

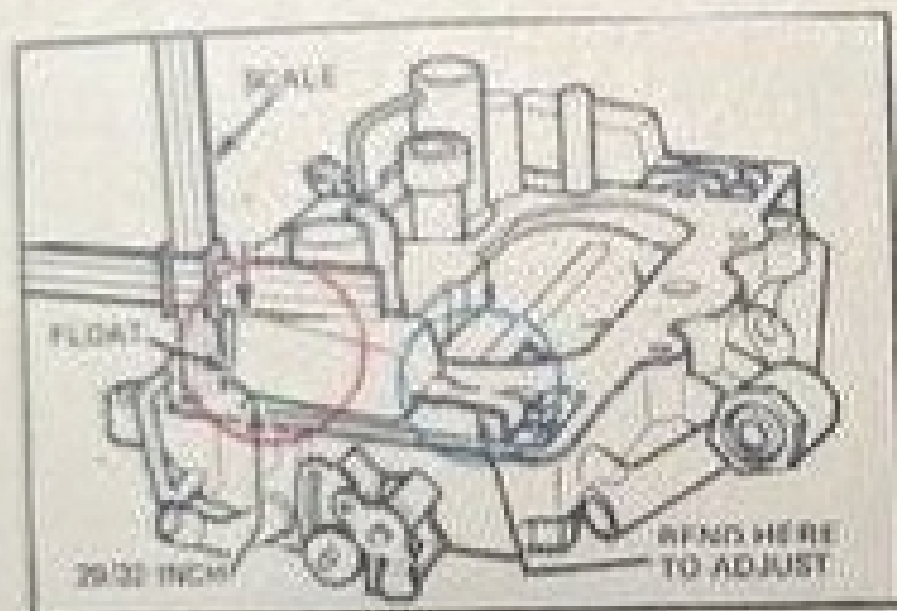


the Professional Approach:

# Thermo Quad Carburetor Adjustments & Troubleshooting

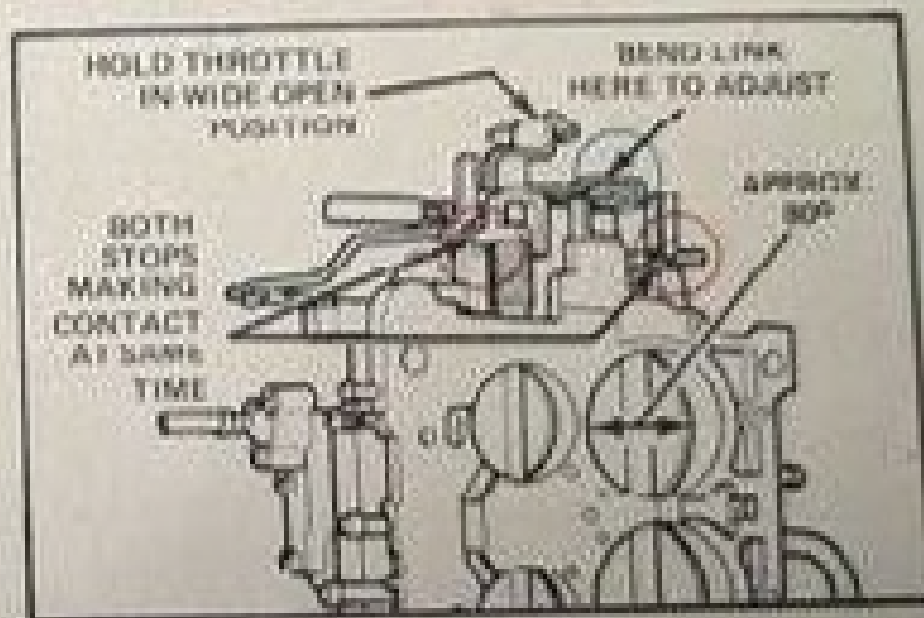


**SERVICE  
TRAINING**



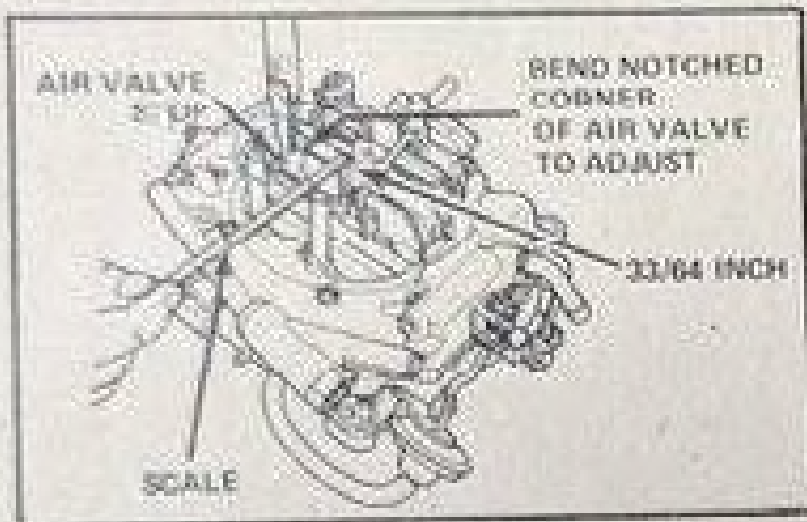
### FLOAT HEIGHT (ON BENCH)

With floats resting on seated needles, and gasket in place, adjust float height to **29/32 inch** by **bending float lever**.



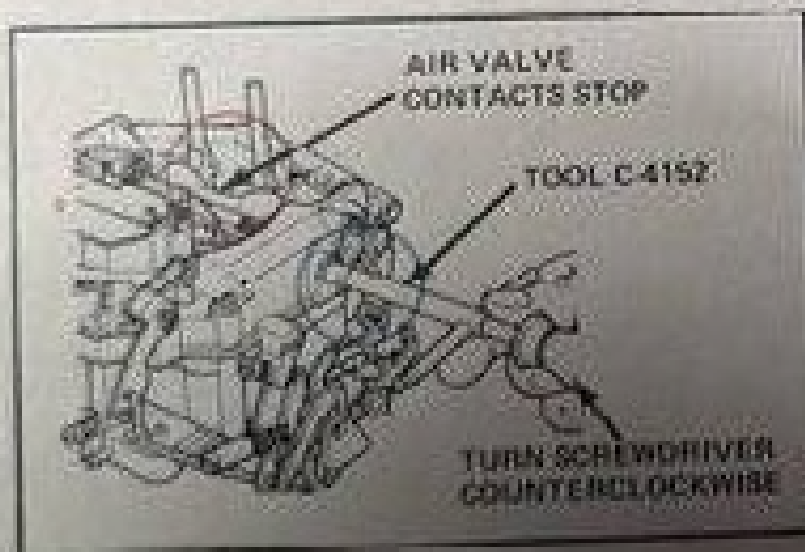
### SECONDARY THROTTLE LINKAGE (ON BENCH)

Adjust by **bending link** until primary and secondary stops both **contact at same time**.



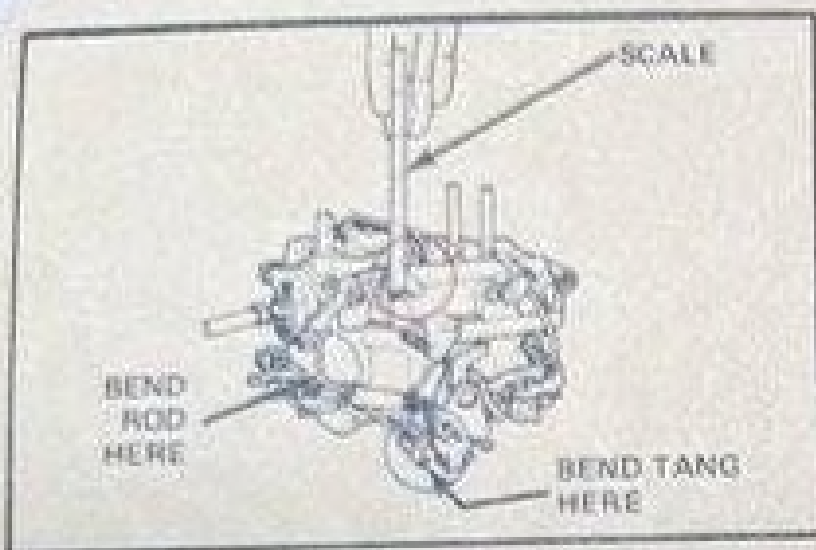
## SECONDARY AIR VALVE OPENING

In wide-open position, adjust the air valve to  $33/64$  inch at the short side by bending the notched corner of the air valve.



## SECONDARY AIR VALVE SPRING TENSION

1. Loosen air valve lock plug and allow air valve to position itself to wide-open.
2. Using screwdriver and tool C-4152, turn plug counterclockwise until air valve contacts stop.
3. Test air valve action. Turn plug an additional  $1\frac{1}{4}$  turns.
4. Hold adjustment plug with screwdriver and tighten lock plug with Tool C-4152.



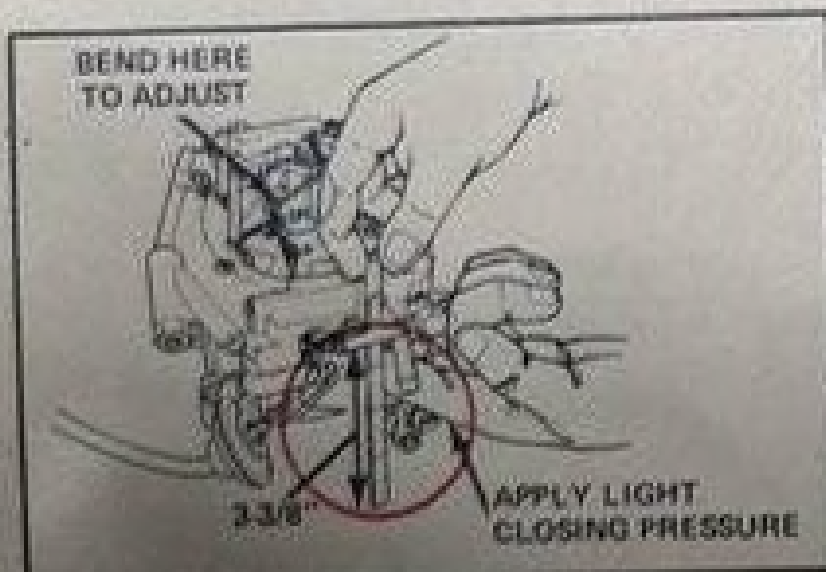
## STAGED ACCELERATOR PUMP STROKE

### First Stage Adjustment

1. Be sure throttle connector rod is in center hole of 3-hole pump arm or in upper hole of 2-hole pump arm.
2. Adjust plunger height to  $33/64$  inch ( $31/64$  inch - Models TQ-9059S and TQ-9058S only) by bending throttle connector rod.

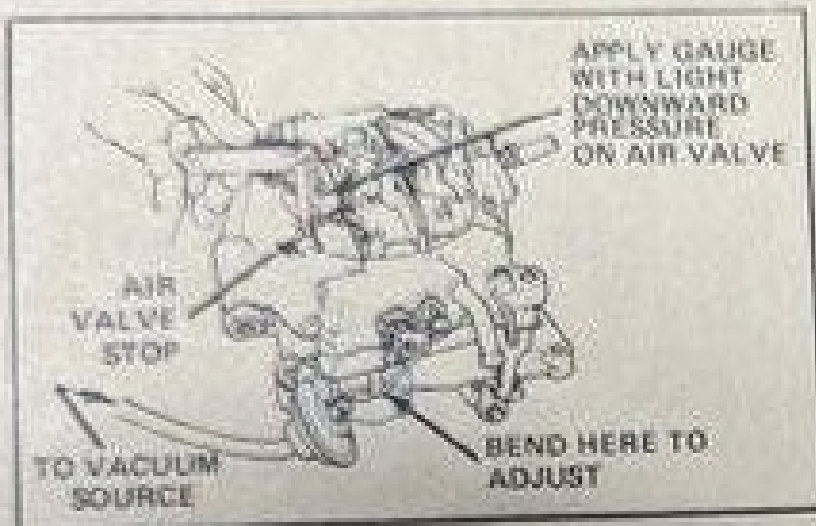
### Second Stage Adjustment

1. Open choke. Open throttle until secondary lockout latch is just touching actuator lever.
2. Adjust accelerator pump plunger height to  $5/16$  inch by bending tang.



## CHOKE CONTROL LEVER (ON BENCH)

1. Place carburetor upright on flat surface.
2. Close choke by pushing on choke lever.
3. Bend the link connecting the two chokeshafts until the vertical distance from top of rod hole in control lever down to flat surface is  $3-3/8$  inches.

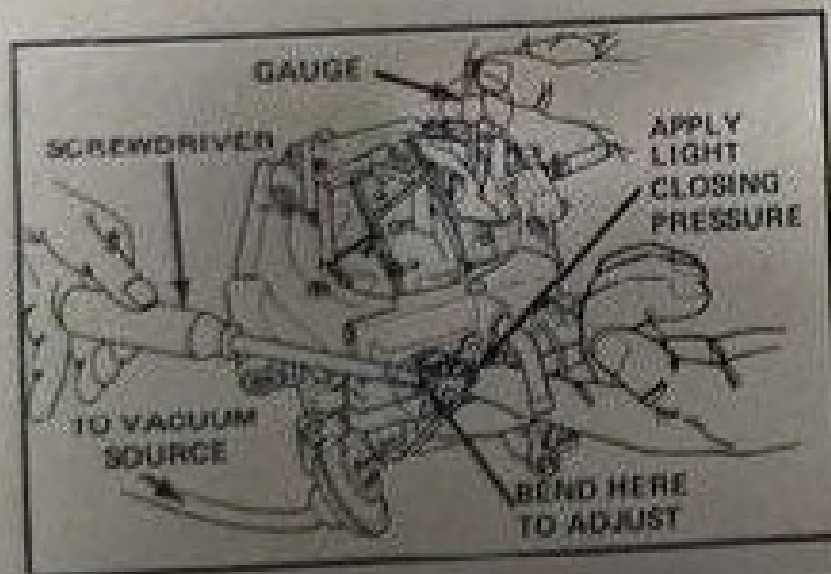


### CHOKE DIAPHRAGM CONNECTOR ROD (SECONDARY AIR VALVE CONTROL)

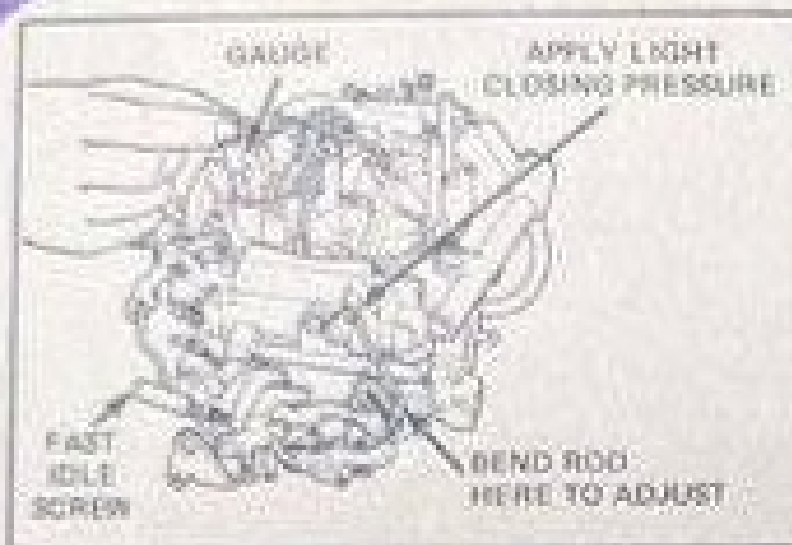
1. Apply 15 inches of vacuum to diaphragm.
2. Adjust clearance between air valve and stop to **.040 inch** by **bending connector rod**.

### VACUUM KICK (CHOKE VALVE OPENING - ON BENCH)\*

1. Open throttle valves and move choke valve to closed position with control lever. Release throttle lever before releasing choke to trap fast-idle cam in closed choke position.
2. Apply 15 inches of vacuum to diaphragm.
3. Insert **.100-inch gauge**. Apply sufficient closing pressure on choke control lever. The correct stops must be in contact for proper measurement.
4. Adjust by **bending the tang** until a slight drag is felt when gauge is removed.
5. Reset fast idle screw.

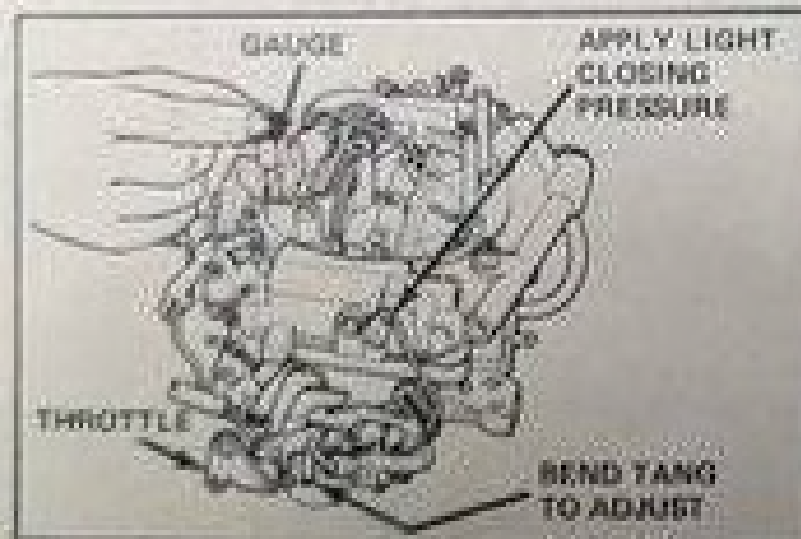


\*Choke adjustments are measured at lowest edge of the choke plate.



### FAST IDLE CAM LINKAGE\*

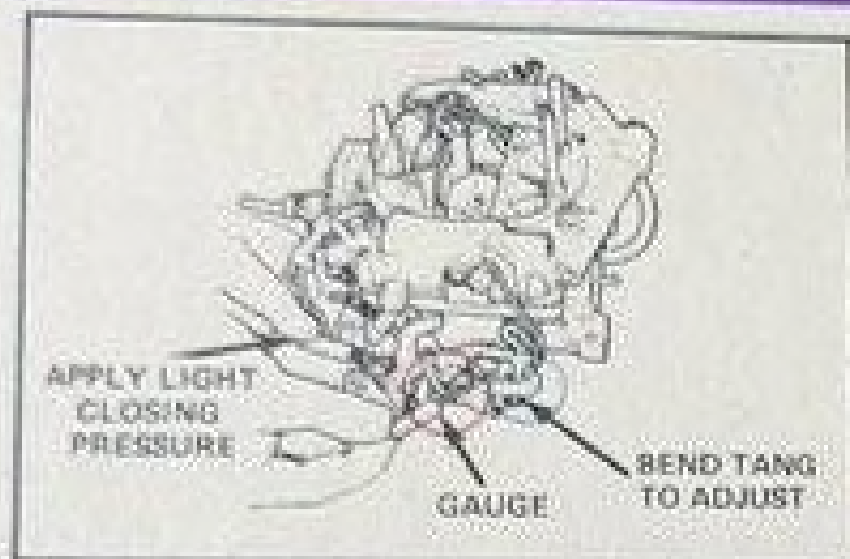
1. With fast idle adjusting screw contacting the second highest speed step on fast idle cam, move choke valve towards closed position with light pressure on cam control lever.
2. Insert **.100-inch gauge** (**.110-inch gauge**—Models TO 9055S and 9074S only). Adjust by **bending the fast idle connector rod** until a slight drag is felt when gauge is removed.



### Choke Unloader (Wide-Open Kick)\*

1. Hold throttle valves in wide-open position. Insert **.310-inch gauge**.
2. Adjust by **bending tang** on fast idle lever until a slight drag is felt when gauge is removed with finger pressing against cam control lever.

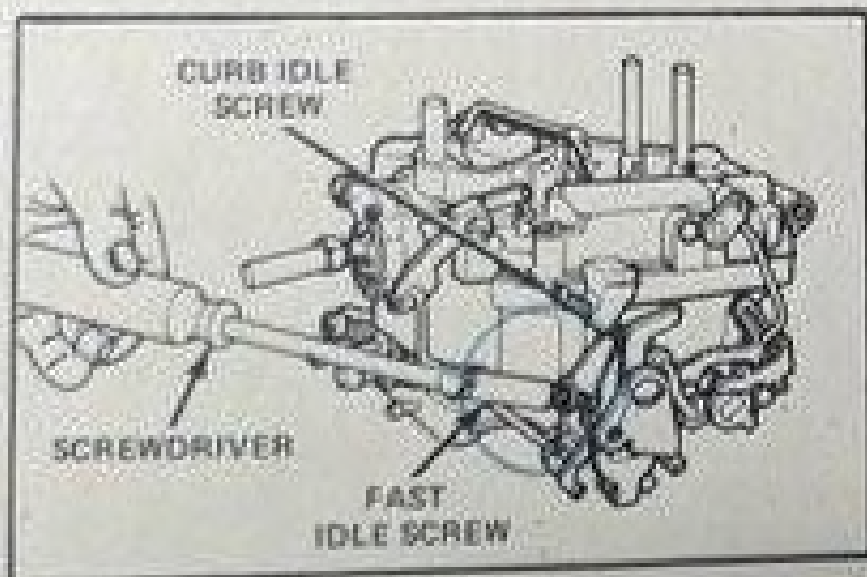
\*Choke adjustments are measured at lowest edge of the choke plate.



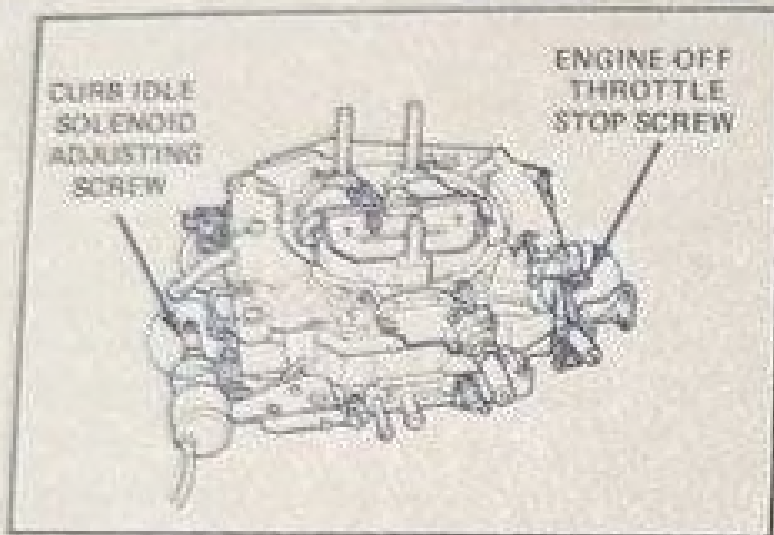
## SECONDARY THROTTLE LOCKOUT

1. Move fast idle control lever to open choke position.
2. Insert **.060 to .090-inch gauge** between lockout lever and stop.
3. Adjust by **bending tang** on fast idle control lever until gauge clearance is within specifications.

## CURB AND FAST IDLE SPEED

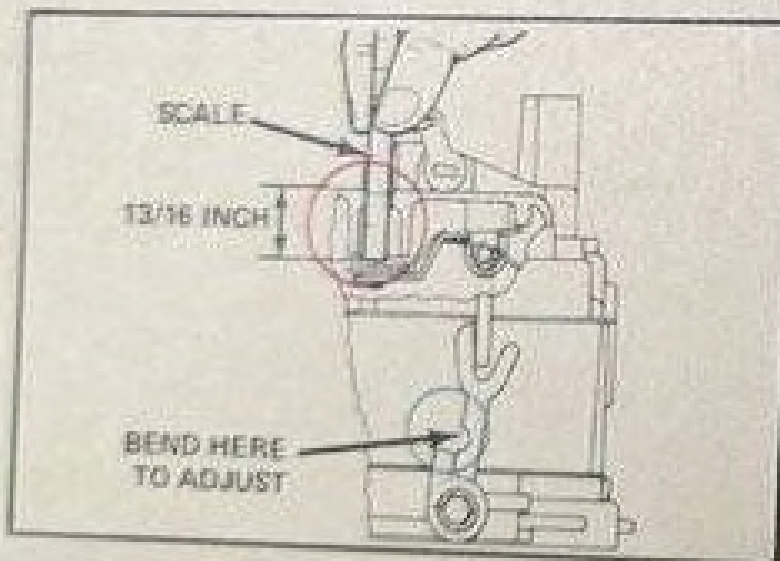


1. Connect a tachometer and set curb idle speed to specifications on Emission Label by **turning curb idle screw**.
2. Disconnect carburetor vacuum hoses coming from heated air control and OSAC valve or vacuum advance hose. Remove air cleaner. Disconnect EGR hose and cap all vacuum ports at carburetor.
3. With engine off, transmission in neutral, and parking brake set, open throttle and close choke.
4. Close throttle and place fast idle screw on second highest speed step.
5. Start engine. Adjust fast idle to specifications by **turning fast idle screw**.
6. Re-check settings.



### CURB IDLE SOLENOID

1. Warm up engine and attach a tachometer.
2. With engine running, adjust curb idle to specifications on Emission Label by turning adjusting screw.
3. Adjust engine-off throttle stop screw until end of screw touches stop. Back off screw one full turn for low-speed setting. Test by disconnecting solenoid wire at connector.
4. Reconnect solenoid wire. Manually advance throttle to normal curb idle.



### BOWL VENT VALVE

1. Remove bowl vent valve.
2. At curb idle, place a ruler in the hole and rest it on the valve.
3. Adjust valve height to 13/16 inch by bending bowl vent lever at notch.
4. Install new plug.

## CARBURETOR TROUBLESHOOTING CHART

CONDITION	CORRECTIVE ADJUSTMENT
Lack of power at wide-open throttle	Secondary throttle linkage
Engine flood during wide open throttle	Secondary air valve opening
Engine backfires during wide-open throttle	Secondary air valve opening
Engine sags or stumbles at wide-open throttle	Secondary air valve spring tension Choke diaphragm connector rod
Engine sags or stumbles at normal acceleration	Accelerator pump stroke (first stage) Float height
Engine sags or stumbles at higher speed acceleration	Accelerator pump stroke (second stage)
Choke plate does not close completely	Choke plate control lever
Engine stalls repeatedly after cold engine start	Vacuum kick Idle enrichment valve
Flooded engine cannot be cleared	Choke unloader