ROCHESTER MODELS M & MV SINGLE BARREL

ROCHESTER MODEL M

CHEVROLET & GMC

Application	Rochester No.
1968	
230" 6 Cyl.	7028006
230" 6 Cyl. W/Gov.	7028010
250" 6 Cyl.	7028007
250" 6 Cyl. W/Gov.	7028011
292" 6 Cyl. 10 & 1500 Series	7028012
292" 6 Cyl. 20, 2500, 30 & 3500 Series	7028013
1969	
230" & 250" 6 Cyl. G-10 & 1500	7029007
250" 6 Cyl. All Others	7029011
292" 6 Cyl.	7029012

ROCHESTER MODEL MV

CHEVROLET & GMC

Application	Rochester No.
1969	
250" 6 Cyl.	7029021
292" 6 Cyl.	7029022
1970	
250" 6 Cyl. G-10 & 1500	7040007
250" 6 Cyl. 10 & 1500 Series	7040021
250" 6 Cyl. 20, 2500, 30 & 3500 Series	7040025
292" 6 Cyl. 10 & 1500 Series	7040022
292" 6 Cyl. 20, 2500, 30 & 3500 Series	7040026
1971	
250" 6 Cyl. G-10 & 1500	7040007
250" 6 Cyl. 10 & 1500 Series	7041021
250" 6 Cyl. 20, 2500, 30 & 3500 Series	7041025
292" 6 Cyl. 10 & 1500 Series	7041022
292" 6 Cyl. 20, 2500, 30 & 3500 Series	7041026
1972	
250" 6 Cyl. 10 & 1500 Series, G-20 & 2500 (Federal)	
Man. Trans.	7042021
Auto. Trans.	7042022
250" 6 Cyl. 10 & 1500 Series, G-20 & 2500 (Calif.)	
Man. Trans.	7042991
Auto. Trans.	7042992
250" 6 Cyl. C & K-20 & 2500, G-30 & 3500 (Federal)	
Man. Trans. (Light Duty)	7042021
Auto. Trans. (Light Duty)	7042022
250" 6 Cyl. C & K-20 & 2500, G-30 & 3500 (Calif.)	
Man. Trans. (Light Duty)	7042991
Auto. Trans. (Light Duty)	7042992
250" 6 Cyl. (Heavy Duty)	7042025
292" 6 Cyl. All	7042026
1973	
250" 6 Cyl. (Light Duty)	
Man. Trans.	7043021
Auto. Trans.	7043022
250" 6 Cyl. (Heavy Duty, Federal)	7043025
250" 6 Cyl. (Heavy Duty, Calif.)	①
292" 6 Cyl. (Federal)	7043026
292" 6 Cyl. (Calif.)	7043326
1974	
250" 6 Cyl. (Light Duty, Federal)	
Man. Trans.	7044021
Auto. Trans.	7044022
250" 6 Cyl. (Light Duty, Calif.)	
Man. Trans.	7044321
Auto. Trans.	①
250" 6 Cyl. (Heavy Duty)	7044025
292" 6 Cyl. (Heavy Duty)	7044026

① — Not available.

NOTE — Carburetors used on vehicles with A.I.R. or CCS are special units with different jet calibrations and adjustment specifications.

NOTE — For application purposes only, Light Duty (L/D) will refer to all Chevrolet 10 series, GMC 1500 series, Chevrolet Sportvans, GMC Rally Vans and all Suburbans. Heavy Duty (H/D) will refer to all remaining models.

CARBURETOR IDENTIFICATION

Rochester carburetor part number is stamped on fuel bowl. Carburetors may be color coded for identification.

DESCRIPTION

Single barrel downdraft carburetor with manual choke (M) or automatic choke (MV). Carburetors have throttle operated metering rod with vacuum operated power piston control (throttle drive rod engages slot in power piston so that piston can lift rod up in jet for full power operation). Idle air vent is located on bowl cover and is operated by a tang on accelerating pump lever. A hot idle compensator valve is located under cover on throttle lever side of carburetor. Automatic choke carburetors have diaphragm type vacuum break assembly located under cover on side of air horn and linked directly to choke valve. Automatic choke is separate well type mounted in manifold and linked to choke valve lever by adjustable rod.

ADJUSTMENT

HOT (SLOW) IDLE RPM

See appropriate article in TUNE-UP Section.

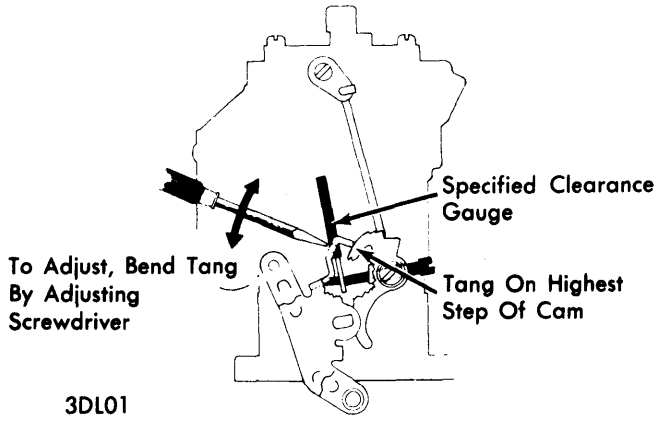
COLD (FAST) IDLE RPM (ON VEHICLE)

See appropriate article in TUNE-UP Section.

COLD (FAST) IDLE RPM (BENCH ADJUSTMENT)

Set initial off car idle speed by turning idle speed screw or idle speed solenoid 1 ½ turns from fully closed position. Place fast idle cam follower tang on highest step of cam (automatic choke) or farthest position on smooth contour of cam (manual choke). Check clearance between idle speed screw and idle stop tang on throttle lever (see specifications). To adjust, insert a screwdriver in slot in tang and bend in or out to obtain specified clearance.

ROCHESTER MODELS M & MV SINGLE BARREL (Cont.)



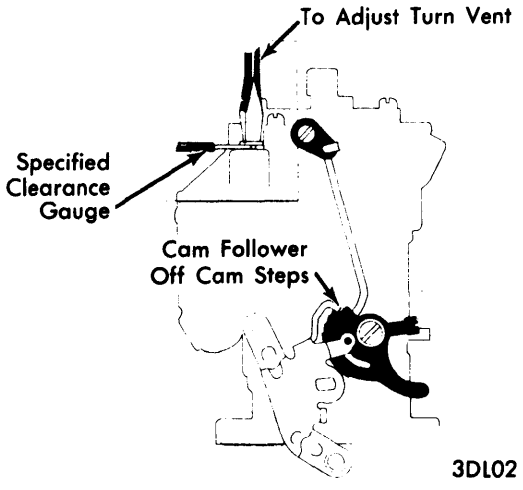
FAST IDLE (BENCH) ADJUSTMENT

ACCELERATOR & DOWNSHIFT LINKAGE ADJUSTMENT

See appropriate article in TUNE-UP Section.

IDLE VENT

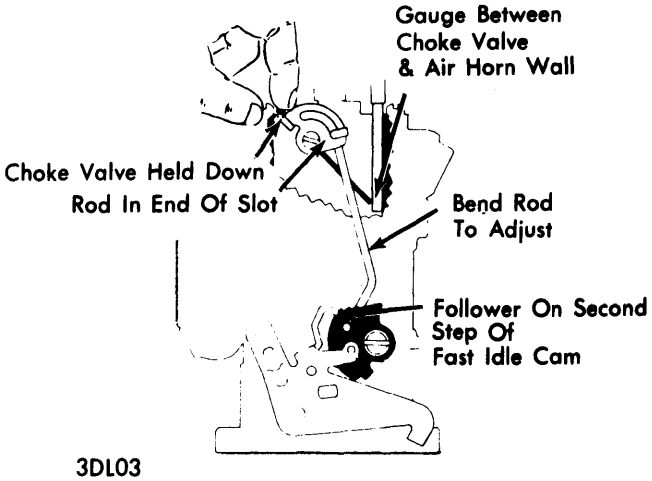
Engine idle RPM must be correct and idle stop solenoid (if equipped) must be energized when checking and adjusting idle vent. Hold choke valve wide open so that cam follower clears fast idle cam and close throttle valve so that throttle lever is against stop screw. Check clearance between face of vent valve and valve seat on air horn. If clearance is not correct (see specifications), adjust by using screwdriver to turn slotted vent valve head in or out as required. *NOTE — Some vent valves do not have a closing spring and act as a pressure relief to vent excessive vapor pressures in bowl.*



IDLE VENT ADJUSTMENT

CHOKE ROD

Automatic Choke Carburetors — Fast idle adjustments must be correct when adjusting choke rod. Position fast idle cam follower on second step of fast idle cam against shoulder of high step. Close choke valve as far as possible with light pressure on high side of choke valve. Choke rod must be in end of slot in choke lever. Measure clearance between choke valve and air horn wall at center of choke valve. If clearance is not correct (see specifications), adjust by bending choke rod at lower offset angle.

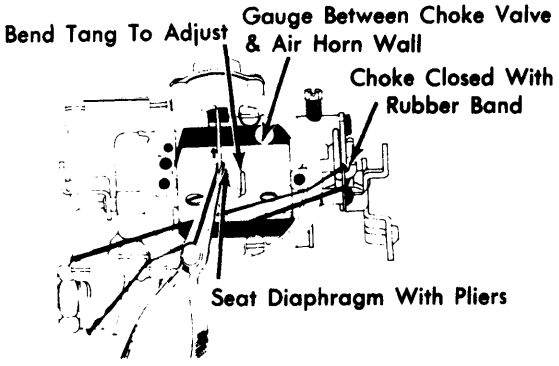


CHOKE ROD ADJUSTMENT

Manual Choke Carburetors — Adjust in same manner as automatic choke carburetors, except align index mark on cam with contact point of cam follower.

VACUUM BREAK (AUTOMATIC CHOKE ONLY)

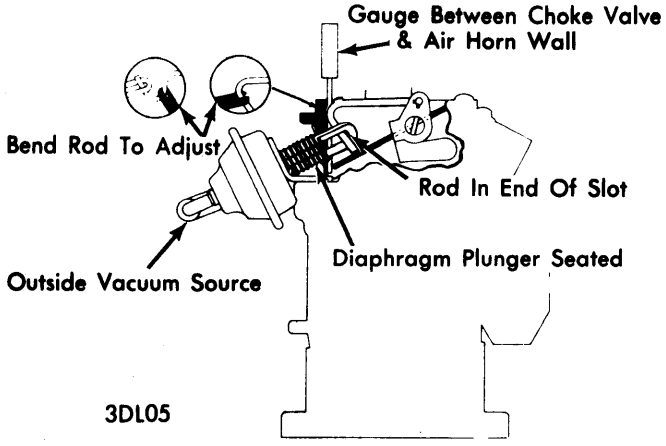
Without External Vacuum Break Diaphragm — Open throttle valve so that cam follower clears highest step on fast idle cam. Close choke valve fully and hold in place with a rubber band (see illustration). Press inward on vacuum break plunger rod until diaphragm is seated. Measure clearance between lower edge of choke valve and air horn wall using specified gauge (see specifications). To adjust to specified clearance, bend vacuum break lever on choke valve.



VACUUM BREAK ADJUSTMENT (WITHOUT DIAPHRAGM)

ROCHESTER MODELS M & MV SINGLE BARREL (Cont.)

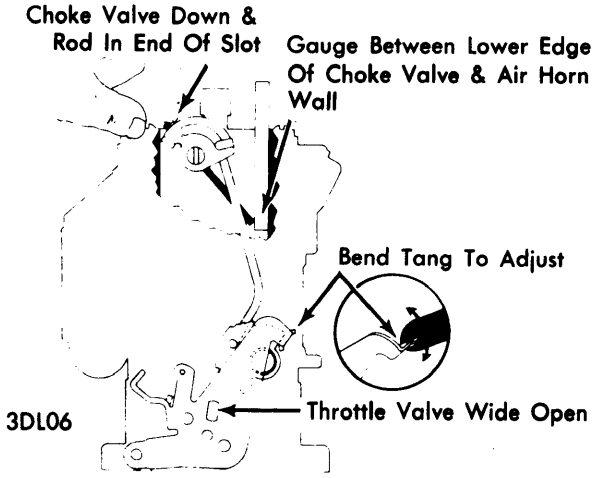
With External Vacuum Break Diaphragm – Attach an outside vacuum source on diaphragm to seat diaphragm plunger. Hold choke valve rod down in end of slot. Measure clearance between lower edge of choke valve and air horn wall using specified gauge. To adjust to specified clearance, bend rod in slot in diaphragm plunger.



VACUUM BREAK ADJUSTMENT (WITH DIAPHRAGM)

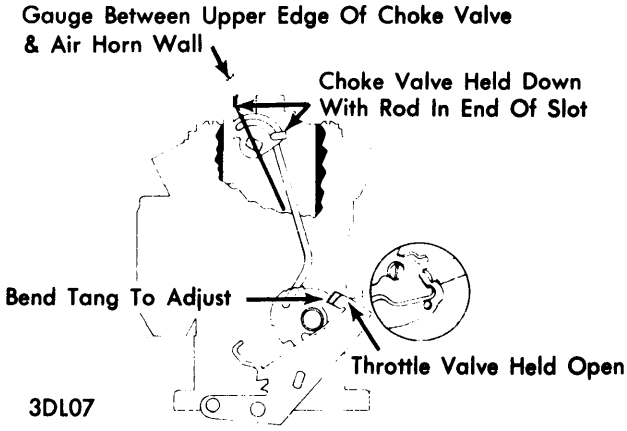
UNLOADER (AUTOMATIC CHOKE ONLY)

All Models (Except 1974 Heavy Duty) – Hold choke valve closed with light pressure on choke coil lever. Rotate throttle lever to wide open position. Check clearance between lower edge of choke valve at center and air horn wall. If clearance not as specified (see specifications), adjust by bending unloader tang on throttle lever as required.



UNLOADER ADJUSTMENT (EXCEPT FOR 1974 HEAVY DUTY)

1974 Heavy Duty Models – Hold choke valve rod down in end of slot and hold throttle valve completely open. Insert specified gauge (see specifications) between upper edge of choke valve and air horn wall. To adjust, bend unloader tang on throttle lever.



UNLOADER ADJUSTMENT (1974 HEAVY DUTY)

CHOKE COIL ROD (AUTOMATIC CHOKE ONLY)

1968-71 – Disconnect rod from choke lever at choke valve and hold choke valve closed. Pull upward on rod to end of travel. Bottom of rod should be even with top of hole in lever. To adjust bend rod at offset.

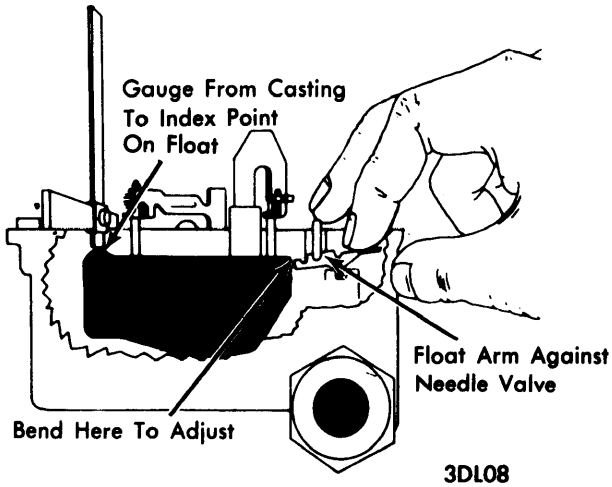
1972-74 – Disconnect rod from choke lever at choke valve and hold choke rod completely closed. Push choke rod down to end of travel. Bottom of rod should be even with top of hole in lever. To adjust bend rod at offset.

MANUAL CHOKE ADJUSTMENT

Push choke knob into stop, then pull out 1/8". Loosen cable clamp at carburetor bracket and adjust cable through clamp until choke valve is fully open and tighten clamp. Make sure choke valve fully opens and closes as cable is actuated.

FLOAT LEVEL

With air horn and gasket removed, hold float pin in place and push down on float arm at outer end against top of float needle. At a point 1/16" from end of float toe (not on radius), or at index point, measure distance from top of float at toe, or index point, to float bowl gasket surface. If distance is not as specified (see specifications), adjust by bending float up or down at float arm junction.



FLOAT LEVEL ADJUSTMENT

ROCHESTER MODELS M & MV SINGLE BARREL (Cont.)

METERING ROD

With air horn removed, remove metering rod by holding throttle valve wide open and pressing down on metering rod against spring tension and sliding rod out of slot in holder. Back out idle speed screw or idle stop solenoid if equipped and rotate fast idle cam so that cam follower clears cam. Hold throttle valve completely closed and press down on power piston so that it is held against its stop. Swing metering rod holder over flat surface of bowl casting adjacent to carburetor bore and use specified gauge to check clearance (see specifications) between lower surface of holder and bowl casting. Gauge should be a slide fit. If clearance is not as specified, adjust by carefully bending metering rod holder up or down as required.

COMBINED EMISSION CONTROL (CEC) VALVE

NOTE — CEC Valve is preset at factory and normally should not require adjustment. However in the case of solenoid replacement, major carburetor overhaul, or throttle body replacement, use following procedure to adjust CEC Valve.

With hot (slow) idle RPM correctly adjusted and engine off, pull outward on end of CEC valve plunger to end of travel. Adjust plunger to just contact throttle lever.

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 ①	Fast ②							
7028066	.....	2400	9/32"	.140"	.100"	.150"	.....	.....	.050"
7028010	.....	2400	9/32"	.140"	.100"	.150"	.....	.....	.050"
7028007	.....	2400	9/32"	.140"	.100"	.150"	.....	.....	.050"
7028011	.....	2400	9/32"	.140"	.100"	.150"	.....	.....	.050"
7028012	.....	2400	9/32"	.080"	.100"	.150"	.....	.....	.050"
7028013	.....	2400	9/32"	.080"	.100"	.150"	.....	.....	.050"
7029007	.....	2400	1/4"	.070"	.100"	.150"	.....	.....	.050"
7029011	.....	2400	1/4"	.070"	.100"	.150"	.....	.....	.050"
7029012	.....	2400	1/4"	.070"	.100"	.150"	.....	.....	.050"
7029021	.....	2400	1/4"	.070"	.100"	.180"	.260"	.350"	.050"
7029022	.....	2400	1/4"	.070"	.100"	.245"	.350"	.350"	.050"
7040007	.....	2400	1/4"	.070"	.100"	.190"	.230"	.350"	.....
7040021	.....	2400	1/4"	.070"	.100"	.190"	.230"	.350"	.....
7040022	.....	2400	1/4"	.070"	.100"	.275"	.350"	.350"	.....
7040026	.....	2400	1/4"	.070"	.100"	.245"	.350"	.250"	.....
7041021	.....	2400	1/4"	.080"	.100"	.180"	.230"	.350"	.....
7041022	.....	2400	1/4"	.070"	.100"	.300"	.350"	.350"	.....
7041025	.....	2400	1/4"	.070"	.100"	.180"	.260"	.350"	.....
7041026	.....	2400	1/4"	.070"	.100"	.275"	.350"	.350"	.....
7042021	.....	2400	1/4"	.080"	.....	.150"	.225"	.500"	.....
7042022	.....	2400	1/4"	.080"	.....	.125"	.190"	.500"	.....
7042991	.....	2400	1/4"	.080"	.....	.150"	.225"	.500"	.....
7042992	.....	2400	1/4"	.080"	.....	.125"	.190"	.500"	.....
7042025	.....	2400	1/4"	.070"	.....	.125"	.260"	.500"	.....
7042026	.....	2400	1/4"	.070"	.....	.275"	.350"	.500"	.....
7043021	.....	1800	1/4"	.080"	.....	.275"	.350"	.500"	.....
7043022	.....	1800	1/4"	.080"	.....	.245"	.300"	.500"	.....
7043025	.....	2400	1/4"	.070"	.....	.350"	.430"	.600"	.....
7043026	.....	2400	1/4"	.070"	.....	.375"	.430"	.600"	.....
7043326	.....	2400	1/4"	.070"	.....	.375"	.430"	.600"	.....
7044021	.....	1800	11/32"	.080"	.....	.275"	.350"	.500"	.....
7044022	.....	1800	11/32"	.080"	.....	.245"	.300"	.500"	.....
7044321	.....	1800	11/32"	.080"	.....	.300"	.375"	.500"	.....
7044025	.....	2400	1/4"	.070"	.....	.245"	.300"	.500"	.....
7044026	.....	2400	1/4"	.070"	.....	.275"	.350"	.500"	.....

① See appropriate article in TUNE-UP Section.
② — In Neutral

ROCHESTER MODELS M & MV SINGLE BARREL (Cont.)

OVERHAUL

DISASSEMBLY

1) If equipped with C.E.C. valve, remove vacuum hose from valve and timed spark tube, then bend back retaining tabs on lockwashers and remove large C.E.C. valve nut and remove valve from bracket. *NOTE — Do not remove C.E.C. valve bracket from float bowl unless replacement of bracket is necessary.* Remove electrically operated idle stop solenoid wire connector and unscrew solenoid (if equipped) from float bowl casting by turning solenoid body counterclockwise. *NOTE — Do not immerse C.E.C. valve assembly or idle stop solenoid in any type of carburetor cleaner.*

2) Remove fast idle cam attaching screw, remove cam from choke rod at lower end by rotating over squirt on rod and from upper lever by rotating rod out of slot. Remove air horn to float bowl attaching screws (6) and remove air horn by lifting straight up. Invert air horn and remove two vacuum break diaphragm cover screws and carefully remove diaphragm cover.

3) Hold choke valve open, push upward on eyelet on choke valve at a 45° angle until looped end of rod slides off wire lever attached to choke valve, then remove diaphragm plunger rod through hole in air horn. If necessary, choke valve, vacuum break lever, and choke shaft can be removed from air horn by removing thermostatic coil lever attaching screw, then removing thermostatic coil lever and two choke valve attaching screws; remove choke valve and shaft from air horn. *NOTE — Choke valve screws are held in place with Loc-tite, so it will be necessary to re-stake them after assembly.*

CAUTION — Do not remove air cleaner stud bridge as Loc-tite is used on attaching screws.

4) Remove air horn to float bowl gasket (gasket has slit next to metering rod lever). Remove float assembly from bowl by lifting upward on float hinge pin, then remove hinge pin from float arm and remove float needle from seat. Disconnect accelerator pump and power piston actuator lever from end of throttle shaft by removing lever attaching screw. Hold down on power piston while removing lever, power piston spring and metering rod assembly may now be removed from float bowl.

5) Remove lower end of power piston link from actuator lever by rotating until tang on rod slides out of notch in lever. Remove actuator lever from lower end of accelerator pump link in same manner. Push down on accelerator pump and remove actuator link by rotating until tang on rod is aligned with slot on pump plunger lever, remove link.

6) Remove pump assembly from float bowl, then remove pump return spring and power piston spring from float bowl. Remove "T" guide and pump discharge spring using needle nose pliers. Invert bowl and remove pump discharge ball and idle tube. Remove main metering jet from bottom of fuel bowl and remove float needle seat and gasket using suitable tool (BT-3007). Remove two screws from idle compensator cover, then remove cover, hot idle compensator and seal from recess in bowl.

7) The idle stop screw can now be removed. Remove fuel inlet nut and gasket, then remove filter and relief spring. Invert carburetor bowl and remove throttle body to bowl attaching screws, throttle body and insulator gasket. *NOTE — Due to close tolerance fit, do not remove valve or shaft.*

CLEANING & INSPECTION

Thoroughly clean carburetor castings and metal parts in a suitable solution, do not immerse rubber and plastic parts in cleaner. Blow out all passages with compressed air, do not use drills to clean jets or passages. Check float needle and seat assembly for wear, inspect upper and lower casting sealing surfaces for damage, inspect holes in levers for out of round condition, examine fast idle cam for wear or damage, check throttle and choke levers for binds or damage, and check all springs for distortion or tension loss; replace parts as necessary.

REASSEMBLY

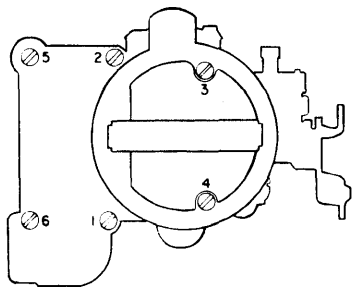
Pump Plunger Installation — Install with slide protruding through bottom of bowl casting. Push downward on pump slide and install pump drive link into hole in lower end of shaft. Ends of drive link point towards carburetor bore.

Power Piston Installation — Install power piston and pump actuating lever to lower end of link (projection on lever points downward). Install spring into cavity, then install end of power piston actuating rod into groove on side of power piston. Install power piston metering rod assembly and actuating rod into float bowl (metering rod entering jet orifice).

NOTE — Check operation of entire drive mechanism, metering rod and accelerator pump, to ensure free operation from closed to wide open throttle, before installing air horn.

Choke Shaft Installation — Install choke shaft, choke valve and vacuum break lever. Align choke valve, tighten retaining screws and stake to prevent loosening.

Air Horn Installation — Install by gently lowering onto float bowl until seated, install long and short attaching screws, and torque screws tightly using following tightening sequence (see illustration).



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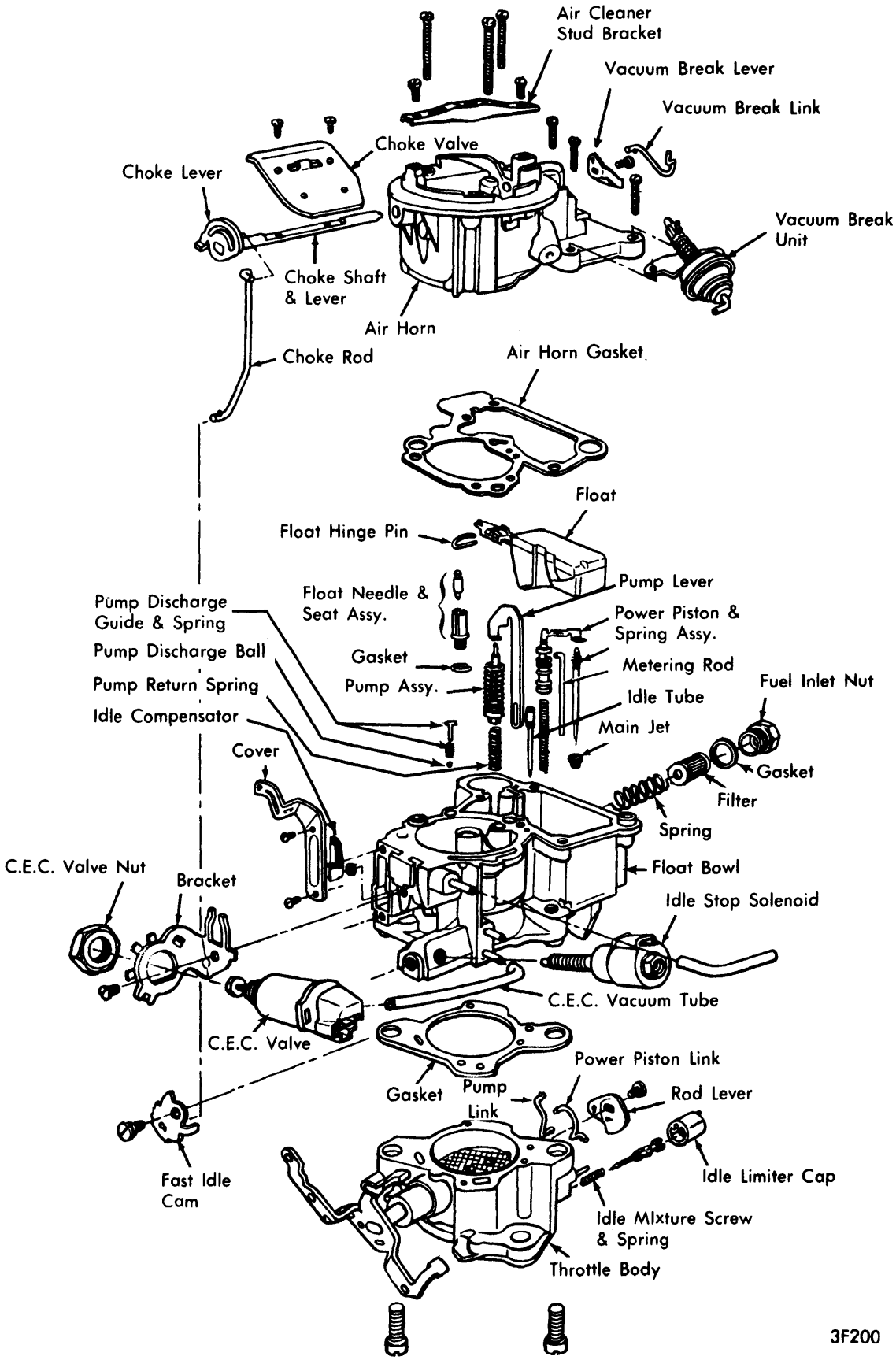
AIR HORN TIGHTENING SEQUENCE

ROCHESTER MODELS M & MV SINGLE BARREL (Cont.)



ROCHESTER MV CARBURETOR ASSEMBLY