

# VAN'S AIRCRAFT

TOTAL PERFORMANCE

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## NOTIFICATION 16-10-17

**Date Released:** October 17, 2016  
**Date Effective:** October 17, 2016  
**Subject:** REIFF Preheat System Installation  
**Affected Models:** RV-12  
**Required Action:** Optional installation  
**Time of Compliance:** Optional installation  
**Supersedes Notice:** N/A

**Labor Required / SLSA Warranty Allowance:** 2.0 Hours

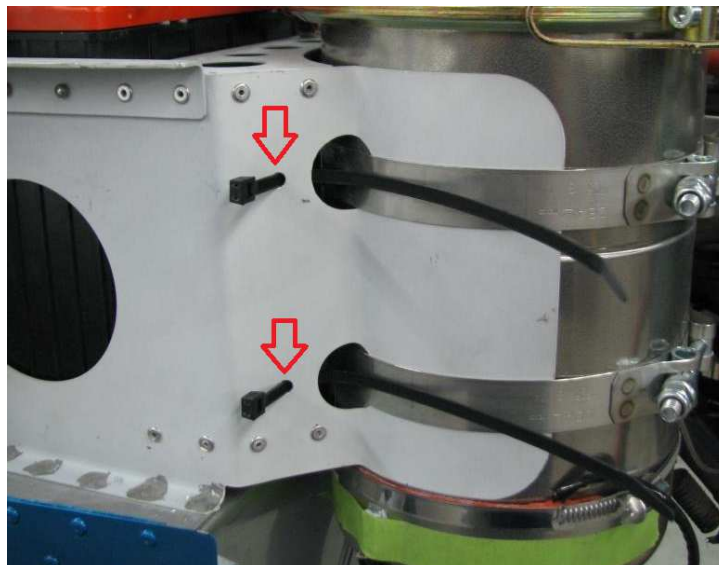
**Level of Certification:** ELSA: Owner, LSR- I, A&P  
SLSA: A&P, LSR-M

**Synopsis:** Installation of optional Pre Heater

### Method of Compliance:

Step 1: Refer to REIFF Preheat Systems Installation Instructions for Rotax 912/914. Pay special attention to the surface preparation, epoxy mixing and curing steps before attempting to bond the heating elements and sensor.

Step 2: Drill two 3/16 in. [5mm] diameter holes in F-1201E-R for tie wraps as shown in Figure 1. The holes will be used later for securing excess wiring. See Figure 5.



**FIGURE 1:** DRILL HOLES

Step 3: Install the HotBand heater (P/N CH38-20) around the lower end of the oil tank. Tighten it with a screwdriver so it's just snug; do not overtighten because it will crush the silicone heating element. Safety wire the clamp screw to insure it will not vibrate loose, which will cause the heating element to overheat and burn out. Run the wire through the screw head slot and through the clamp housing. See Figure 2.



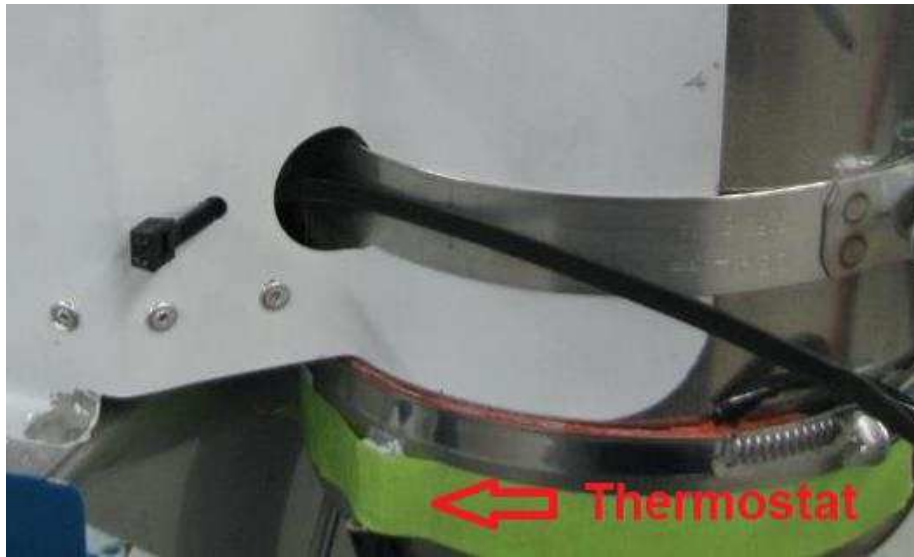
**FIGURE 2:** INSTALL TANK HEATER

Step 4: The HotStrip heater (P/N 14) will be bonded to the bottom of the right side of the engine crankcase. Pick a spot that is flat and smooth at the base of #1 cylinder. **DO NOT** install over gaps, raised letters or bumps. Do not bend the heating element. See Figure 3. A piece of foam is temporarily wedged between the muffler and the Hot Strip applying pressure over the Strip while the epoxy cures.



**FIGURE 3:** INSTALL CRANKCASE HEATER

Step 5: The thermostat (P/N HSTS) will be bonded to the bottom of the oil tank to limit the oil temperature to approximately 150° F [66° C]. See Figure 4. Masking tape is used to temporarily hold the thermostat in place while the epoxy cures.



**FIGURE 4:** INSTALL THERMOSTAT

Step 6: Install the wire harness components and connect them per the REIFF instructions. Position the power cord so the AC plug may be easily accessed through the oil check door. Avoid possible interference with controls or exhaust and muffler. See Figure 5.



**FIGURE 5:** INSTALL WIRE HARNESS

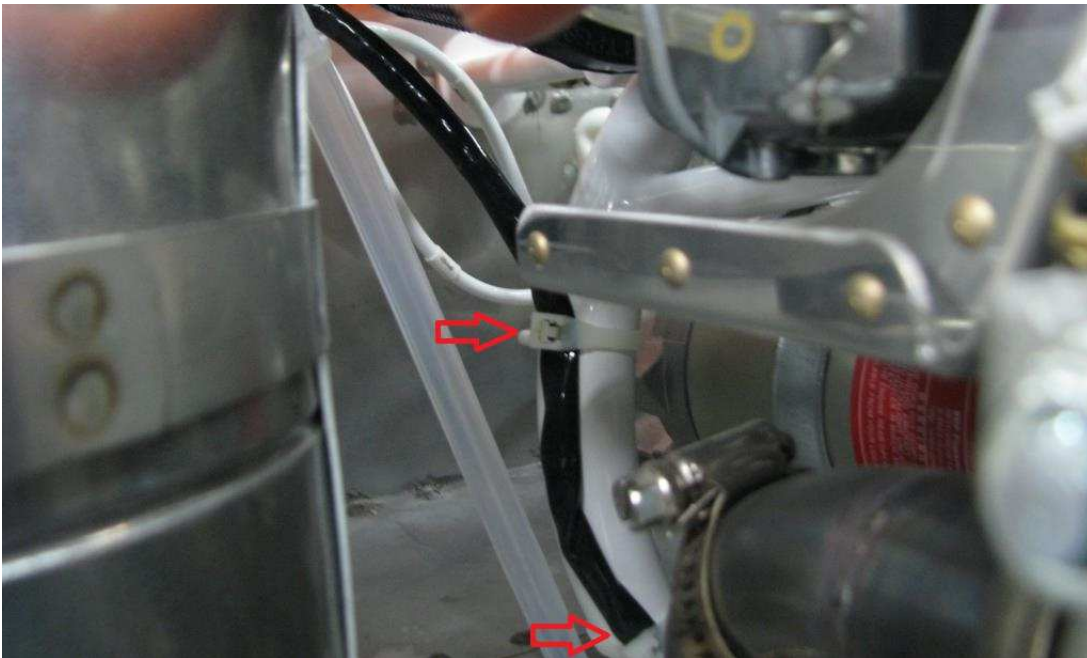


Step 7: Crimp the electrical terminal (not provided) to the end of the green ground wire. Bolt the terminal to the F-1201G-1 at the existing 3/16 in. [5mm] hole. See Figure 6.



**FIGURE 6:** INSTALL GROUND

Step 8: Finally, secure all wire harness components, which run from the base of the engine to the oil tank, to the engine mount while keeping them away from moving parts and exhaust pipes. See Figure 7.



**FIGURE 7:** SECURE WIRE HARNESS

Step 9: Test the system by plugging it in and carefully feeling the heating elements as they warm up.

**NOTE: Any weight and balance information recorded for the aircraft must be updated. Depending on the state of your kit some steps may not be applicable.**

Step 10: In the RV-12 Maintenance Manual (MM) "INSTALLED EQUIPMENT LIST" table, add "Rotax Engine Warmer" to the "ITEM" column. On the same line add a checkmark to the "INSTALLED" column.

Enter 0.6 lb for "Weight", 33.7 in for "Location/Arm" and 20.2 in-lb "Moment" onto the same line as "Rotax Engine Warmer."

In the RV-12 Pilot Operating Handbook (POH) "OPTIONAL EQUIPMENT LIST" table, add "Rotax Engine Warmer" to the "ITEM" column. On the same line add a checkmark to the "INSTALLED" column.

Enter 0.6 lb for "Weight", 33.7 in for "Location/Arm" and 20.2 in-lb "Moment" onto the same line as "Rotax Engine Warmer."

NOTE: Steps 11 to 13 on this page are only applicable if a final weight and balance as specified in the PAP has been completed.

Step 11: In the RV-12 Pilot Operating Handbook (POH) "YOUR AIRPLANE" table, enter the new total values for the arm, weight, and moment of the installed equipment.

Step 12: In the RV-12 POH "YOUR AIRPLANE" table, recalculate and enter new values for the Empty Weight, Empty Moment, and Empty Arm.

Step 13: Make an entry, as calculated in the previous step, on the WEIGHT AND BALANCE RECORD page of the RV-12 Maintenance Manual as follows:

As of this date: \_\_\_/\_\_\_/\_\_\_ the following values represent current Weight and Balance calculations resulting from the installation of the Rotax Engine Warmer.

Revised Empty Weight: \_\_\_\_\_ lbs

Revised Empty Moment: \_\_\_\_\_ in-lbs

Revised Empty Arm: \_\_\_\_\_ in Signed: \_\_\_\_\_

**NOTE: The remaining steps on this page are only applicable for aircraft which have passed a final airworthiness inspection.**

Step 14: (ELSA): Make an appropriate entry in the airframe logbook. See example below: Installed the Rotax Engine Warmer option in accordance with Van's Aircraft notification N 16-10-13 and confirmed proper operation.

Signature \_\_\_\_\_ Certificate # \_\_\_\_\_

Step 15: 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.

Oder Kit:

<u>Qty</u>	<u>P/N</u>	<u>Description</u>
1	EA ENGINE WARM ROTAX	Rotax Engine Warmer

Suggested hardware (not provided in kit):

<u>Qty</u>	<u>P/N</u>	<u>Description</u>
1	ES 36154	Ring Tongue Terminal for AN3, Crimp On, #16/22
1	AN3-3A	Bolt
1	NAS1149F0332P	Flat Washer, Thin
1	MS21042-3	All Metal Lock Nut