

P.O. Box 1240  
Afton, WY 83110 USA  
Tel: 307-885-3151  
Fax: 307-885-9674  
e-mail: [aviat@aviataircraft.com](mailto:aviat@aviataircraft.com)

DATE: 24 SEP 2021

SUBJECT: Elevator Horn

REVISION: A

AIRCRAFT MODEL AFFECTED: **Husky A-1, A-1A, A-1B, A-1C-180 & A-1C-200**

**ALL AIRCRAFT SERIAL NUMBERS AFFECTED**

***(CERTIFIED IN ANY AIRWORTHINESS CATEGORY)***

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## **PURPOSE**

To inform aircraft owners and operators of affected aircraft models and serial numbers listed above of a **Mandatory Requirement** to perform inspections on elevator horns.

## **DESCRIPTION**

Examination of elevator horn failures and a study of possible causes indicates that the failures may be due to improper rigging of the horizontal stabilizers on the aircraft. This results in a slight amount of dihedral which causes a bending load on the elevator horns when the elevator is operated through its range of travel. After enough bending cycles, a crack can be induced, and if not discovered in time, will progress until failure of the horn occurs. The elevator horn serves as an attachment point for the elevator control system.

All elevator assemblies, both right and left, part numbers 35008-501 through 35008-506, are affected by this service bulletin.

## **COMPLIANCE**

At each annual inspection, inspect the elevator horns on both elevators for signs of cracks in the vicinity of the weld attachment to the elevator spar. In addition, the rigging of the tail surfaces must be checked to ensure that the stabilizers are not rigged with any dihedral. Rigging instructions can be found in the "Instructions for Continued Airworthiness" for the applicable aircraft model.

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**\*NOTE:**

- Only FAA certified mechanics should perform the instructions in this service bulletin.
- It is the responsibility of owner/operator to have only FAA certified mechanics perform this work.
- Send the completed compliance letter to Aviat Aircraft, Inc. at the provided address.

**ACCOMPLISHMENT INSTRUCTIONS**

Step 1. Locate and remove the two inspection covers from the vertical tail section just above and below the elevators, see figure 1. The use of the applicable section of the illustrated parts catalog (IPC) on tail surface installation can be helpful with disassembly and reinstallation.



Figure 1, inspection holes

Step 2. Remove the three AN 3 bolts from the elevator horns and the elevators will be disconnected from each other and from the elevator control rod, see figure 2.



Figure 2, AN 3 bolts (View looking up)

Step 3. Next remove the AN4 bolts holding both elevators to the horizontal stabilizers, see figure 3.



Figure 3, AN4 bolt

Step 4. With the AN 3 and the AN 4 bolts removed the elevators can be removed from the fuselage by sliding the elevator outboard until the elevator slides off the bearing in the fuselage, see figure 4. Then tip the elevator outboard end down and remove the elevator. Care should be used when removing the elevators to avoid tearing the fabric on the fuselage with the elevator horns.

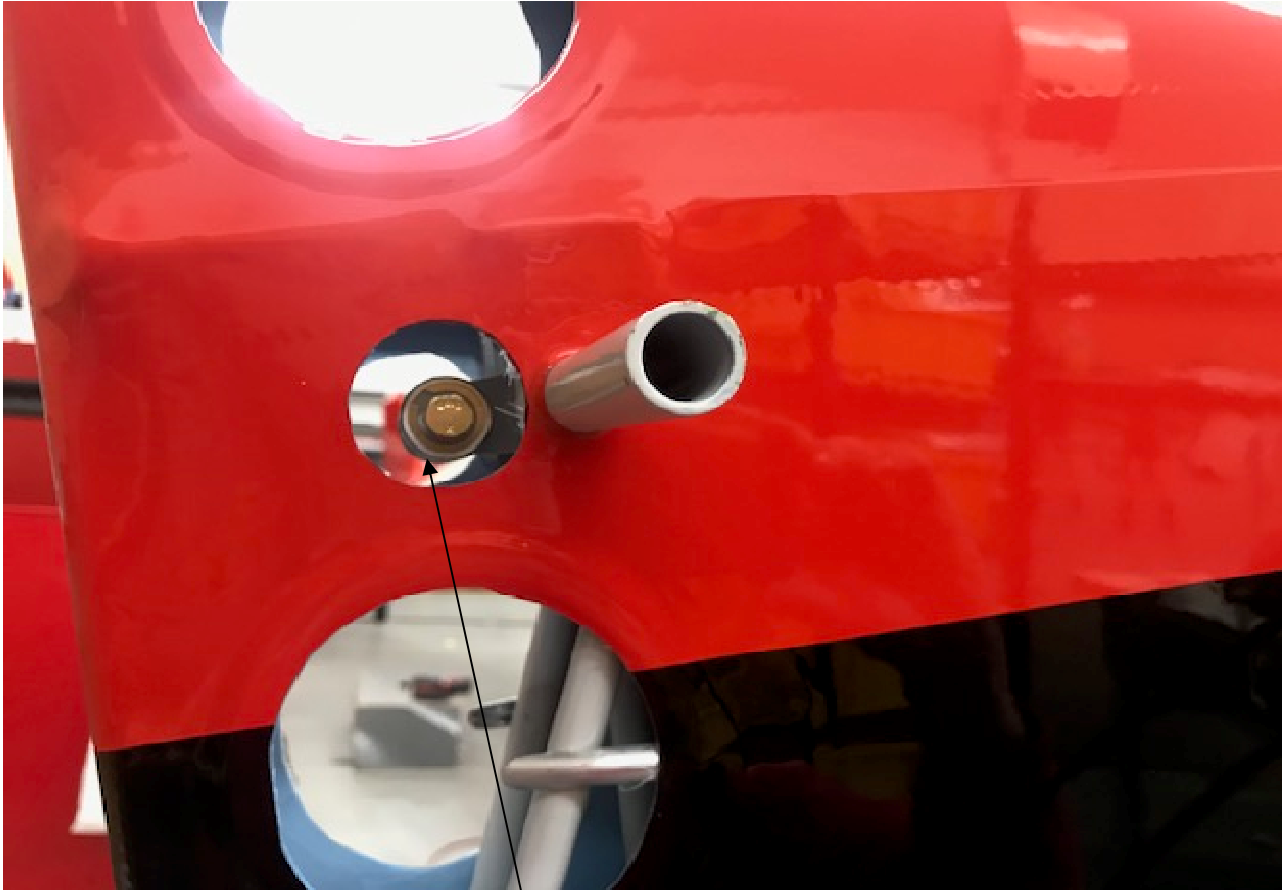


Figure 4, Elevator bearing (stabilizer removed for clarity)

Step 5. Inspect the elevator horns for cracks in the area of the weld attachment to the elevator spar, see figure 5. If no cracks are found in the elevator horns, the elevators can be reinstalled in the reverse order as removed. The Instructions for Continued Airworthiness can be helpful with reinstalling the elevators. All self-locking nuts must be replaced during reinstallation and all nuts should be installed using the torques values as specified by AC 43.13-1.

If during the inspection, cracks are found in an elevator horn, the elevator horn must be replaced. In addition, the rigging of the tail surfaces must be checked to ensure that the horizontal stabilizers are not rigged with any dihedral. Rigging instructions can be found in the Instructions for Continued Airworthiness for the applicable aircraft model.

**POSSIBLE CRACK LOCATIONS  
(REF: SERVICE BULLETIN 11)**

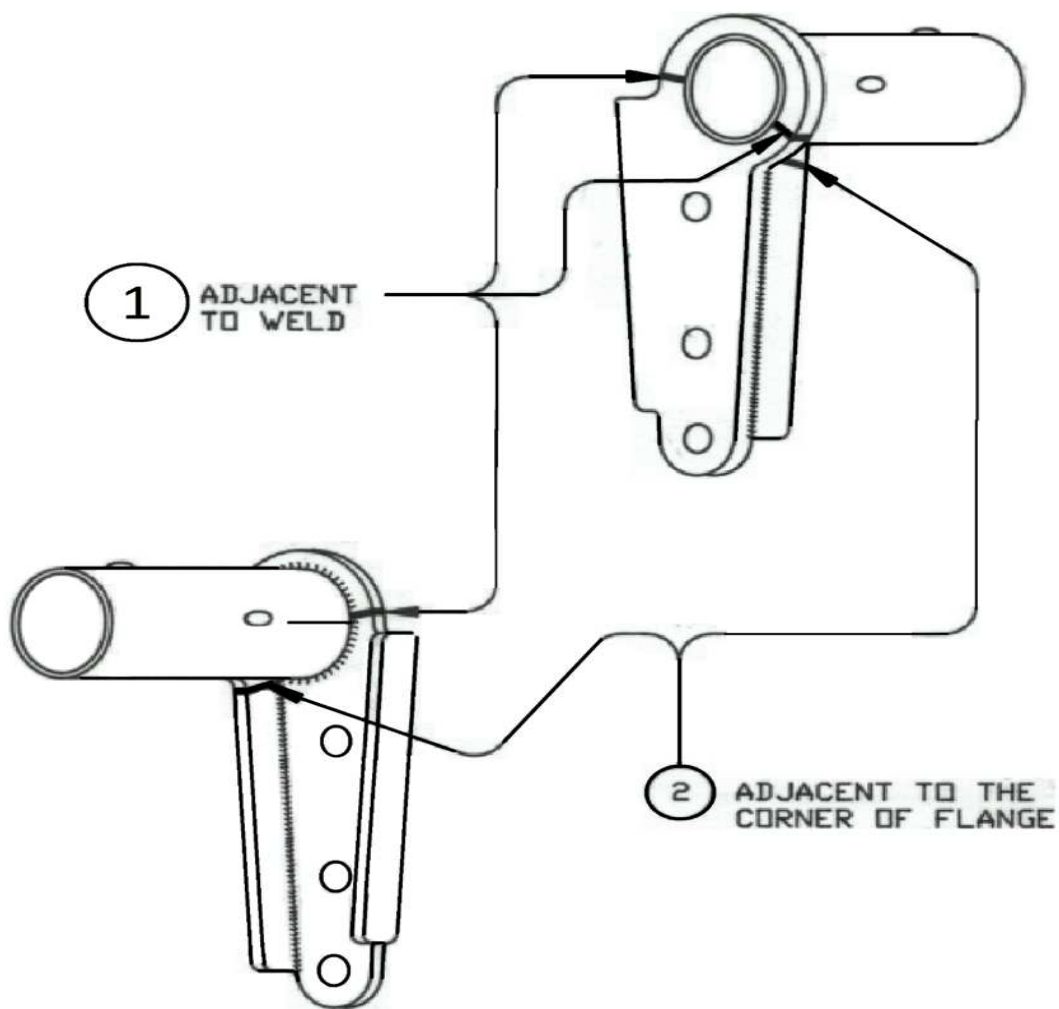


Figure 5 Elevator horn attachment to the elevator spar

Step 6. Make a logbook entry recording the results of this inspection.

Step 7. Complete the service bulletin compliance letter and return to Aviat Aircraft Inc.

**COMPLIANCE LETTER**

This is to certify that I have complied with Service Bulletin 11 on airplane:

Model Number: \_\_\_\_\_

Serial No: \_\_\_\_\_

Registration Number: \_\_\_\_\_

Aircraft Hours: \_\_\_\_\_

Date: \_\_\_\_\_

Were cracks discovered on the elevator horns during this inspection: Yes: \_\_\_ No: \_\_\_

Horizontal tail rigging: Dihedral: \_\_\_\_\_ No Dihedral: \_\_\_\_\_

FAA Certified Repairman: \_\_\_\_\_

License No.: \_\_\_\_\_

Signed: \_\_\_\_\_

Comments:

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Return completed compliance letter to:

Aviat Aircraft, Inc.  
 Engineering Department  
 P.O. Box 1240  
 Afton, WY 83110  
 Fax: 307-885-9674  
 Email: [engineering@aviataircraft.com](mailto:engineering@aviataircraft.com)