

CARBURETOR SERVICE PROCEDURE HOLLEY 2-BARREL MODEL 2280

FORM NO.
16H-30-86

NOTE: Some models of the Holley 2280 carburetor may vary in general design and appearance, but basic cleaning and adjustment procedures will remain the same.

1. DISASSEMBLY

Using the exploded view as a guide, disassemble carburetor only far enough to permit a thorough cleaning. Pay particular attention to the following:

- Remove vacuum power valve piston after prying up retaining ring tangs.
- To remove mechanical power valve push rod and spring, carefully pry off plastic cap and remove clip.

NOTE: Do not interchange mechanical and vacuum power valve assemblies. Valve seats must remain with original needles and springs. The mechanical power valve needle is approximately .050" longer than vacuum power valve needle. There is an undercut groove on the vacuum power valve needle, located just above needle stop.

- Do not remove idle well tubes.
- Removal of choke or throttle valves is not necessary unless part is bent, seized or damaged, requiring repair or replacement. If removal is necessary, file staked (peened) ends of valve retaining screws prior to turning.

NOTE: Do not remove idle mixture screw limiter caps unless recalibration is determined necessary after reassembly and new limiter caps are available. If limiter caps are removed, the carburetor must be recalibrated with required equipment to meet state and federal emission regulations. When limiter caps are removed, count number of turns required to lightly seat idle mixture screw. This will serve as a starting point during reassembly.

NOTE: On 1981 and later models, tamper-proof idle mixture screws are used. Do not remove cover plugs unless idle screw adjustment is absolutely necessary (due to plugged passages, a definite idle defect, or if major carburetor overhaul is performed). If plug is removed, carburetor recalibration with required equipment is necessary to meet federal and state emissions regulations. To remove steel plugs, proceed as follows:

- On 1981 models, clamp throttle body in soft-jawed vise with mixture screws facing upward, to remove roll pin and plug. Drill a .086" pilot hole into each casting surrounding idle mixture screws, above roll pin. Redrill hole to .120". Using a punch, drive out roll pins. Drill a .086" pilot hole directly behind edge of castings at a 45° angle toward plug. Redrill hole to .120" and drive out plugs with punch.
- On 1982 models, clamp throttle body in soft-jawed vise, mixture screws facing upward, to remove plug. Drill a 5/64" pilot hole at a 45° angle into each casting toward concealment plug. Redrill hole to 1/8". Drive out roll pins with a blunt punch.
- On 1983 and later models, center punch 1/4" from end of mixture screw housing. Punch right bank in center of housing and left bank slightly higher. Drill a 3/16" hole at a 45° angle to each housing. Using a small tool, pry out plug.

2. CLEANING

- Using a regular carburetor cleaning solution, soak parts long enough to thoroughly clean all surfaces and passages of foreign matter.
- Do not soak any parts containing rubber, leather or plastic, other than idle limiter caps.
- To remove any residue after use of cleaner, rinse parts in suitable solvent.
- Blow out all passages with dry compressed air.

3. REASSEMBLY

Reassemble carburetor in reverse order of disassembly, paying particular attention to the following:

NOTE: The mechanical power valve is installed in choke side of carburetor and the vacuum power valve is installed in throttle lever side of carburetor.

- After installing vacuum power piston spring and piston in cylinder, carefully stake retaining ring into place. Push in on piston to make sure it does not stick or bind.
- Place accelerator pump rod in inner hole in accelerator pump lever.
- Install idle mixture screw caps before assembling throttle body to fuel bowl. Seat mixture screws and back out number of turns recorded during disassembly.

NOTE: On 1981 models, insert new roll pins into holes around mixture screws and install new concealment plugs.

4. ADJUSTMENT

A. Float Level

1. Assemble gauge included in kit. Calibrate to "B" scale. See Fig. 1.
2. Install float in fuel bowl then install float hinge pin retainer. Install needle, seat and gasket in fuel bowl and tighten securely.

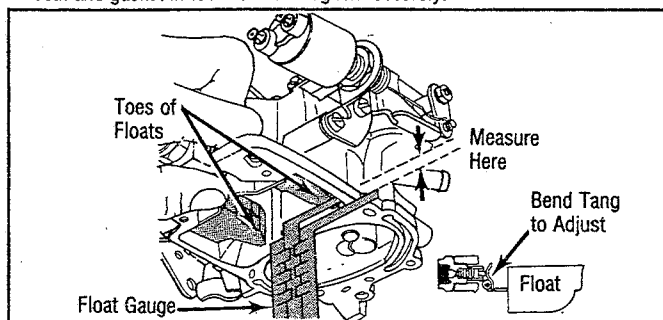


Fig. 1 Float Level Adjustment

3. Invert fuel bowl so that only weight of float is against needle in seat. Hold finger against pin retainer.
4. Using gauge, measure float level specified distance between gasket surface on fuel bowl and toes of floats.

NOTE: Make sure both floats are the same height.

5. To adjust float level, bend float tang. Do not force needle against seat when making adjustment.

B. Accelerator Pump Stroke

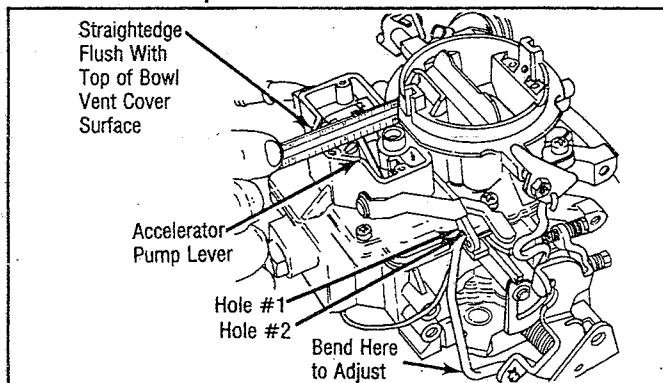


Fig. 2 Accelerator Pump Stroke Adjustment

1. Adjustment is made with bowl vent cover and vent valve lever spring removed. See Fig. 2.
2. Make sure accelerator pump rod is in correct hole in pump lever. Place throttle lever in curb idle position.
3. Place a straightedge on bowl vent cover surface across accelerator pump lever.
4. Lever should be flush with bowl vent cover surface. To adjust, bend accelerator pump rod at bend shown in illustration.
5. On 1981 and later models, adjust to zero clearance between accelerator pump cap nut and pump lever. Make adjustment by turning accelerator pump cap nut in or out.

C. Mechanical Power Valve

NOTE: Adjust accelerator pump stroke first.

1. Adjustment is made with bowl vent cover, vent valve lever spring, retainer, vent valve and pivot pin removed.
2. Place throttle lever in wide open position. Insert a 5/64" Allen wrench in mechanical power valve adjustment screw. See Fig. 3.
3. Push screw down. Release to check for clearance. Turn screw clockwise until there is no clearance.

- Now turn screw 1 full turn counterclockwise. Install bowl vent components and cover.

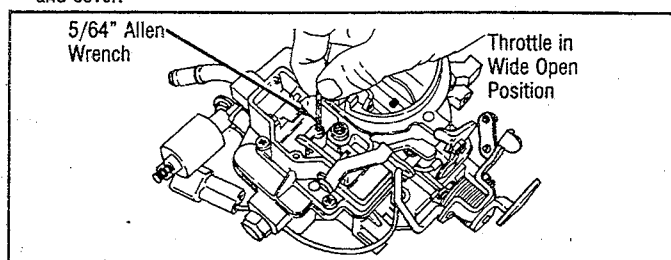


Fig. 3 Mechanical Power Valve Adjustment

D. Bowl Vent Valve Adjustment (1962-1980)

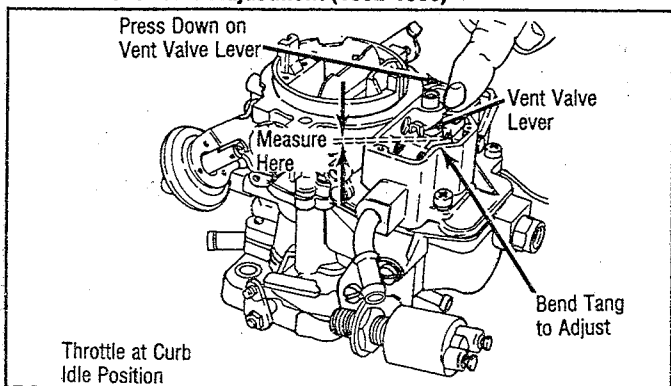


Fig. 4 Bowl Vent Valve Adjustment

NOTE: Adjust accelerator pump stroke first.

- Adjustment is made with bowl vent cover and vent valve lever spring removed. Do not remove vent valve retainer.
- Place throttle lever in curb idle position. Press down on vent valve lever at spring seat. See Fig. 4.
- Measure bowl vent valve specified distance between vent valve tang and vent valve lever.
- To adjust, bend tang on end of vent valve lever.

E. Choke Unloader

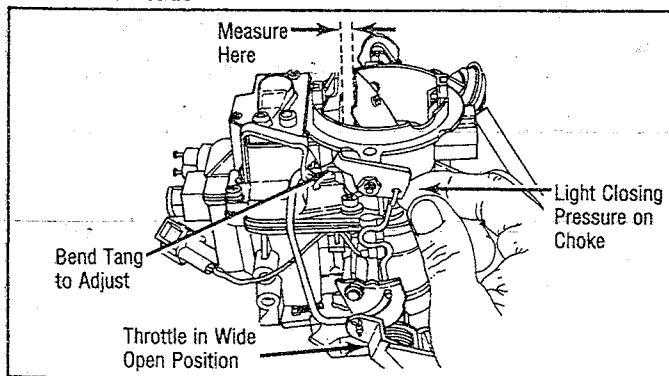


Fig. 5 Choke Unloader Adjustment

- Place throttle lever in wide open position. Lightly press on choke lever with finger to move choke valve toward closed position. See Fig. 5.
- Measure choke unloader specified clearance between upper edge of choke valve and air horn wall.
- To adjust, bend tang on accelerator pump lever.

F. Choke Vacuum Kick

- Place fast idle speed screw on highest step of fast idle cam. See Fig. 6.
- Seat vacuum diaphragm by applying an outside vacuum source of at least 15 in. Hg.
- Apply enough choke valve closing pressure on choke lever with finger to compress spring on vacuum diaphragm without distorting linkage.
- Measure choke vacuum kick specified distance between upper edge of choke valve and air horn wall.
- To adjust vacuum kick on 1982 and later models, insert a 5/64 inch Allen wrench into choke vacuum diaphragm and turn until specified distance is

obtained. On all other models, bend link at "U" bend. On all models, make sure linkage moves freely after adjustment.

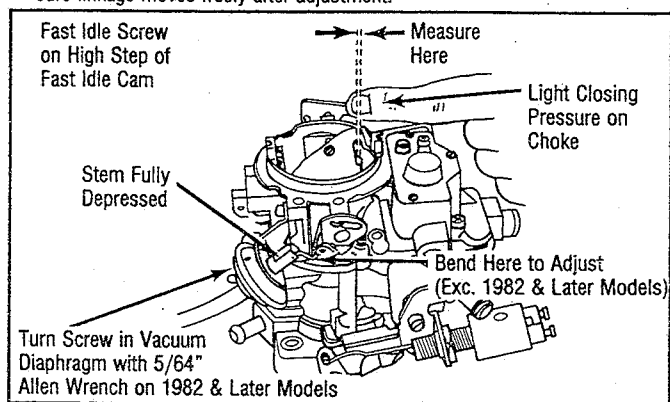


Fig. 6 Choke Vacuum Kick Adjustment

G. Fast Idle Cam Position

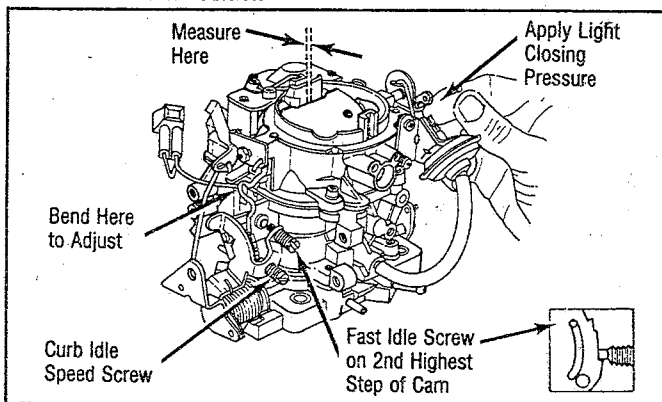


Fig. 7 Fast Idle Cam Position Adjustment

- Place fast idle speed screw on second highest step of fast idle cam. See Fig. 7.
- Apply light closing pressure on choke valve lever with finger.
- Measure fast idle cam specified distance between upper edge of choke valve and air horn wall.
- To adjust, bend fast idle cam link rod at "U" shaped bend.

H. Curb Idle Speed

NOTE: If idle limiter caps have been removed, refer to Manufacturer's Service Manual for correct idle mixture setting procedure and specifications (air/fuel ratio).

- Curb idle speed adjustment is made with engine at normal operating temperature, transmission in neutral and parking brake set.
- Remove air cleaner. Disconnect and plug 3/16 inch hose at canister. Disconnect and plug carburetor-to-heated air temperature sensor vacuum hose. Make sure headlights and air conditioning are off. On 1983 and later models, disconnect and plug vacuum hose from distributor and EGR valve.
- Ground idle stop switch (if equipped) with a jumper wire. Remove PCV valve and allow it to draw air. Set idle RPM as shown on engine compartment Emission Control Tune-Up Decal by adjusting curb idle speed screw. See Fig. 7.
- Remove jumper wire from idle stop switch, if equipped. Reconnect hoses and install air cleaner. On 1983 and later models, engine idle speed with all hoses and wires connected may vary from set speeds. DO NOT READJUST.

I. Fast Idle Speed

- Remove air cleaner. Disconnect and plug 3/16 inch hose at canister. Disconnect and plug carburetor-to-heated air temperature sensor vacuum hose. Make sure headlights and air conditioning are off. Disconnect and plug vacuum hoses at distributor vacuum advance and EGR valve.

NOTE: If vehicle is equipped with Electronic Lean Burn System, only remove air cleaner top cover. Do not disconnect vacuum hose to spark control computer. Ground carburetor idle stop switch instead.

- Ground idle stop switch, if equipped, with a jumper wire. Remove PCV valve and allow it to draw air. Set parking brake and place transmission in Neutral.

- Place fast idle speed screw on second highest step of fast idle cam. Open choke fully. Set fast idle RPM as shown on engine compartment Emission Control Tune-Up Decal by turning fast idle speed screw. See Fig. 7.

NOTE: If idle speed continues to rise, carburetor idle stop switch is not completely grounded.

- Return to idle. Reposition fast idle screw on second highest step of fast idle

cam. Verify fast idle speed and readjust if required. Return to idle, install air cleaner, and reconnect PCV valve and all hoses.

J. Throttle Position Transducer (Except 1982 Models)

- Disconnect wires at throttle position transducer. Loosen lock nut at bracket.
- Rotate transducer in bracket until 11/16" clearance is obtained between bracket and transducer. Tighten lock nut.

SPECIFICATIONS & ADJUSTMENT TABLE

NOTE: See Engine Compartment Decal or Manufacturer's Service Manual for Idle Mixture and Speed Specifications

Adjustment Reference Letter			A	B		D	E	F	G
Application			Float Level	Accelerator Pump		Bowl Vent Valve	Choke Unloader	Choke Vacuum Kick	Fast Idle Cam
				Stroke	Rod Hole				
BUICK									
1968-69	350" ¹		9/32"	Flush	#2	.....	.310"	.140"	.120"
CHEVROLET									
1964-73	283", 307", 327"	R-8051 ¹	9/32"	Flush	#2	.....	.310"	.145"	.110"
		R-8053 ¹	9/32"	Flush	#2	.....	.310"	.090"	.085"
		R-8055 ¹	9/32"	Flush	#2	.....	.310"	.211"	.166"
		R-8056 ¹	9/32"	Flush	#2	.....	.310"	.135"	.110"
		R-8057 ¹	9/32"	Flush	#2	.....	.310"	.140"	.120"
CHRYSLER CORP.									
1962-69	273", 318" ¹		9/32"	Flush	#2	.060"	.310"	.090"	.085"
1970-76	273", 318" ¹		9/32"	Flush	#2	.060"	.310"	.115" ²	.090" ³
1978	318"	A/T	9/32"	Flush	#1	.060"	.310"	.150"	.070"
1979	318"	A/T	5/16"	Flush	#1	.030"	.310"	.150"	.070"
1980	318"	A/T	5/16"	Flush	#1	.030"	.310"	.130"	.070"
		M/T	5/16"	Flush	#1	.030"	.310"	.150"	.070"
1981	318"	All	9/32"	Flush	#1	.....	.310"	.110" ⁴	.070"
1982	318"	All	9/32"	Flush	.....	.....	.200"	.140"	.052"
1983	318"	All	9/32"	Flush	.....	.....	.200"	.140"	.052"
1984	318"	All	9/32"	Flush	.....	.....	.250" ⁶	.140"	.070" ⁶
1985-86	318"	Truck	9/32"	Flush	.....	.....	.150" ⁷	.140"	.070"
1985-86	318"	Can.	9/32"	Flush	.....	.....	.280"	.140"	.052"

¹ - Replacement Carburetor for Original Equipment Carburetor

² - R-7889 = .090"

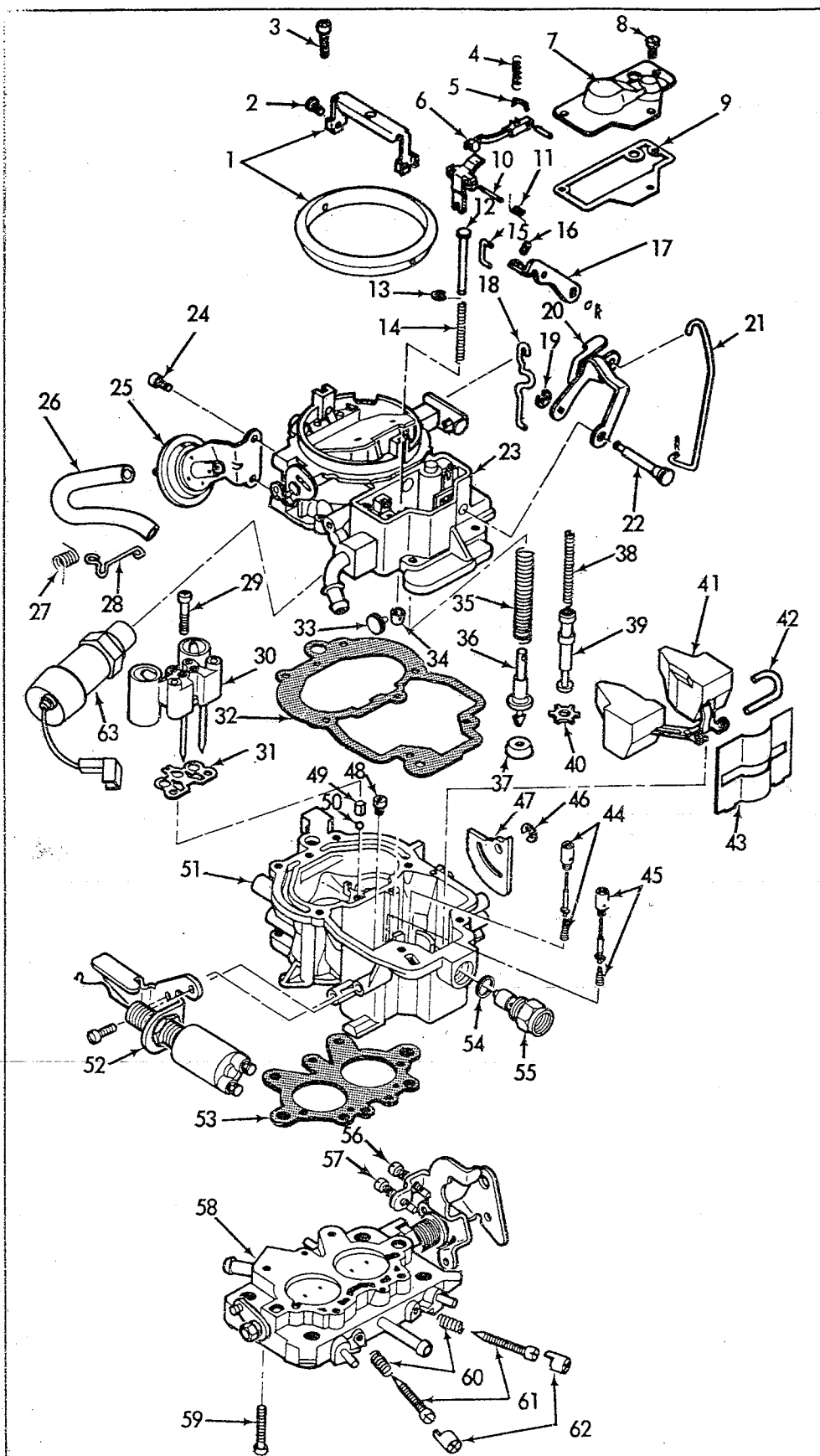
³ - R-7889 = .085"

⁴ - R-9135-A = .130"

⁵ - R-400093-A = .052"

⁶ - R-9951-A = .200"

⁷ - R-40172A = .200"



Parts Legend

Ref.	Nomenclature
1.	Air Cleaner Bracket Assembly
2.	Air Cleaner Bracket Screw (2)
3.	Air Horn Screw (6)
4.	Bowl Vent Spring
5.	Bowl Vent Lever Retainer
6.	Bowl Vent Lever
7.	Bowl Vent Cover
8.	Bowl Vent Cover Screw
9.	Bowl Vent Cover Gasket
10.	Bowl Vent Lever Pin
11.	Bowl Vent Lever Spring
12.	Mechanical Power Valve Push Rod
13.	Push Rod Retainer
14.	Push Rod Spring
15.	Accelerator Pump Link
16.	Power Valve Adjusting Screw
17.	Power Valve Piston
18.	Fast Idle Cam Rod
19.	Acc. Pump Lever Shaft Retainer
20.	Accelerator Pump Lever
21.	Accelerator Pump Rod
22.	Accelerator Pump Lever Shaft
23.	Air Horn
24.	Choke Vac. Diaphragm Screw (2)
25.	Choke Vacuum Diaphragm
26.	Choke Vacuum Diaphragm Hose
27.	Choke Vacuum Diaphragm Link Spring
28.	Choke Vacuum Diaphragm Link
29.	Venturi Screw (2)
30.	Venturi
31.	Venturi Gasket
32.	Air Horn Gasket
33.	Bowl Vent Seal
34.	Bowl Vent Cap
35.	Accelerator Pump Spring
36.	Accelerator Pump Stem
37.	Accelerator Pump Cup
38.	Vacuum Power Valve Piston Spring
39.	Vacuum Power Valve Piston
40.	Vacuum Power Valve Piston Retainer
41.	Float
42.	Float Hinge Pin
43.	Float Baffle
44.	Vacuum Power Valve Assembly
45.	Mechanical Power Valve Assembly
46.	Fast Idle Cam Clip
47.	Fast Idle Cam
48.	Main Jet
49.	Pump Discharge Weight
50.	Pump Discharge Check Ball
51.	Main Body
52.	Throttle Position Transducer (If Equipped)
53.	Main Body Gasket
54.	Needle & Seat Gasket
55.	Needle & Seat
56.	Fast Idle Adjusting Screw
57.	Curb Idle Adjusting Screw
58.	Throttle Body
59.	Throttle Body Screw (4)
60.	Idle Mixture Screw Springs
61.	Idle Mixture Screws
62.	Idle Limiter Caps
63.	Electric Bowl Vent Sol. (1981-)

Exploded View of Typical Model 2280 Carburetor