

BUICK 1966 "V8"

AFB FOUR-BORE DOWN-DRAFT CLIMATIC CONTROL CARBURETORS NOS. 4053S - 4054S - 4055S
4056S - 4059S - 4060S - 4061S - 4179S - 4180S - 4181S

1966 SERIES		ENGINE DISPL.	ORIGINAL CARB. NO.	SERVICE CARB. NO.	ZIP KIT NO.	GASKET SET NO.
46000, 48000, Wildcat, Electra 225	A/T	401	4053S	4053S	902-185A	519A
46000, Wildcat	SYN/T	401	4054S	4054S	902-185A	519A
43000, 44000, 45000, Special, Skylark, LeSabre	A/T	340	4055S	4055S	902-213A	519A
43000, 44000, 45000, Special, Skylark, LeSabre	SYN/T	340	4056S	4056S	902-213A	519A
44607, 44617, 44667, Skylark Gran Sport	SYN/T	400	4179S	4179S	902-185A	519A
44607, 44617, 44667, Skylark Gran Sport	A/T	400	4180S	4180S	902-185A	519A
A.I.R. (Air Injection Reactor)						
46000, 48000, Wildcat, Electra 225	A/T	401	4059S	4059S	902-185A	519A
46000 Wildcat	SYN/T	401	4060S	4060S	902-185A	519A
43000, 44000, 45000, Special, Skylark, LeSabre	A/T	340	4061S	4061S	902-213A	519A
44607, 44617, 44667, Skylark Gran Sport	A/T	400	4181S	4181S	902-185A	519A

CARBURETOR SPECIFICATIONS FOR BUICK 8 CYLINDERS, VACUUM AT IDLE 14 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 Size	Anti-Perc. Bleed In Prim. & Sec. Venturi Size	Main Vent Tube Prim. & Sec. Venturi Amt. Side Holes	Sec. Pick Up Tube (T) & Discharge Port (P); Bleed (B) Size	Pump Jet In Prim. Venturi Size	Choke Setting	Vacuum Spark Part Size
4053S	1 ⁹ / ₁₆ (P) 1 ¹¹ / ₁₆ (S)	1 ³ / ₁₆ (P) 1 ⁹ / ₁₆ (S)	13	.035	.0511	.043	.0531	.200 x .030 x .051	.036 (P) .031 (S)	6 (P) 3 (S)	.052 (P) .0292 (B)	.025	Index	.095 Dia. E. L. None
4054S	1 ⁹ / ₁₆ (P) 1 ¹¹ / ₁₆ (S)	1 ³ / ₁₆ (P) 1 ⁹ / ₁₆ (S)	13	.031	.0452	.043	.0465	.185 x .030	.036 (P) .031 (S)	6 (P) 3 (S)	.0535 (T) .031 .055 (P) .055 (B)	.028	Index	.130 x .040
4055S	1 ⁷ / ₁₆ (P) 1 ⁷ / ₁₆ (S)	1 ¹ / ₈ (P) 1 ¹ / ₄ (S)	13	.031	.0511	.043	.0511	.180 x .030 x .051	.036 (P) .031 (S)	6 (P) 3 (S)	.052 (P) .0292 (B)	.025	1 P. Rich	.095 Dia. E. L. None
4056S	1 ⁷ / ₁₆ (P) 1 ⁷ / ₁₆ (S)	1 ¹ / ₈ (P) 1 ¹ / ₄ (S)	13	.033	.0465	.0465	.0511	.180 x .030 x .051	.036 (P) .031 (S)	6 (P) 3 (S)	.052 (P) .0292 (B)	.028	Index	.130 x .040
4059S	1 ⁹ / ₁₆ (P) 1 ¹¹ / ₁₆ (S)	1 ¹ / ₁₆ (P) 1 ⁹ / ₁₆ (S)	13	.031	.055	.043	.055	.125 x .030 x .051	.036 (P) .031 (S)	6 (P) 3 (S)	.052 (P) .0292 (B)	.025	1 P. Rich	.130 x .040
4060S	1 ⁹ / ₁₆ (P) 1 ¹¹ / ₁₆ (S)	1 ¹ / ₁₆ (P) 1 ⁹ / ₁₆ (S)	13	.033	.0472	.043	.0465	.125 x .030 x .051	.036 (P) .031 (S)	6 (P) 3 (S)	.052 (P) .0292 (B)	.028	Index	.130 x .040
4061S	1 ⁷ / ₁₆ (P) 1 ⁷ / ₁₆ (S)	1 (P) 1 ¹ / ₄ (S)	13	.031	.055	.043	.0571	.150 x .030 x .051	.036 (P) .031 (S)	6 (P) 3 (S)	.052 (P) .040 (B)	.025	2 P. Rich	.130 x .040
4179S	1 ⁹ / ₁₆ (P) 1 ¹¹ / ₁₆ (S)	1 ³ / ₁₆ (P) 1 ⁹ / ₁₆ (S)	13	.031	.0452	.043	.0465	.185 x .030	.036 (P) .031 (S)	6 (P) 3 (S)	.0535 (T) .031 .055 (P) .055 (B)	.028	Index	.130 x .040
4180S	1 ⁹ / ₁₆ (P) 1 ¹¹ / ₁₆ (S)	1 ³ / ₁₆ (P) 1 ⁹ / ₁₆ (S)	13	.035	.0511	.043	.0531	.200 x .030 x .051	.036 (P) .031 (S)	6 (P) 3 (S)	.052 (P) .0292 (B)	.028	Index	.095 Dia. E. L. None
4181S	1 ⁹ / ₁₆ (P) 1 ¹¹ / ₁₆ (S)	1 ¹ / ₁₆ (P) 1 ⁹ / ₁₆ (S)	13	.031	.055	.043	.055	.125 x .030 x .051	.036 (P) .031 (S)	6 (P) 3 (S)	.052 (P) .0292 (B)	.028	Index	.130 x .040

MOTOR TUNE-UP — BE ACCURATE!

Spark Plug Gap .035"	Breaker Point Setting 30° Dwell	Ignition Timing Breaker Points to Open: 2½ B.T.C. At Vibration Damper Vacuum Hose Disconnected	Float Setting See Adjustments	Idle Mixture Screw Setting ¼ to 1¼ Turns Open Idle R.P.M. 500 to 550 A/T In Drive Range, S/M/T In Neut.
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Carter
Carburetor
Division



CARBURETOR ADJUSTMENTS

Adjustments Illustrated on Service Procedure Form 3701

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: (4055 - 4056 - 4061 11/64 inch) (all others 15/64 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: (4060 - 4061 - 4179 - 4180 - 4181 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 (4060 - 4061 - 4179 - 4180 - 4181 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: (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 (4053 - 4180 - .106 inch), (4054 - 4060 - .110 inch), (4055 - .086 inch), (4056 - .098 inch), (4059 - 4181 - .100 inch), (4061 - .072 inch), (4179 - .120 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: (4056 - .026"), (4054 - 4060 - 4179 .029") (4053 - 4055 - 4059 - 4061 - 4180 - 4181 .033") 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: (4055 - 4056 - 4061 5/32 inch), (all others 7/32 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) (4055 - 4056 - 4061 21/64 inch), (all others 23/64 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		(4053 - 4054 - 4179 - 4180) (2)
2-185	Primary throttle valve (4055 - 4056 - 4061) . . . (2)	16-252U	Step up rod package (2) 16-255, (2) 61-400, (2) 120-233 - 1 size lean (4053)
2-189	Secondary throttle valve (4055 - 4056 - 4061) (use 2-284) (2)	16-253U	Step up rod package (2) 16-256, (2) 61-400, (2) 120-165 - 1 size lean (4179 - 4180)
2-196	Secondary throttle valve (4053 - 4054 - 4059 - 4060 - 4179 - 4180 - 4181) (use 2-281) (2)	16-254U	Step up rod package (2) 16-255, (2) 61-400, (2) 120-165 - 1 size lean (4054)
2-211	Primary throttle valve (4053 - 4054 - 4059 - 4060 - 4179 - 4180 - 4181) (2)	16-255	Step up rod (.0705" x .066") Std. (4060) (2)
2-281	Secondary throttle valve (4053 - 4054 - 4059 - 4060 - 4179 - 4180 - 4181) (2)	16-341	Step up rod (.0695" x .059") Std. (4055 - 4056) (2)
2-284	Secondary throttle valve (4055 - 4056 - 4061) . . . (2)	16-383U	Step up rod package (2) 16-382, (2) 61-400, (2) 120-185 - 1 size lean (4055 - 4056)
3-1074S	Secondary throttle shaft and lever assy.	16-430	Step up rod (.0735" x .067") Std. (4061) (2)
3-1277S	Auxiliary throttle shaft, valve and weight assy. (4053 - 4059 - 4180 - 4181)	17-51	Pump discharge check needle (use w/pump jet assy. 48 - per carb. number)
3-1441S	Auxiliary throttle shaft, valve and weight assy. (4054 - 4060 - 4179)	20-43	Piston housing gasket
3-1500S	Primary throttle shaft and lever assy.	20-127	Fuel inlet fitting gasket
3-1509S	Auxiliary throttle shaft, valve and weight assy. (4055 - 4056 - 4061)	20-204	Needle seat gasket (2)
4A-175	Primary throttle shaft dog	21-179S	Float and lever assy. (2)
7-288	Choke valve	24-29	Float lever pin (2)
11B-35	Rivet plug (4053 - 4054 - 4059 - 4060 - 4179 - 4180 - 4181)	25-699S	Needle and seat assy. (resilient seat) (4055 - 4056 - 4061) (2)
11B-79	Rivet plug (2)	25-736S	Needle and seat assy. (resilient seat) (4053 - 4054 - 4059 - 4060 - 4179 - 4180 - 4181) (2)
11B-389	Idle port rivet plug (2)	25-853S	Needle and seat assy. (flared tip) (4055 - 4056 - 4061) (2)
11B-390	Passage plug (primary) (2)	25-854S	Needle and seat assy. (flared tip) (4053 - 4054 - 4059 - 4060 - 4179 - 4180 - 4181) (2)
11B-406	Passage plug (secondary) (2)	30A-75	Idle mixture screw (4059 - 4181) (2)
11B-407	Rivet plug	30A-81	Idle mixture screw (all except 4059 - 4181) . . . (2)
11B-439	Primary venturi plug (2)	47-30	Piston housing welsh plug
14-609S	Choke piston lever and link assy.	47-36	Secondary venturi welsh plug (2)
14-612S	Choke shaft and lever assy. (piston housing)	48-264S	Pump jet and housing assy. (use w/17-51) (4054 - 4056 - 4179 - 4180)
14-619	Choke shaft lever	48-269S	Pump jet and housing assy. (use w/17-51) (4053 - 4055)
14-620	Cam trip lever		
14-820S	Choke lever and shaft assy.		
15-58S	Strainer nut assy. (4061)		
16-189	Step-up rod (.0715" x .066") Std. (4059 - 4181) . . . (2)		
16-219	Step up rod (.0685" x .063") Std.		

Part No.	PART NAME	Part No.	PART NAME
48-318S	Pump jet and housing assy. (use w/17-51) (4059 - 4061).....	103-16	Lead shot (.200").....
48-319S	Pump jet and housing assy. (use w/17-51) (4060 - 4181).....	111-76	Pump arm.....(2)
53A-412	Lockout dog.....	114-146	Primary throttle shaft arm (outer).....
53A-430	Secondary throttle operating lever.....	114-147	Primary throttle shaft arm (inner).....
58-347S	Secondary venturi assy. (choke side) (4053 - 4059 - 4060 - 4180 - 4181).....	115-285	Choke connector rod.....
58-348S	Secondary venturi assy. (pump side) (4053 - 4059 - 4060 - 4180 - 4181).....	115-308	Throttle operating rod.....
58-696S	Primary venturi assy. (choke side) (4053 - 4180).....	115-314	Fast idle connector rod.....
58-697S	Primary venturi assy. (pump side) (4053 - 4180).....	115-372	Pump connector rod.....
58-725S	Primary venturi assy. (choke side) (4054 - 4179).....	116-25	Pump discharge check ball (use 17-51 w/pump jet assy. 48 - per carb. number).....
58-726S	Primary venturi assy. (pump side) (4054 - 4179).....	117-190	Pump connector link.....
58-731S	Secondary venturi assy. (choke side) (4054 - 4179).....	120-158	Secondary metering jet (.082") (4053 - 4059 - 4060 - 4180 - 4181).....(2)
58-732S	Secondary venturi assy. (pump side) (4054 - 4179).....	120-165	Secondary metering jet (.086") (4054 - 4179).....(2)
58-820S	Secondary venturi assembly (choke side) (4055 - 4056).....	120-185	Secondary metering jet (.067") (4061).....(2)
58-821S	Secondary venturi assy. (pump side) (4055 - 4056).....	120-203	Primary metering jet (.090") (4059 - 4060 - 4061 - 4181).....(2)
58-824S	Primary venturi assy. (choke side) (4055).....	120-222	Secondary metering jet (.070") (4055 - 4056).....(2)
58-825S	Primary venturi assy. (pump side) (4055).....	120-256	Primary metering jet (.092") (4053 - 4054 - 4055 - 4056 - 4179 - 4180).....(2)
58-854S	Primary venturi assy. (choke side) (4056).....	121-287	Pump jet housing gasket (4053 - 4054 - 4055 - 4056 - 4179 - 4180).....
58-855S	Primary venturi assy. (pump side) (4056).....	121-292	Air horn gasket (4053 - 4054 - 4055 - 4056 - 4179 - 4180).....
58-936S	Primary venturi assy. (choke side) (4061).....	121-293	Secondary venturi cluster gasket (4053 - 4055 - 4056 - 4059 - 4060 - 4061 - 4180 - 4181).....(2)
58-937S	Primary venturi assy. (pump side) (4061).....	121-302	Primary venturi cluster gasket.....(2)
58-960S	Primary venturi assy. (choke side) (4059 - 4181).....	121-314	Thermostatic valve gasket.....
58-961S	Primary venturi assy. (pump side) (4059 - 4181).....	121-500	Coil housing gasket.....
58-962S	Primary venturi assy. (choke side) (4060).....	121-511	Secondary venturi cluster gasket (4054 - 4179).....(2)
58-963S	Primary venturi assy. (pump side) (4060).....	121-562	Pump jet housing gasket (4059 - 4060 - 4061 - 4181).....
58-966S	Secondary venturi assy. (choke side) (4061).....	121-578	Air horn gasket (4059 - 4060 - 4061 - 4181).....
58-967S	Secondary venturi assy. (pump side) (4061).....	122-108S	Pump intake ball check assy.....
61-58	Fast idle screw spring.....	136-34	Choke piston lever retaining washer.....
61-84	Idle mixture screw spring.....	136-159	Primary throttle shaft washer.....
61-171	Pump spring (lower) (4054 - 4060 - 4179).....	136-160	Secondary throttle shaft washer.....
61-259	Vacuum piston spring.....(2)	136-174	Idle speed screw washer.....
61-291	Idle speed screw spring.....	150-183	Choke piston pin (use w/ 160-295 & 160-296).....
61-398	Pump spring (lower) (4053 - 4055 - 4056 - 4059 - 4061 - 4180 - 4181).....	150A-10	Pin spring.....(6)
61-483	Secondary throttle return spring.....	156-116S	Fuel inlet fitting assy. (all except 4061).....
61-585	Step-up rod retaining spring.....(2)	160-295	Choke piston (4055 - 4056 - 4061) (use w/170-).....
61-623	Throttle flex spring.....	160-296	Choke piston (4053 - 4054 - 4059 - 4060 - 4179 - 4180 - 4181) (use w/170-).....(2)
61-624	Fast idle cam spring.....	160-207	Step-up piston.....(2)
63-58	Coil housing retainer.....(3)	169-92S	Thermostatic valve assembly.....
64-217S	Pump plunger, rod and spring assy.....	170-925S	Piston housing and plug assy. (use w/150-183 and 160-295) (4055 - 4056 - 4061).....
65-43	Step-up piston cover plate.....(2)	170-926S	Piston housing and plug assy. (use w/150-183 and 160-296) (4053 - 4059 - 4180 - 4181).....
101-65	Choke shaft lever attaching screw.....(2)	170-927S	Piston housing and plug assy. (use w/150-183 and 160-296) (4054 - 4060 - 4179).....
101-74	Throttle shaft lever attaching screw.....(2)	170AJ-478S	Thermostatic coil and housing assy. (4055 - 4056 - 4061).....
101-136	Coil housing attaching screw.....(3)	170BE-478S	Thermostatic coil and housing assy. (4053 - 4054 - 4059 - 4060 - 4179 - 4180 - 4181).....
101-152S	Air horn attaching screw and washer assy. (4053 - 4054 - 4055 - 4056 - 4179 - 4180).....	181-352S	Fast idle cam assy. (4053 - 4059 - 4180 - 4181).....
101-184S	Pump jet housing attaching screw and washer assy.....(2)	181-375S	Fast idle cam assy. (4055 - 4061).....
101-323	Fast idle cam attaching screw.....	181-378S	Fast idle cam assy. (4056).....
101-362S	Air horn attaching screw and washer assy.....(8)	181-382S	Fast idle cam assy. (4054 - 4060 - 4179).....
101-379S	Secondary and primary venturi attaching screw and washer assy.....(8)	186-70	Fuel bowl baffle.....(2)
101-419	Secondary throttle valve attaching screw.....(4)	186-106	Flange baffle plate (4053 - 4054 - 4059 - 4060 - 4179 - 4180 - 4181).....
101-420	Primary throttle valve attaching screw.....(4)	186-109S	Choke baffle plate assy. (4053).....
101-421	Pump arm attaching screw.....	186-112S	Choke baffle plate assy. (4055 - 4056 - 4061).....
101-431S	Air horn attaching screw and washer assy.....	186-113	Flange baffle plate (4055 - 4056 - 4061).....
101-436	Piston housing attaching screw.....(3)	186-120S	Choke baffle plate assy. (4054 - 4059 - 4060 - 4179).....
101-452	Idle speed screw.....	186-122S	Choke baffle plate assy. (4080 - 4181).....
101-453S	Thermostatic valve attaching screw and washer assy.....(2)		
101-484	Fast idle adjustment screw.....		
101-558	Choke valve screw.....(2)		
101-560	Step up piston cover plate attaching screw.....(2)		
103-14	Lead shot (.180").....		

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.