

FUEL SYSTEM

SERVICE INSTRUCTION WORKSHEET

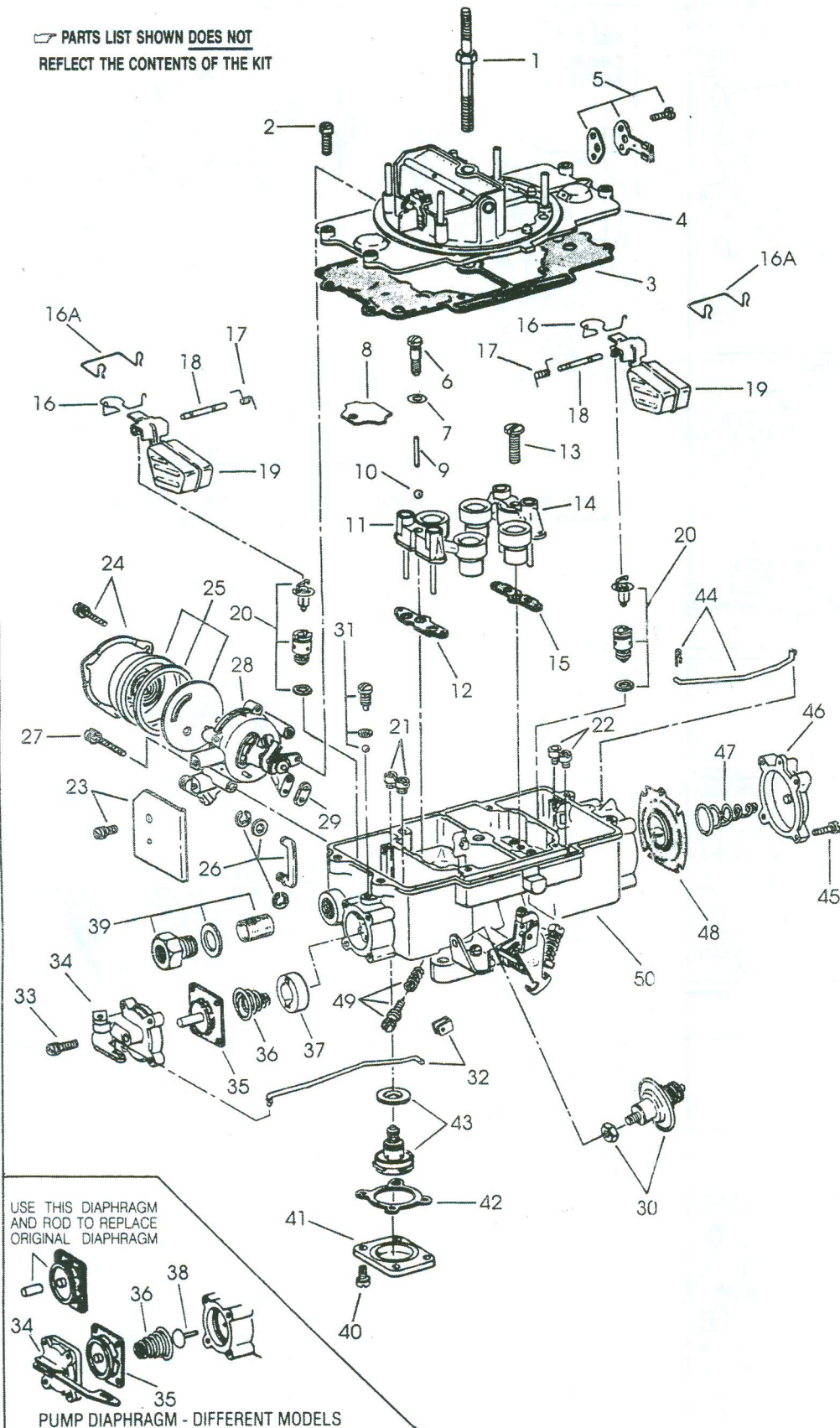
TO REPAIR

GF3491-4

FORD CARBURETOR

4 BARREL---MODEL 4100, F4

☞ PARTS LIST SHOWN DOES NOT
REFLECT THE CONTENTS OF THE KIT



1. Carefully read the text in the following pages to become familiar with the contents of this worksheet before performing carburetor overhaul.
2. The exploded view is typical of the model carburetor this kit will service. The view may differ slightly from the actual carburetor being overhauled.
3. Use the exploded view as a guide. The numerical sequence of the parts list may generally be followed to disassemble the carburetor far enough to permit cleaning and inspection.
4. Parts list shown DOES NOT reflect the contents of the kit.
5. Kit may contain extra parts intended for other carburetors within this group. Substitute identical replacement parts for original worn parts found in carburetor.

CLEANING

Cleaning must be done with carburetor disassembled. Use spray cleaner and a stiff bristle brush to remove dirt and carbon deposits. Do not use abrasives and wires to clean parts and passageways. Wash off in suitable solvent, and clear all passageways with compressed air. **Caution:** When cleaning with solvent do not soak or spray parts containing rubber, leather, plastic and electrical components.

PARTS LIST

1. Stud, air cleaner
2. Screw, air horn (8)
3. Gasket, air horn
4. Air horn assembly
5. Hot idle compensator assembly
6. Screw, pump discharge nozzle
7. Washer, screw
8. Plate (air distribution)
9. Weight, discharge check ball
10. Ball, discharge check
11. Venturi cluster assembly, primary
12. Gasket, primary venturi
13. Screw, secondary venturi
14. Venturi cluster assembly, secondary
15. Gasket, secondary venturi
16. Retainer, float pin (pri. & sec.)
- 16A. Retainer (service replacement)
17. Spring, float dampner (pri. & sec.)
18. Pin, float hinge (pri. & sec.)
19. Float assembly (pri. & sec.)
20. Needle & seat assy. (pri. & sec.)
21. Jet, primary main metering
22. Jet, secondary main metering
23. Screw & air shield
24. Screw & retainer, stat cover
25. Thermostatic coil & cover assy.
26. Fast idle link & retainers
27. Screw, choke housing
28. Choke housing assembly
29. Gasket, choke housing
30. Dashpot assembly
31. Pump inlet screw, washer & check ball
32. Pump link & retainer
33. Screw, pump cover (4)
34. Cover, pump diaphragm
35. Pump diaphragm assembly
36. Spring, diaphragm return
37. Cavity filler, pump
38. Valve, pump inlet check
39. Fitting, washer & filter, fuel inlet
40. Screw, cover (4)
41. Cover, economizer valve
42. Gasket, cover
43. Economizer valve & washer assembly
44. Secondary throttle link & retainer
45. Screw, cover (4)
46. Cover, secondary diaphragm
47. Spring, diaphragm return
48. Secondary diaphragm assembly
49. Idle mixture adjusting screw & spring (2)
50. Main body assembly

REMOVAL & INSTALLATION NOTES

1. Cover opening on intake manifold after carburetor is removed.
2. Before removing similar parts from primary and secondary sides, mark them for proper installation.
3. Main jets are not interchangeable. Note their sizes.
4. Before removing idle mixture screw (49), turn in until lightly seated, counting number of turns. Record for proper installation.
5. Install parts and components in reverse order of removal.

6. When installing economizer valve (43), tighten securely. Do not overtighten.
7. When installing cover assembly (25), make sure coil loop is hooked onto tang of choke lever, or in slot of lever on some models.
8. Before installing pump inlet check valve (38), lubricate stem at retainer shoulder and push into casting until fully seated. Cut off stem at retaining shoulder.
9. When installing idle mixture screw (49), turn in until lightly seated, then back out number of turns recorded earlier.
10. Be sure to install large open end of spring (36) over pump inlet check.

ADJUSTMENT DATA

FIG. 1
FLOAT LEVEL
ADJUSTMENTS

DRY SETTING (BENCH)

1. To perform this initial adjustment, depress float tab to gently seat needle.

CAUTION: Do not exert pressure on resilient needle valve.

2. Cut gauge to size (see spec. chart) at short end (allow for zero line graduation) and locate at 1/8" from free end of float.

3. Measure distance as shown from parting surface (gasket removed) to top surface of float.

4. To adjust, bend tab on float arm.

WET FLOAT LEVEL (ON CAR)

With engine idling at normal operating temperature for a few minutes, remove air horn and gasket. Measure from parting surface of main body to top of fuel level 1/4" away from any vertical surface. see car shop manual for correct wet level setting, if adjustment is required, bend float tab as needed.

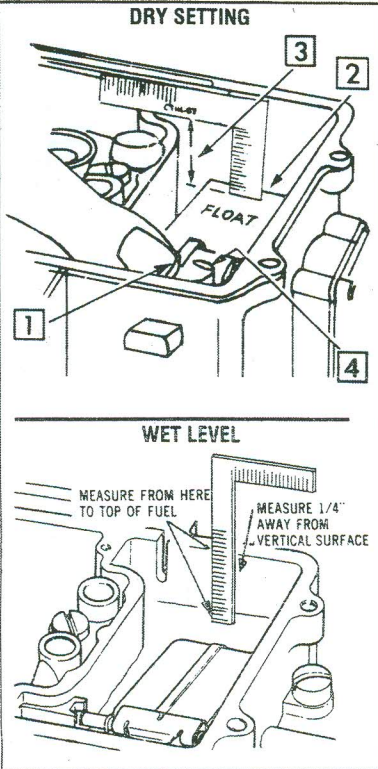
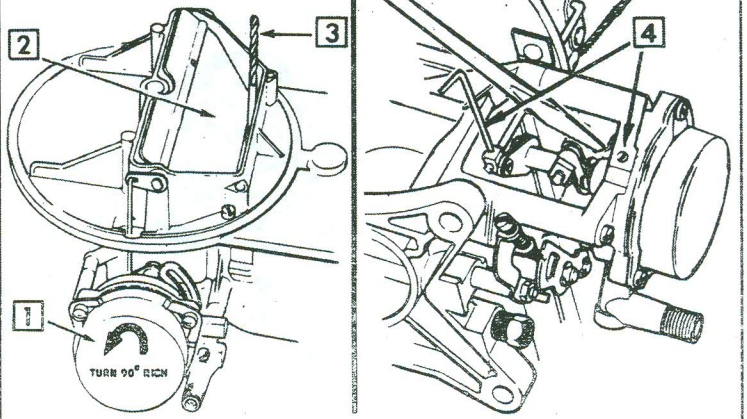


FIG. 4
CHOKE PULL-DOWN
ADJUSTMENT

Models — 1962-63



1. Rotate thermostat cover 90° rich temporarily.
2. Lightly push down on choke valve
3. Measure as specified using a drill or gauge between lower edge of choke valve and wall of air horn.
4. To adjust, turn 1/16" allen wrench or turn slotted screw located on choke housing.

FIG. 2
PUMP ROD
ADJUSTMENT

1. Position pump rod in specified hole (inside or outside) of pump lever (see specification chart).

2. Place opposite end pump rod in specified hole of hole of overtravel lever assembly.

NOTE: In winter, increase length of stroke (holes 3, 4).
In summer, decrease length of stroke (holes 1, 2).

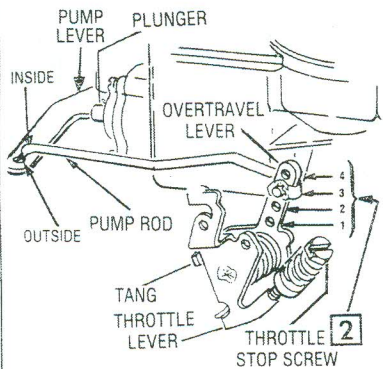


FIG. 5
CHOKE PULL-DOWN
ADJUSTMENT

Models — 1964 & Later

1. Form a paper clip (.036 wire gauge) at a 90° angle 1/8" from end.

2. Insert gauge (paper clip) into cylinder groove & turn choke lever counterclockwise until piston is up against gauge.

3. Measure as specified using a drill or gauge between lower edge of choke valve & wall of airhorn.

4. Turn nut to adjust.

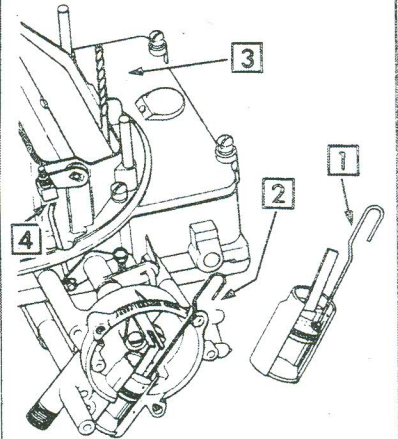


FIG. 3
CHOKE PULL-DOWN
ADJUSTMENT

Models — 1961 & Earlier

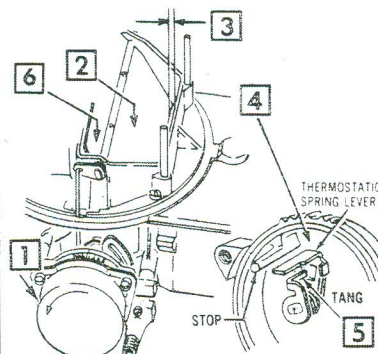
1. Rotate thermostat cover 90° rich temporarily. Next, hold throttle valves at half-open position.

2. Lightly push down on choke valve until resistance is felt.

3. Measure as specified using a drill or gauge between lower edge of choke valve and wall of air horn.

4. To increase clearance, remove thermostat cover and position thermostatic spring lever firmly against stop in housing.

5. Push down on choke plate toward open position with enough force to bend tang on choke shaft.



6. To decrease clearance, rotate thermostatic spring lever clockwise to end of travel. Then push down on choke plate (narrow blade side) with enough force towards closed position to bend tang on choke shaft.

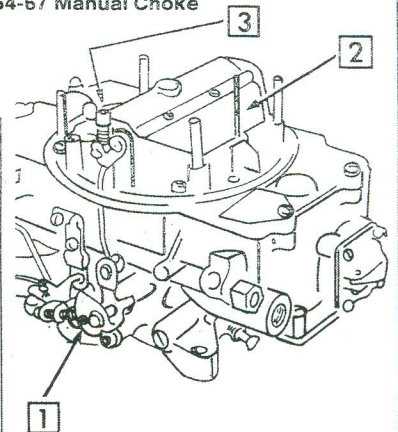
FIG. 6
CHOKE PULL-DOWN
ADJUSTMENT

Models — 1964-67 Manual Choke

1. With throttle valves closed, pull choke cam lever to full choke position.

2. Measure as specified using drill or gauge between lower edge of choke valve and wall of air horn (against tension of pull-down rod spring).

3. If adjustment is required, turn nut to just contact swivel.



ADJUSTMENT DATA (Cont'd)

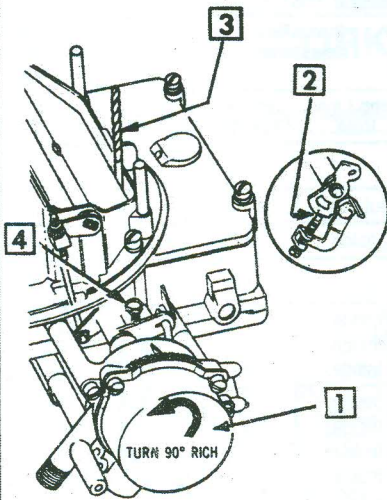
**FIG. 7
FAST IDLE CAM
ADJUSTMENT**

MODELS - 1964 & LATER

NOTE: Choke valve pull-down adjustment must be made prior to adjusting fast idle cam.

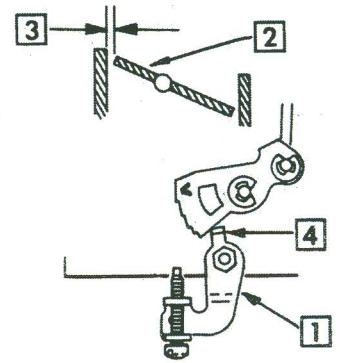
1. Temporarily turn choke cover 90° rich.
2. Position screw on index mark of fast idle cam. Other models with 351C" or 400" engine; fast idle cam must be aligned with tang of intermediate cam lever.
3. Measure clearance as specified between air horn wall and lower edge of choke valve.
4. Adjust screw as required.

NOTE: After completion, recheck and adjust auto choke setting if needed.



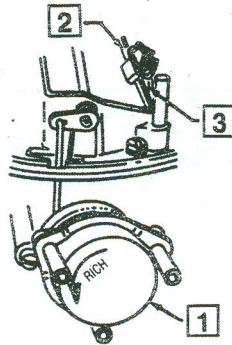
**FIG. 8
CHOKE UNLOADER
ADJUSTMENT**

1. Hold throttle valves in wide open position.
2. Maintain a light closing pressure on choke valve.
3. Measure as specified between upper edge of choke valve and wall of air horn.
4. To adjust, bend tang on fast idle speed lever as required.



**FIG. 9
CHOKE MAGNET & BRACKET
ADJUSTMENT**

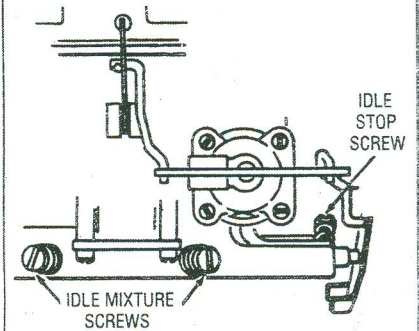
1. Temporarily turn choke cover 90° rich beyond index mark.
2. Place a .010 filler gauge between choke valve and air horn wall.
3. Loosen screws and adjust magnet to just touch choke plate. Retighten and stake screws.



**FIG. 10
SLOW IDLE
ADJUSTMENT**

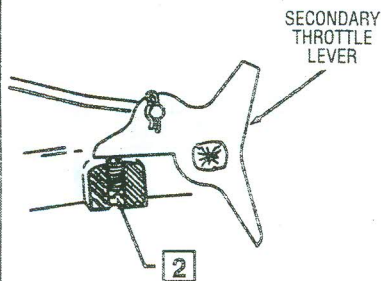
1. With engine at normal operating temperature and choke fully open, adjust idle mixture screws for a smooth idle and adjust idle stop screw for proper R.P.M. (see service manual for R.P.M.)

NOTE: If carburetor has hot idle compensator valve, it must be closed when idle is adjusted.



**FIG. 11
SECONDARY THROTTLE STOP
ADJUSTMENT**

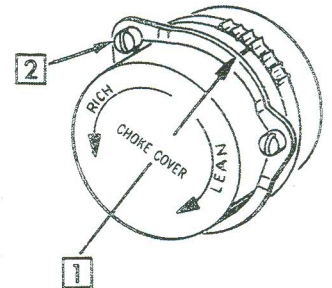
1. Keep secondary throttle valves closed.
2. Turn stop screw in until it just contacts the secondary throttle lever, then turn screw in 3/4 turn more.



**FIG. 12
AUTO CHOKE
ADJUSTMENT**

1. Loosen three choke cover screws.
2. Rotate and align index mark on choke cover with specified line graduation on choke housing. Retighten screws after setting is made.

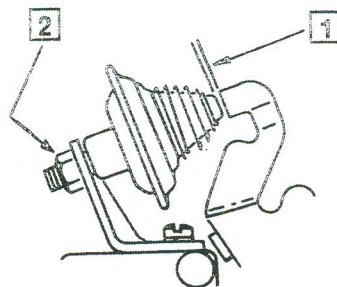
NOTE: Permissible variation—
2 notches either way from initial setting.



**FIG. 13
DASHPOT
ADJUSTMENT**

NOTE: Perform this adjustment after slow idle adjustment (Fig. 10).

1. Depress plunger stem and measure clearance between end of stem and throttle valve lever. Clearance should indicate as specified ("1/16 - 1/8")
2. To adjust, loosen locknut and turn dashpot in or out as required. Retighten locknut.



SPECIFICATION CHART

Year	Application	Float Level		Pump Rod Adjustment		Choke Pull-down	Fast Idle Cam	Unloader	Auto Choke
		Primary	Secondary	Pump Lever Hole	Overtravel Lever Hole				

EDSEL

1960	361 Eng.	29/64	29/64	Outside ¹	4-W ⁷	5/32	—	1/16	3NL
1959-58	361 Eng.	29/64	29/64	Inside	3 ²	—	—	1/16	Index

FORD, MERCURY

1968-67	289 Eng. —S/E	1/2	17/32	Inside	3	1/4	—	1/16	Manual
	—T/E	17/32	11/16	Inside	3	1/4	—	1/16	Manual
	428 Eng. —Police	17/32	11/16	Inside	3	5/32 ³	1/8	1/16	1NR
1966	289 Eng. —S/E	17/32	17/32	Inside	3	1/8	1/8	1/16	2NR
	—T/E	1/2	5/8	Inside	3	1/8	1/8	1/16	2NR
	—Hi-Perf.	1/2	5/8	Inside	3	1/4	—	1/16	Manual
	352 Eng. —S/E	17/32	17/32	Inside	3	9/64	1/8	1/16	Index
	—T/E	1/2	5/8	Inside	3	1/8	1/8	1/16	1NR
	390 Eng. —S/E	17/32	11/16	Inside	3	5/32	1/8	1/16	1NR ⁵
1965	289 Eng. —S/E	29/64	29/64	Inside	3	1/4	—	1/16	Manual
	—Hi. Perf.	29/64	29/64	Inside	3	1/8	1/8 ⁶	1/16	2NR
	352, 390 Eng.	29/64	29/64	Inside	3	5/32	1/8	1/16	Index
1964	FORD								
	289 Eng. —Early	21/32	21/32	Inside	4-W ⁸	3/16	1/16	1/16	3NL
	289 Eng. —Late C40F-AL —M/T	29/64	29/64	Outside	3	7/32	—	1/16	Manual
	—C40F-AT —A/T	29/64	29/64	Inside	2	7/32	—	1/16	—
	352 Eng. —M/T	21/32	21/32	Inside	2	3/16	1/16	1/16	1NL
	—A/T	21/32	21/32	Inside	3	5/32	1/16	1/16	3NL
	390 Eng. —M/T	21/32	21/32	Inside	4-W ⁸	3/16	1/16	1/16	1NR
	—A/T	21/32	21/32	Inside	4-W ⁸	5/32	1/16	1/16	1NL
	MERCURY								
	289 Eng. —210 H.P.	21/32	21/32	Inside	4-W ⁸	5/32	1/16	1/16	1NL ⁹
—271 H.P.	21/32	21/32	Inside	4-W ⁸	3/16	1/16	1/16	Manual	
390 Eng.	21/32	21/32	Inside	4-W ⁸	3/16	1/16	1/16	1NR ¹⁰	
1963	All —Exc.	47/64	47/64	Inside	3-W ¹¹	3/16	—	1/16	2NL ¹²
	T-Bird —390 Eng. (Early)	21/32	21/32	Inside	3-W ¹¹	5/32	—	1/16	2NL
	Galaxie —352 Eng., T-Bird —390 Eng. (Late)	47/64	47/64	Inside	3-W ¹¹	5/32	—	1/16	2NL
1962	All	21/32	21/32	Inside	3-W ¹¹	3/16	—	1/16	2NL ¹²
1961	All	21/32	21/32	Outside ¹	4-W ⁷	5/32	—	1/16	2NL ¹²
1960	All	29/64	29/64	Outside ¹	4-W ⁷	5/32	—	1/16	3NL
1959	Ford	29/64	29/64	Inside	3-W ⁷	—	—	1/16	Index
	Mercury, T-Bird	29/64	29/64	Inside	4-W ⁸	—	—	1/16	Index
1958	All	29/64	29/64	Inside	3-W ⁷	—	—	1/16	Index ¹³

FOOTNOTES:

¹ After pump rod is positioned as indicated, back out throttle stop screw. Measure plunger's travel (5/32") from closed to wide open throttle. To adjust, move pump rod to inside hole and recheck. If adjustment is needed, push overtravel lever forward and bend tang slightly toward throttle lever.

² 1959 model set in hole no. 4.

³ Models with A/T set 9/64".

⁴ Mercury models with A/T set 9/64".

⁵ Mercury models with M/T set 2NR.

⁶ Models with A/T set 7/64".

⁷ Summer setting hole no. 2.

⁸ Summer setting hole no. 3.

⁹ Models with A/T set 3NL.

¹⁰ Models with A/T set 1NL.

¹¹ Summer setting hole no. 1.

¹² Models with M/T set Index.

¹³ Mercury models set 4NR.

ABBREVIATIONS:

A/T - Automatic Transmission
 Exc. - Except
 Hi-Perf. - Hi-Performance
 H.P. - Horsepower
 NL - Notch Lean
 NR - Notch Rich
 S/E - Standard Engine
 T/E - Thermocor Exhaust Emission