SK3IB/69 + 70.

Slingsby Sailplanes Ltd., Kirbymoorside, York. 4.2.64.

Technical Instruction No. 23.

Kirby Cadet Mk. 3. T.31B (Tandem Tutor) Mod. No. 80.

Inspection and Modification of Wing Front Spar.

As a result of a series of special inspections carried out on T.31B (Kirby Cadet Mk. 3) operated by the A.T.C. a high proportion were found to have defects in the front main spar in the region of the strut attachment fitting. The defects were in the form of compression shakes which would reduce the spar strength and which might ultimately result in Structural failure.

In view of the complicated histories of many T.31b gliders and the difficulty of obtaining exact figures for hours and launches for particular components and also the lack of dates on which the instances at which these defects may occur, it has been decided to call for inspection and modification action on all T.31B aircraft before further flight.

EMBODIMENT.

Aircraft are not to be flown before the embodiment of this modification.

PROCEDURE.

1. Remove the fabric between ribs 6 and 13.

2. Remove the leading edge ply from 10 mm outboard of Ribs No. 6 to 10 mm inboard of Rib No. 13.

3. Remove the ply aft of the main spar to the front member of the spoiler on the top surface of the wing between ribs 6 and 9.

4. Remove the ply 3" behind the main spar on the bottom surface of the wing at Ribs 7 and 7A.

5. Remove the ply behind the main spar on the bottom of the wing between ribs 9 and 10.

6. Remove the 10 mm wide intercostals carefully from the top and bottom of the spar, between ribs 6 and 13.

7. Cut away the wing rib boom at the main spar position, top and bottom surfaces at Ribs 7 - 8 - 9 - 10 - 11 and 12.

8. Remove the gussets attaching the main spar and diagonal bracing ribs at Rib 10.

9. Examine the top and bottom surface of the spar boom. Particularly look for compression shakes in the booms, which will be shown as fine lines running across the length of the booms.

These shakes, or cracks may be located adjacent to the ribs at the termination of the intercostals and between Ribs 9/10 and 10/11 where the intercostal is cut at the gusset midway between the ribs. Close examination of the full length of the spar should however be made and if damage to the spar boom is found, full details should be sent to the Technical Office of Slingsby Sailplanes Limited who will forward an approved repair scheme.

If no interior damage is found proceed to close up the areas concerned.

10. Replace the gussets attaching the diagonal bracing members to the main spar.

P.T.O.

11. Attach a 1½ mm ply strip along the top and bottom surface of the main spar boom from Rib 6 to the gussets attaching the diagonal bracing members to the main spar at Rib 10 and the similar gussets at Rib 13. This strip to be spliced to the gusset attaching the diagonal bracing member to the spar.

12. Fit and fix the continuous reinforcing members on the top and bottom of the main spar between Ribs 6 and 13. Shape to Rib profile.

13. Fit splice backing members at Ribs 6, 9 and 13.

14. Fix nose ply.

15. Make splice and fix ply to the main spar and the front spoiler member on the top of the wing between Ribs 6 and 9.

16. Make splice and fix ply gussets ar ribs 10, 11 and 12.

17. Fix 10 mm x 10 mm backing member to the ply on the bottom surface of the wing at Ribs 7 and 7A.

18. Make splices and fit ply at Ribs 7 and 7A.

19. Make splices and fit ply between Ribs 9 and 10 on the under surface.

20. Make good external treatment.

21. Details of the modification and the date on which it was incorporated must be noted in the aircraft Log Book.

Complete kits of parts required for the embodiment of this modification are obtainable from Slingsby Sailplanes Ltd.. Price: £8-12-6 (which includes all parts except paint, dope and glue).