1975-79 FUEL SYSTEMS
Rochester M2MC 2-Barrel Carburetor

1979 General Motors

CARBURETOR APPLICATION

ROCHESTER M2MC CARBURETOR NUMBERS

Application	Man. Trans.	Auto. Trans.
305"		
C10 & G10		
Without A/C	1705914	17059142
With A/C	17059145	17059144
K10 & C20		
Without A/C	17059101	17059100
With A/C	17059103	17059102

CARBURETOR IDENTIFICATION

Carburetor model identification is stamped vertically on the left rear corner of the float bowl. If float bowl is replaced, follow manufacturer's instructions contained in service kit to transfer part number to new float bowl.

DESCRIPTION

The Rochester M2MC is a single-stage, 2-barrel, downdraft carburetor. It uses the design feature of the primary side of the Rochester M4MC 4-barrel carburetor.

The carburetor is equipped with an Adjustable Part Throttle (APT) screw in float bowl. This adjustment screw helps refine fuel mixture to improve emission control. This screw is preset at factory and adjustment should not be changed. The choke system control is a conventional, heated air type. A single choke vacuum break diaphragm is used to control choke valve opening.

ADJUSTMENTS

CHOKE VALVE ANGLE GAUGE

Some carburetor adjustments must be performed using Choke Valve Angle Gauge (J-26701). While preparations and actual adjustments may vary with each individual adjustment, the procedure for using the angle gauge to check the choke valve angle remains the same. Use the following procedure to perform adjustments requiring the use of the choke angle gauge. *See Fig. 1.*

1) Rotate degree scale on angle gauge so that zero (0) mark is opposite pointer. With choke valve closed, place angle gauge magnet squarely on choke valve. Rotate leveling bubble on angle gauge until it is centered.

2) Rotate degree scale until specified degree mark is opposite pointer. Perform individual adjustments requiring the use of angle gauge. If bubble is centered, adjustment is correct. If not, adjust carburetor.

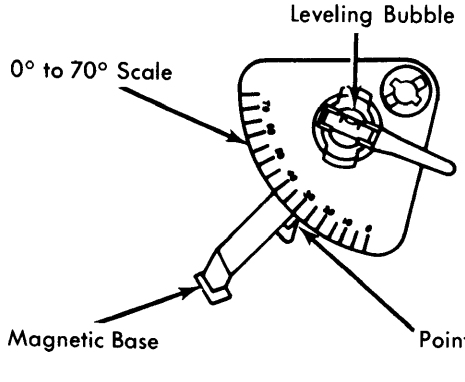

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Fig. 1: Choke Valve Angle Gauge

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

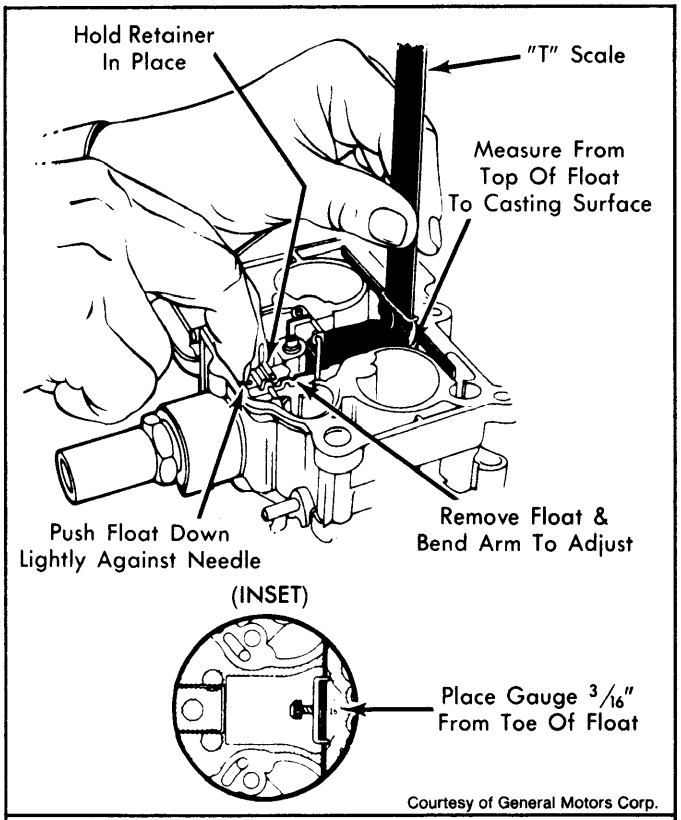
1) This is a preliminary adjustment only. This adjustment ensures that other adjustments are made with fast idle speed approximately correct. Final cold (fast) idle RPM adjustment must be made with carburetor installed on engine. See appropriate article in TUNE-UP PROCEDURES section.

2) Place fast idle speed screw on highest step of fast idle cam. Back off fast idle speed screw until throttle valves are completely closed. Now turn fast idle speed screw in until it just touches high step of fast idle cam, then turn fast idle speed screw in an additional 2 turns.

FLOAT LEVEL

1) Remove air horn and gasket from float bowl. Hold float retainer down firmly and lightly push float down against needle. *See Fig. 2.*

2) Position "T" scale over toe of float at a point 3/16" from end of float toe. Measure distance from top of float bowl casting to top of float. To adjust, remove float and bend arm. Make sure float is correctly aligned after adjustment.



Courtesy of General Motors Corp.

Fig. 2: Adjusting Float Level

ACCELERATOR PUMP

1) Close throttle valves completely. Make sure fast idle speed screw is off fast idle cam. *See Fig. 3.* Ensure accelerator pump rod is in specified hole (inner or outer) of accelerator pump lever.

2) Using "T" scale, measure accelerator pump distance from top of choke valve wall (next to vent stack) to top of accelerator pump stem. To adjust distance, support accelerator pump lever with a screwdriver and bend pump arm.

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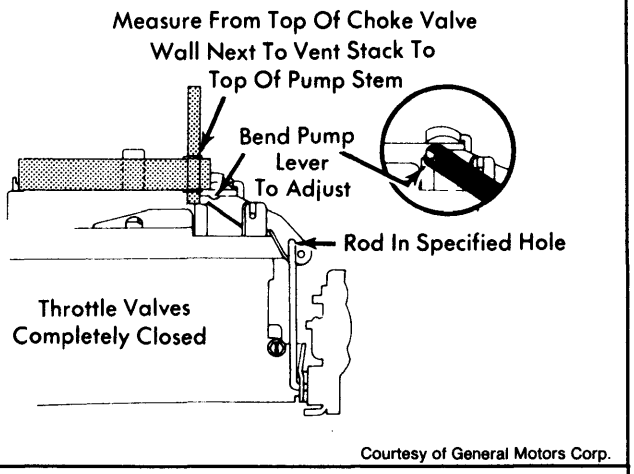

Fig. 3: Adjusting Accelerator Pump

CHOKE COIL LEVER

1) Remove 3 retaining screws. Remove choke cover and coil assembly from choke housing. *See Fig. 4.* Position fast idle speed screw on high step of fast idle cam.

2) Push up (counterclockwise) on choke coil tang to close choke valve. Insert specified drill or pin gauge in hole provided in choke housing. Lower edge of choke lever inside housing should just touch drill or pin gauge. To adjust, bend choke rod.

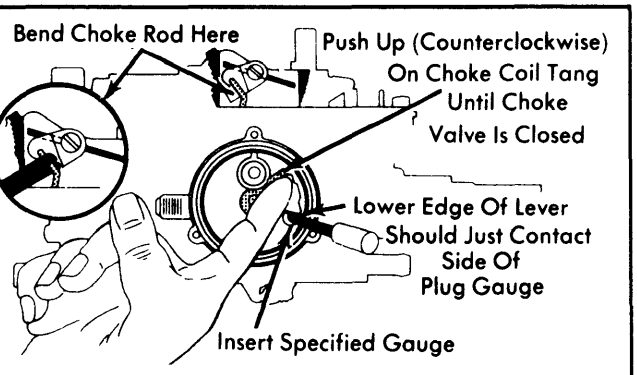

Fig. 4: Adjusting Choke Coil Lever

CHOKE ROD (FAST IDLE CAM)

NOTE: Cold (fast) idle RPM and choke coil lever adjustments must be adjusted first. This adjustment is performed using choke angle gauge. See CHOKE VALVE ANGLE GAUGE in this article.

1) Place fast idle speed screw on second step of fast idle cam, against shoulder of highest step. *See Fig. 5.* Close choke valve by pushing up on choke coil lever or vacuum break lever tang. Hold choke closed with a rubber band.

3) Bubble on choke angle gauge should be centered with specified degree mark opposite pointer. See 1979 CARBURETOR ADJUSTMENT SPECIFICATIONS table. To adjust, bend tang on fast idle cam until bubble of choke valve angle gauge is centered.

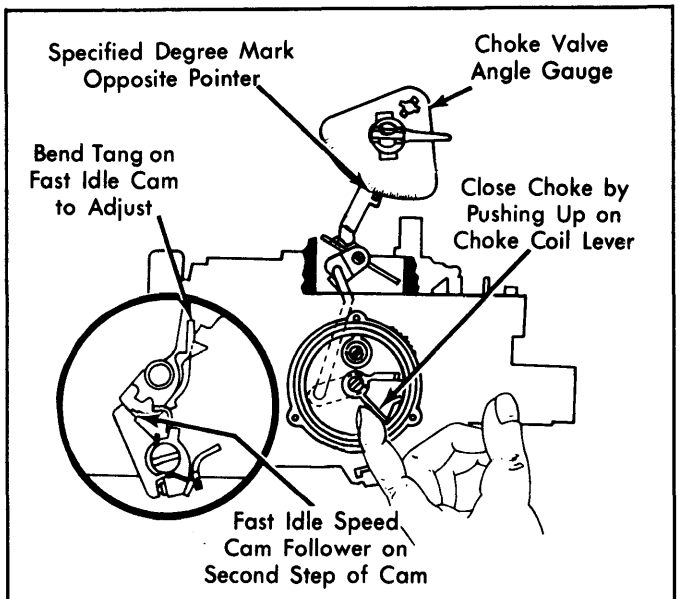

Fig. 5: Adjusting Choke Rod (Fast Idle Cam)

PRIMARY VACUUM BREAK

NOTE: This adjustment is performed using choke valve angle gauge. See CHOKE VALVE ANGLE GAUGE in this article.

1) Using an outside vacuum source of at least 15 in. Hg, seat primary vacuum break diaphragm. On models equipped with air bleed, remove rubber cover from filter and plug vacuum tube with tape. If bleed hole is in end of diaphragm, plug hole in diaphragm with tape.

2) On all models, close choke valve by pushing up on choke coil lever or vacuum break lever tang. *See Fig. 6.* Bubble on choke valve angle gauge should be centered with specified degree mark opposite pointer. To adjust, turn vacuum break adjustment screw until bubble is centered.

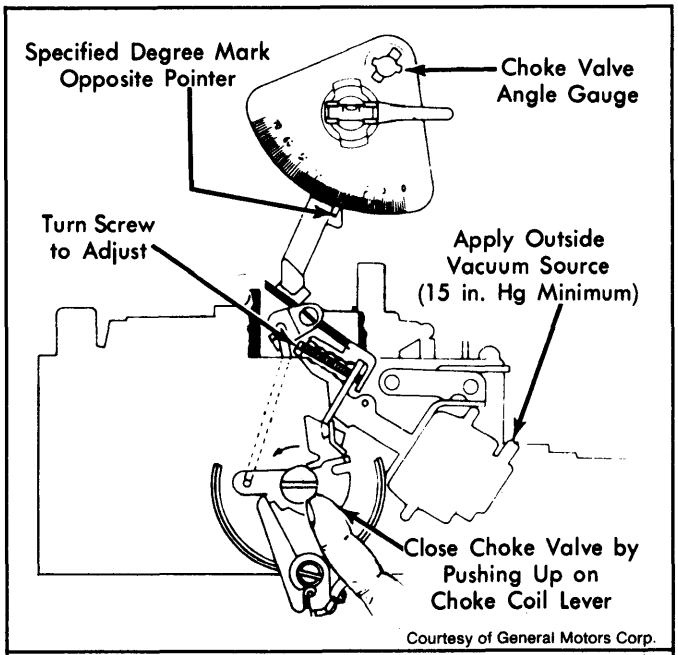

Fig. 6: Adjusting Primary Vacuum Break

Rochester M2MC 2-Barrel Carburetor (Cont.)

AUTOMATIC CHOKE

Loosen 3 choke cover retaining screws. Position fast idle speed screw on high step of fast idle cam. Rotate cover to align reference mark on cover with specified graduation on housing. Tighten choke cover screws.

CHOKE UNLOADER

NOTE: This adjustment is performed using choke valve angle gauge. See CHOKE VALVE ANGLE GAUGE in this article.

1) Ensure automatic choke is properly adjusted. Hold throttle valves wide open. If engine is warm, close choke valve by pushing up on vacuum break lever tang. Hold choke valve in position with a rubber band.

2) Bubble on choke valve angle gauge should be centered with specified degree mark opposite pointer. To adjust, bend choke unloader tang on throttle lever until bubble is centered. *See Fig. 7.*

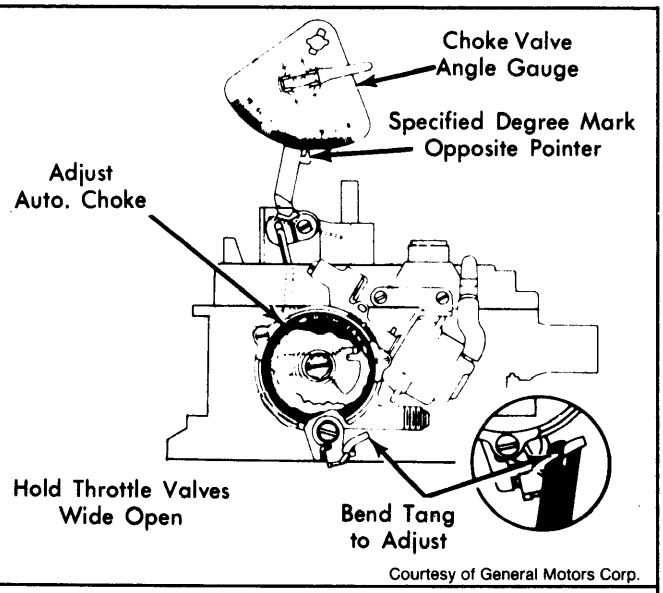

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Fig. 7: Adjusting Choke Unloader

OVERHAUL

CARBURETOR

Disassembly - 1) Place carburetor on a work stand to avoid damaging throttle valves. Remove solenoid and bracket assembly. Remove screw and upper choke lever from choke shaft. Rotate lever to remove choke rod from slot in lever. Remove choke rod from lower (inner) choke lever inside float bowl casting.

NOTE: Hold lever outward and twist rod counterclockwise to remove.

2) Using a drift punch, drive pump lever pivot pin inward until pump lever can be removed from air horn. Remove pump lever from pump rod, noting location for reassembly reference.

NOTE: Be careful when removing roll pin to avoid damage to pump lever bosses.

3) Remove primary vacuum break hose from tube on float bowl and mark for reassembly reference. Remove 7 air horn screws (2 countersunk screws are located next to venturi). Lift air horn straight up to remove. *See Fig. 8.*

4) Further disassembly of air horn assembly is not required for cleaning purposes. Choke valve and choke valve screws should not be removed. DO NOT attempt to remove the small tubes sticking out from bottom of air horn. These tubes are pressed in at the factory.

5) Remove air horn gasket from float bowl. When lifting gasket tab from under power piston hanger, use care not to bend springs holding main metering rods. Remove pump plunger and return spring from pump well.

6) Remove power piston and metering rods by depressing piston stem and allowing it to snap free several times. Remove power piston spring from well. Disconnect tension spring from top of each metering rod. Rotate rods to remove from hanger, noting position for reassembly reference.

NOTE: The Adjustable Part Throttle (APT) metering rod adjustment screw is preset at factory. DO NOT change this adjustment. If float bowl is being replaced, new float bowl will have APT metering rod adjustment screw installed.

7) Remove plastic filler block from cavity in float bowl. Remove float assembly and needle valve by pulling up on retaining clip. Remove needle seat and gasket.

8) Remove aneroid cavity insert. Remove metering jets (if necessary). Remove accelerator pump discharge check ball retainer and check ball. Remove accelerator pump well baffle.

9) Remove rear vacuum break diaphragm (if equipped). Remove vacuum break rod by holding down fast idle cam in hot idle position. Move end of rod away from float bowl and disengage from intermediate choke lever.

10) Remove 3 screws and choke cover assembly. Remove choke cover gasket (if equipped). Remove screw and washer inside choke housing. Remove choke housing from float bowl.

11) Turn float bowl over and remove lower choke lever. Remove plastic tube seal from choke housing (if equipped). Remove coil lever screw at end of shaft inside choke housing. Remove coil lever from flats on choke shaft. Remove intermediate choke shaft from housing by sliding it outward.

NOTE: If choke housing is to be soaked in solvent, remove cup seal from inside choke shaft hole. Remove cup seal from insert to clean bowl. DO NOT remove insert.

12) Remove fuel inlet nut, gasket, check valve filter and spring. Remove throttle body from float bowl. Remove throttle body-to-bowl insulator gasket.

13) Remove accelerator pump rod from throttle lever. If idle mixture screws are being removed, turn throttle body over and position on a holding fixture with manifold side up.

14) Make 2 parallel cuts in throttle body with a small hacksaw, one on each side of idle mixture needle plug. Cuts should reach down to steel plug, but no more than 1/8" beyond locator points. Distance between saw marks will depend upon size of punch used.

15) Place a flat punch at a point near ends of saw marks. Hold punch at 45 degree angle and drive it into throttle body until casting breaks away, exposing steel plug.

16) Hold center punch vertically and drive into steel plug. Then hold punch at 45 degree angle and drive plug out of casting. Repeat process for remaining idle mixture screw.

NOTE: Hardened steel plug will shatter. It is not necessary to remove plug completely. Remove just enough pieces to allow removal of 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 that new gaskets fit correctly and that all holes and slots are punched through and correctly located.

2) Intermediate choke shaft lever and fast idle cam are in proper position when tang on lever is beneath fast idle cam. Make sure float needle pull clip is NOT installed in holes of pump arm.

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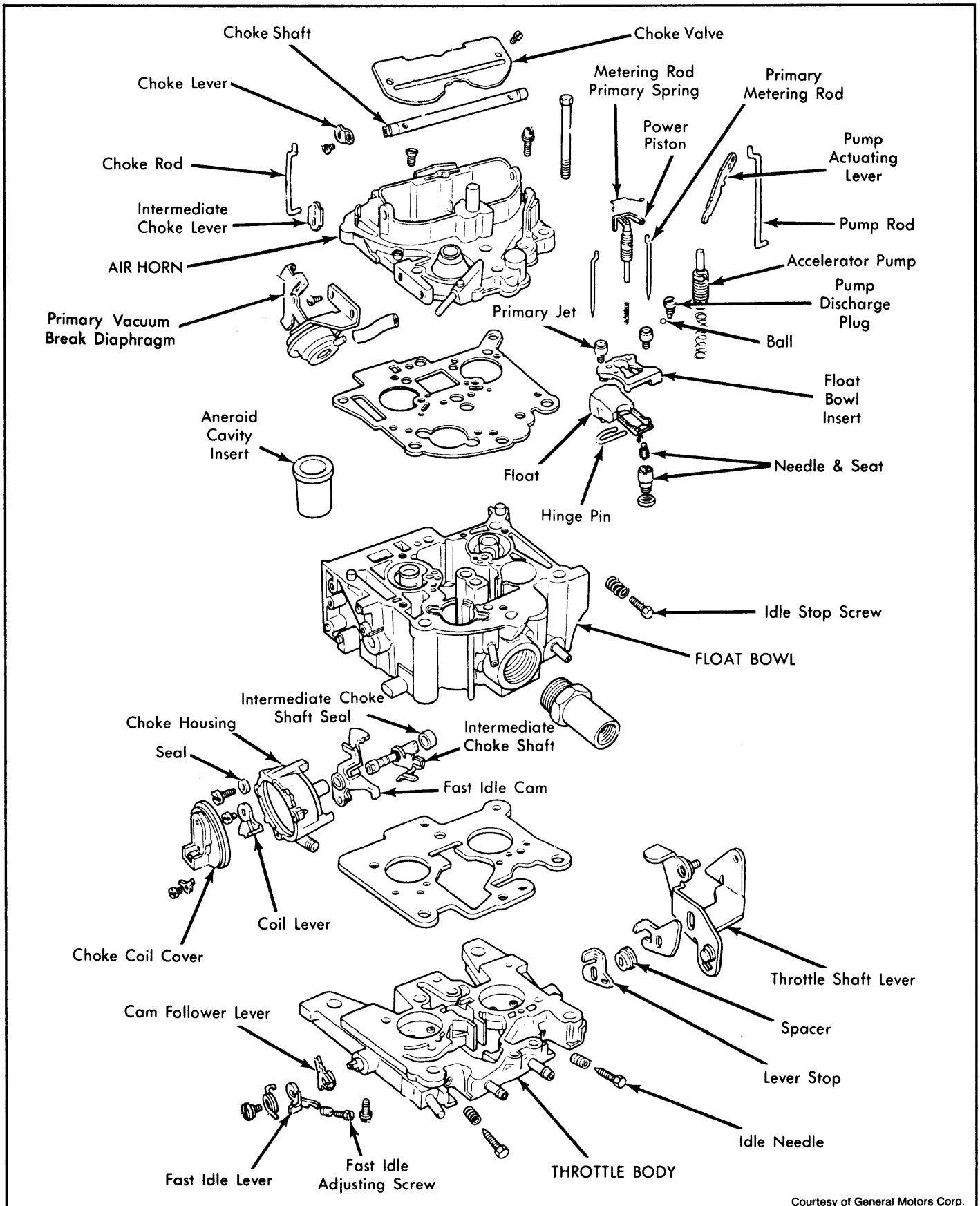

Courtesy of General Motors Corp.

Fig. 8: Exploded View of Rochester M2MC 2-Barrel Carburetor

Rochester M2MC 2-Barrel Carburetor (Cont.)

3) Ensure that bleed tubes, enrichement tubes (if equipped), and plunger stem are placed in correct positions. Install air horn screws and tighten evenly and in specified tigthening sequence. *See Fig. 9.*

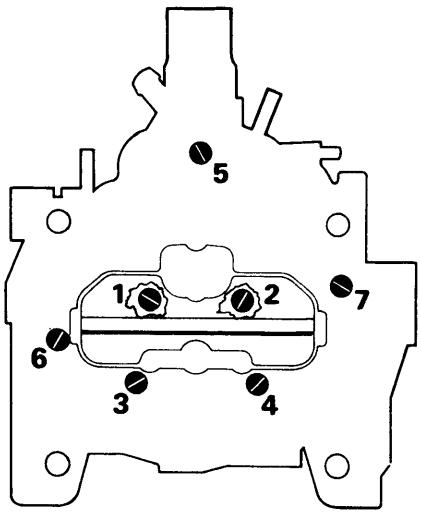

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Fig. 9: Air Horn Screw Tightening Sequence

1979 CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Float Level Setting	Accelerator Lever Setting	Pump Hole Setting	Choke Coil Lever Setting	Choke Rod Setting ①	Primary Vac. Break Setting ①	Auto. Choke Setting	Choke Unloader Setting ①
17059100	15/32"	13/32"	Inner	.120"	38° (.243")	29° (.171")	1 Lean	38° (.243")
17059101	15/32"	13/32"	Inner	.120"	38° (.243")	29° (.171")	1 Lean	38° (.243")
17059102	15/32"	13/32"	Inner	.120"	38° (.243")	29° (.171")	1 Lean	38° (.243")
17059103	15/32"	13/32"	Inner	.120"	38° (.243")	29° (.171")	1 Lean	38° (.243")
17059142	15/32"	13/32"	Inner	.120"	38° (.243")	29° (.171")	1 Lean	38° (.243")
17059143	15/32"	13/32"	Inner	.120"	38° (.243")	29° (.171")	1 Lean	38° (.243")
17059144	15/32"	13/32"	Inner	.120"	38° (.243")	29° (.171")	1 Lean	38° (.243")
17059145	15/32"	13/32"	Inner	.120"	38° (.243")	29° (.171")	1 Lean	38° (.243")

① – Both angle degree and decimal equivalent given.