

Wet Bay Door "C" Hinge Modification

Right after delivery I noticed small gap on the left end of the wet bay door on our 2007 Phaeton a little over three years ago, I did not see it as a real problem at that point so I left it alone and did nothing. Yesterday, one of the forum members brought his Phaeton's wet bay door problem to our attention. I thought it was time to take a picture to post on the forum to let other members know his wet bay door problem was not an isolated case.

I'm glad his coach had this problem and he brought it to our attention because I now find my wet bay door was almost ready to fall out of its double "C" type hinge. A few more open and close operations and the door would have unhinged and no doubt been damaged.

The next two pictures are of my wet bay door. The left and right top corners of the door (pictures were taken before modifications). As you can see in the upper left corner of the picture the two "C" channels have unhinged. The reason the channels can become unhinged is partly due to the offset door brackets TMH has installed on this door to cause the door to open further than the other top hinged doors on their coaches. As the door is closed the two door air springs resist being compressed, during their resistance to



this compression the two "C" channels are pushed apart. When TMH installs the door the two "C" channels are tight but after dozens of open and close operations the aluminum wears just enough to allow the channels to push apart and unhinge.



As seen in the above picture, this end of the hinge was not as bad as the left end however I do not think it would have been long before there would have been damage. I would never have been able to catch the door during opening or closing if the channels had become unhinged.

To remove the door checking for damage to the door or "C" hinge, this is what I did. I removed the air springs from their bottom connection. The door can then be swung up more than 90 degrees, being really careful two people need to hold the door. Push toward the coach slightly lifting on the hinge side of the door. The door should release from the "C" channels. The door is not really that heavy but it is awkward that is why I used two of us. We moved the door to a work table to check for any damage to the "C" channel. I did not find any damage to either the door hinge or the RV side hinge. I have heard others state Tiffin has bent the "C" channel to tighten the door. I

do not think that is the best way to fix this problem as it would be easy to crack the aluminum channel.

I therefore decided on a low tech modification to correct this TMH design problem. I decided to build and install three wooden blocks which would keep the door hinge "C" channel from being pushed away from the RV side wall mounted "C" channel. As the door is closed the backside of the "C" is pushed by the block against the other "C" channel preventing them from being separated by the air springs pushing upward and inward on the door. The three blocks prevent the "C" channel separation which the TMH design had been allowing to occur.



My, Low Tech Modification, three blocks of pressure treated wood cut in this shape. This shape allows mounting into the upper door channel. I decided on installing three blocks, left, right and center just for security. I cannot really supply any measurements because on my coach each block length was different. Left to right each of the blocks got shorter not by much but still they were each shorter. It probably has something to do with 3/16 ".



Notice the gap between the end of the block and the aluminum "C" channel, a small gap is needed as when the door is swung downward the gap will narrow as the door nears full closure. I needed to check and increase the clearance multiple times until I got the clearance correct. I began with too little clearance and increased the gap until the door would close almost completely before I felt pressure on the top of the door near the block. I performed the block clearance testing one block at a time until I got all three properly cut and closing without pressure on the top of the door at the hinge. Then I installed all three blocks and tested the door closing. I had to cut the gray sealant between the wall and floor where the three blocks were to be mounted. I used another low tech method of mounting the blocks, black silicone sealant. After sticking the blocks in place I installed wooden pressure sticks to keep pressure on my blocks until the silicone had time to cure. I think everyone will find the same problem I found on my wet bay door. TMH when they built the left side wall did not get the corner pushed in at the top as much as it is at the bottom. On my coach the top is pushed out 3/16 of an inch more than at the bottom. As seen in the below picture. The wood is flush with the wall at the bottom and as you can see there is a gap at the top. It is just the way TMH assembled the side wall.



This is what the left end of the door looks like after my three wooden block modification. You can see the 3/16 inch gap which TMH built into the wall. There is no way to correct this in my opinion without major work by TMH.



This is the right end of the door after my modification.



This is a picture of the whole door after modifying the hinge operation.



You can see the small 3/16 inch gap in the upper left top corner of the door. I see no way to correct this assembly error after the fact I'll just live with it. This modification took three hours of my time I used a few inches of pressure treated wood (3/4" x 1 1/2" x 2 1/2") for the blocks. A few dabs of black silicone and few wisps of black spray paint so the wood would blend in with the surrounding black painted metal.

It's a Finished Product:

Use this document anyway you desire, I would like to receive credit for my idea and design if you pass this on to others. I hope if your coach has this problem it will be as easy to correct as mine was. If you desire TMH to correct your coach's wet bay door hinge problem, take a copy of this document with you, see what they say. I bet it will take them longer than the three hours it took me, even IF they use my idea and design.