



## SERVICE BULLETIN 00013, REVISION 1

- Date Released:** May 6, 2021 (Rev 1, improved installation instructions)  
December 22, 2020 (Initial release)
- Date Effective:** December 22, 2020
- Subject:** Cracking of the EX-00021 Cylinder #1 and EX-00022-1 Cylinder #2 exhausts
- Affected Models:** All RV-12iS model aircraft (Legacy RV-12 is not affected)
- Required Action:** Inspect EX-00021 Cylinder #1 exhaust tube and EX-00022-1 Cylinder #2 exhaust tube for cracks as described in this document. If cracks are found in either tube, replace the EX-00021 with the EX-00021-1 **AND** replace the EX-00022-1 with the EX-00022-2.
- Time of Compliance:** Inspect before further flight
- If no cracks are detected:
    - o Install Aithre Shield Carbon Monoxide (CO) Detector per SL-00010, or another aviation-compatible CO detector
    - AND**
    - o Re-inspect every 25 flight hours until the EX-00021 is replaced with the EX-00021-1 **AND** EX-00022-1 is replaced with the EX-00022-2.
  - If cracks are detected:
    - o Replace the EX-00021 with the EX-00021-1 **AND** the EX-00022-1 with the EX-00022-2.
- Supersedes Notice:** N/A
- Labor Required / SLSA Warranty Allowance:** 2.5 Hours
- Level of Certification:** SLSA: LSA Repairman Maintenance or A&P  
ELSA: Owner (certification not required)  
*Check the rules of the local controlling agency and the operating limitations for your aircraft.*

### Synopsis:

Data from the field suggests that some EX-00021 Cylinder #1 and EX-00022-1 Cylinder #2 exhaust tubes are prone to fatigue cracking. Complying with this service bulletin will ensure aircraft equipped with the affected parts are operating with sufficiently durable parts, equivalent to aircraft equipped with newer parts.

### **Materials Required:**

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

Purchase:

- Qty 1 SB-00013 (this SB kit includes exhaust tubes EX-00021-1 and EX-00022-2 as well as the required new exhaust nuts)

Carbon Monoxide detector options: You may acquire and install an Aithre Shield Carbon Monoxide (CO) detector per Van's Aircraft Service Letter SL-00010, or install any other commercially available, aviation-appropriate CO detector.

Van's Aircraft recommends always operating an aircraft with a CO detector onboard.

### **Method of Compliance:**

Step 1: Remove the cowl.

Step 2: Remove the EX-00021 and EX-00022-1. See the RV-12iS Maintenance Manual Chapter 14.

Step 3: Loosen the remaining exhaust tubes by loosening the exhaust stud nuts.

Step 4: Install the EX-00022-2 and temporarily install the EX-00021-1. See the RV-12 KAI Section 48iS/U and RV-12iS Maintenance Manual Section 14.

Step 5: Temporarily install the lower cowl. Adjust the EX-00030 Muffler Assembly side-to-side position, ensuring clearance between the exhaust system, the lower cowl, and the oil and coolant hoses.

Step 6: Torque the exhaust stud nuts on the EX-00022-2, EX-00023, and EX-00024, then remove the lower cowl. See RV-12iS KAI Section 48iS/U and RV-12iS Maintenance Manual Chapter 14.

Step 7: Lubricate the EX-00021-1 slip joints with anti-seize, then install the EX-00021-1. See RV-12iS KAI 48iS/U, 50iS/U, and the RV-12 Maintenance Manual Section 14.

Step 8: Install the cowl.

Step 9: Conduct a ground engine run long enough to complete the Lane and Ignition Check items in the Before Takeoff Run Up checklist. This will allow exhaust components to settle into their nominal positions.

Step 10: After engine run, verify clearance between EX-00021-1, lower cowl, and coolant and oil hoses. Adjust the clocking of the upper segment of the EX-00021-1 as necessary. See KAI Section 50iS/U.

Step 11: After the engine run, verify clearance between the EX-00030 Muffler Assembly and the exhaust pipe opening in the cowl. Enlarge the cowl exhaust pipe opening as required. See KAI Section 48iS/U.

Step 12: Make a logbook entry indicating compliance with SB-00013 Rev 1.

Place a copy of this notification in the back of the maintenance manual for your aircraft. Note the addition of this notification to the bottom of the Maintenance Manual table of contents.

*If you are no longer in possession of this aircraft, please forward this information to the present owner/operator and notify Van's Aircraft, Inc.*

Contact:

<https://www.vansaircraft.com/gr/transfer-of-ownership/>