1968-69 CARTER RBS SINGLE BARREL

RAMBLER AMERICAN, REBEL, JAVELIN & AMBASSADOR

1968

232" 6 Cyl. (Auto. Trans.) ①	Carter Carb. No.
Before Eng. Code 911L03	4470S
Beginning Eng. Code 911L03	4626S

1969

	Carter Carb. No.	
	Synchro-mesh	Auto. Trans.
199" 6 Cyl.	4633S	4634S
232" 6 Cyl.	4631S	① 4666S

① – Rogue Models use Holley Model 1931.

▸CHANGES, CAUTIONS, CORRECTIONS

▸*1968 AMERICAN MOTORS 232" 6 CYL. AUTO. TRANS. ENGINES RUNNING EXTREMELY RICH OR NOT RUNNING CORRECTION (With Carter RBS 4470S Carbs. with Build Code Date before "K7"):* Caused by missing or loose aluminum welch plug on lower side of fuel well in fuel bowl. If plug loose, pry old plug out and install new STEEL welch plug as follows: Support fuel well on block of wood, use light hammer and flat punch to seat plug firmly in opening (convex center of plug should be flat). *NOTE – Carburetors with build code date "K7" and later have steel welch plug installed and should not require modification.*

▸*1968 AMERICAN MOTORS 232" 6 CYL. AUTOMATIC TRANS. ENGINES UNABLE TO OBTAIN SMOOTH IDLE (With Carter RBS 4470S Carbs with Build Code Date before "K7"):* This condition may be caused by Idle Limiter installed incorrectly causing a too lean mixture. Check for securely tightened vacuum lines and no leaks at intake manifold, check entire ignition system and ignition timing. If trouble perists, correct as follows: Remove idle mixture adjusting screw and spring, use #61 (.039") drill in pin vise to enlarge idle adjusting screw port (coat drill with light grease to collect drill chips). Blow out idle port and adjust idle speed and mixture when carburetor reinstalled on engine. *NOTE – Carburetors with build date code "K7" and later should not require modification.*

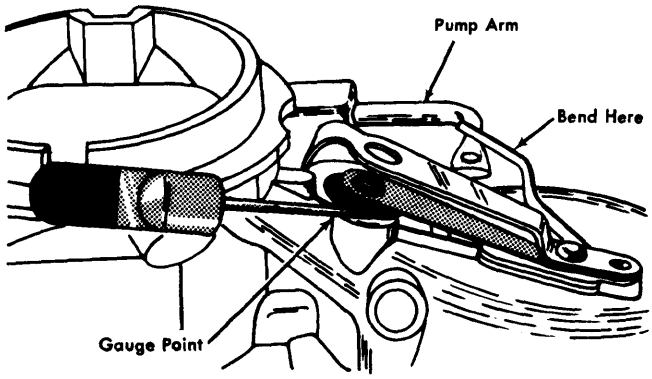
1968-69 232" 6 CYL. ENGINE NOTE – Engine has "Engine Mod" system with "low-quench" combustion chamber and closed-positive crankcase ventilation system. Carburetor and distributor are special emission calibrated units.

CARBURETOR IDENTIFICATION

Carter carburetor number is stamped on side of carburetor flange near throttle lever.

DESCRIPTION

Single barrel, concentric bowl type with a vacuum diaphragm controlled step-up. Design is similar to previous models except for new bowl vent system which follows:



BOWL VENT ADJUSTMENT

Bowl Vent – Consists of a separate vent on the bowl cover controlled by a flat vent valve on a spring arm. Vent is opened by link actuated by accelerating pump arm when throttle is closed, and is closed by spring arm when throttle is opened.

Idle Limiter Cap – Beginning with Engine Code 911L03 (Carter Carburetor Number 4626S) carburetors are equipped with an exterior idle limiter cap on the idle mixture screws and a fixed stop which limits travel to 7/8 turn.

ADJUSTMENT

Idle Speed & Mixture

Adjust with engine at normal operating temperature (choke valve wide open and fast idle not operative), air cleaner in place, automatic transmission in Drive, and air conditioner OFF.

NOTE – On 4626S Carburetor turn mixture screw ½ turn clockwise (leaner) from full rich stop before starting engine.

1968 Carburetors – With engine idling, set idle speed to 50 RPM less than specified speed (see Specifications), turn idle mixture adjusting screw out (counterclockwise) until engine speed begins to drop off, then turn screw in (clockwise) to lean mixture until maximum engine speed is obtained and continue to turn screw in until engine speed begins to drop off, finally turn screw out until maximum speed is just regained (this will assure a "lean as possible" setting). Readjust idle speed to specifications.

1969 Carburetors – With engine idling adjust idle speed to specified RPM. Starting from full rich stop, turn idle mixture screw clockwise until a loss of engine RPM is indicated. Turn mixture screw 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 RBS SINGLE BARREL (Continued)

CARBURETOR ADJUSTMENT SPECIFICATIONS								
Carter Carb. No.	Idle Speed (Engine RPM)		Initial Idle Mixture	Float Level Setting	Pump Clearance Setting	Bowl Vent Setting	Unloader Setting	Auto. Choke Setting
	Hot ①	Fast ②						
4470S	525	2000	1 Turn	9/16"	.000-.015"	5/64"	1/8" ④	2 Rich
4626S	525	2000	3/8 Turn	9/16"	.000-.015"	5/64"	1/8" ④	2 Rich
4631S	600	2000	③	9/16"	.0156"	5/64"	1/8"	Index
4633S	600	2000	③	9/16"	.0156"	5/64"	3/16"	Index
4634S	525	2000	③	9/16"	.0156"	5/64"	3/16"	2 Rich
4666S	525	2000	③	9/16"	.0156"	5/64"	1/8"	2 Rich

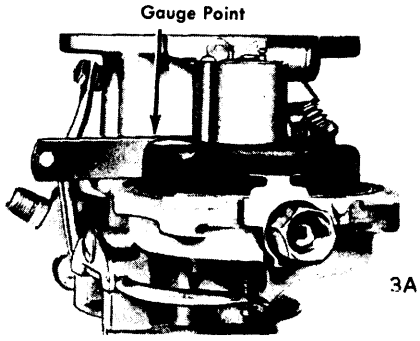
① – Auto. Trans. in Drive and air conditioner OFF.
② – With fast idle tang at index mark on fast idle cam.
③ – Idle Limiter Cap used.
④ – ± 1/32".

Fast Idle Speed (On Engine)

With engine idling at normal operating temperature, align fast idle tang on throttle lever with index mark on fast idle cam, bend tang as necessary for correct engine fast idle speed *(see specifications)*.

Float Level

With carburetor assembly inverted (bowl and bowl gasket removed) and with weight of float only resting on inlet needle, measure distance from machined surface of casting to top of "bump" at each end of float (see illustration and specifications). To adjust, remove float from carburetor and bend bracket at narrow portion. *NOTE - If adjustment is made with float in carburetor do not allow any pressure to be placed on resilient inlet needle seat.*



FLOAT LEVEL ADJUSTMENT

Accelerating Pump

NOTE - This adjustment must be made each time carburetor is disassembled and must be made before fast idle, bowl vent, and unloader adjustments. Back out idle speed screw and hold choke valve wide open so that throttle valve seats in carburetor bore. Turn adjusting nut on pump arm for correct clearance (see Specifications) between shoulder on pump shaft and pump arm. *NOTE* - Adjusting screw is self-locking.

Choke Piston Linkage

Bend a .026" wire gauge 90° approximately 1/8" from its end. Open choke valve and place gauge so bent portion is between top of slot in choke piston cylinder and bottom of slot in piston. While holding wire gauge in place, close choke valve by pressing piston lever in choke housing until resistance is felt.

1968 Carburetors – The bottom edge of choke valve should be ¼" from air horn. Bend choke piston link if adjustment is needed.

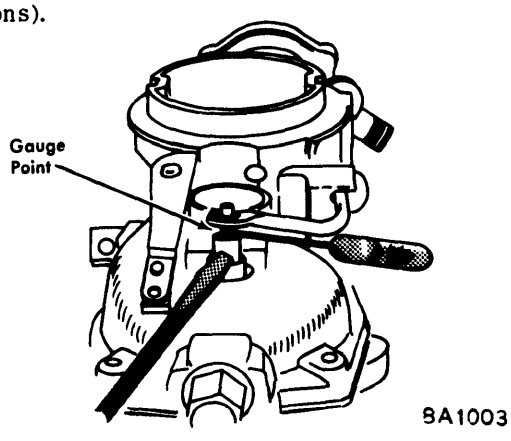
1969 Carburetors – The upper edge of choke valve should be within specifications from the air horn: 4631S & 4633S – 3/16"; 4634S & 4666S - 7/32"; bend choke piston link if adjustment is needed.

Fast Idle Cam Linkage (Off Engine)

With choke valve fully closed, fast idle tang on throttle lever should be aligned with index mark on fast idle cam. To adjust, bend fast idle cam connector rod at offset.

Automatic Choke

Loosen choke cover screws and rotate choke cover and coil assembly to align reference mark on cover with correct graduation of scale on housing (see Specifications).



ACCELERATING PUMP ADJUSTMENT

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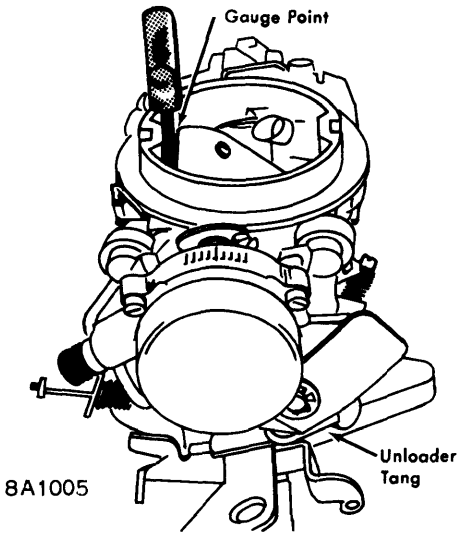
Unloader

With throttle valve wide open, clearance between upper edge of choke valve and wall of air horn should be as indicated in table. To adjust, bend tang on throttle lever (see illustration).



UNLOADER ADJUSTMENT

OVERHAUL

Disassembly

1) Remove pump adjusting nut, then push plunger down and remove spring and washer. Remove pump plunger shaft retainer, then remove pump arm retainer and arm, upper plunger spring, washer and spacer. Remove retaining screw and separate dashpot assembly from mounting flange.

2) Remove fast idle cam and disengage cam from connector rod. Remove thermostatic coil housing and gasket. *NOTE – Do not remove choke valve except for cleaning or repairing.* To remove choke, remove choke piston lever and slide piston out of cylinder, then disconnect choke piston link (wire). Spread fork of choke lever with a screwdriver and slide from shaft. Remove choke valve screws and valve, and slide shaft out of air horn.

3) Remove bowl and gasket, then remove float pin attaching screws, float, pin, and needle and seat assembly. Press pump plunger down until it bottoms, then hold a 3/8" bolt of suitable length on upper end of plunger shaft and tap with light hammer. Work over bench so parts are not lost. *NOTE – Pump discharge needle and pump inlet ball are not serviced and are not removed.*

4) If necessary to remove diaphragm assembly, pierce cover with a sharp pointed tool, pry cover and washer out of carburetor casting, remove lower retainer, spring, diaphragm assembly and step-up rod.

5) If necessary to remove throttle valve, file upset end of attaching screws, then remove screws, valve, and slide shaft and lever assembly out of casting. Remove idle limiter cap by installing a sheet metal screw in center of cap and turning clockwise. Remove idle mixture and curb idle screws and springs.

Cleaning & Inspection

Clean casting and parts in a suitable cleaning solution. *NOTE – Do not immerse needle seat, diaphragm, plunger, or float in cleaning solution. If diaphragm assembly has not been removed, do not immerse casting in cleaning solution.* Blow out all passages with air and remove all gum and carbon from carburetor bore. Inspect all parts for damage and replace as necessary.

Reassembly

1) Invert carburetor casting and install pump plunger and lower pump spring and check valve. Use a 5/8" deep socket as a driver and tap valve firmly into place with a light hammer.

2) With carburetor casting upright, insert step-up rod approximately half way into sleeve of diaphragm assembly, install assembly in carburetor, install spring and retainer, position new diaphragm cover in place. Position Tool J-21202 on cover and tap tool with hammer to seat cover in casting. Place conical washer over cover with small end of cone pointing up, and tap cone flat with a hammer using a 7/16" socket and short extension. Apply thin coat of "Pliobond" around outside edge of cover to seal.

3) If throttle shaft assembly was removed, attach connector link and insert shaft into position, then install valve with new attaching screws (do not tighten screws). *NOTE – Trademark on valve should extend toward idle port when viewed from manifold flange side.* Tap valve lightly with screwdriver to seat valve in bore, then hold valve in position and tighten attaching screws.

4) Install upper pump washer, spacer and spring, then install washer and pump delayer on connecting link. Install pump arm with connector link through hole in lower end of arm. Upper end of arm is over pump plunger and under bowl vent connector rod. Hold and install retainer and screw, then install pump adjusting nut on connector link and retainer clip on upper end of plunger shaft.

5) If choke was completely disassembled, install choke valve and shaft. Center valve in bore by tapping with a screwdriver and install attaching screws. Attach fast idle connector rod to choke lever and install choke lever on shaft. Crimp forked ends of lever with pliers to secure in place. Attach fast idle cam to lower end of connector rod and install fast idle cam, washer, and retainer. Assemble choke piston and link (wire) to choke piston lever. Slide piston into cylinder, then position lever on end of shaft and secure with attaching screw. Install choke housing gasket, thermostatic coil housing, revolve housing counterclockwise until indicator mark is on specified setting (see Specifications). Install three retainers and screws. Install curb idle and idle mixture adjusting screws. Turn idle mixture adjusting screw in by hand against seat, then back screw out 1 turn to provide an initial setting. After final idle mixture adjustment is made on vehicle install new idle limiter caps.

6) Invert carburetor and install fuel inlet needle and seat, then insert float pin into float bracket and install float assembly in casting. Secure float pin with attaching screws. Place a new bowl cover gasket on carburetor and install bowl cover attaching screws. Torque screws evenly. Install dashpot assembly and retaining screw on mounting flange.

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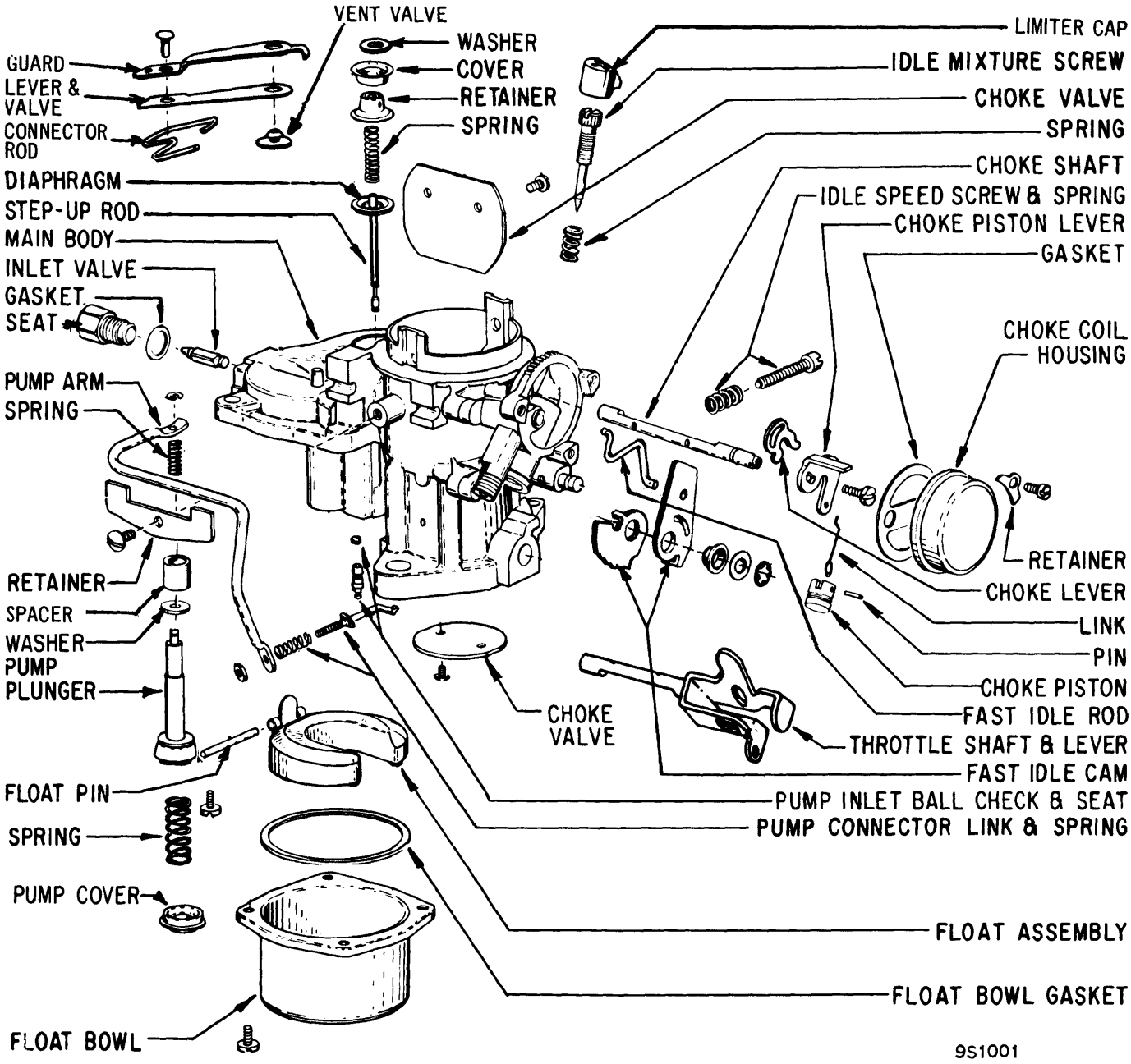

CARTER RBS SINGLE BARREL CARBURETOR ASSEMBLY