

## BUICK 1967 "V8"

### AFB FOUR-BORE DOWN-DRAFT CLIMATIC CONTROL CARBURETORS NOS. 4331S – 4332S – 4344S

1967 SERIES	ENGINE DISPL.	ORIGINAL CARB. NO.	SERVICE CARB. NO.	ZIP KIT NO.	GASKET SET NO.
43000, 44000, 45000, Special, Skylark, Sport Wagon, LeSabre A/T	340	4331S	4331S	902-213A	519A
43000, 44000, 45000, Special, Skylark, Sport Wagon, LeSabre SYN/T	340	4332S	4332S	902-213A	519A
A.I.R. (Air Injection Reactor)					
43000, 44000, 45000, Special, Skylark, Sport Wagon, LeSabre A/T	340	4344S	4344S	902-213A	519A

## CARBURETOR SPECIFICATIONS

### FOR BUICK 8 CYLINDERS, VACUUM AT IDLE 15 INCHES

Carb. No.	Thro. Bore Prim. & Sec. Size	Main Venturi Prim. & Sec. Size	Vents In Air Horn & Body Amt.	Idle Speed Jet In Prim. Venturi Size	Idle By-Pass In Prim. Venturi Size	Idle Econ. In Prim. Venturi Size	Idle Bleed In Prim. Venturi Size	Idle Port In Prim. Side Size	Anti-Per. or Nozzle Bleed In Prim. & Sec. Venturi Size	Main Vent Tube In Prim. & Sec. Venturi Amt. Side Holes	Sec. Discharge In Sec. Venturi Port (P) Bleed (B) Size	Pump Jet In Prim. Side Size	Choke Setting	Vacuum Spark Port In Prim. Side Size
4331S	1 $\frac{7}{16}$ (P) 1 $\frac{7}{16}$ (S)	1 $\frac{1}{8}$ (P) 1 $\frac{1}{4}$ (S)	13	.031	.0511	.043	.0511	.180 x .030 x .051	.036 (P) .031 (S)	6 (P) Early 20 (P) Late 3 (S)	.052 (P) .0292 (B)	.025	1 P. Rich	Full Vac.
4332S	1 $\frac{7}{16}$ (P) 1 $\frac{7}{16}$ (S)	1 $\frac{1}{8}$ (P) 1 $\frac{1}{4}$ (S)	13	.033	.0465	.0465	.0511	.180 x .030 x .051	.036 (P) .031 (S)	6 (P) Early 20 (P) Late 3 (S)	.052 (P) .0292 (B)	.028	Index	.130 x .040
4344S	1 $\frac{7}{16}$ (P) 1 $\frac{7}{16}$ (S)	1 (P) 1 $\frac{1}{4}$ (S)	13	.031	.055	.043	.0571	.150 x .030 x .051	.036 (P) .031 (S)	6 (P) Early 20 (P) Late 3 (S)	.052 (P) .040 (B)	.025	2 P. Rich	.130 x .040

## MOTOR TUNE-UP – BE ACCURATE!

Spark Plug Gap .035"	Breaker Point Setting .016" 30° Dwell	Ignition Timing Breaker Points to Open: 2 $\frac{1}{2}$ B.T.C. At Vibration Damper Vacuum Hose Disconnected	Float Setting See Adjustments	Idle Mixture Screw Setting (A/T. 1 $\frac{3}{4}$ to 3 $\frac{1}{4}$ ) (S/T. $\frac{1}{4}$ to 1 $\frac{1}{4}$ ) (A.I.R. 1 $\frac{1}{2}$ to 2 $\frac{1}{4}$ ) Turns Open. Idle R.P.M. 550 to 600 Add 50 R.P.M. W/A/C. A/T. In Drive Range S/M/T. In Neut.
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Carter  
Carburetor  
Division



3 Pages  
Form 5507B

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**CARBURETOR ADJUSTMENTS**

**FLOAT ALIGNMENT:** Side of floats parallel to edge of casting. Minimum clearance between lever and air horn lugs without binding. To adjust, bend float lever.

**FLOAT LEVEL:** (11/64 inch). Resilient seat or flared tip needle plus or minus 1/64 inch between top of floats (at outer end) and air horn gasket. To adjust, bend float lever.

**FLOAT DROP:** 23/32 inch plus or minus 1/16 inch between top of floats (at outer end) and air horn gasket. To adjust, bend stop tabs on float brackets.

**PUMP:** (4344 1/2 inch) (all others 7/16 inch) from the top of the bowl cover to the top of the plunger shaft, with throttle connector rod (4344 in inner hole) (all others in center hole) of pump arm with throttle valves tightly closed. To adjust, bend throttle connector rod.

**CHOKE PISTON LINKAGE ADJUSTMENT:** Remove choke coil assembly. (1) Bend a .026 inch wire gauge (tool T109-189) at a 90° angle approximately 1/8 inch from its end. (2) Open the choke valve and insert the wire gauge so that the bent portion is between the top of the slot in the choke piston cylinder and the bottom of the center of slot in the piston. Hold the wire gauge in position and close the choke valve by pressing on the piston lever in the choke housing until resistance is felt. There should now be (4331 - .085 inch), (4332 - .095 inch), (4344 - .075 inch) plus or minus .005 inch between the top of the choke valve and inner wall of air horn. (3) To adjust, bend choke connector rod.

**FAST IDLE LINKAGE ADJUSTMENT:** With choke valve closed center index mark on cam should align with adjusting screw. To adjust, bend fast idle connector rod.

**NOTE:** It may be necessary to bend stop lug on fast idle cam.

**FAST IDLE THROTTLE VALVE CLEARANCE:** (4331 - .033"), (4332 .026") between lower edge of throttle valve and bore with adjusting screw on center index mark of cam. Adjust fast idle screw.

**FAST IDLE ON CAR:** 600 R.P.M. hot engine with fast idle screw at lowest step of cam A/T in drive, Syn./T in Neut.

**UNLOADER:** (5/32 inch) between upper edge of choke valve and inner wall of air horn with throttle valves wide open. To adjust, bend unloader lip on throttle lever.

**SECONDARY THROTTLE LEVER ADJUSTMENT:** (1) Block choke valve wide open. (2) (21/64 inch) between lower edge of primary valve and bore (opposite idle port) secondary valves should just start to open. To adjust, bend throttle operating rod.

**NOTE:** Secondary throttle valves will be a few degrees from wide open when primary valves are wide open. Upper edge of secondary valve should just contact auxiliary valve when auxiliary valve is wide open. If necessary, bend stop lug on secondary lever to prevent secondary valves from going past wide open. (3) With primary and secondary throttle valves tightly closed, there should be .010 to .030 inch between positive closing shoes on primary and secondary throttle lever. To adjust, bend shoe on secondary lever.

**SECONDARY THROTTLE LOCK-OUT ADJUSTMENT:** Crack throttle valves and manually open and close the choke valve. Tang on secondary throttle lever should freely engage in notch of lockout dog. To adjust, bend tang on secondary throttle lever.

## PARTS LIST

Part No.	PART NAME	Part No.	PART NAME
1A-119	Flange gasket. . . . .	48-2695	Pump jet and housing assembly (4331) . . . . .
2-185	Primary throttle valve. . . . . (2)	48-3185	Pump jet and housing assembly (4344) . . . . .
2-284	Secondary throttle valve . . . . . (2)	53A-412	Lockout dog. . . . .
3-16335	Secondary throttle shaft & lever assembly. . . . .	53A-430	Secondary throttle operating lever. . . . .
3-15005	Primary throttle shaft and lever assembly. . . . .	58-8205	Secondary venturi assembly (choke side) (4331 - 4332) . . . . .
3-15095	Auxiliary throttle shaft, valve & weight assy. . . . .	58-8215	Secondary venturi assembly (pump side) (4331 - 4332) . . . . .
4A-175	Primary throttle shaft dog . . . . .	58-9665	Secondary venturi assembly (choke side) (4344) . . . . .
7-288	Choke valve . . . . .	58-9675	Secondary venturi assembly (pump side) (4344) . . . . .
11B-79	Rivet plug . . . . . (2)	58-10185	Primary venturi assy. (choke side) early (4331) . . . . .
11B-389	Idle port rivet plug. . . . . (2)	58-10195	Primary venturi assy. (pump side) early (4331) . . . . .
11B-390	Passage plug (primary) . . . . . (2)	58-10815	Primary venturi assy. (choke side) early (4332) . . . . .
11B-406	Passage plug (secondary) . . . . . (2)	58-10825	Primary venturi assy. (pump side) early (4332) . . . . .
11B-407	Rivet plug . . . . .	58-10855	Primary venturi assy. (choke side) early (4344) . . . . .
11B-439	Primary venturi plug . . . . . (2)	58-10865	Primary venturi assy. (pump side) early (4344) . . . . .
14-6095	Choke piston lever and link assembly. . . . .	58-11255	Primary venturi assy. (choke side) late (4331) . . . . .
14-6125	Choke shaft and lever assy. (piston housing). . . . .	58-11265	Primary venturi assy. (pump side) late (4331) . . . . .
14-619	Choke shaft lever . . . . .	58-11275	Primary venturi assy. (choke side) late (4332) . . . . .
14-620	Cam trip lever. . . . .	58-11285	Primary venturi assy. (pump side) late (4332) . . . . .
14-8205	Choke lever and shaft assembly . . . . .	58-11295	Primary venturi assy. (choke side) late (4344) . . . . .
15-885	Filter nut assembly . . . . .	58-11305	Primary venturi assy. (pump side) late (4344) . . . . .
16-341	Step up rod (.0685" x .059") Std. (4331) . . . . . (2)	61-58	Fast idle speed screw spring. . . . .
16-383U	Step up rod package (2) 16-382, (2) 61-400, (2) 120-185 1 size lean (4331-4332) . . . . .	61-84	Idle mixture screw spring . . . . . (2)
16-430	Step up rod (.0735" x .067") Std. (4344) . . . . . (2)	61-171	Pump spring (lower) (4332) . . . . .
16-492	Step up rod (.0695" x .059") Std. (4332) . . . . . (2)	61-259	Vacuum piston spring. . . . . (2)
17-51	Pump discharge needle. . . . .	61-291	Idle speed screw spring . . . . .
20-43	Piston housing gasket . . . . .	61-398	Pump spring (lower) (4331 - 4344) . . . . .
20-135	Fuel inlet fitting gasket . . . . .	61-483	Secondary throttle return spring . . . . .
20-204	Needle seat gasket . . . . . (2)	61-585	Step up rod retaining spring . . . . . (2)
21-1795	Float and lever assembly . . . . . (2)	61-623	Throttle flex spring . . . . .
24-29	Float lever pin . . . . . (2)	61-624	Fast idle cam spring (Use 61-850) . . . . .
25-6995	Needle and seat assembly (resilient seat). . . . . (2)	61-626	Filter spring. . . . .
25-8595	Needle and seat assembly (flared tip needle). . . . . (2)	61-850	Fast idle cam spring . . . . .
30A-81	Idle mixture screw . . . . . (2)	63-58	Coil housing retainer . . . . . (3)
30-1495	Filter element assembly . . . . .	64-2175	Pump plunger, rod and spring assembly . . . . .
47-30	Piston housing welsh plug . . . . .	65-43	Step up piston cover plate . . . . . (2)
47-36	Secondary venturi welsh plug. . . . . (2)	101-65	Choke shaft lever screw . . . . . (2)
48-2645	Pump jet and housing assembly (4332) . . . . .	101-74	Throttle shaft lever screw . . . . . (2)

Part No.	PART NAME	Part No.	PART NAME
101-136	Coil housing screw . . . . . (3)	120-222	Secondary metering jet (.070") (4331 - 4332) . . . (2)
101-152S	Air horn screw assembly (4331 - 4332) . . . . .	120-392	Primary metering jet (.092") (4331 - 4332) . . . . . (2)
101-184S	Pump jet housing screw assembly . . . . . (2)	121-287	Pump jet housing gasket (4331 - 4332) . . . . .
101-323	Fast idle cam screw . . . . .	121-292	Air horn gasket (4331 - 4332) . . . . .
101-362S	Air horn screw assembly . . . . . (8)	121-293	Secondary venturi cluster gasket . . . . . (2)
101-379S	Secondary venturi screw assembly . . . . . (4)	121-302	Primary venturi cluster gasket . . . . . (2)
101-419	Secondary throttle valve screw . . . . . (4)	121-314	Thermostatic valve gasket . . . . .
101-420	Primary throttle valve screw . . . . . (4)	121-500	Coil housing gasket . . . . .
101-421	Pump arm screw . . . . .	121-562	Pump jet housing gasket (4344) . . . . .
101-431S	Air horn screw assembly . . . . .	121-578	Air horn gasket (4344) . . . . .
101-436	Piston housing screw . . . . . (3)	122-108S	Pump intake ball check assembly . . . . .
101-442S	Primary venturi screw assembly . . . . . (4)	136-34	Choke shaft washer . . . . .
101-452	Idle speed screw . . . . .	136-159	Primary throttle shaft washer . . . . .
101-453S	Thermo. valve screw assembly . . . . . (2)	136-160	Secondary throttle shaft washer . . . . .
101-484	Fast idle speed screw . . . . .	136-174	Idle speed screw washer . . . . .
101-558	Choke valve screw . . . . . (2)	150-183	Choke piston pin . . . . .
101-560	Step up piston cover plate screw . . . . . (2)	150A-10	Pin spring . . . . . (6)
103-14	Lead shot (.180") . . . . .	160-207	Step up piston . . . . . (2)
103-16	Lead shot (.200") . . . . .	160-295	Choke piston . . . . .
111-76	Pump arm . . . . .	169-92S	Thermo. valve assembly . . . . .
114-146	Primary throttle shaft arm (outer) . . . . .	170-938S	Piston housing and plug assembly . . . . .
114-147	Primary throttle shaft arm (inner) . . . . .	170AJ-478S	Thermo. coil and housing assembly . . . . .
115-285	Choke connector rod . . . . .	181-355S	Fast idle cam assembly (4331 - 4344) (Use 181-399S) . . . . .
115-308	Throttle operating rod . . . . .	181-357S	Fast idle cam assembly (4332) (Use 181-400S) . . . . .
115-314	Fast idle connector rod . . . . .	181-399S	Fast idle cam assembly (4331-4344) . . . . .
115-372	Pump connector rod . . . . .	181-400S	Fast idle cam assembly (4332) . . . . .
117-190	Pump connector link . . . . .	186-70	Fuel bowl baffle . . . . . (2)
120-185	Secondary metering jet (.067") (4344) . . . . . (2)	186-113	Flange baffle plate . . . . .
120-203	Primary metering jet (.090") (4344) . . . . . (2)	186-120S	Choke baffle plate assembly . . . . .

NOTE: Parts not listed above are not available for servicing these carburetors.

NOTE: Figures in parentheses indicate number of pieces used in one carburetor. Where no figure is shown, only one is used.

