

MARVEL
CARBUETER
AND
HEAT CONTROL

As Used on 1929

Essex Super-Six

“BOOKLET 61”

Formerly Booklet "V-1"

MARVEL CARBURETER CO.

FLINT, MICHIGAN

U. S. A.

Model 'V" Carbureter

Used on 1929 Essex Super-Six Cars

The carbureter measures the fuel charges for the engine and automatically mixes them with the proper amount of air to form a highly combustible gas. The Marvel model "V" carbureter is of the automatic air valve, heat controlled type. Its outstanding advantages are:

1. Simplicity of adjustment and operation.
2. Quick starting in any weather.
3. Automatic and manually controlled heat application to insure complete vaporization of fuel and maximum quick warming-up in coldest weather, thereby reducing overuse of the choker and resultant crankcase dilution to the minimum.
4. Economy in fuel consumption.
5. Ease of adjustment of heat control to meet varied driving and climatic conditions.

CONSTRUCTION

The construction embodies a main body or mixing chamber and a conventional float chamber bowl with fuel strainer attached at point of entrance of fuel to bowl. Within the mixing chamber are two nozzles which proportion the amount of gasoline used in the mixture. These nozzles are both of the fixed opening non-adjustable type. One of these nozzles, called the "low speed" is situated in a fixed air opening, the venturi, and the other, called the "high speed", is controlled by the automatic air valve, and located under same. An air screw is provided which regulates the pressure of the air valve spring enclosed therein. This constitutes the only mixture adjustment on the carbureter. Within this screw is also enclosed a plunger connected by a link to the air valve.

The function of this plunger is to provide a resistance in addition to that of the air valve spring to assist in acceleration. This arrangement of plunger and air valve screw is termed the dash pot.

A further control of the high speed jet is provided by the "economizer" which is a fuel metering valve operated by the carbureter throttle. This valve provides the maximum fuel feed to the "high speed" nozzle when the throttle is fully opened for high speeds, hill power and for quick "pick-up." During the ordinary driving ranges this valve controls the amount of fuel being used, thus providing all the economy possible. This valve is entirely automatic and requires no adjustment.

Built in with this valve also, is an accelerating pump. Quick opening of the throttle provides with this pump a forced fuel charge from the high speed nozzle to assist in acceleration and quick getaway.

Reference to the top of fuel bowl of carbureter will show a little seasonal control lever for this acceleration charge, marked "Summer" and "Winter." The "Winter" setting should always be used in cool and cold weather. In this setting all pressure from accelerating pump, due to quick opening of the throttle, forces fuel from high speed nozzle. With the control set at "Summer" or hot weather driving conditions, a check valve in fuel line between fuel bowl and pump is kept from closing, thus allowing pump pressure to force but little fuel from high speed nozzle by-passing most of it thru check valve, back into fuel bowl.

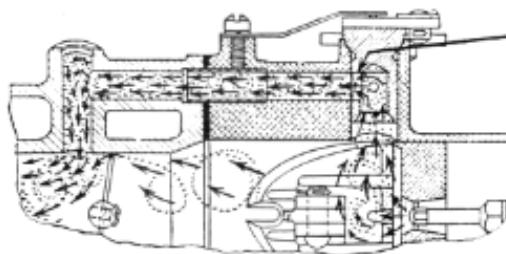
"Summer" setting of accelerating device on carbureter is only necessary in extremes of hot weather, when quick opening of throttle makes car momentarily sluggish if control is left in "Winter" setting.

A heat control lever is placed on the carbureter heat elbow to

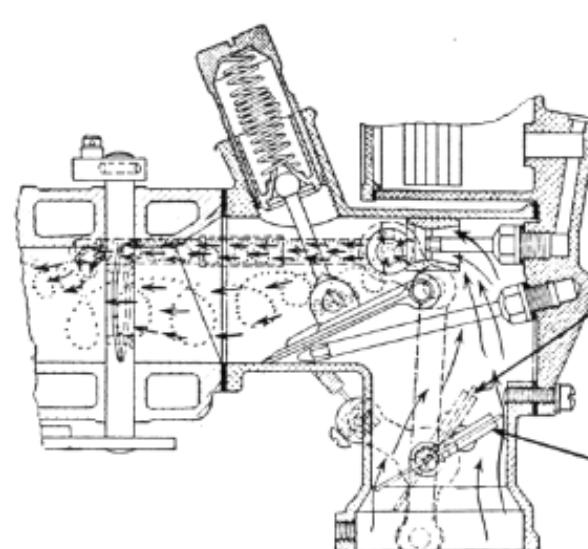
provide for manual regulation of heat in addition to the automatic heat control mechanism of the carbureter.

CHOKER AND BY-PASS

A choke button is provided on the instrument board to assist in starting. Pulling out this button does two things in the carbureter. First, it closes a butterfly choker valve in the air inlet of carbureter, which restricts the air opening and consequently produces a very rich mixture for starting. Second, thru interconnection of the choker lever and by-pass valve (See cuts p. 4-5), this motion likewise opens a passage between mixing chamber, just above low speed nozzle, and the intake manifold passage, just above the throttle. (See sketch page 5). Due to the higher suction existing above the throttle, the over-rich starting mixture is therefore immediately drawn thru the fixed opening in by-pass valve, up past the throttle and on into the engine. Partial release of choker button on instrument board after starting, releases choker valve so that it positions itself to the needs of the engine, due to the action of the counterweights attached to this choker valve, which now becomes automatic in its, action, the weights allowing the valve to open or close automatically, depending on the engine speed and quantity of air passing thru carbureter. This partial release of choker button does not, however, change position of by-pass valve opening, which remains open, and engine therefore runs at an increased idling speed during this period, same as would be obtained if the throttle were manually opened slightly and there was no by-pass valve. This gives the car a speed of approximately 14 to 15 miles per hour on the road automatically, without the necessity of opening throttle, and is of great assistance in getting under way after starting a cold engine.

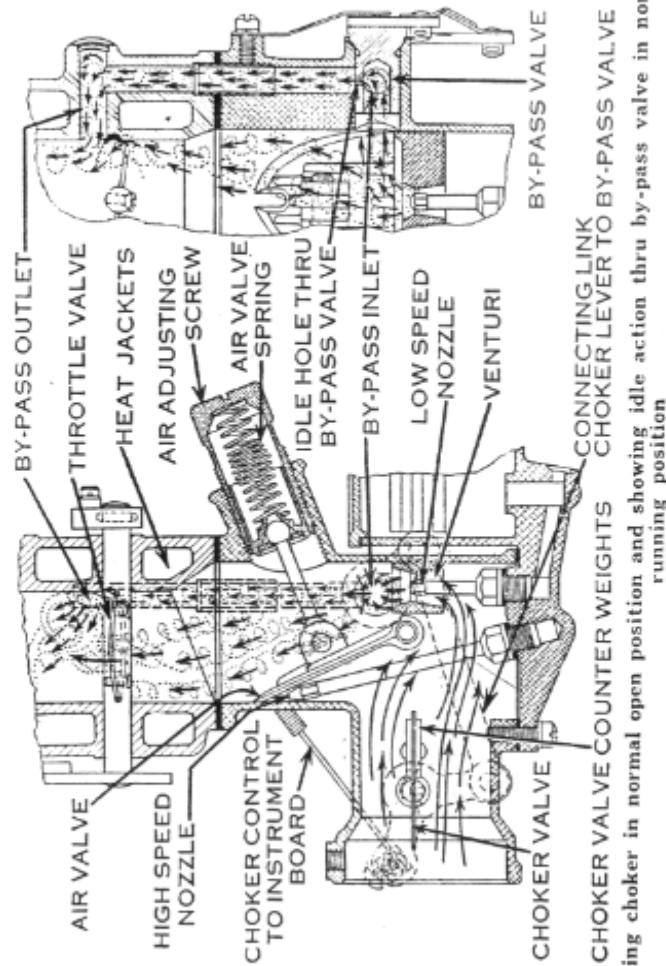


STARTING HOLE THRU
BY-PASS VALVE



CHOKER—15 MPH CHOKER—30 MPH

Showing action of automatic choker, and showing action thru by-pass valve on starting and warming up



CHOKER VALVE COUNTER WEIGHTS
Showing choker in normal open position and showing idle action thru action thru by-pass valve in normal running position

Reference to sketch on page 4 will show this action, and likewise the position of choker valve.

As soon as engine is sufficiently warmed up to drive with choker button completely released, by-pass valve returns to its normal position shown in sketch on page 5 and choker valve is automatically locked in wide open position.

It will be noted in sketch on page 5 that there is still a very small hole in by-pass valve in this position connecting to passage above throttle. This is to provide for a proportion of the idling mixture to pass above the throttle, as shown in sketch, stabilizing the idling action of the engine, and insuring positive idling performance, especially in cold weather.

Some idling mixture is, however, allowed to pass in normal way past throttle, and by the regulation of this amount, by adjustment of throttle opening, the desired idling speed is obtained.

HEAT CONTROL

The carburetor and manifolds have been designed to utilize the exhaust gases of the engine to insure complete vaporization and a consequent minimum consumption of fuel. This is accomplished by an exhaust jacket in a double walled elbow casting placed between the carburetor and the intake port in cylinder block. This elbow casting is connected to the exhaust manifold in such a manner that the exhaust gases pass between the walls of the elbow, through the heat jacket and back to the exhaust manifold. The amount of heat thus furnished to the elbow is controlled by a damper valve in the main exhaust above the elbow and situated between the exhaust outlet and the exhaust inlet to elbow heat jackets.

The damper valve in the main exhaust is connected to the throttle lever of carburetor in such a manner that the greatest proportion of

of heat is deflected to the jackets of elbow when the throttle is only partly open, as in idling and at low speeds, and a decreasing amount as the throttle is opened further for higher speeds. By means of the heat control lever attached to the damper valve this automatic action of the damper valve may be varied to suit weather and driving conditions.

An adjustment for seasonal control of heat also is provided on the damper valve lever "J" (See Cuts), whereby the amount of exhaust heat deflected by the damper to the elbow jackets may be decreased by moving damper adjusting stud "L" in damper connecting rod "K" from hook-up hole in damper lever marked "Warm" to hook-up hole marked "Medium", or to hook-up hole marked "Cool", thus initially opening damper valve at closed throttle positions and greatly reducing the heat application.

Gases from exhaust manifold are deflected by damper valve "A" and pass thru extension "C" of exhaust manifold into elbow jackets "D", passing around dividing wall or baffle "E", circulating around carbureter throttle, and back up thru passages "D", and again into exhaust manifold on rear side of valve "A", and thence in the normal way to muffler.

It will be noted in cuts that valve "A" is connected by means of damper lever "J" and damper connecting rod "K" to the driver's lever "I", which is fastened to the same shaft as throttle bell crank "G", which is connected by means of throttle connecting rod "H" to carbureter throttle lever "F". Movement of the accelerator lever when driving, which is fastened to the throttle bell crank, is therefore transmitted simultaneously to carbureter throttle and exhaust damper valve. As throttle is opened, valve "A" is also opened, due to this interconnection. Thus the volume of heat thru heat jackets of

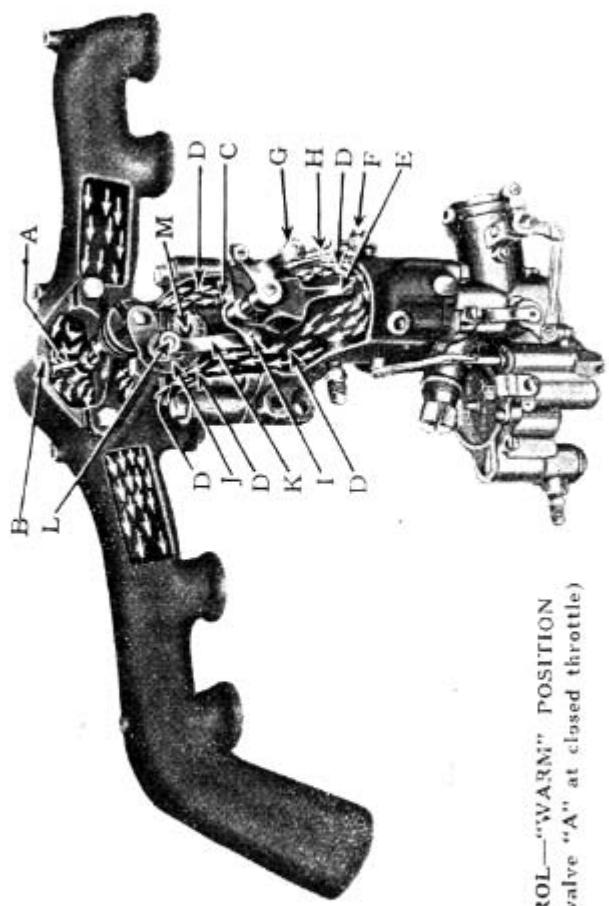
of heat thru heat jackets of elbow will be lessened as the engine speed is increased, the amount of decrease depending upon position of damper lever adjusting stud "L" in damper lever "I"-whether in hole for "Warm", "Medium", or "Cool" position.

In the cut on page 9 showing "Warm" heat position, note shape of exhaust manifold at "B" adjacent to edge of valve in closed position. At closed throttle, valve "A" is at extreme left side edge of the land "B" in exhaust manifold. As throttle is opened, valve "A" rotates clockwise so that its edge passes across this land "B", but the valve itself does not open until it clears the land "B", thus insuring maximum heat circulation thru elbow jackets up to this amount of throttle opening, or until car has obtained a speed of approximately 45-50 miles per hour, after which in higher speeds, further opening of the throttle automatically moves "A" beyond land "B", valve "A" rapidly opening then to insure against overheating.

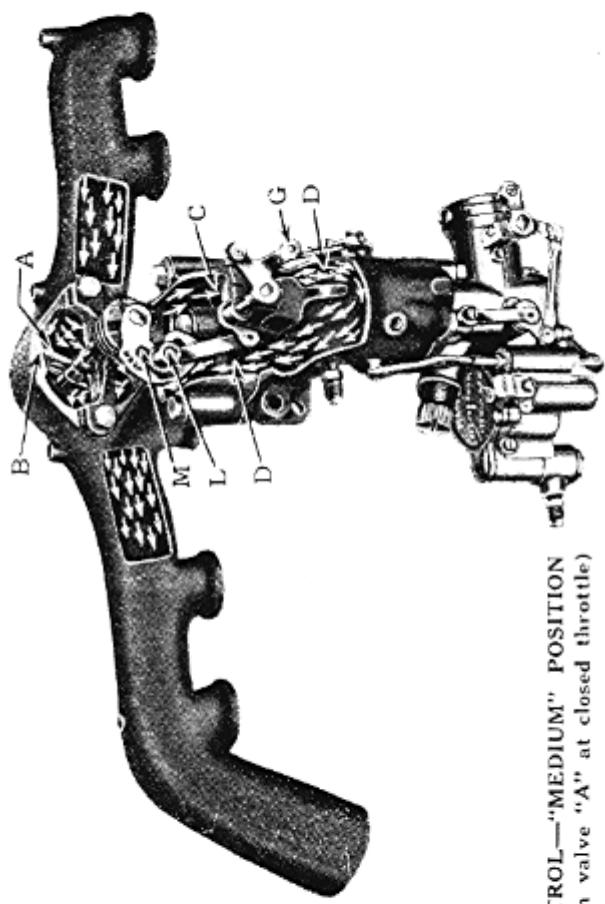
This "Warm" position of the heat control should be used always in severe winter weather and thruout the cold season.

In the cut on page 10 showing "Medium" heat position, it will be noted, that due to damper adjusting stud "L" having been moved thru slot "M" in damper lever "I" to the hook-up hole marked "Medium," that this movement has initially moved valve "A" so that at closed throttle valve "A" is near the extreme edge of land "B" in exhaust manifold, and ready to open with very little throttle opening. This setting therefore insures less deflection of exhaust heat to elbow jackets than in the "Warm" position, and valve "A" as before moves rapidly toward its open position as throttle is opened to full open.

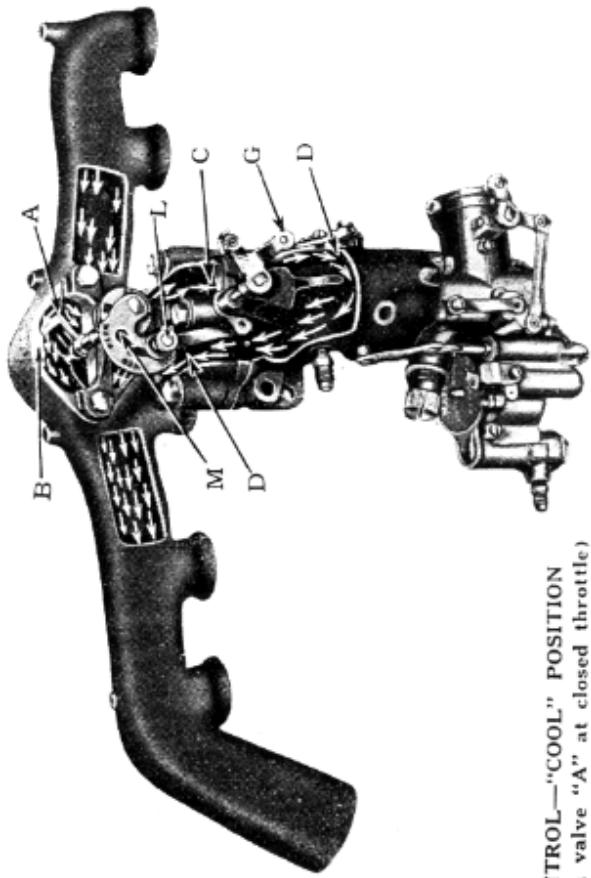
This "Medium" position of heat control should be used thruout the normal seasons, when the weather is neither the extreme or hot or cold.



HEAT CONTROL—"WARM" POSITION
(Note position valve "A" at closed throttle)



HEAT CONTROL—"MEDIUM" POSITION
(Note position valve "A" at closed throttle)



HEAT CONTROL—"COOL" POSITION
(Note position valve "A" at closed throttle)

In the cut on page 11 it will be noted that the adjusting stud "L" has been moved to the hook-up hole marked "Cool" in the damper lever "I". This initially places the valve "A", at closed throttle, past the land "B" in exhaust manifold, or opened considerably. As throttle is opened, valve "A" then rapidly moves toward full open position. This is the position of heat control to give the least deflection of heat thru elbow jackets.

This "Cool" position should only be used in climates where extreme hot weather is experienced or in foreign territories where very high test or light fuels are used.

It should be remembered that the adjustment of heat control is purely seasonal, and this adjustment largely controls the car performance, or the effect of a "rich" or "lean" action in the carburetor. Therefore in cold weather, drive with adjustment set at "Warm" to provide quick warm-up after starting, and sufficient heat for good performance. In extremely warm weather, place adjustment at "Cool", and for all intermediate seasons, at "Medium" for most normal driving.

STARTING

To start engine, pull out choke button all the way. Advance spark lever about halfway and depress starter pedal.

The moment the engine fires the choke button should be pushed in very slightly and engine allowed to run at fairly good speed for a few minutes. If engine hesitates, pull out choke button slightly and push back in to a point where engine runs smoothly during this short period, the object being to secure momentarily a richer mixture to assist engine in warming up. Even in zero weather it is not necessary to run with choker out, except momentarily when just starting cold engine.

It should be borne in mind that the automatic heating system of the carburetor makes it entirely unnecessary to drive with choker pulled out and one of the objects of the heating system is for this purpose, thereby obviating the common practice of diluting the oil in the crankcase by using an excess amount of fuel from over-choking while engine is warming up.

It should be remembered in cold weather, as stated above, that the setting of the heat control largely controls the performance. Therefore, in cold weather, drive with heat enough to provide same, which will not be obtained if control is in "Cool" position.

ADJUSTMENT

No change should be made in the carburetor adjustment until after an inspection has been made to determine if the trouble is in some other unit. It should be noted that the gasoline lines and strainer are clear, that there is gasoline in the vacuum tank, that there are no leaks at connections between carburetor and engine, that the ignition system is in proper condition, and that there is even compression in all cylinders.

If it is necessary to test adjustments or to make a readjustment proceed as follows:

Set air screw so that end is flush with the end of ratchet spring bearing against it.

Set heat control in "Warm" position, and leave in this position while making adjustment. Pull out choker to closed position and start engine in usual manner. As soon as engine has fired, slightly release choker. Run for a few moments until engine has warmed up, remembering never to use choker more than necessary, as when not needed it has a tendency to foul up engine and ruin the lubricating oil in the crankcase.

Next, set air screw for good idle by either turning in to the right a little or backing out to the left as the needs of the engine require.

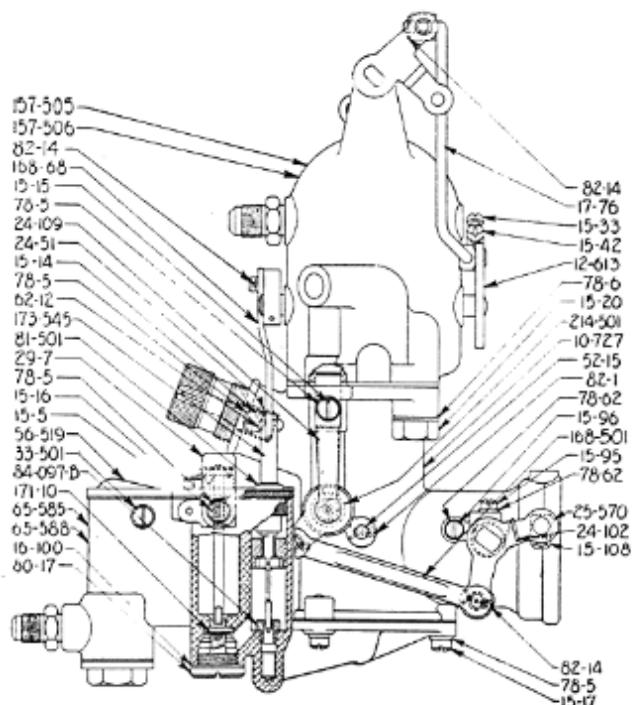
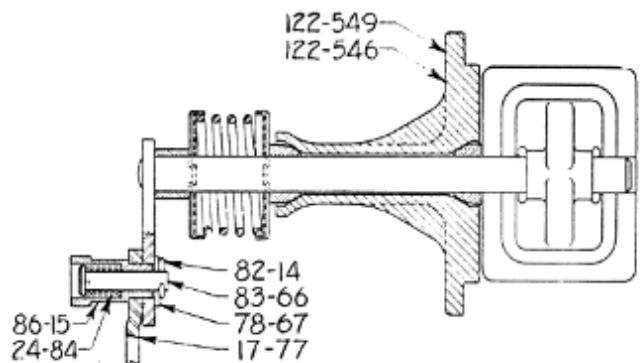
With the engine warmed up, the adjustment of the air screw for proper idling is easily accomplished by using a little care. If the air screw is turned in too tight, the motor will roll or appear sluggish. If the air screw is not tight enough, the motor will hesitate and stumble, and perhaps stop entirely. To make a nice clean adjustment for idle turn air screw back to the left until engine hesitates, Indicating that mixture has too much air and is too lean; next turn air screw in to the right three or four notches at a time until engine runs smoothly. This idle setting accomplished, by proceeding as directed above, the proper carbureter adjustment for the entire range of the engine will have been attained.

If the engine idles too fast with throttle closed, the latter may be adjusted by means of the throttle lever adjusting screw.

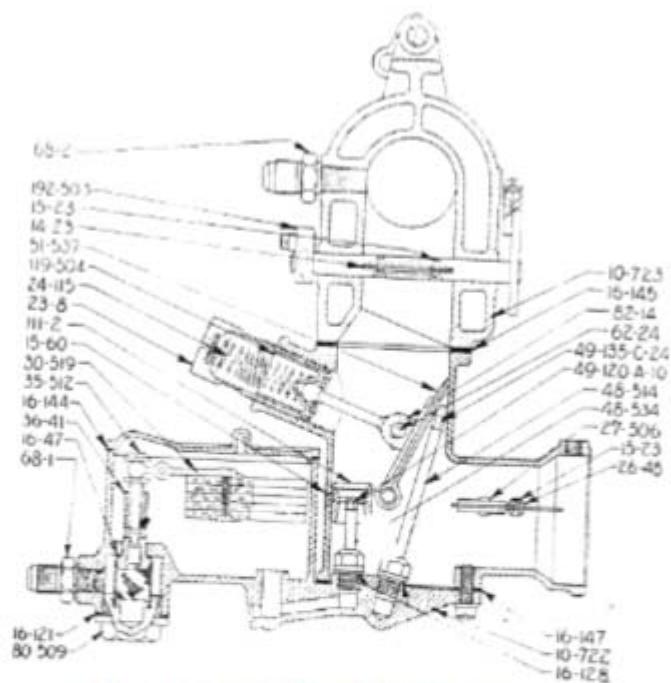
ALTITUDE CHANGES

No change is necessary for touring through mountainous country but for cars operating permanently in territory of 4000 feet elevation or over we advise going to the nearest Hudson-Essex dealer or Marvel service, station and changing to 49-110- J-24 High Speed Jet for the best results in such altitude territory.

Do not, under any circumstances, make this change unless operating permanently above 4000 feet elevation.



Showing Part Numbers of Service Parts



Showing Part Numbers of Service Parts

PARTS PRICE LIST
 MARVEL CARBURETER
 MODEL "V"

FOR 1929 ESSEX SUPER SIX

Part No.	Name	Price
10-140	Carbureter Body	5.00
10-722	Carbureter Assembly -----	\$16.00
10-733	Carbureter & Elbow Assembly (Complete)-----	25.00
12-613	Throttle Lever, Screws & Swivel Assembly -----	.50
14-23	Throttle Fly -----	.25
15-5	Bowl Cover Screw -----	.05
15-14	Ratchet Spring Screw -----	.05
15-15	By-Pass Valve Spring Screw---	.05
15-16	Choker Clip Screw -----	.05
15-17	Bowl to Body Screw -----	.05
15-20	Body to Elbow Screw -----	.05
15-23	Throttle & Choker Fly Screw--	.05
15-33	Throttle Adjusting S c r e w Lock Screw -----	.05
15-42	Throttle Adjusting Screw-----	.05
15-60	Spacer Block Screw-----	.05
15-95	Choker Sleeve Retainer Screw	.05
15-96	Choker Stop Screw -----	.05
15-108	Choker Swivel Screw -----	.05
16-47	Float Valve Seat Gasket-----	.05
16-100	Seasonal Control Plug Gasket-	.05
16-121	Strainer Plug Gasket-----	.05
16-128	Standpipe Fitting Gasket-----	.05
16-144	Bowl Cover Gasket-----	.05
L6-145	Carbureter to Heat Jacketed Elbow Gasket -----	.10
16-147	Bowl to Body Gasket-----	.05
17-76	Throttle Connecting Rod-----	.20
17-77	Exhaust Damper Connecting Rod -----	.20
23-18	Air Adjusting Screw Shell----	.60
24-51	Ratchet Spring-----	.15

Part No.	Name	Price
24-84	Exhaust Damper Valve	
	Adjusting Sleeve Spring -----	.15
24-102	Choker Spring -----	.15
24-109	By-Pass Valve Retaining Spring -----	.15
24-115	Air Valve Spring -----	.35
25-570	Choker Lever & Sleeve Assembly -----	1.00
26-48	Choker Shaft -----	.30
27-506	Choker Fly & Counterbalance Weights Assembly -----	.40
29-7	Choker Tube Clip -----	.15
30-519	Float & Lever Assembly -----	1.00
33-501	Float Lever Shaft & Head Assembly -----	.20
35-512	Float Valve & Head Assembly	.75
36-41	Float Valve Seat-----	.55
37-1	Lead Shot -----	.05
48-514	High Speed Standpipe Assembly	.50
48-534	Low Speed Standpipe Assembly	.50
49-120-A-10	Low Speed Jet -----	.30
49-135-C-24	High Speed Jet -----	.30
51-537	Air Valve & Dash Pot Plunger Assembly -----	1.75
52-15	Air Valve Shaft -----	.20
56-519	Bowl Cover Assembly -----	1.00
62-12	Metering Pin Link Pin -----	.05
62-24	Dash Pot Plunger Rod Pin-----	.05
65-585	Bowl & Plugs Assembly -----	2.50
65-588	Bowl Assembly (Complete)---	10.00
68-1	1/4" Flared Tube Union-----	.15
68-2	5/16" Flared Tube Union-----	.15
78-5	Choker Clip, By-Pass Spring, Ratchet Spring and Bowl to Body Screw Lock Washer-----	.05
78-6	Carburetor to Elbow Screw Lock Washer -----	.05
78-62	Choker Sleeve Locating Screw & Choker Stop Screw Lock Washer -----	.05
78-67	Exhaust Damper Valve Ad- justing Sleeve Washer -----	.05

Part No.	Name	Price
80-17	Seasonal Control Plug -----	.20
80-509	Strainer Plug & Gauze Assembly	.45
81-501	Metering Pin Packing Nut Assembly -----	.20
82-1	Air Valve Shaft Cotter Key 1/16" x 1/2" -----	.05
82-14	Air Spring Plunger Pin, By-Pass Valve Link Stud Adjusting Sleeve, Throttle Swivel & Metering Pin Link Stud Cotter Key 1/16" x 3/8"	.05
88-66	Exhaust Damper Valve Adjusting Sleeve Stud -----	.15
84-097-B	Metering Pin Jet -----	.30
86-15	Exhaust Damper Lever Adjusting Sleeve -----	.15
111-2	Spacer Block -----	.40
119-504	Dashpot Plunger Rod & Washer Assembly -----	.90
122-546	Exhaust Damper Assembly (Complete) -----	3.00
122-549	Exhaust Damper Assembly-----	2.50
157-505	Heat Jacketed Throttle Elbow, Bell Crank & Shaft Assembly-----	4.50
157-506	Heat Jacketed Throttle Elbow Assembly (Complete) -----	9.00
168-68	Metering Pin Link -----	.20
168-501	By-Pass Valve Link Assembly	.40
171-10	Check Valve -----	.10
173-545	Metering Pin & Link Assembly	.75
192-503	Metering Pin Lever & Throttle Cut-off Assembly -----	.75
214-501	By-Pass Valve & Lever Assembly	.50

Marvel Distributors and Service Stations

*NOTE: Marvel Distributors in charge of service stations in this territory. Carries a complete stock of carbureters and parts. Overhauls and rebuilds carbureters in addition to giving service.

Aberdeen, Washington - Hood Automotive Service Company.

Abilene, Kansas - Meade Battery & Electric Company.

Abilene, Texas - Hoppe Auto Electric Service.

Akron, Ohio - The Maibohm Battery & Ignition Company.

Albany, N. Y. - 412 Hamilton Street - John F. Pierce Garage.

Allentown, Pa. - 1041 Hamilton Avenue - Motor Accessories Company.

Ann Arbor, Michigan - 314 E. Liberty Avenue - Maynard Battery Shop.

Atlanta, Ga. - Scarboro Electric Service.

*Atlanta, Ga. - 135 Ivy St. - Alemite Lubricator Company of Georgia.

Augusta, Ga - C. M. Hill Service Station.

Baltimore, Md. - 882-84 Park Avenue Stephen Seth & Company.

Bellingham, Washington - Paul Tifar

Birmingham, Alabama - 404 South 21St Street - Alemite Lubricator Co. of
Alabama.

Boston, Mass - 335 Newbury Street - Marvel Carbureter Sales Company.

Brooklyn, N. Y - 1061 Atlantic Avenue - E. A. Wildermuth.

Brooklyn, N. Y - 439-441 Madison St. - Madison Garage.

Buffalo, N. Y. - The Battery & Starter Company - 883 Main Street.

Calexico, Calif. - Imperial Avenue - Watts & Jenson.

Canon City, Colorado - 708 - Main Street - Bliley-Walker Service Station.

Canton, Ohio - 420 4th St. N. E. - Carbureter Sales & Service.

Casper, Wyoming - 136 E. Midwest Avenue - Auto

Electrical Company.

Centralia, Illinois - B, J. Hoitcamp Electric Service Company.

Centralia, Washington - Motor Service Company.

Charlotte, N. C. - Woodside Motor Company.

Chattanooga, Tenn. - 318 Market Street - Hessler Brothers.

Chicago, Illinois - 2427 S. Prairie Avenue - Marvel Carbureter Sales
Company.

Chicago, Illinois - 2919 Lawrence Avenue - Albany Park Service Station.

Cincinnati, Ohio - 2110 Gilbert Avenue - Lockie & Glenn.

Cleveland, Ohio - 2013 East 65th Street - Fred Crandall Company.

Cleveland, Ohio - 4310 Carnegie Avenue - Wright Carbureter & Ignition
Co.

Cleveland, Ohio - 1801 E. 21st Street - Hart Ignition Company.
*Columbia, S. C - 1111 Taylor Street - Standard Parts Corp.
'Columbus, Ohio - Ohio Ignition Company.
Denville, Illinois - Horner Electric Company.
*Dallas, Texas - 2210 Live Oak Street - The Beach Wittmann Company.
Dallas, Texas - J. J. Gibson Company.
Davenport, Iowa - Emeis Electrical Service - 218 Iowa Street.
Dayton, Ohio - 339 S. Jefferson St. - Carbureter Sales & Service Co.
*Denver, Colorado - The Auto Electric Appliance Company - W. 13th &
Acoma St.
*Des Moines, Iowa - 1309 Locust Street - Iowa Auto Market.
*Detroit, Michigan - 3127 Jefferson E. - Greenleaf Incorporated.
Detroit, Mich - 52 E. Canfield - Auto City Garage.
Detroit, Michigan - 3705 Burlingame - Northwest Auto Electric.
Detroit, Michigan - 631 Six Mile Road - Thomsson's Auto Electric.
Detroit, Michigan - 10412 Harper - Klann Auto Electric.
El Centro, Calif. - 644 Main Street - Joe Bush, Inc.
*El Paso, Texas - 315 E. Missouri St. - Western Battery & Magneto Co.
Elkhart, Indiana - 522 W. Indiana - Niblock Auto & Battery Company.
Emporia, Kansas - 823 Commercial St. - Bebermeyer Electric Company.
Enid, Okla. - Silver's Electric Station & Garage.
Everette, Washington - 2817 Rucker Avenue - Proctor Motor Company.
*Fargo, North Dakota - 404 N. "P" Avenue - United Electric Service
Ferndale, Michigan - Ferndale Auto Electric Co.
Flint, Michigan - 706 Cornelia Street - The Merrell Company.
Florence, Colorado - The Electric Service Station.
Fort Scott, Kansas - Johnson Electric Service - 9 Main Street.
Fort Worth, Texas - Automotive Electric & Battery Company
- Macon St.
Glendale, California - Psenner-Pauff, Inc.,
Garden City, Kansas - Kemper Auto Electric Company.
Grand Rapids, Michigan - 53 Commerce Avenue - Electric Service
Station.
Grand Rapids, Michigan - 606 Divison, S. E. - Martin Auto Electric.
Great Bend, Kansas - Scheuffler Tire & Supply Company.
Greeley, Colorado - 17 Tenth Street - The Mutual Battery & Electric
Service.
Hanford, California - Cousins Tractor Company.

Harrisburg, Pa. - 112-15 Cameron Street - E. Mather Company.
Hiawatha, Kansas - Hauer Auto Repair Shop.
Hoisington, Kansas - C. M. Bell Battery & Electric Company.
Hollywood, California - 6550 Sunset Blvd. - Shaefer's Battery & Ignition.
Houston, Texas - L. A. Korn Carbureter Sales & Service.
Huntington, W. Va. - Rear 538 Fourth Avenue - Jack Warner's Garage.
Hutchinson, Kansas - Carbureter Electric Company
 % Welborn & Rose.
Idaho Falls, Idaho - Idaho Falls Battery Company.
Indianapolis, Indiana - 733-35 N. Capital - Madden Copple, Inc.
Jackson, Michigan - 146 Pearl Street - Fulhaver & Fletcher.
*Jacksonville, Fla. - 927 Main Street - The Lovejoy Company.
Jamaica, L. I., N. Y. - 104 Smith St. - Fogarty Bros.
Jamestown, N. Dakota - N. W. Lyons.
Joplin, Missouri - O'Neill Tire & Battery Company.
Junction City, Kansas - Meade's Battery Service.
Kalamazoo, Michigan - M. & T. Battery & Electric Company.
Kankakee, Illinois - Fortin Brothers.
*Kansas City, Mo. - 1820-22 McGee Street - The
 Beach-Wittmann Company.
*Knoxville, Tenn. - 307-11 N. Central Street - McNutt & Burks, Inc.
LaPort, Indiana - 610 Indiana Avenue - Borgerd & Fritt.
Lansing, Michigan - 125 N. Larch St. - Dyer's Garage.
Larned, Kansas - Beebe Electric Company.
Lexington, Ky. - 151-157 East Short - Wombwell Automotive Parts.
Lewistown, Idaho - Robinson Battery & Ignition Co.
Liberal, Kansas - Motor Parts & Supply Company.
*Lincoln, Nebraska - 1637 "P" Street - Parkhurst Auto Electric Company.
Long Beach, Calif. - 1009 American Avenue - Helme Electric Equipment
 Company.
*Los Angeles, California - 1837 S. Flower St. - Marvel Carbureter Sales
 Co.
Los Angeles, Calif. - 315 W. 12th Street - Carbureter Equipment
 Company.
Louisville, Ky. - 725 East Broadway - Automotive Electric Company, Inc.
Manhattan, Kansas - Sager Electric Company.
Marion, Ohio - 127 E. Church St. - Exide Battery Service.
Marshfield, Oregon - P. J. Rooney Company.
*Memphis, Tenn. - Union & Marshall Avenues - Mc Gregor Battery
 Engineering Co.
*Milwaukee, Wisconsin - 2838 Fond Du Lac Ave. - Praetke Auto Electric
 & Battery Co.

*Minneapolis, Minn. - 2nd Ave. N. 3rd St - W. S. Nott Co.
Montgomery, Ala. - Auto Electric Service Co.
Mt. Vernon, Wash. - Carl E. Lindhery Co.
*Nashville, Tenn. - 1227 Broad St. - The Chapman Co New Castle, Ind. -
John W. Shopp.
Newport News, Va. - H. & W. Motor Corp.
New York City, N. Y. - 225 W. 64th St. - C. I. BarrowS.
New York City, N. Y. - 242 W. 69th St. - Marvel Carbureter Sales Co.
Oklahoma City, Okla. - 6 E. 5th - Herman Reuter Service.
*Oklahoma City, Okla. - 706 Broadway - The BeachWittmann Co.
Oakland, Calif. - 23rd and Veldex - C. E. S. Co.
Ontario, Calif. - Cochran & Nichols.
Pasadena, Calif. - 165 S. Fair Oaks - Kay & Burbank Co.
Philadelphia, Pa. - 1625 N. Sydenham St. - Marvel Carbureter Sales Co.
Phoenix, Ariz. - 315 N. Central Ave. - Motor Supply Co.
Pittsburgh, Pa. - 5157 Liberty Ave. - Electrical Equipment Service Co.
Pittsburgh, Pa. - 5209 Baum Blvd. - Carbureter & Ignition Co.
Pomona, Calif. - Carey Ave. & Holt - C. R. May.
Porterville, Calif. - Hayden & Hayden.
Portland, Oregon - L. H. Buntzel Co.
Portland, Oregon - 111 13th St. - Henry Ward & Co.
*Raleigh, N. C. - 215 E. Davie St. - Motor & Equipment Co.
*Richmond, Va. - 501-11 W. Broad St. - Lane Bowles Co.
Richmond, Va. - McKinnin Motor Co.
Rochester, N. Y. - 335 Court St. - Standard Battery Service.
Rockford. Ill. - Phillips Battery & Electric Co.
*Salt Lake City, Utah - 475 S. Main St.- AutornotiveElectric Service Co.
*San Antonio, Texas - Westbrook Carbureter & Electric Co.
San Diego, Calif. - 929 Columbus St. - San Diego Garage.
San Francisco, Calif. - 1726 California St. - Hanni Auto Repair.
San Jose, Calif. - 580 1st St. - Lehmann Brothers.
San Luis Obispo, Calif. - 1009 Monterey St. - C. H. Kamm & Co.
Santa Barbara, Calif. - 514-522 State St. - Harry A. Thayer.
Santa Monica, Calif. - 1452 Second St. - G. R. Payne.
*Seattle, Wash. - 12th Ave. & Pine St. - McAlpin-Schreiner Co.
Spokane, Wash. - W. 610 Third Ave. - The Carburetet Service Co.
Stockton. Calif. - Miner Ave. & California St. - J. M. McGillivray.
*St. Louis, Mo. - 2827 Locust Blvd. - R. A. MacGuire Inc.
St. Paul, Minn. - 179 W. 69th St. - Mayer Battery Electric Service.
Tacoma. Wash. - 110-112 South Eighth St. -McAlpinSchreiner Co.

*Tampa, Fla. - 708 Twiggs St. - Motive Parts Co. of Florida.
Terre Haute, Ind. - The Terre Haute Battery & Electric Co.
Tucson, Ariz. - 49 No. 6th Ave. - Motor Supply Co.
*Tulsa, Okla. - 210 10th St. East - The Beach-Wittmann Co.
Union City, N. J. - 586 Summit Ave. - Charlie's Auto Repairs.
Victoria, B. C., Canada - Auto Electric & Battery Co. Ltd.
Visalis, Calif. - 500 E. Main St. - Christie & Henry.
*Washington, D. C. - 1019 17th St. N. W. - Tompkins Sales & Service Co.
Wenatchee, Wash. - 326 S. Wenatchee Hayes Auto Repair Shop.
*Wichita, Kansas - 225 N. Market St. - The Beach-Wittmann Co.
Wichita Falls, Texas - Ruby Howard Battery Co.
Yakima, Wash. - Wm. C. Wright Co.
Youngstown, Ohio 28 W. Madison St. - Exide Milburn Service Co.
Ypsilanti, Michigan - 38 E. Michigan - Walton Auto Electric.

Canadian List

Calgary, Alberta - Dyson Battery Service - 330 Fifth Avenue.
Edmonton, Alberta - Dyson Distributors, Ltd.
Halifax, Nova Scotia - Halifax Ignition Company.
Montreal, Quebec - Battery & Electric Service Co.
Oshawa, Ont - Geo. C. C. Allchin, Ltd.
Ottawa, Ontario - Welch & Johnson.
Regina, Saskatchewan - Magneto Service Station.
*Toronto, Ontario - 350 Danforth Avenue - Barnes Battery & Ignition Co.
*Toronto, Ontario - 252 Victoria Street - Auto Electric Service Company,
Ltd.
Vancouver, B. C. - 821 Hornby Street - Roy Howard, Ltd.
*Vancouver, B. C. - 15th, & Granville Sts - Big Chief Service Station.
Vancouver, B. C. - 1255 Seymour Street - Standard Equipment, Ltd.
Vancouver, B. C. - 847 Yates St. - Mechanical Motors.
Winnipeg, Manitoba - Beattie Auto Electric, Ltd.

Marvel Carbureter Company Export Distributors

Argentine, Buenos Aires - Calle Esmeralda 471 - Alejandro De Angelis.
Australia, Sydney - P. O. Box 152 - Larke, Hoskins & Co., Ltd.
Belgium, Brussels - rue de l'Aqueduc 104 - Mertens & Straet.
Columbia Cali - Arboleda y Cia, S/A.

Columbia Bogota - Antonio Puerto y Cia, S /A.
Columbia Cali - Mariano Tenorio g.
Cuba, Havana - Infanta - 48-A - Lirna y Daybar.
Denmark, Copenhagen - Agersgate 27 Str. - Jens Anderson & Sonner.
Egypt, Alexandria - 15 Place des Canons - Albert Benin.
Finland, Helsingfors - Alexandersgatan - Svend Orum.
Germany, Berlin - Halensee - Cicerastrasse 36 - Duetsche Motor Service
Holland, Rotterdam - Van Oldenbarneveltstraat 69 - G. Van Dyk &
Company.
Jamaica, . Kingston - Motor Car & Supplies.
Norway, Oslo - Drrammensrsien - Sorenson og Balchen.
Panama, Ancon, Canal Zone-P. O. Box 5033-Panazone Garage.
Porto Rica, San Juan - J. Ochoa y Hno.
Roumania, Bucarest - 53 Calea Victoriei - Leonida & . Co.
Sweden, Stockholm - Vasgatan 52-A/B Maskinaffaren Stieltjes
Uruguay, Montevideo - Rincon 729 - Clericetti y Barella

: