

Weather Helm – Major cause whilst sailing a Dart 16

So what is weather Helm? When you are sailing close to the wind you should be feeling a slight pull on the tiller. This is because the boat wants to sail right up to where the wind is coming from. If you let this happen the boat will simply slow down and stop. Not exactly what you wish to happen! Therefore you would be constantly be applying a slight pull on the tiller. This is weather helm.

It is desirable to always have a bit of weather helm but any more becomes a real show stopper because not only will it slow down the boat, it places undue pressure on the rudder fittings and also becomes extremely tiring for the helmsman to steer. If you wish to learn more about weather helm why not search the Internet as there are many articles and most sailing books will have a section on the subject.

What this article is about is to make you aware of a particular problem with the Dart 16 that can cause severe weather helm and is therefore not an exhaustive guide on the subject. If you have experienced having to grip the tiller very tightly then read on! The rudder set up for the Dart 16 has been designed to allow the rudder blades to release themselves from their vertical position when they encounter an obstacle, such as when sailing up the beach. With the rudders automatically being released on impact with the beach saves them from getting damaged. A very good thing indeed and one we should be grateful for as the rudders do cost a lot of money!



Illustration 1: Rudder blade vertical and snug against stock leather spacer



Illustration 2: Rudder blade NOT fully vertical

Whenever the rudder hits an obstacle, and it could be a floating plastic bag when afloat, the mechanism in use to keep the blade down can move ever so slightly such that when the blade is then locked back into place it will not be a snug fit vertically but there will be a small amount of movement allowing the rudder to move backwards and forwards. It is this movement that usually is the cause of excessive weather helm. A movement of about 1-2mm is fine but anything more causes a real problem. In my experience a movement of 5mm will cause me to have to steer with two hands on the tiller! So how can we overcome the problem? All that needs to be done is that you ensure that the mechanism is checked

before you go afloat, EVERY time you go afloat. Whilst on the beach, lower the rudder and lock it in place. Now see if the rudder can be moved backwards. If it does you need to readjust the slider under the tiller. If you have one of the original assemblies, I think prior to 2002, the adjustment is actually done via the bolt that is used to attach the tiller to the rudder.

If you find that both rudders are fine then the excessive weather helm is occurring for another reason /s. One major reason might be the rake of the mast. This is not peculiar to a Dart 16 but to any sailing dinghy. If the mast is raked to far aft then this could be the cause. It would also be a serious contributor to one's lack of speed. When raking the mast backwards one is moving the centre of effort backwards which automatically does several things. In this article I am only wishing to deal with weather helm. The more the mast is raked backwards the more severe the weather helm. So how do you know whether you've set the boat up with too much aft rake. For some of the answers you'll have to see the document on 'Rake'. Another cause of weather helm could be the balance of the boat. If you have too much weight at the front or at the back (the boat is unbalanced) then apart from anything else weather helm will be an outcome. Next time you go out sailing have a friend observe from a distance how your boat is balanced and hopefully that will assist you in getting the correct balance. If you still then have excessive weather helm the next thing to look at is the way you trim the sails.



Illustration 3: Adjustment points