



Dell'Orto VHSB VHSH Floats and Float Height Setting

Copyright © 2010 Jet-Tech Motorsport



The Dell'Orto VHSB 30 carburettor comes with three different float options.

Two of the options utilise a pair of single floats that 'rest' on the float arm (Type B and B2) and the third option utilises a one-piece float arm and float combination (Type B3).



Type B Part# 15760



Type B3 Part# 9794

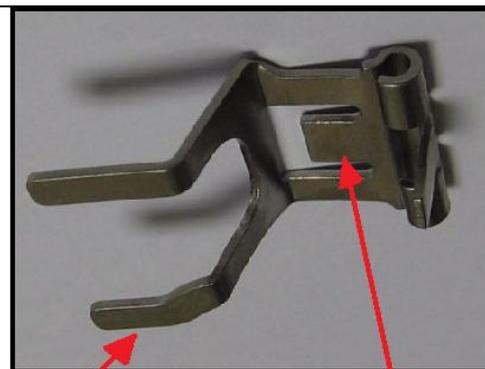


Type B2 Part# 12630.1

The first thing to establish is what type of float assembly you have in your carburettor. If possible, you should use the pair of single floats that rest on the float arm (Type B or B3). These combinations work better for Karts because they maintain a better, more stable fuel level in the float bowl when cornering hard and because they are easier to set.

Setting the Float Height - For Type B and B3 Floats:

Hold the carburettor upside down and check that the float arm is parallel to the carburettor casting face. If the float arms are not parallel to the casting face, bend the float **Arms** carefully to align them.



Arm

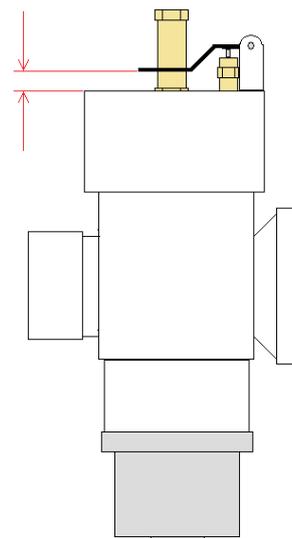
Tab

Measure the distance from the float arm to the casting face.

To adjust the float height, bend the **Tab** of the float arm – not the arms themselves.

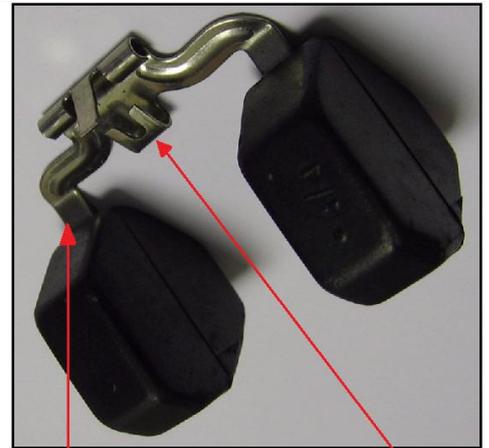
The starting or default measurement for this type of float assembly is 6mm.

Using these type of floats (B and B3) and float arm can make adjusting your float height easy and accurate. We have a set of float arms pre-set to different heights so when at the track, rather than bending the Tab, we can just insert a different float arm.



Setting the Float Height - For Type B2 Floats:

Check that the float arm is parallel to the carburettor casting face. If the float arms are not parallel to the casting face, bend the float **Arms** carefully to align them.



Arm

Tab

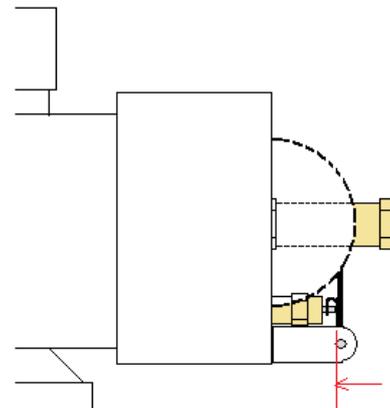
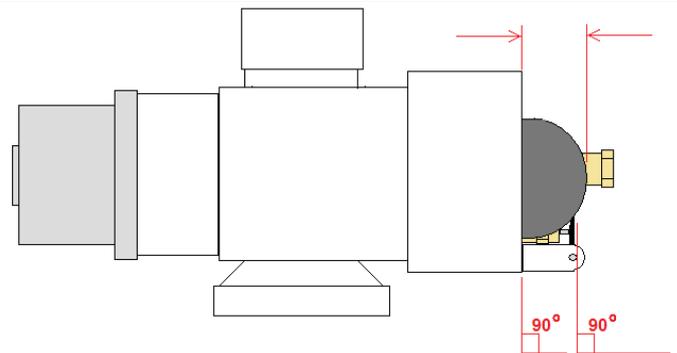
Place the carburettor on its side on a level surface.

The float arm assembly should be just cutting off the needle valve (fuel inlet valve). If necessary, gently push the floats down until the needle valve (fuel inlet valve) is closed.

Measure the distance from the top of the float to the casting face.

To adjust the float height, bend the float arms gently. Be careful, the float arms are weak and the more they are bent, the more likely that they will eventually snap!

The starting or default measurement for this type of float assembly is 11mm.



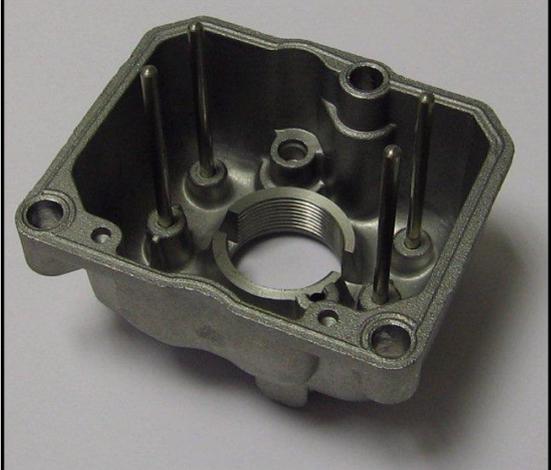
Fuel Cut-Off Needle Valve Closed

Converting to Type B or Type B3 Float Assembly from the Type B2 Float Assembly.

As mentioned earlier, using type B or B3 floats and float arm assembly can make adjusting your float height easy and accurate. You can obtain a number of float arms and pre-set them to different heights so when at the track, rather than bending the Tab, you can just insert a different float arm to change the float height.

Before undertaking a conversion, you need to check the float bowl type that you have. Older carburettors may have the “Aprilia” type float bowl Part #: 13042 – this has now been discontinued.

VHSH Deep float bowl for 2 independent floats fitted to the majority of VHSH carburettors: Part#: 14415
You should be able to convert either float bowl but the later one is the best option.



To convert to the Type B floats you require the parts listed below.

1 x Float Arm Part# 10544



1 x Float Arm Pivot Pin Part# 12692

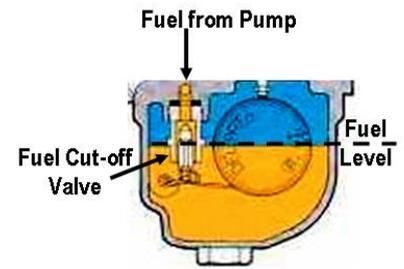


2 x Single Floats Part# 15760



Carburettor Float Height Tuning - Design & Management

I am sure you already know that fuel level or float height can be used to tune your carburetors jetting, so how is it done? Well to put it simply any change in fuel level in your carburetors float chamber will change the static head of fuel on all of your carburetors fuel jetting circuits and therefore the higher the fuel level, then the richer will be your overall jetting and conversely the lower your fuel level, then the weaker will be your overall jetting. A similar effect is to be seen when adjusting the pop-off pressures in diaphragm carburetors used in many karting applications.



Dell'Orto recommend float height settings for all of there racing carburettor types and recommend that fuel level tuning is controlled by changing the float weight. Again as with above the heavier the float, then the richer will be the overall jetting and conversely the lighter the float then the weaker will be the overall jetting.

How does this work? Well the heavier float will float lower in the fuel and therefore, given that the float is connected via a light metal lever to the fuel cut-off valve, the result is that the fuel level in the bowl will be higher when eventually the fuel supply is cut-off and vice-versa for the lighter float. As you can start to see, these principles open up a whole new area of carburettor tuning to add to the already infinite combinations available from various needles, needlejets and main jets, don't worry as all of Jet-Tech's Software includes "Fuel Level Tuning" to help manage your carburetors float height and float weight adjustment features. This unique software feature is designed to help guide you through these infinite combinations.



Finally some tips to help you get the best from your carburettor tuning; if you have a choice between the one-piece and double float designs for the Dell'Orto carburettor, always go for the double float design as this design is much better in dealing with the lateral forces developed during cornering.

Always fit an overflow catch tank to your carburetors vent pipes, in this way you know if you have a fuel cut-off valve problem, without it you may be wondering why you are always running rich! Always make sure your fuel is top quality and contains no water dirt or contaminates. Use a good quality filter system such as the Jet-Tech Fuel Prep to filter your fuel.

Fuel / Oil Ratios

When we look at fuel/oil ratios in the 2-stroke mix, it's worth understanding the affect that changing the oil/fuel ratio will have on your jetting. If you increase the oil content, you are effectively reducing the amount of petrol (gas) in the mixture so your overall jetting will need to be richer. The converse is also true so reducing the oil content is effectively making the mixture richer, so your overall jetting will need to be leaner.