VAN'S AIRCRAFT
TOTAL PERFORMANCE

14401 Keil Road NE, Aurora, Oregon, USA 97002
PHONE 503-678-6545 • FAX 503-678-6560
www.vansaircraft.com • info@vansaircraft.com

SERVICE BULLETIN 00104

Date Released:	September 24, 2024
Date Effective:	September 24, 2024
Subject:	Legacy RV-12 center section replacement and conversion to RV-12iS center section
Affected Models:	Legacy RV-12 aircraft with damaged center section
Time of Compliance:	On condition (if center section is damaged)
Supersedes Notice:	N 16-11-02, SB-00040, and SB-00050
Labor Estimate:	100 Hours (excludes repainting)
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:

After an excessively hard landing or other overload event during which the F-1204 Center Section assembly and surrounding structure is damaged, upgrading to the newer RV-12iS F-01204-1 Center Section assembly is required.

Materials Required:

The following materials are required to complete the steps necessary to achieve compliance with this Service Bulletin 00104:

Purchase: SB-00104-KIT

Method of Compliance:

Step 1: Inspect center section and surrounding structure for damage, cracking, and deformation. Remove seats, interior, and interior cover panels as required for initial inspection. If repair is deemed necessary, proceed to step 2.

Step 2: Remove the wings. Reference Section 30 of the KAI.

Step 3: Remove the canopy and aft window. Reference Sections 34, 33, and 28 of the KAI.

Step 4: Remove and discard the F-1277-R Fwd Turtle Deck Skin, and F-1273-L/-R Baggage Corner Skin. Reference Sections 25 and 23 of the KAI.

Step 5: Disconnect control cables, aft electrical systems as required, and remove the tail cone at the baggage bulkhead. Reference Sections 28 and 32 of the KAI.

Step 6: Drain the fuel. Remove and set aside the mechanical gauge. Remove and discard the fuel tank. Reference Section 37 of the KAI.

Step 7: Support or remove the propeller and engine. Reference Sections 47 and 46 of the KAI.

Step 8: Drain the brake system and inspect for damage. Remove the main gear legs. Reference Section 27 & 35 of the KAI.

Step 9: Remove the F-1265 Flaperon Push Rods, WD-1214-L/-R, WD-1215-L/-R, WD-1213 weldments and top of the F-1276D System Blocks. Reference section 32 and 31B.

NOTE: The following steps specify the process to remove the damaged F-1204 Center Section as well as the surrounding structure, which will then be modified for compatibility with the F-01204-1 Center Section.

NOTE: Pull a string through the roll bar assembly using the existing electrical wiring when removing, to facilitate the installation of electrical wires during the reassembly process. The F-1232A Roll Bar Brace can remain attached to the roll bar.

NOTE: The following instructions refer to printed supplemental figures provided with this service bulletin. If printing from electronic form, it is important to print the supplemental documents at 100% scale to ensure the templates are properly sized on paper.

Step 10: Remove and set aside for later use the F-1254-L/-R Support Frames and the Roll Bar Assembly by drilling out rivets common to F-1207A Bulkhead, and unbolting F-1231D Roll Bar Bases. Reference Section 24 of the KAI.

Step 11: Remove and set aside the fuel pump. Cut the fuel line and fuel return line after of the center section to facilitate removal, as shown in Supplemental Figure 1. Remove, and discard the portion of the fuel lines located aft of the center section. Drill F-1048F Facet Pump Bracket off of the belly skin for reuse. Reference Section 21 of the KAI.

Step 12: Remove and discard the two F-1205B Roll Bar Attach Plates. Reference Section 23 of the KAI.

Step 13: Remove the F-1256-L/-R Skin Stiffener and set aside for later use. Reference Section 23 of the KAI.

Optionally, you may choose to install flush rivets in the F-1234-L/R canopy decks as in the RV-12iS configuration. If intending to switch to flush fasteners, remove the F-1234-L/-R Canopy Deck and set aside for reinstallation. Refer to Section 23iS/U of the KAI.

Step 14: Remove and discard the F-1248-L/-R Arm Rests, two F-1248B Fuselage Pin Latches, two F-1270D, two F-1270A Side Skin Doublers, two F-1270 Side Skins, six F-1268 Doublers, F-1276 Bottom Skin, and F-1275G-L/-R Cover Plates. Reference Sections 21, 23, 25 and 35 of the KAI.

Step 15: Remove and set aside the F-1204H Bulkhead Cap, F-1204R Retainer Blocks attached to F-1204CL-L/-R Fwd Bulkhead Side Assemblies, F-1205A Mid Fuse Brace, and two F-1204M. Reference Sections 20, 21, and 23 of the KAI.

Step 16: The following can be removed as a subassembly: Remove and set aside the F-1206A Bulkhead as an assembly, including the F-1206B Rear Spar Receptacle Supports, F-1206H-L/-R Baggage Ribs, F-1206G-L/-R Baggage Ribs, and F-1207B Baggage Bulkhead. Reference Section 21 of the KAI.

Step 17: Remove rivets common to the F-1204 Center Section and F-1225-L/-R Seat Floor, F-1215-L/-R Seat Ribs and F-1216-L/-R Seat Belt Attach Lug Supports.

Discard the removed Center Section assembly, consisting of the F-1204F-L/-R Aft Side Bulkheads, F-1204D Center Section Aft Bulkhead, F-1224-L/-R Baggage Floor, F-1221-L/-R, F-1222-L/-R, and F-1223-L/-R Baggage Ribs. Reference Sections 21 of the KAI.

Reassemble using the new parts, following the below Sections of the RV-12iS plans:

- 20iS - Center Section Bulkhead
- 21iS - Mid-fuse Ribs and Bottom Skins
    - the ELT Bracket Assembly's 4 most aft holes will need to match drilled into the F-1206 bulkhead before final assembly.
- 23iS - Side Skins
- 24iS - Rollover Structure & F-01207 Bulkhead
- 26iS - Fuel Tank

NOTE: The following steps describe installation of the modified fuel system.

Step 18: Remove the 3/8 and 1/4 inch fuel lines shown in Supplemental Figure 1. The portions to be removed are hatch-marked in the diagram.

Step 19: Use the provided templates to make F-12144, F-12145, F-12146 fuel lines as shown in Supplemental Figures 2 through 5.

Step 20: Create the additional wiring pass through holes, modify the System Blocks, and fabricate the F-12147 Wear Plate as shown in Supplemental Figures 6 through 8.

NOTE: In the following section, the flight controls retain the original manual flap control, but will use the provided new pitch cables, as shown in KAI section 32iS. For the rest of the assembly, refer to KAI section 32.

- 32 - Flight Controls
- 35iS - Landing Gear & Engine Mount
- 38iS - Airframe Assembly

- 39iS - Reinstalling canopy

Step 21: Make a logbook entry indicating compliance with this 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/