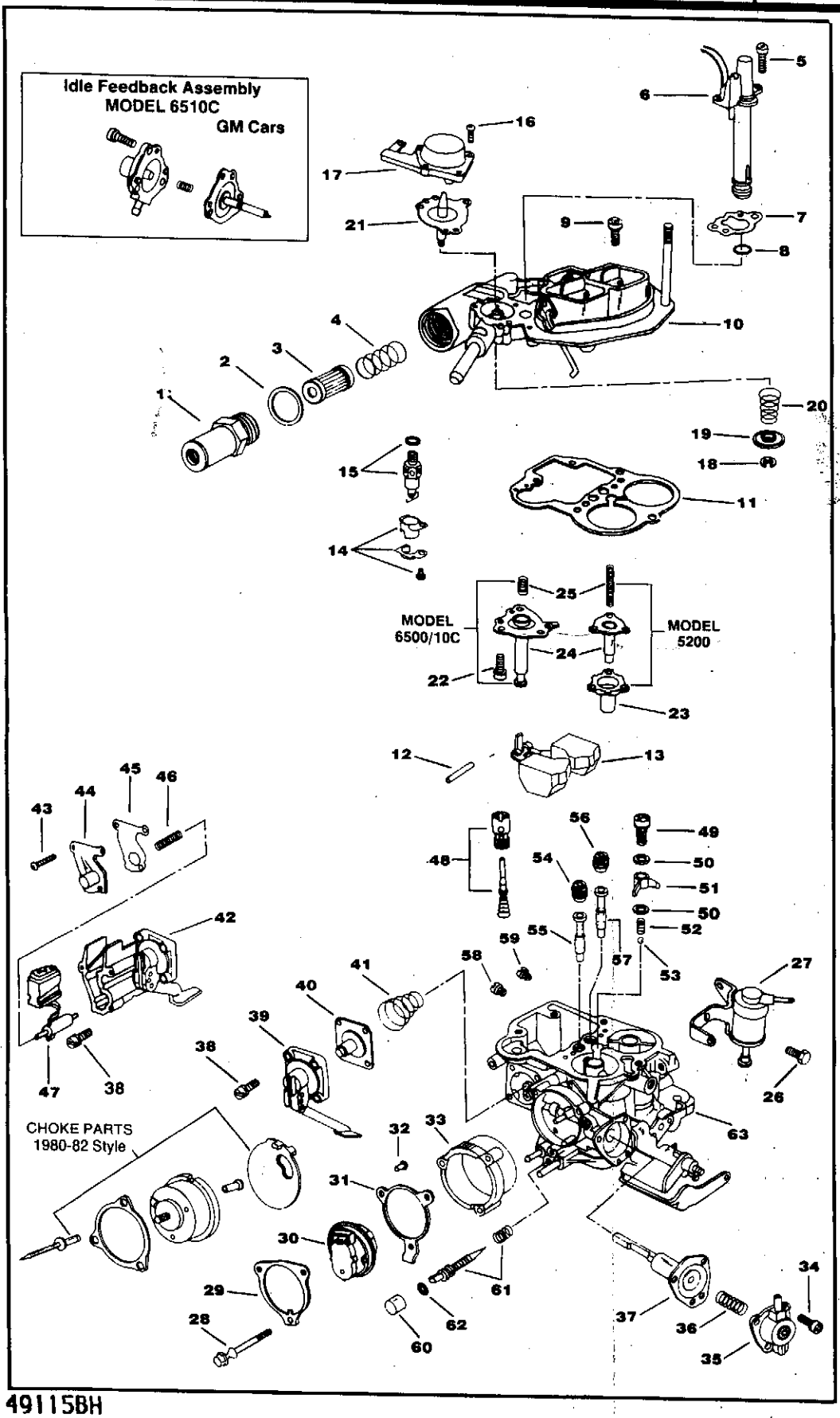
FUEL SYSTEM
SERVICE INSTRUCTION WORKSHEET

GF3821-11

TO REPAIR

HOLLEY CARBURETOR

2 BARREL—MODELS 5200, 6500, 6510



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 shown 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 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 this 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.

PARTS LIST

1. Fitting, fuel inlet
2. Washer, fitting
3. Filter, fuel
4. Spring, fuel filter
5. Screw, solenoid (2)*
6. Mix. control solenoid assembly*
7. Gasket, solenoid *
8. O-ring, solenoid*
9. Screw, air horn (5)
10. Air horn assembly
11. Gasket, air horn
12. Pin, float hinge
13. Float assembly
14. Screw, bracket & baffle
15. Needle, seat & washer assembly
16. Screw, solenoid (3)
17. Air horn vent solenoid assembly
18. Retainer, valve vent
19. Valve,vent
20. Spring, diaphragm return
21. Vent valve diaphragm assembly
22. Screw, diaphragm assembly (3)
23. Cover, diaphragm
24. Diaphragm assy., enrichment
25. Spring, diaphragm return
26. Screw, idle stop solenoid (2)
27. Idle stop solenoid assembly
28. Screw, choke retainer (3)
29. Retainer, choke cover
30. Choke cover & coil assembly
31. Ring, choke coil ground
32. Bushing, choke coil
33. Housing, choke coil
34. Screw, cover (3)
35. Cover assembly
36. Spring, diaphragm return
37. Diaph. assy., choke pull-down
38. Screw, pump cover (4)
39. Pump cover assembly
40. Pump diaphragm assembly
41. Spring, diaphragm return
42. Pump cover & sensor housing*
43. Screw, cover (3)*
44. Cover, TPS*
45. Gasket, cover*
46. Spring, TPS*
47. Throttle position sensor (TPS)*
48. Power valve assembly
49. Screw, pump disc. nozzle
50. Washer, pump nozzle (2)
51. Nozzle, pump disc.
52. Spring, disc. ball
53. Ball, disc. check
54. Jet, pri. high speed bleed
55. Tube, pri. main well
56. Jet, sec. high speed bleed
57. Tube, sec. main well
58. Jet, primary main
59. Jet, secondary main
60. Plug, idle mix. needle
61. Needle & spring, idle mix.
62. O-ring, needle
63. Main body assembly

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

* Available in Model 6510 with mixture control solenoid.

REMOVAL & INSTALLATION NOTES

1. Cover opening on intake manifold after carburetor is removed.
2. Note similar components such as springs, jets, tubes, mark their locations for proper installation. Note shape of needle of power valve assembly (**48**).
3. When pop rivets are used to retain choke components, drill rivet head then use a small punch to drive remainder of rivet out. When break-away screws (**28**) are used, use a file or a small grinder to remove screw heads. Remove choke components, then use pliers to back out remainder of screws.
4. To remove idle mixture needle plug (**60**), refer to Fig. 1.
5. Before removing idle mixture needle (**61**), turn in until lightly seated counting number of turns. Record for installation.
6. Install parts and components in reverse order of removal.
7. Install O-rings (**62**) on needle, then turn in until lightly seated. Back out number of turns recorded earlier. (Install plug or limiter cap after final adjustment).
8. Install pump return spring (**41**) with large diameter against diaphragm assembly.
9. If two check balls (**53**) are available, one is used as a weight.
10. When installing choke cover & coil assembly (**30**), make sure bushing and spring loop are on pin of lever. No gasket should be used with electric choke. Install pop rivets or break-away screws as required.
11. Make sure to install the correct needle with power valve assembly (**48**) as two different needles may be found in kit.
12. On model 6510C with mixture control solenoid, retain the TPS plunger seal and retainer for reassembly.

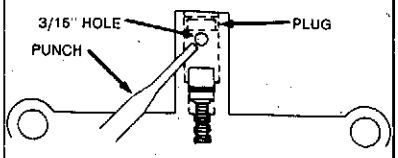
CLEANING

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.

FIG. 1
IDLE MIXTURE NEEDLE PLUG REMOVAL

1. CENTER PUNCH A MARK ON BOTTOM SURFACE OF CARBURETOR FUEL EXTENSION HOUSING 1/4" - 9/32" FROM THE EDGE.
2. DRILL A 3/16" HOLE THROUGH THE CASTING INTO THE SPACE BETWEEN IDLE MIXTURE NEEDLE AND PLUG.
3. USE A 3/32" DIA. PUNCH AND TAP PLUG OUT OF HOUSING.



ADJUSTMENT DATA

FIG. A
FLOAT LEVEL ADJUSTMENT

1. INVERT AIR HORN WITHOUT GASKET
2. ALLOW WEIGHT OF FLOAT TO PRESS DOWN AGAINST FLOAT NEEDLE
3. MEASURE CLEARANCE AS SPECIFIED BETWEEN TOP OF FLOAT AND AIR HORN CASTING SURFACE
4. TO ADJUST, BEND FLOAT ARM TANG THAT TOUCHES FLOAT NEEDLE (See Fig.C)

NOTE: TO AVOID DAMAGING FLOAT NEEDLE, DO NOT PRESS INTO SEAT

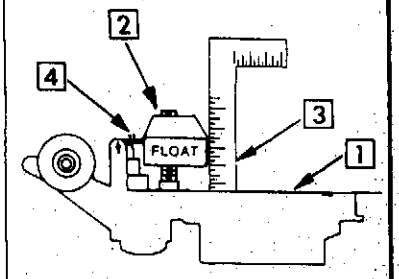


FIG. B
FLOAT DROP ADJUSTMENT

1. POSITION AIR HORN ASSEMBLY RIGHT SIDE UP WITHOUT GASKET
2. WITH FLOAT HANGING, MEASURE SPECIFIED DISTANCE FROM AIR HORN CASTING SURFACE TO TOP OF FLOAT
3. IF ADJUSTMENT IS REQUIRED, BEND FLOAT DROP TANG (See Fig. C) THAT CONTACTS INLET NEEDLE SEAT BOSS

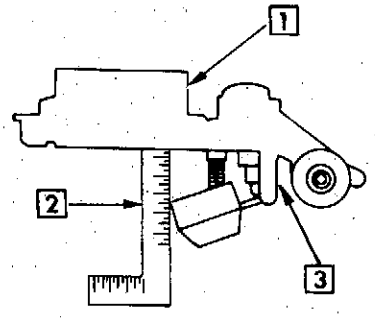


FIG. C
FLOAT ASSEMBLY DETAIL VIEW

1. BEND THIS TANG TO ADJUST FLOAT LEVEL
2. BEND THIS TANG TO ADJUST FLOAT DROP

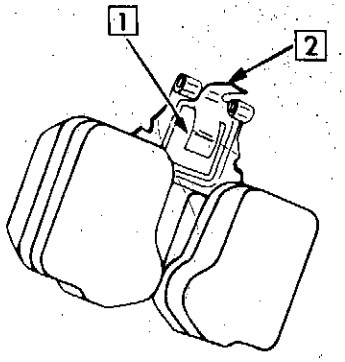
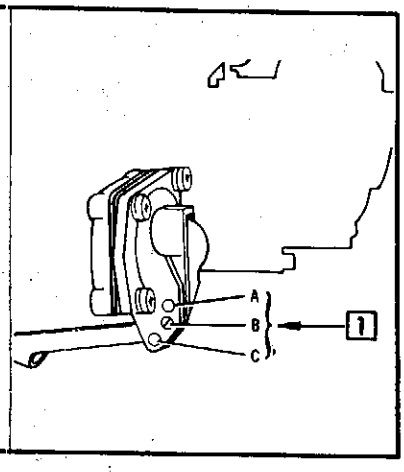


FIG. D
PUMP HOLE LOCATION

NOTE: THIS ADJUSTMENT HAS 3 HOLE LOCATIONS TO CONTROL LENGTH OF PUMP STROKE

1. PLACE PIN IN CORRECT HOLE AS SPECIFIED. A - SHORT STROKE, B - MEDIUM, C - LONG



ADJUSTMENT DATA (CONT'D)

FIG. E
FAST IDLE CAM ADJUSTMENT

1. PLACE FAST IDLE SCREW ON (LOW STEP - AMC, FORD) (SECOND STEP GM) FAST IDLE CAM. FORD (SOME MODELS) PLACE ON BOTTOM STEP AGAINST TOP STEP. MEASURE CLEARANCE AS SPECIFIED USING DRILL OR GAUGE BETWEEN WALL OF AIR HORN & LOWER EDGE OF CHOKE VALVE.
2. WITH CLEARANCE CORRECT BETWEEN AIR HORN WALL & LOWER EDGE OF CHOKE VALVE, THE CHOKE LEVER TANG SHOULD JUST CONTACT LEVER ON FAST IDLE CAM. TO ADJUST, BEND CHOKE LEVER TANG.

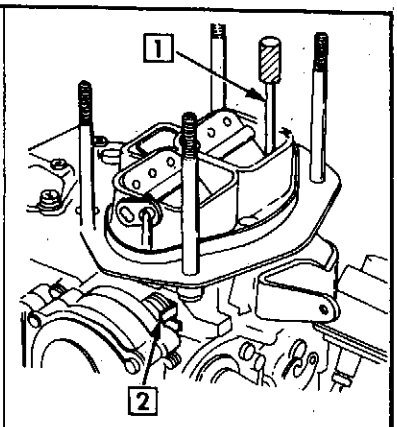


FIG. F
VACUUM BREAK ADJUSTMENT

FORD, AMC ONLY — POSITION FAST IDLE SCREW ON TOP OF FAST IDLE CAM. FOLLOWING PROCEDURES APPLY TO ALL MODELS

1. TURN CHOKE COIL LEVER INSIDE HOUSING TO CLOSE CHOKE VALVE
2. PUSH DIAPHRAGM ROD IN AGAINST STOP
3. REMOVE ALL SLACK FROM LINKAGE IN OPEN DIRECTION & MEASURE CLEARANCE AS SPECIFIED BETWEEN WALL OF AIR HORN & LOWER EDGE OF CHOKE VALVE
4. IF ADJUSTMENT IS REQUIRED, TURN SCREW TO OBTAIN NECESSARY CLEARANCE

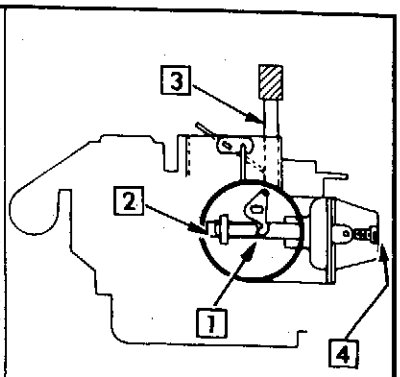


FIG. G
CHOKE UNLOADER ADJUSTMENT

1. POSITION THROTTLE VALVES WIDE OPEN
2. MEASURE CLEARANCE AS SPECIFIED BETWEEN WALL OF AIR HORN & LOWER EDGE OF CHOKE VALVE
3. IF ADJUSTMENT IS REQUIRED, BEND UNLOADER TANG

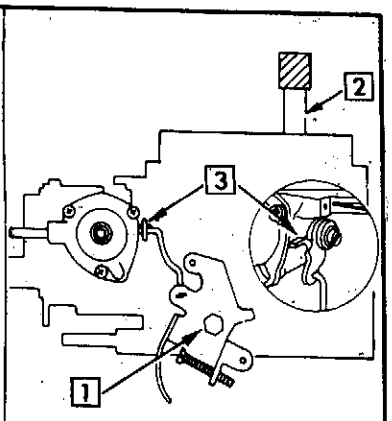


FIG. H
AUTO CHOKE ADJUSTMENT

1. LOOSEN THREE CHOKE COVER SCREWS
2. ROTATE & ALIGN INDEX MARK ON CHOKE COVER WITH SPECIFIED LINE GRADUATION ON CHOKE HOUSING. RE-TIGHTEN SCREWS AFTER SETTING IS MADE

NOTE 1—WHEN INSTALLING CHOKE COVER, BE SURE TO ENGAGE CHOKE COIL LOOP WITH CHOKE LEVER TANG IN HOUSING.

NOTE 2—G.M. MODELS USE TAMPER-PROOF SCREWS. FILE SCREW HEADS UNTIL COVER RETAINING RING CAN BE REMOVED.

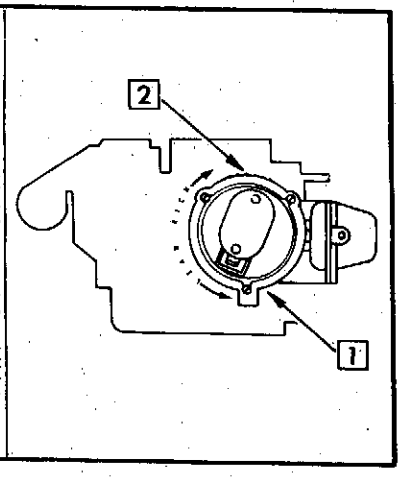


FIG. I
SECONDARY THROTTLE STOP SCREW ADJUSTMENT

1. WITH CARBURETOR INVERTED, TURN OUT SECONDARY THROTTLE STOP SCREW UNTIL SECONDARY VALVE SEATS IN BORE
2. ADJUST BY TURNING SCREW IN UNTIL IT TOUCHES TAB ON SECONDARY THROTTLE LEVER. THEN TURN SCREW AN ADDITIONAL 1/4 TURN CLOCKWISE

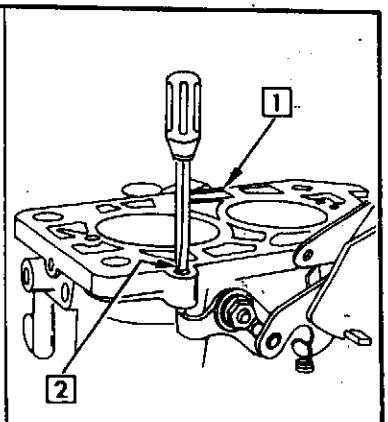
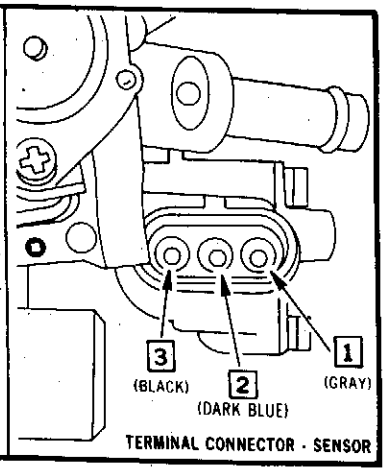


FIG. J
THROTTLE POSITION SENSOR ADJ. (ON CAR)

NOTE: DO NOT ADJUST UNLESS IN DIAGNOSIS, T.P.S. IS NOT ADJUSTED PROPERLY.

1. WITH CARBURETOR MOUNTED ON ENGINE, REMOVE T.P.S. ADJUSTING SCREW.
2. CONNECT A 10 MEG. O.H.M. DIGITAL VOLTMETER (3 DIGIT READ-OUT) ACROSS (USING JUMPER WIRES WITH TERMINAL ACCESS) TERMINALS 2 & 3.
3. WITH ENGINE STOPPED, IGNITION ON, & A.C. OFF, RE-INSTALL T.P.S. ADJUSTING SCREW. TURN SCREW TO OBTAIN .41 VOLTS AT CURB IDLE POSITION ('81 CHEVETTE). FOR OTHER MODELS CONSULT MANUFACTURER'S SERVICE MANUAL. AFTER ADJUSTMENT IS MADE, APPLY SEALANT TO SCREW TO MAINTAIN ADJUSTMENT.



TERMINAL CONNECTOR - SENSOR

SPECIFICATION CHART

Year	Application	Float Level Fig. A	Float Drop Fig. B	Pump Position Fig. D	Fast Idle Cam Fig. E	Vacuum Break Fig. F	Unloader Fig. G	Auto Choke Fig. H
FORD, MERCURY — SPECIFICATION I.D.-A								
1981-77	2.3L Eng. Exc. Carb. No. R8031; 8125, 27, 41; 8365, 73, 89, 91; 8447, 49	15/32	1-1/8	No. 2	7/64	15/64	15/64	1NR
	Carb. No. R8707, 09, 11, 13, 15, 17	15/32	1-1/8	No. 2	7/64	15/64	1/4	2NR
	Carb. No. R8491, 93	15/32	1-1/8	No. 2	7/64	15/64	15/64	2NR
	Carb. No. R8491-2, 93-2	15/32	1-1/8	No. 3	7/64	15/64	15/64	2NR
		15/32	1-1/8	No. 3	5/32	15/64	15/64	2NR
CHEVROLET, OLDSMOBILE — SPECIFICATION I.D.-B								
1978	151 Eng. -Cal.	33/64	1-1/8	No. 2	9/64	21/64	11/32	1NR
CHEVROLET, PONTIAC — SPECIFICATION I.D.-C								
1987-83	1.6L Eng. -U.S. -A/T	1/2	—	[2]	5/64	17/64	11/32	[1]
	-M/T	1/2	—	[2]	5/64	19/64	11/32	[1]
1982	1.6L Eng. -U.S. -All	1/2	—	[2]	5/64	17/64	11/32	[1]
1981	1.6L Eng. -U.S. -All	1/2	—	[2]	1/8	19/64	11/32	[1]
1980	1.6L Eng. -Cal.	1/2	—	[2]	1/8	19/64	11/32	[1]
FORD, MERCURY — SPECIFICATION I.D.-D								
1982	2.3L Eng. -Carb. Model 5200 Exc. Carb. No. E1BE-RA; E1ZE-VA, YA, ACA	15/32	1-1/8	No. 2	1/8	15/64	15/64	[1]
	Carb. Model 6500	15/32	1-1/8	No. 2	5/64	13/64	13/64	[1]
		15/32	1-1/8	No. 3[3]	1/8	9/32	25/64	[1]
1981	2.3L Eng. -Carb. Model 5200	29/64	1-1/8	No. 2	5/64	13/64	13/64	[1]
	-Carb. Model 6500	15/32	1-1/8	No. 3	1/8	15/64	25/64	[1]
1980	2.3L Eng. Carb. Model 5200 Exc.	29/64	1-1/8	No. 2	5/64	13/64	13/64	1NL
	Carb. No. E0EE-GA, RA	29/64	1-1/8	No. 2	5/64	15/64	13/64	2NR
	Carb. Model 6500 Exc.	15/32	1-1/8	No. 2	1/8	15/64	25/64	Index[4]
	Carb. No. E0EE-NC, VC	15/32	1-1/8	No. 3	1/8	15/64	15/64	Index[4]
CHEVROLET, OLDSMOBILE, PONTIAC — SPECIFICATION I.D.-E								
1979	151-1 Eng.	33/64	1	[2]	5/32	1/4[5]	11/32	2NR
FORD, MERCURY — SPECIFICATION I.D.-F								
1980	2.3L Eng. Turbo Carb. No. E0ZE-AAA	15/32	1-1/8	No. 3	5/32	9/32	15/64	2NR
	Carb. No. E0ZE-ACA, ACB, ACC, ATA, ATB	15/32	1-1/8	No. 2[6]	1/8[7]	9/32	15/64	Index
	Carb. No. E0ZE-AZA	15/32	1-1/8	No. 3	5/32	9/32	25/64	Index
FORD, MERCURY — SPECIFICATION I.D.-G								
1979	2.3L Eng.	15/32	—	No. 2	1/8	15/64	15/64	2NR[8]
1978	2.3L Eng.	29/64	—	[2]	1/8	15/64	15/64	2NR[8]
1976	2300cc Eng. Capri A/T	15/32	—	No. 2	1/8	15/64	17/64	Index
	M/T	15/32	—	No. 2	5/32	9/32	17/64	Index

FOOTNOTES:

[1] No adjustment required.
[2] Reinstall in same position.
[3] Carb. No. E2ZE-APA, ARA set No. 2.
[4] Carb. No. E0EE-NC, VA no adjustment required.
[5] Carb. No. 10009973, 974 set 9/32".
[6] Carb. No. E0ZE-ACB, ACC re-nstall in same position.
[7] Carb. No. E0ZE-ACA, ACC set 5/32".
[8] Carb. No. D9EE-AJC, AKC; D8EE-EA, HA set 1NR.

ABBREVIATIONS:

A/T - Automatic Transmission
Cal. - California
Exc. - Except
M/T - Manual Transmission
N/L - Notch Lean
N/R - Notch Rich