1975-79 FUEL SYSTEMS
Rochester 2GC 2-Barrel Carburetor

1975-78 General Motors

CARBURETOR APPLICATION

ROCHESTER 2GC CARBURETOR NUMBERS

Application	Man. Trans.	Auto. Trans.
1978		
305"		17058116
		17058118
		17058127
1977		
305" Light Duty		
C10 & G10	[1] 17057113	[1] 17057108
	[2] 17057123	[2] 17057110
305" Heavy Duty		
C & K Series	17056137	17056137
1975-76		
350"		
C10	17056115	17056116
G10	17056123	17056124

[1] - Without A/C system.
[2] - With A/C system.

CARBURETOR IDENTIFICATION

The carburetor model identification number is stamped on a vertical portion of the float bowl, adjacent to the fuel inlet nut. If replacing float bowl, follow manufacturer's instructions contained in service package so that the identification number can be transferred to the new float bowl.

DESCRIPTION

The Rochester 2GC carburetor is a 2-barrel, downdraft design, and is equipped with an integral choke attached to the throttle body assembly. Vapor canister purge ports are located in throttle body casting, connecting to a tube pressed into the throttle body casting leading directly to the vapor canister.

The accelerator pump system has a raised cast-in boss on the floor of the float bowl to prevent entry of dirt into the accelerator pump/power valve fuel inlet passage. The end of the pump plunger stem is swedged to provided a "clipless" retaining feature. This allows removal of pump plunger assembly from the inner lever by twisting the swedged end until it breaks. Replacement pump assembly is equipped with a retaining clip.

Vehicles equipped with an automatic transmission and air conditioning system use and electrically operated solenoid to maintain proper idle speed when A/C system is in operation.

ADJUSTMENTS

HOT (SLOW) IDLE RPM

See appropriate article in TUNE-UP PROCEDURES section.

IDLE MIXTURE

See appropriate article in TUNE-UP PROCEDURES section.

COLD (FAST) IDLE RPM

See appropriate article in TUNE-UP PROCEDURES section.

FLOAT LEVEL

1) Remove air horn, leaving gasket in place. Turn air horn upside-down. Allow weight of float to rest on top of needle. *See Fig. 1.*
2) Using "T" scale, measure distance from air horn gasket to index point at toe of float. If adjustment is needed, gently bend float arm up or down. Do not force needle against needle seat.

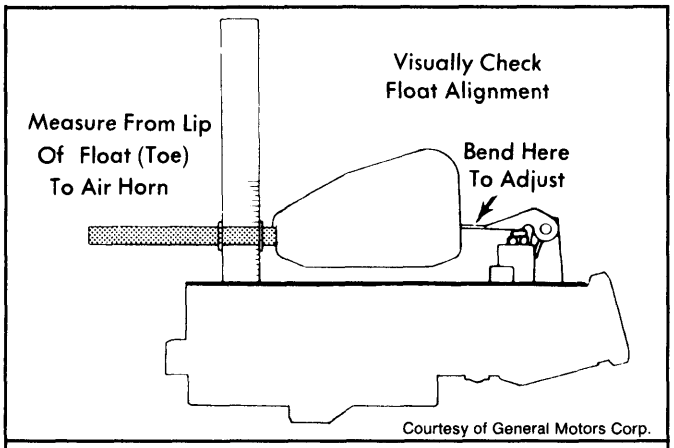

Fig. 1: Adjusting Float Level

FLOAT DROP

1) Remove air horn, leave gasket in place. Hold air horn upright. Allow float to hang down by its own weight. *See Fig. 2.* Using "T" scale, measure distance from air horn gasket to index point at toe of float.
2) Float drop should be 1 9/32". If adjustment is needed, gently bend float tang up or down. Install new gasket, replace air horn. Start engine and check for leaks.

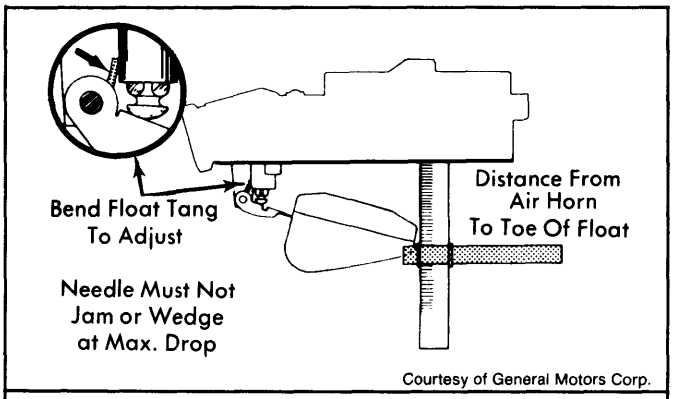

Fig. 2: Adjusting Float Drop

ACCELERATOR PUMP ROD

Back out idle speed screw. Hold throttle valve completely closed. Measure distance from top of air horn ring to top of accelerator pump rod. Distance should be 1 21/32". If necessary, bend pump rod at angle to adjust. *See Fig. 3.*

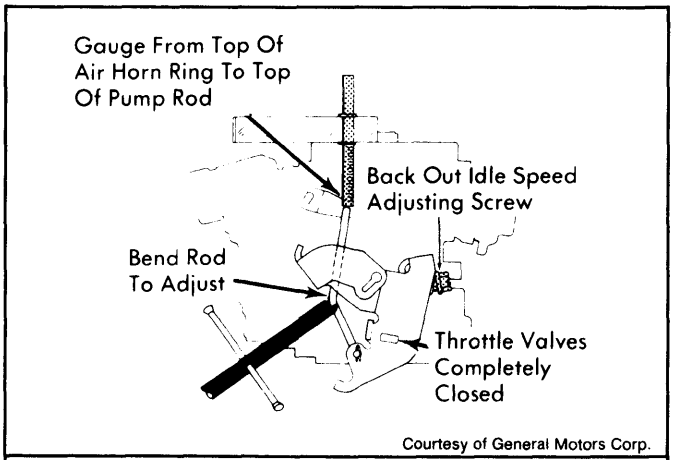

Fig. 3: Adjusting Accelerator Pump Rod

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CHOKE COIL ROD (FAST IDLE CAM)

1) Place fast idle speed screw on 2nd step of fast idle cam *See Fig. 4*. Apply light closing pressure to choke valve.
2) Measure specified clearance between lower edge of choke valve and air horn wall. See appropriate CARBURETOR ADJUSTMENT SPECIFICATIONS table. Measurement can be made with a specified drill or pin gauge. To adjust, bend tang on choke plate.

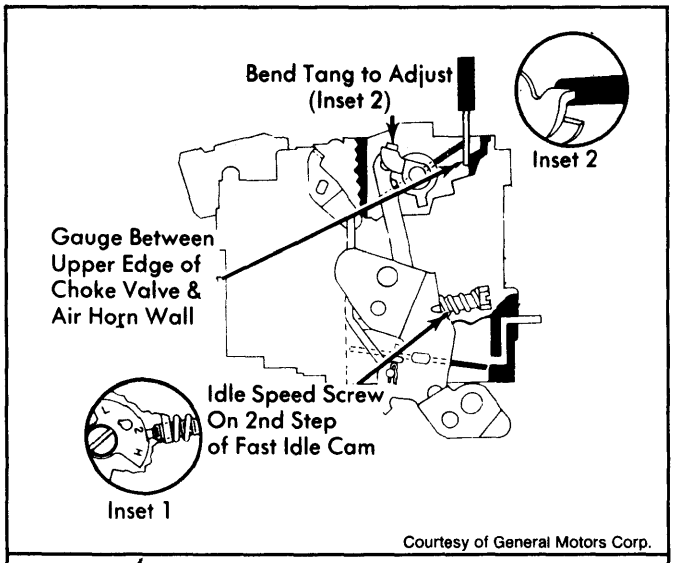

Fig. 4: Adjusting Choke Coil Rod

CHOKE UNLOADER

1) Hold throttle valve wide open. Apply light closing pressure to choke valve. *See Fig. 5*.
2) Measure specified clearance between upper edge of choke valve and air horn wall. Measurement can be made with a specified drill or pin gauge. To adjust, bend choke unloader tang.

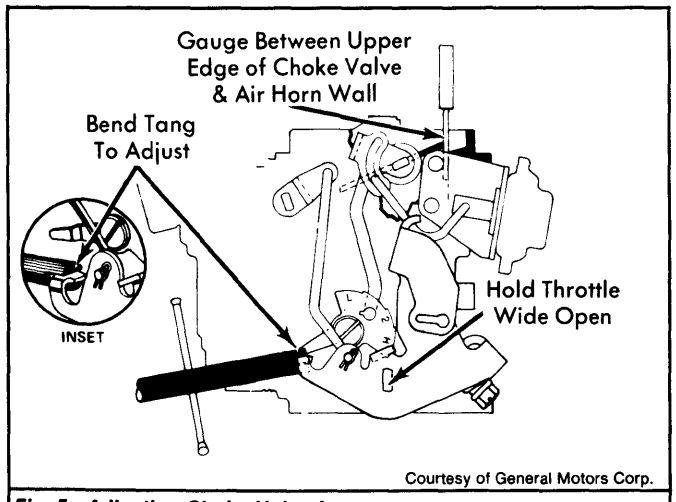

Fig. 5: Adjusting Choke Unloader

INTERMEDIATE CHOKE ROD

1) Remove thermostatic coil cover assembly. Remove inside baffle plate. Place idle speed screw on highest step of fast idle cam. Press up on choke lever to close choke valve. *See Fig. 6*.
2) If adjustment is correct, a .120" gauge should be able to pass through hole in lever and enter hole in casting. Bend connector link to adjust. Install coil cover and adjust choke setting.

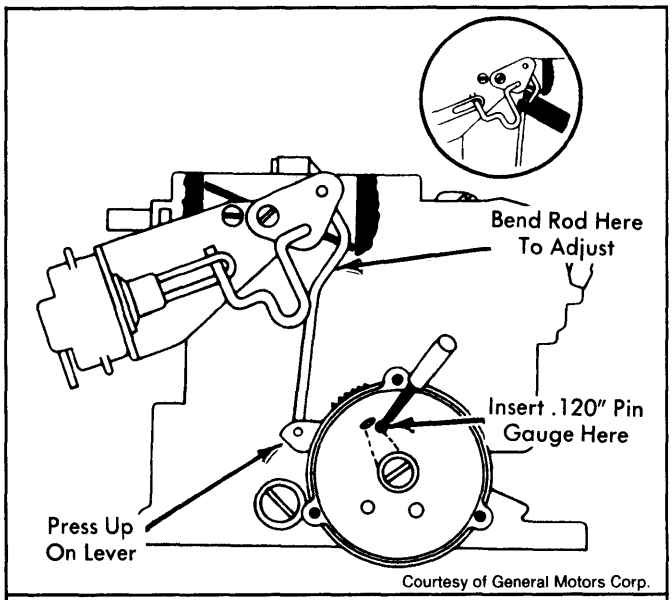

Fig. 6: Adjusting Intermediate Choke Rod

AUTOMATIC CHOKE

1) Loosen choke coil cover retaining screws. Place idle speed screw on highest step of fast idle cam. Turn choke cover against spring tension until choke valve is just closed.
2) With choke coil lever located inside coil tang, align mark on electric choke with specified point on choke housing. See appropriate CARBURETOR ADJUSTMENT SPECIFICATIONS table. Tighten retaining screws.

VACUUM BREAK

1) Place idle speed screw on highest step of fast idle cam. Using an outside vacuum source, apply enough vacuum to seat diaphragm. *See Fig. 7*. Stem should retract when vacuum is applied.
2) Cover purge bleed hole in vacuum break diaphragm with masking tape to prevent diaphragm from bleeding down. Apply light closing pressure to choke valve.
3) Measure specified clearance between upper edge of choke valve and air horn wall. Measurement can be made with a specified drill or pin gauge. To adjust, bend "U" shaped portion of vacuum diaphragm connector link. Remove masking tape.

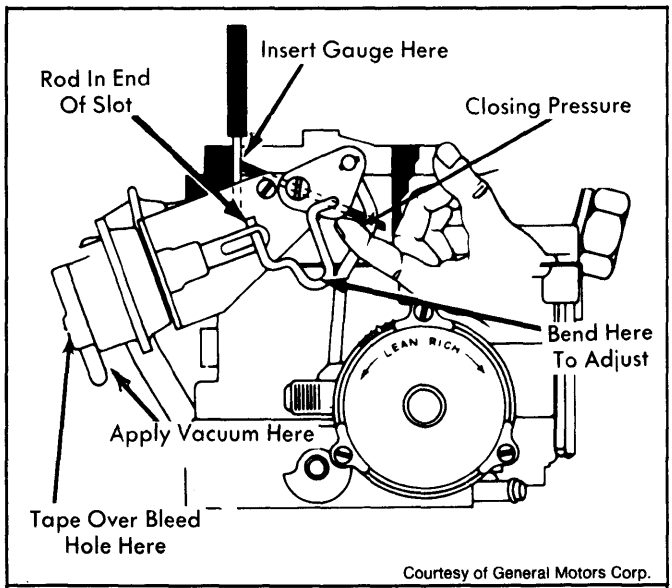

Fig. 7: Adjusting Vacuum Break

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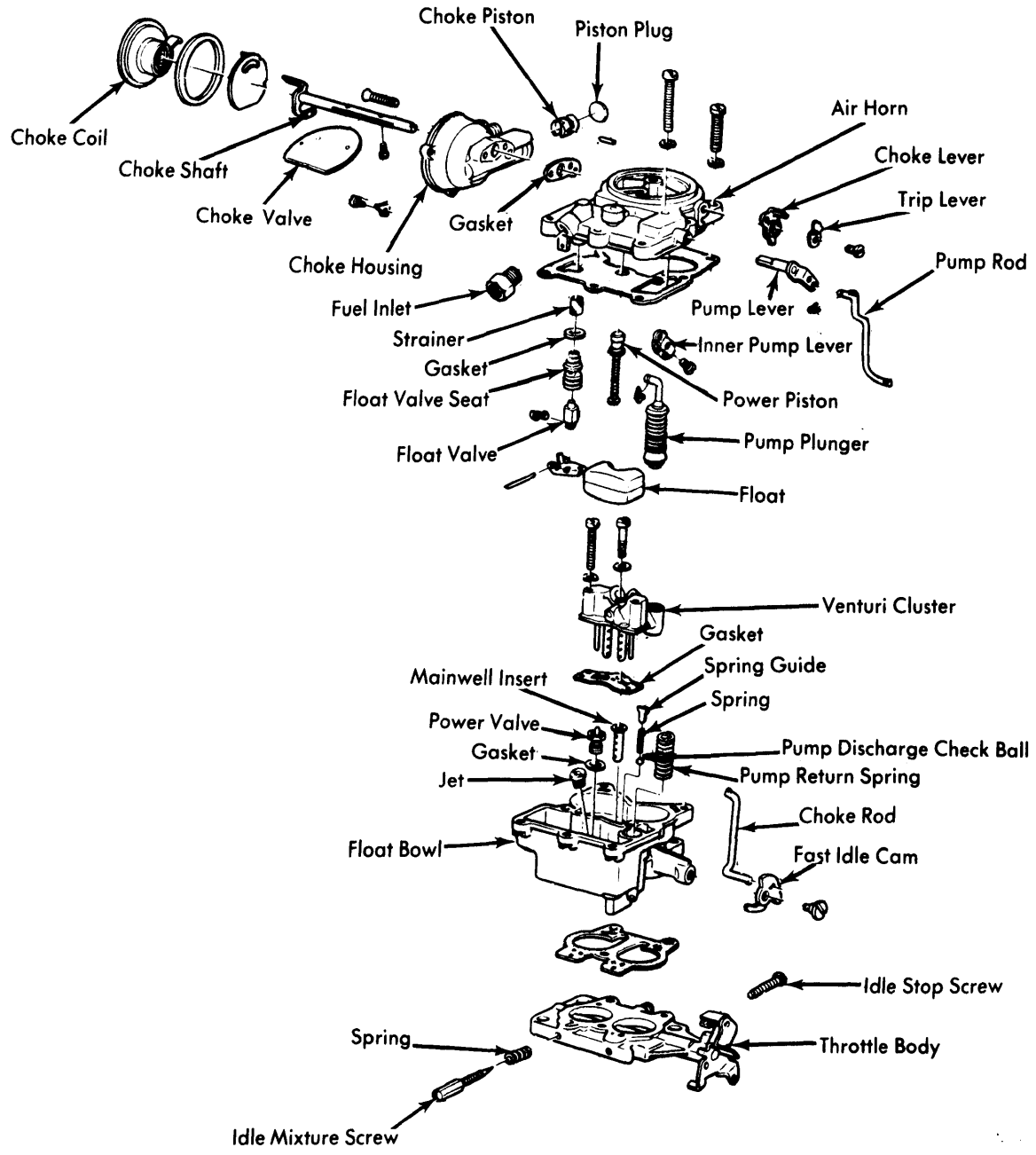
OVERHAUL

CARBURETOR

Disassembly - 1) Remove fuel inlet filter nut and gasket. Remove fuel filter and spring. *See Fig. 8.* Disconnect lower end of pump rod from throttle lever by removing spring clip.
2) Remove upper end of pump rod from pump lever by rotating rod out of hole in lever. Remove vacuum break diaphragm hose from tube in throttle body. Remove vacuum break diaphragm assembly from air horn.
3) Remove diaphragm and link assembly from lever on end of choke shaft. Remove vacuum break lever from end of choke shaft. Detach intermediate choke rod from vacuum break lever and from lever on thermostatic coil housing.
4) Remove fast idle cam attaching screw from side of float bowl. Remove fast idle cam from end of choke rod by rotating rod out of hole in fast idle cam. Upper end of choke rod will be removed after air horn is removed from float bowl.
5) Remove 8 air horn attaching screws and air horn. Place air horn on a flat surface. Remove float hinge pin and lift float from air horn. Remove float needle and clip (if used) from float arm.
6) Remove float needle seat and gasket. Remove power piston by depressing stem and allowing it to snap free several times. Use care not to bend piston stem.

NOTE: Pump assembly and plunger stem should only be removed if pump assembly is being replaced.



Courtesy of General Motors Corp.

Fig. 8: Exploded View of Rochester 2GC 2-Barrel Carburetor

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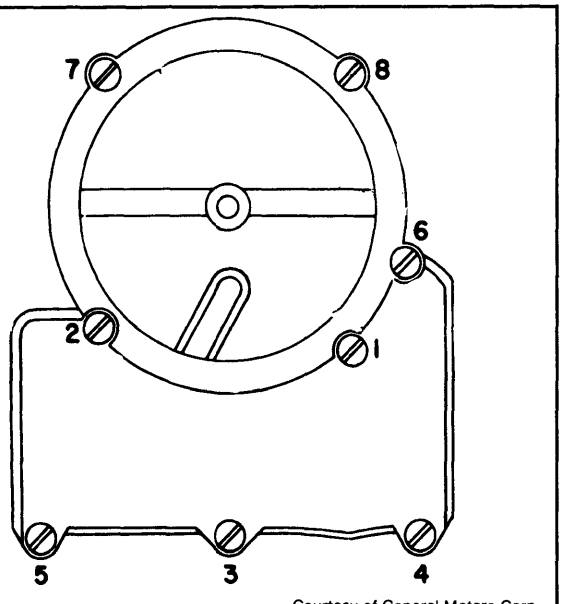
7) Remove pump plunger assembly and inner pump lever from pump shaft by loosening set screw on inner lever. To remove pump plunger stem from inner pump lever, it will be necessary to break off swedged end of pump plunger stem.
8) After removing inner pump lever and pump assembly, remove outer pump lever and pump assembly from air horn. Remove plastic washer on pump plunger shaft. Remove gasket from air horn.
9) Remove fuel inlet baffle next to needle seat. Remove 2 choke valve attaching screws. It may be necessary to file off staked ends of choke valve screws. Remove choke valve and choke shaft. Remove fast idle cam rod and lever from choke shaft.
10) Remove pump plunger return spring from pump well. Turn float bowl upside-down and catch aluminum check ball as it falls out. Remove main metering jets, power valve, and gasket.
11) Remove 3 screws holding venturi cluster. Remove venturi cluster and gasket. Remove plastic main well inserts in main well cavity. Remove pump discharge spring retainer. Remove spring and check ball from discharge passage.
12) Turn float bowl upside-down and and remove 3 throttle body-to-float bowl attaching screws. Remove throttle body and gasket. If necessary to remove idle mixture screws, trim off limiter caps. Remove idle mixture screws and springs.
Cleaning & Inspection - 1) Use a regular carburetor cleaning solution. Soak components long enough to thoroughly clean all surfaces and passages of foreign matter.
2) DO NOT soak any components containing rubber, leather or plastic. Remove any residue after cleaning by rinsing components. Blow out all passages with dry compressed air.
Reassembly - 1) To reassemble, reverse disassembly procedure. Use new gaskets and seals. Make sure new gaskets fit correctly and all holes are punched through and properly located.
2) If idle mixture screw were removed, lightly seat screws and back out screws 4 turns as a preliminary adjustment. When installing choke valve onto choke shaft, ensure that part number or "RP" letters face upward.
3) If removed, install outer pump shaft and lever assembly into air horn casting. Make sure plastic washer is in place before installing pump assembly. Install pump plunger to inner lever and retain with service clip. End of plunger shaft should point toward center of carburetor.
4) Install air horn screws, noting location and type of screw for correct installation. Tighten screws evenly and in proper sequence. *See Fig. 9.*



Courtesy of General Motors Corp.

Fig. 9: Air Horn Tightening Sequence

1975 CARBURETOR ADJUSTMENT SPECIFICATIONS

Rochester Carb. No.	Idle Speed Unloader	Pump Rod	Pump Float Setting	Rod Location	Air Choke Rod	Rear Valve Dashpot	Front Vac. Break	Air Vac. Break	Choke Valve Windup	Coil Lever
5115	.350"	1 5/8"	21/32"	.....	.400"	.....	.130"	.....	.....	.....
5116	.350"	1 5/8"	21/32"	.....	.400"	.....	.130"	.....	.....	.....
5123	.350"	1 5/8"	21/32"	.....	.400"	.....	.130"	.....	.....	.....
5124	.350"	1 5/8"	21/32"	.....	.400"	.....	.130"	.....	.....	.....

① - Basic prefix number is 704.

1976 CARBURETOR ADJUSTMENT SPECIFICATIONS

Rochester Carb. No.	Hot Idle Speed (Engine RPM)		Float Level Setting	Float Drop Setting	Pump Rod Setting	Choke Rod Setting	Vacuum Break Setting	Unloader Setting	Auto. Choke Setting
	Man.Trans.	Auto. Trans.							
6115	800	....	21/32"	1 9/32"	1 11/16"	.260"	.130"	.325"	Index
6116	....	600	21/32"	1 9/32"	1 11/32"	.260"	.130"	.325"	1NR
6123	800	....	21/32"	1 9/32"	1 11/32"	.260"	.130"	.325"	Index
6124	....	600	21/32"	1 9/32"	1 11/32"	.260"	.130"	.325"	1NR

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1977 CARBURETOR ADJUSTMENT SPECIFICATIONS

Rochester Carb. No.	Hot Idle Speed (Engine RPM)		Float Level Setting	Float Drop Setting	Pump Rod Setting	Choke Rod Setting	Vacuum Break Setting	Unloader Setting	Auto. Choke Setting
	Man.Trans.	Auto. Trans.							
17056137	700	700①	1 9/32"	1 9/32"	1 21/32"	.260"	.190"	.325"	INDEX
17057108	.....	500②	1 9/32"	1 9/32"	1 21/32"	.260"	.130"③	.325"	INDEX
17057110	.....	500④	1 9/32"	1 9/32"	1 21/32"	.260"	.130"③	.325"	INDEX
17057113	600①	.....	1 9/32"	1 9/32"	1 21/32"	.260"	.130"③	.325"	INDEX
17057123	600①	.....	1 9/32"	1 9/32"	1 21/32"	.260"	.130"③	.325"	INDEX

① — Transmission in NEUTRAL
② — Transmission in DRIVE
③ — .130" below 22,500 miles; .160" above 22,500 miles
④ — 500 RPM in DRIVE with idle screw; 650 RPM in DRIVE with solenoid screw

1978 CARBURETOR ADJUSTMENT SPECIFICATIONS

Rochester Car. No.	Idle Speed (Engine RPM)		Float Level Setting	Metering Rod Setting	Fast Idle (Off Engine)	Choke Rod Setting	Vacuum Break Setting	Unloader Setting	Auto. Choke Setting
	Hot #	Fast __							
17058116	①	①	.594"	1.281"	1.656"	.260"	.130"②	.325"	Index
17058118	①	①	.594"	1.281"	1.656"	.260"	.130"②	.325"	Index
17058127	①	①	.594"	1.281"	1.656"	.260"	.....	.325"	Index

① — See Emission Control Decal.
② — Reset to .160" at first engine tune-up.