1972 ROCHESTER 4MC & 4MV 4-BARREL

ROCHESTER 4MC

OLDSMOBILE	Rochester Carb. No. Synchro-mesh	Auto. Trans.
350" F-85	7042250	7042250
455" (Except Toronado & 442)	7042251	7042251
455" (Toronado)		7042252
455" (442)	7042953	7042953

ROCHESTER 4MV

BUICK		
350" (Non-Calif.)	7042245	7042244
(Calif.)	7042245	7042944
455" (Non-Calif.)	7042243	7042240
(Calif.)	7042243	7042940
455" Stage I		
(Non-Calif.)	7042942	7042242
(Calif.)	7042942	7042942
CADILLAC		
Early Production		
(Standard)		7042230
(Limousine)		7042231
(Eldorado)		7042232
Late Production		
(Standard)		7042234, 7042237
(Limousine)		7042235, 7042238
(Eldorado)		7042236, 7042239
CHEVROLET		
350" (Non-Calif.)	7042203	7042202
(Calif.)	7042903	7042902
455" (Corvette)	7042217	7042216
402" & 454" (All Others)	7042215	7042220
PONTIAC		
400"	7042263	7042264
455" (Except H.O.)		7042262
455" (H.O.)	7042273	7042270

CARBURETOR IDENTIFICATION

Carburetor part number is stamped on a vertical section of the float bowl, near secondary throttle lever. When replacing float bowl assembly, follow manufacturers instructions, contained in service package, so that the part number is transferred to the new float bowl.

CARBURETOR DESCRIPTION

The 4MC and 4MV carburetors are 4-barrel downdraft types, having one very basic difference that will give an easy identification. The 4MC models are equipped with an integral automatic choke, whereas the 4MV model utilizes a remote thermostatic coil, mounted on the exhaust manifold, which operates the conventional choke valve in carburetor air horn. The 1972 models are of the same basic design as previous models, but certain design changes and improvements have been made, as follows:

Buick – The milled slot in the secondary metering rods has been removed as tests have proven it no longer necessary. A new fast idle cam, with a larger counterweight, is used to insure more positive operation of the secondary throttle lockout lever. Throttle body casting is redesigned for additional strength by adding extra material adjacent to the hold down studs. A vacuum supply tube has been installed in carburetor throttle body which connects to a timed vertical port in the throttle body bore. This provides a vacuum signal to the E.G.R. (Exhaust Gas Recirculation) Valve in the off-idle and part throttle ranges of carburetor operation. This Exhaust Gas Re-circulation system, used on all California and synchro-mesh transmission models, controls oxides of nitrogen, by lowering combustion temperatures during off-idle and part throttle ranges of operation. The purge system for fuel vapor collection canister, has been removed from the carburetor throttle body and is now installed in the air cleaner snorkel. Float needle seat has been redesigned by removing side windows to provide a more reliable needle seat assembly by preventing binding.

Cadillac – A Clean Air Tube has beed added to air horn for the Transmission Controlled Spark System (TCS). A plunger bucking spring has been added to vacuum break plunger stem to offset thermostatic coil tension and provide less choke valve opening at colder temperatures and wider opening during warmer temperature operations after initial start. In addition, a new fast idle cam is used with revised steps for improved engine warm-up operation. Later production carburetors incorporate a fuel pull-over enrichment circuit to provide added enrichment and improved fuel control during higher engine speeds and carburetor air flows.

Chevrolet – The milled slot in secondary metering rods has been removed as tests have proven it is no longer necessary. The Combination Emission Control (CEC) Valve has been eliminated and is replaced by an Idle Stop Solenoid, bracket mounted on carburetor. Curb Idle is adjusted using the plunger screw in the Idle Stop Solenoid. The vacuum tube in the float bowl, previously for CEC, is now the timed vacuum source for the Transmission Controlled Spark (TCS), and by use of a hose "tee" connection, it is also the vapor canister purge system. A new metal Vacuum Break Diaphragm Assembly, incorporating a choke closing assist spring, is used for improved choke operation. Vacuum break diaphragm plunger is also revised in that the fast idle cam pull-off feature is eliminated, and the slot for free travel of the air valve dashpot link is moved from the air valve shaft lever to the vacuum break plunger. A choke closing assist spring is now incorporated in the vacuum break diaphragm plunger stem, replacing torsion spring, previously on vacuum break bracket. Spring assists in closing choke valve for improved starting.

Oldsmobile – The milled slot in the tip of the secondary metering rod has been eliminated as tests have proven it is no longer necessary. Float needle seat is changed in that it is now nickel plated with a double angle seat; this double seat, along with the use of a less resilient viton tip float needle valve, aids in preventing float needle from sticking in the seat due to fuel gum formation. Throttle body casting has been redesigned for additional strength and improved torque retention by adding extra material next to the hold-down studs, thus reducing the possibliity of a vacuum leak. The carburetors used on the 442 and Toronado, incorporate an electrically operated Idle Stop Solenoid to control Curb Idle. This solenoid maintains a slightly higher idle speed to control exhaust emissions; the idle stopscrew on the carburetor is used for low idle adjustment to prevent dieseling (after-run) when engine is turned off. Some models will not use an idle stop solenoid, but will use the normal idle stopscrew for curb idle speed. These models, however, will use either a dashpot, or a vacuum activator as a throttle closing device.

Pontiac – A new primary throttle lever is used for accomodation of minor changes in throttle linkage. The milled slot has been removed from the secondary metering rods as tests have proven it no longer necessary. Float needle seat has been redesigned in that the side windows have been removed and all fuel will be discharged over the top of the needle seat assembly, thus providing a more reliable needle seat assembly in that it will help prevent any binds from

1972 ROCHESTER 4MC & 4 MV 4-BARREL (Cont.)

CARBURETOR ADJUSTMENT SPECIFICATIONS - #1

Rochester Carb. No.	Slow Curb Idle Speed (Engine RPM) ⑯		Fast Idle Speed ① ② (Engine RPM)	Float Level Setting	Accelerator Pump		Air Valve Dashpot Setting
	Synchro-mesh	Auto. Trans.			Rod Location	Adjustment	
7042202	.....	600/450	1500 ③ ⑤	1/4"	.....	3/8"	.020"
7042203	900/450	.....	1350 ③ ⑤	1/4"	.....	3/8"	.020"
7042215	750/450	.....	1350 ③ ⑤	1/4"	.....	3/8"	.020"
7042216	.....	600/450	1500 ③ ⑤	1/4"	.....	3/8"	.020"
7042217	750/450	.....	1350 ③ ⑤	1/4"	.....	3/8"	.020"
7042220	.....	600/450	1500 ③ ⑤	1/4"	.....	3/8"	.020"
7042230	.....	600 ⑥	1950 ⑦	1/4"	OUTER	11/32"	.030"
7042231	.....	600 ⑥	1950 ⑦	1/4"	OUTER	11/32"	.030"
7042232	.....	600 ⑥	1950 ⑦	11/32"	OUTER	11/32"	.030"
7042234,37	.....	600 ⑥	1950 ⑦	1/4"	OUTER	11/32"	.030"
7042235,38	.....	600 ⑥	1950 ⑦	1/4"	OUTER	11/32"	.030"
7042236,39	.....	600 ⑥	1950 ⑦	11/32"	OUTER	11/32"	.030"
7042240	.....	650/500	700 ⑧	13/32"	INNER	7/16"	.030"
7042242	.....	650/500	700 ⑧	13/32"	INNER	7/16"	.030"
7042243	900/600	.....	920 ⑧	13/32"	INNER	7/16"	.030"
7042244	.....	650/500	700 ⑧	15/32"	INNER	13/32"	.030"
7042245	800/600	.....	820 ⑧	15/32"	INNER	9/32"	.030"
7042250	750/550 ⑬	600	1100 ⑧	1/4"	.....	3/8"	.....
7042251	.....	600	1100 ⑧	1/4"	.....	3/8"	.....
7042252	.....	650/550	1100 ⑧	1/4"	.....	3/8"	.....
7042262	.....	650/550	1500 ⑭	3/8"	.....	13/32"	.025"
7042263	1000/600	.....	1500 ⑭	1/4"	.....	13/32"	.025"
7042264	.....	700/500	1500 ⑭	3/8"	.....	13/32"	.025"
7042270	.....	650/500	1500 ⑭	1/4"	.....	7/16"	.025"
7042273	1000/600	.....	1500 ⑭	1/4"	.....	7/16"	.025"
7042902	.....	600/450	1500 ⑤	1/4"	.....	3/8"	.020"
7042903	900/450	.....	1350 ⑤	1/4"	.....	3/8"	.020"
7042940	.....	650/500	700 ⑧	13/32"	INNER	7/16"	.030"
7042942	900/600	650/500	920/700 ⑮	13/32"	INNER	7/16"	.030"
7042944	.....	650/500	700 ⑧	15/32"	INNER	13/32"	.030"
7042953	750/550	650/550	1100 ⑧	1/4"	.....	3/8"	.....

① – With A.I.R. operating, if equipped.
② – Higher Speed – Solenoid Energized.
Lower Speed – Solenoid De-Energized.
③ – Without vacuum advance.
⑤ – Cam follower on Second Step of cam.
⑥ – Solenoid De-Energized – 350-400 RPM.
⑦ – Cam follower on Highest Step of cam.
⑧ – Cam follower on Low Step of cam.
⑬ – Vacuum Actuated Throttle Closing Device.
Higher RPM – Actuator Connected.
Lower RPM – Actuator Disconnected and plugged.
⑭ – Cam follower on Top Step of cam.
⑮ – Cam follower on Low Step of cam.
Higher RPM – Synchro-mesh.
Lower RPM – Auto. Trans.
⑯ – Synchro-mesh in Neutral, auto. trans. in Drive.

the float needle in this area. The choke vacuum break retains the compression(bucking) spring on the plunger stem, in addition, an internal bleed check valve will be used in the vacuum break unit to retard choke valve opening for improved engine cold starting.

ADJUSTMENT

Idle Speed & Mixture

NOTE – Carburetors have plastic idle limiter caps on idle mixture adjusting screws. No attempt to adjust idle mixture screws should be made. If caps are removed during such operations as carburetor overhaul, fuel bowl replacement, or throttle body replacement, special procedure is required to readjust idle mixture screws.

Buick Idle Speed – Make adjustment with engine at normal operating temperature, air cleaner installed, choke open, and air conditioning OFF. Disconnect the hose from air cleaner to vapor canister. Disconnect and plug distributor vacuum advance hose. Open throttle momentarily to permit idle solenoid to extend and contact throttle lever pad in idle position. Adjust solenoid set screw to obtain the higher RPM listed. *NOTE – Solenoid mounting bracket may be moved for additional adjustment.* Disconnect solenoid wire and adjust idle screw to obtain the lower RPM listed (see Specifications), then reconnect solenoid wire.

Cadillac – Make adjustment with engine at normal operating temperature, distributor advance hose disconnected at distributor and plugged, parking brake hose and compressor hose disconnected and plugged. Transmission in DRIVE, A/C off, air cleaner removed and wire to throttle solenoid disconnected, proceed as follows:

1) Adjust low idle speed screw to obtain 350-400 RPM. Reconnect solenoid wire, open throttle slightly to extend plunger fully.

1972 ROCHESTER 4MC & 4MV 4-BARREL (Cont.)

CARBURETOR ADJUSTMENT SPECIFICATIONS – #2

Rochester Carb. No.	Choke Rod Or Lever Setting	Secondary Metering Rod	Vacuum Break Setting	Unloader Setting	Air Valve Lockout	Choke Coil Or Rod Setting
7042202	.100"	.....	.215"	.450"	.....	⑭
7042203	.100"	.....	.215"	.450"	.....	⑭
7042215	.100"	.....	.250"	.450"	.....	⑭
7042216	.100"	.....	.250"	.450"	.....	⑭
7042217	.100"	.....	.250"	.450"	.....	⑭
7042220	.100"	.....	.250"	.450"	.....	⑭
7042230	.090"	27/32"	.190"	.310"	.015"	⑭
7042231	.090"	27/32"	.190"	.310"	.015"	⑭
7042232	.090"	27/32"	.190"	.310"	.015"	⑭
7042234, 37	.090"	27/32"	.110"	.310"	.015"	⑭
7042235, 38	.090"	27/32"	.110"	.310"	.015"	⑭
7042236, 39	.090"	27/32"	.110"	.310"	.015"	⑭
7042240	.130"	53/64"	.215" ⑨	.335"	.....	⑭
7042242	.130"	53/64"	.200" ⑩	.335"	.....	⑭
7042243	.130"	53/64"	.215" ⑪	.335"	.....	⑭
7042244	.130"	53/64"	.170" ⑫	.335"	.....	⑭
7042245	.130"	53/64"	.170" ⑫	.335"	.....	⑭
7042250	.230"	.....	.230"	.200"	.035"	INDEX ⑭
7042251	.230"	.....	.215"	.200"	.035"	INDEX ⑭
7042252	.230"	.....	.215"	.200"	.035"	INDEX ⑭
7042262	.100"	.....	.290"	.310"	.....	⑭
7042263	.100"	.....	.325"	.310"	.....	⑭
7042264	.100"	.....	.290"	.310"	.....	⑭
7042270	.100"	.....	.290"	.310"	.....	⑭
7042273	.100"	.....	.325"	.310"	.....	⑭
7042902	.100"	.....	.215"	.450"	.....	⑭
7042903	.100"	.....	.215"	.450"	.....	⑭
7042940	.130"	53/64"	.215" ⑨	.335"	.....	⑭
7042942	.130"	53/64"	.200" ⑩	.335"	.....	⑭
7042944	.130"	53/64"	.170" ⑫	.335"	.....	⑭
7042953	.230"	.....	.275"	.200"	.035"	INDEX ⑭

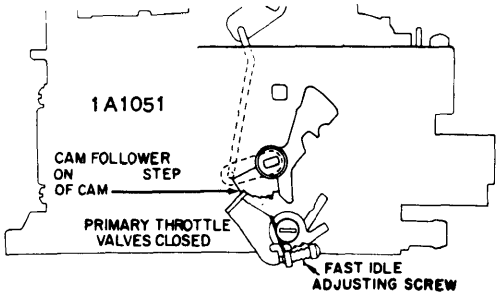
⑭ – See Text for Adjustment.
⑨ – Auxiliary Vacuum Break – .160".
⑩ – Auxiliary Vacuum Break – .180".
⑪ – Auxiliary Vacuum Break – .195".
⑫ – Auxiliary Vacuum Break – .150".

2) Loosen solenoid lock nut and turn solenoid to obtain 600 RPM. Lock solenoid in place and reconnect all hoses and install air cleaner.

Chevrolet – Make adjustment with engine at normal operating temperature, air cleaner installed, choke open, and air conditioning OFF. Set parking brake and block drive wheels. Disconnect fuel tank vapor canister hose, then disconnect distributor vacuum hose at distributor and plug. Disconnect electrical connection at the idle stop solenoid and adjust idle speed screw to the lower RPM listed (see Specifications). Check dwell, timing and low idle speed. Reconnect solenoid connector, open throttle momentarily and adjust the solenoid plunger screw to the higher RPM listed (see Specifications).

Oldsmobile – Make adjustment with engine at normal operating temperature, air cleaner removed, air cleaner vacuum hose disconnected at intake manifold (and plugged), and with choke open and air conditioning OFF. Set parking brake and block drive wheels. Disconnect distributor vacuum hose at distributor (and plug), then disconnect carburetor hose from vapor canister (and plug). With dwell and timing properly adjusted, proceed as follows:

1) If equipped with Idle Stop Solenoid or Vacuum Actuator, adjust solenoid or actuator to obtain the higher RPM listed (see Specifications). Disconnect idle solenoid or vacuum actuator by disconnecting wire or vacuum hose (plug hose), and adjust idle speed screw to the lower RPM listed (see Specifications).
2) If carburetor **does not** have either an Idle Stop Solenoid or a Vacuum Acutator, adjust idle speed screw to obtain the RPM listed (see Specifications), with transmission in Drive.



FAST IDLE ADJUSTMENT

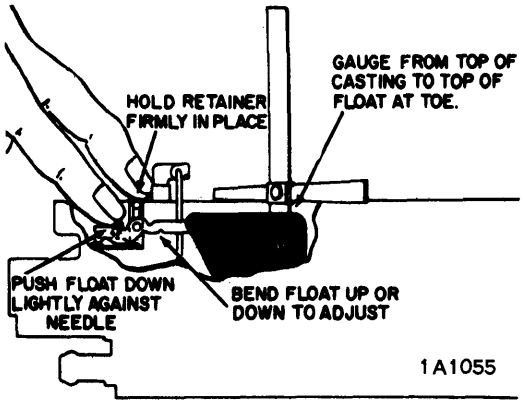
1972 ROCHESTER 4MC & 4 MV 4-BARREL (Cont.)

Pontiac – Make adjustment with engine at normal operating temperature, choke open, air conditioning OFF, all disconnected vacuum fittings plugged, synchro-mesh in Neutral, auto. trans. in Drive, parking brake set, and drive wheels blocked. Disconnect carburetor evap hose from vapor canister, then disconnect carburetor to vacuum solenoid hose (at solenoid) and plug. Disconnect throttle solenoid wire, and with dwell and timing properly set, adjust carburetor speed screw to obtain the lower RPM listed (see Specifications). Reconnect solenoid wire and open throttle momentarily, adjust solenoid plunger screw to the higher RPM listed (see Specifications).

Fast Idle Speed

Fast idle speed may be adjusted after curb idle speed adjustment has been correctly made. All pre-adjustment conditions apply except for mode of automatic transmission operation. Adjust fast idle speed screw to obtain specified fast idle RPM (see Specifications), with cam follower on correct step of fast idle cam and automatic transmission selector lever in the proper mode shown in the following table:

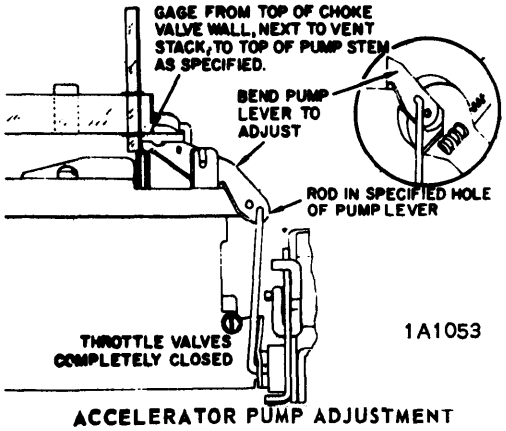
Vehicle	Transmission Mode	Cam Step
Buick	Drive	Low
Cadillac	Neutral	Highest
Chevrolet	Park	Second
Oldsmobile	Park	Low
Pontiac	Park	Highest



FLOAT LEVEL ADJUSTMENT

Float Level

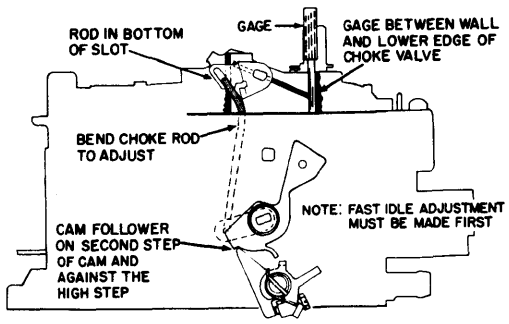
Hold retaining pin firmly in place with tang of float lightly seated on float needle. With adjustable T-scale, measure from top of float bowl gasket surface (gasket removed) to top of float at toe. Locate gauge point 1/16" from radius on toe. Bend float up or down to obtain specified clearance (see Specifications).



ACCELERATOR PUMP ADJUSTMENT

Accelerator Pump Rod

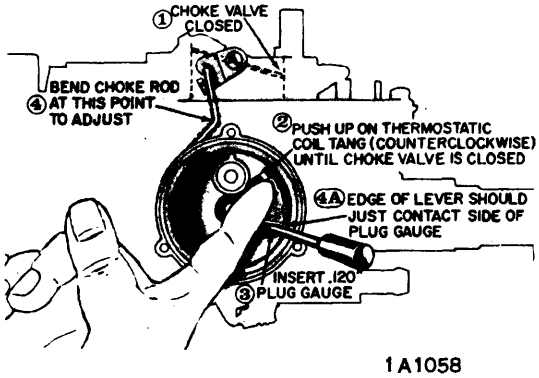
Completely close primary throttle valves by backing out the idle speed screw and making sure that the fast idle cam follower clears fast idle cam. It will also be necessary to bend the secondary throttle closing tang away from the primary throttle lever. With pump rod in specified hole (see Specifications), measure distance from top of choke valve wall, next to vent stack, to top of pump stem. Obtain specified measurement (see Specifications) by bending pump lever. Support pump lever with screwdriver placed between lever and top of air horn. After adjustment is completed, readjust secondary throttle closing tang and idle speed stopscrew.



CHOKE ROD ADJUSTMENT
(4MV CARBS.)

Choke Rod (All 4MV Carbs.)

Place fast idle cam follower on second step of fast idle cam and hold it against high step of cam by pressing lightly upward on vacuum break lever. With choke rod in bottom of slot in choke lever, measure clearance between lower edge of choke valve at choke lever end and air horn wall. If clearance not correct (see Specifications), adjust by bending choke rod at existing bend near upper end of rod.



CHOKE COIL LEVER ADJUSTMENT
(OLDSMOBILE)

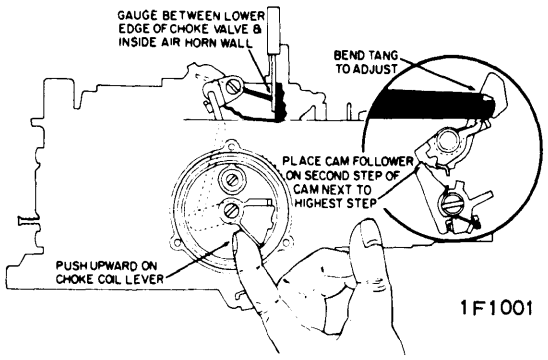
Choke Coil Lever (4MC Oldsmobile Carbs.)

Remove thermostatic choke cover and coil assembly. Hold choke valve closed, push up on thermostatic coil tang to end of travel. Insert a .120" plug gauge in hole in housing, just below edge of lever. Lever should just touch edge of gauge. Bend rod at existing bend if adjustment required.

1972 ROCHESTER 4MC & 4MV 4-BARREL (Cont.)

Fast Idle Cam (Choke Rod 4MC Oldsmobile Carbs.)

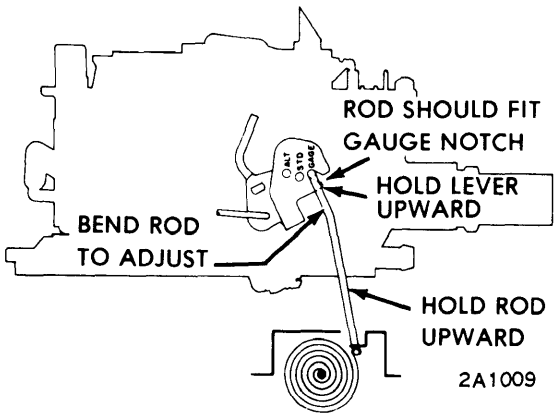
Place fast idle cam follower on second step of fast idle cam, move choke valve toward closed position by pressing on choke coil lever within automatic choke housing (remove choke cover and coil assembly for access) so that cam follower is held firmly against shoulder of high step of cam. With choke valve in this position, measure clearance between lower edge of choke valve at choke lever end and air horn wall. If clearance not correct (see Specifications), adjust by bending tang at side of fast idle cam as shown in illustration.



FAST IDLE CAM ADJUSTMENT (OLDSMOBILE)

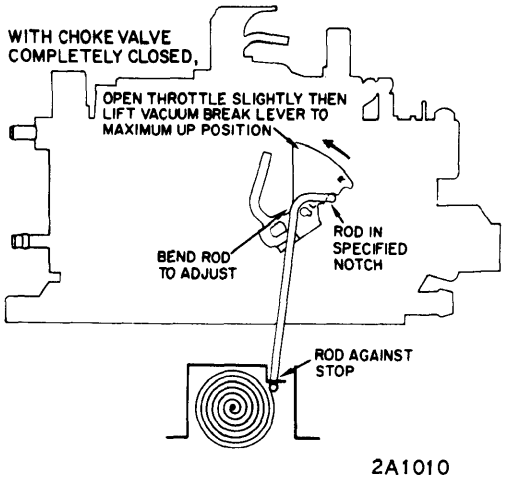
Automatic Choke Coil Rod (All 4MV Carburetors)

Buick – Hold choke valve fully closed by rotating vacuum break lever counterclockwise. Pull upward on choke thermostatic coil rod to end of travel. Rod should fit freely in gauging notch at edge of lever. Adjust by bending rod at existing bend. Reconnect rod in "Std" hole in lever.



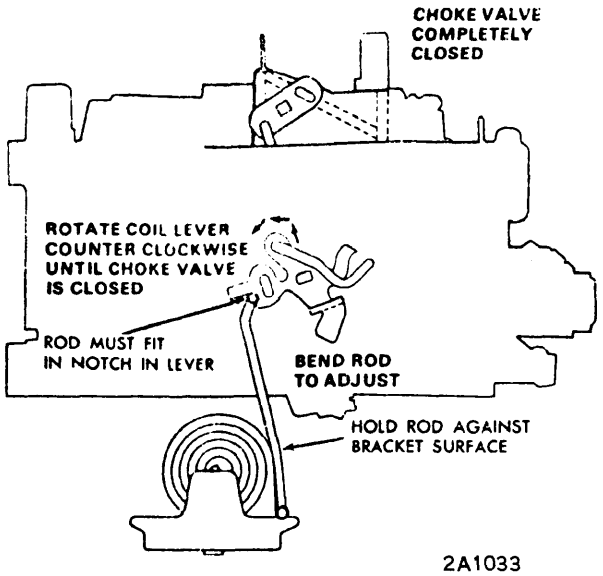
CHOKE COIL ROD ADJUSTMENT (BUICK)

Cadillac – Remove choke assembly from manifold to disengage choke coil rod from vacuum break lever. Reinstall choke coil assembly, but do not install choke coil rod into hole in vacuum break lever. With choke valve completely closed, fast idle cam in cold start position and vacuum break lever in maximum upward position, pull choke coil rod upward to end of travel against stop in choke coil housing. Upper end of rod should fit in gauging notch. Bend choke coil rod to adjust for proper positioning in specified notch. *NOTE – "L" gauging notch is for a one notch leaner setting and the "R" notch is for a one notch richer setting.*



CHOKE COIL ROD ADJUSTMENT (CADILLAC)

Chevrolet – Hold choke valve completely closed by rotating vacuum break lever counterclockwise. With thermostatic coil rod disconnected, push downward on coil rod to end of travel. Rod should contact bracket surface. Coil rod should just fit in adjustment notch in choke coil lever; to adjust, bend choke coil rod or lever.

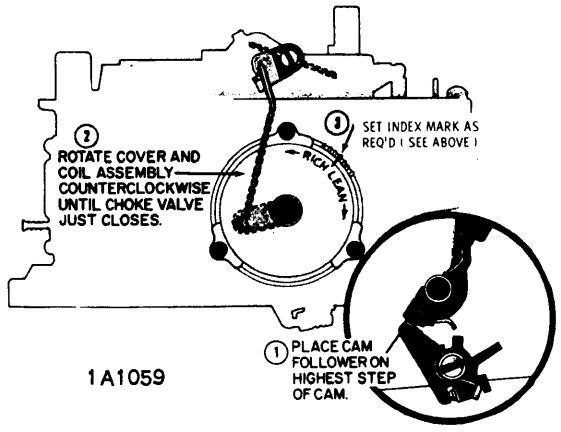


CHOKE COIL ROD ADJUSTMENT (CHEVROLET)

Automatic Choke Coil (4MC Oldsmobile Carbs.)

Oldsmobile – Place cam follower on highest step of cam. Rotate choke cover counterclockwise until choke valve just closes. Rotate choke cover to place index mark opposite specified mark on choke housing (see Specifications).

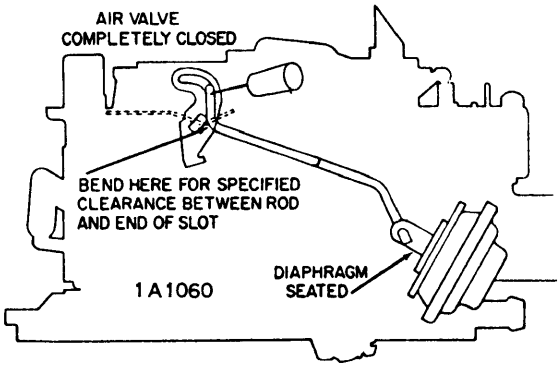
1972 ROCHESTER 4MC & 4 MV 4-BARREL (Cont.)



CHOKE COIL ADJUSTMENT (OLDSMOBILE)

Air Valve Dashpot (4MV Carburetors)

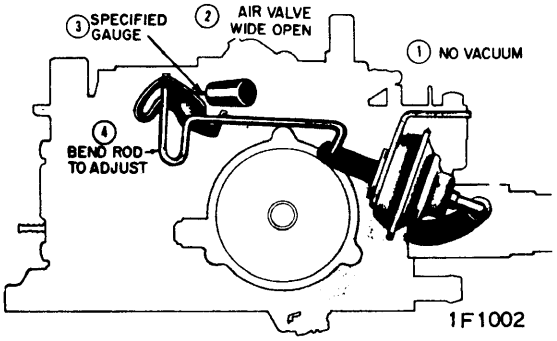
Seat vacuum break diaphragm using an outside vacuum source, measure clearance between the dashpot rod and end of slot in air valve lever. To adjust, bend rod at air valve end.



AIR VALVE DASHPOT ADJUSTMENT (4MV)

Air Valve Dashpot (4MC Oldsmobile Carburetors)

With air valve wide open and vacuum break diaphragm extended (no vacuum), gauge clearance between air valve dashpot rod and end of slot in air valve lever. If clearance not correct (see Specifications), adjust by bending rod at loop in air valve end of rod.

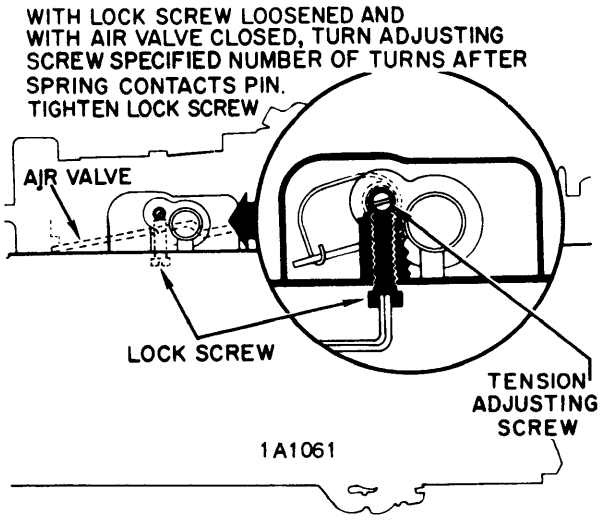


AIR VALVE DASHPOT ADJUSTMENT (4MC)

Air Valve Spring

To adjust air valve spring wind-up, loosen lockscrew (Allen screw) and turn adjusting screw counterclockwise to remove all spring tension. With air valve held closed, turn adjusting screw clockwise until torsion spring just contacts pin in shaft; then turn adjusting screw clockwise the exact amount specified below. While holding adjusting screw in this position, tighten lockscrew.

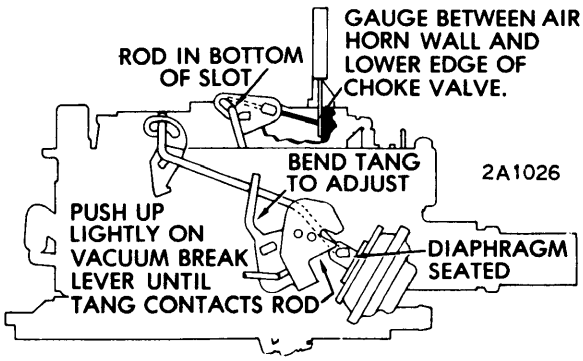
Application	Adjust Screw
Buick & Cadillac	½ turn
Oldsmobile (7042250)	½ turn
(All Others)	¾ turn



AIR VALVE SPRING ADJUSTMENT

Vacuum Break (4MV Carbs.)

Buick – Using an outside vacuum source, seat vacuum break actuator, then with diaphragm seated and vacuum break lever tang held lightly against vacuum break rod, measure distance between the lower edge of choke valve and air horn. To adjust, bend tang on lever.

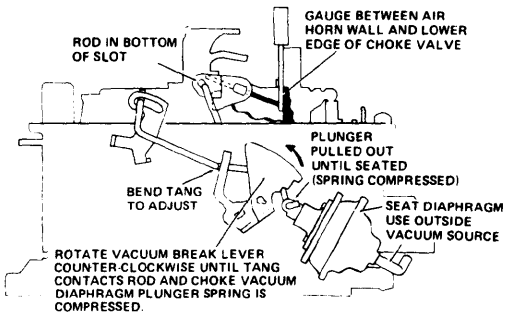


VACUUM BREAK ADJUSTMENT (BUICK)

Cadillac – Open throttle valve and place fast idle cam follower on high step. Place a rubber band on the vacuum break lever and some portion of the air horn near the secondary valve so tang of vacuum break lever will pull rearward, contacting the vacuum break rod when vacuum is applied to unit. Disconnect the rubber tee from vacuum

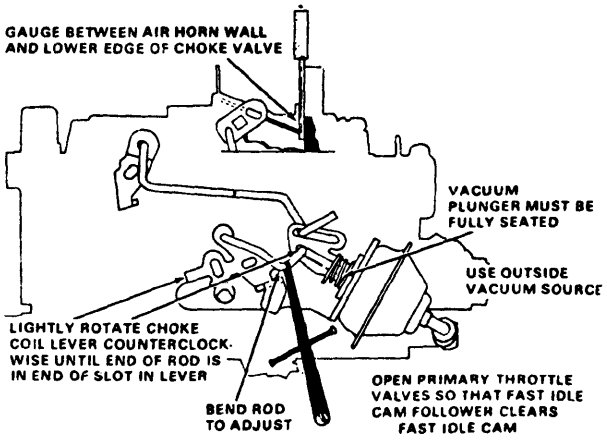
1972 ROCHESTER 4MC & 4MV 4-BARREL (Cont.)

break unit, connect a short 15-20" piece of rubber hose to the nipple of the unit and apply vacuum from an external source to the nipple of the vacuum break unit until the diaphragm is seated and the diaphragm link is in the extended position. Clamp off hose and measure distance between the front wall of air horn and lower edge of choke valve (see Specifications). Remove all play from choke valve by lightly pressing valve toward its open position. *NOTE - Choke rod should be at the bottom of the choke lever.* Bend vacuum break lever tang to adjust.



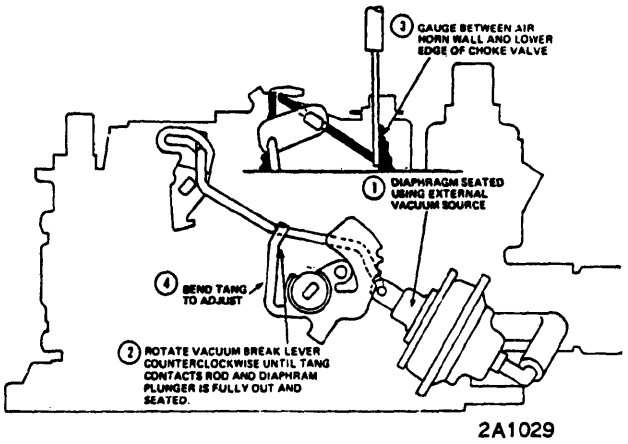
VACUUM BREAK ADJUSTMENT (CADILLAC)

Chevrolet - Seat choke vacuum break diaphragm using an outside vacuum source. Open throttle valve slightly so cam follower will clear steps of fast idle cam. Rotate vacuum break lever counterclockwise (towards direction of closed choke) and hold in place with a rubber band. End of vacuum break rod should also be in outer end of slot in vacuum break diaphragm plunger. Measure distance between lower edge of choke valve and inside air horn wall. To adjust, bend vacuum break link.



VACUUM BREAK ADJUSTMENT (CHEVROLET)

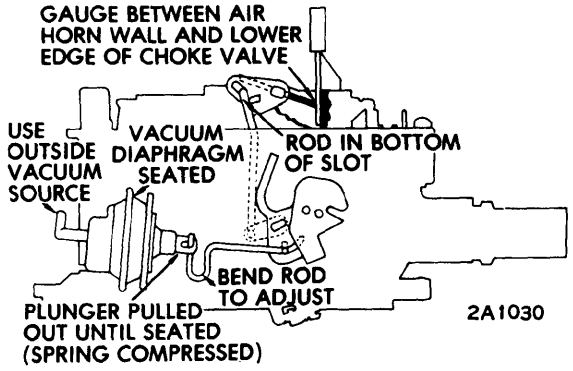
Pontiac - Seat vacuum break diaphragm using an external vacuum source. Rotate vacuum break lever counterclockwise until tang contacts rod and diaphragm plunger is fully out and seated. Measure distance between air horn wall and lower edge of choke valve. To adjust, bend tang on lever.



VACUUM BREAK ADJUSTMENT (PONTIAC)

Auxiliary Vacuum Break (4MV Carburetors)

Buick - Fully seat auxiliary vacuum break diaphragm plunger using an outside vacuum source. With diaphragm in this position, rotate the choke valve towards the closed choke position, pushing on vacuum break lever until the spring loaded plunger is fully extended. With choke valve held in this position, measure distance between lower edge of choke valve and inside air horn wall (see Specifications), if not correct, bend vacuum break link at U-bend to adjust.



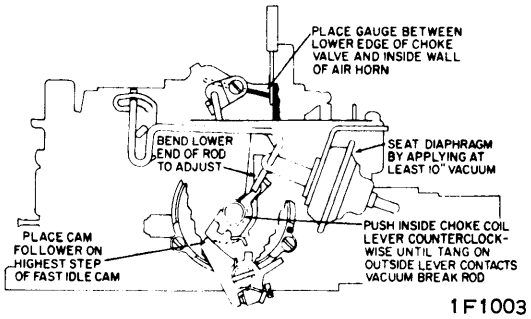
AUXILIARY VACUUM BREAK ADJUSTMENT (BUICK)

Vacuum Break (4MC Carbs.)

Oldsmobile - Place fast idle cam follower on highest step of fast idle cam, use outside vacuum source (at least 10" of Hg) to seat vacuum break diaphragm *(CAUTION - Diaphragm will not seat immediately due to built-in delaying action).* With automatic choke cover and coil assembly removed, press up on inner choke coil lever to rotate shaft and outer lever counterclockwise until tang on outer lever contacts vacuum break rod. Tap lower edge of choke valve down to take up slack in linkage, then check clearance between lower edge of valve and air horn wall. Clearance

1972 ROCHESTER 4MC & 4 MV 4-BARREL (Cont.)

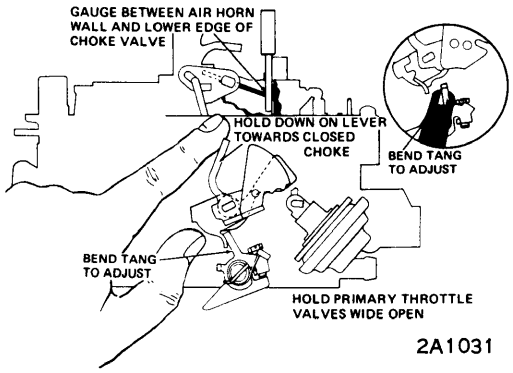
should be as specified (see Specifications), if not correct, bend lower end of vacuum break rod at outer lever tang as required.



VACUUM BREAK ADJUSTMENT (OLDSMOBILE)

Unloader

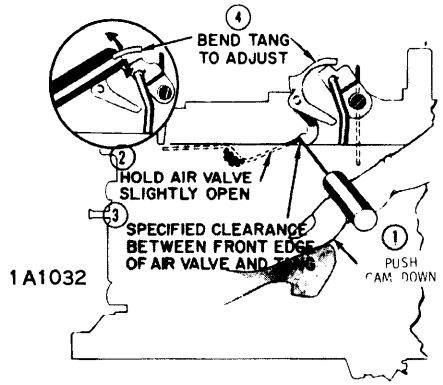
Rotate vacuum break lever counterclockwise towards closed choke position, then open primary throttle to wide open position. With throttle valves held wide open, distance between the lower edge of choke valve and air horn wall should be as specified (see Specifications). To adjust, bend tang on fast idle lever.



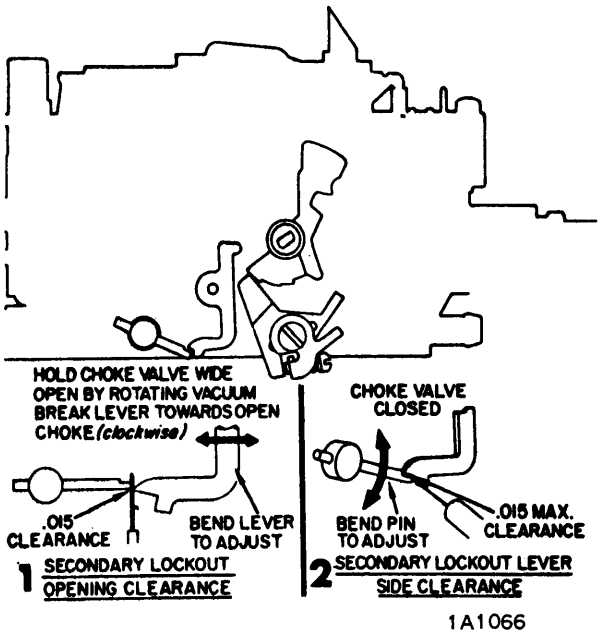
UNLOADER ADJUSTMENT

Air Valve Lockout (4MC Carburetors)

Push cam down and hold air valve slightly open. Measure distance between front edge of air valve and tang on lockout lever. If clearance not correct (see Specifications), bend upper end of lockout lever that bears against choke valve lever.



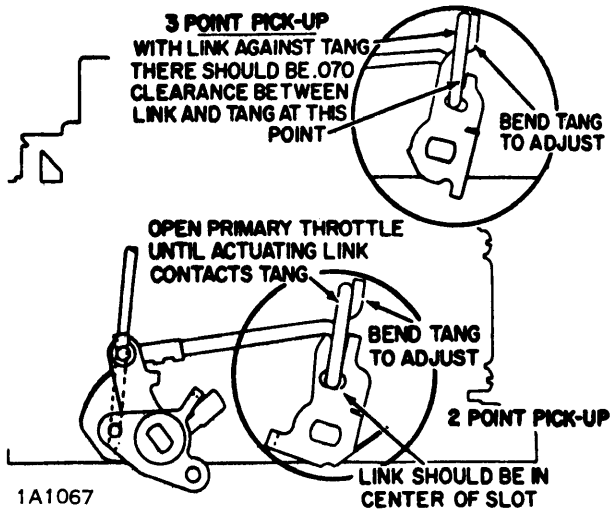
AIR VALVE ADJUSTMENT (4MC CARBS.)



SECONDARY THROTTLE LOCKOUT ADJUSTMENT

Secondary Throttle Lockout

Opening Clearance – Hold choke valve wide open by rotating vacuum break lever toward open choke (Clockwise). With secondary throttle valves held partially open, measure clearance between end of lockout pin and toe of lockout lever, distance should be .015". Bend lockout lever to adjust (see illustration).



SECONDARY THROTTLE CLOSING ADJUSTMENT

Secondary Lockout Pin Side Clearance – With choke valve and secondary throttle valve fully closed, bend lockout pin at point shown to obtain side clearance of .015" between side of lockout pin and lockout lever.

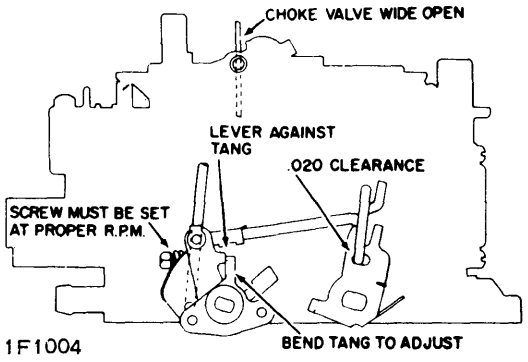
Secondary Throttle Opening

Open primary throttle valves until actuating link contacts upper tang on secondary lever. Since there are two types of linkage in production, check as follows:

1972 ROCHESTER 4MC & 4MV 4-BARREL (Cont.)

2-Point Pickup Linkage – Bottom of link should be in center of secondary lever slot.

3-Point Pickup Linkage – Clearance between link and middle tang should be .070".



SECONDARY CLOSING ADJUSTMENT

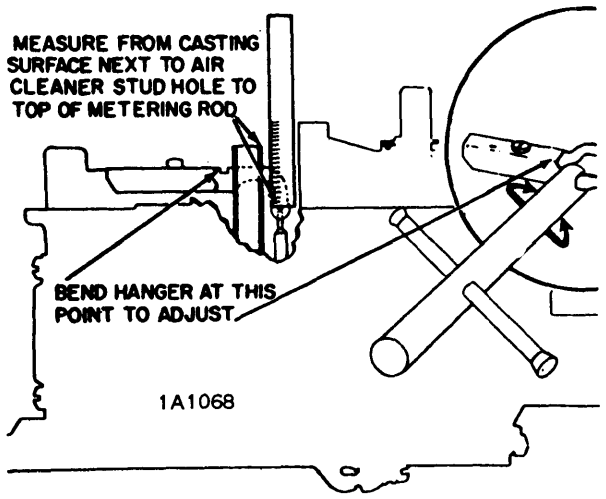
Secondary Closing

With curb idle properly adjusted, cam follower off fast idle cam and choke valve wide open, clearance between secondary throttle actuating rod and front of slot in secondary throttle lever (with closing tang on throttle lever resting against actuating lever) should be .020". If adjustment required, bend tang on primary throttle actuating lever.

Secondary Metering Rods

NOTE – Metering rod hangers are selectively matched to each carburetor and letter stamped. Unless hanger has been damaged, no change in hanger (metering rod) setting will be necessary.

If a new metering rod hanger is installed, adjustment may be checked by measuring the distance from top of metering rod to top of air horn (next to air cleaner stud hole). If measurement not as specified (see Specifications), bend metering rod hanger so that both metering rods are adjusted to the same dimension. *NOTE – Air valve must be closed when measurement is taken.*



SECONDARY METERING ROD ADJUSTMENT

OVERHAUL

Disassembly

Air Horn – 1) Remove idle vent valve assembly. Disconnect choke rod from upper choke shaft lever and pump rod from pump lever. Remove vacuum break rod.

2) Remove air horn-to-bowl attaching screws (2) next to primary venturi. Remove air horn by lifting straight up. Air horn gasket should remain on bowl. *CAUTION – Be careful not to bend the two small main well air bleed tubes pressed into the air horn. DO NOT attempt to remove these tubes.*

3) Hold air valve wide open, then tilt and slide secondary metering rods from hanger. *NOTE – Further disassembly of air horn is not required for cleaning only.* For parts replacement, take out choke valve screws, remove choke valve and slide choke shaft out. Remove pump lever roll pin and remove pump lever. *CAUTION – Air valves and shaft are calibrated and must not be removed. If damaged, replace air horn assembly.*

Float Bowl – 1) Remove pump plunger. Remove air horn gasket from dowels on secondary side, then remove gasket from around power piston and primary metering rods. Remove pump return spring, plastic filler over float valve, and power piston and main metering rods (use needle-nose pliers and pull straight up on metering rod hanger directly over power piston).

2) Remove power piston spring, disconnect tension spring from top of each metering rod, and remove rods from hanger. Remove float assembly by sliding assembly toward front of bowl to disengage needle pull clip. Be careful not to distort pull clip. Remove float needle retainer and needle assembly.

3) Remove primary metering jets. *CAUTION – Do not remove secondary metering discs.* Remove pump discharge check ball retainer and check ball, and remove baffle from secondary side of bowl. On 4MV carburetors, remove vacuum hose from tube connection on bowl and from vacuum break assembly. Remove choke assembly from float bowl *(NOTE – If further disassembly of choke is necessary, remove vacuum brake link. Spread retaining ears on bracket next to vacuum break assembly and remove assembly from the lever).*

4) Remove fast idle cam from choke assembly. Remove lower choke rod and actuating lever from inside the float bowl well. Remove hot idle compensator and "O" ring from float bowl.

5) Remove fuel filter and spring. Remove throttle body-to-bowl screws (2) and remove throttle body and insulator gasket.

1972 ROCHESTER 4MC & 4 MV 4-BARREL (Cont.)

Automatic Choke Disassembly (4MC Carb.) – 1) Pull cover and coil assembly straight out and off choke housing. *Do not attempt to remove baffle plate beneath thermostatic coil.* Remove retaining screw and washer inside choke housing, slide complete choke assembly off float bowl.

2) Remove coil lever retaining screw from end of shaft inside choke housing, remove lever from intermediate choke shaft flats, then remove intermediate choke shaft by sliding it out of housing, remove fast idle cam from shaft.

3) Remove cup seal from inside choke housing shaft hole in housing before immersing housing in carburetor cleaner, remove cup seal from float bowl plastic insert before cleaning bowl. *CAUTION – Do not remove plastic insert.*

Throttle Body – Remove pump rod from throttle lever. Remove idle limiter caps, idle mixture screws and springs. *CAUTION – Handle throttle body carefully so as not to damage secondary throttle valves.* Further disassembly for cleaning purposes is not necessary.

Cleaning & Inspection

1) No rubber parts, plastic parts, diaphragms or pump plungers should be immersed in carburetor cleaner. However, the plastic cam on the air valve shaft may be cleaned normally in carburetor cleaner.

2) If air valve or cam are damaged, or air valve is binding, air horn assembly must be replaced. After cleaning parts in a suitable carburetor cleaner, rinse all parts as directed by carburetor cleaner manufacturer. Dry all parts and blow out all passages with compressed air.

3) When cleaning or overhauling a carburetor, identify the carburetor by the code stamped adjacent to the fuel inlet and order a complete Repair Kit for the carburetor being worked on. Check all valves and shafts for binding or damage.

Reassembly

Reverse disassembly procedure using new parts and gaskets contained in the Repair Kit. When reassembling float bowl, be sure to adjust float level and make all other adjustments. *See "Adjustment" in this article.*

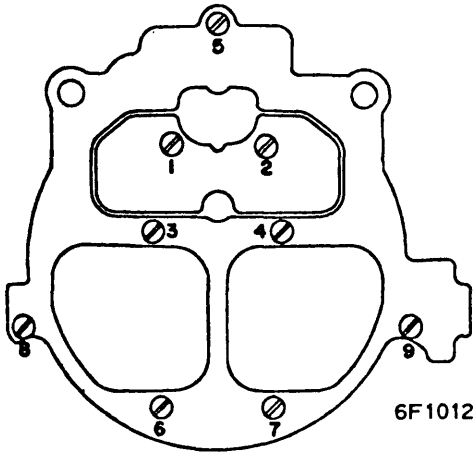
Automatic Choke Reassembly (4MC Carb.) – 1) Install cup seal in plastic insert on side of float bowl (lip facing outward). Install fast idle cam on intermediate choke shaft with steps on cam facing downward. Install new cup seal inside choke housing (lips facing inward toward inside of housing), then install fast idle cam and intermediate shaft through seal in choke housing.

2) Install thermostatic coil lever on intermediate choke shaft flats so that both inside and outside levers face toward fuel inlet, then tighten retaining screw. Install lower choke rod lever in float bowl cavity. Install vacuum seal in choke housing cavity.

3) Install housing on bowl and slide intermediate shaft into lower choke lever. If choke housing correctly installed, tang on lever should be beneath fast idle cam. Do not install choke cover and coil assembly until choke coil lever adjustment is completed. *See "Adjustment" in this article.*

Vacuum Break Installation – If vacuum break diaphragm was removed from bracket, slide vacuum break diaphragm between retaining ears and bend ears down slightly to hold assembly securely. Install fast idle cam on vacuum break assembly.

Air Horn Installation – To prevent distortion of the air horn and binding of choke valve or air valve, tighten all air horn screws in correct sequence as shown in the accompanying illustration.



AIR HORN SCREW ATTACHING SEQUENCE