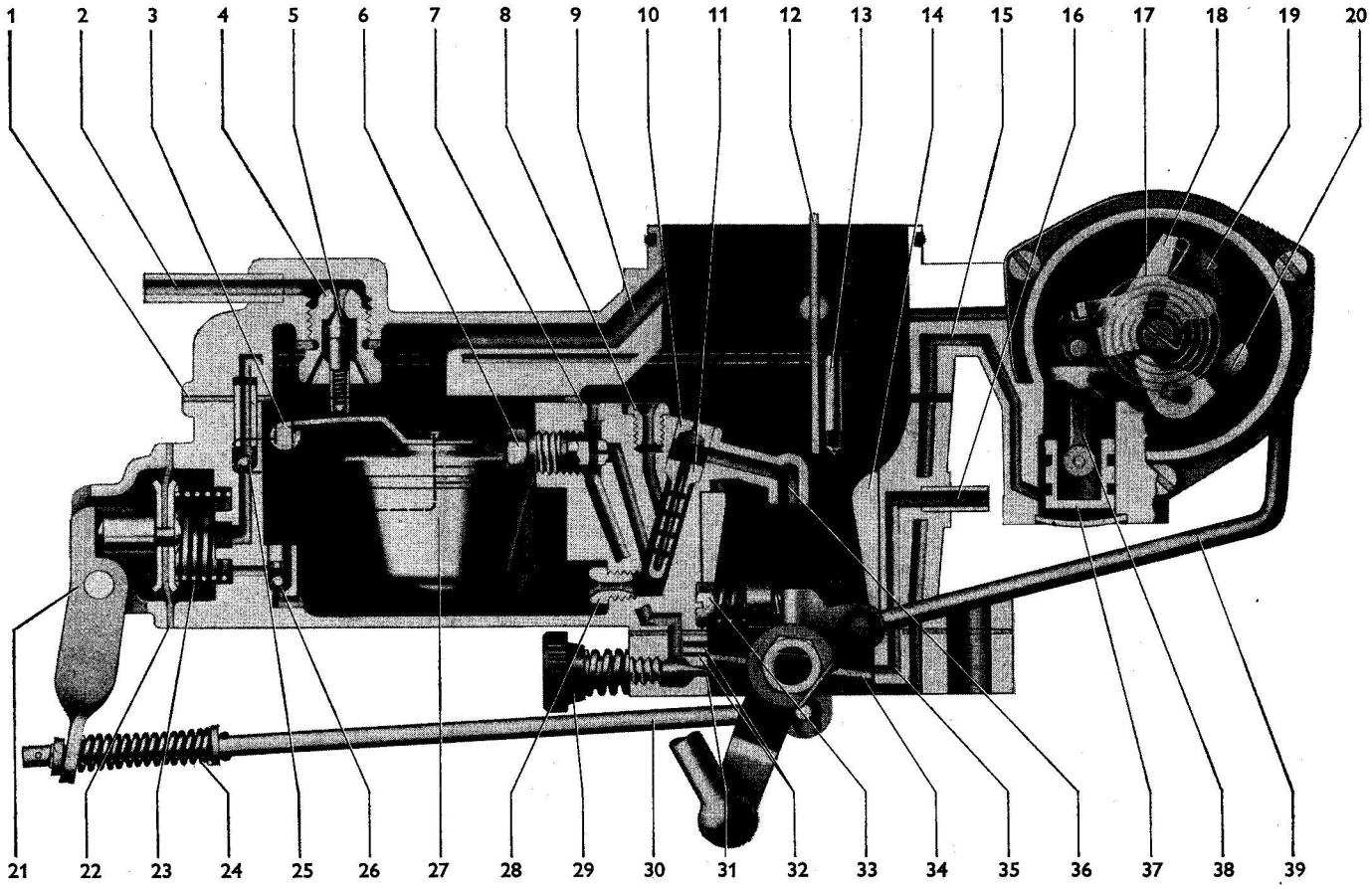

SOLEX 32 PDSIT-2/-3

1 - Gasket
2 - Fuel line
3 - Float pin
4 - Float needle valve
5 - Float needle
6 - Pilot jet
7 - Pilot air bleed drilling
8 - Air correction jet
9 - Vent passage for float chamber
10 - Ventilation jet
11 - Emulsion tube
12 - Choke valve
13 - Injector tube for accelerator pump
14 - Venturi
15 - Vacuum drilling
16 - Vacuum connection
17 - Bi-metal spring
18 - Intermediate lever
19 - Fast idle cam
20 - Stop lever
21 - Pump lever
22 - Pump diaphragm
23 - Diaphragm spring
24 - Connecting rod spring
25 - Ball pressure valve
26 - Ball suction valve
27 - Float
28 - Main jet
29 - Volume control screw
30 - Connecting rod
31 - Idling mixture port
32 - By-pass port
33 - Idle adjusting screw
34 - Throttle valve
35 - Vacuum drilling
36 - Discharge arm
37 - Vacuum piston
38 - Piston rod
39 - Operating rod

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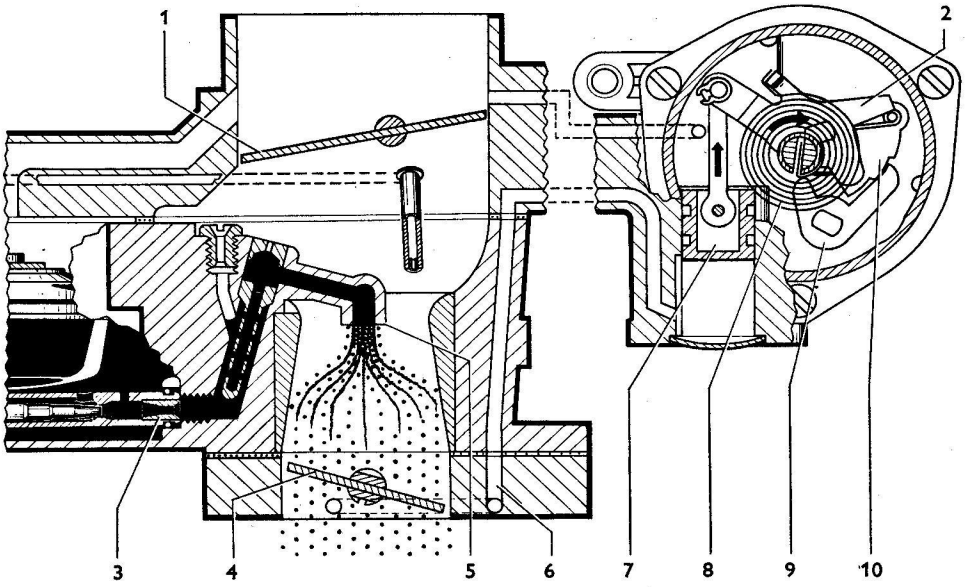
Automatic choke

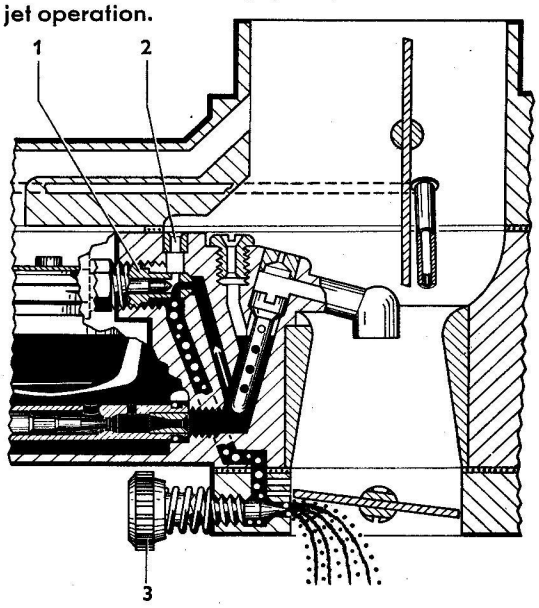
Before starting when cold, the throttle valve (4) must be opened by depressing the accelerator pedal briefly once so that the tensioned bi-metal spring (8) can close the choke valve (1) via the intermediate lever (2). The stop lever (9) rests on the highest step of the fast idle cam (10) and opens the throttle valve (4) with the operating rod. When the starter is operated, a vacuum or depression is created which draws fuel from the float chamber through the main jet (3) the inclined emulsion tube and the discharge arm (5) into the venturi. The choke valve (1) is opened slightly against the tension of the bi-metal spring by the vacuum piston (7) and the piston rod. The vacuum cylinder is connected by a drilling (6) with the vacuum present below the throttle valve so that the piston moves and can open the choke valve via the piston rod.

As the bi-metal spring heats up, the choke valve opens slowly and after 2 to 3 minutes it is fully open. At the same time the stop lever (9) moves down to the lowest step on the fast idle cam (10) and the throttle valve returns to the idling position. The engine now runs at the speed set by the idling screw.



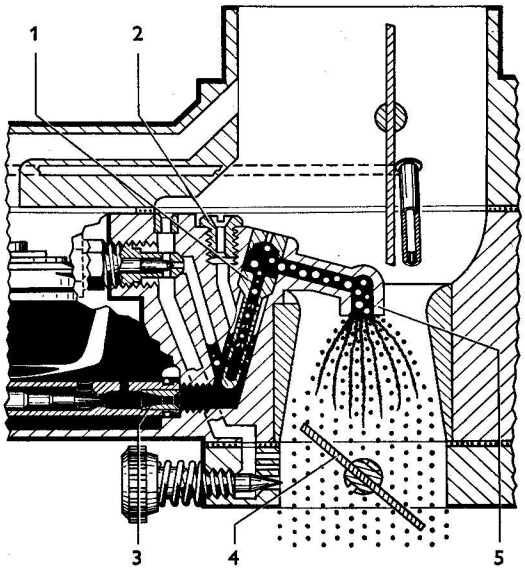
Idling operation

The fuel flows from the float chamber through the main jet and a drilling to the pilot jet (1). Air enters through the pilot air bleed drilling (2) and forms a fuel/air mixture which passes to the idle mixture port via a drilling. The amount of mixture flowing through this port is regulated by the mixture control screw (3). By-pass ports near the throttle valve gap help to keep the engine running smoothly during transfer from idling to main jet operation.



Normal running

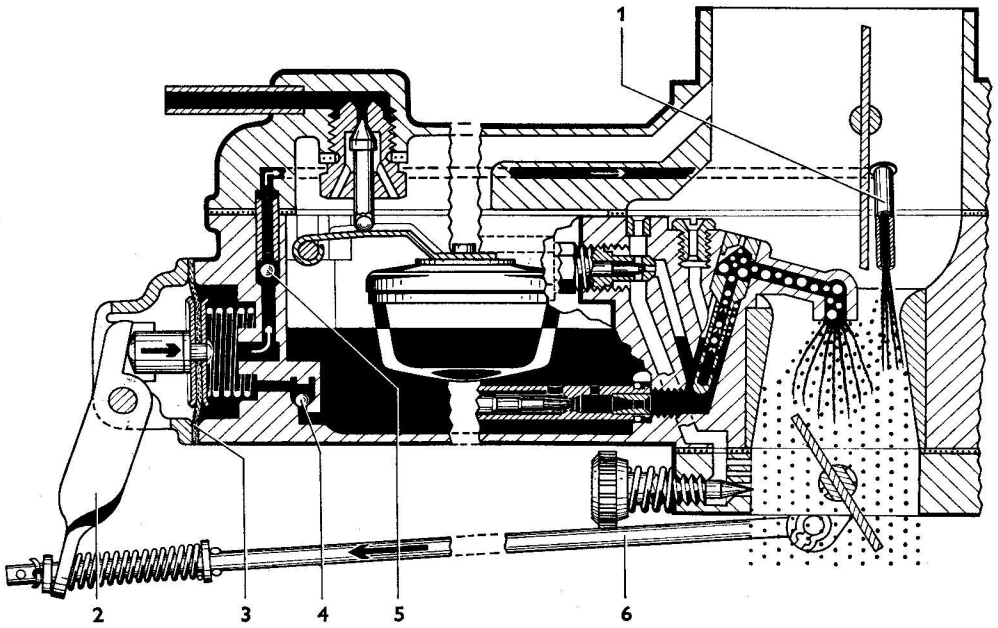
When the throttle valve (4) is open, the vacuum available at the narrowest point of the venturi extends through the discharge arm (5), emulsion tube (1), air correction jet (2) and main jet (3) to the float chamber. The fuel in the emulsion tube is converted to an emulsion by the air coming via the air correction jet and a lateral drilling and this mixture is drawn off through the discharge arm. According to the extent of the vacuum, a varying amount of fuel/air mixture is drawn from the discharge arm. As the engine speed increases, the amount of air in the mixture also increases due to the higher flow of air through the air correction jet.



Accelerator pump

The pump diaphragm (3) is operated from the throttle valve shaft via a connecting rod (6) the pump lever (2) and the spring. The diaphragm draws fuel in through the ball valve (4) from the float chamber and pumps it via ball pressure valve (5) and the injector tube (1) into the carburetor venturi. When the throttle valve closes, the accelerator pump chamber fills with fuel.

At higher engine speeds the vacuum at the mouth of the injector tube is so great that additional fuel is drawn from the float chamber through the accelerator pump and the mixture is enriched further via the acceleration system.



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