

TECHNICAL INSTRUCTION NO. 1.

TAILPLANE ATTACHMENTS ON SKY, SKYLARK MKS. 1, 2, 3A, 3B, 3C & 3D

The daily inspection of the prototype "Sky" owned by a Gliding Club disclosed damage to the two centre ribs of the tailplane.

This damage took the form of a vertical crack in the plywood webs of the ribs at the point where they are pierced for the trimmer lever and was found to be due to incorrect tightening down of the tailplane anchorage nut. When rigging the sailplane a tommy bar had been used, on some occasion, to apply extra load to the nut so as to make sure that the anchorage was effective. This had imposed an excessive load on the centre ribs causing the structure to fracture.

The centre ribs of production versions of the "Sky" were stiffened up to withstand some degree of this abuse. The centre ribs of the Skylark tailplane are of solid spruce faced with ply for the same reason.

However, we, as the manufacturers, consider that this notice should be sent to all owners of sailplanes with this particular type of tailplane attachment in order to explain the correct method of fastening down the tailplane and to give instruction for a check inspection.

Method to be used for rigging the Tailplane.

Before fitting the tailplane it is important to ensure that the faces of the front and rear attachment and the threads of the bolt and nut are free from dirt and accumulated old grease. If dirt is present the parts should be washed with petrol and wiped dry, a thin covering of anti-freeze grease should then be applied to all surfaces included the bearing faces of the attachment bolts and nuts.

When rigging the tailplane it should be placed in position on the fuselage ensuring that the trimmer lever is correctly engaged. The attachment bolt or nut should then be lightly screwed down and the tip of the tailplane gently shaken to seat the fittings. The attachment bolt or nut is then fully tensioned by applying the full force of both hands and then using a short tommy bar to bring the spring lock into the next notch on the locking plate.

Inspection for Damage.

An inspection for damage to the tailplane attachments should be carried out as soon as possible after the receipt of this notice. The inspection should proceed as follows:-

1. Lay the tailplane in position on the fuselage without the attachment bolt or nut being in position. Using the thumbs apply a load to the centre ribs at the attachment bolt position and check for deflection. If undue deflection of the ribs is noticed this may indicate damage to the structure and further examination should be made.
2. Fit the tailplane onto the fuselage and tighten the attachment as instructed above. Standing astride the fuselage apply a vertical load to the leading edge of the tailplane with the hands placed approximately 12 inches either side of the centre line, check for excessive movement. If undue movement is noticed inspect for further damage.

In the event of damage to the tailplane structure being found, a description of the damage should be sent to Slingsby Sailplanes Ltd., who will issue instructions for repair.