Installation of a threaded insert for carbon masts

Equipment Required

Required Threaded insert (see 595-941-E for sizes and part numbers) 1 x 'Pilot' Dagger Drill (see 595-941-E for sizing) 1 x Dagger Drill (see 595-941-E for sizing) 1 x Tap (see 595-941-E for sizing) 1 x Tap Wrench 1 x Torx head Screwdriver 1 x 400ml tube of Plexus 310 Black Mixing Nozzles (job dependent) 1 x Plexus Gun (Part No. 312-416-GUN) Corresponding dome headed machine screw (M5, M6 or M8) Corresponding washer (M5, M6 or M8) Grease Masking tape



Step 1

Position fitting onto mast and ensure the proposed position of the inserts are located in sufficient reinforcement and material. Mark the out line of the fitting for easy reference when positioning later (placing a layer of masking tape down allows a good surface to mark onto that can be removed after the fitting is secured).

Step 2

Size the first dagger drill to match the hole in the fitting where the fixing is intended to be positioned.

Step 3

Use the fitting to position the holes and drill through using the 'Pilot' dagger drill (see below)





Step 4

Remove fitting and now use the larger dagger drill to open up the hole to allow for tapping. Once the hole has been increased, remove any carbon waste and dust from around the hole.



Step 5

The hole is now ready to be tapped. Ensure when tapping, the tap is perpendicular to the hole to prevent the insert being placed in at an angle.

When tapping turn tap through 1 full rotation and the 1/4 turn backwards, then a full rotation and repeat until the hole is fully tapped. Again, clean away any waste produced.



Step 6

Prepare the threaded insert. As these are machined parts, contaminates can often be left on the surface of the external thread and this must be removed before inserting into the mast. Failure to do this could result in the insert failing to secure in to the Plexus. Degrease with acetone or similar



Step 7

Now prepare the threaded insert for installation. Once the external thread of the insert has been thoroughly cleaned it can be combined with the domed machine screw and washer.

Before inserting the machine screw, carefully apply some grease to the tip, ensuring none of this grease touches the external thread of the insert. The grease is required on the machine screw to help remove it after the insert has been bonded in. Failure to use the grease can result in difficulties removing the machine screw without removing the insert as well.

The washer creates a evenly distributed loading to the inert to help ensure it is inserted squarely.



Step 8

The insert is secured into the carbon using the Plexus 310. Before the Plexus is applied to the tip of the insert it is advised that an amount is pushed through the nozzle to ensure that the adhesive is mixed fully and this is shown by a consistent colour in the expelled Plexus.



Step 9

Add the Plexus to the tip of the insert and locate into the threaded hole and tighten down until the insert is flush with the surface.





Step 10

Once the insert is fully located into the hole, reverse the action on the screwdriver and back the domed machine screw out of the insert. Wipe away any excess Plexus, being careful to make sure that no Plexus gets into the insert.



Step 11

Once the insert has been installed, the fitting can then be repositioned over the insert and secured with the corresponding fixing.

