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## INSTALLATION INSTRUCTIONS FOR ROTAX 912/914

Failure to follow these instructions may result in product failure.  
If any of these instructions are unclear, please call for clarification before beginning.

- 1) Refer to this photo to see how all the parts plug together.



- 2) 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 over tighten because you 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.
- 3) The HotStrip heater (P/N 14) will be bonded to the bottom of the crankcase. Pick a spot that is flat and smooth. Do not install on a surface that is not flat, or over raised letters or gaps. Do not bend the heating element. The thermostat (P/N HSTS) will be bonded to the bottom of the oil tank, to limit the oil temp to approximately 150° F.
- 4) **Surface preparation is critical.** Before bonding the HotStrip heater any paint, if any, MUST be removed from the engine using paint remover. Trace the heater outline with a felt tip pen and remove the paint from the area inside the lines. Both of the surfaces (engine and heater) must then be scuffed with a Scotchbrite pad to provide a rougher surface and improve adhesion. The final step is to clean both surfaces with alcohol, lacquer thinner or acetone, and allow it to dry.

- 5) Thorough mixing is critical.** Mix the Aremco epoxy following the instructions on the package. Lay the bag on a table and roll the two parts back and forth in the bag **for several minutes** with a large socket. Simply kneading the bag a few times with your fingers is NOT sufficient. Apply a coating of epoxy approximately 1/16 inch thick onto the **unprinted side** (the side with flaps) of the HotStrip heater. Position the heater onto the crankcase and apply firm pressure to squeeze out excess epoxy, and use duct tape to hold the heater tightly to the sump while the epoxy cures. The thermostat (P/N HSTS) should be bonded to the bottom of the oil tank using the same procedure and epoxy as for the heater. Place unused epoxy in the freezer and save it for final touch up in step 6. JB Weld epoxy (regular, not quick set) is available in most hardware stores and is a suitable substitute epoxy but **do not substitute any other adhesive**.
- 6) Proper curing is critical.** Aremco cures in 24-48 hrs at 75° F. Temps cooler than that will inhibit curing. For cold weather installations, start with the engine warm or use other means to warm the engine such as a spot light or space heater. After the epoxy is fully cured (when it's hard), power up the heating element and watch it closely as it heats up. Probe the epoxy as it heats up and if it softens or the heater moves, unplug it and allow it to cure longer. If using JB Weld follow the curing instructions on the package, except that 75° F is required to be fully cured in the 16 hours stated in their instructions. Curing of either epoxy is complete when the epoxy is solid. Use epoxy to form a generous bead around and over the heater edges to "lock" the heater in place, and to seal the openings in the corners and the lead wire exit hole to keep out oil, water, or other foreign matter which can short out the heater. Also place a generous dab of epoxy over the first ½ inch of the lead wire to bond it to the engine for strain relief. Allow this final application of epoxy to cure before running the engine.
- 7)** Using good aircraft practices install the wire harness components (P/N's HSPC, HSH, and Y) and plug them together as indicated in the photo. Route the power cord so that the AC plug is easily accessible with an extension cord, such as through the front air inlet, oil check door, or cooling air exit. Avoid interference with any moving parts or controls, and the exhaust pipes. Attach the green ground wire to the engine, and test the connection by checking for continuity between the engine and the ground pin on the plug.
- 8)** Test the system by plugging it in and carefully feeling by hand to ensure each heating element gets warm.
- 9)** Before recowling the engine, have someone get in the cockpit and move all controls while you watch to see if there is any interference with any part of the heater system.
- 10)** Installation of these FAA-PMA parts is a minor alteration and does not require an STC or Form 337. If installed on a certificated aircraft an A&P is required to document the engine logbook and W&B.
- 11)** Update the aircraft's weight & balance. The weight of the system is 0.6 lb.

## OPERATING INSTRUCTIONS

To use the heater, plug it in several hours or overnight before starting the engine. For best results, it is recommended to use a blanket over the engine cowling and prop, and foam rubber plugs in the front air inlets to minimize heat loss from the engine to the air. The system is built for continuous use but there is probably no benefit to leaving it on continuously unless you want the aircraft to be "ready to go" at any time, and continuous use may cause condensation inside the engine. The heater may be used with a timer, thermostat, or telephone activated switch to turn it on remotely. These items are available from Reiff Preheat Systems or others. Never use a timer to cycle the heater on and off unless you fly the aircraft each time. In remote areas without electricity a DC/AC inverter can power the heater from a car or truck, or a portable generator can be used. Some generators are small and light enough to be carried in most aircraft. Always use a grounded outlet for safety. For the best protection against shock, use a ground fault type outlet or extension cord. During each annual or 100 hr. inspection the heater system should be checked to make sure it is still secure and in good condition and that all the heating elements still function.

### Warranty

Install it, try it, and if you are unsatisfied for any reason, send it back within 30 days of purchase.  
Up to 5 years after purchase we will replace or repair any part that fails for any reason.