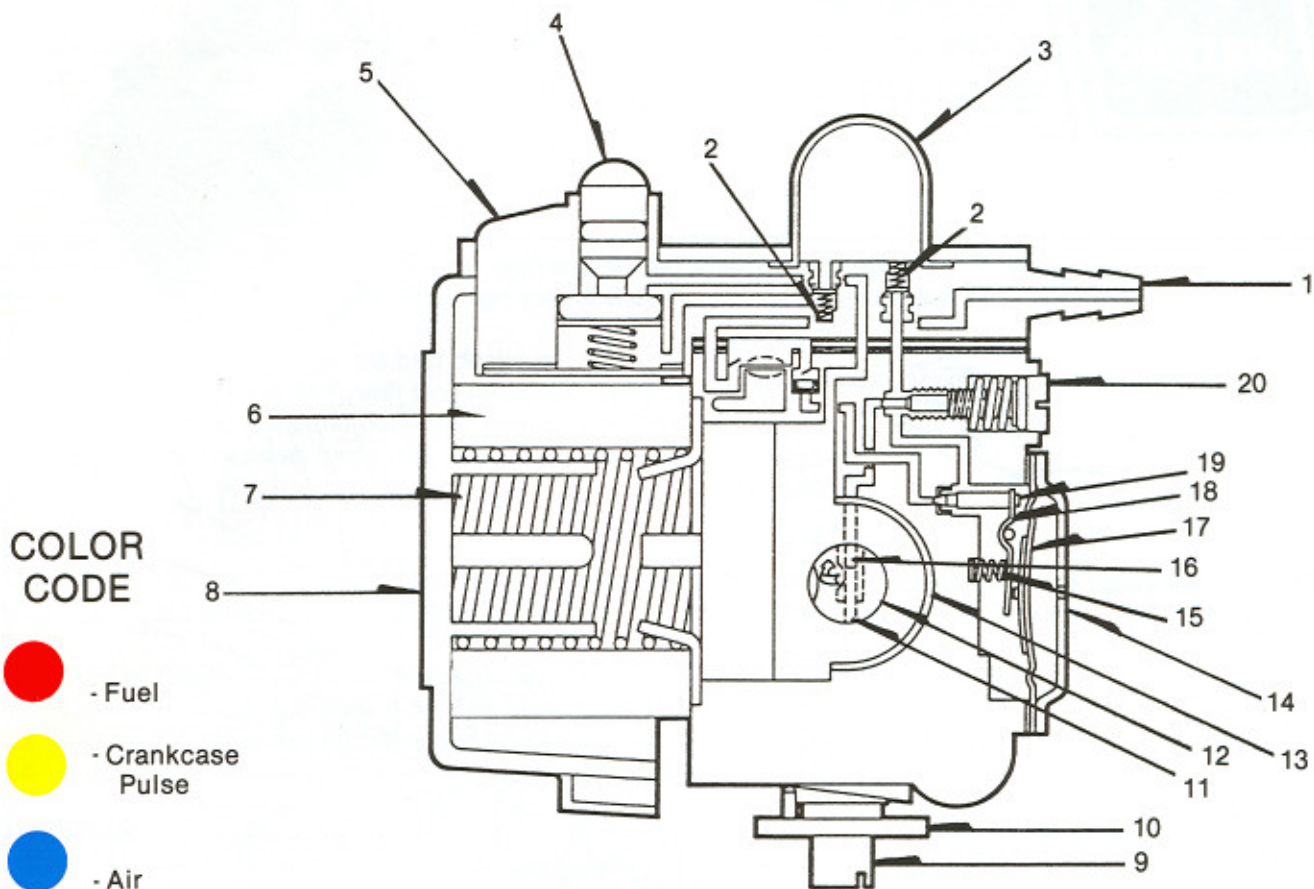


TRIMMER AND  
BLOWER MODEL  
CARBURETOR  
**SERVICE MANUAL**

**WZ series**



# STANDARD WZ w/PRIMER & STARTER BOX



## OPERATING FUNCTIONS

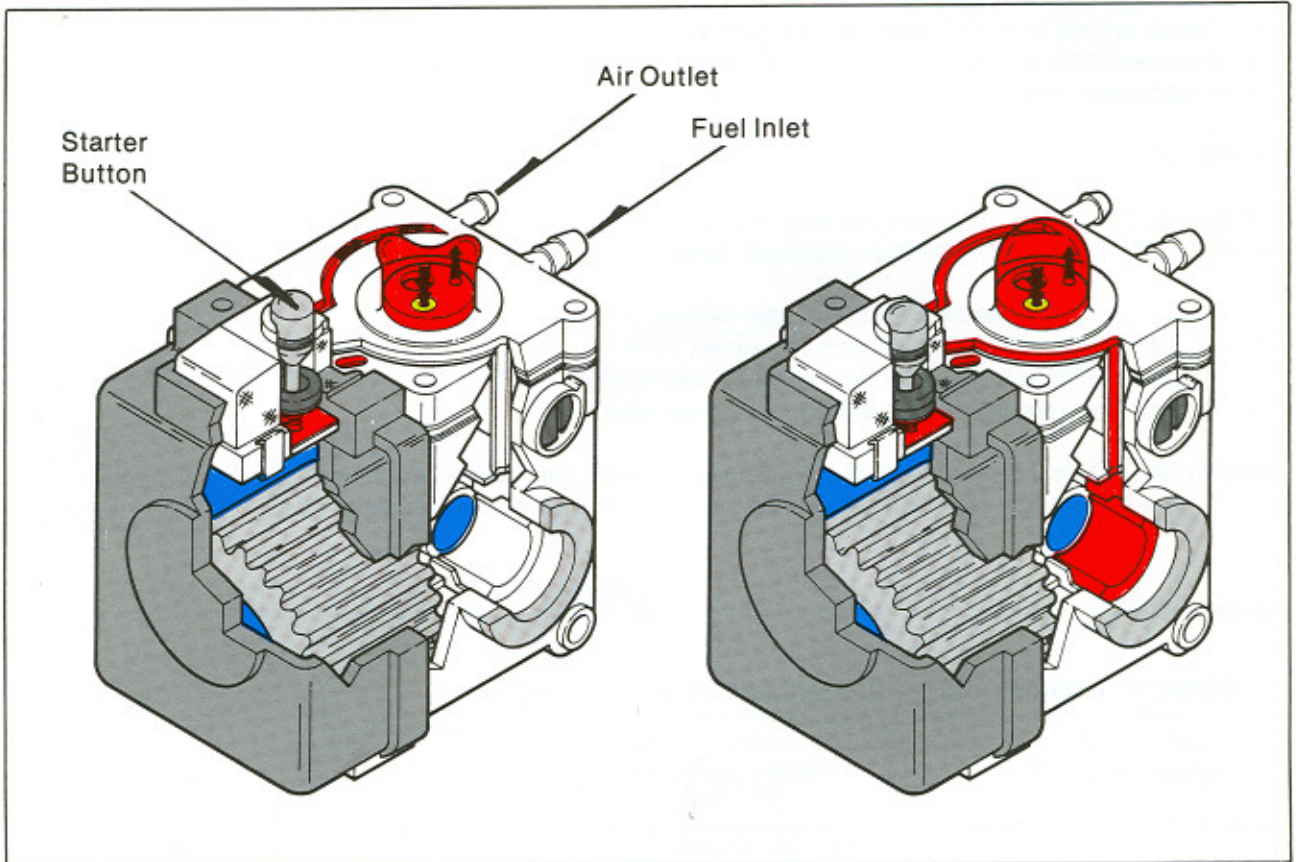
1. Fuel Inlet: Fuel drawn from gas tank enters here.
2. Check Valve Discs: Activate to assist purge system.
3. Primer Bulb: Purges air from metering system when compressed, draws fuel into metering system for easy start when released.
4. Starter Button: When depressed forces fuel in starter box onto starting wick.
5. Starter Box: Retains fuel from primer until it is forced to starting wick.
6. Air Filter: Filters air entering carburetor.
7. Filter Spring: Maintains compressed filter in air box.
8. Air Filter Cover: Encloses air filter.
9. Outer Idle Limiter: Fine tune adjustment for idle.
10. Throttle Lever: Attaches to throttle linkage to control barrel opening.
11. Inner Idle Needle: Adjusts for correct fuel mix at idle.
12. Throttle Barrel: Allows correct ratio of air/fuel to mix from idle to W.O.T.
13. Starting Wick: Absorbs fuel from starter box, eliminates need for a choke.
14. Atmospheric Vent: Allows atmospheric pressure onto dry side of metering diaphragm.
15. Metering Spring: When compressed allows lever to lift needle off seat.
16. Nozzle: Passage for fuel to enter throttle bore as barrel opens.
17. Metering Diaphragm: Forced onto metering lever to lift inlet needle off seat to allow fuel to flow into metering chamber.
18. Metering Lever: Activates from contact of metering diaphragm to lift inlet needle.
19. Inlet Needle: Meters correct amount of fuel to pass.
20. High Speed Needle: Adjusts fuel mixture for high speed.



# STARTING WZ w/PRIMER & STARTER BOX

The primer and starter box are designed for easy start which when activated will purge the entire metering system of air and replace it with fuel, the starter box eliminates the need for a choke.

As the clear bulb is depressed an outlet disc is forced against a spring to allow air to escape. When the bulb is released a vacuum is created which pulls an inlet disc against a spring to allow air and fuel from the metering chamber to enter. This procedure must be repeated until the bulb fills with fuel and enters the outlet fitting. This signifies that the metering system is free of air and the starter box is filled with fuel. At this time the starter button should be depressed and held for 3-4 seconds, this procedure delivers fuel retained in the box to the starting wick which will be drawn into the engine during the starting process.



## STARTING WZ w/PRIMER (only)

The priming system of a WZ with the primer only is basically the same as the procedure mentioned above. Depress and release the primer bulb until fuel fills the bulb and enters the outlet fitting. This signifies that the metering system is free of air and is ready to start.

### SERVICE PROCEDURE FOR PRIMER

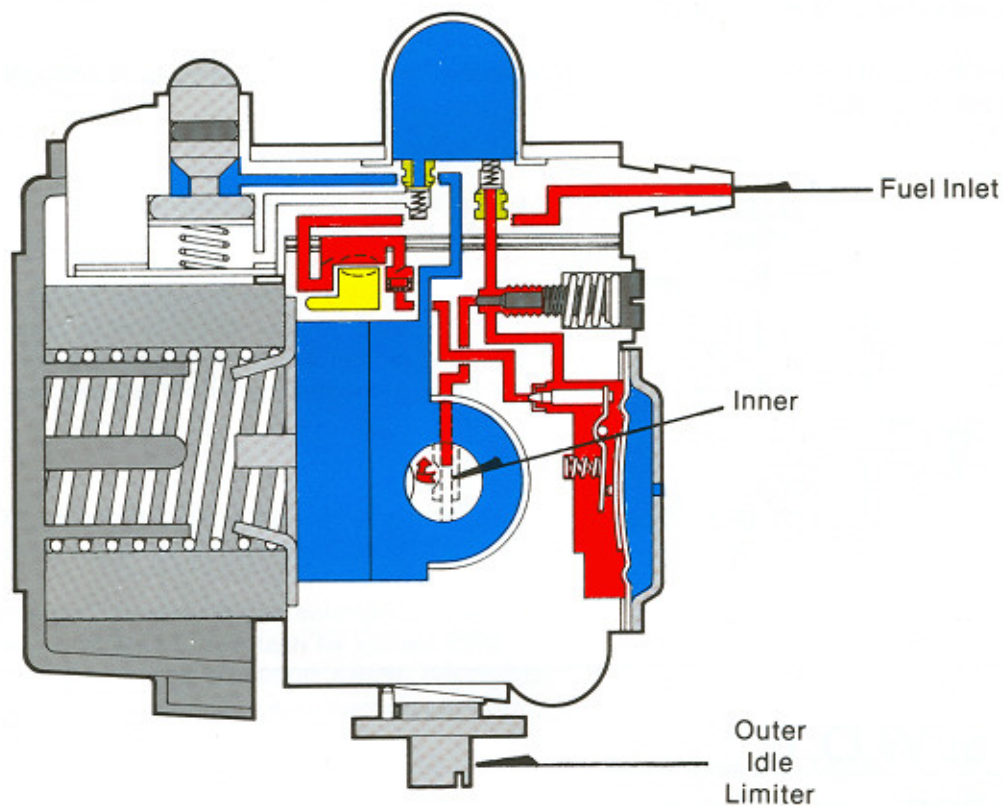
#### PROBLEM

Primer does not fill with fuel.

#### REMEDY

Remove bulb and lightly air blow to remove foreign material that could restrict the disc movement.

## WZ at Idle Position



### **IDLE ADJUSTMENT OF THE WZ**

The WZ is equipped with an outer idle limiter for a fine tune adjustment and an inner idle needle for the actual idle mixture setting.

Only adjustments to the outer idle limiter should be made by the operator.

The inner idle needle should only be adjusted by an authorized Walbro service person.

The throttle lever has 5 location marks for the outer idle limiter to be adjusted to. Walbro presets this to the center mark.

### **LEAN IDLE CONDITION**

A lean idle condition means that the carburetor is getting a higher ratio of air to fuel than the engine requires. Steps to correct this condition are as follows:

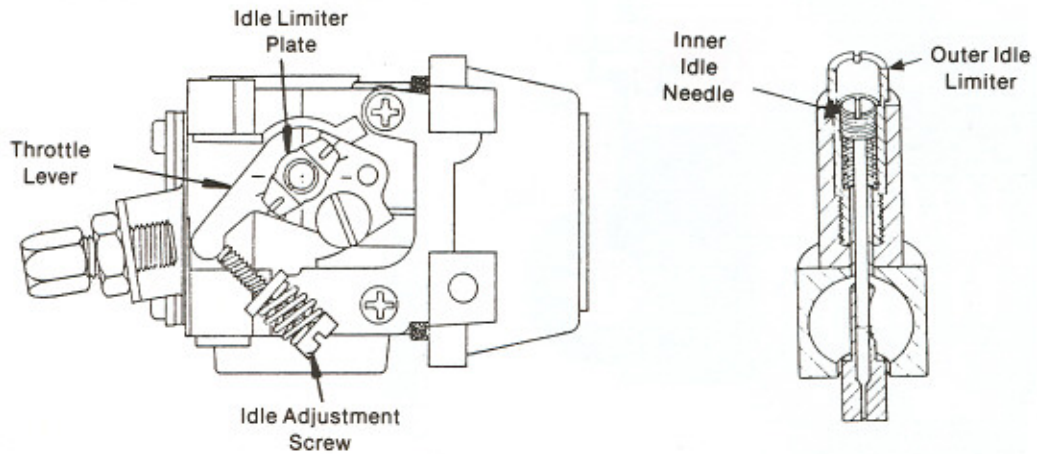
1. Turn the outer idle limiter counter-clockwise 2 marks, the idle RPM will drop slightly indicating a richer condition. If the idle appears too rich follow step 2.
2. Turn outer idle limiter clockwise 1 mark. This will put the idle adjustment closer to an optimum setting.



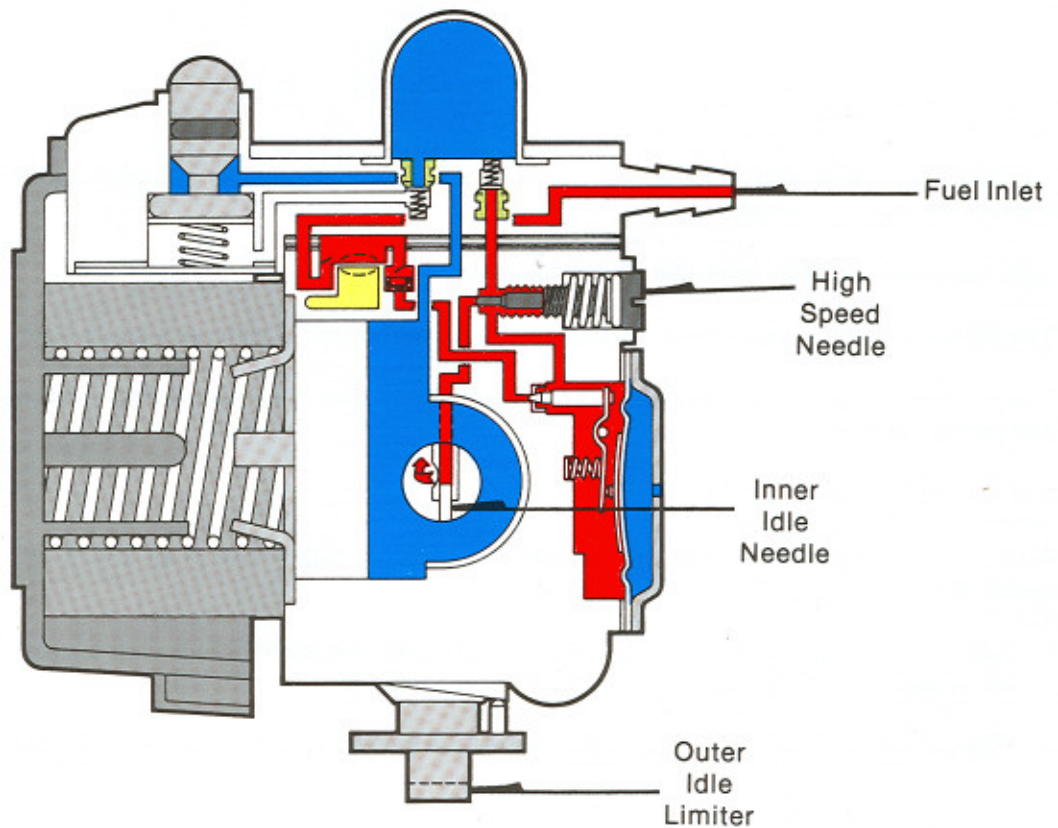
## RICH IDLE CONDITION

A rich idle condition means that the carburetor is getting a higher ratio of fuel to air than the engine requires. Steps to correct this condition are as follows:

1. Turn the outer idle limiter clockwise 2 marks, the idle RPM should increase slightly indicating a leaner condition. If the idle appears too lean follow step 2.
2. Turn the outer idle limiter 1 mark counter-clockwise. This will put the idle adjustment closer to an optimum setting.



## WZ at W.O.T. Position



## HIGH SPEED ADJUSTMENT OF WZ (W.O.T.)

The high speed or W.O.T. needle is pre-set by Walbro at assembly and readjusted to the engine specification by the engine manufacturer.

High speed needle settings may range between 1-2 turns open, see the service manual for the correct settings.

Note: Prior to servicing always record the settings.

## RICH W.O.T. CONDITION

A rich W.O.T. condition means that the engine is getting a higher ratio of fuel to air which may cause the engine to exhibit a drop in RPM at high speed. Steps to correct this condition are as follows:

1. Turn high speed needle 1/8 turn clockwise.
2. Check engine at W.O.T. with tach for correct RPM.
3. If correct RPM is met do not adjust needle any further.
4. If carburetor requires further adjustment repeat step 1.

## LEAN W.O.T. CONDITION

A lean W.O.T. condition means the engine is getting a higher ratio of air to fuel that could cause the engine to exhibit a higher RPM than specified. Steps to correct this condition are as follows:

1. Turn high speed needle 1/8 turn counter-clockwise.
2. Check engine at W.O.T. with tach for correct RPM.
3. If correct RPM is met do not adjust needle any further.
4. If carburetor requires further adjustment repeat step 1.

**IMPORTANT:** Over adjustment of the high speed needle can cause severe damage to an engine, if a lean or rich condition persists contact your Walbro service representative.

**REMEMBER ALWAYS WORK IN A CLEAN AREA**

### SERVICE PROCEDURE FOR FLOODED WZ CARBURETOR

#### **CAUSE**

Metering lever set too high  
Metering diaphragm misassembled  
Inlet needle will not seal

#### **REMEDY**

Carefully adjust lever to correct specification.  
Place metering gasket on body before placing metering diaphragm.  
Carefully remove inlet needle and wipe clean. Also clean and blow seat.

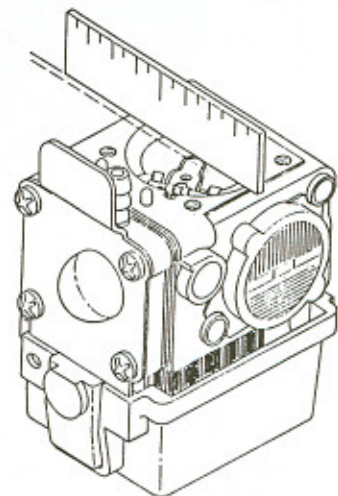
### SERVICE PROCEDURE FOR LEAN WZ CARBURETOR

#### **CAUSE**

Metering lever set too low  
Hole in metering diaphragm  
Leaky manifold gasket  
Loose metering cover screws  
Pump diaphragm check valves worn  
Dirty fuel inlet screen  
Obstructed or damaged fuel or pulse line

#### **REMEDY**

Carefully adjust lever to correct specification.  
Replace metering diaphragm.  
Replace manifold gasket.  
Retighten securely.  
Replace pump diaphragm.  
Remove screen and clean or replace.  
Remove obstruction or replace line if necessary. Also check in-line fuel filter.



Place a straightedge across pump body casting as illustrated. Metering lever should be  $.059 \pm .005$  below straightedge. Slight pressure will bend the metering lever up or down.



**WALBRO CORPORATION**  
CASS CITY, MICHIGAN