



THE PATENT
AUTOVAC
VACUUM PETROL FEED APPARATUS

(Higginson, Arundel & Jay's Patent)

*Car
Owner's
Handbook*

The **AUTOVAC**
MANUFACTURING
CO. LTD.

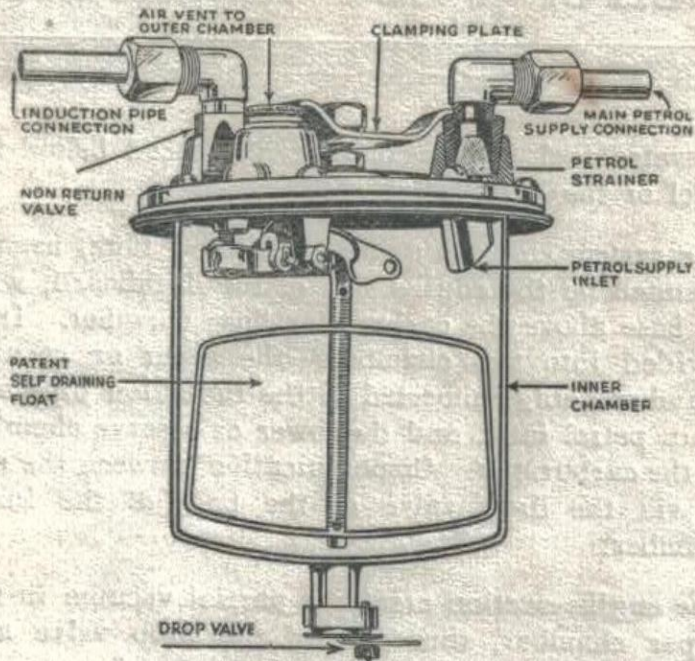
HEATON NORRIS,
STOCKPORT,
Eng.

PETROL Depth Gauge

REGISTERED PATENT



Indicates depth of petrol in the tank.
Mounted on the instrument board, and
is suitable for all cars fitted with
Gravity or Vacuum Fuel Feed System.
Easily fitted and certain in
action.



INTERNAL VIEW OF AUTOVAC WITH OUTER TANK
REMOVED.

*All Models operate on the same principle and,
though differing in construction, the same instruc-
tions for maintenance, etc., apply*

The Patent AUTOVAC Petrol Feed Apparatus

Elevates fuel from a main tank placed below the level of the carburetter.

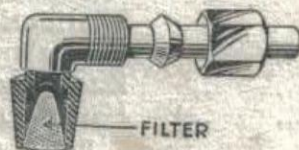
The system employs a small auxiliary tank, usually mounted on the engine side of the dashboard, with its base above the carburetter float chamber. It is divided into two chambers—the inner or vacuum chamber being connected to the induction pipe and main petrol tank, and the lower or reserve chamber to the carburetter. Communication between the two is via the drop valve at the base of the inner chamber.

The engine suction creates a partial vacuum in the upper chamber, thus closing the drop valve and drawing up petrol from the main tank. As the fuel flows in the float rises. When it reaches a certain height two valves are operated—one cuts off the suction, the other admits air; this admission of air destroys the vacuum, releases the drop valve, and allows the petrol to discharge into the outer chamber. As the reserve chamber is always open to the atmosphere through the air vent, the fuel flows to the carburetter by gravity.

As the float falls with the outflow of fuel from the inner chamber, the valve mechanism is again actuated and the operation of taking in fuel is repeated.

CARE OF THE AUTOVAC.

Most of the fuel feed troubles coming under our notice are due to obstructions caused by foreign matter in the petrol; therefore we would stress the importance of regular attention to the following:—



1—Clean Filter Every Month.

To gain access to this filter disconnect pipe at elbow marked PETROL, slack off clamp nut and remove elbow; the filter cone lies underneath. Replace filter as shown in sketch. If elbow is tight, grip between jaws of a spanner and turn. Note position of wedge ring; it should not be at extreme end of pipe, but about $\frac{1}{4}$ inch from extremity.



Some Autovacs are fitted with a Hexagon Plug, to the car manufacturer's specification, instead of the drain tap illustrated.

2—Drain Off Sediment Trap Every Week.

The sump where plug or tap is fitted acts as a trap for fine sediment and water, the carburetter supply being taken off at a higher level. Drain off until the petrol runs clear. If petrol does not run, pass a fine wire through tap to clear sediment.

3—Keep All Joints Air-tight.

Inspect the pipe connections occasionally, and tighten where necessary. If the top cover has been removed for any reason, make certain that all the top screws are tight and the top washers intact. Leaks at these points will impair the efficiency of the apparatus.

DO NOT try to adjust the air valve which is disclosed after removing the air vent cone. This valve is soldered in position after being set, and requires no attention.

- ” ” Solder up the holes in the float stem.
- ” ” Exert too much pressure on the clamp.
- ” ” Use broken cover gaskets or washers made of any material other than that used by us.
- ” ” Plug holes in air vent cone.
- ” ” Change the elbows about. The one with the valve fitted is the suction elbow.
- ” ” Use perished rubber tubing for the windscreen cleaner, especially if the connection is taken from the Autovac.
- ” ” Plug the air vent in the main petrol tank. This hole is usually drilled in the filler cap, and sometimes becomes clogged with cleaning paste, etc.

NOTE—

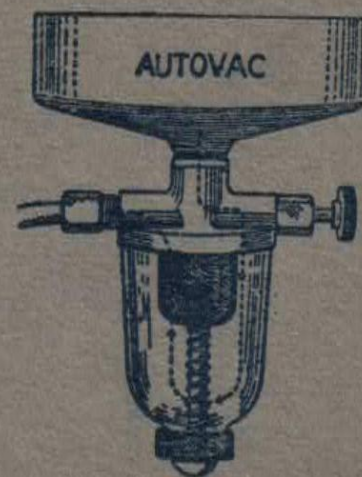
If Autovac becomes quite empty it is not necessary to prime it; simply close carburetter throttle and turn engine with handle or starter to draw in a charge of petrol; engine can then be started and run for a short time to fill the Autovac.

If Autovac has emptied main tank and any difficulty is experienced in filling it, petrol pipe or filter may be choked with sediment drawn from base of main tank.

The Patent Self-draining Float.

Among the many improvements embodied in the design of the Autovac Apparatus, this is probably the most important. A hollow float stem is used, having a hole inside and one outside the body of the float. Any petrol entering the float is automatically evacuated through the stem during the suction period, and during the period of atmospheric pressure air flows in, thereby enabling the float to function as when air-tight.

AUTOVAC STRAINER



Perfectly filtered petrol is delivered to the Carburetter when this Strainer is fitted to the base of the AUTOVAC. The F.1 Type fits all Models of the Patent AUTOVAC Vacuum Fuel Feed Apparatus.