VAN'S AIRCRAFT
TOTAL PERFORMANCE

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SERVICE LETTER 00068

Date Released: January 23, 2023

Date Effective: January 23, 2023

Subject: Optional Stabilator Hinge Spacer Installation

Affected Models: ELSA RV-12/12iS Empennage Kits shipped before December 2022

SLSA RV-12/12iS aircraft:
Serial Numbers 12001 to 12107

Required Action: None

Time of Compliance: Optional

Supersedes Notice: N/A

Labor Required / SLSA Warranty Allowance: N/A

Level of Certification: SLSA: LSA Repairman Maintenance or A&P
ELSA: Owner (certification not required)
Check the rules of the local controlling authority/agency and the operating limitations for your aircraft.

Synopsis:

Attaching the stabilator to the tail of the RV-12 and RV-12iS can be challenging due to the washers used between the hinge brackets and tailcone flange bearings. Permanent shims have been designed to reduce the difficulty of the operation.

RV-12 and RV-12iS aircraft with empennage kits shipped before 09/18/18 must complete SB 18-02-02 prior to or in conjunction with this SL.

Materials Required:

The following materials are required to complete the steps necessary to achieve compliance with this Service Letter.

SL-00068-KIT
Download from the Van's website: the latest revisions of RV-12iS KAI sections 09iS/U, 11iS/U, 12iS/U, 38 iS/U. RV-12 owners should also download RV-12 KAI sections 09, 11, 12, 32, and SB 18-02-02.

Method of Compliance:

NOTE: Figures in this Service Letter show the RV-12iS Stabilator. RV-12 and early RV-12iS aircraft with SB 18-02-02 installed have different parts and hardware. Refer to SB 18-02-02 for installation details to supplement this Service Letter.

Step 1: Loosen the stabilator cables per KAI 38iS/U (RV-12iS) or KAI 32 (RV-12).

Step 2: Remove the empennage fairing per KAI 12iS/U (RV-12iS) or KAI 12 (RV-12).

NOTE: Based on experience at Van's Aircraft, the standard stackup of washers between the stabilator hinges and the tailcone flange bearings is one NAS1149F0463P washer on the outboard side, and one NAS1149F0432P on the inboard side. This may vary depending on the aircraft.

Step 3: Inspect and make note of the washer thicknesses used at the interfaces between the stabilator hinges and tailcone flange bearings.

Step 4: Remove the stabilator from the tailcone. See KAI 11iS/U (RV-12iS) or KAI 11 (RV-12).

Step 5: Remove the stabilator Hinge Stop hardware per KAI 9iS/U (RV-12iS) or SB 18-02-02 (RV-12).

Step 6: Drill out the rivets in the inboard side of the Hinge Gussets, as shown in Figure 1.

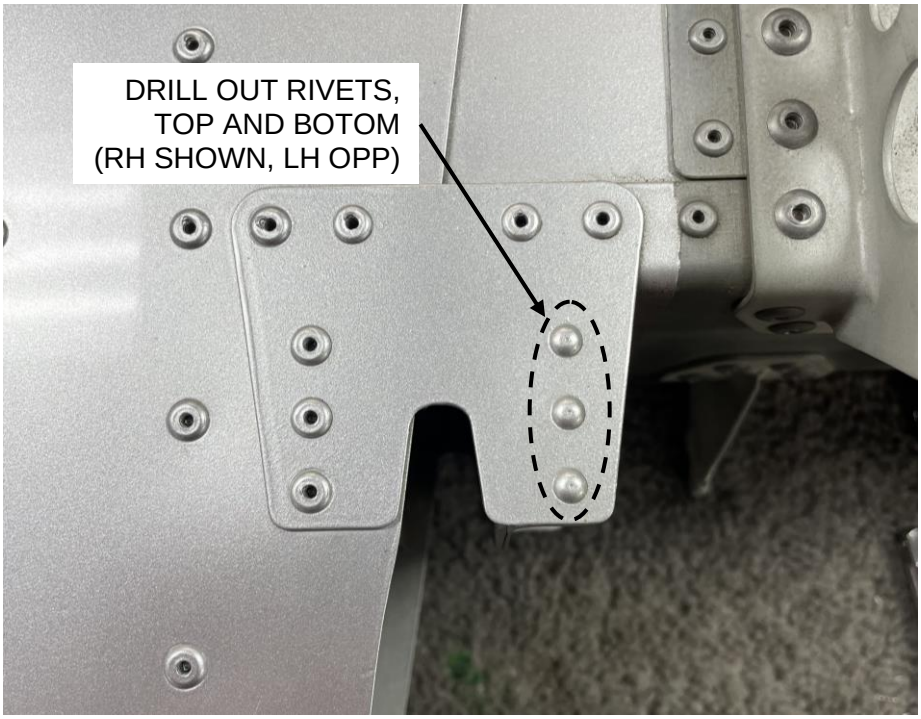

FIGURE 1: RIVETS IN INBOARD GUSSETS

Step 7: Drill out the blind rivets (RV-12iS) or unbolt (RV-12) to remove the Inboard Hinge Bracket Assemblies, as shown in Figure 2.

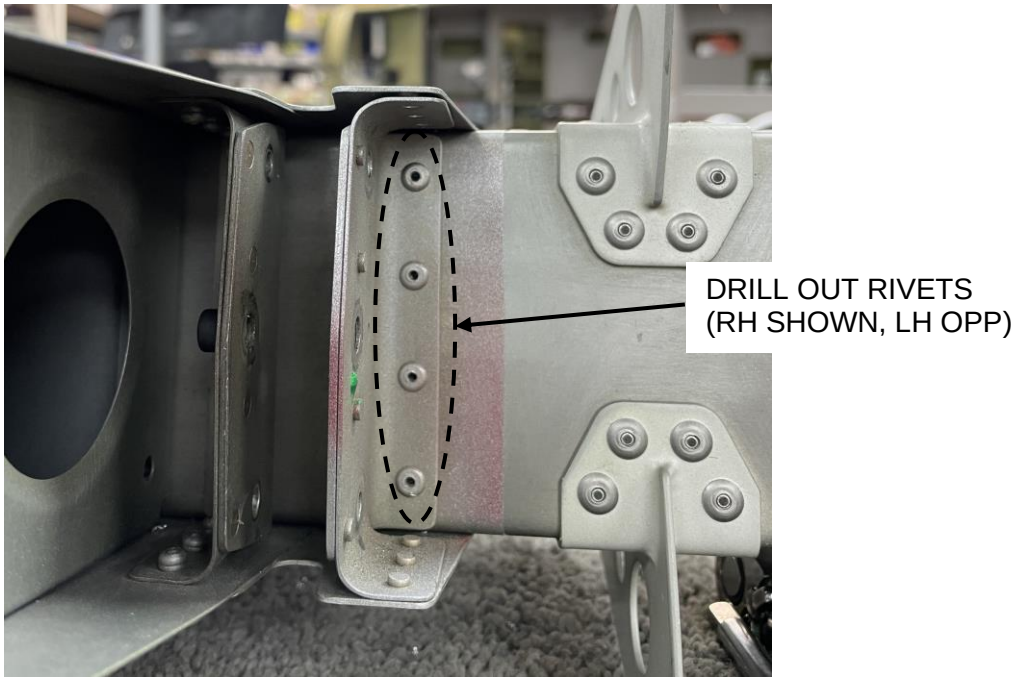

FIGURE 2: RIVETS IN INBOARD HINGE BRACKET ASSEMBLIES

Step 8: Drill out the noted rivets in the Inboard and Outboard Hinge Bracket Assemblies, as shown in Figure 3.

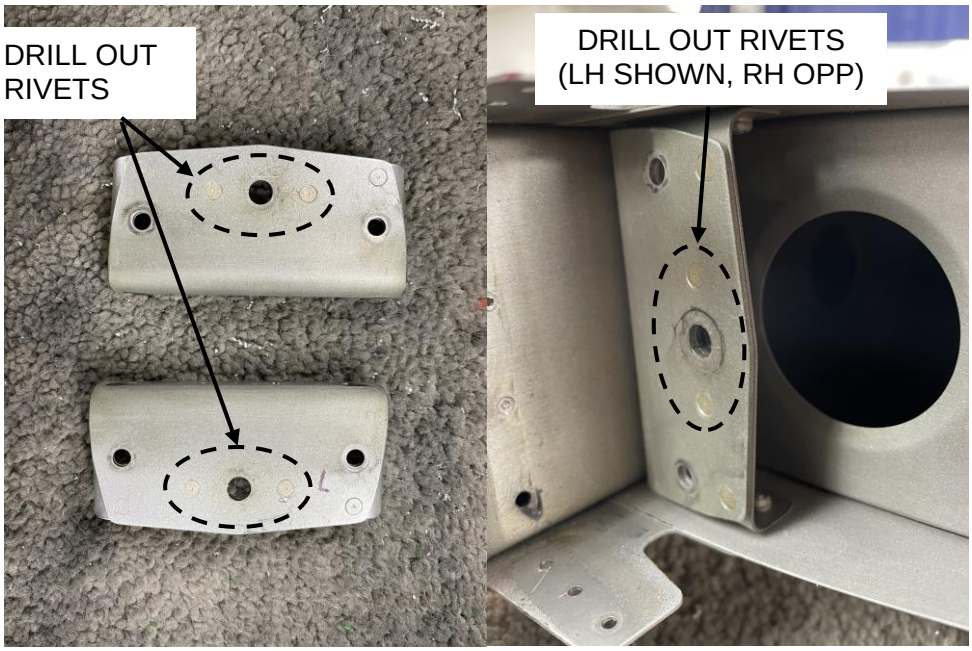

FIGURE 3: NUTPLATE RIVETS IN HINGE BRACKET ASSEMBLIES

Step 9: Prime or Alodine bare metal in the countersinks of the Inboard and Outboard Hinge Bracket Assemblies.

Step 10: Deburr and radius the forward edge of the F-12191 and F-12192 Hinge Spacers as described in KAI 9iS/U.

Step 11: Machine Countersink the #40 holes in the F-12191 Hinge Spacers and Dimple the #40 holes in the F-12192 Hinge Spacers.

NOTE: Due to the possible variation in washer stackup noted in Step 3, the F-12191 and F-12192 Hinge Spacers may need to be riveted in the opposite location (outboard vs. inboard). Use the same material thickness that was noted in Step 3.

NOTE: The outboard Hinge Spacers can be installed with a pneumatic squeezer and thin-nose yoke, or bucked using a small bucking bar and rivet gun. See Figure 5 for an example of installation with a pneumatic squeezer.

Step 12: Rivet the F-12191 Hinge Spacer and nutplate to the Outboard Hinge Assembly as shown in Figure 4.

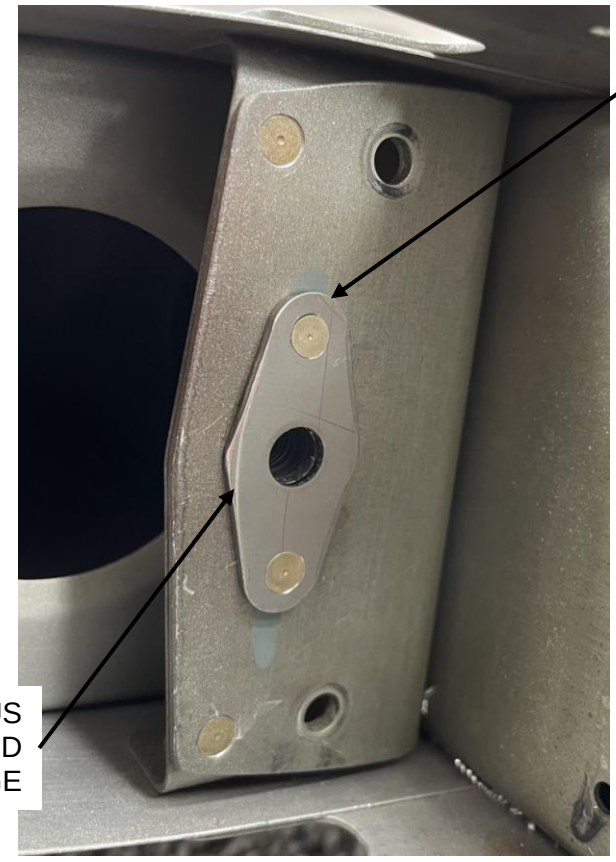

FIGURE 4: OUTBOARD HINGE SPACER INSTALLATION

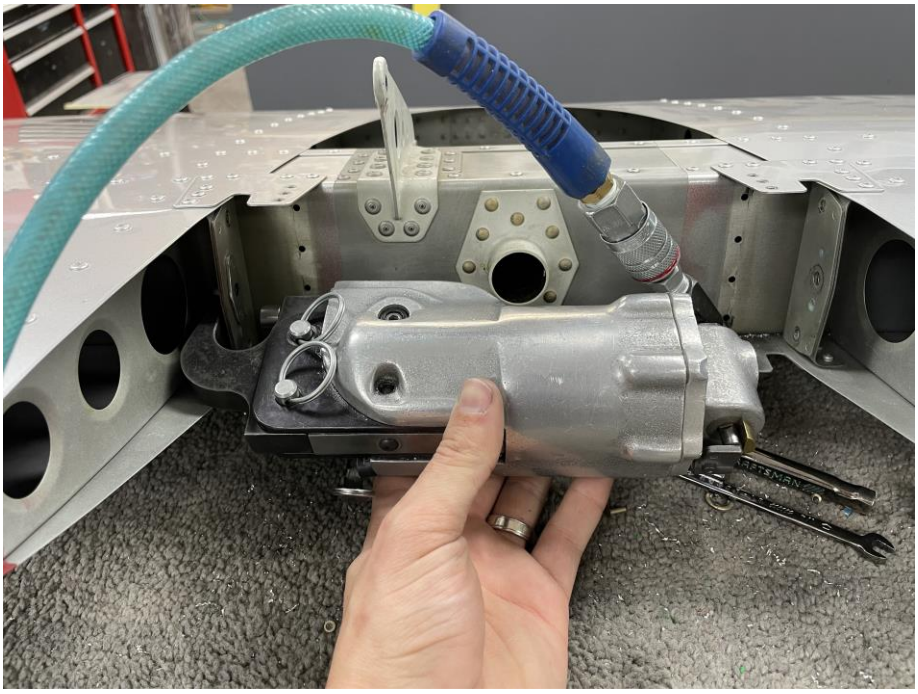

FIGURE 5: INSTALLATION OF OUTBOARD HINGE SPACERS WITH PNEUMATIC SQUEEZER

Step 13: Rivet the F-12192 Hinge Spacer to the Inboard Hinge Assembly as shown in Figure 6.

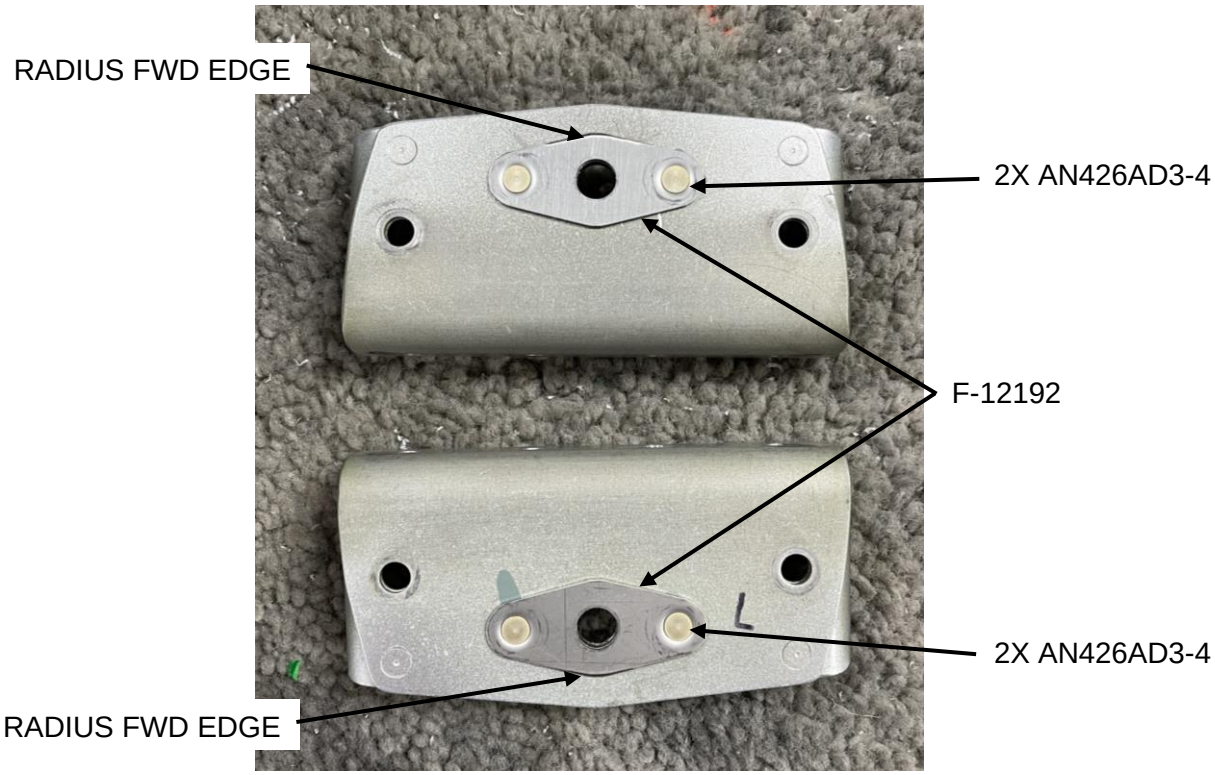

FIGURE 6: INBOARD HINGE BRACKET ASSEMBLIES

NOTE: Do not install the Hinge Stop hardware until Step 16.

Step 14: Install the Inboard Hinge Bracket Assembly to the stabilator spar box per KAI 9iS/U (RV-12iS) or SB 18-02-02 (RV-12). Figure 7 shows installation details for an RV-12iS.

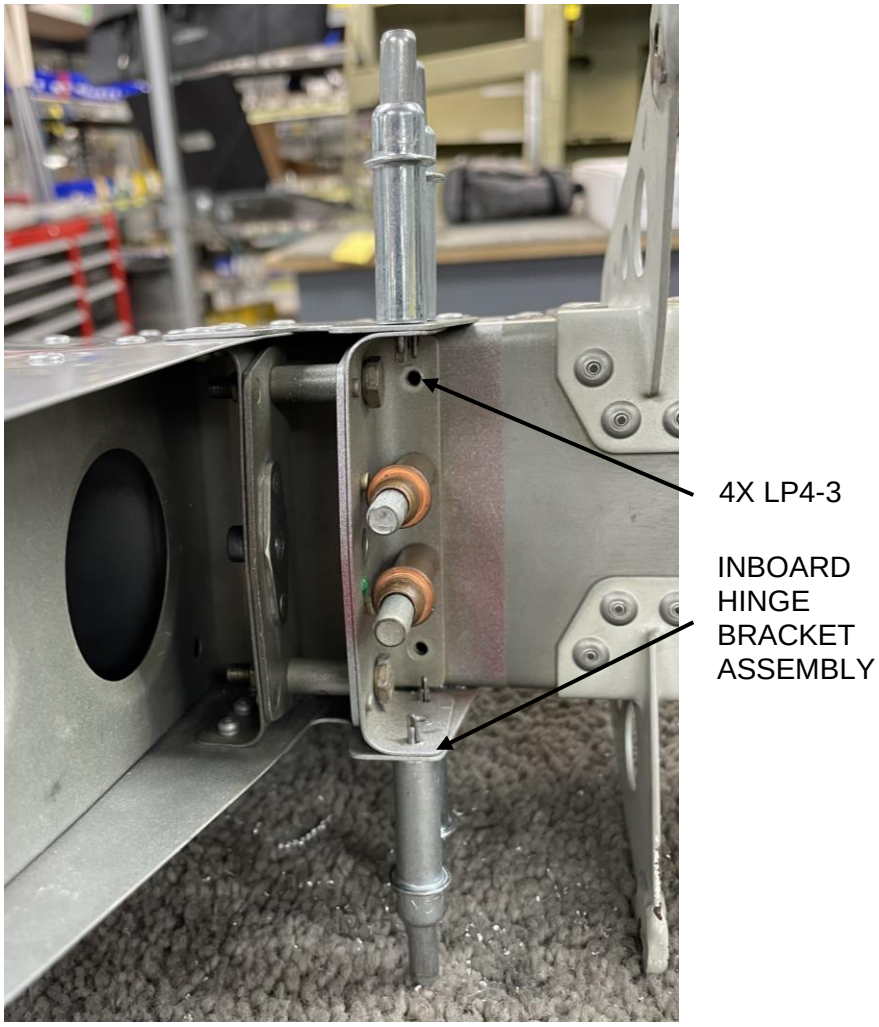

FIGURE 7: RIVETING INBOARD HINGE BRACKET ASSEMBLIES TO SPAR BOX (RH SHOWN, LH OPPOSITE)

Step 15: Rivet the Hinge Gussets to the Hinge Assemblies. See Figure 8 and KAI 9iS/U (RV-12iS) or SB 18-02-02 (RV-12)

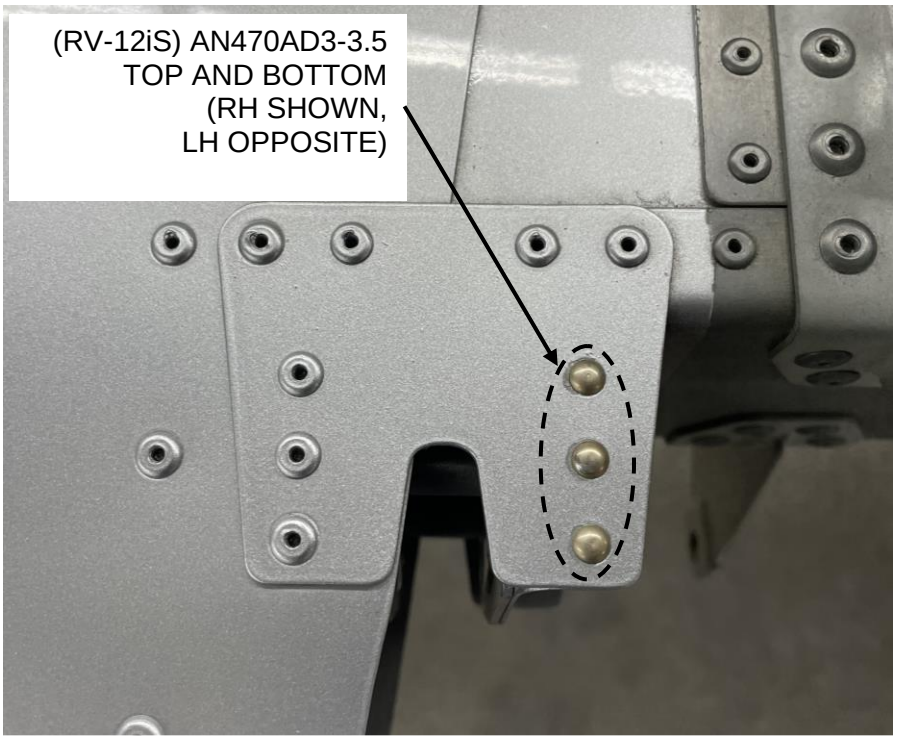

FIGURE 8: RIVETING GUSSET TO INBOARD HINGE BRACKET ASSEMBLY

Step 16: Install the Hinge Stop hardware per KAI 9iS/U (RV-12iS) or SB 18-02-02 (RV-12).

Step 17: Install the stabilator to the tailcone per KAI 11iS/U (RV-12iS and RV-12).

Step 18: Tension the stabilator cables per KAI 38iS/U (RV-12iS) or KAI 32 (RV-12).

Step 19: Install the empennage fairing per KAI 12iS/U (RV-12iS) or KAI 12 (RV-12).

Step 20: Make a logbook entry indicating compliance with service document per the requirements of the controlling authority/agency.

Place a copy of this notification in the back of the maintenance manual for your aircraft. Add the name and date of the service information to the Addendum Documents List at the front of the Maintenance Manual.

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.

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