1970-71 Holley (Chrysler) 2300 2-Barrel

CHRYSLER CORP.

Holley Carburetor No.

1970

Application	Man. Trans.	Auto. Trans.
440" Engine		
"C.A.S." Carbs.		
Front	R-4382A	R-4382A
Center	R-4375A	R-4376A
Rear	R-4383A	R-4383A
"E.C.S." Carbs.		
Front	R-4365A	R-4175A
Center	R-4374A	R-4144A
Rear	R-4365A	R-4175A

1971

Application	Man. Trans.	Auto. Trans.
340" Engine		
Front	R-4789A	R-4789A
Center	R-4791A	R-4792A
Rear	R-4790A	R-4790A
440" Engine		
Front	R-4671A	R-4671A
Center	R-4669A	R-4670A
Rear	R-4672A	R-4672A

NOTE — "C.A.S." (Cleaner Air System) carburetors differ from "E.C.S." (Evaporation Control System) carburetors in the manner in which fuel bowl vapors are released through the bowl vent valve. Vapor is released to underhood air on C.A.S. carburetors, but is vented (through a hose) to the crankcase on E.C.S. carburetors. Otherwise, adjustments and procedures are identical.

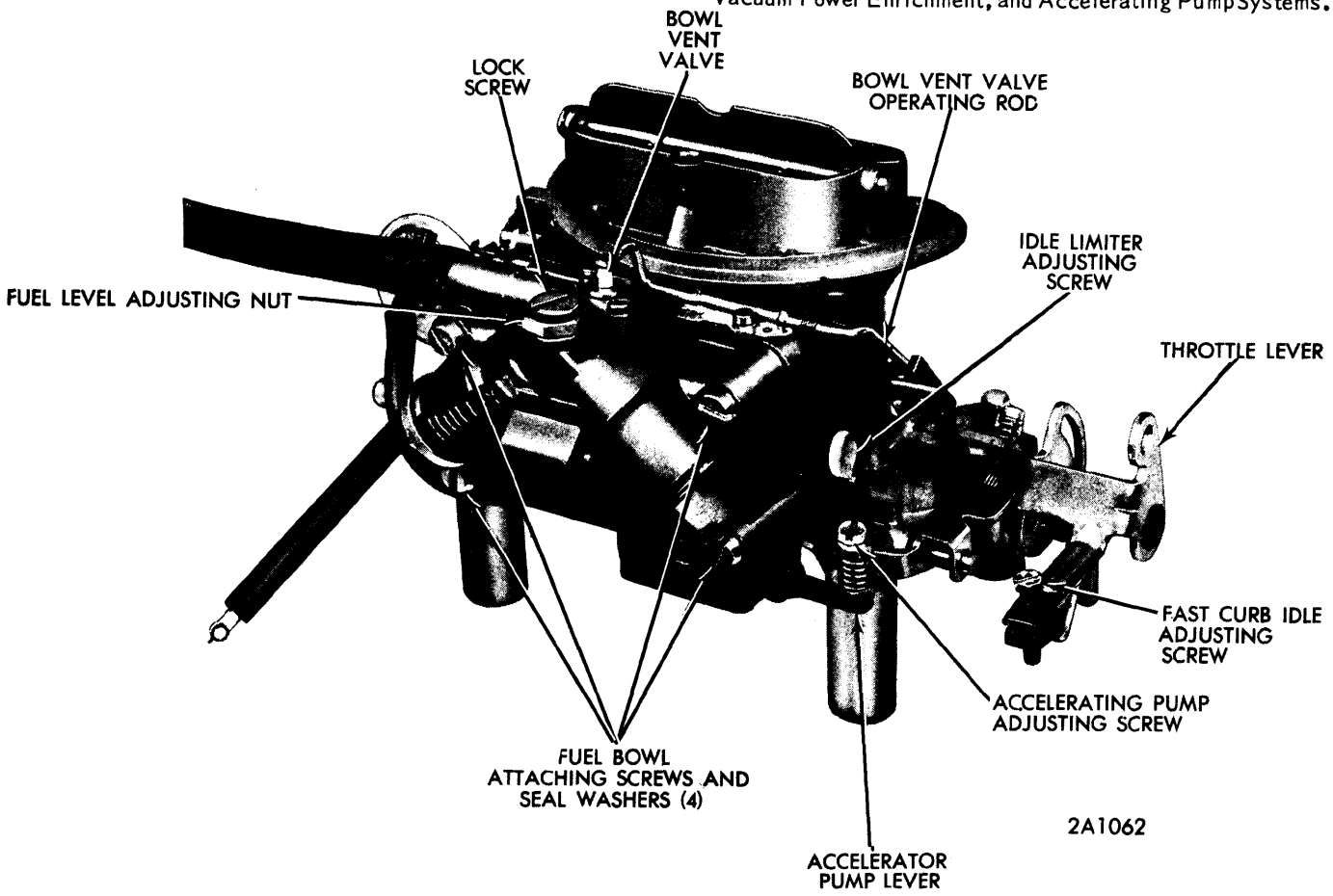
NOTE — 1971 carburetors meet emission control standards for both C.A.S. and E.C.S., and no distinction between "Except California" and "California Only" is necessary.

TRIPLE CARBURETOR INSTALLATION

Center carburetor and two end (front and rear) carburetors are tandem mounted on a cast iron intake manifold. Center carburetor throttle actuation is conventional with throttle lever linked to accelerator pedal. Front and rear carburetor throttles are linked to vacuum diaphragm units which open throttle valves in these carburetors in accordance with vacuum requirements; however, these throttle valves are also linked to center carburetor throttle lever by adjustable connector rods to provide positive closing of all throttles in accordance with accelerator pedal movement (center carburetor throttle rod is slotted to provide for this action).

DESCRIPTION

Center Carburetor – Two barrel downdraft carburetor of conventional Holley design with usual idle, Main Metering, Vacuum Power Enrichment, and Accelerating Pump Systems.



HOLLEY MODEL 2300 CARBURETOR (CENTER CARB.) (FRONT VIEW)

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Accelerating pump is cam operated diaphragm type, located on bottom of fuel bowl. Pump functions when pump lever is activated by a cam on throttle lever. An override spring on pump lever adjusting screw, allows a prolonged discharge of fuel for smooth acceleration.

Front & Rear Carburetors – Two barrel down-draft carburetors of same general design as center carburetor except that they do not have Idle, Vacuum Power Enrichment, Accelerating Pump, or choke systems and adjustment of these systems is not required.

ADJUSTMENT

Front & Rear Carburetor Throttle Rod Adjustment

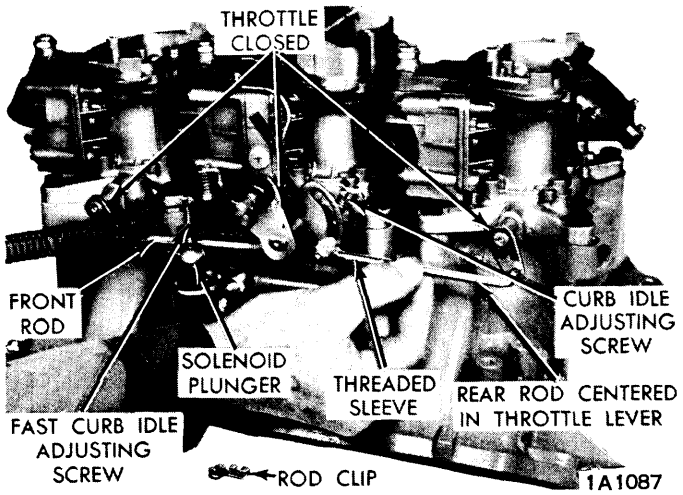
This adjustment is required to synchronize front and rear carburetor throttle valves with center carburetor. Adjust with ignition switch OFF (to de-energize fast curb idle solenoid so that clearance exists between solenoid plunger and adjusting screw).

1) Remove air cleaner, disconnect front and rear carburetor connector rods from throttle levers. Close throttle valves on all carburetors and hold throttle levers in this position.

2) Adjust length of front and rear connector rods by turning rod in or out of threaded sleeve until rod end freely enters hole in throttle lever, connect rods. *NOTE – Fast curb idle adjusting screw will be adjusted when making Idle Speed and Mixture adjustment.*

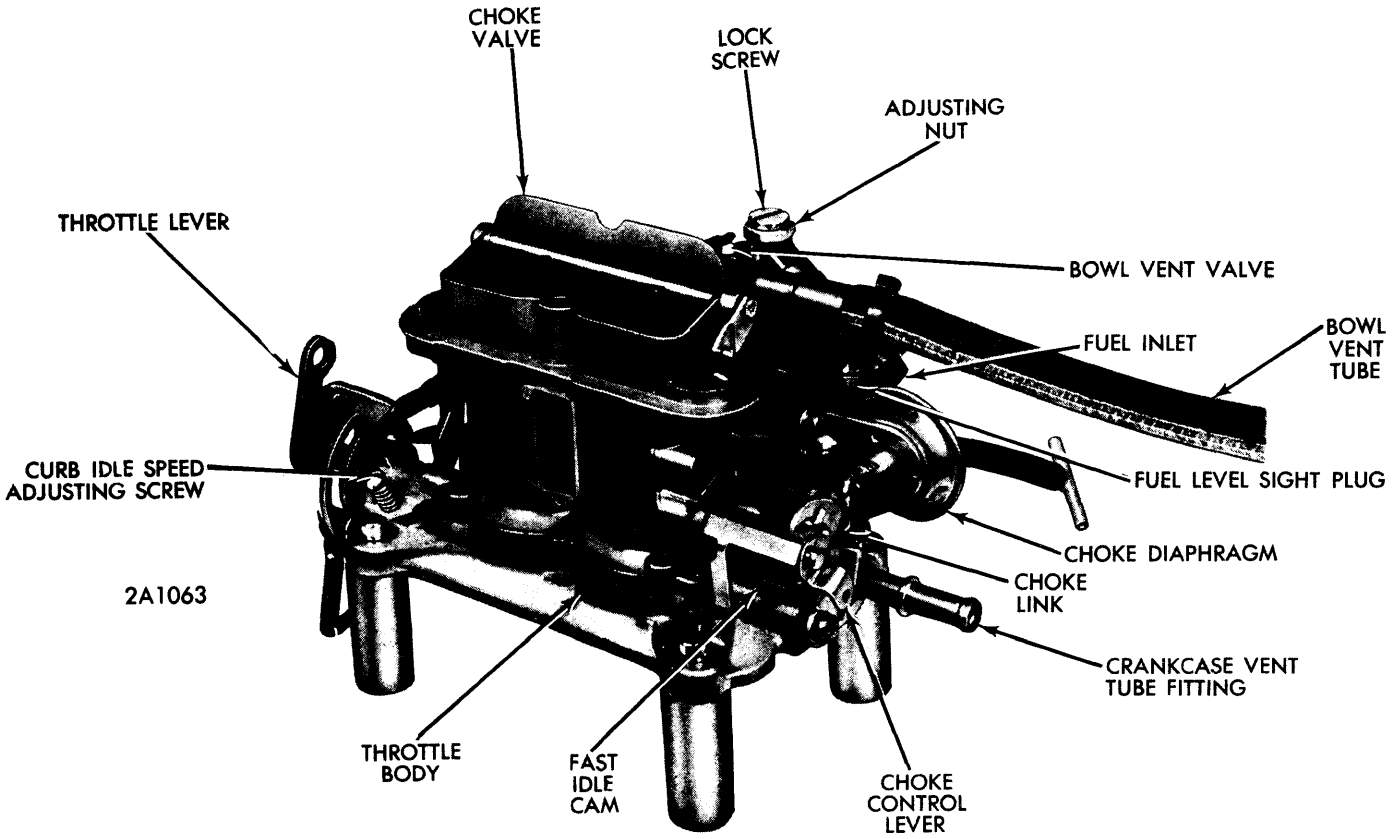
Idle Speed & Mixture (Center Carburetor)

Make adjustments only after Ignition Timing checked and with engine at normal operating temperature. Air cleaner must be installed. On automatic transmission cars, position selector lever in **Neutral** (not in Park). On air conditioned cars, turn air conditioner **Off**.



THROTTLE ROD ADJUSTMENT

Idle Speed – Two adjustments are required to correctly set idle speed. The idle stop solenoid, which is energized when the ignition switch is ON, controls the **fast** curb idle



HOLLEY MODEL 2300 CARBURETOR (CENTER CARB.) (REAR VIEW)

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speed (engine running). When the ignition switch is turned off, the solenoid is de-energized and the throttle valves are allowed to further close due to the adjustment of the **slow** curb idle speed screw. This further closing of the throttle valves prevents "dieseling" or after-running. Adjust both solenoid curb idle speed screw and slow idle speed screw as follows:

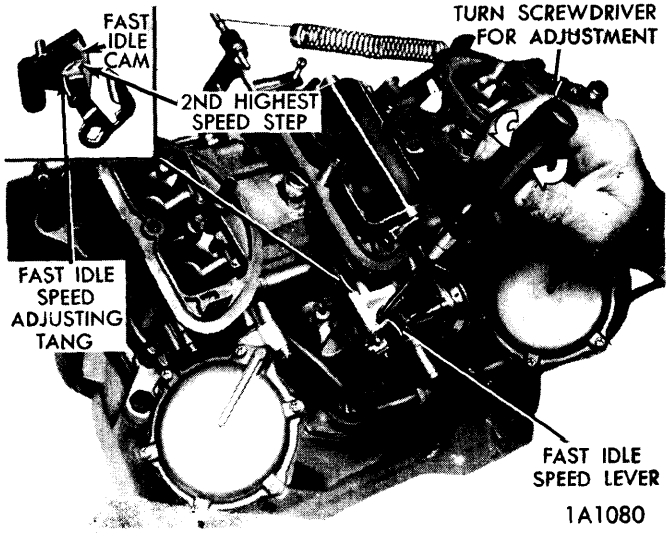
1) With engine running, turn idle speed solenoid adjusting screw in or out to obtain specified RPM (see Specifications).

2) After specified RPM has been obtained and with engine still running (to energize solenoid), adjust curb idle speed screw until end of screw **just touches** stop on carburetor throttle body. Now, back off 1 full turn to obtain slow curb idle setting (approximately 650-700 RPM).

Idle Mixture – Mixture adjusting screws have limiter caps installed which limit range of adjustment. *DO NOT remove these caps.* Chrysler Corp. recommends that idle mixture be adjusted with the aid of an exhaust analyzer.

Fast Idle Speed (On Engine)

With engine off, open throttle slightly and close choke valve until fast idle lever tang can be positioned on second highest speed step of fast idle cam. Operate engine with automatic transmission lever in PARK or NEUTRAL, check engine RPM when speed stabilized. If fast idle speed not correct (see Specifications), adjust by inserting screwdriver in fast idle tang slot and bending fast idle tang in a direction **perpendicular** to contact surface of cam. *(CAUTION – Bending tang in any other direction will change cam position adjustment).* After each adjustment reposition fast idle tang on cam and recheck fast idle speed.



FAST IDLE SPEED ADJUSTMENT

Choke Control Lever Qualifying Adjustment

This adjustment required to establish correct relationship between choke valve position, automatic choke, and fast idle cam and must be made before checking or adjusting Fast Idle Cam Position, Vacuum Kick, or Unloader. Adjustment can be made with carburetor on bench or on engine.

CARBURETOR ADJUSTMENT SPECIFICATIONS

Holley Carb. No.	Idle Speed (Engine RPM)		Fuel Level Setting③	Fast Idle Cam Position	Unloader Setting	Vacuum Break Setting	Bowl Vent Clearance
	Hot①	Fast②					
R-4144A	900	1800	.....	#53	5/32"	#50	#38
R-4175A	.....	.....	.....	.....	.....	.....	.....
R-4365A	.....	.....	.....	.....	.....	.....	.....
R-4374A	900	2200	.....	#53	5/32"	#28	#38
R-4375A	900	2200	.....	#53	5/32"	#28	#38
R-4382A	.....	.....	.....	.....	.....	.....	.....
R-4376A	900	1800	.....	#53	5/32"	#50	#38
R-4383A	.....	.....	.....	.....	.....	.....	.....
R-4669A	900	1800	.....	#53	5/32"	#28	#38
R-4670A	900	1800	.....	#53	5/32"	#50	#38
R-4671A	.....	.....	.....	.....	.....	.....	.....
R-4672A	.....	.....	.....	.....	.....	.....	.....
R-4789A	.....	.....	.....	.....	.....	.....	.....
R-4790A	.....	.....	.....	.....	.....	.....	.....
R-4791A	950	2600	.....	#53	5/32"	#28	#38
R-4792A	1000	2800	.....	#53	5/32"	#39	#38

① – **Auto. Trans. in Neutral, A/C OFF.**
② – **Fast idle screw on 2nd highest cam step.**
③ – **See Text.**

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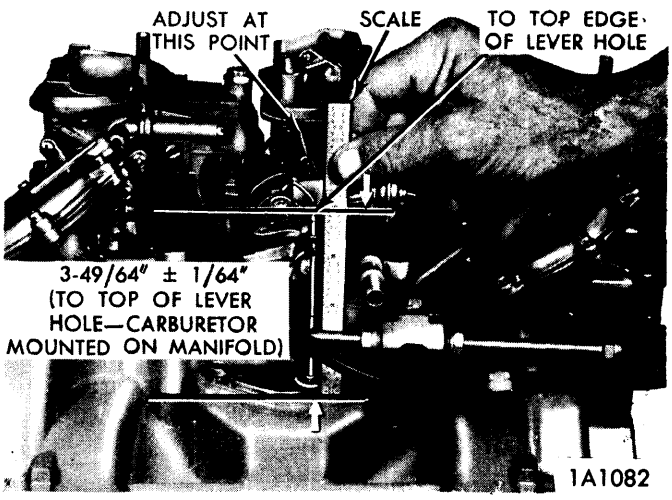
1) Open throttle valves to mid-position, close choke valve by light pressure on choke control lever.

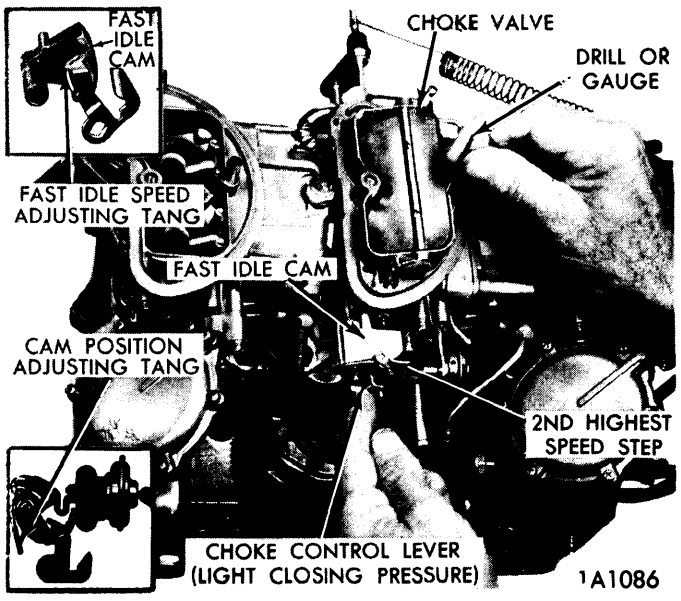
2) Measurement from top of choke rod hole in control lever to choke assembly (carburetor on engine) should be 3-49/64" ± 1/64", or from same point to carburetor base (carburetor on bench) should be 1-23/32" ± 1/64". Adjust as necessary by bending choke lever rod at point just below air cleaner flange on air horn (see illustration). *CAUTION – Improper bending may cause binding of the rod. Check for free movement between open and closed choke positions and rebend rod to eliminate any interference.*



QUALIFYING CHOKE CONTROL LEVER

Fast Idle Cam Position

This adjustment required to establish correct relationship between choke valve and fast idle cam positions and can be made with carburetor on bench or on the car.

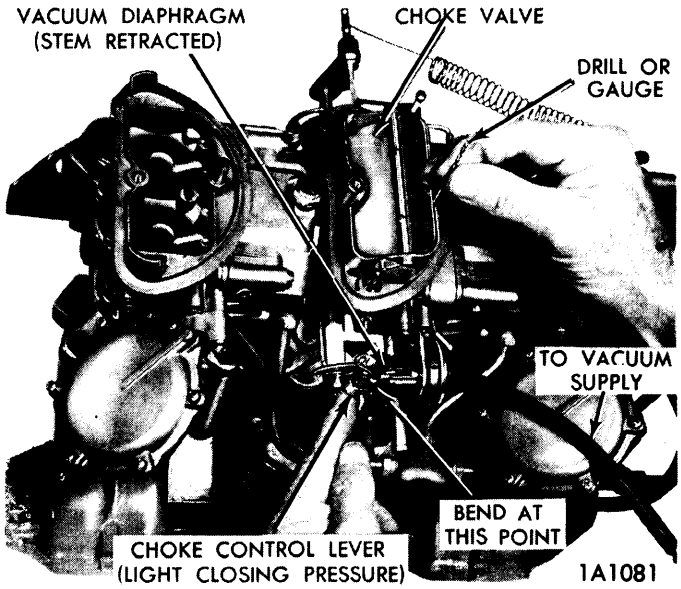


FAST IDLE CAM POSITION ADJUSTMENT

1) Position fast idle lever tang on second highest step of fast idle cam, move choke valve toward closed position with light pressure on choke control lever.

2) Insert drill rod of specified size (see Specifications) between upper edge of choke valve and air horn wall. Slight drag should be noted as drill is withdrawn.

3) Adjust as required by bending tang on choke control lever (see illustration).



VACUUM BREAK (KICK) ADJUSTMENT

Vacuum Kick

This adjustment can be checked on the bench (using on auxiliary vacuum source of at least 10" of Hg. connected to vacuum unit hose) or on the engine (using auxiliary vacuum source or by running engine to supply vacuum).

1) Position fast idle cam to allow choke valve to close to kick position, operate engine to supply vacuum to vacuum kick diaphragm.

2) Insert drill rod of specified size (see Specifications) between upper edge of choke valve and air horn wall, apply closing pressure on choke control lever to provide minimum choke valve opening without distortion of diaphragm link *(NOTE – Internal spring in unit must be fully compressed which will be noted by extension of diaphragm stem).* Slight drag should be noted as drill is withdrawn.

3) Adjust as required by changing diaphragm link length by opening or closing the bend in the link *(CAUTION – Do not apply twisting or bending force to diaphragm)* to obtain correct choke valve opening.

4) Check adjustment as follows: With no **vacuum applied** to diaphragm, choke valve should move **freely between** open and closed positions. If movement **is not free, check** linkage for misalignment or bending and **repeat adjustment** if necessary.

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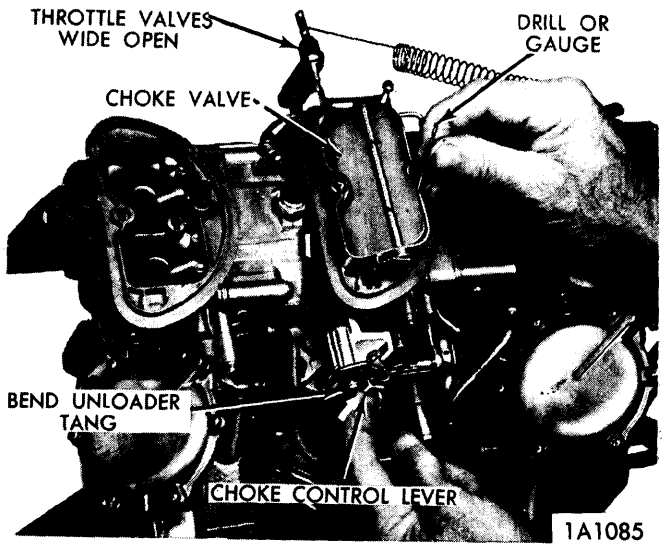
Unloader

Choke Control Lever Qualifying Adjustment must be made before checking or adjusting Unloader.

1) Hold throttle valves in wide open position. Insert drill rod of specified size (see Specifications) between upper edge of choke valve and air horn wall. With light closing pressure on choke control lever, a slight drag should be noted as drill is withdrawn.

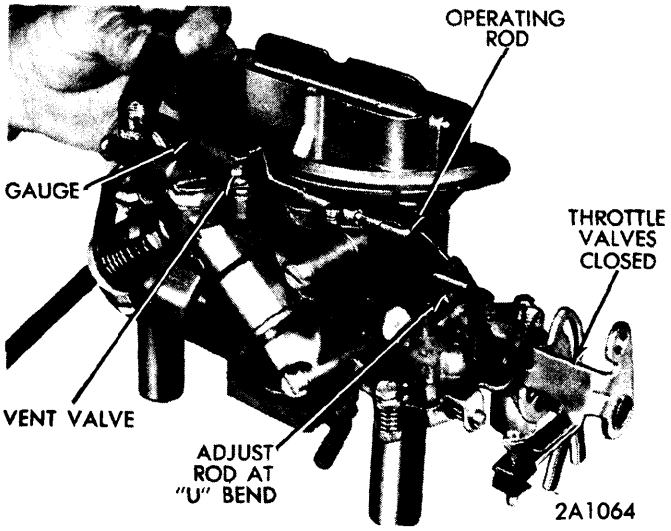
2) Adjust as required by bending unloader tang on choke control lever (see illustration).



CHOKE UNLOADER ADJUSTMENT

BOWL VENT VALVE

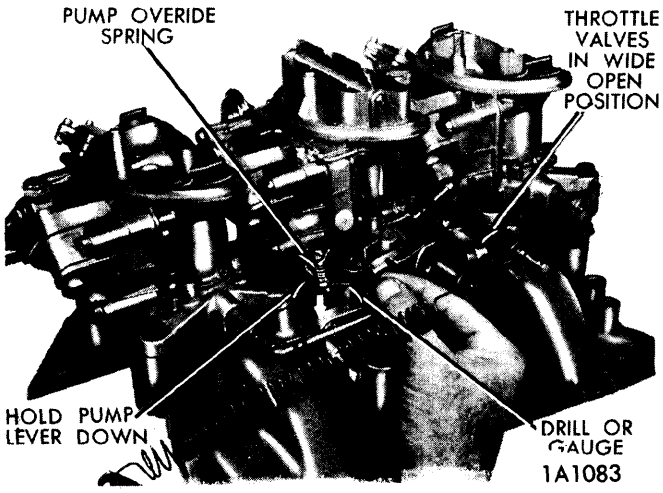
With throttle valves at fast curb idle position (solenoid energized), check clearance between bowl vent valve and actuating rod (between valve and top of fuel bowl on C.A.S. carburetors). If clearance not correct (see Specifications), bend actuating rod.



BOWL VENT VALVE ADJUSTMENT

Accelerating Pump Lever Clearance

With throttle valves wide open, hold pump lever on pump assembly down, check clearance between adjusting nut on lower end of pump override spring stud and pump lever with a feeler gauge. Clearance should be .015" (minimum), .0625" (maximum). If adjustment is necessary, adjust pump override screw to obtain correct clearance. There must be no free movement of pump leverage when throttle is at curb idle.

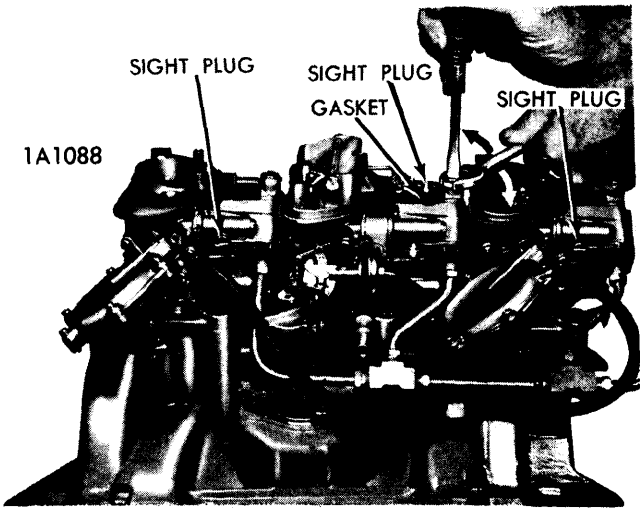


ACCELERATOR PUMP ADJUSTMENT

Fuel Level (On Engine)

Make certain that fuel pump pressure is correct (5 lbs.) before checking fuel level. Check and adjust all carburetors similarly.

1) With engine running, remove sight plug from side of fuel bowl. *(CAUTION – Use shop towel or container under bowl to catch any flow due to incorrect setting).* Fuel should just dribble from sight plug hole.



FUEL LEVEL ADJUSTMENT

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2) If adjustment required, loosen lockscrew on top of fuel bowl, turn adjusting nut up or down until fuel just dribbles from plug hole, tighten lockscrew. Reinstall sight plug and gasket and tighten securely.

Automatic Choke

CAUTION – This unit is serviced as a complete assembly. Do not attempt to repair unit or change adjustment. If unit binds or does not function properly, a new unit should be installed.

OVERHAUL

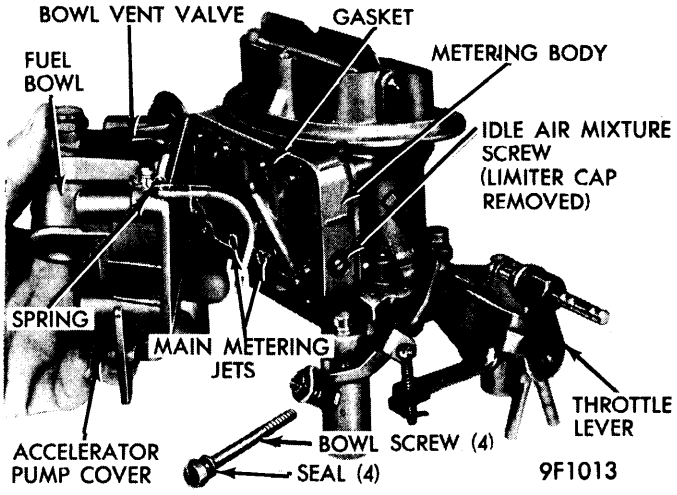
Dry Float Level (On Bench)

With float assembled in fuel bowl, invert assembly so that float rests against seated intake needle. Center the float in the bowl, using the external adjusting screw. *NOTE – Check and adjust fuel level after carburetor installed on engine.*

►*OVERHAUL NOTE – Model 2300 (secondary carburetors) do not have choke system, accelerating pump system, or power enrichment system. They have a different metering body assembly and special overhaul procedure is required as noted. When disassembling secondary carburetors, disregard instructions for parts not used.*

Disassembly

Install carburetor on stand (C-3886), or use elevating legs (Tool T109-287S) or other suitable support to prevent damage to throttle valves. Remove screws and seal washers attaching fuel bowl and metering body to main body, remove fuel bowl and discard seal washers. Remove metering body and discard gaskets. Disassemble sub-assemblies as follows:



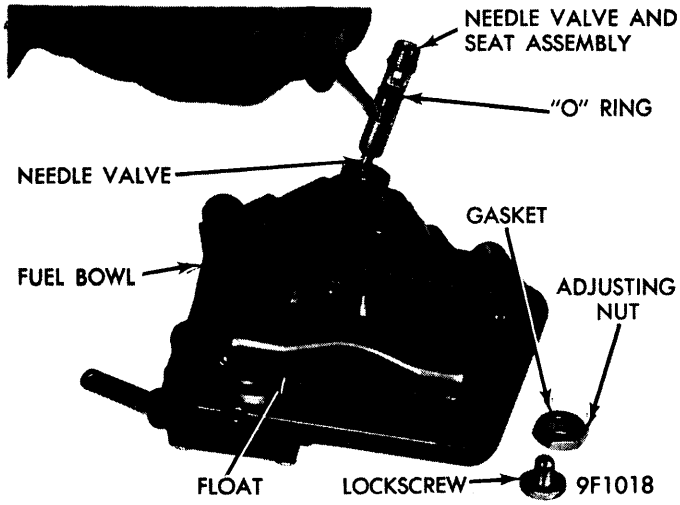
FUEL BOWL REMOVAL & INSTALLATION (PRIMARY CARBURETOR)

Main Body – 1) Remove attaching screw and washer and slide choke unloader lever off end of throttle shaft.

2) Disconnect choke diaphragm hose from throttle body fitting, remove choke diaphragm attaching screws, disengage link from fast idle cam and remove choke diaphragm assembly.

3) Remove clip retaining fast idle lever and cam, slide lever and cam off shaft while disengaging choke rod from bottom hole of cam lever. *CAUTION – Note choke rod position and reinstall in same hole.*

4) Remove pump discharge nozzle retaining screw and discard gasket, lift out discharge nozzle and discard nozzle gasket. Remove vacuum diaphragm hose (to outboard carburetors). Invert main body and drop out pump discharge needle from discharge passage.



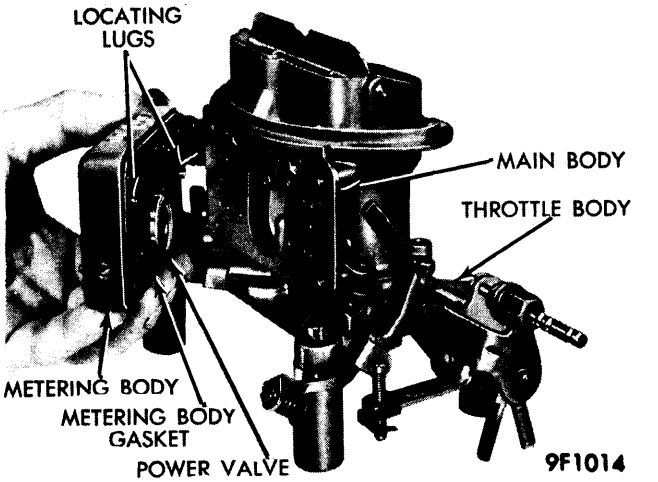
FLOAT & NEEDLE VALVE ASSEMBLY

Fuel Bowl – 1) Remove attaching screw, remove bowl vent valve, plate, spring, and vent valve assembly from bowl.

2) Remove fuel level adjusting screw locknut, remove adjusting nut, slide needle valve and seat out of fuel bowl and discard needle seat "O" ring.

3) Remove float lever bracket attaching screws and remove float, spring, and fulcrum pin from bowl. Remove sight plug and gasket, discard gasket. Remove fuel inlet fitting and discard gasket.

4) Remove accelerating pump cover attaching screws using clutch head screwdriver (CL-13), remove cover, carefully remove pump diaphragm and return spring.



METERING BODY REMOVAL & INSTALLATION (PRIMARY CARBURETOR)

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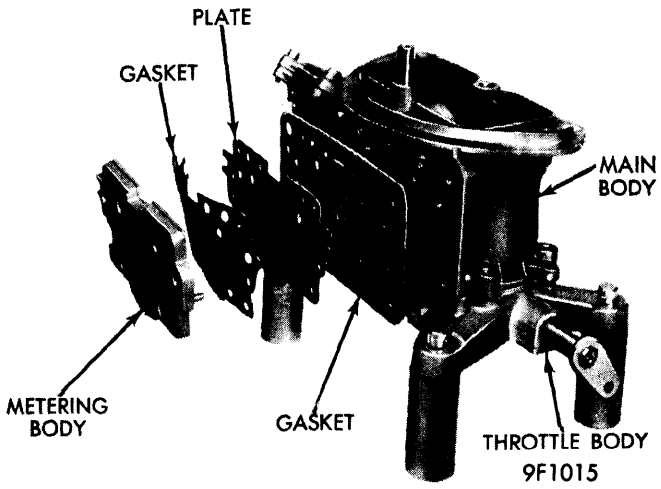
Main Metering Body (Primary Carb.) -1) Remove power valve assembly using suitable tool (C-3747) and main metering jets using tool (C-3748).

2) Pry plastic limiter caps off idle mixture adjusting screws and discard caps. *Turn adjusting screws in until lightly seated and COUNT number of turns required so that screws can be reinstalled in exact same position,* then remove screws and gaskets.



METERING BODY, PLATE & GASKETS (SECONDARY CARBURETOR)

Main Metering Body (Secondary Carbs.) – After removing fuel bowl, use clutch head screwdriver to remove metering body attaching screws, remove metering body, gasket, plate, and bowl gasket, discard gasket. *NOTE – Idle mixture adjusting screws, power valve, or separate metering jets are not used on these models.*

Throttle Body – *For normal cleaning and overhaul of carburetors, throttle valves should not be removed unless they are nicked or damaged and replacement is required.* To remove valves, remove staking on throttle valve screws with a file, remove screws, slide throttle valves out of carburetor bores.

Vacuum Diaphragm (Secondary Carbs.) – Remove diaphragm attaching screws, lift diaphragm assembly off and disengage diaphragm stem from throttle shaft lever stud. *NOTE – Diaphragm assembly can be disassembled, if required, by removing cover screws. Cover, return spring, and diaphragm assembly can then be removed.*

Cleaning & Inspection

Use denatured alcohol or suitable commerical solvent (Metalclene, etc.) to remove gum deposits. If solvent used, rinse with hot water and blow dry with air, then rinse in clean gasoline or kerosene. Use care to blow out all passages with air. *CAUTION – Do not use solvent to clean rubber diaphragms and do not use wire or drills to clean jets or other calibrated parts.* Check castings for cracks, warpage, damaged or marred mating surfaces, or stripped screw threads. Replace broken or distorted springs, screws with damaged threads, and distorted lockwashers. Inspect floats for damage. Inspect throttle and choke valves for nicked edges or worn plating and replace as required.

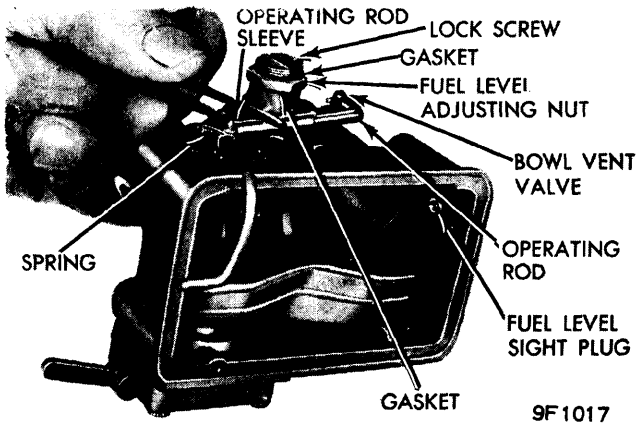
►*VACUUM DIAPHRAGM CAUTION – DO NOT place assembly in any cleaning liquid. Clean external surfaces with clean cloth or soft wire brush, shake dirt from stem side of diaphragm. Air can be used to remove loose dirt, but air hose must not be connected to vacuum inlet fitting.*

Reassembly

Use all new gaskets, "O" rings, and seal washers. Reassemble carburetors by reversing disassembly procedure and note the following:

Throttle Valve Installation – Slide new throttle valves in position on throttle shaft with valve number on bottom (toward mounting flange and away from vacuum port), install valve screws loosely. Close valves and hold in place with finger pressure on high side of valves, tap valves lightly to center them in bores, tighten screws securely. Check for smooth operation from closed to open position without drag or binding, and for centering by holding throttle body up to a strong light (light visible around entire edge of valve should be uniform). Stake screws by squeezing with pliers.

Power Valve – Use new gasket and tighten power valve to 120 Inch Lbs.



BOWL VENT VALVE & BOWL ASSEMBLY

Idle Mixture Screws & Limiter Caps – Install new screws if tapered portion grooved or ridged. Press new gasket in each idle mixture port, then thread screw through gasket and tighten until lightly seated, **finally back out screw exact number of turns noted at disassembly.** Install new plastic limiter cap over idle screws with tab on cap against stop in screw bore.

Accelerating Pump Diaphragm – Install diaphragm with contact button rivet head toward pump lever in cover.

Bowl Vent Valve Assembly – Spring short loop must enter hole in plate from underneath and long end must be hooked under rod.

Fuel Bowl – Use new seal washers on bowl mounting screws, make certain that bowl, metering body, and gaskets are aligned, tighten bowl screws to 50 Inch Lbs.