



## *The Magical Mystical Weber DCOE*

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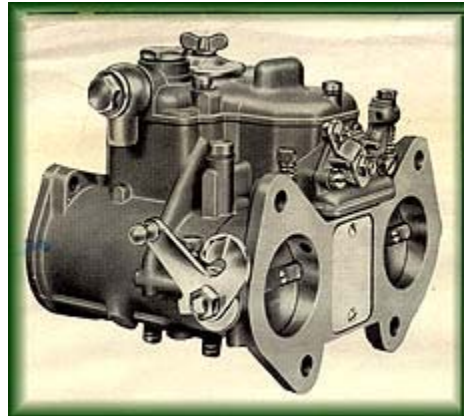
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# WEBER CARBURETOR

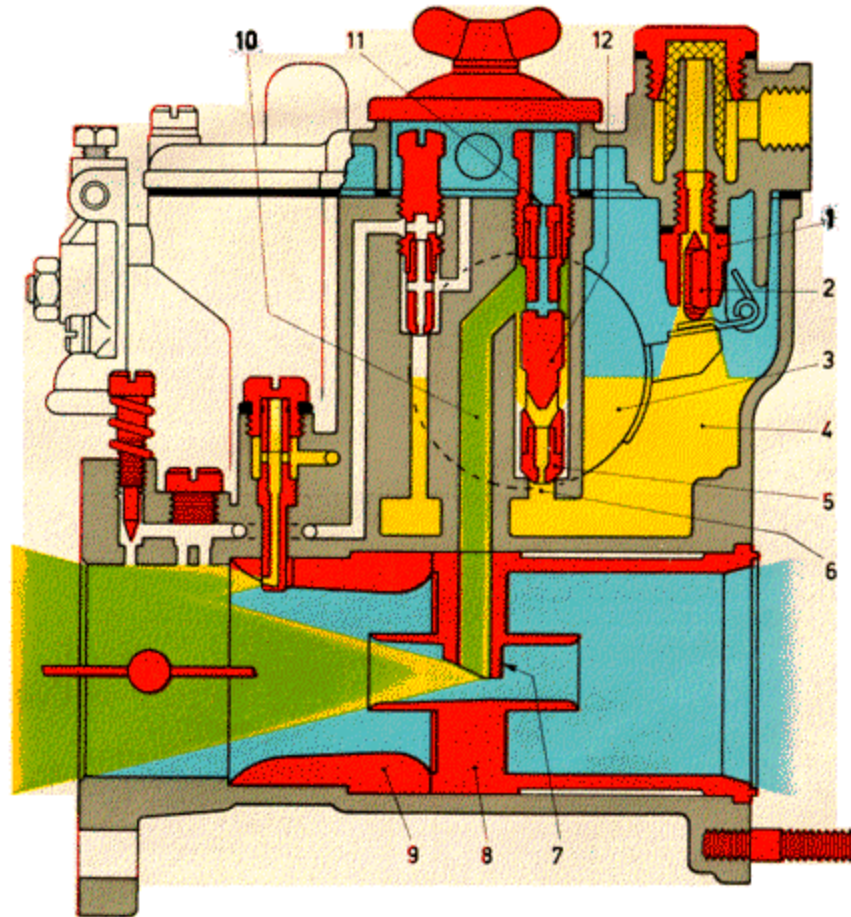
## 40DCOE2

*(from Weber General Catalog 1/5/1961)*

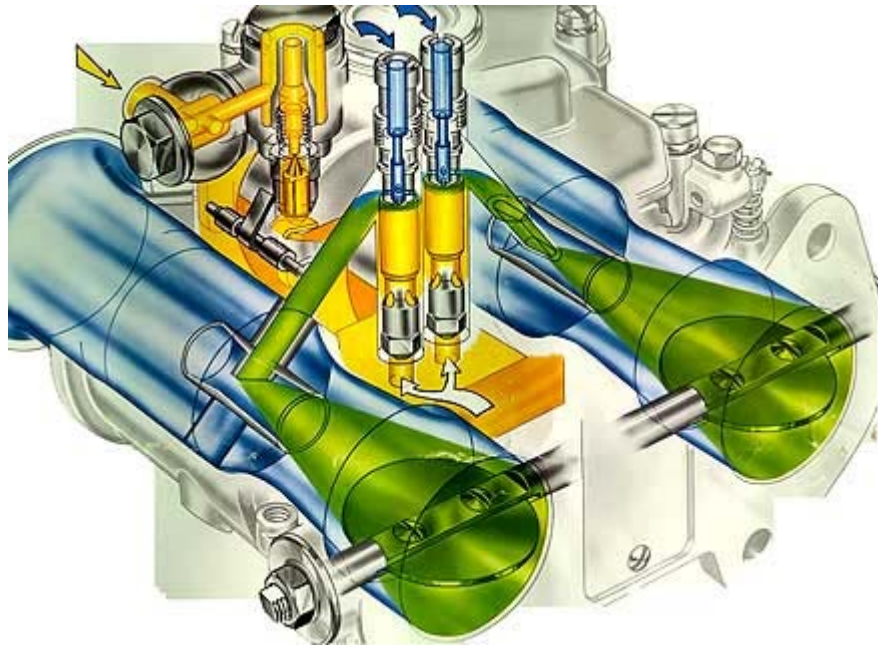



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**NORMAL OPERATION:**

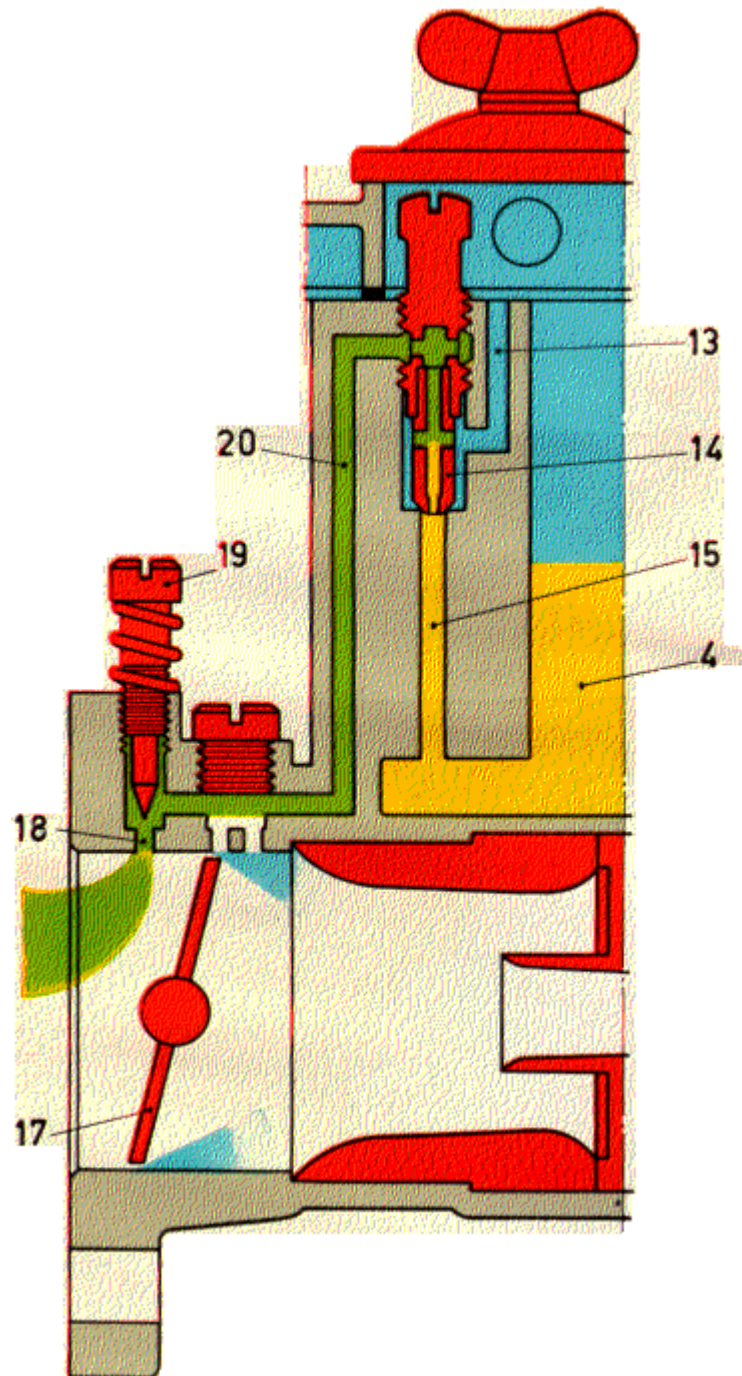


The fuel arrives through the needle valve (1) to the bowl (4) where the float (3) controls the opening of the needle (2) in order to maintain a constant fuel level. Through the ducts (6) and the main jets (5), it reaches the emulsifying tubes (12) from which after having been mixed with the air coming from the air corrector jets (11), through the pipes (10) and the nozzles (7) it reaches the carburation area consisting of the auxiliary Venturi's (8) and chokes (9).



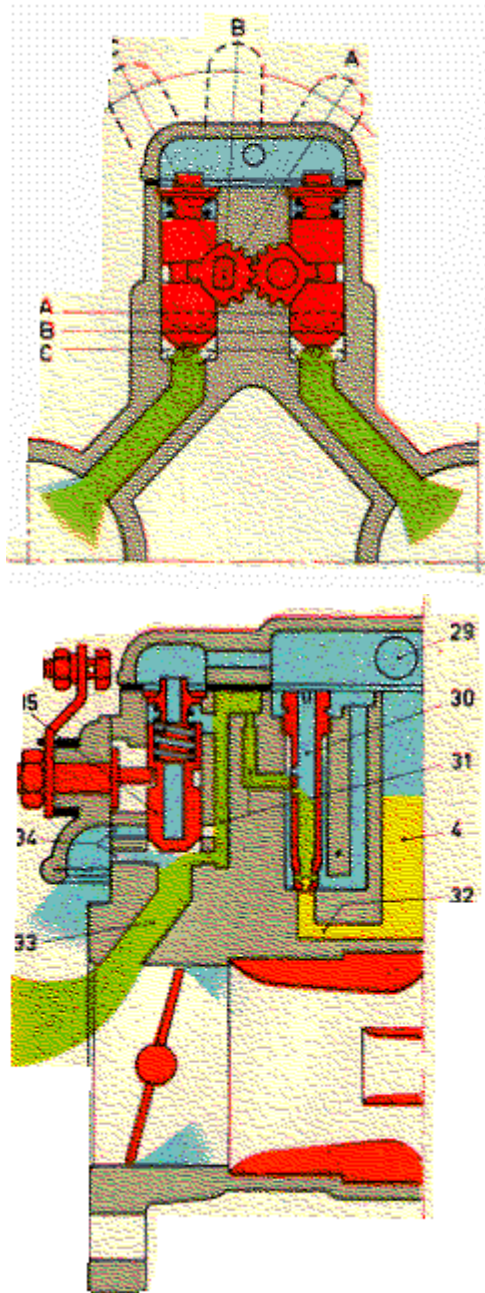
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### STARTING DEVICE



The fuel flowing from the bowl (4) arrives to the starting device through the ducts (32) and the starting jets (30). Emulsified with the air coming from the hole (29) it reaches the valves opening (35) through the ducts (31) and definitely emulsified by the air entering from orifices (34) is then carried by means of the ducts (33) to the carburetor throats below the throttles.



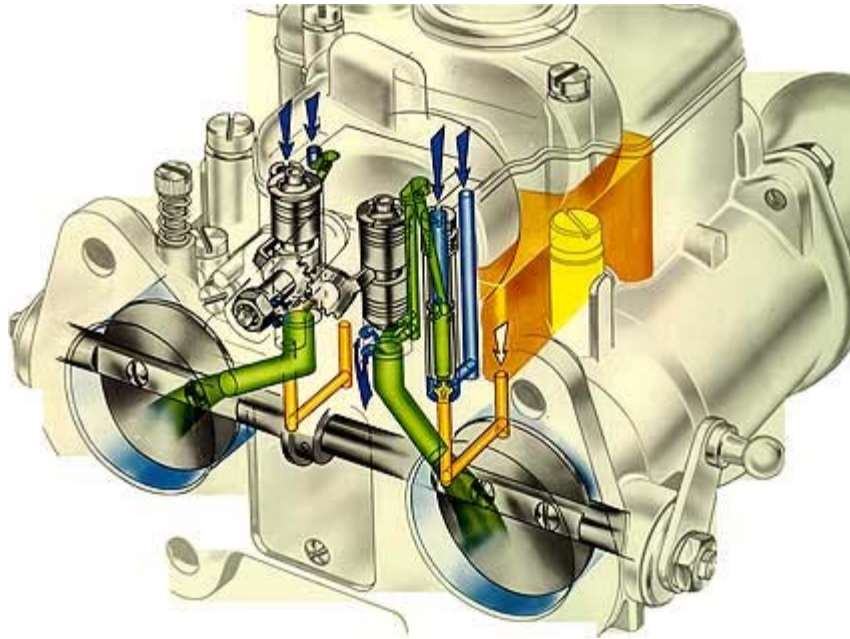


*Engine cold starts:* starting device inserted (position A)

*Engine starts half warm:* partial insertion of the device (position B)

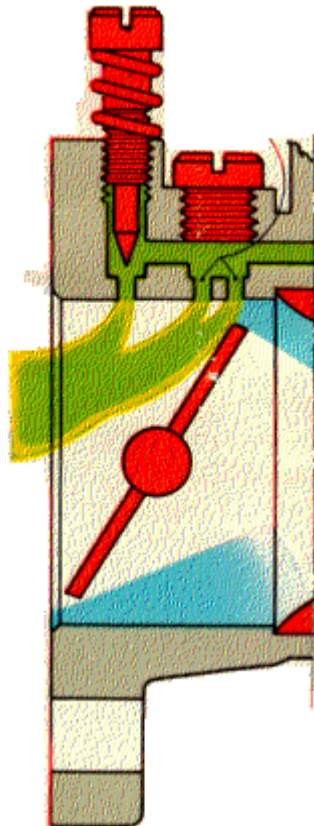
*Engine warm ups:* during engine warming up, even if the vehicle is under way, the starting device must be gradually pushed into the rest position.

*Normal operation:* starting device must be pushed back as soon as the engine has reached the operating temperature (position C)



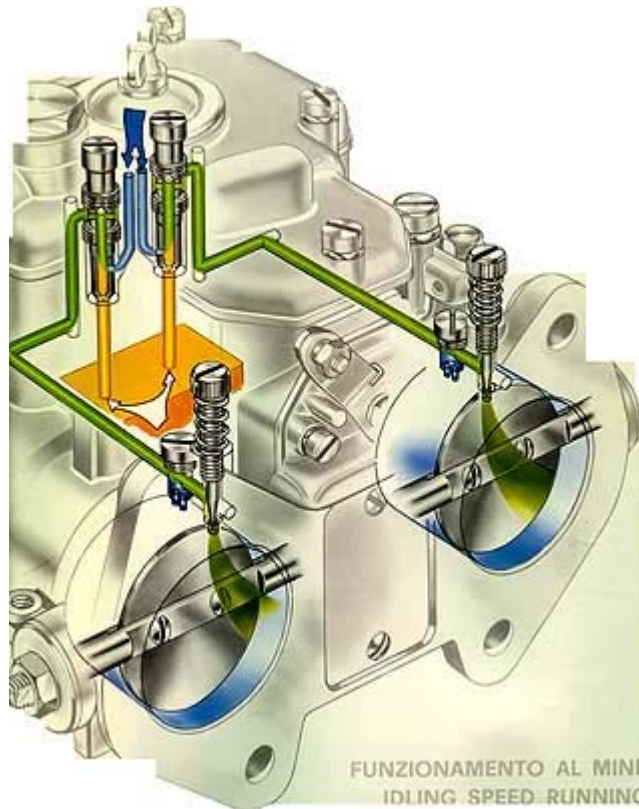
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## Idling Operation and Progressive Action



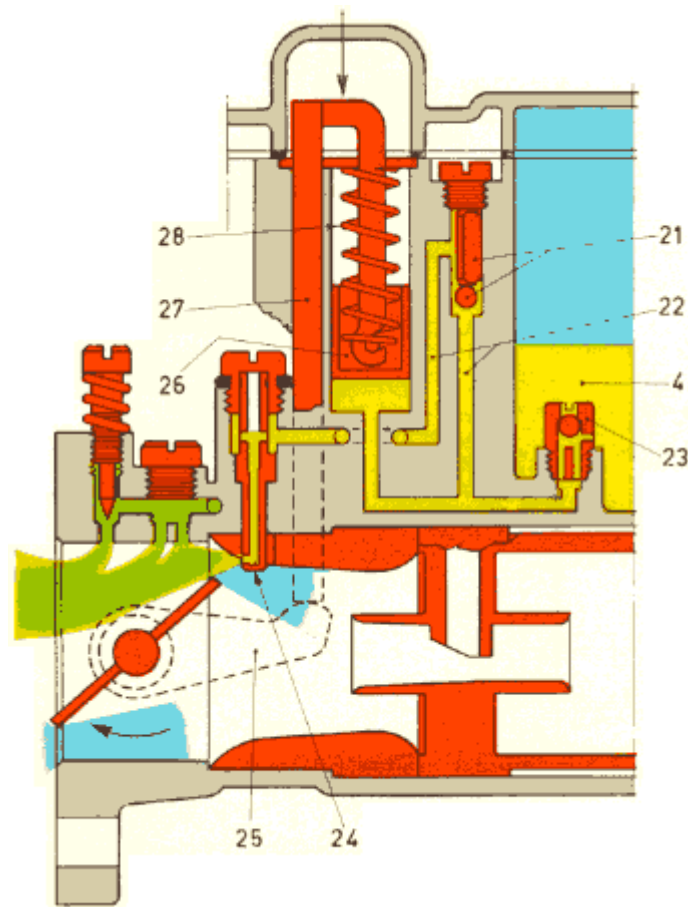
The fuel is carried from the bowl (4) to the calibrated holes of

the idling jets (14) through the ducts (15). Emulsified with the air coming from the ducts (13) through the ducts (20) and the idling feed holes (18) adjustable by means of screws (19) the fuel reaches the ducts (20) the mixture can reach the carburetor throats also through the progression holes (16)



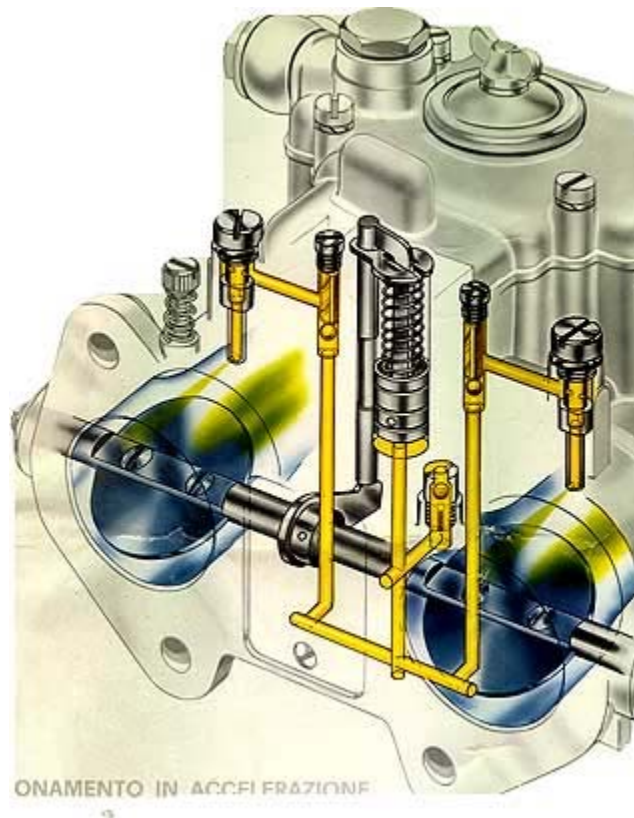
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## ACCELERATION



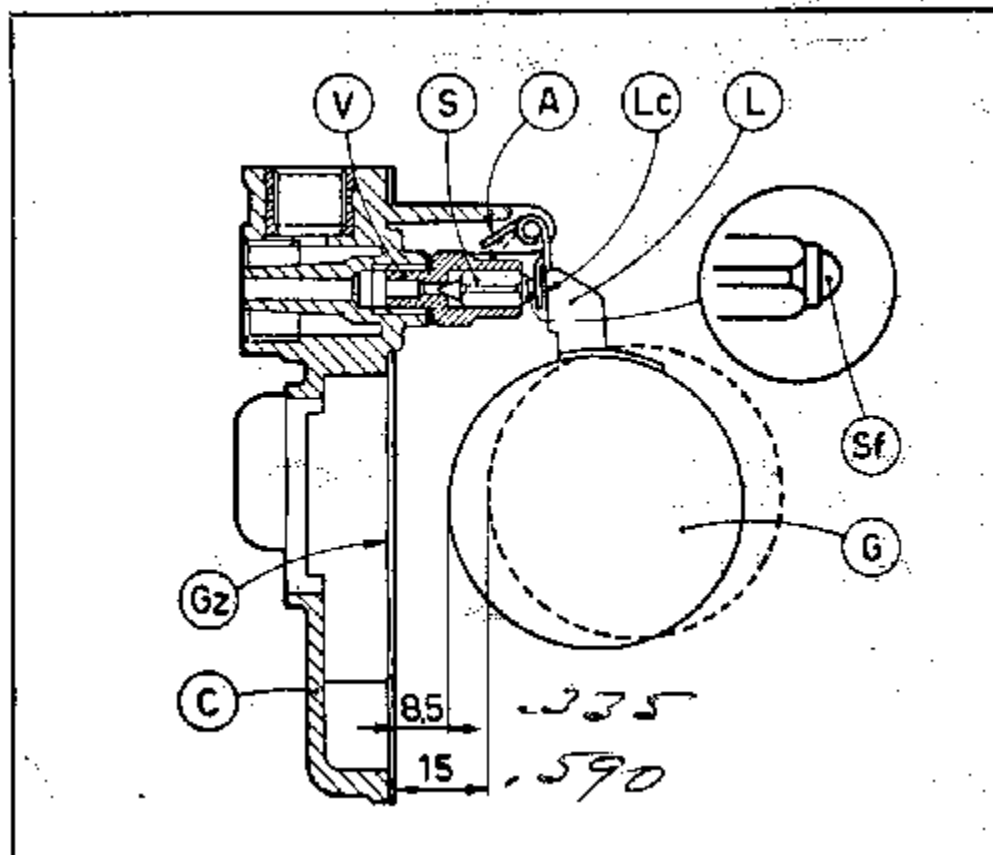
By closing the throttle valves, the lever (25) , by means of the shaft (27), lifts the piston (26). the fuel is thus drawn from the bowl (4) into the pump cylinder through the suction valve (23). By opening the throttles, the shaft (27) is free and the piston (26) is pushed down under the action of the spring (28), by means of the ducts (22) the fuel is injected into the carburetor throats. The inlet valve (23) is provided with a calibrated hole which discharges the excess fuel delivered by the accelerating pump in to the float bowl.





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## SETTING THE FLOAT



1. 1 Make sure that the weight of the float is the correct one (**26 grams**), that the float can freely slide on the axis and does not show any pits.
2. 2 Make sure that the needle valve (**v**) is tightly screwed in its housing and that the pin ball (**Sf**) of the dampening device incorporated in the needle (**S**) is not jammed.
3. 3 Keep the carburetor cover (**C**) in a vertical position as indicated in the above figure, since the weight of the float (**G**) could lower the pin ball (**Sf**) fitted on the needle (**S**)
4. 4 With carburetor cover (**C**) in vertical position and float clip (**Lc**) in light contact with the pin ball (**Sf**) of the needle (**S**) the distance of both half-floats from upper surface of carburetor cover (**C**) with gasket (**Gz**) in place, must measure **8.5mm**.
5. 5 After the leveling has been done, check that the stroke of the float is **6.5mm**. If necessary adjust the position of the lug (**A**).
6. 6 In case float (**G**) had not been rightly set, rectify the position of float clip (**Lc**) till the required quota is reached, taking care that the clip (**Lc**) does not show any pit on the contact surface that could affect the free sliding of the needle.
7. 7 Fit up the carburetor cover making sure that float can move with out any hindrance or friction.

NOTE: the operation of leveling of the float must be carried out whenever it is necessary to replace the float and needle valve: in this case it is advisable to replace also the sealing gasket, making sure that the new needle valve is tightly screwed in its housing.

## EXPLODED VIEW

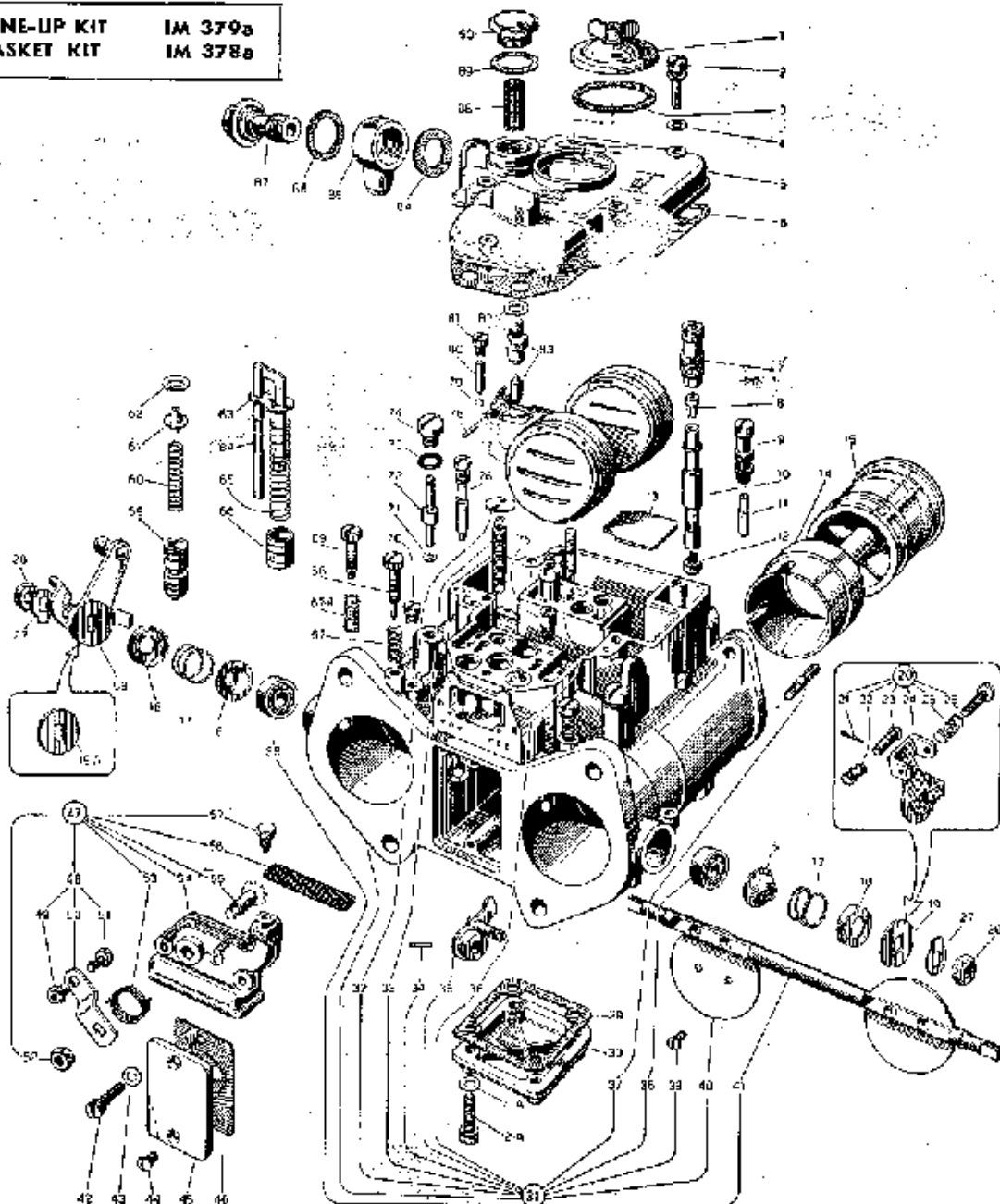
CARBURATORE SCOMPOSTO

CARBURATEUR ECLATÉ

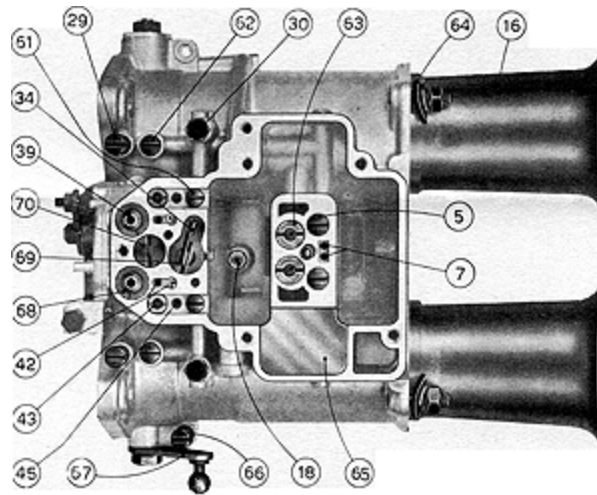
EXPLODED VIEW

DARSTELLUNG DER TEILE

TUNE-UP KIT	IM 379a
GASKET KIT	IM 378a



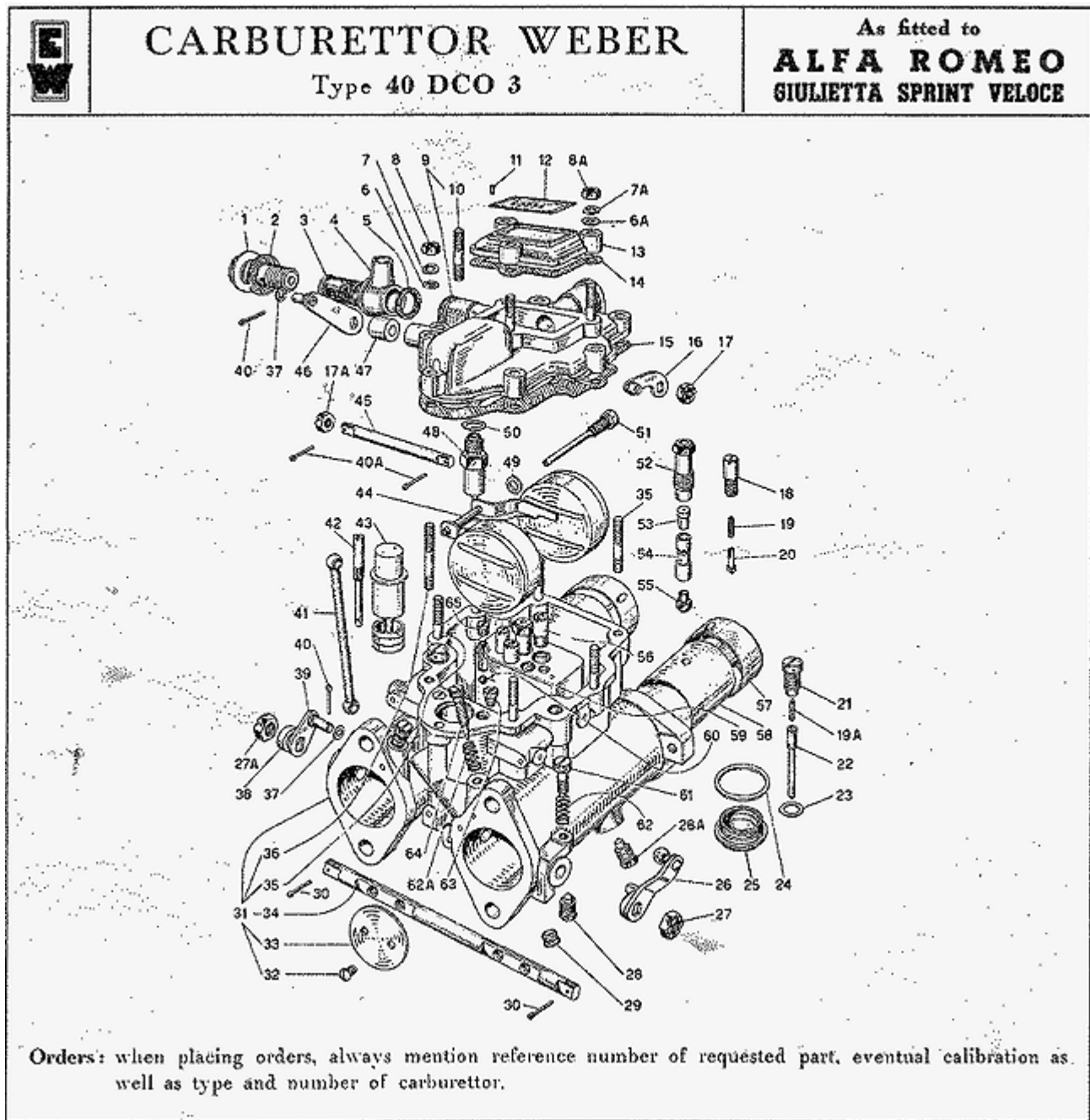
## PARTS LOCATION



5. Idle jet holders 7. Idle air orifices 16. Additional Air Horns 18. Pump inlet valve 29. Idle mixture adjustment screws 30. Pump jets 34. Pump control rod 39 Spring guides and retainers 42. Mixture ducts 43. Starting Jets 45. Starting jet wells 61. Pump deliver vlave 62. Progression holes inspection screw 63. Emulsion tubes complete with main jets and air corrector jets 64. Air Horns mounting plate. 65. Bowl plate 66. Idle speed adjusting screw 66. Idle speed adjusting screw 67. Throttle control lever 68. Retainer Washers 69. Pump Spring retainer plate 70. Throttle return spring retaining plate

## 40DCOE3





## SETTINGS

## S E T T I N G

Key N.	Q.	Reference N.	PART NAME	Size m/cm	Key N.	Q.	Reference N.	PART NAME
58	2	TS 769	Choke . . . . .	28 ✓	54	2	TS 1211	Emulsifying tube . . . . .
57	2	TS 774	Auxiliary venturi . . . . .	4.50	53	2	969	Emulsifying tube, air adj. jet . . . . .
55	2	TS 195	Main jet . . . . . 120	1.10	56	2	TS 713	Air idling jet . . . . . 120
20	2	820	Idling jet . . . . .	0.50	48	1	TS 854a/m	Needle valve . . . . .
22	2	TS 707	Pump jet . . . . .	0.40	44	1	TS 752a	Float . . . . . (weight)
42	1	3916	Pump exhaust screw . . . . .	1.50 ✓	—	1	—	Float levelling . . . . .

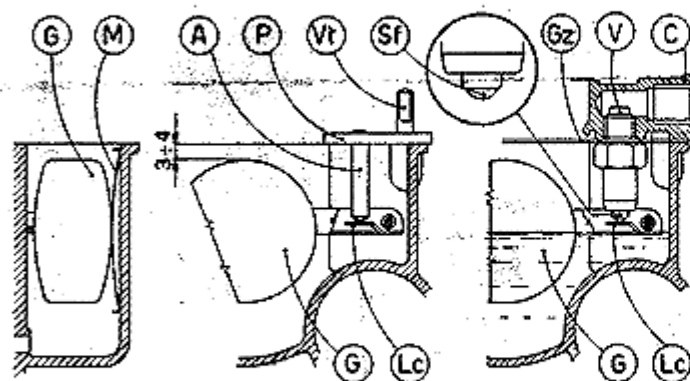
S. p. A. E. WEBER do not answer for eventual working anomalies due to arbitrary modifications introduced into the above

## FLOAT SETTINGS

### (\*) DIRECTIONS FOR THE LEVELLING OF THE FLOAT

To effect a correct levelling of the float it is essential that following directions be complied with:

- 1) - Remove carburettor cover (C), remove gasket (Gz) from cover taking care not to deteriorate it, make sure that float (G) slides freely in its seat.
- 2) - Insert friction spring (M) between half-float and wall of carburettor bowl.



- 3) - Insert plate (P), provided with a control appendix (A) of 23.75 m/m in length, into the two screw studs (Vr) adjacent to float fulcrum screw and place it onto upper surface of carburettor body.

- 4) - Lift float (G) so that clip (Lc) may come in contact with control appendix (A), taking care that float (G) be kept, by means of the pressure of spring (M), in the position it has already reached.

- 5) - In these conditions, the distance of both half floats from upper surface of carburettor body with no gasket (Gz) on it, must measure 3-4 m/m.

- 6) - In case float (G) had not been rightly set, rectify the position of float clip (Lc) till the required quota is reached, taking care that clip (Lc) be perpendicular to the axis of appendix (A), and that it does not show any pit on the contact surface that could affect the free sliding of the pin ball (Sf).

- 7) - Remove friction spring (M), fit up gasket (Gz) and cover (C), making sure that needle valve (V) is tightly screwed in its seat; proceed then to uniform tightening of the cover fixing nuts.

N.B. - Plate (P) and appendix (A) make up WEBER caliper 9620, 175, 1594.

NOTE - Should replacement of needle valve (V) be required, make sure that the new valve is tightly screwed in its seat, insert a new gasket, and repeat levelling operations.

I highly recommend you buy and use the Weber Service Manual for DCOE carburetors! It gives detailed pictures on how to repair your Weber carbs. If you want to know more about the way Webers work, you purchase the book on Weber Theory. Try your local book stores or Autobooks in Michigan.

**[WEBERCARBURETORS.COM](http://www.teglerizer.com/dcoe/rasorcom.htm)**

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