

Functioning of Starting Device Warming Up (figure 110)

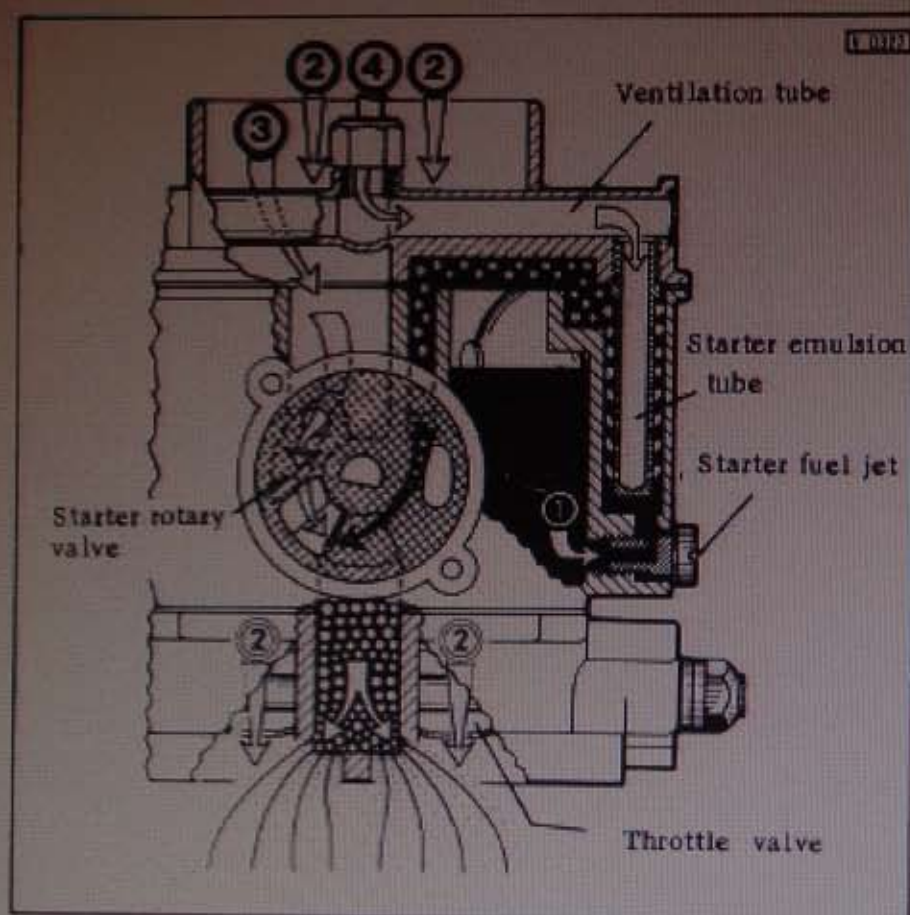


Fig. 110 Functioning of the starting device with warm engine

1. Fuel feed
2. Entry of main air
3. Entry of starter air
4. Entry of compensating air

Normally the fuel level in the starter emulsion tube is just as high as in the float chamber. When the starter rotary valve is placed in position "starting from cold", during the first stage the vacuum existing in the starting system sucks in the fuel present in the well and in the starter emulsion tube. In the starter mixing chamber this fuel is then mixed with the starter air entering through a calibrated bore to a bubble mix. This starting emulsion is brought into both air intakes through the vertical tunnel channel and is then mixed with the air entering through the gap of the throttle valve to form the starting mixture. This starting mixture is so rich in fuel that starting of engine is possible even at low temperatures. As soon as the fuel in the starter emulsion tube has fallen, the second stage commences. The fuel drawn through the starter fuel jet is now mixed with compensating air which en-

ters the starter emulsion tube from above through the ventilation tube in the air intake. The formation of this pre-emulsion at the starter emulsion tube leans out the starting mixture, thus ensuring a further smooth running of the engine. When starter rotary valve is in position "warming up", the starting mixture leans out further, as then the fuel i. e. the pre-emulsion can enter the starter mixing chamber only through a smaller bore of the starter disk. This change in the cross section allows the engine to run for some time without danger and the vehicle to be already driven. The starting device works progressively with infinite variation i. e. to each position of the starter rotary valve corresponds a different enrichment of the starter mixture.

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