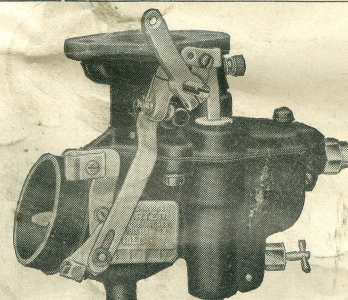


BB1-245S—1 inch Flange Size
BB1-Special—1 1/4 inch Flange Size
(The above superseded by BB1A or BB1D
and 245SA or 245SD)

BB1-BB1A-BB1D-
245S-245SA-245SD
LIST PRICE \$13.00

289S-289SD
LIST PRICE \$15.00

Exchange allowance of \$2.00 is made
when old carburetor is returned.



245SA-245SD—1 inch Flange Size
BB1A-BB1D—1 1/4 inch Flange Size
289S-289SD—1 1/2 inch Flange Size

THE CARBURETERS

BB1 and 245S carbureters have throttle lever riveted on shaft. BB1A, 245SA and 289S carbureters have throttle lever adjustable on shaft to facilitate installation where variations occur in the length of the accelerator or hand throttle rods.

BB1D, 245SD and 289SD carbureters have die-cast lower body. Early production 245SD, BB1D and 289SD used float lever pin and plug assembly inserted from outside of body.

Later production (starting October 1, 1945, designated as H-45 on inspection tag) uses float pin and pin retainer in slot in bowl.

CARBURETER ADJUSTMENTS

High Speed Adjustment

Adjustable main metering screw controls fuel supply above idling speed. Turning screw in, gives leaner mixture. Turning screw out, gives richer mixture. In adjusting, do not sacrifice power or performance for economy.

After motor has reached normal running temperature and correct idle adjustment has been made, open throttle to about 35 miles per hour engine speed. Turn metering screw OUT until motor reaches maximum speed, then IN until engine speed starts to decrease. Now open screw slowly until motor reaches maximum speed. This adjustment will give maximum power and economy.

Idle Adjustment

First, set throttle lever adjusting screw so that motor runs approximately 300 rpm. Then set idle adjustment screw so that motor fires evenly. (Most mechanics prefer to use a vacuum gauge, setting idle adjusting screw to highest vacuum.)

Note: A richer mixture is obtained by backing out adjustment screw—a leaner mixture by turning screw in.

The Accelerating Pump

The pump operates in a well in the body casting. At opening of throttle, pump discharges through main nozzle, starting a flow of fuel through nozzle from main float chamber and supplying instantly the excess fuel necessary for prompt acceleration.

Pump link is provided with two holes to receive pump link screw, giving short and long strokes to pump piston. For winter driving, in Northern climates, link screw should be set in outer (top) hole, which gives longer stroke, supplying maximum quantity of fuel for acceleration.

If this does not give desired results, the main metering jet, check valve assembly and pump valve assembly should be removed and cleaned with compressed air.

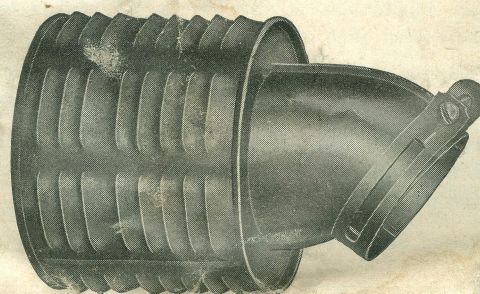
If Motor Loads—Check Float Level

To check float level, remove upper casting from float chamber. Remove body gasket and place gauge T109-49 across machined edges of float chamber. Hold lip of float firmly against end of seated needle.

Top of float (not soldered seam) should just touch float gauge.

Before adjusting float, see that float lever pin plug is firmly seated. To lower float level, bend lip of float lever toward needle. To raise float level, bend lip away from needle. A very slight bend is usually sufficient.

Be sure to bend lip of float, not bracket, holding lip against needle with needle firmly seated.



No. 90-15S

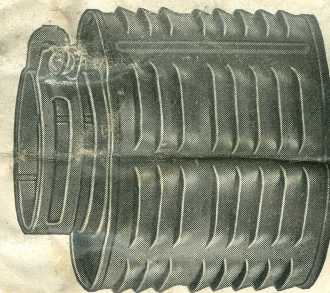
AIR CLEANERS

The air cleaners illustrated are recommended for use with the BB carbureters.

When ordering air cleaners, specify No. 90-12S for Oldsmobiles.

No. 90-14S or 90-15S for other BB installations.

LIST PRICE \$3.00



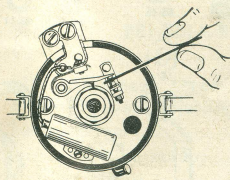
No. 90-14S

Motor Tune-up—Be Accurate! Always Use Feeler Gauges!

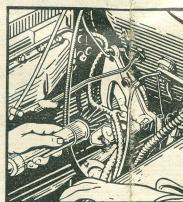
CAUTION: Change worn or leaky flange gaskets. Tighten manifold bolts and test compression before adjusting carburetor.



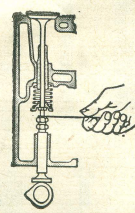
Set
Spark Plug
Gap



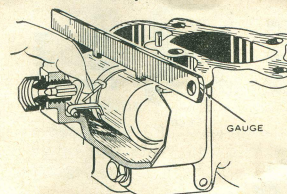
Set
Breaker Points



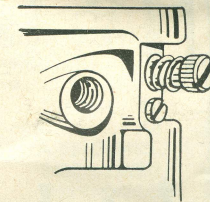
Adjust Ignition Timing
Use Timing Light



Set Valves
to
Specification



Float Setting
(Use Gauge)
1/32"-1/16"
Below Top Edge
of Casting



Idle Adjustment
Screw Setting
1/4 to 1/4
Turns Open

These adjustments must be accurate and in conformity with manufacturer's specifications.

CARBURETOR SPECIFICATIONS

Dimensions: (BB1-BB1A-BB1D-245S-245SA-245SD) Flange size, 1 1/4 in. (31.75 mm) (245SA and 245SD have 1 1/4 in. (SAE) flange but holes drilled for 1 in. manifold).

(289S-289SD) Flange size, 1 1/2 in. (38.10 mm).

Throttle bore, 1-7/16 in. (36.51 mm).

(BB1-BB1A-BB1D-245S-245SA-245SD) Main venturi, 1 in. (25.40 mm) I. D. Air bleed through venturi, to idle passage, .085 to .087 in. diameter (2.15 to 2.20 mm) drill.

(289S-289SD) Main venturi, 1-1/16 in. (26.99 mm) I. D. Air bleed through venturi, to idle passage, .0885 to .0905 in. diameter (2.25 to 2.30 mm) drill.

Float Setting: Top of float 1/32 in. to 1/16 in. (.79 to 1.19 mm) below top surface of lower body.

Vent: (To Float Chamber) Outside, Size: No. 30 (3.26 mm) drill.

Gasoline Intake Needle: Triangular, horizontal. No. 38 (2.58 mm) drill in needle seat, 25-44S. (No. 31 (3.048 mm) drill, 25-46S, used with vacuum tank or gravity feed only.)

Idle Jet Tube: Jet size, .0236 in. (.60 mm) drill.

Idle Ports: Lower port size: .062 to .064 in. (1.58 to 1.63 mm) diameter. Top of port located .005 to .009 in. (.13 to .23 mm) below lower edge of valve.

Upper port size: .053 to .057 in. (1.35 to 1.45 mm) diameter (for idle adjustment screw).

Set Idle Adjustment Screw: 1/4 to 1 1/4 turns open. For richer mixture, turn screw out. Do not idle engine below 300 r.p.m. or 6 miles per hour.

Main Metering Screw: Adjustable.

Nozzle: No. 33 (2.87 mm) drill.

Accelerating Jets:

2—.0394 in. (1.00 mm) drill 1/16 in. (1.59 mm) from shoulder.

1—.051 in. (1.3 mm) drill 3/8 in. (9.53 mm) from shoulder.

1—.063 in. (1.6 mm) drill 23/32 in. (18.26 mm) from shoulder.

1—.051 in. (1.3 mm) drill 1-1/16 in. (26.99 mm) from shoulder.

Air Bleed to Nozzle: (BB1-BB1A-BB1D-245S-245SA-245SD) Size: .0275 to .0295 in. (.70 to .75 mm) drill.

(289S-289SD) Size: .0384 to .0404 in. (1 mm) drill.

Step-up Jet: (Power Orifice) (BB1-BB1A-BB1D-245S-245SA-245SD) .0315 in. (.80 mm) drill.

(289S-289SD) .0354 in. (.90 mm) drill.

Accelerating Pump: Type, low pressure, delayed action.

Stroke: Summer setting (inner hole, short stroke) 9/16 in. (14.29 mm).

Stroke: Winter setting (outer hole, long stroke) 1 in. (25.40 mm).

Pump intake ball check: size 1/8 in. (3.18 mm).

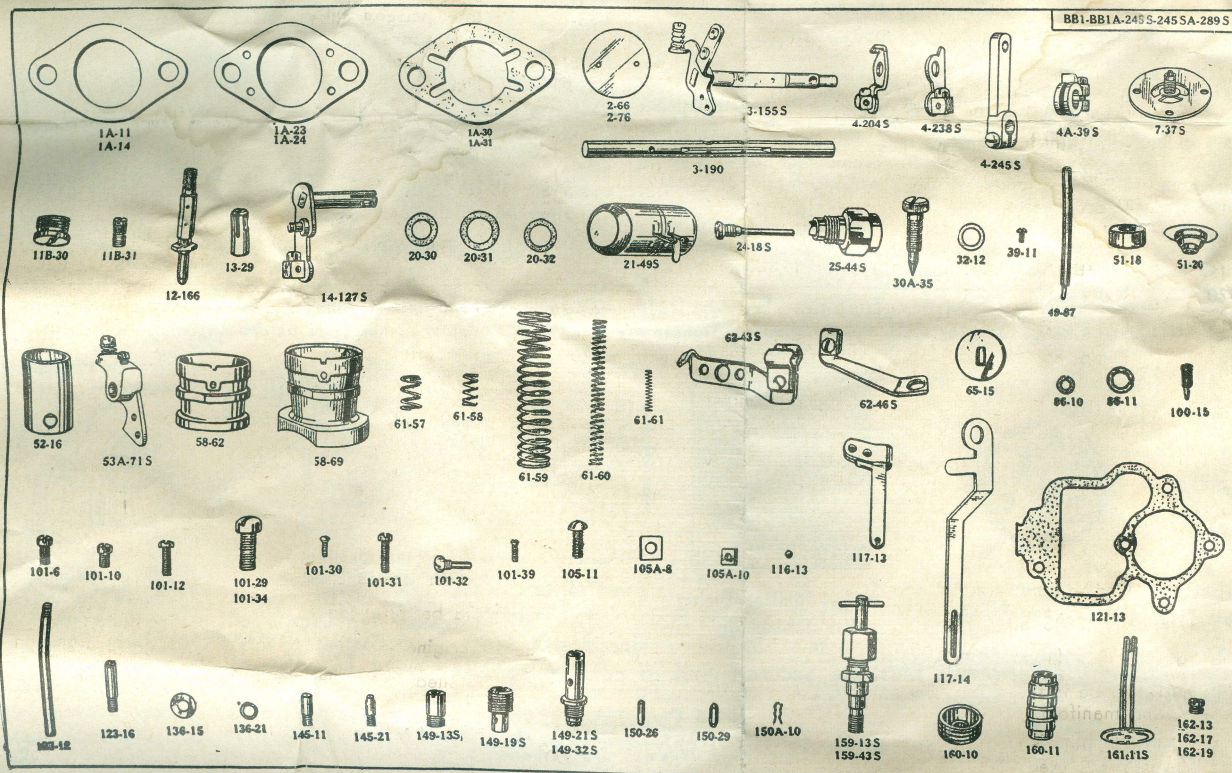
Pump discharge jet (in pump valve cage assembly) No. 52 (1.61 mm) drill size.

Choke: Butterfly type, with pressure relief, poppet, valve.

Tube Clamps: On air intake and under body attaching screw.

Throttle Lever: Adjusting—on left side. Loose lever on right side.

Note: Parts shown below are for identification only. Check number and price in list given on Page 3.



Models BBI, BBIA, BBID, 245S, 245SA and 245SD—List Price \$13.00

Models 289S and 289SD—List Price \$15.00

WHEN SERVICING, USE GASKET ASSORTMENT No. 101A—LIST PRICE \$0.50

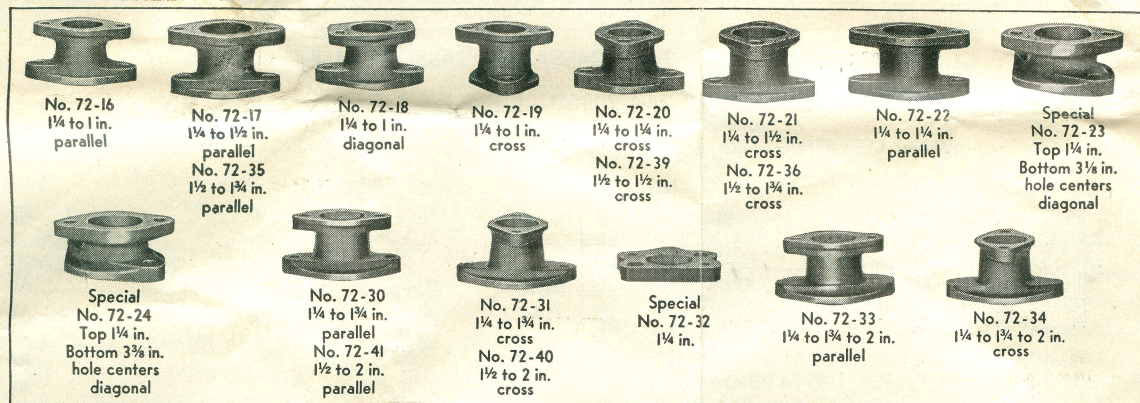
Part No.	PART NAME	List Price	Part No.	PART NAME	List Price
1A-11	Flange gasket.....	BB1-245S \$0.05	62-46S	Tube clamp assembly.....	All .25
1A-23	★Flange gasket (with governor).....	BB1A-BBID .06	63-24	Float lever pin retainer.....	Late models of 245SD-BB1D-289SD .05
1A-24	★Flange gasket (with governor).....	289S-289SD .06	65-15	Pump link coverplate.....	All .02
1A-30	Flange gasket (without governor).....	BB1A-BBID .06	71A-17	Flange stud.....	All .05
1A-31	Flange gasket (without governor).....	289S-289SD .06	86-10	Lock washer (Use with 101-6).....	All .01
1A-54	Flange gasket.....	245SA-245SD .05	86-15	Lock washer.....	All .01
2-66	Throttle valve.....	BB1-245S .20	100-15	Collar screw.....	All .05
2-76	Throttle valve.....	BB1A-BBID-245SA-245SD-289S-289SD .20	101-6	Choke bracket attaching screw (Sup. by 101-142S).....	All .05
3-155S	Throttle shaft and lever assembly.....	BB1-245S .60	101-10	Wire clamp screw.....	All .05
3-190	Throttle shaft.....	BB1A-BBID-245SA-245SD-289S-289SD .60	101-12	Choke tube bracket clamp screw.....	All .05
4-204S	Throttle lever ass'y (loose).....	BB1-245S .30	101-29	Body attaching screw (Sup. by 101-151S).....	BB1-BB1A-245S-245SA-289S .05
4-238S	Throttle lever ass'y (loose).....	BB1A-BBID-245SA-245SD-289S-289SD .30	101-30	Choke valve screw.....	All .05
4-245S	Throttle lever ass'y.....	BB1A-BBID-245SA-245SD-289S-289SD .60	101-31	Throttle lever adj. screw (Sup. by 101-58).....	All .05
4A-39S	Throttle shaft dog ass'y.....	BB1A-BBID-245SA-245SD-289S-289SD .30	101-32	Pump link screw.....	All .05
7-37S	Choke valve assembly.....	All .50	101-34	Throttle lever clamp screw (Sup. by 105-12).....	BB1A-BBID-245SA-245SD-289S-289SD .05
11B-12	Rivet plug.....	BB1-BB1A-245S-245SA-289S .02	101-39	Throttle valve screw.....	BB1A-BBID-245SA-245SD-289S-289SD—2 for .05
11B-26	Rivet plug.....	BB1-BB1A-245S-245SA-289S .02	101-57	Body attaching screw (Sup. by 101-234S).....	BB1D-245SD-289SD .05
11B-30	Step-up piston plug.....	All .10	101-58	Throttle lever adjusting screw.....	All .05
11B-31	Idle hole plug.....	All .10	101-142S	Choke bracket attaching screw and washer assembly.....	All .05
11B-33	Spark control passage plug.....	BB1A-BBID-245SA-245SD .10	101-151S	Body flange attaching screw and washer assembly.....	BB1-BB1A-245S-245SA-289S .05
11B-41	Rivet plug.....	245SD-BBID-289SD .02	101-234S	Body flange attaching screw and washer assembly.....	BB1D-245SD-289SD .05
11B-79	Rivet plug.....	245SD-BBID-289SD .02	105-11	Tube clamp screw.....	All .05
12-166	‡Nozzle.....	All .60	105-12	Throttle lever clamp screw.....	BB1A-BBID-245SA-245SD-289S-289SD .05
13-29	Choke shaft (stub).....	All .15	105A-8	Tube clamp nut.....	(2) All .05
14-127S	Choke assembly with clamp and screw.....	All .40	105A-10	Choke tube clamp nut.....	All .05
20-30	‡Nozzle gasket.....	All .05	105A-13	Flange nut.....	All .05
20-31	Needle seat gasket.....	All .05	116-13	Ball.....	All .02
20-32	Metering screw gasket.....	All .05	117-13	Pump link.....	All .15
21-49S	Float and lever assembly.....	All .80	117-14	Choke link.....	All .10
24-18S	Float lever pin and plug ass'y.....	245S-245SA-BB1-BB1A-289S and early models of 245SD-BBID-289SD .10	121-13	Body gasket.....	BB1-BB1A-245S-245SA-289S .10
24-23	Float lever pin.....	Late models of 245SD-BBID-289SD .05	121-126	Body gasket.....	BB1D-245SD-289SD .10
25-44S	Needle and seat ass'y (For cars with fuel pump).....	All .80	123-12	Idle passage tube.....	All .10
25-46S	Needle and seat ass'y (For cars with vacuum tank or gravity feed).....	All .80	123-16	Idle orifice tube.....	All .20
30A-35	Idle adjustment screw.....	All .30	136-15	Choke link washer.....	All .02
32-12	Pump rod gasket.....	All .05	136-21	Float lever pin plug washer.....	BB1-BB1A-245S-245SA-289S, early production of BB1D-245SD-289SD .01
39-11	Throttle valve screw.....	BB1-245S—2 for .05	145-11	Vent tube.....	BB1-BB1A-BBID-245S-245SA-245SD .05
49-87	Step-up push rod.....	All .10	145-21	Vent tube.....	289S-289SD .05
51-18	Throttle shaft collar.....	BB1-245S .15	149-13S	Check valve assembly.....	All .30
51-20	Pump collar.....	All .10	149-19S	Pump valve assembly.....	All .30
52-16	Pump sleeve.....	All .20	149-21S	Step-up valve ass'y.....	BB1-BB1A-BBID-245S-245SA-245SD .40
53A-71S	Pump arm ass'y.....	BB1A-BBID-245SA-245SD-289S-289SD .60	149-32S	Step-up valve ass'y.....	289S-289SD .40
58-62	Venturi.....	BB1-BB1A-BBID-245S-245SA-245SD .40	150-26	Pump collar pin.....	All .02
58-69	Venturi.....	289S-289SD .50	150-29	Venturi pin.....	All .02
61-57	Idle adjustment screw spring.....	All .05	150A-10	Pin spring.....	All .01
61-58	Throttle lever adjusting screw spring.....	All .05	159-13S	Adj. main metering screw and needle ass'y (Sup. by 159-43S).....	BB1-BB1A-245S-245SA .75
61-59	Pump spring.....	All .10	159-43S	Adjustable main metering screw ass'y.....	All .40
61-60	Step-up piston spring.....	All .05	160-10	Pump piston.....	All .40
61-61	Step-up spring.....	All .05	160-11	Step-up piston.....	All .20
62-43S	Choke tube bracket assembly.....	All .25	161-11S	Pump rod plate and rod assembly.....	All .30
			162-13	Power orifice.....	BB1-BB1A-BBID-245S-245SA-245SD .10
			162-17	†Power orifice.....	289S-289SD .10
			162-19	Power orifice.....	289S-289SD .10

‡When servicing 289S and 289SD carburetors, two nozzle gaskets No. 20-30 should be installed beneath nozzle No. 12-166.

†This power orifice (1 mm) may be used when installations are made on motors originally equipped with 1 3/4 inch or larger units.

★This gasket to be installed between carburetor and governor when governor is installed. Original flange gasket to remain between governor and manifold.

EFFECTIVE JANUARY 1, 1948, ADD 30% TO LIST PRICE OF CARBURETORS AND EFFECTIVE OCTOBER 1, 1948, ADD 20% TO ALL OTHER PRICES SHOWN WITH FRACTIONAL ADJUSTMENT TO NEAREST EVEN CENT.



CARTER FLANGE ADAPTORS—LIST PRICE \$1.00 EACH

(SIZES GIVEN ARE STANDARD S. A. E. BOLT CENTERS)

These adaptors have been designed to make possible the installation of the Carter "BB1A," "245SA" and "289S" Carbureters on a number of cars. These adaptors all have carburetor end drilled with two 13/32" holes, spaced 2-11/16" center to center, to fit carburetor flange. Drillings of manifold ends of adaptors are shown below:

Adaptor	Manifold Flange Size	Manifold End Holes	Manifold Centers
72-16	1-inch S.A.E.	2 holes 5/16-inch—18 thread	2 1/2-inches
72-17	1 1/2-inch S.A.E.	2 holes 5/8-inch—16 thread	2-15/16-inches
72-18	1-inch S.A.E.	2 holes 11/32-inch No thread	2 1/2-inches
72-19	1-inch S.A.E.	2 holes 5/16-inch—18 thread	2 1/2-inches
72-20	1 1/4-inch S.A.E.	2 holes 5/8-inch—16 thread	2-11/16-inches
72-21	1 1/2-inch S.A.E.	2 holes 5/8-inch—16 thread	2-15/16-inches
72-22	1 1/4-inch S.A.E.	2 holes 13/32-inch—No thread	2-11/16-inches
*72-23	1 1/2-inch S.A.E.	2 holes 13/32-inch—No thread	3 1/2-inches
*72-24	1 1/2-inch S.A.E.	2 holes 13/32-inch—No thread	3 1/2-inches
72-30 & 72-31	1 1/2-inch S.A.E.	2 holes 7/16-inch—14 thread	3-5/16-inches
*72-32	1 1/2-inch S.A.E.	2 holes 11/32-inch—No thread	2-15/16-inches
72-33 & 72-34	1 1/2-inch S.A.E.	Not drilled	
72-35 & 72-36	1 1/4-inch S.A.E.	2 holes 7/16-inch—14 thread	3-5/16-inches
72-39	1 1/2-inch S.A.E.	2 holes 5/8-inch—16 thread	2-15/16-inches
72-40 & 72-41	2-inch S.A.E.	2 holes 7/16-inch—14 thread	3-9/16-inches
72-43	1 1/2-inch S.A.E.	2 holes 13/32-inch—No thread	2-15/16-inches
72-44	1 1/2-inch S.A.E.	2 holes 13/32-inch—No thread	2-15/16-inches

*Buick installations require B-19S Dash Choke Control Assembly and 92-11S Throttle Rod Assembly. List Price \$1.00 each.

*Note: This flange is supplied unless otherwise specified, with special throttle lever, control rod, etc., complete for \$2.20.

The installations listed below have been reported as entirely successful. Undoubtedly the "BB1" Carbureters will prove equally adaptable to many other motors of similar characteristics.

Car	Model	Year	Carbureter	Adaptor	Car	Model	Year	Carbureter	Adaptor
Auburn	6-43	1923-25	BB1-245SA	None	Graham	"Prosperity Six"	1931-32	BB1A-Special	72-22
Auburn	6-66	1926	BB1-245SA	None	Graham	Blue Streak	1932	BB1A-Special	72-17
*Auburn	8-77	1927	BB1A-Special	None	Graham	"65"	1933	BB1A-Special	72-22
Auburn	6-80	1928-29	BB1A-Special	None	Hupmobile	A-6	1925-27	BB1-245SA	None
*Auburn	8-88	1925-27	BB1A-Special	None	Hupmobile	Eight	1927	BB1A-Special	72-20
Auburn	120	1928-29	BB1A-Special	None	Hupmobile	Six	1928-31	BB1A-Special	None
Auburn	DD6	1929	BB1A-Special	None	International				
Auburn "8"	8-100	1932	289	None	(I.H.C.)				
Buick	Standard Six		BB1A-Special	72-23	International	Truck 646	1927-8-9	BB1A-Special	None
Buick	Master Six		BB1A-Special	72-24	Jewett	644	1930-31	BB1A	None
*Buick	8-50	1931	BB1A-Special	72-24	Jewett		1922-24	BB1A-Special	None
Chandler	31	1928	BB1-245SA	None	La Salle "8"	345C	1925-26	BB1A-Special	72-20
Chandler	65	1929	BB1-245SA	None	Marmon	L-Eight	1931	289	72-41
Chrysler "4"	58	1925-26	BB1-245SA	None	Marmon	68-78	1927	BB1A-Special	72-20
Chrysler	60-62	1927-28	BB1-245SA	None	Marmon	69 or Q	1929	BB1A-Special	72-20
Chrysler	70	1925-27	BB1A-Special	72-20	Marmon	70	1930	BB1A-Special	72-20
Chrysler	72-75	1927-29	BB1A-Special	72-20	Marmon	70	1931	BB1A-Special	72-20
Chrysler	65	1928-29	BB1A-Special	72-20	Nash	Standard Six	1928-31	BB1A-Special	72-18
Chrysler	80 Imperial	1929	BB1A-Special	72-30	Nash	8 Twin Ignition	1931	BB1A	72-24
Chrysler	66	1930	BB1A-Special	None	Oakland	Six "All Am."	1928	BB1A-Special	72-16
Chrysler	Six	1930	BB1-245SA	None	Oakland	Six	1929	BB1A-Special	72-22
Chrysler	Six	1931	6B2 Chrysler	None	Oldsmobile	Six	1927-30	BB1-245SA	None
De Soto	Six "K"	1928-29	BB1-245SA	None	*Packard	Six	1926-28	BB1-289S	72-39
De Soto	Six "K"	1930	BB1-245SA	None	*Packard	Eight	1929	BB1-289S	72-39
De Soto	Six "K"	1931	6B2	None	Packard "8"	900	1931-32	289	72-39
Devaux	6-75	1931	BB1A-Special	72-22	Paige	6-45		BB1A-Special	72-17
Diamond T	Truck Model 290	1930	BB1A-Special	None	Pierce-Arrow	81	1928	289	None
*Dodge	Senior Six	1928-30	BB1-289S	72-39	Pontiac	Six	1926-7-8	BB1-245SA	None
Dodge	Victory Six	1927-28	BB1A-Special	72-20	Pontiac	Six	1929-32	BB1A-Special	72-22
Dodge	Standard Six	1927-28	BB1A-Special	72-20	Reo	"Flying Cloud"	1929	BB1A-Special	72-21
Dodge	Six DA	1929	BB1A-Special	None	Reo	"Mate"	1929	BB1A-Special	72-20
Dodge	Six DD	1930	BB1-245SA	None	Reo	"Wolverine"	1927-28	BB1A-Special	72-20
Dodge	Six DH	1931	6B2 Dodge	None	Reo	Mdls. "T" & "U"	1923-27	BB1A-Special	72-20
Durant	6-14	1930-31	BB1A-Special	None	Reo	Speed Wagon	1925-26	BB1A-Special	None
Durant	6-70—6-75	1930	BB1A-Special	None	Reo	Truck "FA"	1927-28	BB1A-Special	72-20
Erskine	6	1927-29	BB1-245SA	None	Reo	Trk. "DA"—"DC"	1927-28	BB1A-Special	72-20
Erskine					Roosevelt	"Eight"	1929	BB1A-Special	72-20
"Dynamic"	6	1930	BB1A-Special	None	Studebaker	"Light 6"	1919	BB1A-Special	72-20
Essex	6	1930-31	BB1A-Special	72-32	Studebaker	"Special Six"	1920-25	BB1A-Special	72-20
Falcon-Knight	All		BB1-245SA	None	Studebaker	"Standard Six"	1926-27	BB1A-Special	None
Flint	35-60-80	1924-26	BB1A-Special	72-20	Studebaker	"Commander 6"	1927-29	BB1-289S	72-39
Flint	A40-B40	1924-26	BB1-245SA	None	Studebaker	"Dictator"	1928-30	BB1A-Special	72-20
Franklin	Six	1927-30	BB1A-Special	None	Studebaker	"Commander 8"		BB1A-Special	72-20
*Gardner	Eight	1928	BB1-289S	None	Studebaker	President 8	1931	BB1-289S	72-17
Graham-Paige	6-10	1928	BB1A-Special	72-18	Whippet	"Fifty-five"	1932	BB1A-Special	None
Graham-Paige	6-19	1928	BB1A-Special	72-33	Whippet	Four	1928	BB1-245SA	None
*Graham-Paige	16-14	1928	BB1-289S	None	White Truck	Six	1929-30	BB1-245SA	None
Graham-Paige	6-12	1929	BB1A-Special	72-22	Willys	45		BB1-289S	72-17
*Graham-Paige	6-15	1929	BB1-289S	None	Willys	Six	1930	BB1A-Special	72-16
(Necessary to drill out threads in 1 1/2" (38.10 mm) end of adaptor)					Willys-Knight	70-70A	1926-29	BB1-245SA	None
Graham	8-37	1929	*BB1A-Special	72-30	Willys-Knight	70B	1926-29	BB1A-Special	72-16
Graham-Paige	Special	1930	BB1A-Special	72-22	Willys-Knight	6-87	1930	BB1A-Special	72-16
Graham	"Standard"	1930	BB1A-Special	72-22	Willys	"6-97"—"6-98D"	1931	BB1A-Special	72-22
					Willys "8"	880-98D	1931	BB1A-Special	None
					Willys-Knight	"66A"—"66B"	1929-30	BB1A-Special	72-20

*For constant open throttle driving install power orifice No. 162-17.

*When installations are made on these cars install larger power orifice (step-up jet), No. 162-17.