

Service Letter: 443 Initial Revision

Date: August 18, 2017

Title: Inspection of Aileron Hinge Rib and Support

Models: 8KCAB serial numbers 643-90 to 1115-2012 and 1121-2012
8KCAB any serial number equipped with 4-1533 ailerons and 7-1535 metal wing frames.

Description: Service instructions do not specifically reference inspection of the aileron hinge rib or support. This service letter adds an inspection procedure and interval for these components. While there have been no service difficulties with the standard 4-1533 aileron; the structure is identical to that used with the 4-2142 aileron.

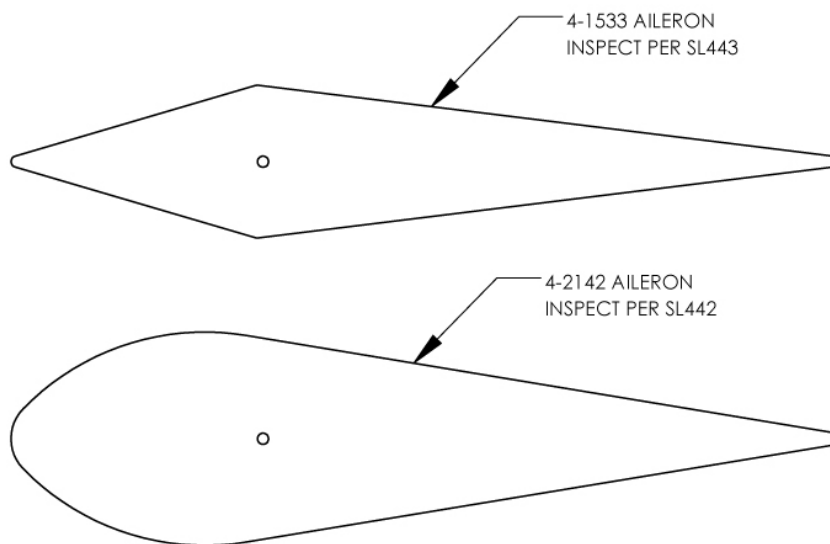


Figure 1, Aileron Part Number

The inspection procedures described herein are not intended to be a substitute for a properly performed 100 hour / annual inspection. Refer to Advisory Circular (AC) 43.13-1B: Acceptable Methods, Techniques, and Practices: Aircraft Inspection and Repair.

Inspection: Inspect aileron hinge ribs and aileron hinge support for cracks or other damage at every 100-hour or annual inspection.

1. Remove left and right wing tips.
2. Remove fabric from the wing tip ribs as shown in Figure 2 (use a soldering iron to open a 1.0 inch diameter hole directly aft of the rear spar, use a razor blade to open all other holes).

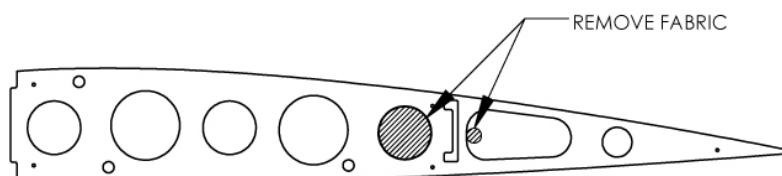


Figure 2, Wing Tip Fabric

3. Open access holes on the bottom of the wing at stations 77.5 and 119.0 as measured from the wing butt rib (2 locations per wing). The access holes are shown in Figure 3. Opening the access holes is optional provided an equivalent inspection can be conducted (i.e. borescope).
4. Remove inspection covers located on the bottom of at wing station 114.0 per Figure 3.

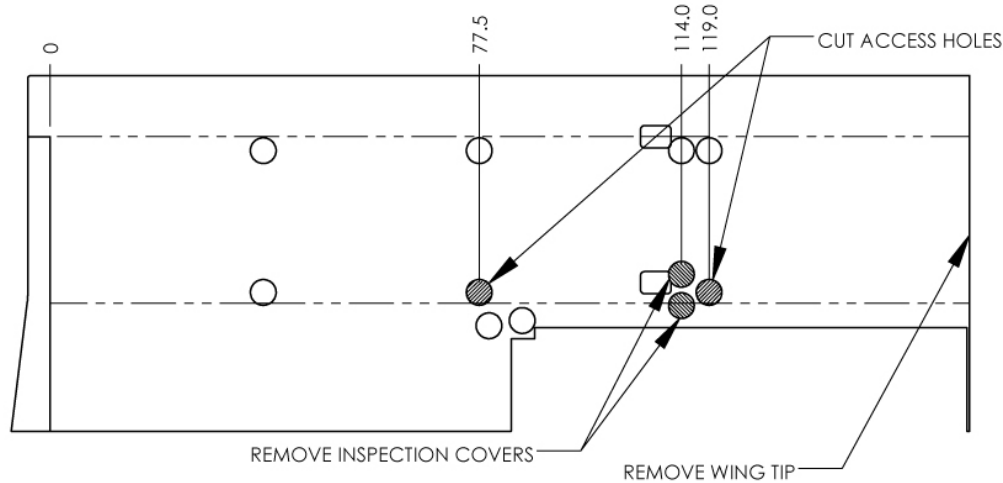


Figure 3, Wing Inspection Locations

5. Visually inspect hinge rib and rear spar gusset for cracks as shown in Figure 4 (3 locations per wing). The cracks originate at the rear spar relief and propagate diagonally toward the rib lightening hole. The cracks may also originate from rivet locations. Using a mirror inspect the opposite side of the hinge rib and gusset for cracks.

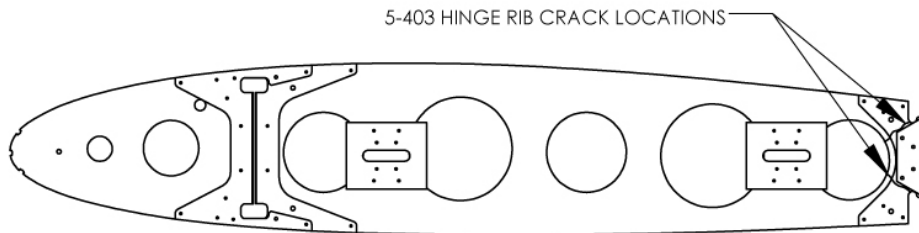


Figure 4, Hinge Rib Crack Locations

6. Visually inspect hinge support for cracks as shown in Figure 5 (2 locations per wing). The cracks may originate from the upper or lower edge of the support and propagate along the bend line. Inspection should include the bolt locations at the rear spar. Inspection of the middle hinge is difficult; the use of a borescope may be necessary.

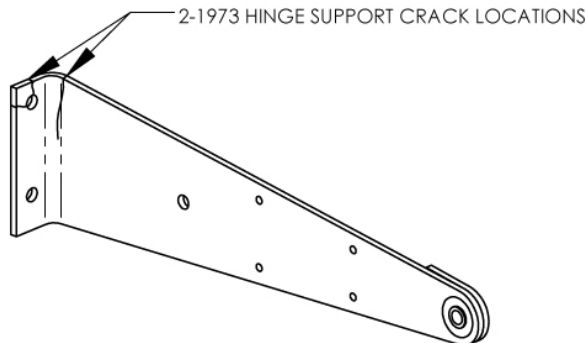


Figure 5, Hinge Support Hinge Locations

7. If no cracks are found. Reinstall wing tips and install 3-639 covers where access holes were opened or covers were removed. Record satisfactory inspection to SL443, initial rev., dated 8-18-2017 or later approved revision in the aircraft logbook. If access holes in step 3 were not opened also record the method used for inspection.
8. If cracks are found replace damaged parts or repair per SL444, initial rev., dated 8-18-2017 or later approved revision. Report the service difficulty via email to aca-dmir@tds.net or phone 262-534-6315.