



The BING Type 62 throttle valve carburettor is manufactured with a fixed choke tube diameter of 12 to 17 mm. As a special feature, it has vertically positioned shafts for the throttle valve and choke. The carburettor is secured to the engine and to an air filter by horizontal flanges.

The carburettor housing contains the float system to regulate the flow of fuel from tank to carburettor, the main regulating system with mixing tube, the air adjustment jet and the main jet, together with the idling system with idling jet, mixture control screw or air jet and idling stop screw.

FUEL INTAKE CONTROL

The float of the carburettor is annular in shape and positioned centrally below the carburettor choke tube, allowing the carburettor to be inclined considerably in all directions without impairing its operation. The float's function is to maintain the fuel level in the float chamber constant. When the fuel has reached a specified level in the float chamber, the float (13), connected to the carburettor housing by a pin (14), is lifted until the float needle (15) is pressed against the valve seat in the carburettor housing, thus cutting off any further supply of fuel. When the engine draws fuel from the carburettor, the fuel level in the float chamber drops and so does the float. The float needle opens the valve again and allows fuel to flow in from the tank.

The float needle valve regulates the fuel supply in conjunction with the float, but it does not act as a shut-off valve when the engine is at a standstill. Minute foreign bodies may be deposited between the valve seat and the tip of the needle, thus preventing complete closure of the valve. When the engine is stopped, therefore, the fuel cock on the tank should always be closed. In addition, the fuel must be filtered before it reaches the carburettor, by a filter with a maximum mesh size of 0.13 mm, corresponding to a No. 150 mesh where the diameter of the wire is 0.05 mm. Naturally, this filter must be cleaned at regular intervals.

When fitting a new float, the fuel level must be adjusted. The float hinge is bent until the bottom of the float is parallel with the bottom edge of the carburettor housing, into which the float bowl fits.

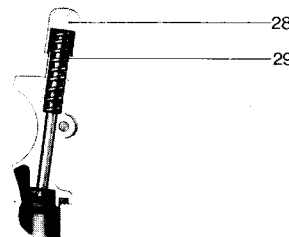
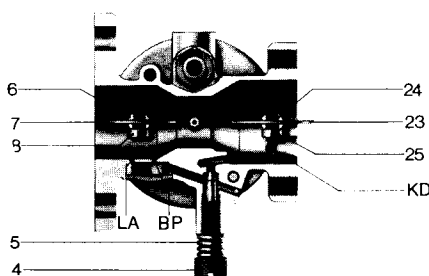
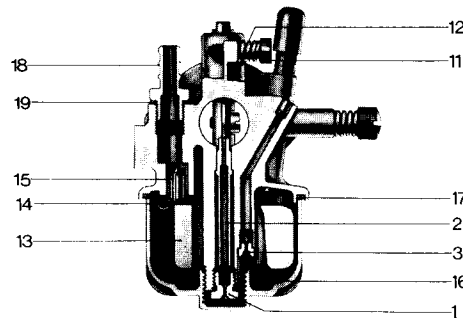
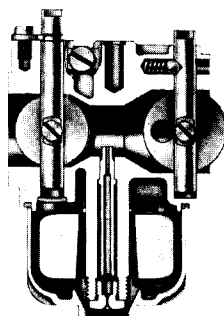
The float bowl (16) is secured to the carburettor housing by means of a central thread. There is a seal (17) between the carburettor housing and the float chamber. The space in the float bowl above the fuel level is vented to atmosphere via a bore. If this vent is blocked, the float will not lift, as an air cushion forms above it. The carburettor then overflows. This bore must therefore be kept clean. With most versions, however, there is a second vent to atmosphere via the tickler, so the carburettor does not completely cease to function even if the vent bore is blocked.

Fuel is supplied either via the fuel pipe adapter (18), with a seal (19), or via a swivelling fuel pipe connector (20) secured to the carburettor housing by a screw (21) and two seals (22).

MAIN REGULATING SYSTEM

The amount of mixture drawn in by the engine, and thus its performance, is determined by the cross-sectional area in the choke tube, which is opened up by the throttle valve (7). The valve is operated by a throttle shaft (6), to which it is secured by a screw (8). The air flow in the choke tube creates a vacuum which draws fuel from the float chamber through the jet system into the carburettor choke tube. The amount of fuel drawn in, and thus the composition of the mixture, is determined by the main regulating system. After passing through the main jet (1), the fuel is premixed in the mixing tube (2) with air, the amount of which is adjusted by the air adjustment jet (not illustrated; not a spare part). This assists the atomizing process, forming minute fuel droplets.

Axial movement of the throttle shaft is prevented by the retaining plate (9) and screw (10), so the throttle valve cannot obstruct the carburettor housing when the engine is running. The top end of the shaft receives the operating lever. A number of different throttle levers are available for different applications.



IDLING SYSTEM

During idling and at low engine loads, the throttle valve is almost closed. The air flow and the vacuum in the choke tube are reduced so much that the main regulating system will no longer supply any fuel. In this operating range the fuel supply for the air intake is provided by an auxiliary system, the idling system.

As a result of the vacuum between the engine and the throttle valve, fuel flows through the idling jet (3), is mixed with air — the amount of which may be regulated by the mixture control screw (4), the setting of which is maintained by the action of the spring (5) — and passes through the idling outlet bore and the bypass or transition passages into the carburettor choke tube.

During idling, the throttle valve is closed to such an extent that only the idling outlet bore (LA) is available between the throttle valve and the engine. The fuel required is drawn in through this bore only, while air enters through the bypass bores and is mixed with fuel together with the idling air regulated by the mixture control screw. If the throttle valve is opened further, bringing the bypass bores (BP) into play, these too are then subjected to the vacuum in the inlet and supply the additional fuel required for the amount of air drawn in, which is now greater. The idling outlet bore and the bypass bores are precisely matched to any given engine and must not therefore be changed when the carburettor is cleaned.

To set the optimal idling speed, the mixture control screw is turned clockwise until fully closed and then backed off by the number of turns specified for the particular engine. The idling speed quoted for a particular engine serves as a guide only. It may sometimes be necessary to make minor adjustments. First, run the engine until warm and select the desired idling speed by using the idling stop screw (11) — the setting is maintained by means of the spring (12). The stop screw limits the closure of the throttle valve. The mixture control screw is then opened (turn anti-clockwise!), until the engine speed rises. The screw is then closed again by approximately one quarter of a turn.

STARTING AIDS

The mixture can be enriched to start the engine by closing the choke (23), secured to the choke shaft (24) by a screw (25). The throttle valve should be approximately half open. Once the engine has started, the choke should be opened again as soon as engine speed begins to fall because of the overrich mixture. Recesses in the circumference of the choke shaft act as a catch, in conjunction with the ball (26) and the spring (27), when the choke is fully open or fully closed.

When outside temperatures are low, the carburettor may also be "tickled". The float may be pushed below the fuel level in the float chamber by depressing the tickler (28) against the spring (29), so that more fuel is supplied than normally necessary.

