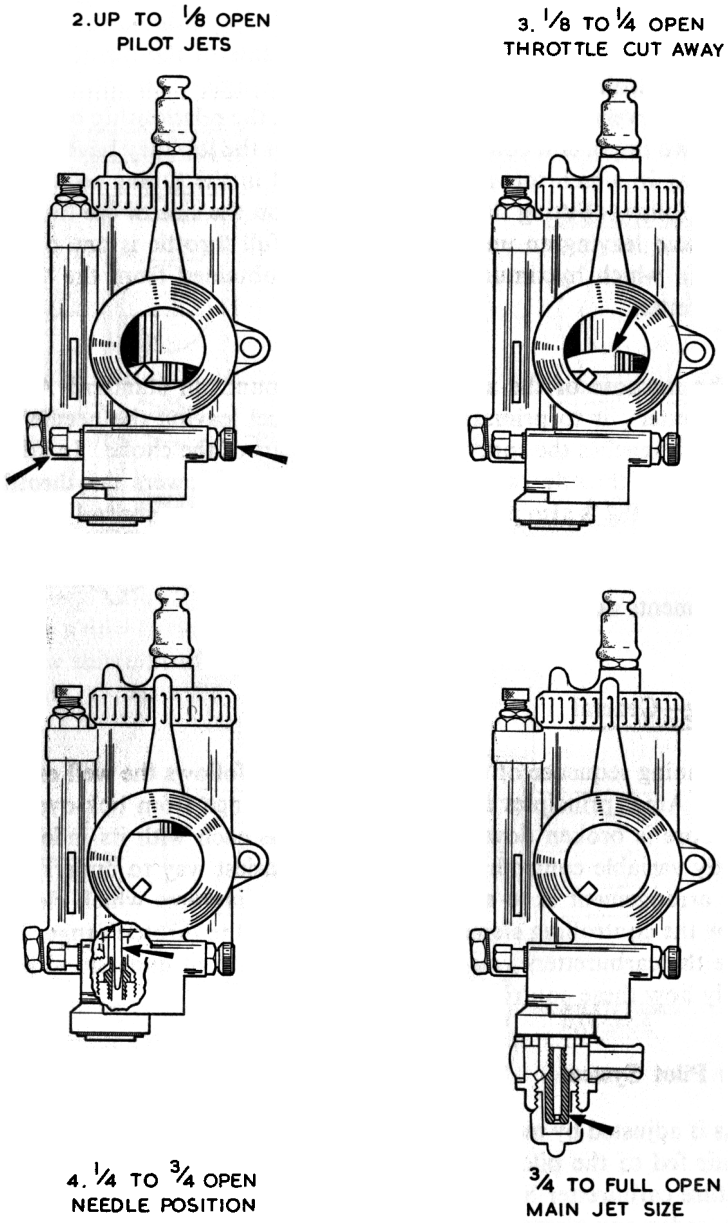
TUNING SEQUENCE



Throttle positions.

The Throttle Cut-away

This influences the speed of air over the spray tube and controls the mixture at small throttle openings. Here again the correct throttle slide has been fitted by the Factory and it is extremely unlikely that you will require to alter this at anytime. If for unusual circumstances such as constant operation of the machine at very high altitude it is necessary to change the throttle cut-away then this must be done by replacing the throttle slide. Slides are available with a range of cut-aways designed to richen or weaken the mixture. That fitted as standard to your Spitfire is a No. 5½ cut-away; to richen the mixture you would require a smaller number whilst to weaken it you would require a higher number.

The Needle Jet

As the throttle is further opened the effects of the throttle cut-away diminish and the effects of the needle within the needle jet become more important. Your Spitfire is fitted as standard with a 107 needle jet and a standard GP needle.

You will not require to interchange these parts but it may be necessary for you to alter the position of the needle within the throttle slide. This has the effect of increasing or reducing the amount of gas mixed with a given amount of air over the range of throttle openings controlled by the needle. To allow more gas to be mixed with a given volume of air the needle must be raised within the throttle slide whilst to reduce the amount of gas it must be lowered. This is a very simple adjustment described fully in the tuning sequence.

The Main Jet

This controls the mixture supply to the engine from approximately three-quarters open to full throttle. It is only variable by inter-changing main jets and your Spitfire is fitted with a No. 260 main jet which will never require reducing. It may be necessary under certain circumstances, and to obtain the very maximum performance of which the engine is capable, to replace this 260 jet by a 270 or 280 depending on conditions. The way in which it should be decided whether or not to attempt tuning by replacement of the main jet is described in the tuning sequence section.

Tuning Sequence

The correct sequence of tuning is as follows:—

(1) main jet size
(2) pilot adjustment
(3) throttle valve cut-away
(4) needle position