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TOTAL PERFORMANCE

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SERVICE BULLETIN 00134 REV 1

Date Released: 08/22/26 – Rev 1 (In Step 3 added an allowable e/D = 1.00 with stated conditions. Added note on original RV-4 before Step 1)

08/13/26 – (Rev 0 Initial Release)

Date Effective: 08/22/26

Subject: Horizontal Stabilizer Forward Attach Bolt Position

Affected Models: RV-4, RV-6/6A, RV-7/7A, RV-8/8A

Required Action: Inspect aircraft to determine if bolts positions are within the limits specified by this service document.

Time of Compliance: Within the next 10 flying hours or 90 days from the effective date of this service document whichever comes first.

Supersedes Notice: N/A

Labor Required / SLSA Warranty Allowance: N/A

Level of Certification: N/A

Synopsis:

The plans pages for the horizontal stabilizer attach specify the position of the horizontal stabilizer forward spar attach bolts. See Figure 2 and Figure 3. Some aircraft have been constructed with these bolt holes significantly displaced from the given location. This has resulted in inquiries which have been dealt with on a case-by-case basis. This service document establishes the acceptable limits for the bolt locations. Contact Van's Aircraft for further guidance if an aircraft does not meet the criteria established in this document.

Materials Required:

No materials are required to complete the steps necessary to achieve compliance with this Service Bulletin 00134

Method of Compliance:

NOTE: Except where called out for simplicity the RV-7 will be shown throughout this document. Other aircraft will be similar in construction with relevant part numbers. Consult the instructions provided with your aircraft for further information.

NOTE: Some original RV-4 aircraft were built with a single bolt attach the forward spar of the horizontal stabilizer on each side of the aircraft. These aircraft should be upgraded to meet the altered stab attach KAI 30 Rev 1 Nov 1983. Aircraft with custom attach methods should contact Van's Aircraft for further assistance.

Step 1: Remove the empennage fairing.

Inspect the position of the bolts attaching the forward spar of the horizontal stabilizer to the fuselage. The bolts heads are visible looking from above. Also use a mirror and light source inspect the bottom side of the joint. A cursory inspection may reveal that there are no issues. If the bolt positions appear to be outside of the acceptable range defined by this document remove the front horizontal stabilizer bolts to make accurate measurements in the following steps.

The strength of this joint and the airframe structure as a whole is relatively tolerant of variations in the outermost bolt hole position in the fuselage longerons, even where this involves less than what are normally considered minimum edge distances, zero edge distance and even bolt holes cutting through the inner edge of the longeron flange.

In the fuselage longeron, spanwise locations of the outermost bolt positions that result in the hole for the outboard bolt having a reduced edge margin in the longeron, cutting through the inboard edge of the longeron or missing the longeron altogether is acceptable. See Figure 1.

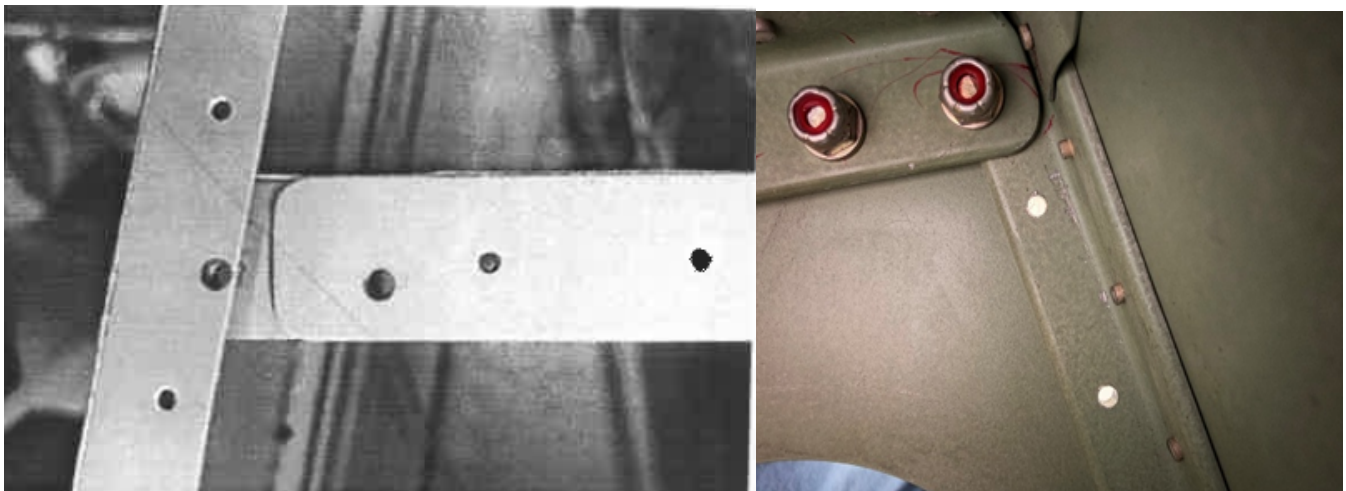


FIGURE 1: LONGERON REDUCED EDGE DISTANCE
(HORIZONTAL AND TOP DECK REMOVED)

Step 2: Measure the distance between the attach bolts on one side of the aircraft (see the set of bolts marked with arrows in Figure 2 with a distance of 27/32 inches between them). At minimum the distance between the bolts should be 25/32 inches. If the distance is less than 25/32 inches contact Van's Aircraft for further assistance.

Step 3: Measure the edge distance between the center of each bolt hole and the forward edge of the HS-714 Attach Angle. Repeat the measurement for the forward edge of the F-710B Angle. See Figure 2 and Figure 3. In no case may the edge distance be less than $e/D = 1.5$ (e/D the distance from the center of a hole to the edge of the part divided by the diameter of the hole $.1875 \times 1.5 = .281$). If the e/D is less than 1.5 contact Van's Aircraft for further assistance.

Measure the edge distance between the center of the outboard most bolt holes and the outboard edge of the HS-714 Attach Angle. In no case may the edge distance be less than $e/D = 1.5$. If the e/D is less than 1.5 contact Van's Aircraft for further assistance.

Check to ensure that the outboard end of F-710B is resting on the F-718 Longerons. Measure the edge distance between the center of the outboard most bolt holes and the outboard edge of the F-710B Angle. In no case may the edge distance be less than $e/D = 1.33$ ($.1875 \times 1.33 = .249$) unless the entire diameter of the outboard most bolt hole is within boundary of the main longeron (see Figure 5) in which case the edge distance of $e/D = 1.00$ ($.1875 \times 1.00 = .188$) is acceptable. If the e/D is less than those specified above contact Van's Aircraft for further assistance.

For the edge distance between the center of the bolt position and the forward edge of the F-710B Angle and HS-714 Attach Angle, the minimum acceptable e/D may be more than 1.5 depending on the results obtained in Step 5 and the values in the chart in Figure 4.

Step 4: For the left and right sides of the aircraft, measure the distance from the center of the bolt pattern to the centerline of the aircraft.

For example, Figure 2 the center of the bolt pattern would be 4 1/16 inches plus half the distance between the bolts or half of 27/32 inches which results in a bolt pattern center distance to the centerline of 4.484 inches.

Step 5: Plot the e/D value between the hole center and the forward edge of the attach angles from Step 3 and the bolt pattern center distance to the centerline measured in Step 4. The plotted point must be outside the unacceptable region noted in Figure 4.

For example, the bolt pattern distance from Step 4 was 4.484 inches. Assume the nominal e/D of 2. This example corresponds to the RV-7 nominal point given on the chart in Figure 4. If the point on the chart is within the unacceptable area on the chart contact Van's Aircraft for further assistance.

Step 6: Make a logbook entry indicating compliance with this service document per the requirements of the controlling authority/agency.

If you are no longer in possession of this aircraft, please forward this information to the present owner/operator and immediately notify Van's Aircraft, Inc. via email at registrations@vansaircraft.com. Please include the new owner's contact information and date the aircraft ownership transferred.

Information regarding establishing/transferring aircraft ownership, registration and licensing is available at: <https://www.vansaircraft.com/qr/transfer-of-ownership/>

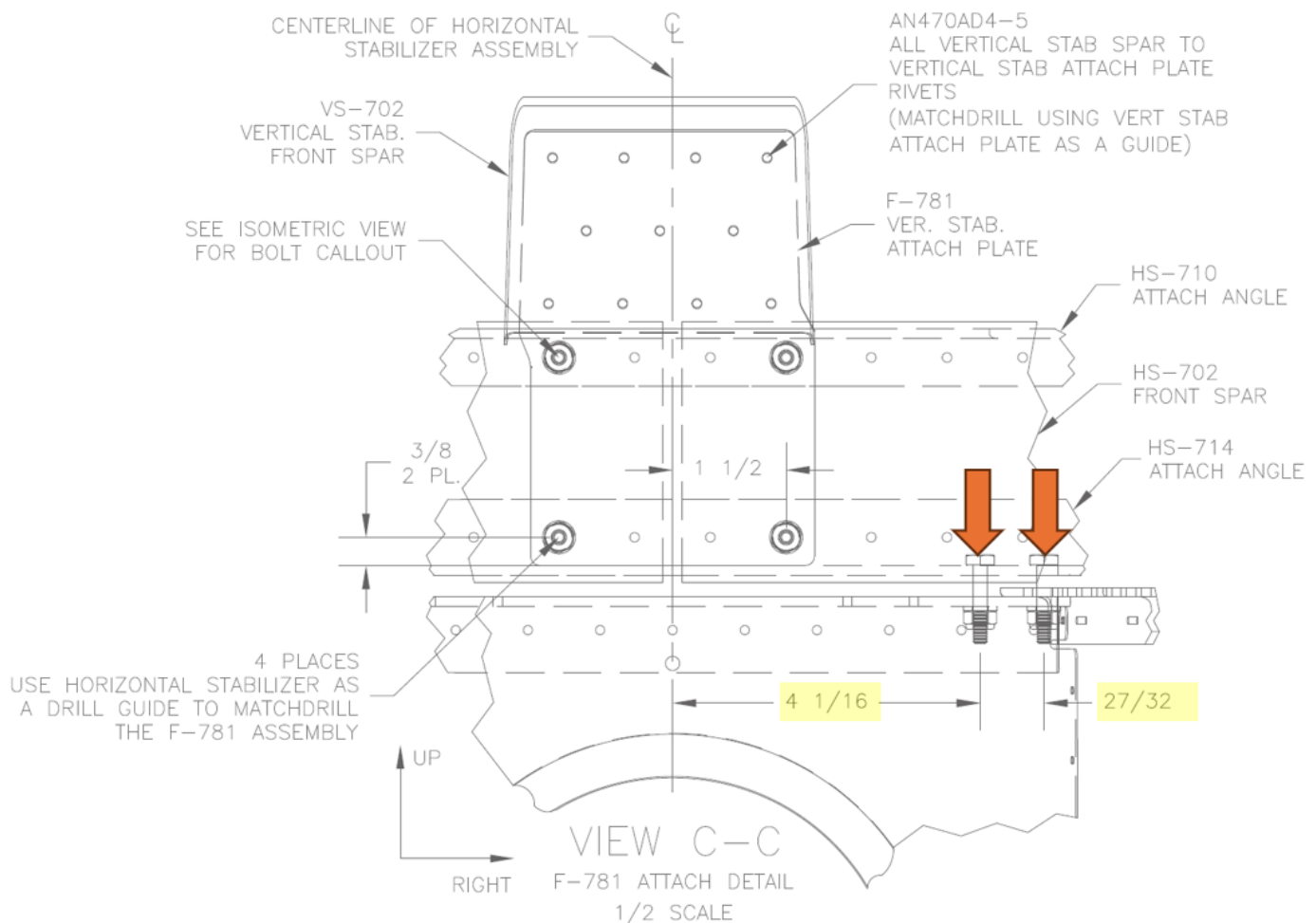


FIGURE 2: RV-7 DEG 27A TYPICAL HORIZONTAL STABILIZER ATTACH FRONT VIEW

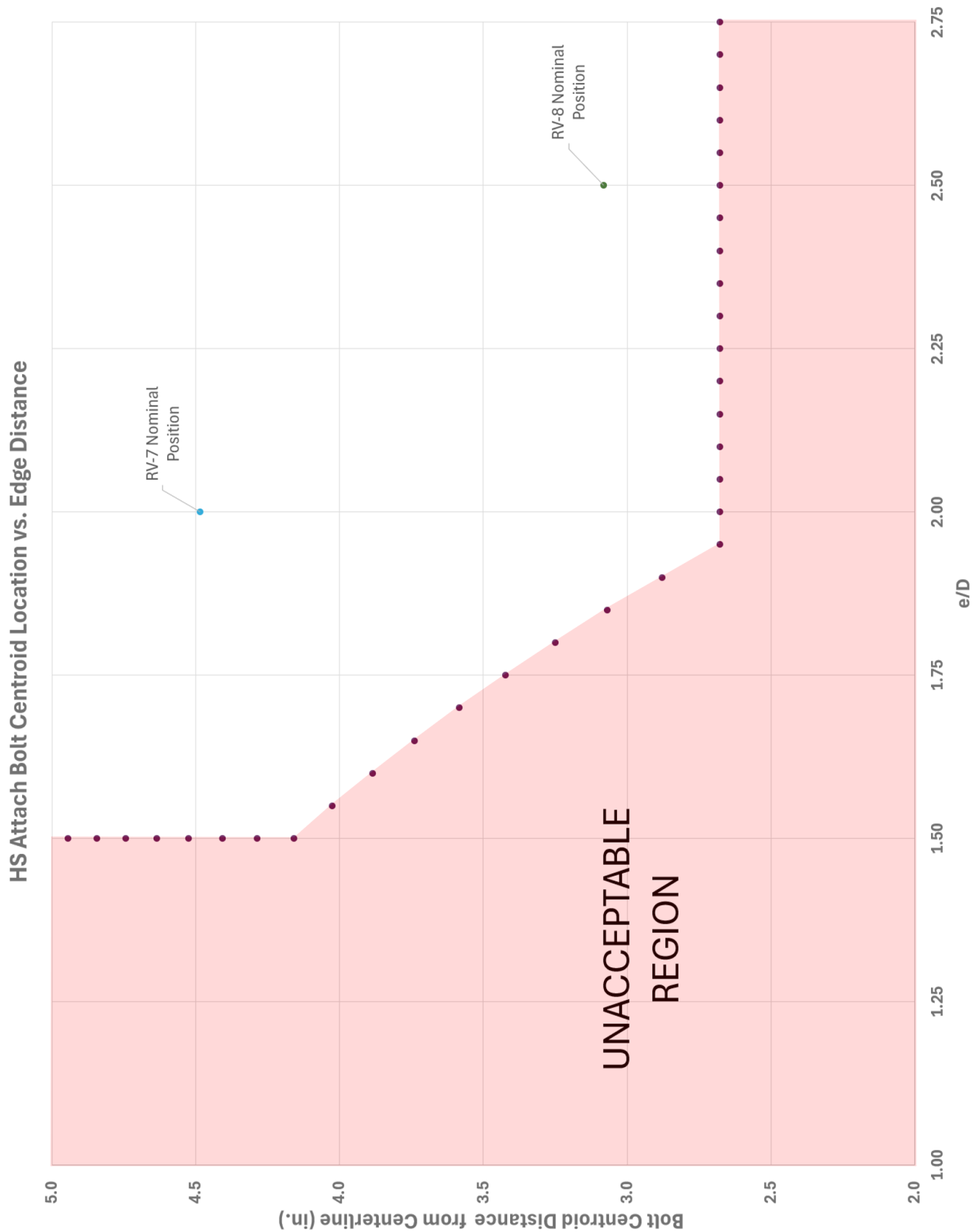


FIGURE 4: ACCEPTABLE BOLT POSITION CHART

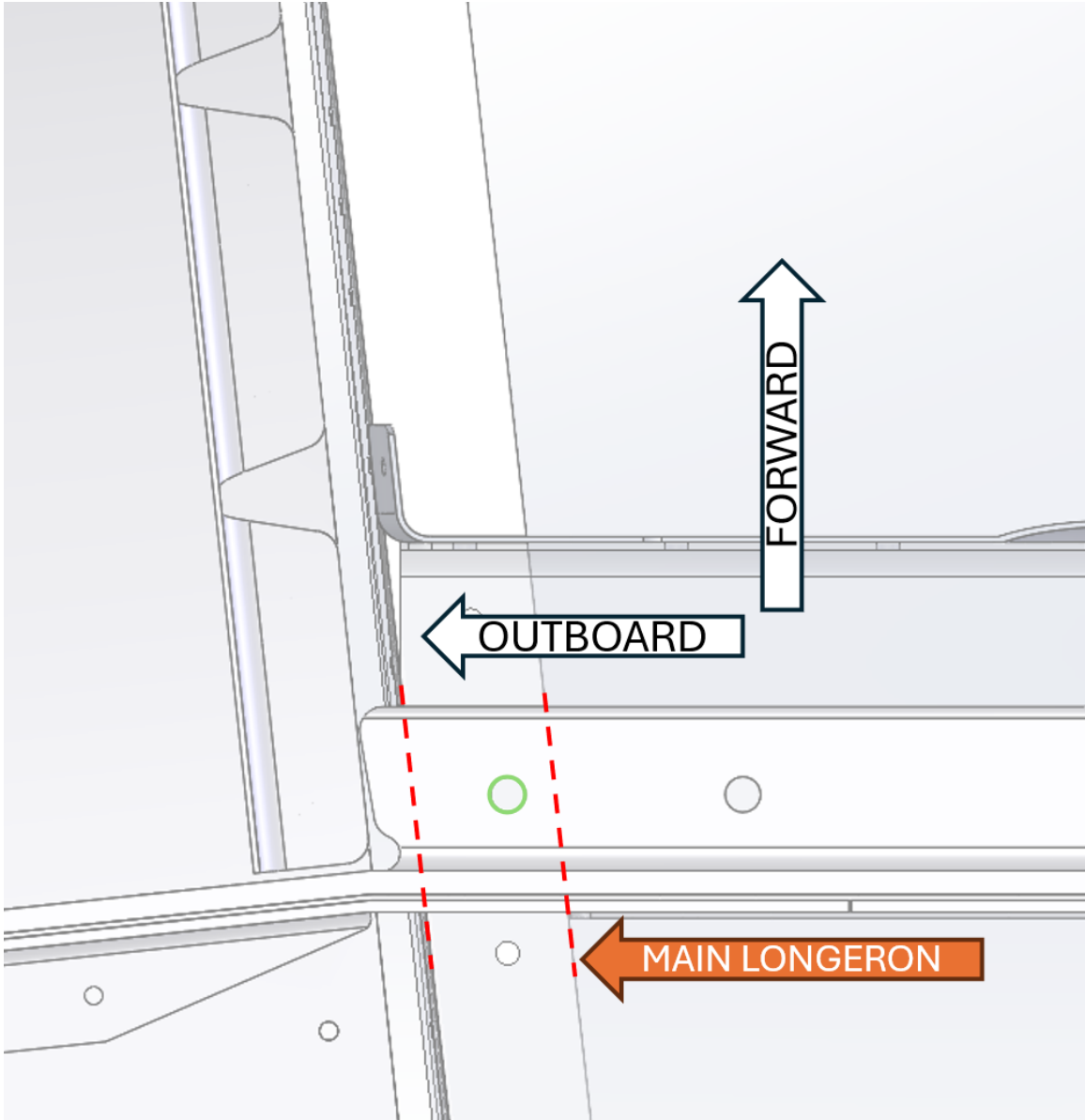


FIGURE 5: OUTBOARD BOLT POSITION & e/D