HOLLEY MODEL 5200, 5210-C & 5220 2-BARREL

CARBURETOR APPLICATION

CHRYSLER CORP. (MODEL 5220)

Application	Chrysler Corp. Carb. No. Man. Trans.	Auto. Trans.
105" (1.7 Liter) 4 Cylinder		
Federal		
Without A/C	R-9108A	R-9110A
With A/C	R-9109A	R-9111A
California		
Without A/C	R-8676A	R-8841A
With A/C	R-8840A	R-8842A

FORD MOTOR CO. (MODEL 5200)

Application	Ford Motor Co. Part No. Man. Trans.	Auto. Trans.
140" (2.3 Liter) 4 Cylinder		
Federal		
Without A/C	E0EE-RA	E0EE-TA
With A/C	E0EE-GA	E0EE-JA
Turbocharged	E0ZE-AAA	.....

GENERAL MOTORS – CHEVROLET (MODEL 5210-C)

Application	Chevrolet Part No. Man. Trans.	Auto. Trans.
98" (1.6 Liter) 4 Cylinder		
Federal		
Without A/C	14004463, 467	14004461, 465
With A/C	14004464, 468	14004462, 466

CARBURETOR IDENTIFICATION

Carburetor identification number may be found stamped on side of float bowl or on a metal tag attached to carburetor.

DESCRIPTION

Carburetor is two stage, two venturi type, with primary venturi smaller than secondary. Secondary stage operated by mechanical linkage. Primary stage includes curb idle, accelerator pump, idle transfer, main metering and power enrichment systems. Secondary stage includes transfer, main metering and power enrichment systems. A single fuel bowl supplies fuel for both stages. Carburetor assemblies utilize an automatic choke with electric heater assist.

For improved engine starting when engine is warm, all carburetors utilize a vacuum-operated fuel bowl vent valve. This allows fuel vapors to vent into carbon canister when engine is off. With engine running, fuel vapors are vented into air horn of carburetor. All models use integral-type electrically heated choke.

ADJUSTMENT

HOT (SLOW) IDLE RPM

See appropriate article in TUNE-UP SERVICE PROCEDURES.

IDLE MIXTURE

See appropriate article in TUNE-UP SERVICE PROCEDURES.

COLD (FAST) IDLE RPM

See appropriate article in TUNE-UP SERVICE PROCEDURES.

FLOAT LEVEL

1) With air horn removed, turn upside down. Allow weight of float to press down against float needle valve. *See Fig. 1.*

2) Measure float level specified clearance between top of float and air horn gasket surface. Clearance can be checked using a specified drill or pin gauge.

3) Make sure float tang still rests on float needle when clearance is checked. To adjust, bend tang that contacts float needle.

NOTE – *Do not apply pressure to float needle while checking or changing adjustment.*

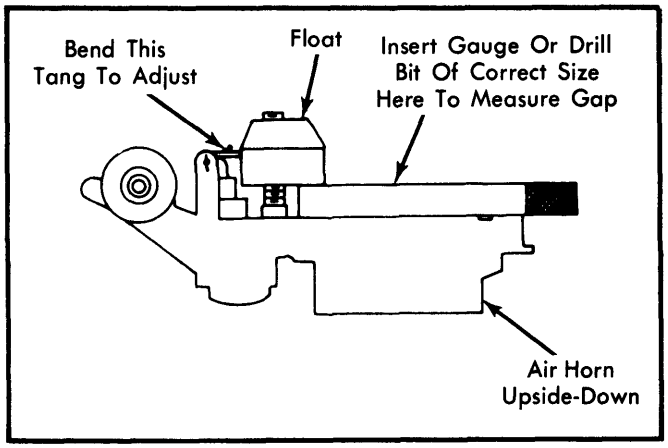

Fig. 1 Adjusting Float Level

FLOAT DROP

All Models (Exc. General Motors) – 1) With air horn removed, position right side up. Allow float to hang. Using "T" scale, measure specified float drop from air horn gasket surface to lowest point at bottom of float. *See Fig. 2.*

2) To adjust, bend float tang on float arm that contacts fuel inlet needle seat boss.

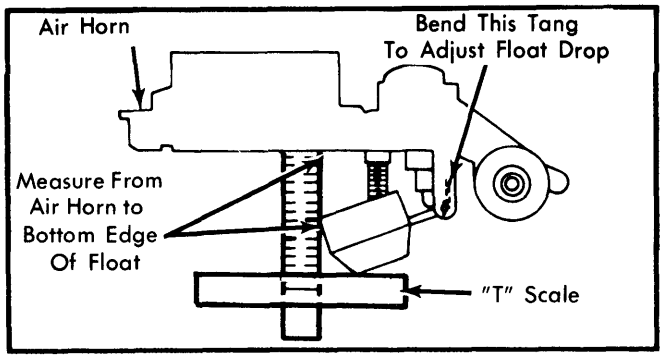

Fig. 2 Adjusting Float Drop (Chrysler Corp. Only)

HOLLEY MODEL 5200, 5210-C & 5220 2-BARREL (Cont.)

FAST IDLE CAM POSITION

All Models (Exc. Chrysler Corp.) – 1) Position fast idle speed screw on low step of fast idle cam (Ford models) or second highest step of fast idle cam (General Motors models), against shoulder of next highest step. *See Fig. 3.*

2) Measure fast idle cam position specified clearance between lower edge of choke valve and air horn wall. Clearance can be measured using a specified drill or pin gauge.

3) With clearance correct, choke lever tang should just contact lever on fast idle cam. To adjust, bend choke lever tang.

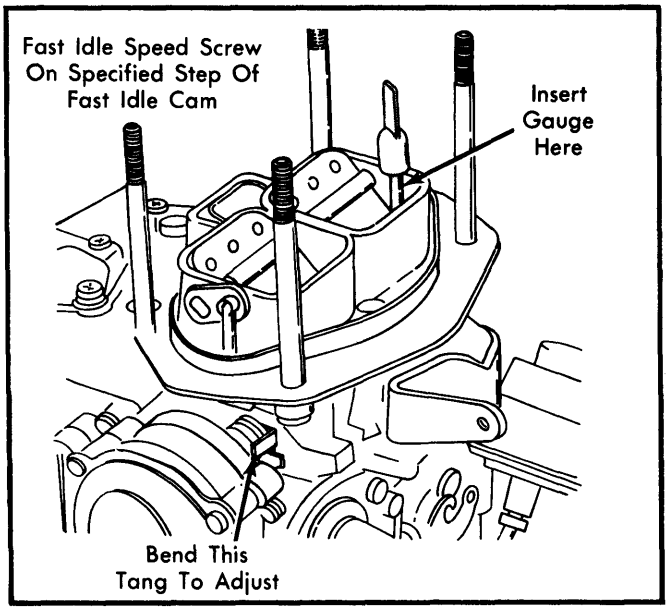

Fig. 3 Adjusting Fast Idle Cam (All Models Except Chrysler Corp.)

CHOKE VACUUM KICK (INITIAL CHOKE VALVE CLEARANCE)

Ford Models – 1) Remove retaining screws from choke coil cover. Remove choke coil cover and coil. *See Fig. 4.*

2) Place fast idle speed screw on second step of fast idle cam. Press choke diaphragm stem in towards stop using screwdriver.

3) Remove all slack from choke linkage. Measure choke vacuum kick specified clearance between lower edge of choke valve and air horn wall.

4) Clearance can be measured using a specified drill or pin gauge. To adjust, turn screw in end of vacuum diaphragm using a 5/32" Allen wrench.

5) Install choke coil and cover, and retaining ring. Install screws. Adjust automatic choke to correct setting.

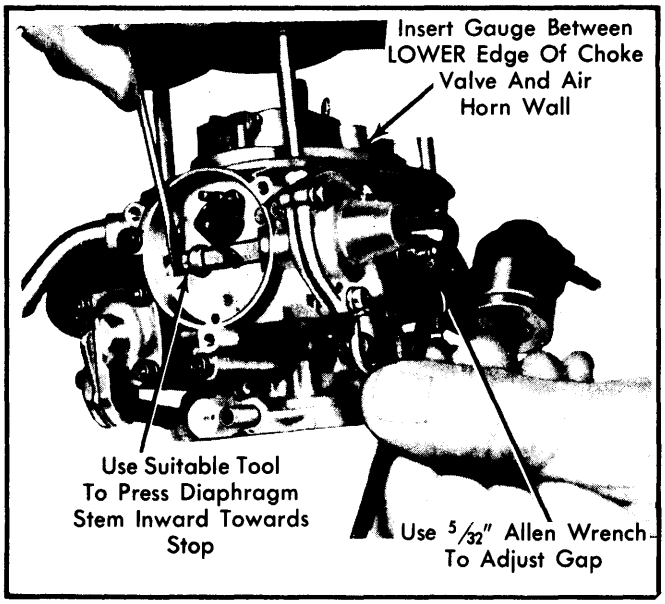

Fig. 4 Adjusting Choke Vacuum Kick (Ford Motor Co. Models)

All Models (Exc. Ford Motor Co.) – 1) Open throttle and close choke. Now close throttle to trap fast idle cam in closed choke position. *See Fig. 5.*

2) Disconnect vacuum hose at choke vacuum diaphragm. Connect an outside vacuum source. Apply a minimum of 15 in. Hg. of vacuum.

3) Apply a slight closing pressure on choke valve with finger. Measure choke vacuum kick specified clearance between upper edge of choke valve and air horn wall (Chrysler models) or lower edge of choke valve and air horn wall (General Motors models).

4) Clearance can be measured using a specified drill or pin gauge. To adjust, turn screw in end of vacuum diaphragm using a 5/32" Allen wrench.

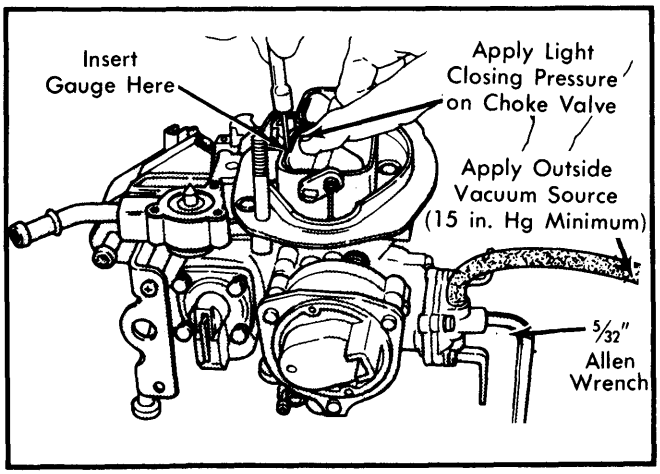

Fig. 5 Adjusting Choke Vacuum Kick (Chrysler Corp. and General Motors Models)

HOLLEY MODEL 5200, 5210-C & 5220 2-BARREL (Cont.)

CHOKE UNLOADER

General Motors Models Only – 1) Open the throttle valves wide open. Measure the choke unloader specified clearance between the lower edge of choke valve and air horn wall. See *Fig. 6*.

2) Clearance can be checked using a specified drill or pin gauge. To adjust, bend choke unloader tang on fast idle cam.

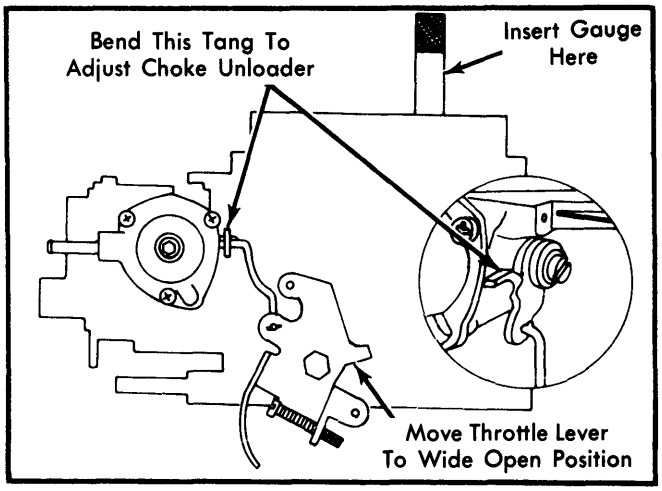

Fig. 6 Adjusting Choke Unloader (General Motors Models Only)

SECONDARY THROTTLE STOP SCREW

All Models (Exc. Chrysler Corp.) – 1) Back off the secondary throttle stop screw until the secondary valve seats in bore. See *Fig. 7*.

2) Turn screw in until it just contacts tab on secondary throttle lever. Now turn screw an additional ¼ turn.

AUTOMATIC CHOKE

NOTE – *General Motors and Chrysler use tamper proof screws to retain choke coil cover. File screw heads until cover retainer ring can be removed and then remove remaining portion of cover screws from choke housing. (New choke coil cover screws are supplied in service kit.)*

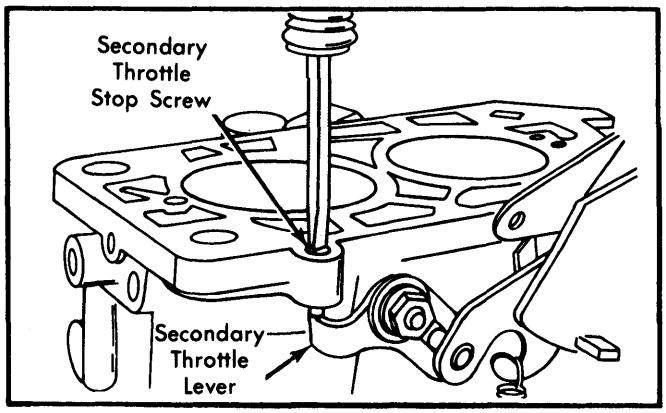

Fig. 7 Adjusting Secondary Throttle Stop Screw (All Models Except Chrysler Corp.)

1) Loosen choke coil cover retaining screws. Rotate choke coil cover until index mark on cover is aligned with correct setting on choke housing.

2) Housing is not marked for a rich or lean setting. Rotate cover clockwise for rich ("R") setting and counterclockwise for lean ("L") setting.

OVERHAUL

DISASSEMBLY

Air Horn – 1) Pry choke rod loose from choke housing lever. Remove air horn screws and lockwashers. Separate air horn from main body.

2) Disconnect choke rod from choke lever. Remove choke rod and dust seal. Remove float hinge pin. Remove float and fuel inlet needle. Remove fuel inlet needle seat and gasket.

3) Remove 3 bowl vent valve cover screws and remove cover. Remove clip from bowl vent valve diaphragm stem. Remove retainer, spring (if equipped) and diaphragm.

4) On Ford models, pry vent valve paddle pivot pin toward fuel inlet seat. Remove pin and vent valve paddle

5) On all models remove power enrichment valve screws and remove power enrichment diaphragm. Remove idle speed solenoid (if equipped). Remove fuel inlet fitting, gasket and filter (if equipped).

Main Body – 1) Remove 3 choke cover retaining screws. Remove retaining ring and choke cover (and coil). Remove choke vacuum diaphragm cover screws. Remove cover and spring.

2) Rotate cam on choke shaft to allow diaphragm shaft to be removed. On Ford models only, remove choke housing screws, pull housing away and disconnect fast idle rod. Remove housing.

NOTE – *General Motors and Chrysler do not recommend removal of choke housing. Screws are installed with locking compound and damage to main body may result if screws are removed.*

3) On Ford and General Motors models, remove "O" ring from vacuum passage in choke housing. Remove choke housing shaft nut, lock washer, lever, spring retainer and fast idle cam from shaft. Remove screw and lock washer from fast idle lever. Remove bushing and washer, then remove fast idle lever and washer from housing.

4) On all models, remove 4 accelerator pump cover screws. Remove accelerator pump diaphragm and spring. Remove accelerator pump discharge nozzle. Turn main body over and catch both check balls.

5) Remove primary and secondary high speed bleed plugs. Note size and position for reassembly. Turn main body upside down and catch primary and secondary main well tubes. Note size and position for reassembly.

HOLLEY MODEL 5200, 5210-C & 5220 2-BARREL (Cont.)

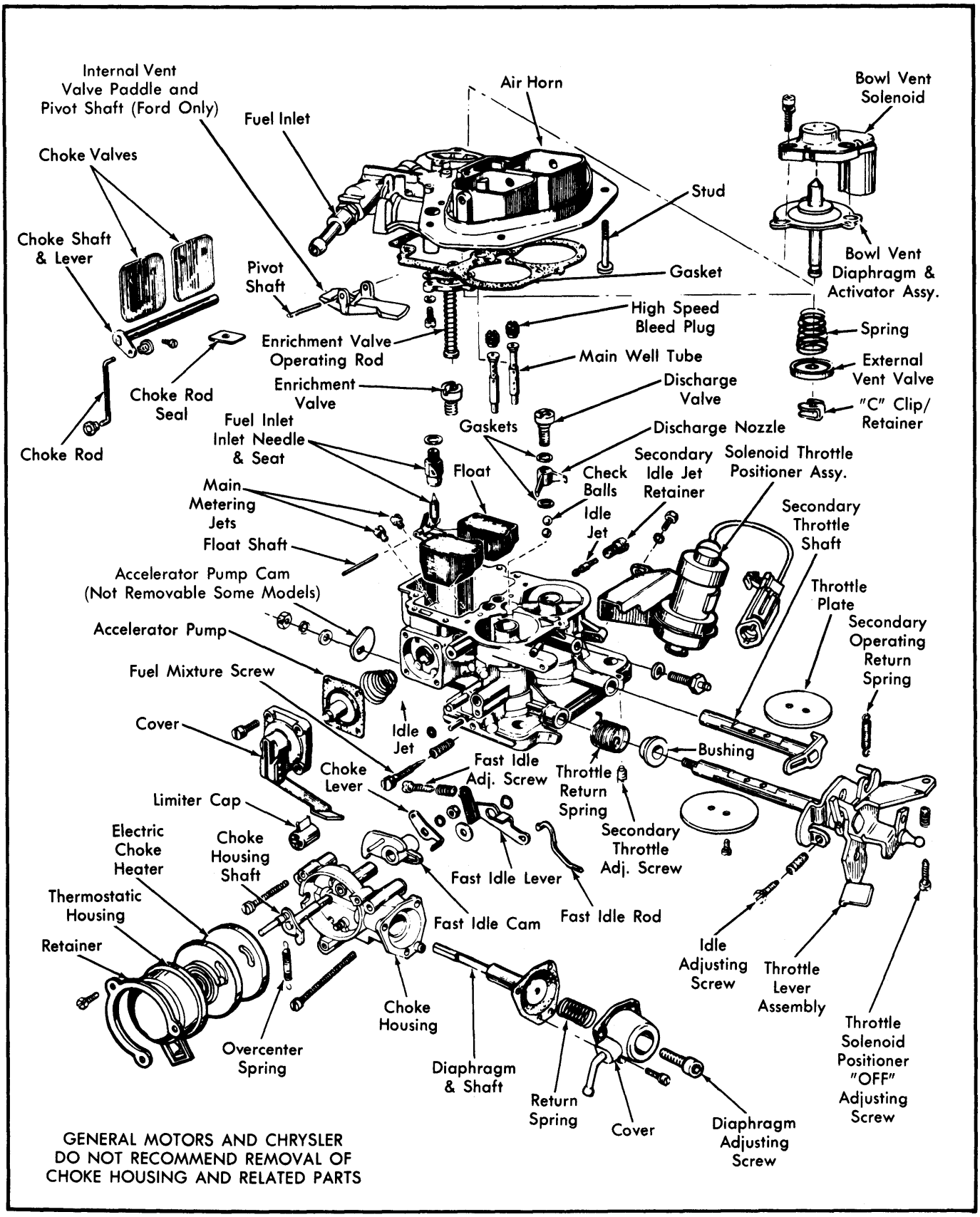

Fig. 8 Exploded View of Holley Model 5200, 5210-C and 5220 2-Barrel Carubretor

HOLLEY MODEL 5200, 5210-C & 5220 2-BARREL (Cont.)

6) Remove primary and secondary main jets. Note size and position for reassembly. Remove power valve and gasket.

7) On Ford models, remove secondary idle jet retainer and remove idle jet located on side of carburetor.

8) On Chrysler models, remove wide open throttle cutout switch screws and remove switch. Mark location for reassembly.

9) Invert throttle body and position on a holding fixture with manifold side up. Position a punch in locator point in pilot hole beneath idle mixture needle plug. Drive out hardened steel plug. Count number of turns required to gently seat mixture screw (to be used during reassembly). Remove mixture screw.

10) On Ford models, remove secondary operating lever return spring. Remove nut and lock washer from end of primary throttle shaft. Remove accelerator pump cam. Remove idle speed screw and spring from throttle lever.

CLEANING & INSPECTION

- Do not immerse plastic or rubber parts in solvent. Do not immerse diaphragm assemblies, dashpot or solenoid in solvent.
- Blow out all passages with compressed air. Do not use wire or drill bit to clean carburetor orifices.
- Inspect all parts for wear, cracks, nicks or burrs, and damage. Replace parts as necessary.
- After cleaning with solvent, wash all parts in hot water and blow dry with compressed air.

REASSEMBLY

Reassemble carburetor in reverse order of disassembly, noting the following:

1) Reinstall main jets, bleed jets, main well emulsion tubes and idle jets in proper locations.

2) To install power valve diaphragm, align 3 screw holes in diaphragm, body and cover. Hold stem and spring compressed against fuel bowl cover while installing and tightening screws.

3) Wide open throttle switch (Chrysler models) should be positioned so that A/C circuit will open when throttle lever is 10° before wide open throttle and stay open when throttle is in wide open position.

CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Float Level Setting	Float Drop Setting	Fast Idle Cam Setting	Choke Vacuum Kick Setting	Choke Unloader Setting	Auto. Choke Setting
Chrysler Corp.						
R-8676A	31/64"	1-7/8"	.....	.070"	.....	①
R-8840A	31/64"	1-7/8"	.....	.070"	.....	①
R-8841A	31/64"	1-7/8"	.....	.040"	.....	①
R-8842A	31/64"	1-7/8"	.....	.040"	.....	①
R-9108A	31/64"	1-7/8"	.....	.070"	.....	①
R-9109A	31/64"	1-7/8"	.....	.100"	.....	①
R-9110A	31/64"	1-7/8"	.....	.040"	.....	①
R-9111A	31/64"	1-7/8"	.....	.040"	.....	①
Ford Motor Co.						
E0EE-GA②	15/32"	.....	.080"	.197"	.197"	2 Rich
E0EE-GA③	15/32"	1"	.080"	.197"	.197"	2 Rich
E0EE-JA	15/32"	1"	.080"	.197"	.197"	1 Lean
E0EE-RA②	15/32"	.....	.080"	.197"	.197"	2 Rich
E0EE-RA③	15/32"	1"	.080"	.197"	.197"	2 Rich
E0EE-TA	15/32"	1"	.080"	.197"	.197"	1 Lean
E0ZE-AAA	15/32"	.....	.157"	.285"	.236"	2 Rich
General Motors						
14004461	1/2"	.....	.110"	.120"	.350"	①
14004462	1/2"	.....	.110"	.120"	.350"	①
14004463	1/2"	.....	.110"	.120"	.350"	①
14004464	1/2"	.....	.110"	.120"	.350"	①
14004465	1/2"	.....	.110"	.120"	.350"	①
14004466	1/2"	.....	.110"	.120"	.350"	①
14004467	1/2"	.....	.110"	.120"	.350"	①
14004468	1/2"	.....	.110"	.120"	.350"	①

① – No adjustment required.
② – Calibration No. 0-02B-RO.
③ – Calibration No. 0-02C-RO.