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# **SERVICE BULLETIN 19-08-16**

Date Released: January 10<sup>th</sup>, 2020

Date Effective: January 10<sup>th</sup>, 2020

Subject: AV-60000 and AV-60009 Recall

Affected Models: RV-12iS

Affected Serial Numbers: AV-60000 and AV-60009 electronic modules with production dates prior to September 30, 2019 (as inscribed on the parts) SLSA SN: 12076-12081

- Required Action:Create and send photographs of AV-60000 and AV-60009<br/>modules to Van's Aircraft for inspection
- Time of Compliance: At or before next annual inspection
- Supersedes Notice: None

Labor Required / SLSA Warranty Allowance: 2.0 Hours (if applicable)

Level of Certification: LSA Repairman Maintenance, A&P (not applicable to E-LSA)

# Synopsis:

A potential issue exists where an electronic component may not have been fully soldered in the AV-60000 and AV-60009 electrical modules. In an affected module, this issue may result in intermittent electronic failures. The most common failure would involve loss of the dimmer, trim system or stall warning, start power solid-state switch (see FTS Section VI. This switch may be bypassed if non-functional by turning on the Emergency Backup Battery Switch located just left of the fuel pump switches) or Garmin GTN-650 (if installed).

# Materials Required:

None.

# Method of Compliance:

Using the above-listed production dates, determine if your control modules are included in the affected scope. If in-scope, take <u>clear</u>, <u>in-focus and zoomed-in close</u> digital photographs of all affected components as described below, and submit the photos to Van's Aircraft for evaluation. Van's will review in order to determine if your modules need to be returned for closer inspection or repair. See examples of acceptable photos below. Note that SLSA aircraft owners will be contacted individually regarding this process.

# Remove the AV-60000 POWER MODULE

WARNING: To prevent electrical short circuits, the WH-P149 Battery Ground Cable must be disconnected from the battery while working on electrical system components. See KAI 45iS/U.

WARNING: Installing any wire to the wrong terminal during re-assembly WILL cause serious damage and render systems and/or components inoperative.

Step 1: Disconnect battery ground cable, see KAI 45iS/U.

Step 2: Remove both F-01244-L&R Tunnel Fwd Side Covers, see KAI 49iS-06.

NOTE: Steps 3-7 describe removal of the AV-60000 Fuse Panel. It may be possible by removing a few tie-wraps and removing the screws that attach the AV-60000 to pull the fuse panel into a position to take the required pictures without disconnecting any wires. Keep in mind that lighting is important in taking a highenough-quality photo, which will allow Van's staff to complete its review.

NOTE: Taking photos before and during disassembly will be helpful during reassembly.

# Removing the AV-60000 Fuse Panel

Step 3: Remove all fuses from the AV-60000 Fuse Panel.

Step 4: Remove the AV-60000 from the F-01246 Tunnel Cover, refer to KAI 42MiS/U-12.

<u>Step 5:</u> Separate the fuse panel faceplate and the 3 lower switches from the AV-60000 PCB. Do not disconnect any wires from the 3 switches. If the black plastic fuse guide comes off the back of the fuse panel faceplate it can be reattached with double-sided tape.

<u>Step 6:</u> Refer to Figure 1 & 2 and Figures 8-10 (below), note the location of the 4 screw terminals that attach large wires to the back of the AV-60000 PCB and their respective colors. Also note the direction each wire is currently oriented (the orientation prevents interference with the tunnel side covers). Taking a couple photos before disassembly will be helpful during reassembly.

<u>Step 7:</u> Label each wire (with a masking tape flag) before disconnecting them from the AV-60000 screw terminals. Remove the 4 colored screws and labeled wires. Remove both D-sub connectors. Label the terminal colors on the back of the AV-60000 PCB as shown in Figure 2 below.

# Removing the AV-60009 HIC Module

Step 8: Remove right MFD EFIS display (if equipped).

<u>Step 9:</u> Remove F-00144 RV-12iS Blank Side Panel or F-00024-1 DUAL HDX1100 INST PANEL RIGHT or F-00065 RV-12 Panel (Co-Pilot) as applicable to your aircraft.

<u>Step 10:</u> Remove all electrical connectors from AV-60009 HIC Module, see KAI 42MiS/U-13, Steps 5 and 6, and 42CiS/U-13 Figure 1.

Step 11: Remove the AV-60009, see KAI 42MiS/U-03 Step 3.

## Evaluation

<u>Step 12:</u> Use Figures 11 and 12 below to determine if the production date of your modules is affected and in scope for this Service Bulletin. If not affected, proceed to Step 13. If affected complete the remainder of this Step.

Take clear, in focus, well lighted, pictures of the 3 locations noted in Figure 3 on the AV-60000 and the location in Figure 7 on the AV-60009. Send these photos to <u>servicebulletins@vansaircraft.com</u>.

If Van's Aircraft determines that a module needs to be returned, ship each module in padded wrapping material to avoid possible damage to sensitive electronic components.

## **Reinstall the AV-60000 POWER MODULE**

<u>Step 13:</u> Reattach both D-sub connectors to the AV-60000. Reinstall all previously labeled wires to the proper terminals using the correct colored screws.

<u>Step 14:</u> Reinstall the AV-60000 assembly to the Tunnel Cover. Reinstall all fuses in their proper location, refer to RV-12iS POH, section 7.

#### **Reinstall the AV-60009 HIC MODULE**

Step 15: Reinstall the AV-60009, see KAI 42MiS/U-03 Step 3.

Step 16: Attach electrical connectors to AV-60009.

Step 17: Reinstall Right Side Instrument panel and EFIS display (if equipped).

Step 18: Connect battery ground cable.

# Verify functionality of all systems.

<u>Step 19:</u> Adjust Pitch Trim speed as per Production Acceptance Procedures (PAP) document Section G1, then reinstall both tunnel side covers. Verify Lane A and Lane B fault lights operate properly. Verify each fuel pump operates properly. Verify aircraft starts and runs and the EFIS is displaying engine data. Verify Stall Warning audio. Verify Garmin GTN-650 operates (if equipped). Verify functionality of all other electrical systems.

<u>Step 20:</u> Make a logbook entry indicating compliance with SB 19-08-16. Place a copy of this notification in the back of the maintenance manual for your aircraft. Make an addition to the end of the Maintenance Manual table of contents indicating this notification has been added.



FIGURE 1: Rear of AV-60000 as installed, note colored screw terminal wire orientations.



FIGURE 2: Label screw terminal colors on PCB if you remove the wires.



**FIGURE 3:** The AV-60000 components to be photographed are located at the top of the AV-60000 (shown here with transparent faceplates).



FIGURE 4: Example of in-focus closeup of IC03 and IC04 needed for photo analysis.



FIGURE 5: Example of in-focus closeup of IC05 and IC07 needed for photo analysis.



FIGURE 6: Example of in-focus closeup of IC06 needed for photo analysis.



FIGURE 7: Example of in-focus closeup of the AV-60009 components needed for photo analysis. View is looking at the aft end of the assembly nearest the square 8-pin Molex connector.





FIGURE 9: GARMIN POWER MODULE CONNECTIONS



FIGURE 10: GARMIN IFR POWER MODULE CONNECTIONS



FIGURE 11: AV-60000 Production Date Location



FIGURE 12: AV-60009 Production Date Location