

# **GARDNER**

BY  
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- 11 -

THE SUBJECT OF GARDNERS  
OF HOW TO REAP A GOOD CROP

A lot of crap has been said about Gardner Carbs as to whether they are a benefit or otherwise. But to the knowledgeable person there are definite gains to be had listed below:

- a) Uncluttered inlet tract (has to be good for gas flow).
- b) No necessity for jet changing (No carrying millions of easily lost jets!).
- c) Changes in carburation can be made instantly, and more finely than with jets.

Most people who have used them apparently seem to move onto other carbs eventually, because they seem to find Gardners hard to set up. This is far from the case, but as in most new set-ups a little care, and method, is needed to get the best results.

Firstly there are a few things that need to be done before fitting to the bike.

Take the float chamber and mark the fuel height on the outside, by filling the chamber by the usual means, and taking a 'clear' pipe from the chamber-to-carb outlet up the side of the float chamber. Once the fuel is shut off by the needle the fuel height can easily be seen through the clear pipe. BINGO!

Now the carb itself if you had not guessed most of the setting up involves getting the fuel height O.K. this is VITAL for power output and reliability as in due course you will realise.

Remove the back of the carb, take out the slide mechanism, and replace just the jet tube into the bottom of the carb body. Screw this right to the top and put the flat on the screw onto the spring loaded plunger for the first time. (i.e. first click). Then take a set-square and bring it to the top of the jet tube and mark the side of the carb body level with the jet tube top. Turn the jet tube down one more turn and scribe again. Do this for as many turns as possible of the jet tube before it falls out (obviously).

Now we have a carb with all the jet tube heights marked down the side. Very useful, as you can see there is a considerable difference between the top and bottom marks. Enough to cause problems with carburation if the float chamber is not moved with the jet tube, and very definitely enough to cause a loss of power if you go the wrong way!

Refit the body of the carb to the back plate (does not matter about the slide) and fit to the bike. Stand the bike on level ground and drop a plumb line down the side of the carb body. Purpose of this is to find the vertical with respect to the bike and set-up as you have it on any particular bike. Obvious that the carb angles will differ....

Now scribe a line down the carb body to show this vertical. Remove the carb body (again) so that lines can be scribed at right angles to the 'Vertical' to meet the jet tube heights marked earlier.

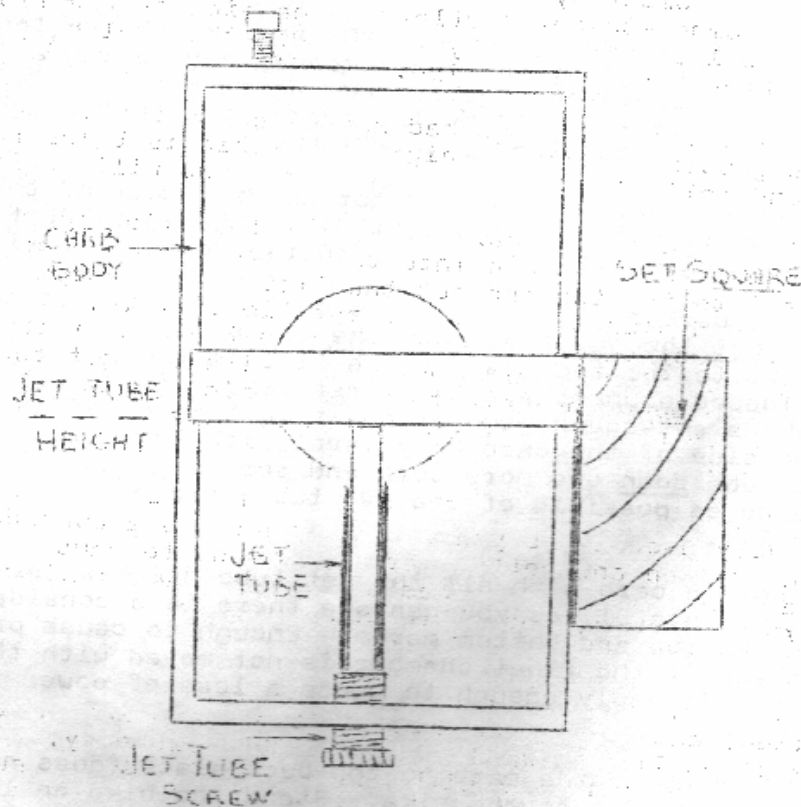
Hopefully these lines will be Horizontal whilst the carb is fitted to the bike.

For anyone who has bought an over the counter Gardner they will know that the float height is meant to be  $\frac{3}{16}$  of an inch below the jet tube height.....

So its now dead easy to measure  $\frac{3}{16}$ " below the jet tube height and mark the carb body on the opposite side of the Vertical line to the jet tube heights. If that confuses, then look at the illustration which will clarify exactly what has gone off.

With the Carb back to normal and float chamber fitted (plus some anti vibration fitting for it). It is an easy task to lift or lower the float height for any particular position of the jet tube, and by matching the marks your settings will be exact.

As people like Paul Kean and Alan Hibbs know only too well if the float chamber is too high the engine will run in the paddock perfectly but possibly a little smokey, but as soon as full throt is applied the carb pours in the petrol. The effect being one la

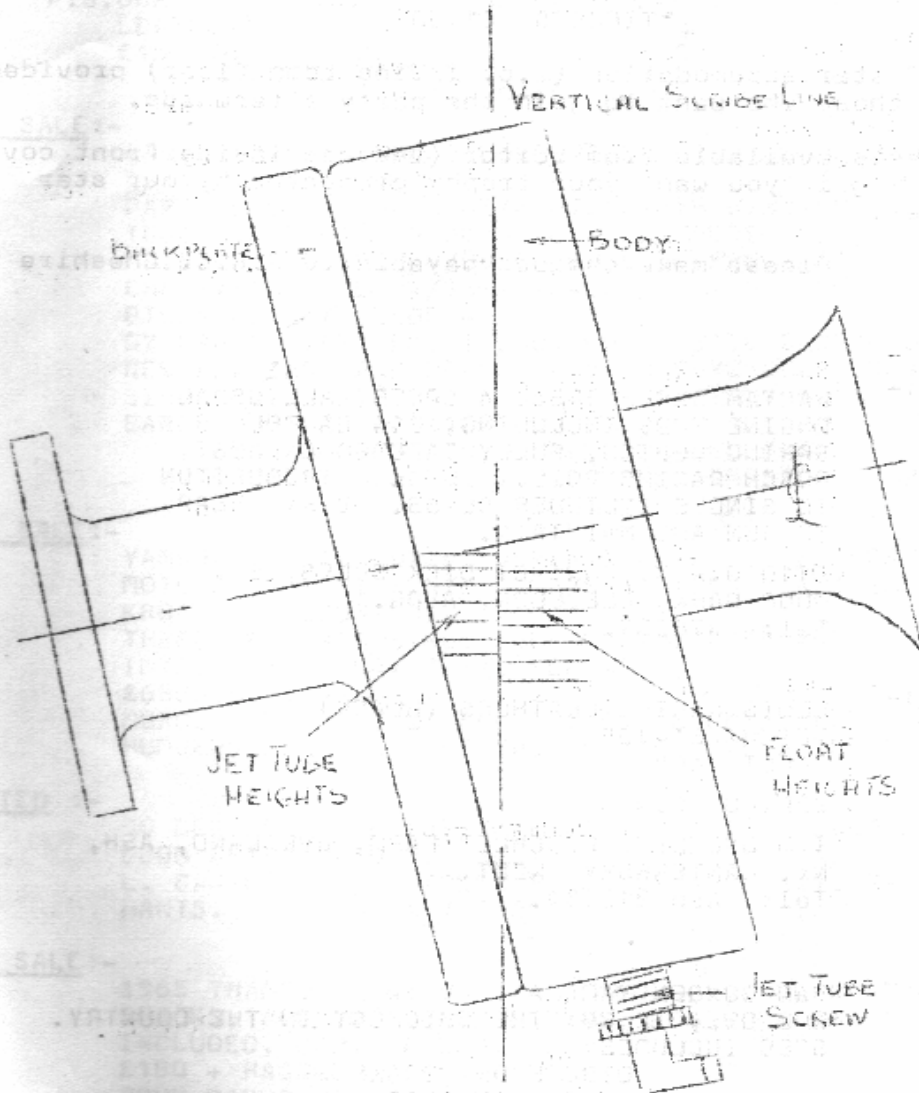


and an oiled upplug!.

The opposite can happen, with the float chamber too low, Symptoms are; unexplained loss of power, pinking, poor starting but possibly a good plug reading. This may be due to correct jet setting but wrong float height, the engine has to work a little too hard to get the fuel it needs and ZAP power down the drain.

A gain in power can be had by using a small fiddle, but a word of warning, this must be set up before a meeting as the settings are critical.

Once you have found a good setting for power and reliability turn the jet tube up one or two turns to weaken the mix then raise the float chamber until the engine stops pinking on full load and you get a good plug reading again.



This may mean that the float chamber is higher than normal, if you go too high there are the obvious problems, too low and a siozure may occur. So the float height is Vital, and for the person who has not got a trained ear, stick to keeping the float at the correct height and you will never need to touch you Gardner Carb again.....

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