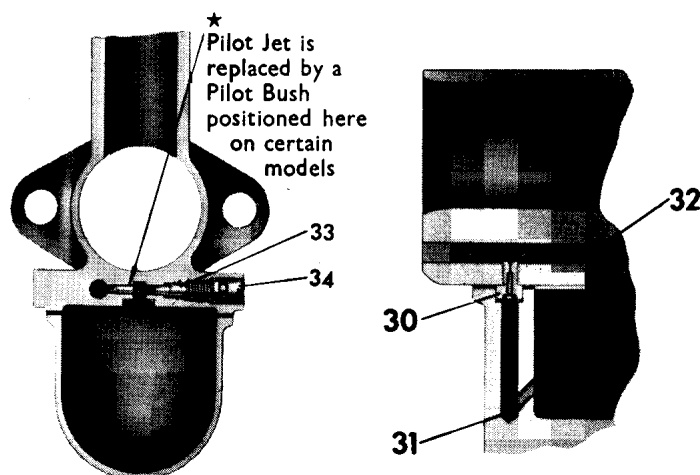
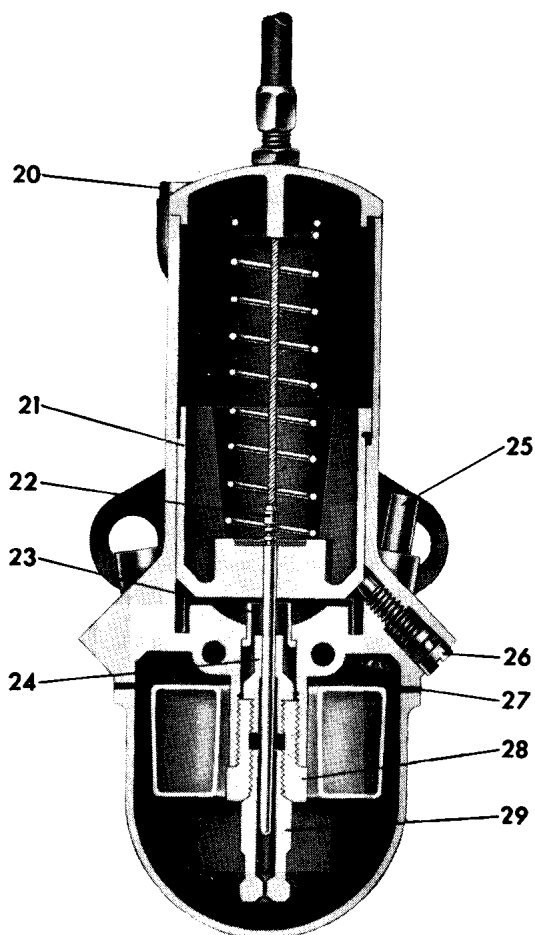


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|-------------------------------|---------------------------------|
| 1 Mixing Chamber Top. | 18 Float Chamber Body. |
| 2 Air Valve Spring. | 19 Float. |
| 3 Air Valve. | 20 Mixing Chamber Top Screws. |
| 4 Float Spindle. | 21 Throttle Valve. |
| 5 Float Needle. | 22 Jet Needle. |
| 6 Needle Seating. | 23 Choke Tube. |
| 7 Filter Gauze. | 24 Needle Jet. |
| 8 Banjo. | 25 Tickler. |
| 9 Banjo Bolt. | 26 Throttle Adjusting Screw. |
| 10 Cable Adjuster (Air). | 27 Float Chamber Washer. |
| 11 Cable Adjuster (Throttle). | 28 Jet Holder. |
| 12 Cable Adjuster Locknuts. | 29 Main Jet. |
| 13 Carburettor Body. | 30 Pilot Jet. |
| 14 Throttle Valve Spring. | 31 Pilot Jet Feed Passages. |
| 15 Jet Needle Clip. | 32 Feed Passage from Pilot Jet. |
| 16 Pilot By-pass. | 33 Pilot Air Feed Passage. |
| 17 Pilot Outlet. | 34 Pilot Air Adjusting Screw. |



SECTION SHOWING PILOT JET AND PILOT JET FEED PASSAGES

Fig. 20



SECTION THROUGH FLOAT CHAMBER

Fig. 19

70. Tuning the Carburetors

The throttle opening at which each tuning point is most effective is shown in Fig. 21. It should be remembered, however, that a change of setting at any point will have some effect on the setting required at other points; for instance, a change of main jet will have some effect on the mixture strength at half throttle which, however, is mainly controlled by the needle position. Similarly an alteration to the throttle cut-away may affect both the needle position required and the adjustment of the pilot air screw. For this reason it is necessary to tune the carburettor in a definite sequence, which is as follows:

First—Main Jet. The size should be chosen which gives maximum speed at full throttle with the air control wide open. If two different sizes of jet give the same speed the larger should be chosen for safety as it is dangerous to run with too weak a mixture at full throttle.

Second—The pilot air screw should be set to give good idling. On Series I and early Series II machines the pilot jet is detachable.

Third—The throttle valve should be selected with the largest amount of cut-away which will prevent spitting or misfiring when opening the throttle slowly from the idling position.

Fourth—The lowest position of the taper needle should be found consistent with good acceleration with the air slide wide open.

Fifth—The pilot air screw should be checked to improve the idling if possible. When setting the adjustment of the pilot air screw this should be done in conjunction with the throttle stop. Note that the correct setting of the air screw is the one which gives the fastest idling speed for a given position of the throttle stop. If the idling speed is then undesirably fast it can be slowed down by unscrewing the throttle stop a fraction of a turn.