

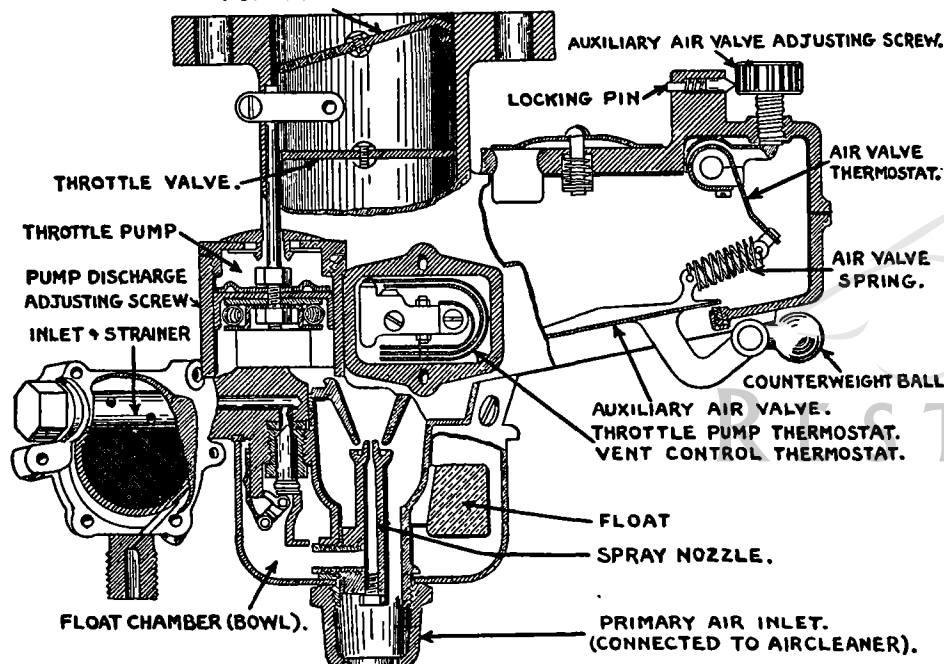
CADILLAC V8, SERIES 355 (1931), 355B (1932), 355C (1933).
LA SALLE V8, SERIES 345 (1931), 345B (1932), 345C (1933).

TYPE:—Air valve updraft type with positively operated pneumatic accelerating pump (throttle pump). All fuel is metered by spray nozzle located in center of primary air passage. Auxiliary air valve in air horn is controlled by air valve spring and thermostat and is adjustable.

1932-33 Type. Air cleaner added with main air intake elbow bolted over air valve and a smaller elbow leads from the main air intake to the primary intake at the bottom of the bowl. Auxiliary air valve adjustment screw is located on top of carburetor body in same position as before.

PRELIMINARY ADJUSTMENT:—Check choke control linkage to see that choke lever on carburetor is against stop when choke control button is pulled all the way out. With carburetor fully choked see that free movement of air valve tip is 1/16-3/32" at room temperatures (65-80°F.). If this requires adjustment, take out air valve cover screws, lift cover slightly and unhook air valve spring (if air valve spring is stretched or distorted it must be replaced), remove cover, loosen two screws on bracket carrying thermostatic arm, turn shaft slightly and tighten screws, replace air valve spring.

AUTOMATIC THROTTLE VALVE.



AIR VALVE ADJUSTMENT:—With engine warm and idling at approximately 300 R.P.M. turn adjusting screw to right or clockwise until engine speed decreases or engine begins to roll, then turn screw to left or counter-clockwise until speed decreases or engine begins to miss. Correct setting should be midway between these points. Setting can be determined accurately by counting the number of notches on the adjusting screw between extreme rich and extreme lean positions and then turning screw back one-half this number of notches. With air intake elbow removed setting can be checked by pressing lightly up and down on air valve counterweight. If setting is correct, engine speed should decrease slightly in each case. If engine speed increases when counterweight is pressed up, setting is too lean. If engine speed decreases when counterweight is pressed up and increases when counterweight is pressed down, setting is too rich. In making the air valve adjustment the adjusting screw should be turned one or two notches at a time and the engine performance noted.

THROTTLE PUMP:—Throttle pump discharges air in pump chamber into float chamber when throttle is opened, increasing the pressure above the gasoline and causing an increased fuel discharge from the spray nozzle. Throttle pump thermostat opens at 74-78°F., providing a vent for part of the pump discharge and decreasing the float bowl pressure. A second thermostat controlling a float chamber vent is set to open at 125-130°F. (or 115-120°F.

with high-test gasoline. Thermostats should not require adjustment.

Adjustment:—Throttle pump adjusting screw (by-pass needle valve) on side of pump cylinder should be turned down against its seat for normal operating conditions. For hot weather operation or with high test gasoline, adjusting screw can be backed off 2-3 turns. To make this adjustment loosen lock nut and turn adjusting screw counter-clockwise. Adjusting screw must be turned seven full turns to completely open by-pass valve.

AUTOMATIC THROTTLE:—Carburetors are fitted with an automatic (spring loaded) throttle valve above the regular throttle valve. Automatic throttle should not require adjustment and a special tool or testing spring must be used to check setting. With carburetor off the engine and held horizontally with the test tool clipped to the edge of the automatic throttle valve, the weight of the tool should be sufficient to open throttle to within 1/32" of the stop pin. If it does not and throttle shaft is free, loosen the two screws on the spring housing at the end of the throttle shaft and turn the center adjusting screw clockwise to increase spring tension or counter-clockwise to decrease spring tension. Tighten locking screws and check setting.

FLOAT LEVEL:—Float level should be 7/16-15/32" above flange on central tube of carburetor body. To check float level with carburetor off engine, remove float bowl, invert carburetor, take off gasket on float bowl seat, measure distance from bottom of float (bottom when not inverted) to top edge of flange on central tube of carburetor body (float bowl seat). This distance should be 7/16-15/32". Correct float level by bending hinge bracket.

CHOKE:—Adjust choke linkage so that choke lever on carburetor is against stop when choke button on instrument panel is pulled all the way out.

CADILLAC V-12, MODEL 370 (1930-31).

CADILLAC V-16, MODEL 452 (1930-31).

TYPE:—Twin installation consisting of two carburetors of the same design as used on V-8 model (see previous article). One carburetor is used to supply fuel for each bank of cylinders. Carburetors must be equalized as well as adjusted in order to assure smooth running.

NOTE:—Throttle pump on these carburetors has been changed slightly and throttle pump thermostat is mounted on the pump body under a flat cover. Thermostat is set to operate at 75-80°F.

PRELIMINARY ADJUSTMENT:—Same as for V8 type (see preceding article). Idle speed should be set for 320 R.P.M. and can be checked by taking off oil filler cap and noting rocker arm which should move 40 times in 15 seconds at 320 R.P.M.

AIR VALVE ADJUSTMENT:—With engine warm and idling at 320 R.P.M. adjust air valve on each carburetor by turning adjusting screw to right or clockwise until engine speed decreases or engine begins to roll, then turn screw to left or counter-clockwise until speed decreases or engine begins to miss. Final setting should be midway between these points.

EQUALIZING ADJUSTMENT:—Use special Cadillac Equalizing Gauge, Part No. 109626. Gauge consists of a 'U' tube partly filled with mercury and with a rubber tube connected to each leg of the tube. These tubes should be connected to the intake manifolds after the vacuum lines on the manifolds have been disconnected. Gauge should be hung on one of the radiator tie rods so that it hangs vertically with the mercury level in the tubes even when the engine is not running. With the gauge in place, disconnect the throttle rod on the right hand carburetor, idle engine at 320 R.P.M. and note mercury level in tubes. If engine speed is exactly 320 R.P.M. (rocker arm will move 40 times in 15 seconds) and mercury levels are even, the carburetor adjustment is correct. If mercury levels are even but engine speed is greater than 320 R.P.M., turn both throttle stop screws out evenly. If mercury levels are not equal and engine idles too fast, back off the throttle stop screw on the carburetor feeding the bank on which the mercury level is lower. If mercury levels are not even and engine speed is too slow, turn up throttle stop screw on carburetor feeding bank on which mercury level is higher. Continue adjustment until mercury levels are even and engine speed is exactly 320 R.P.M.

Check air valve setting by turning adjusting screw clockwise until engine slows down from a too rich mixture, then turn screw counter-clockwise, counting the notches on the adjusting screw until engine slows down from a too lean mixture, then turn screw back exactly one-half this number of notches. Recheck idling speed and mercury level in gauge. Adjust length of right hand throttle rod so that it can be connected without disturbing position of carburetor throttle valve, connect rod. Open throttle and run engine at 1000 R.P.M. Check mercury levels in gauge. If columns are not equal, readjust right hand carburetor throttle rod slightly. Close throttle and idle engine. Check mercury levels and readjust if necessary.