

FUEL AND EXHAUST SYSTEM

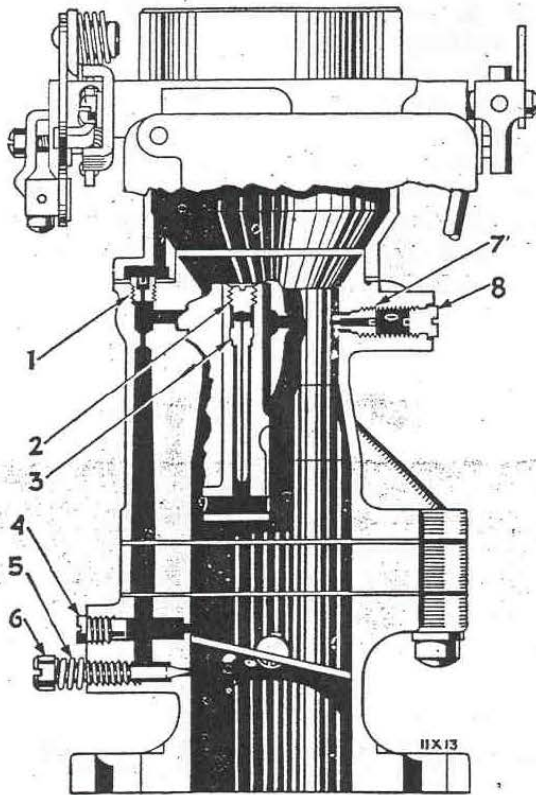


FIG. 900—Front Cross-Section

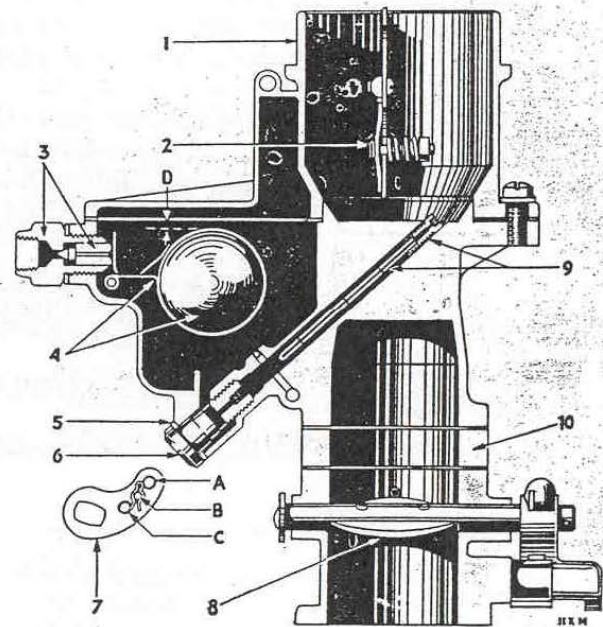


FIG. 900-A—Side Cross-Section

CARBURETOR

- 1—Idle vent screw plug
- 2—Idle orifice plug
- 3—Idle orifice tube
- 4—Idle hole plug
- 5—Idle adjustment screw spring
- 6—Idle adjustment screw (and valve)
- 7—Pump jet
- 8—Pump jet plug

- A—Accelerating pump winter setting (outer hole)
- B—Accelerating pump summer intermediate setting (center hole)
- C—Accelerating pump extreme summer setting (inner hole)
- D— $1/16"$ (1.58 mm.)
- 1—Air horn assembly
- 2—Choker valve assembly
- 3—Float needle and seat assembly
- 4—Float and lever assembly
- 5—Main metering screw gasket
- 6—Main metering screw
- 7—Accelerating pump lever
- 8—Throttle valve
- 9—Main vent tube and plug assembly
- 10—Body flange gasket (insulator)

GENERAL DESCRIPTION

Fuel is drawn from the main tank at the rear of the car and delivered to the carburetor by a pump located on the right side of the engine. The carburetor is equipped with an air cleaner and intake silencer. The inlet and exhaust manifold assemblies have a hot spot with a heat control to provide first, full exhaust heat around the hot spot for smooth operation during the warming up period. Secondly, it provides proper mixture temperature throughout the entire engine speed range. This is accomplished through the medium of a calibrated thermostatic coil and a counterweight, both operating on the offset heat control valve shaft.

The exhaust pipe, muffler and tail pipe are connected to the engine and to the frame by means of flexible connections to prevent transmission of engine noises to the frame and to carry out in detail the floating power principle.

FUEL TANK

The main fuel tank at the rear of the frame has a capacity of 16 U.S.S. gallons (13.3 Imperial gallons, 60.5 liters).

To permit proper fuel pump action, the vent hole in the filler cap must be kept open at all times. It is well to inspect this vent hole occasionally, especially in extremely dusty sections, to make sure that it does not become clogged.

JOURNEY THROUGH AIRFLOWLAND

Recent months have brought sufficient requests for information on carburetors and carburetor repairs that perhaps this page might profitably be devoted to the subject for the benefit of those with questions.

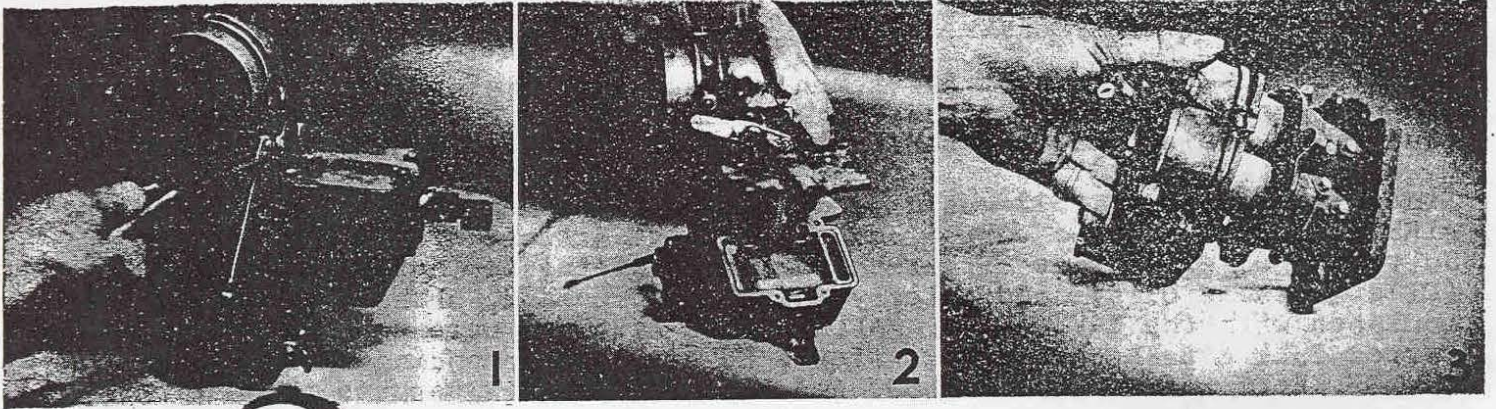
Since the Stromberg EE22 was used on the vast majority of all Chrysler AIRFLOWS, we've chosen to reproduce a service article from MOTOR AGE for July 1938 covering that carburetor. The remaining few not using the EE22 (C1's and some C9's) used chiefly the Stromberg EX32, although a few were equipped with the EXV3 model. All De Soto AIRFLOWS were equipped with Carter Ball & Ball carburetors of the E6 series, commencing with E6B1 on the SE, E6F1 and E6F2 on the SG, and E6G1 on the S2. Despite the different manufacturers and the fact that the EE22 is a dual throat, while all the rest are single, all of them are similar enough in construction that the service article can be used as a guide.

The EE22 came in two basic styles; the 1934-'35 version with the linkage on the engine side, and the 1936-'37 version with the linkage on the fender side. They were largely the same, and except for those parts directly related to the linkage, and a few minor differences in calibration, most parts are common to both styles. The 1937 C17 AIRFLOW was the last of the Chrysler Eights to use the EE22 exclusively. Some 1937 C14 models were so equipped, while others used the somewhat more advanced AAOV1 that was standard on the C15. Strangely enough the AAOV1 was not designated by either Stromberg or Chrysler as the replacement for the EE22, but rather, both of them were superseded by the AAV2, which became standard on all Chrysler Eights in 1938 and 1939. Both the AAOV1 and the AAV2 are considerably different in design from the EE22, and in the opinion of some AIRFLOW'RS using them, they perform very well indeed. In the wee small hours of the morning of August First, at Long Beach, your club's judging committee voted to accept the recommended supersede, AAV2, as correct on an equal basis with the original EE22.

The differences between the various models of the Carter B&B E6 series, as used on the De Soto AIRFLOWS are minor, and mainly internal. Externally, except for linkage, they all look pretty much alike. While the matter wasn't acted on officially, given the broad interpretation the committee applied to Chryslers, yours truly would feel obliged to accept any of the E6 series on De Sotos. The last of them was the E6S3, used on the 1941 De Soto S8, however many carbs used even on post-war cars with standard transmission were of very similar external appearance, tho not of the E6 series.

Repairs should not pose any serious problems. While many have found that repair kits are hard to find, almost any long-established carburetor re-builder can scrounge around and come up with the most often needed parts. None of these carbs are particularly complicated and almost any careful worker can dismantle and re-assemble one. Almost without exception it is impossible to replace anything wrong. The truth is that there is practically nothing that will fit where it doesn't belong. The greatest enemies of all carburetors are dirt and leaky gaskets. Both are easily cured. Any auto supply store can sell you a gallon can of Carburetor cleaner for two or three dollars, and lacking new gaskets, they can easily be cut by hand from sheet gasket material of appropriate weight.

Beyond this, probably the pump leather, idle needle valve, and float needle valve and seat are most likely to need replacement. Jets do tend to enlarge over the years of use, but the most disastrous effect is usually worsened gas mileage. The differences in performance may be minor, and can generally be lived with until new jets can be found.



Servicing Stromberg

BY
BILL TOBOLDT

1. After removing carburetor from engine, disconnect link between throttle and accelerating pump arm.

2. Remove machine screws securing upper casting to center casting and lift off upper casting including the accelerating pump piston.

3. Remove machine screws holding lower casting to center casting which will permit the separation of the two castings.

4. Remove screws holding throttles to throttle shaft. Remove throttles and then withdraw throttle shaft from carburetor casting.

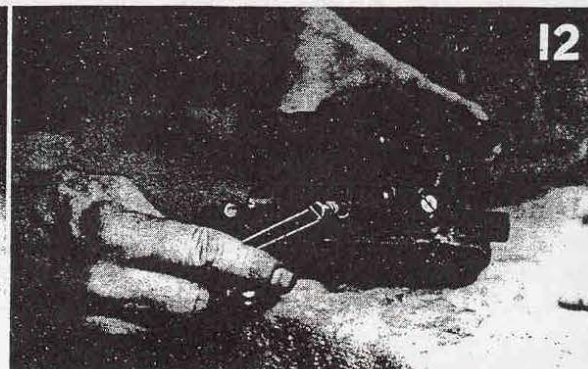
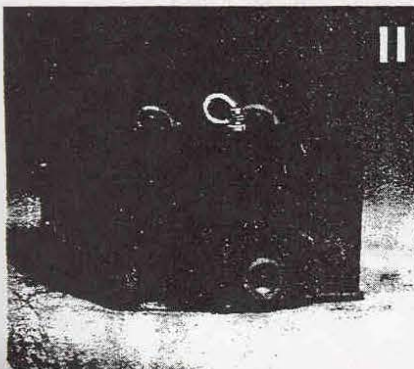
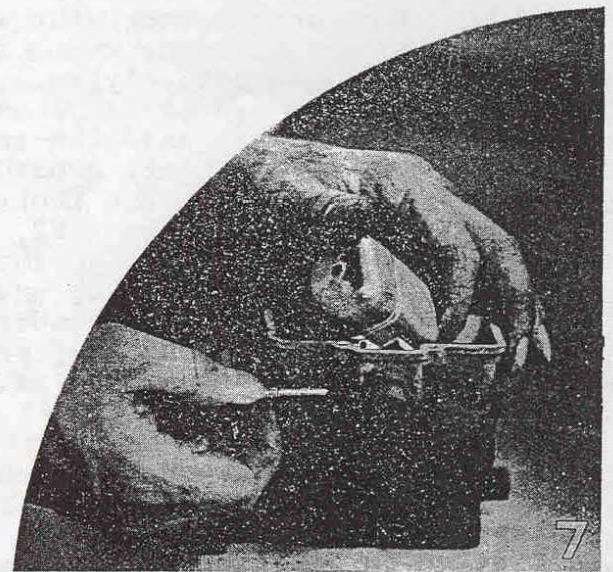
5. Remove split pin from upper end of accelerating pump shaft, disengaging pump shaft from operating link. Remove screw securing pump operating link to carburetor body and remove link.

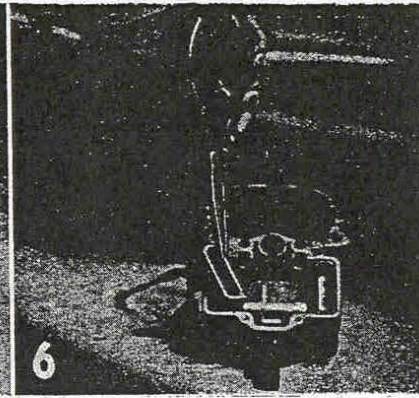
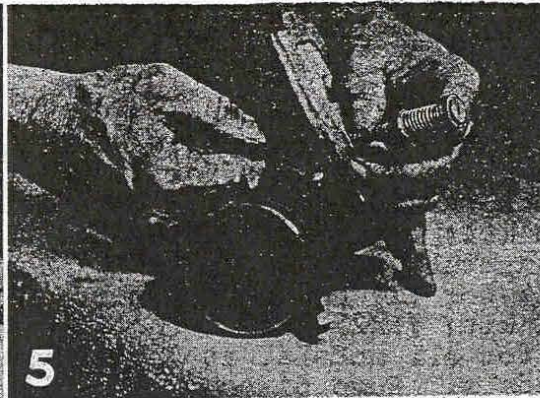
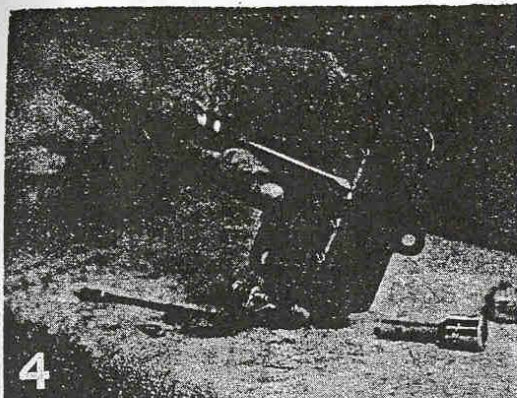
6. Lift out baffles (if carburetor is so equipped) from carburetor float bowl.

7. Remove screw from inside of carburetor casting, permitting removal of carburetor float.

8. With wrench, remove float needle valve and seat.

9. With large screw driver, remove economizer valve from carburetor body.





Carburetors

Details of Disassembly of Model EE22 Stromberg Carburetors

10. With special socket wrench remove main metering jets after having first removed metering jet plugs. Note—Socket wrench for removing main metering jets can easily be made by taking short length of steel tubing of proper size and flattening the sides.

11. With small screw driver remove check valve. Note—On some models of the EE 22 carburetor, the check valve is removed through the interior of the float bowl. On others, as shown in the illustration, the check valve is removed from the outside, after first having removed a plug.

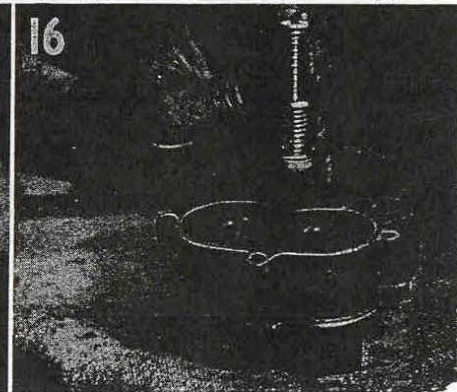
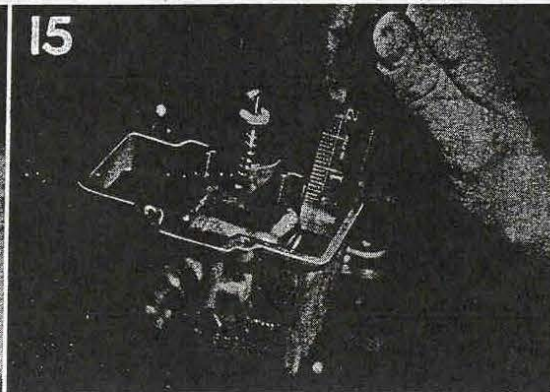
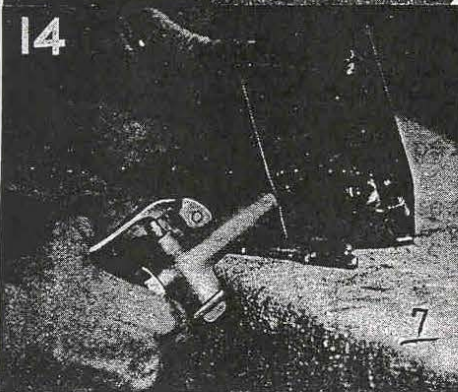
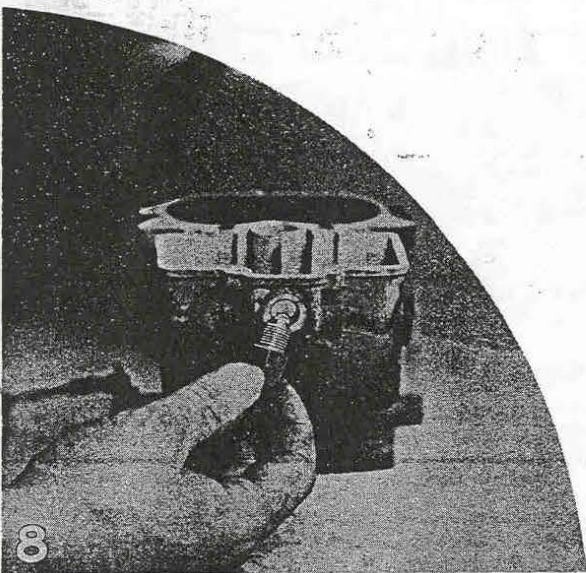
12. Remove idle adjusting screws, also remove idle discharge plugs located directly above idle adjusting screws.

13. Remove idle tubes with small screw driver.

14. With compressed air, blow out all carburetor passages, and then with acetone clean all parts. Then reassemble, reversing the procedure outlined. Use gaskets and other parts where necessary.

15. Measure fuel level. Correct level on all models can be secured from the Chilton Flat Rate manual.

16. While not absolutely necessary, installation of the accelerating pump piston is simplified if a special sleeve is used. This prevents distortion of the pump leather.



CARBURETOR PARTS NUMBERS

CHRYSLER AIRFLOWS

Parts numbers are Stromberg. EE22 gasket kit: #J-4469-G for all models. EE22 repair kit: no number available for 1934-'35 models. Kit #RK27 for 1936, '37 models. Kits #RK28 and #RK29 have nearly the same parts and are useful. EX32 gasket kit: #J-4537-G. Gasket kit #J-4364-G as was used on CZ and C8 models is useful. EX32 repair kit: no number available for C1, C9. Repair kit #RK24 for CZ, C8 models is useful. EXV3 gasket kit: #J-4544-G. EXV3 repair kit: #RK25. Fuel (not float) level: 5/8 below top of bowl without gasket for all models, at 3 lbs. pressure. EE22 idle needle valve: P15478 all models. Pump piston: P17073 all models. EX32 and EXV3 pump piston: P19167 all models. Idle needle valve: P17402 all models.

EE22

| Car Model | Main Body Assy. | Main D'chge Jet | Main Meter Jet | By-pass Jet | Throt-tle Valve | Idle Tube | Idle Air Bleed | Pump D'chge Nozzle | Needle and Seat |
|-----------|-----------------|-----------------|----------------|-------------|-----------------|-----------|----------------|--------------------|-----------------|
| CU | P20252 | P19840 | P17004 | P19481 | P19850 | P18264 | P14577 | P18852 | P19867 |
| CV | " | " | " | " | " | " | " | " | " |
| C2 | " | " | " | " | " | " | " | " | P20888 |
| C3 | " | " | " | " | " | " | " | " | " |
| C10 | P21744 | " | " | " | " | " | " | " | " |
| C11 | " | " | " | " | " | " | " | " | " |
| C17 | " | " | " | " | " | " | " | " | " |
| C9 | " | " | " | " | " | " | " | " | " |

C9 listing refers to those models so equipped. EX32 was standard.

EX32

| | | | | | | | | | |
|----------|---------|--------|---|--------|-------|--------|---|--------|--------|
| C1 C9 | P20683T | P20877 | " | P18149 | P5436 | P19424 | " | P18126 | P20887 |
|----------|---------|--------|---|--------|-------|--------|---|--------|--------|

EXV3

| | | | | | | | | | |
|----------|--------|---|---|--------|---|---|---|--------|---|
| C1 C9 | P20173 | " | " | P21197 | " | " | " | P17020 | " |
|----------|--------|---|---|--------|---|---|---|--------|---|

If so equipped. EX32 was standard equipment.

DE SOTO AIRFLOWS

Parts numbers are Carter. Conversion to Chrysler numbers available on request. Gasket Kit: all E6 series models use #120. E6B1 repair kit: no number available. E6F1 and E6F2 repair kit: #1017A. E6G1 repair kit: #1018A. Float (not fuel) level: 5/64 below top of bowl without gasket for all models. Idle Needle Valve: 30A-37 all models

| Car Model | Std. Equip. Carb. | Main Vent Tube Assy. | Idle Ori- fice Tube | Step Up Valve Assy. | Accel. Pump Jet Assy. | Float Needle and Seat | Main Meter Jet or Screw | Pump Piston, Needle, Plug Assy. |
|-----------|-------------------|----------------------|---------------------|---------------------|-----------------------|-----------------------|-------------------------|---------------------------------|
| SE | E6B1 | 145-14S | 123-18S | 149-31S | 48-44 | 25-50S | 159-40 | 160-22S |
| SG | E6F1 | " | " | " | " | " | 159-51 | " |
| | E6F2 | " | 123-21S | 149-43S | " | " | 159-63S | " |
| S2 | E6G1 | " | " | " | " | 25-61S | " | " |

Further parts numbers and information available on request.

The Carter B&B E6P5 carburetor is designated by Carter and Chrysler as the replacement model for all E6 series carbs, from 1933 to 1940.

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