

WHEELPANT INSTALLATION

There are many different wheelpant designs, and many different ways of splitting them for removal, and variations in the way they are secured. After trying several different designs, we found one we liked, adapted it to the Mark IV (500 x 5 wheels), and sent it to FeatherLite to copy and supply. It is the one that we have installed on our Mark IV, and shown in many of the pictures of our airplane. We prefer to split the wheelpant so the seam is roughly the same diameter as the tire, and on the inboard side of the wheelpant, so the hardware is relatively hidden.

We have a bracket that is held to the inboard side of the strut by the 4 axle bolts, and which the inboard side of the wheel pant is fastened to at 3 different spots. Then the outboard side of the wheel pant is secured to the outboard end of the axle. We know of two different methods of securing the wheelpant to the axle. The first is to drill and tap the axle to receive an AN-4 bolt. This hole must be off-center, because the axle castlenut must be held from turning by a cotterpin that goes through the axle centerline. The hole must also be drilled and tapped deep enough so it will engage all of the threads of the AN-4 bolt. And a hardpoint must be built into the wheelpant to mate with the end of the axle.

Alternatively, you can make or purchase from Brock Mfg. a bracket which can be welded to the axle castlenut which has an AN-4 nutplate riveted to the bracket. The nutplate is centered on the bracket, so rotating the castlenut does not change the alignment of the wheelpant hardpoint with the nutplate. This installation is a little more expensive and takes a little more work, but it is the most fool-proof.

Eric Westland reports that Van's (of RV fame) sells an axle nut with the U-shaped bracket and nutplate already attached.

You should not forget to make vents in the top of your wheel pants so that after landing, taxiing, and parking, there will be natural convective airflow past your brake disks to cool them down.