

# **TOTAL PERFORMANCE** **VAN'S AIRCRAFT**

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## **NOTIFICATION 17-03-01**

**Date Released:** November 7, 2017  
**Date Effective:** November 7, 2017  
**Subject:** 12 WINTERIZATION KIT ULS  
**Affected Models:** RV-12  
**Required Action:** Optional  
**Time of Compliance:** Optional  
**Supersedes Notice:** N/A

**Labor Required / SLSA Warranty Allowance:** N/A

**Level of Certification:** Owner, LSA Repairman Inspection (*not applicable to SLSA*), LSA Repairman Maintenance, A&P

### **Synopsis:**

RV-12 coolant radiator and oil cooler block-off plates for use in cold climates when ambient operating temperature is below 50°F (10°C).

The use of these block-off plates allows the oil temperature and coolant temperature to be maintained within the normal operating range during cruise flight and improve cockpit heater performance. With the RV-12 not having an oil or coolant thermostat, it is not possible to add winterization parts that will properly regulate oil and coolant temperatures at all temperature conditions.

**The use of this winterization kit will require any pilot flying the aircraft to actively monitor the engine temperatures and make adjustments to the installed parts, to coincide with air temperature changes that are common from one day to another. Example - It is possible that at warmer temperatures, a particular airplane may allow for partial blockage of the radiator with the Radiator Cover, but require that no Oil Cooler Cover be installed.**

**NOTE: Proper Radiator Cover position is dependent on ambient operating temperature, the normal cruise flight coolant temperature of your particular engine and the manner in which you operate your aircraft. The airplane can be flown with ground OAT's up to ~ 50°F (10°C), if the Radiator Cover is lifted to its fully open position. We suggest you initially install the Radiator Cover at approximately 1/2 closed position and observe how it impacts the coolant temperature of your aircraft during operation.**

**Coolant temperature above 230°F (110°C) is acceptable during full-power climb-out. Do not exceed 248°F (120°C). If your coolant temperature remains below 190°F (88°C) during normal cruise flight adjust the Radiator Cover downward to block more of the radiator surface. If your coolant temperature exceeds 210°F**

(99°C) during normal cruise flight, adjust the Radiator Cover upward to block less of the radiator surface. Good cabin heater performance is achieved with CHT/Coolant temps of 200°F (93°C) to 210°F (99°C) in cruise flight.

**NOTE:** Proper Oil Cooler Cover selection is dependent on ambient operating temperature, the normal cruise flight oil temperature of your particular engine and the manner in which you operate your aircraft. Three different Oil Cooler Covers are provided, we recommend installing the FF-00119A (small) cover first and monitor how it impacts the oil temperature of your aircraft during normal operation. Oil temperature above 230°F (110°C) is acceptable during full-power climb-out. Do not exceed 248°F (120°C). If your oil temperature remains below 180°F (82°C) during normal cruise flight install the next larger Oil Cooler Cover and monitor oil temperature.

#### **Method of Compliance:**

In order to upgrade to the required configuration, affected parts must be assembled and installed.

#### **PART NUMBER**

Purchase a new part from Van's Aircraft. Part no. **12 WINTERIZATION KIT ULS**

Step 1: Separate FF-00119 Oil Cooler Cover into three separate oil cooler block-off plates, FF-00119A (small), FF-00119B (medium), and FF-00119C (large), see Figure 1. Smooth / deburr the edges as needed. Attach a 5.75" long piece of the supplied Seal-00001 weatherstrip to the lower edge of each block-off plate after de-glossing the surface with Scotchbrite® (or similar) and cleaning the surface with denatured alcohol. Refer to Figure 2.

Step 2: Cut FF-00118C Seal to final dimension. Align the top and side edges of the FF-00118B Handle and FF-00118C Seal and mark the rivet hole locations on the seal using the handle as a template. Refer to Figure 3. Make 1/8" diam. holes at each mark using a leather or hole punch. Assemble the FF-00118 Radiator Cover Assembly by riveting the FF-00118B Handle and FF-00118C Seal to the FF-00118A Cover using the double-flush riveting method. Refer to Figure 4.

Step 3: Remove Top and Bottom Cowls (refer to Section 38 of the KAI).

Step 4: Inspect FF-1209 Seal Face for straightness. Adjust as necessary to match the expected installed configuration. Refer to Figure 5.

Step 5: Install FF-00118 Radiator Cover Assembly on to the top of the FF-1209 Seal Face as shown in Figure 6. Trim the ends of the seal to fit within the width of the radiator flanges if necessary. Refer to figure 7.

Step 6: Attach the fuel pressure sensor hose to the top of the left carburetor cable bracket with a tie-wrap, verify the hose and tie-wrap do not interfere with throttle or choke cables or links. Refer to figure 8.

Step 7: Install the Bottom Cowl. The top flange of the Radiator Cover Assembly must be visible above the top of the upper Cowl Duct Seal when the bottom cowl is installed.

Step 8: Test for proper Radiator Cover Assembly operation by sliding Radiator Cover Assembly up and down. Friction is expected and should prevent the Radiator Cover Assembly from moving inadvertently. Verify there is no interference with the Radiator Cover Assembly and any installed hoses or wires when the Radiator Cover Assembly is operated through its full position range. When properly installed, the Cowl Duct will be a travel limiter for full up (handle contacts the Cowl Duct at the inside top) and full down (top flange of the Radiator Cover Assembly contacts top of Duct Seal). Radiator Cover Assembly adjustment can be made through the Cowl Duct inlet on the front of the cowl when the Top Cowl is installed.

Step 9: Install Top Cowl.

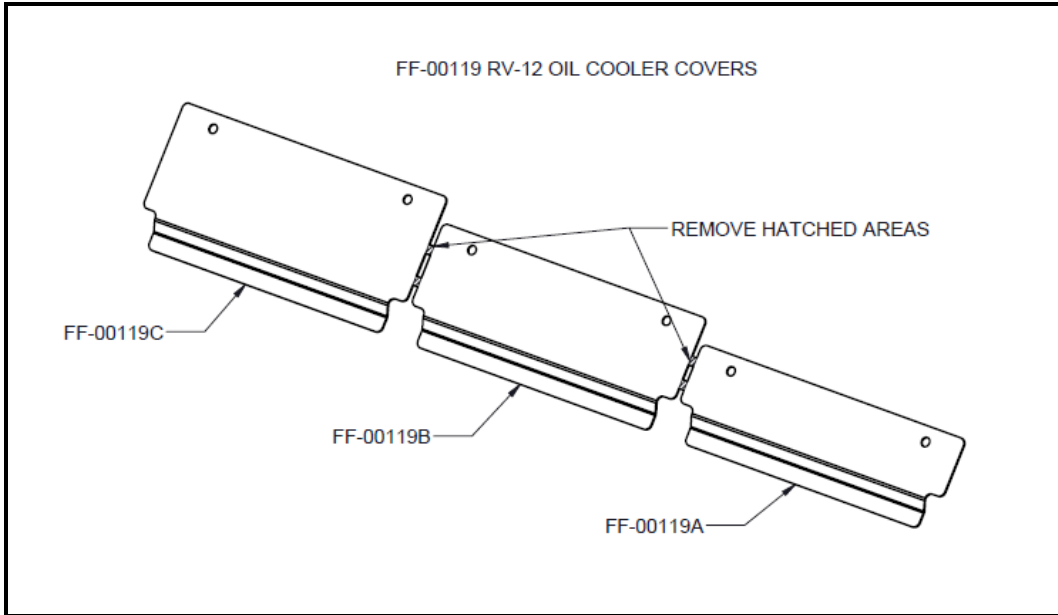
Step 10: Install FF-00119A (small) Oil Cooler Cover using the top two Oil Cooler attach screws. Refer to KAI 49-12.

Step 11: Place a placard on the instrument panel above the Master Switch indicating "Winterization Cover(s) Installed, monitor oil and coolant temperatures".

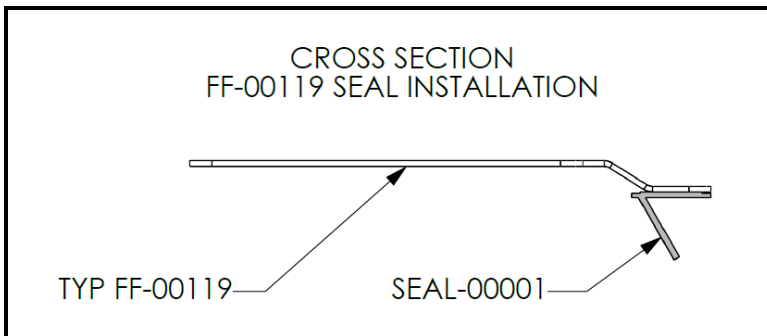
Step 12: Remove Winterization cover(s) when operating your aircraft in ambient temperatures exceeding 50°F (10°C) or whenever coolant or oil temperatures approach the Caution Range (Yellow Arc) during normal cruise flight, as necessary.

Step 13: Make a logbook entry indicating compliance with N 17-03-01.

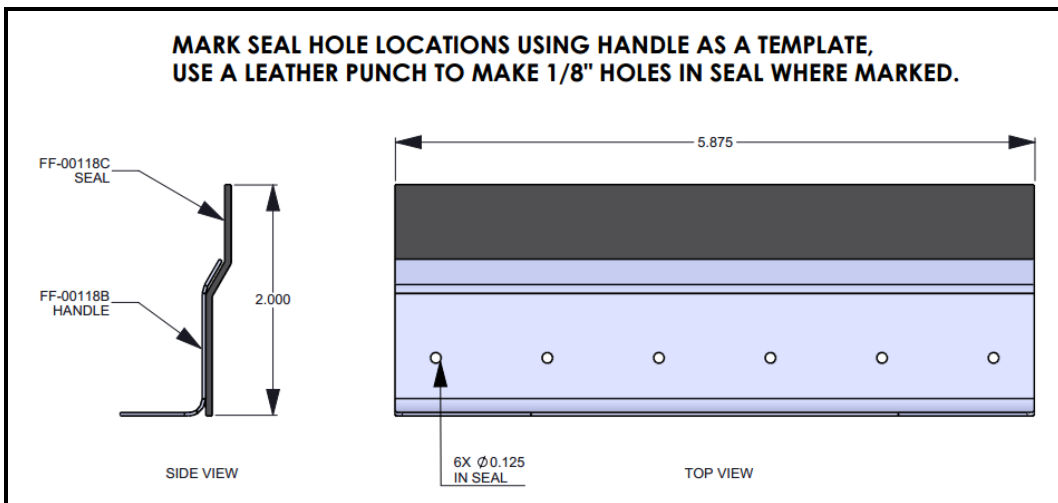
Place a copy of this notification in the back of the maintenance manual for your aircraft. Note the addition of this notification to the bottom of the Maintenance Manual table of contents.



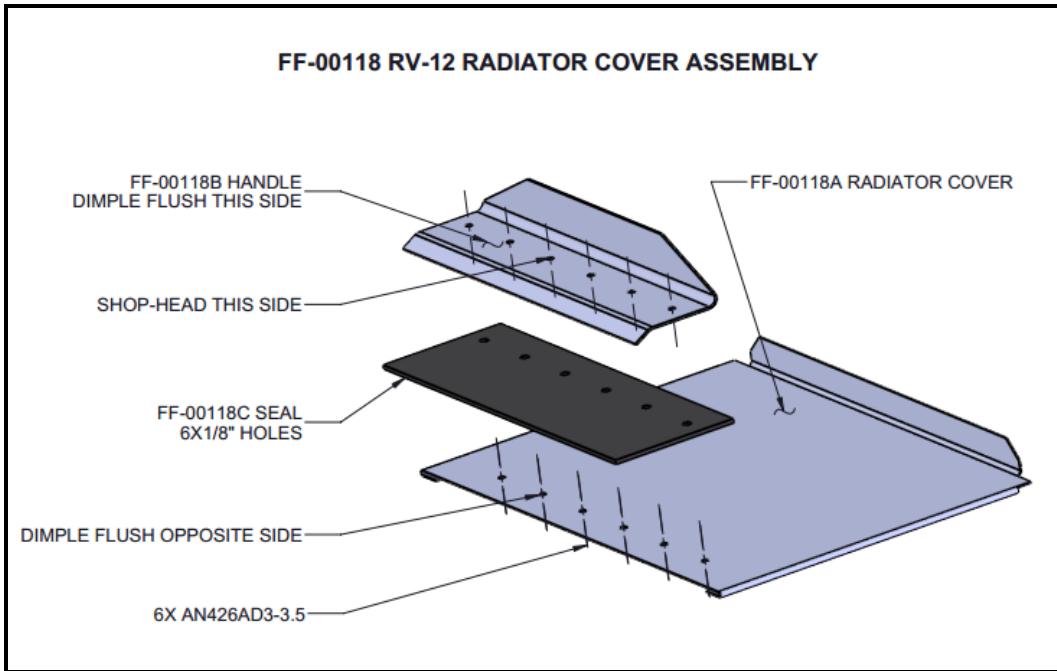
**Figure 1: Separating FF-00119 Oil Cooler Covers.**



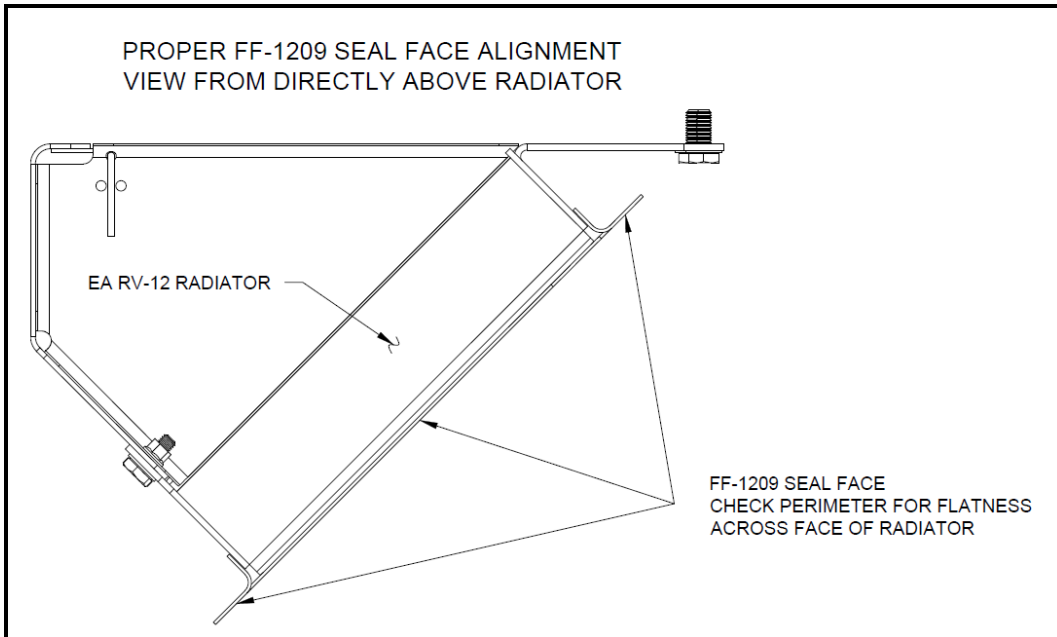
**Figure 2: Seal-00001 installation on FF-00119 Oil Cooler Covers.**



**Figure 3: Marking FF-00118C Seal hole locations.**



**Figure 4: Assembling the FF-00118 Radiator Cover.**



**Figure 5: Using a straightedge, check the FF-1209 Seal Face. Looking from above, the FF-1209 Seal Face flanges must be parallel with the face of the radiator, as shown here.**

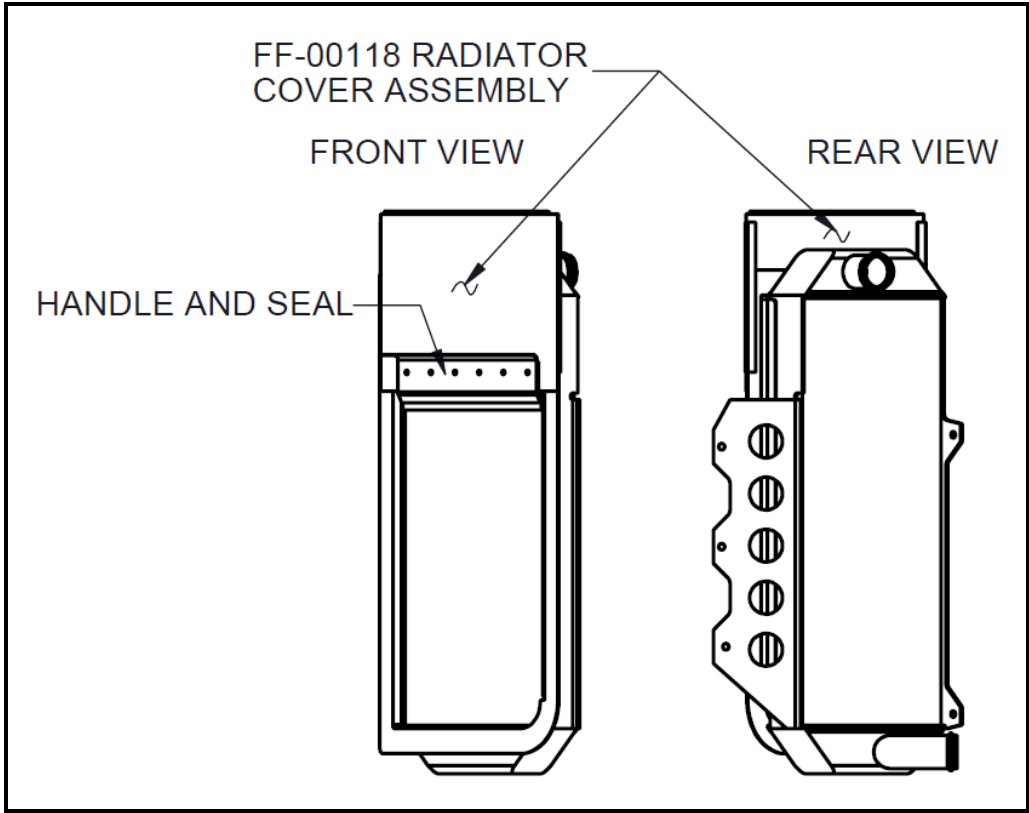
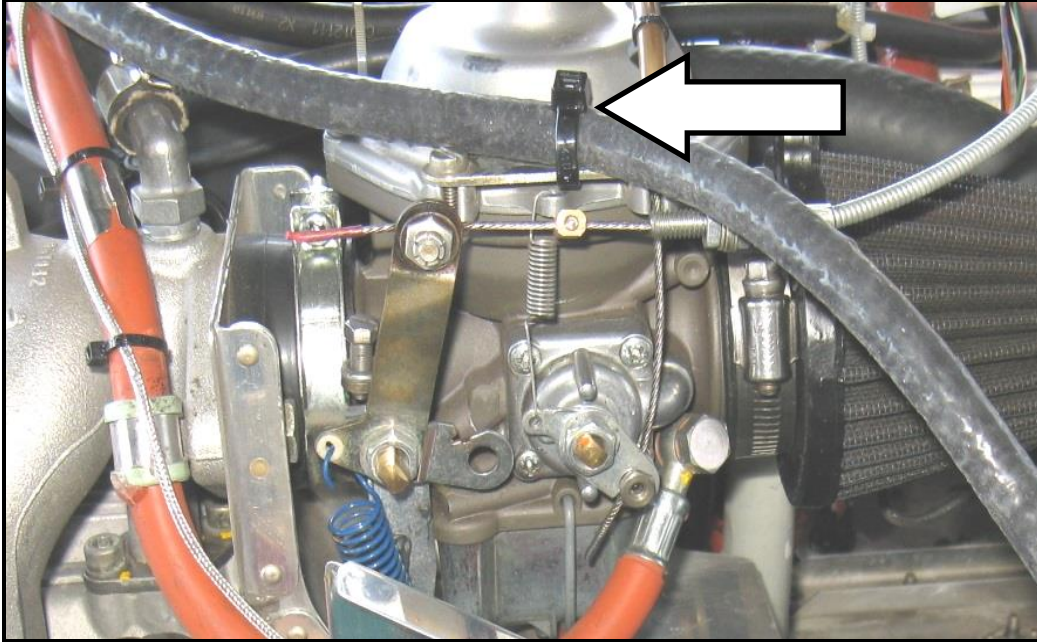


Figure 6: FF-00118 Radiator Cover Assembly Initial Installation Position.



Figure 7: Seal trimmed to proper width.



**Figure 8: Fuel Pressure Sensor Hose attached to the top of left Carburetor Cable Bracket.**