



SERVICE BULLETIN 00053

Date Released:	February 16, 2022
Date Effective:	February 16, 2022
Subject:	Tailcone Skin Stiffening Clips
Affected Models:	RV-12, RV-12iS
Required Action:	Inspect lower tailcone skin for cracks and install new tailcone stiffener clips
Time of Compliance:	Within 100 hours or at the next 12-month inspection, whichever occurs first
Supersedes Notice:	N/A
Labor Required / SLSA Warranty Allowance:	2.4 hours
Level of Certification:	SLSA: LSA Repairman Maintenance or A&P ELSA: Owner (certification not required) <i>Check the rules of the local controlling authority/agency and the operating limitations for your aircraft.</i>

Synopsis:

Van's Aircraft has received reports of cracks forming in the lower tailcone skins of RV-12/12iS aircraft near the tailcone bulkheads. These cracks were observed along the centerline of the aircraft and forward of a bulkhead. Clips have been designed to stiffen these locations, thereby preventing the formation of these cracks.

The clips must be installed whether cracks are present, or not. If cracks are found, an additional patch plate needs to be fabricated and installed along with the clips.

Materials Required:

The following materials are required to complete the steps necessary to achieve compliance with this Service Bulletin:

Purchase SB-00053
Tail Stand
3/8" Plywood
.032 Aluminum Sheet (required only if cracks are found)

Method of Compliance:

Step 1: Install a tail stand to prevent the tail of the aircraft from moving or striking the ground while work is being performed.

Step 2: Remove the seats and baggage bulkhead to gain access to the tailcone.

NOTE: Do not place plywood on top of stiffeners or bulkheads. The weight of the person working in the tailcone should not exceed 200 lbs.

Step 3: Fabricate platform sections from plywood to be placed on the skins between the stiffeners as shown in Figure 1 to provide support during completion of this service bulletin.

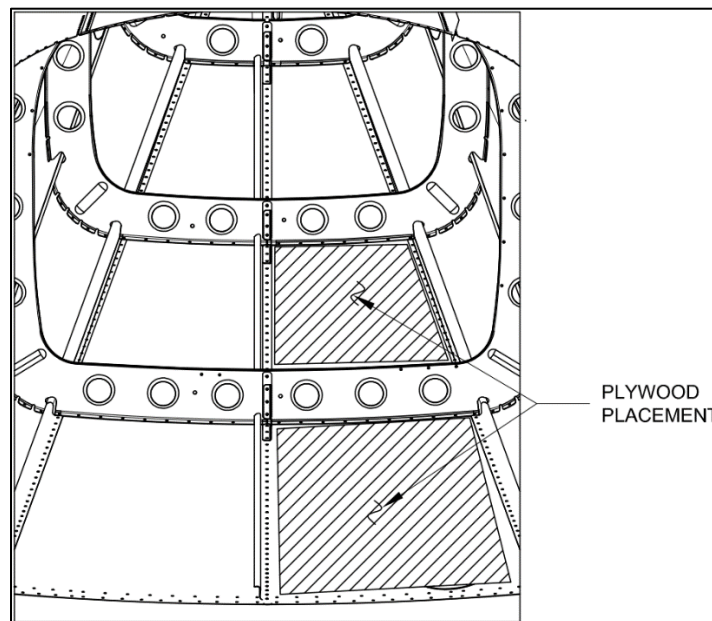


Figure 1 - Example Plywood Support Placement

Step 4: Deburr all F-12183 clips and prime if desired.

NOTE: Cracks have occurred along the line of rivets connecting the F-01282-L/R-1 Skins.

Step 5: Inspect the lower fuselage skin for cracks near the F-1208, F-1209, and F-1210 bulkheads.

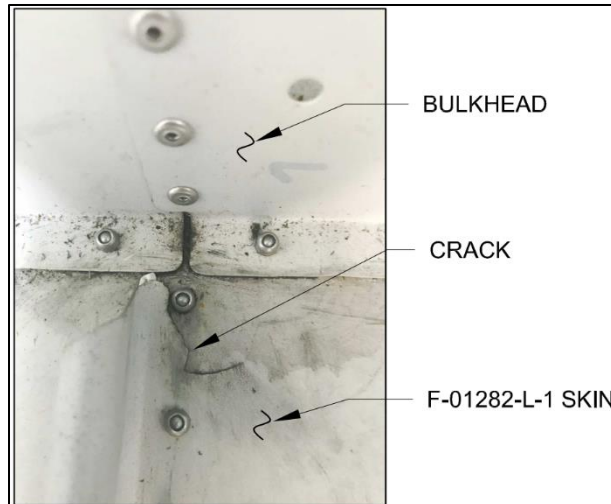


Figure 2 - Example Crack in Skin

NOTE: Do not install a patch plate without installing the fuselage clips at the same time as there will be rivets common to the patch plate, skin, and clips.

Step 6: If cracks are not found, proceed to Step 7.

If cracks are found, stop drill the edge of each crack and fabricate a diamond shaped patch like the one shown in Figure 3, below. Fabricate the patch from .032" Aluminum Sheet.

The patch should capture at least three rivets past the crack in the skin or forward and aft of the bulkhead and two rivets left and right of centerline in the bulkhead. Rivets that have a crack within two rivet diameters of the rivet do not count towards the required minimum rivets. The edges of the patch must maintain a minimum edge distance of 2.5 rivet diameters from the center of a rivet to the edge.

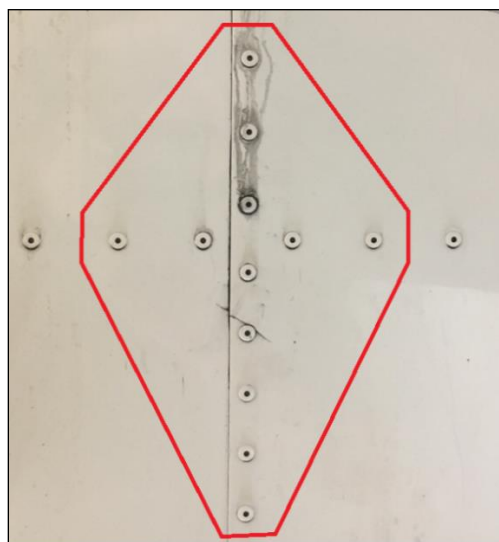


Figure 3 - Example Patch Plate Outline

NOTE: Reference KAI Section 5 for rivet removal procedure.

Step 7: Remove rivets in skins as shown in Figure 4 at the F-1208 and F-1209 bulkhead locations. At the F-1210 bulkhead, only remove the three forward rivets depicted in Figure 4.

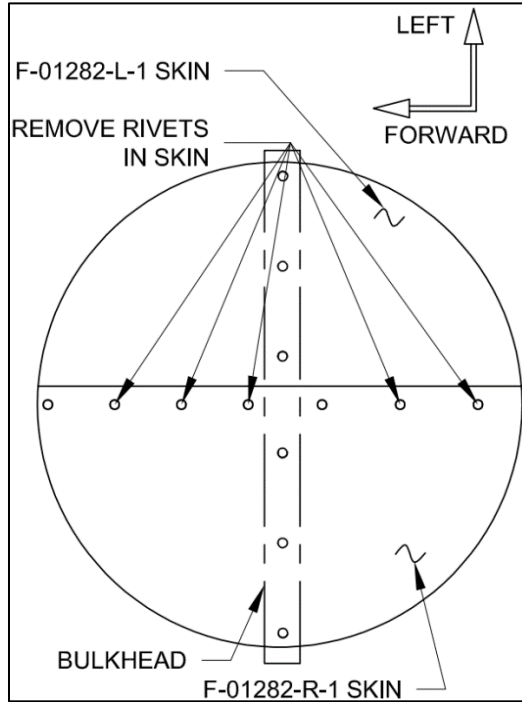


Figure 4 - Rivet Removal in Skins

Step 8: Remove rivets in the F-1208, F-1209, and F-1210 bulkheads as shown in Figure 5.

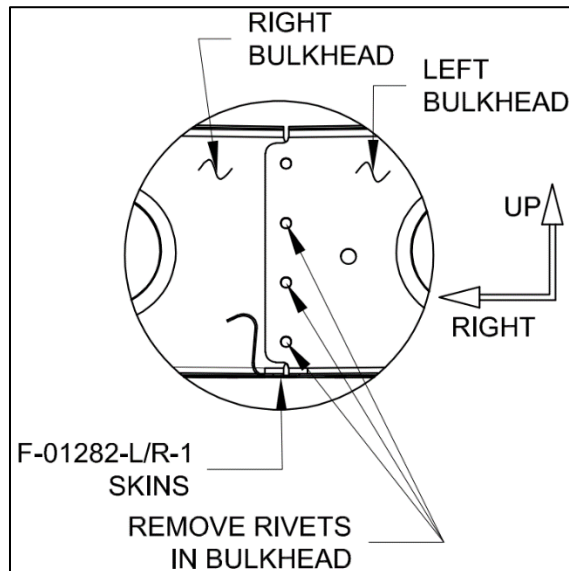


Figure 5 - Rivet Removal in Bulkheads

NOTE: If a patch plate is needed at the F-1208 bulkhead, ensure it is installed at the same time as the clips since it will have rivets common to the clips being installed.

Step 9: Locate the F-12183A and F-12183B clips. These clips will be used on the forward and aft side of the F-1208 bulkhead. Two .063" holes have been punched in the web of F-12183A and F-12183B to help in identification.

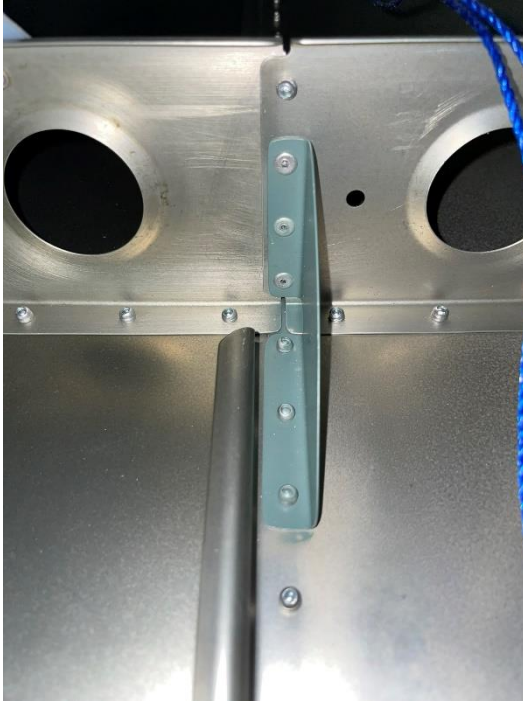


Figure 6 - Forward Clip Installation



Figure 7 - Aft Clip Installation

NOTE: The lower hole of the clips that is common to the bulkhead is difficult to access if the forward clip is not rotated to allow room for the rivet puller. See Figure 8.

Step 10: Rivet the lower hole through the F-12183A, F-1208, and F-12183B using an LP4-3 rivet.



Figure 8 - Riveting Lower Hole

Step 11: Cleco the clips into place and install LP4-3 rivets into the remaining holes.



Figure 9 - Both Clips Installed

NOTE: If a patch plate is needed at the F-1209 bulkhead, ensure it is installed at the same time as the clips since it will require the installation of rivets common to the clips being installed.

Step 12: Locate the F-12183C and F-12183D clips. These clips will be used on the forward and aft side of the F-1209 bulkhead. A single .063" hole has been punched in the web of F-12183C and F-12183D to help in identification.

Step 13: Follow procedure described in Steps 10 and 11.

NOTE: If a patch plate is needed at the F-1210 bulkhead, ensure it is installed at the same time as the clips since it will have rivets common to the clips being installed.

Step 14: Locate the F-12183E clip. There are no holes in the web of F-12183E.

Step 15: Follow procedure described in Steps 10 and 11.

Step 16: Reinstall baggage bulkhead and seats. Remove tail stand.

Step 17: Make a logbook entry indicating compliance with service document per the requirements of the controlling authority/agency.

Step 18: 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/>