**HotStrip Oil Sump Heater**

**INSTALLATION & OPERATING INSTRUCTIONS**

Failure to follow these instructions WILL result in product failure.

If any of these instructions are unclear, please call for clarification before beginning.

---

1) Test each heating element before installation by plugging it in just long enough to verify that it gets warm (a few seconds).

2) See photos on page 2 showing how the parts plug together, and do a trial fit. Pick a spot to install the heater(s) that is a flat, smooth area on the bottom or side of the oil sump below the oil level. Do not install on a surface that is not flat, or over raised letters, gaps, dents, etc. Continental 360, 470, 520, 550: heater must go on the side, the bottom is not flat. Lycoming IO-360: for locations see photos in our web site “Installation Instructions”. Locate parts away from controls like the throttle and mixture arms, to avoid interference with them. Do not bond to composite (non-metallic) sumps.

3) Surface preparation is critical. Paint and anodizing MUST be removed and both of the surfaces (sump and heater) must be scuffed (use Scotchbrite pad), cleaned with alcohol, lacquer thinner, or acetone, and dry.

4) Thorough mixing of epoxy is critical. Place the Aremco epoxy bag in your pocket for a while to soften it and make it easier to mix, then follow the instructions on the package. Remove the divider clip and 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 onto the unprinted side of the heater (the side with flaps), P/N 14. Position the heater onto the sump and apply firm pressure to squeeze out excess epoxy. Ideal epoxy thickness is 0.010” (like 3 sheets of paper). Use duct tape to hold the heater tightly to the sump while the epoxy cures. Place unused epoxy in the freezer and save it for final touch up in step 5. J-B Weld epoxy #8265 or 8265S (available in most hardware stores) is a suitable substitute epoxy but do not substitute any other adhesive including other J-B WELD products.

5) Proper curing is critical. Aremco epoxy cures in 48 hrs at 75° F. Temps cooler than that will inhibit curing. For cold weather installations, it is not necessary to have the hangar at 75°. Tent the engine with a blanket and use the cylinder heaters, a heat lamp, or space heater to warm the sump to 75°. After the epoxy is fully cured (when it’s hard), power up the heating elements (with sump full of oil) and watch them closely as they heat up. Probe the epoxy as it heats up and if it gets gooey, unplug it and allow it to cure longer. If using JB Weld follow the curing instructions on their package, except that 75°F is required to be fully cured in the 24 hrs 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. Allow this edge bead to cure before running the engine. IMPORTANT: Place a gob of epoxy or RTV over the lead wires for strain relief.

6) If your system includes a thermostat (P/N HSTS) bond it to the oil sump using the same procedure and epoxy as for the heater. The sensor is the small white box, bond it to the sump below the oil level a few inches from the heating elements.

7) Install the oil sump heater harness (P/N HSH or HSPC). P/N HSH plugs into a connector on the cylinder heater harness (P/N CH4, CH6, CH7, or CH9). On 4 & 6 cylinder engines route HSH through the rear baffle and down to the sump heater. Cut a 3/8” hole in the baffle, debur it, and insert the provided snap bushing to protect the harness. For P/N HSPC locate the AC plug so it will be accessible with an extension cord, typically through the cooling air exit or oil access door. Secure the harnesses using cable ties, clamps, or by bonding to the sump with epoxy or RTV. Avoid interference with any moving parts such as throttle linkage and heat sources such as exhaust pipes. Attach the green ground wire to the engine.

8) Installation of these FAA-PMA parts is a minor alteration and does not require an STC or Form 337. See www.ReiffPreheat.com/FAA-PMA.htm. For type certificated aircraft an A&P is required to install them (or supervise owner installation) and document the engine logbook and W&B. The weight of your system is printed on the label on your box. The arm is the same as the arm for the engine oil.
Operating Instructions

Always use a grounded outlet for safety. For the best protection against shock, use a ground fault type outlet or extension cord. Place a blanket over the engine cowling and plug all cowl openings to retain heat in the engine compartment. Plug in the heater at least 3-5 hours before engine start, 10-12 hours for maximum heating. See the Heating Time Table for more info:
www.ReiffPreheat.com/product.htm#Heating_time

We suggest using a WI-FI or cellular remote control to make it convenient for you to turn the preheater on prior to a flight. Continuous preheating during long periods of aircraft inactivity is not recommended, nor do we advocate continuous preheater use as a means to prevent corrosion in inactive engines. Corrosion can occur in engines that are not flown frequently, whether they are warm or not. Every aircraft owner should become familiar with these (see here for links www.ReiffPreheat.com/FAQ.htm#QA3):

Lycoming Service Letter No. L180B “Engine Preservation for Active and Stored Aircraft”

Continental Service Information Letter No. SIL99-1 “Engine Preservation for Active and Stored Aircraft”

During each annual inspection the heaters and harnesses should be checked to make sure they are secure and undamaged. If necessary, replacement parts may be obtained directly from us.

No Fault 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 your purchase we will replace or repair any part that fails.