1968-69 CARTER AFB 4-BARREL

1968

	Carter Carburetor Number	
CHRYSLER CORP.	**Synchro-mesh**	**Auto. Trans.**
426" V8 Hemi-Head		
Front	4430S	4430S
Rear	4431S	4432S
LINCOLN		
462" V8 (Air Cond.)		① 4562S
(Without Air Cond.)		② 4563S
RAMBLER AMERICAN, AMX, JAVELIN, REBEL & AMBASSADOR		
290" V8 (Early)	4467S	
(Later)	4622S	4585S
343" V8 (Early)	4469S	4468S
(Later)	4624S	4623S
390" V8	4583S	4584S

① - Ford Motor Co. Part No. C8VF-C, E.
② - Ford Motor Co. Part No. C8VF-D.

1969

	Carter Carburetor Number	
CHRYSLER CORP.	**Synchro-mesh**	**Auto. Trans.**
426" V8 Hemi-Head		
Front	4619S	4619S
Rear	4620S	4621S
RAMBLER, AMX, JAVELIN, REBEL & AMBASSADOR		
290" V8	4660S	4661S
343" V8	4662S	4663S
390" V8	4664S	4665S

►CHANGES, CAUTIONS, CORRECTIONS

►*1968 LINCOLN STUMBLE ON LIGHT THROTTLE ACCELERATION CORRECTION:* This condition may be noted when operating in ambient temperatures above 85°F. To correct this condition, and on vehicles operated continuously at higher temperatures, change accelerator pump rod from regular inner hole (maximum capacity) setting to outer hole (minimum capacity) on pump lever.

►*1968 LINCOLN CONTINENTAL CARBURETOR GASKET INSTALLATION:* The 5-piece gasket and spacer must be installed from bottom to top as follows: Lowest gasket has tang to front, two separate holes at rear, and two front holes open to each other. Second piece is a thin metal spacer that has four separate holes (front holes have tangs in openings). Third piece is exactly like first piece. Fourth piece is a thick metal spacer with vacuum connector at front (bent to right). Uppermost piece has tang at front (left and right throat holes are open to each other in front and rear.) *NOTE - Gaskets and spacers may have "Top", "Bottom", "Front", "Rear" stamped on them. Be sure to install as stamped.* Tighten both front nuts 6-8 ft. lbs. and both rear nuts 6-8 ft. lbs. Then retighten both front nuts 12-15 ft. lbs., and both rear nuts 12-15 ft. lbs.

1968 AMERICAN MOTORS 290" & 343" V8 ENGINES TIP-IN STUMBLE ON FAST ACCELERATION FROM A COMPLETE STOP CORRECTION: See *"Accelerating Pump" under Adjustment.* Make any corrections needed, **then reposition** accelerator pump operating rod in outer **(short stroke)** hole of pump operating lever.

►*1968 AMERICAN MOTORS 343" V8 ENGINES WITH AUTOMATIC TRANSMISSIONS HAVING EXCESSIVE RICHNESS AFTER COLD START OR STALLS AND SAGS DURING WARM-UP CORRECTION (With AFB 4468S carburetor):* Check all adjustments and change setting on automatic choke to 2 Rich and setting on choke valve clearance to .120".

►*1968 AFB CARB. 4623S CHANGED AND SUPERSEDES AFB 4468S CARB:* AFB Carburetor 4623S has the P.C.V. vacuum source relocated to front. Secondary idle circuit has been eliminated. Economizer restriction hole measures .0465" on AFB 4623S carburetor with A8 code date suffix.

►*1968 AMERICAN MOTORS 343" V8 ENGINE CONSTANT THROTTLE SURGE AT 25-55 MPH (With Carter AFB No. 4468S 4-Barrel Carb. and Auto. Trans.):* Make the following checks and corrections in order listed:

1) Check for loose or kinked distributor vacuum hoses; reposition and tighten. Tighten transmission vacuum line fittings and hose connections. On cars with vacuum wipers, install hose clamps No. 3178454 on crankcase ventilation hose at "Y" fitting connector. Tighten intake manifold bolts to 45 ft. lbs. torque. Check and adjust distributor cam angle, ignition timing, and carburetor idle speed and mixture adjustment. Road test car.

2) If surge persists after above checks, modify carburetor and distributor as follows:

Carburetor - Refer to ADJUSTMENT. Remove air horn assembly, check and adjust float level to 5/16". Remove primary venturi assemblies and use drill in pin vise to drill out low speed jets (restriction in lower end of low speed tube in venturi assembly) to .035". Clean out with compressed air, reinstall primary venturi assemblies and air horn. Pry out welch plug over off-idle air bleed screw (in air horn upper rim directly above idle mixture screws), turn this adjusting screw clockwise until seated, install new welch plug No. 4485707. Turn both idle mixture screws counterclockwise (richer) to limit of limiter cap travel.

Distributor - Replace vacuum control unit with new part, No. 3207411 (same unit used on other American Motors V8 Distributors). *NOTE – Check and adjust ignition timing to 1± BTDC (TDC ±1°) with engine idling at 500 RPM, then reset dial speed to specified 550 RPM in Drive.*

3) If carburetor idle unsatisfactory after above corrections made, pry off and discard idle limiter caps on idle mixture adjusting screws, adjust idle speed and mixture (see ADJUSTMENT), then install new limiter caps on screws as directed. *NOTE - Exhaust Gas Analyser can be used for this adjustment as follows:* First set idle speed to specified RPM, adjust fuel-air mixture to 14.0 ± 0.2 to 1 ratio. If change in idle speed is more than 30 RPM, readjust to specified speed and repeat idle mixture adjustment, finally install new limiter caps as directed.

►*1968 LINCOLN "IMCO" ENGINE:* This engine has specially calibrated carburetor and distributor and related control units for exhaust emission control without air injection. Carburetors have "Idle Limiter Caps" on idle mixture adjusting screws to limit range of adjustment.

►*1968-69 AMERICAN MOTORS ENGINE NOTE:* **These** engines have exhaust emission controls **consisting of** specially calibrated carburetors and distributors, **"thermo**statically controlled" air cleaner, and **closed-positive**

1968-69 CARTER AFB 4-BARREL (Cont.)

crankcase ventilation system. This comprises the "Engine-Mod" system used on synchro-mesh cars. Auto. Trans. cars "Air Guard" system also includes an air pump for air injection and carburetor idle mixture adjusting screws have "Idle Limiter Caps" to limit the range of adjustment.

►*1968-69 CHRYSLER CORP. "CAS" ENGINE NOTE:* These engines have specially calibrated carburetors and distributor and other control devices for exhaust emission control and require special adjustment procedures.

CARBURETOR IDENTIFICATION

Carter carburetor number is stamped on tag attached to carburetor by an air horn screw.

American Motors Carburetors - Carburetor code number is stamped on side of mounting flange adjacent to choke housing.

DESCRIPTION

Four barrel downdraft type of same design used on previous models. Some carburetors have "Idle Limiter Caps" installed on idle mixture adjusting screws to limit the range of adjustment (see Adjustments).

Chrysler Corp. Hemi-Head Engine Carburetors - These carburetors are similar to other AFB models except as follows: Front carburetor does not have Automatic Choke or Fast Idle mechanism (adjustment data does not apply). Rear carburetor has integral automatic choke with choke vacuum piston located in choke housing.

ADJUSTMENT

NOTE – First set both idle mixture adjusting screws the correct number of turns out from a lightly seated position (see Specifications). On cars with idle limiter caps, turn screws counterclockwise to limit of travel (cap lug against stop on body). On Lincoln carburetors with idle air bypass adjustment for idle speed, turn screw out 3½ turns from a lightly seated position. On all carburetors with Hot Idle Compensator, make certain compensator valve is closed. With engine at normal operating temperature (choke valve wide open and fast idle inoperative), adjust each model as follows:

Chrysler Corp. – *Exhaust Analyser must be used to assure correct fuel-air mixture setting.*

Lincoln – Disconnect vacuum line at parking brake release power unit and plug vacuum line (so that parking brake can be applied), turn on headlights (to place alternator under load), turn Air conditioner ON and set automatic transmission in Drive. With air cleaner installed, adjust idle air bypass screw for correct hot engine idle speed *(see Specifications)*, turn both idle mixture adjusting screws in equally for smoothest idle within range of idle limiters. Repeat idle speed and idle mixture adjustments as necessary. Final idle speed must be checked with air cleaner installed.

1968 American Motors (Synchro-mesh) – With air cleaner installed, adjust throttle stopscrew for correct hot engine idle speed *(see Specifications)*, adjust both idle mixture screws evenly by turning screws out to richen mixture until engine speed begins to fall off, then turn screws in until maximum speed is regained and continue turning screws in until engine speed begins to fall off due to lean mixture, finally turn screws out just enough to regain maximum speed (this will ensure a "lean as possible" mixture setting). Recheck idle speed and readjust if necessary. If idle speed changed more than 30 RPM, repeat idle mixture adjustment. Check for Hot Idle Compensator being closed by removing air cleaner, noting engine RPM and then pressing down on compensator valve to make certain it is closed. If engine RPM drops, valve was open, and engine should be allowed to cool off until valve closes and idle adjustment repeated with air cleaner installed.

1969 American Motors (Synchro-mesh) – Disconnect bypass hose and allow engine to warm up to operating temperature. Turn mixture screws clockwise until seated lightly, then, turn screws counterclockwise 2 turns off their seats. Adjust idle speed to specified RPM. Turn mixture screws counterclockwise until a loss of engine RPM is indicated. Turn both screws equally unless engine demands otherwise. Turn mixture screws clockwise until RPM increases, then continue turning clockwise until RPM decreases. Turn mixture screws counterclockwise until highest RPM reading is obtained at the "lean idle" setting. If idle speed changed more than 30 RPM during mixture adjustment, reset to specified RPM and repeat adjustment.

1968 American Motors (Auto. Trans) – Make certain idle mixture screws set ½ turn clockwise from maximum rich or counterclockwise setting (7/8 turn out with ear on limiter cap against stop). With air cleaner in place, air conditioner OFF and automatic transmission in DRIVE, adjust throttle stopscrew for idle speed of 50 RPM less than specified hot engine idle speed *(see Specifications)*. Turn both idle mixture screws out evenly to richen mixture until engine speed begins to drop off or screws contact stops, then turn screws in until engine speed (idle) regained and continue to turn screws in until engine speed begins to drop off due to lean mixture, finally turn screws out to point where idle speed is just regained (this will ensure a "lean as possible" setting). Readjust idle speed to specified engine RPM.

1969 American Motors (Auto. Trans.) – With engine at normal operating temperature, adjust idle speed to specified RPM. Starting from full rich stops, turn idle mixture screws clockwise until a loss of engine RPM is indicated. Turn mixture screws counterclockwise until highest RPM reading is obtained at "lean best idle" setting.

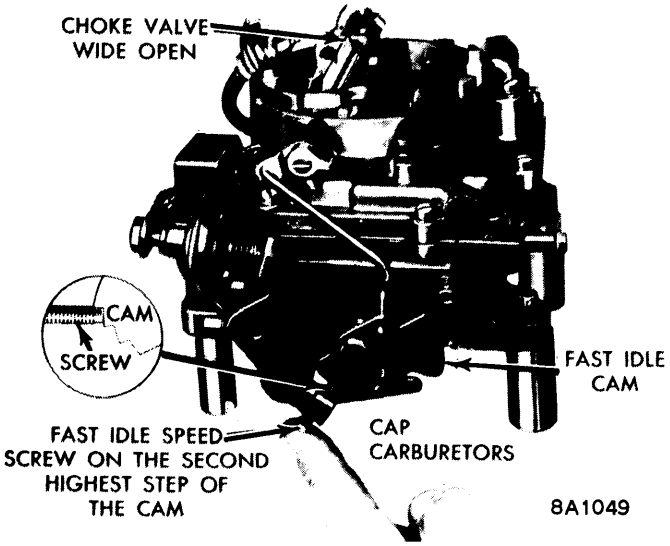
NOTE – If unable to obtain satisfactory idle quality when adjusted, idle limiter caps may be removed and idle speed and mixture adjusted.

1968-69 CARTER AFB 4-BARREL (Cont.)

CARBURETOR ADJUSTMENT SPECIFICATIONS									
Carter Carb. No.	Idle Speed (Engine RPM)		Fast Idle Cam Clearance	Initial ② Idle Mix. Setting	Float Level Setting	Float Drop Setting	Accel. ⑫ Pump Travel	Auto. Choke Setting	Unloader Setting
	Hot	Fast							
4430S ①	750	None	None	2	7/32" ③	3/4" ③	7/16"	None	None
4431S ①	750	1800 ⑥	#50	2	7/32" ③	3/4" ③	7/16"	2 Rich	1/4"
4432S ①	750	1800 ⑥	#50	2	7/32" ③	3/4" ③	7/16"	2 Rich	1/4"
4467S	650	2000 ⑤	–	2-3	⑭ 11/32" ③	2" ④	15/64" ⑦	2 Rich	5/32"
4468S	550	2000 ⑤	–	⑩	⑭ 11/32" ③	2" ④	17/64" ⑦	1 Rich	5/32"
4469S	550	2000 ⑤	–	2-3	⑭ 11/32" ③	2" ④	17/64" ⑦	2 Rich	5/32"
4562S ①	550 ⑧	1600 ⑥	–	1-1 1/2 ⑪	3/16" ③	23/32" ③	⑬ 17/32"	1 Lean	.096"
4563S ①	550 ⑧	1600 ⑥	–	1-1 1/2 ⑪	3/16" ③	23/32" ③	⑬ 17/32"	1 Lean	.096"
4583S	650 ⑨	2000 ⑤	–	2-3	⑭ 11/32" ③	2" ④	15/64" ⑦	2 Rich	5/32"
4584S	550 ⑨	2000 ⑤	–	⑩	⑭ 11/32" ③	2" ④	17/64" ⑦	1 Rich	5/32"
4585S	550 ⑨	2000 ⑤	–	⑩	⑭ 11/32" ③	2" ④	17/64" ⑦	1 Rich	5/32"
4622S	650 ⑨	2000 ⑤	–	2-3	⑭ 11/32" ③	23/32" ③	13/32"	2 Rich	5/32"
4623S	550 ⑨	2000 ⑤	–	⑩	⑭ 11/32" ③	23/32" ③	7/16"	1 Rich	5/32"
4624S	650 ⑨	2000 ⑤	–	2-3	⑭ 11/32" ③	23/32" ③	7/16"	2 Rich	5/32"
4619S	750 ⑱	None	None	None	7/32"	3/4"	7/16"	None	None
4620S	750 ⑱	2000 ⑥	#50	1-2	7/32"	3/4"	7/16"	2 Rich	1/4"
4621S	750 ⑱	2000 ⑥	#50	1-2	7/32"	3/4"	7/16"	2 Rich	1/4"
4660S	650 ⑰	2000 ⑯	–	2	11/32"	2"	21/64" ⑦	2 Rich	5/32"
4661S	550 ⑰	2000 ⑯	–	⑮	11/32"	2"	21/64" ⑦	Index	11/64"
4662S	650 ⑰	2000 ⑯	–	2	11/32"	2"	21/64" ⑦	Index	5/32"
4663S	550 ⑰	2000 ⑯	–	⑮	11/32"	2"	21/64" ⑦	Index	11/64"
4664S	650 ⑰	2000 ⑯	–	2	11/32"	2"	21/64" ⑦	Index	5/32"
4665S	550 ⑰	2000 ⑯	–	⑮	11/32"	2"	21/64" ⑦	Index	11/64"

① - Auto. Trans. in Drive, Air Cond. ON (except as noted).
② - Turns open from lightly seated position (except as noted).
③ - Measured from top of float (except as noted).
④ - To bottom of float at toe (free) end.
⑤ - With fast idle screw on HIGH step of cam.
⑥ - With fast idle screw on SECOND step of cam.
⑦ - To bottom of "S" link in pump plunger shaft with pump rod in CENTER hole of pump arm.
⑧ - With lights on high beam.
⑨ - With Air Cond. OFF.
⑩ - Screw turned ½ turn clockwise from maximum rich or counterclockwise setting.
⑪ - Screw at maximum counterclockwise setting.
⑫ - To top of plunger shaft with pump rod in CENTER hole of pump arm (except as noted).
⑬ - To top of plunger shaft with pump rod in INNER hole of pump arm.
⑭ - Plus or Minus 1/64".
⑮ - Idle limiter caps used.
⑯ - With fast idle screw on index mark of cam.
⑰ - Auto. Trans. in DRIVE, air cond. OFF (except where noted).
⑱ - Auto. Trans. in NEUTRAL, air cond. OFF.

1968-69 CARTER AFB 4-BARREL (Cont.)



FAST IDLE SPEED ADJUSTMENT (CHRYSLER CORP. CARBURETORS)

Carburetor Interconnecting Linkage (Two Carb. Engines)

Dodge & Plymouth Hemi-Head Engines - After adjusting throttle linkage, install connector rod assembly (linking carburetor throttles) with slotted end attached to outboard side of inboard lever on rear carburetor. Hold rear carburetor throttle valves in wide open position, loosen locknut and turn adjusting stud in connector rod so that front carburetor throttle valves are also in wide open position, tighten locknut.

Fast Idle Speed (On Engine)

Chrysler Corp. "CAS" Carburetors - *CAUTION - Ignition timing and Distributor Control Valve adjustments must be correct before adjusting fast idle speed. See special "CAS" adjustment procedure.* With air cleaner in place and engine idling at normal operating temperature, open throttle and position fast idle screw on second step of fast idle cam *(see illustration)*. Turn fast idle adjusting screw in or out for correct fast idle speed *(see Specifications)*.

All Cars (except Chrysler Corp. with "CAS" Carburetors) - With engine at normal operating temperature and hot idle speed properly adjusted, rotate fast idle cam so that fast idle screw is on correct step of fast idle cam as listed in the specifications, adjust fast idle screw for correct engine fast idle RPM (see Specifications).

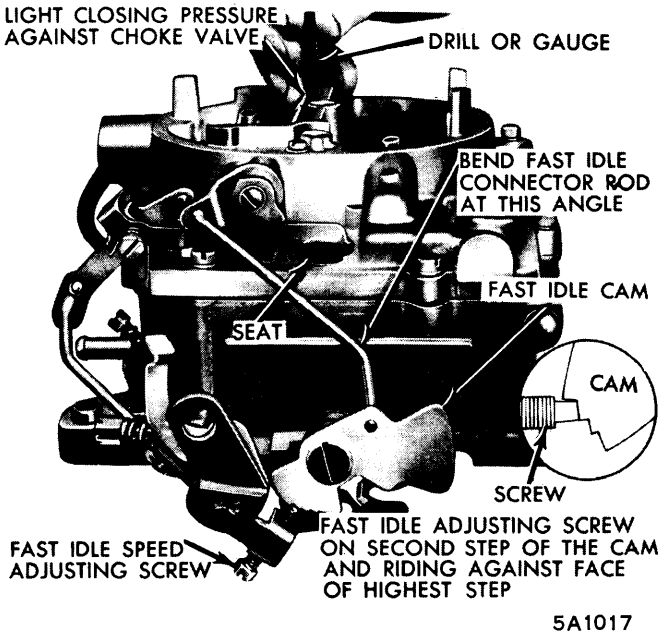
Idle Speed-Up Controls

See CARBURETOR on car model Tune-Up pages for adjustment (when used).

Fast Idle Cam Index (Off Engine)

Chrysler Corp. Carburetors – Position fast idle adjusting screw on second step of fast idle cam and against shoulder of highest step, move choke valve toward closed position with light pressure. Measure choke valve opening by inserting correct size gauge or drill rod (see Specifications) between edge of valve and air horn wall. If slight drag not noted as gauge withdrawn, adjust by bending fast idle connector rod at the angle.

American Motors - With choke closed and lug on outer choke shaft lever contacting stop on inner choke shaft lever, center of fast idle screw should be aligned with index mark on fast idle cam. Adjust by bending fast idle connector rod as necessary.



FAST IDLE CAM INDEX ADJUSTMENT (CHRYSLER CORP. CARBS.)

Bowl Vent Valve

Chrysler – With throttle valves tightly closed, measure clearance between air horn and bowl vent valve at smallest opening point using a 5/32" drill rod or gauge (all carburetors). If clearance not correct, adjust by bending adjusting tang on pivot end of lever as necessary. *NOTE – Vent valve not used on 4430S carburetors.*

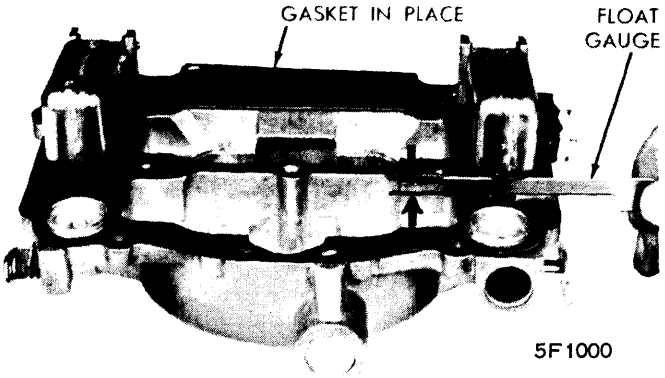
Lincoln – With slight clearance between lug on fast idle cam and stop on flange casting, and inner countershaft lever contacting lug on outer countershaft lever, fast idle adjusting screw should be aligned with index mark on fast idle cam. Adjust by bending fast idle connector rod. If necessary, bend stop lug on fast idle cam. With choke valve and primary throttle valves fully closed, rotate fast idle cam until index mark on cam aligned with center of fast idle screw, turn screw inward until it just contacts the cam, release throttle valves and turn fast idle screw in exactly 1 turn for initial fast idle setting.

Float Level

► *FLOAT SETTING CAUTION (CARBURETORS WITH RESILIENT INLET NEEDLE SEAT): When bending float lever to adjust float level, do not allow lever to contact inlet needle seat as seat can be compressed enough to cause a false setting. Check float level with weight of float only resting on needle.*

1968-69 CARTER AFB 4-BARREL (Cont.)

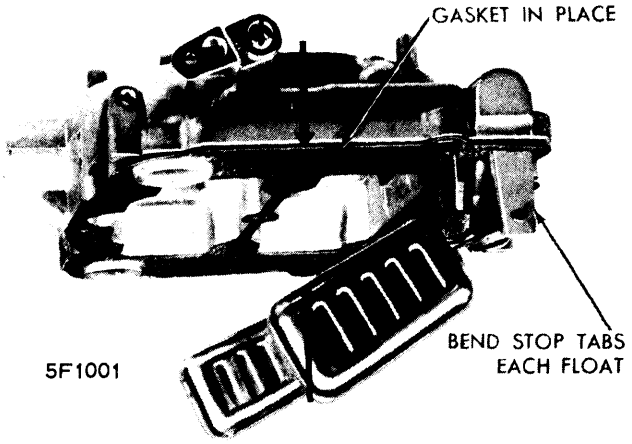
Before making float adjustment, make sure floats are parallel to outer edge of air horn casting. Remove as much clearance as possible between arms of float lever and support lugs on air horn. Arms should be parallel to inner surfaces of supports and float arm should operate freely without excessive clearance on hinge pin. Adjust both primary and secondary floats to same height. With air horn inverted, bowl cover gasket in place, and needle valve seated, measure distance from top of float at outer end to air horn gasket (see Specifications). If distance not correct, adjust by bending float arm.



FLOAT LEVEL SETTING (TYPICAL)

Float Drop

With bowl cover held upright so that floats hang freely at lower end of travel, measure distance from bowl cover gasket to bottom of float (or top of float as noted in specifications). If this distance not correct (see Specifications), adjust by bending float stop tab on float brackets.

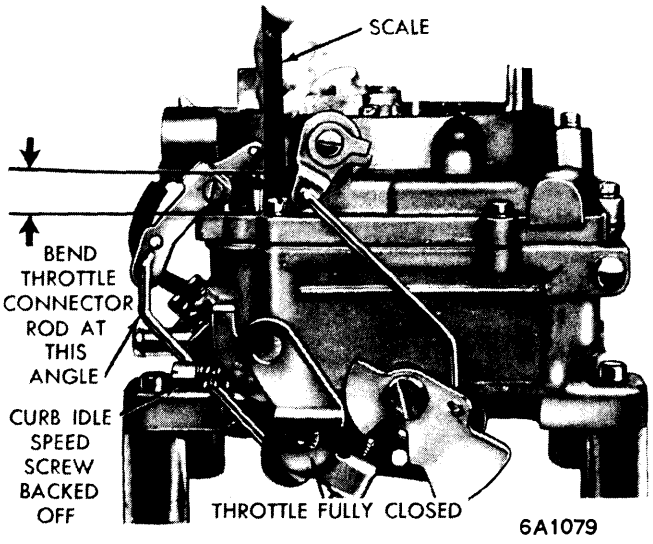


FLOAT DROP ADJUSTMENT

Accelerating Pump

NOTE - This is a pump stroke (travel) adjustment and not a seasonal setting. On all models with a seasonal setting, pump connector rod must be engaged in correct hole of pump arm (see Specifications).

Back out throttle stopscrew so that throttle valves are fully seated, use a scale to measure distance from top surface of bowl cover to top of pump plunger shaft (All carburetors except as noted in specifications where measurement is made to bottom of "S" link in pump plunger shaft). If this distance not correct (see Specifications), adjust by bending pump connector rod at lower angle. Return throttle stopscrew to original position.



ACCELERATING PUMP STROKE ADJUSTMENT

Automatic Choke

Integral Type - *Adjust choke after Choke Piston Linkage has been adjusted.* Loosen cover screws and rotate thermostatic coil and cover assembly to align reference mark on cover with correct graduation of scale on housing, tighten cover screws. See "Specifications".

Dashpot

Chrysler – After idle speed and mixture adjusted, run engine with tachometer attached and open throttle to point where actuating tab on throttle lever just contacts dashpot stem (stem must not be compressed), note tachometer reading. Engine speed should be 2000 RPM. Adjust dashpot by turning it in or out of mounting bracket.

Lincoln – With primary throttle valves closed, distance from top surface of air horn to bottom of dashpot lever arm should be .171". To adjust, bend dashpot lever arm (between lever arm base and plunger).

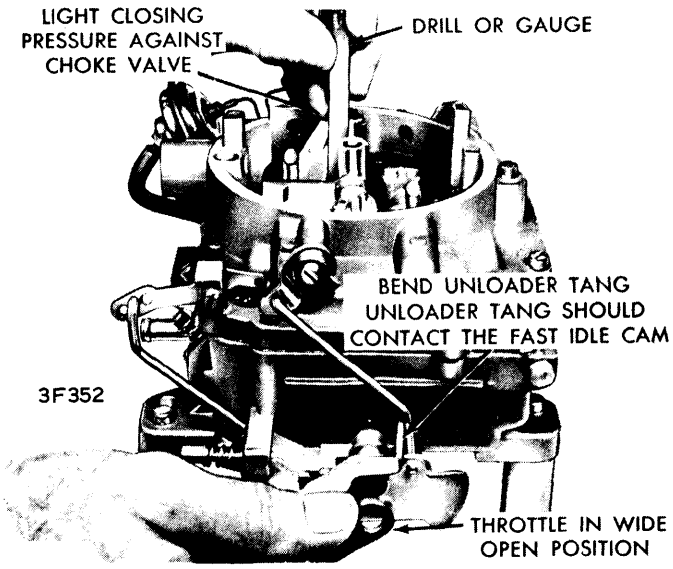
American Motors – With throttle valves tightly closed, clearance between dashpot stem (with stem fully depressed) and throttle lever should be as shown in table below. Turn dashpot to adjust.

4467S	7/32"
4468S, 4584S	3/16"
4469S, 4583S	9/64"
4585S, 4622S, 4623S, 4624S, 4661S, 4663S, 4665S	11/64"
4660S, 4662S, 4664S	5/32"

Unloader

After fast idle cam index adjustment completed, rotate primary throttle valves to wide open position and check choke valve opening between upper edge of valve and air horn wall. Clearance should be as indicated in Specifications. To adjust, bend unloader lip on primary throttle lever.

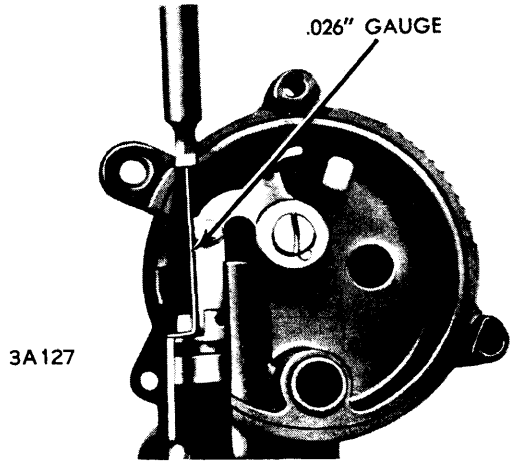
1968-69 CARTER AFB 4-BARREL (Cont.)



UNLOADER ADJUSTMENT (TYPICAL)

Choke Piston Linkage

NOTE – This adjustment required on carburetors with "Integral Type" automatic choke assemblies with choke vacuum piston. Remove choke cover and coil assembly, then proceed as follows:



CHOKE PISTON LINKAGE ADJUSTMENT

Choke Piston Linkage

Car & Carburetor	Choke Valve Clearance
1968 Chrysler Corp. 4431S	.161"
4432S	.102"
1969 Chrysler Corp. 4620S, 21S	.0995"
1968 Lincoln 4562S, 63S	.100"
1968 American Mtrs. 4467S, 4622S	.088"
4584S, 4585S	.096"
4469S, 4583S, 4624S	.110"
4468S, 4623S	.120"
1969 American Mtrs. 4660S	.0781"
4661S, 4663S, 4665S	.125"
4662S, 4664S	.1093"

Chrysler Corp., Lincoln & American Motors – Bend a .026" wire gauge (T109-189) at a 90° angle approximately 1/8" from end, then open the choke valve and insert gauge so that bent portion is between top of slot in piston cylinder and bottom of slot in piston (see illustration). Hold wire gauge in position and close choke valve by pressing on piston lever in choke housing until resistance is felt. Clearance between top of choke valve and wall of air horn should be as indicated (see "Choke Piston Linkage" table). To adjust, bend choke connector rod. *NOTE – If choke shaft has a clamp type lever, loosen clamp screw and rotate lever on shaft, then tighten screw.*

Secondary Throttle Lever

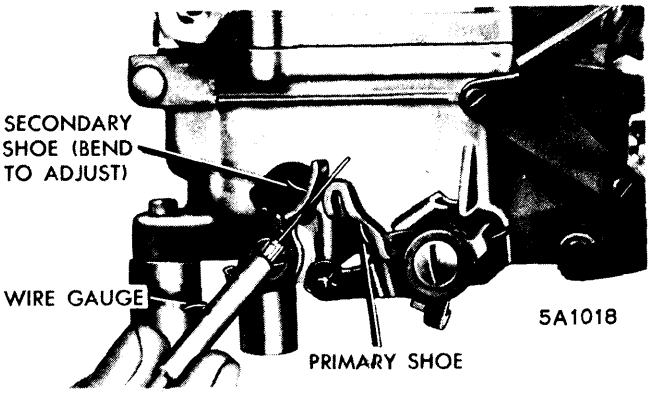
All Models - *See additional adjustment data below.* Block choke valve in wide open position. Open primary throttle valves until distance from lower edge of valves to carburetor bore on side opposite idle ports is exactly as shown in table below. Secondary throttle valves should just start to open at this point. Adjust by bending secondary throttle operating rod.

Secondary Throttle Setting

Car & Carb.	Primary Throttle Setting
Chrysler (All)	17/64"
Lincoln (All)	15/32"
American Motors (All)	7/16"

Lincoln – With throttle valves wide open, primary and secondary valves should be in a vertical position. Bend stop lug on secondary lever as necessary to prevent secondary valves going past this wide open position.

American Motors - Primary and secondary throttle valves should be in vertical position at wide open throttle.



SECONDARY THROTTLE LINKAGE

Closing Shoe Clearance

Fully closed primary and secondary throttle valves. Clearance between positive closing shoes on primary and secondary throttle levers should be .020" (.010-.030") on all carburetors. To adjust, bend shoe on secondary throttle lever (all carburetors).

Secondary Throttle Lockout

Crack throttle valves and manually open and close choke valve. Tang on secondary throttle lever should freely engage notch in lockout dog while barely missing edge of secondary throttle lever to 1/64" (.015") Gauge.

LINCOLN NOTE – After making above adjustment, hold lockout lever tightly against stop on main body with secondary throttle valves partially open. Clearance between tang on secondary throttle lever and ramp on lockout lever should be .015-.040". Adjust by bending tang on secondary throttle lever. Manually open and close choke valve. With choke valve closed, secondary throttle valve opening (high side of valves on side adjacent to throttle lever) should be .070" with primary throttle valves wide open. Adjust by bending tang on secondary throttle lever.

1968-69 CARTER AFB 4-BARREL (Cont.)

AMERICAN MOTORS NOTE – After making above adjustment, set clearance between lockout dog and tang on notch. To adjust, bend tang on secondary throttle lever.

Auxiliary Throttle Valves

NOTE – Auxiliary throttle valves not used on all models. Velocity valves located above secondary throttle valves. Valves should close of own weight. No adjustment required.

OVERHAUL

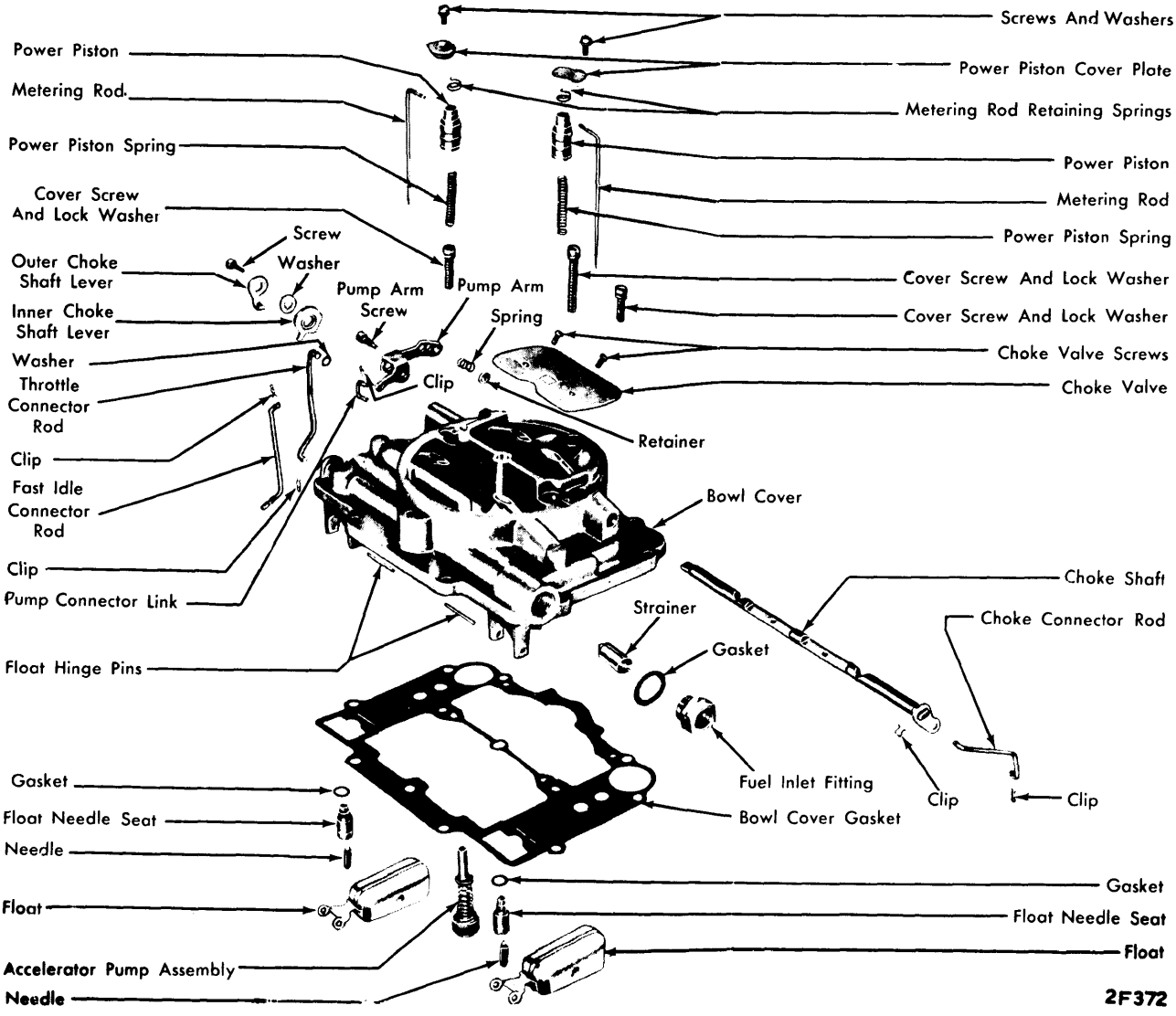
►*1968 AMERICAN MOTORS IDLE MIXTURE SCREW LIMITER CAP NOTE:* These caps must be removed during overhaul. Turn screws until ears on caps are pointing outward from center of carburetor, cut off ears with diagonal cutting pliers, and remove screws. Cut off rest of cap. To replace cap, see note under American Motors Auto. Trans. Carb. Adjustment.

►*DODGE & PLYMOUTH "HEMI-HEAD" ENGINE CARBURETOR OVERHAUL NOTE:* Front carburetors on these installations do not have Automatic Choke or Fast Idle mechanism. Disregard data on these items when overhauling these carburetors.

Disassembly

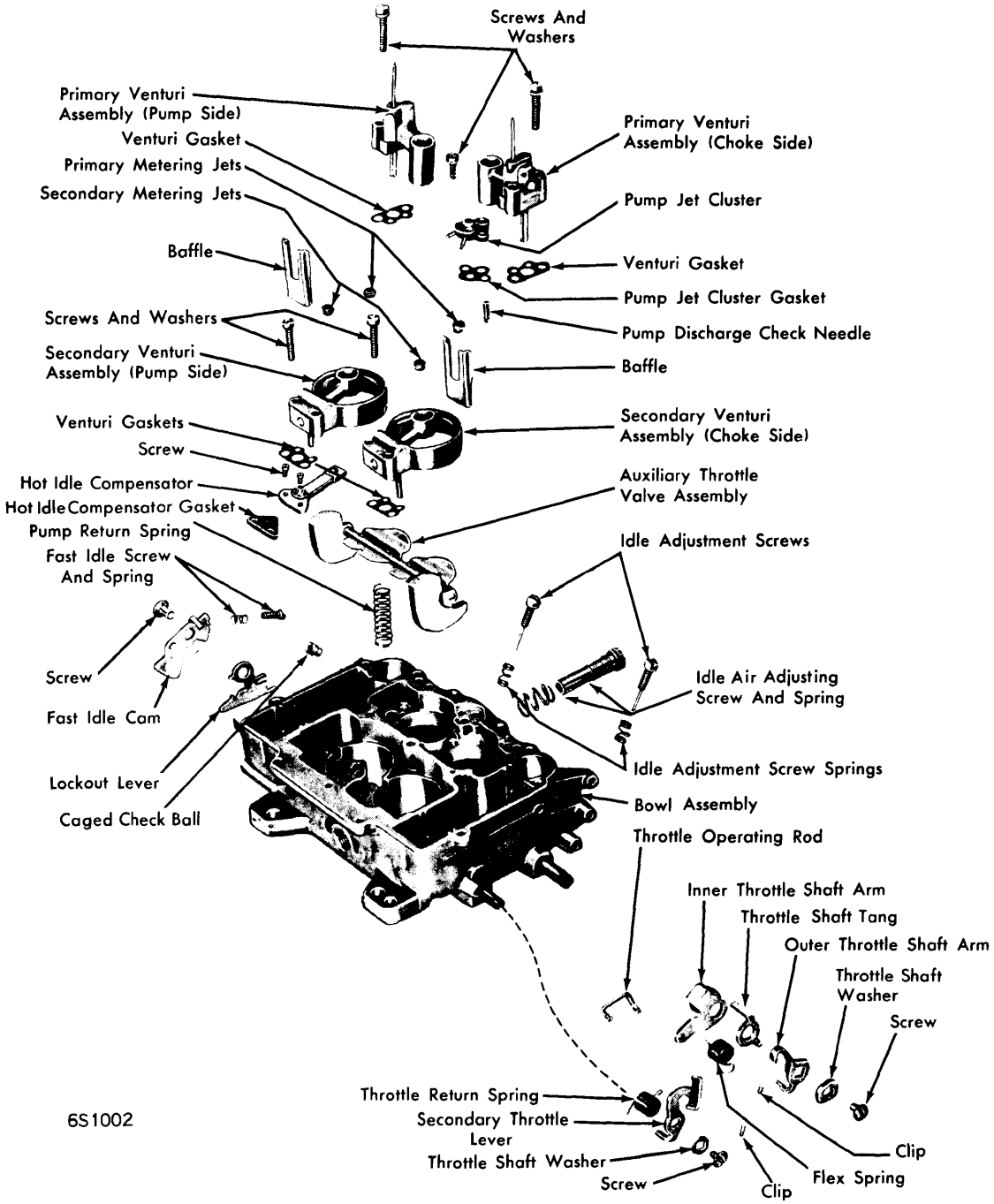
NOTE – When disassembling carburetor, keep PRIMARY and SECONDARY parts separate so they will NOT be interchanged when reassembling carburetor.

Disconnect choke connector rod at choke shaft lever (except models with "cross-over" type choke or manual choke), then disconnect throttle connector rod at pump arm, and fast idle connector rod at choke lever. Remove retaining screws from step-up piston and rod cover plates (hold cover down against spring tension), remove covers, lift out piston and rod assemblies, remove springs from



CARTER AFB 4-BARREL CARBURETOR AIR HORN & FLOAT ASSEMBLY (TYPICAL)

1968-69 CARTER AFB 4-BARREL (Cont.)



CARTER AFB 4-BARREL CARBURETOR THROTTLE BODY ASSEMBLY (WITH AUXILIARY THROTTLE VALVES)

piston wells. Remove fuel inlet fitting, gasket and (Chrysler Corp.) strainer. Remove dashpot (if so equipped).

Air Horn - Remove all air horn attaching screws, lift air horn straight up and away from main body to avoid damage to floats. Invert air horn, remove float hinge pins, lift out floats, remove fuel inlet needles, seats and gaskets *(CAUTION - Keep individual float assemblies separate so they may be reinstalled together and in same position).* Disengage pump plunger link, slide pump plunger and spring out of air horn (place plunger in clean gasoline to prevent leather drying out), remove air horn gasket. Take out pump arm pivot screw, remove pump arm and link. If necessary to remove choke valve and shaft, remove choke shaft lever retaining screw from end of shaft, remove outer lever and washer, and inner lever from shaft. Take out choke valve screws and remove choke valve, then slide choke shaft out of air horn.

Automatic Choke – Remove choke cover screws and retainers, remove choke cover and thermostatic coil assembly, gasket, and baffle plate. Remove choke lever attaching screw, rotate lever to remove vacuum piston from cylinder, lift out piston, lever, and link assembly (piston can be removed from link by taking out piston pin). Take out choke

1968-69 CARTER AFB 4-BARREL (Cont.)

housing attaching screws, remove choke housing assembly and O-ring gasket. Remove choke shaft, lever, and rod assembly from housing.

Main Body – Remove pump return spring from pump cylinder. Remove pump discharge nozzle assembly and gasket, then invert carburetor and drop out pump discharge check needle (in passage under pump nozzle). Remove hot idle compensator and gasket *(CAUTION – Use care not to distort or damage bi-metal strip).* Mark primary and secondary venturi assemblies for correct reinstallation, then remove venturi assemblies and gaskets. Remove float bowl baffles and auxiliary throttle valve assembly (if used). Remove primary and secondary metering jets *(CAUTION – Keep jets separate for correct reinstallation).* Remove pump intake ball check assembly plug from pump side of bowl. Remove idle mixture screws and spring *(CAUTION – Do not remove these screws or limiter caps on Lincoln carburetors, and see note above for American Motors (1968) removal).* Remove idle air adjustment screw and spring. Plastic idle limiter caps are used on all American Motors (1969) models, except a 4-speed manual transmission. To remove these idle limiter caps, install a sheet metal screw in center of each cap and turn clockwise, remove idle mixture screws and springs. It is not necessary to remove throttle valves or disturb throttle linkage for normal cleaning and inspection. If necessary to replace parts, disassemble as directed below. *NOTE – On air conditioned Lincoln cars, remove fast idle speed-up valve and solenoid assembly. It is not necessary to further disassemble this assembly, unless a malfunction exists. If so, remove solenoid from valve, noting position of poppet valve and spring. Do not wash these parts in cleaning solution.*

Throttle Valves & Linkages – On 1968 models take out fast idle cam attaching screw, remove fast idle cam, trip lever, and lockout lever. Remove secondary throttle operating rod. Take out screw on end of secondary throttle shaft, remove washer and operating lever and spring from shaft. Unhook throttle flex spring from outer primary throttle shaft arm. Take out screw on end of primary throttle shaft, remove outer throttle shaft arm and dog, inner throttle shaft arm, and flex spring from primary throttle shaft. On both 1968 and 1969 models new throttle valves may be installed. Screws that attach throttle valves are staked on opposite side. Care should be taken when removing so as not to break screws in throttle shaft. Remove staked portion of screws with a file. Remove screws that attach primary and secondary throttle valves to throttle shaft and slide valves out of bores. *NOTE – It is recommended that if throttle shafts are excessively worn, a new carburetor be installed.*

Cleaning & Inspection

Clean carburetor castings and metal parts thoroughly in carburetor cleaning solution. Do not immerse choke cover and thermostatic coil assembly, or pump plunger in cleaning solution. Clean pump plunger in clean gasoline. Blow out all passages with compressed air and remove all carbon deposits *(NOTE – If carbon deposits noted in choke piston cylinder and slots, remove welch plug from end of cylinder by piercing center of plug with a pointed tool and prying plug out, install new plug after cleaning cylinder and plug seat).* Inspect all parts for wear or damage and replace as necessary.

Reassembly

Use all new gaskets. Install parts in reverse order of disassembly procedure, and note the following:

Valve Installation – Use new screws when installing valves in their respective bores. Install new screws but do not tighten. Make sure idle speed adjusting screw is backed out, then hold valves in place with fingers placed on high side of valve. Tap valves lightly with a screwdriver to seat them in bores and while holding in this position, tighten screws securely. Stake screws in place by squeezing with pliers.

Lincoln Idle Speed-Up Control – Install vacuum inlet tube and fitting in air horn. If valve disassembled, install poppet valve and spring in housing. Install solenoid, place gasket in position and install assembly.

Limiter Cap Installation (American Motors) - When installing idle mixture screws, turn screws until they bottom lightly and back out 2 turns for initial adjustment. After final idle mixture adjustment is made on vehicle install new idle limiter caps.