BUILDING TIP

With the Lancair 360's in particular, getting the heat out, according to our customers in hot climates, requires attention to a couple of key details. While our company 360 does not have any particular problems here, we do know of a some aids worthy of noting.

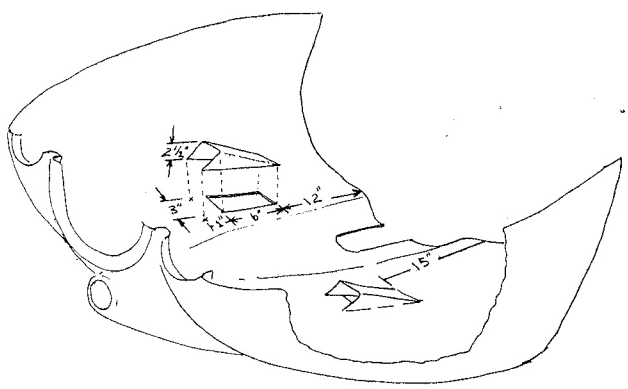
1st: OIL COOLER:

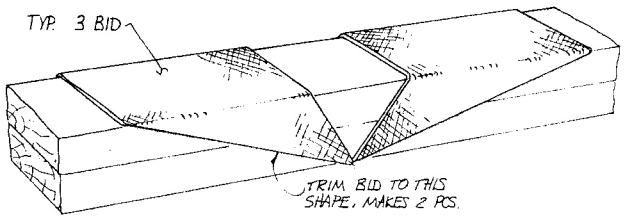
The engine oil cooler must be large (typical 9 vane type) and it should have its own dedicated air supply both in and out. The best method is to install it on the lower left rear side of the bottom cowling. Feed air to it through a 6" wide NACA style duct fwd of the cooler itself. Make a fiberglass enclosure to duct the air to the cooler vanes. Minimum size for feed air to the cooler is 3" diameter with 3-1/2" to 4" being best.

Air exits the cooler directly through the side of the lower cowl via some louvers fashioned into the side of the cowl. Some builders have made their own custom fiberglass louvers and others have installed a section of prestamped aluminum louver material. Louvers should cover the full size of the oil cooler vanes.

2nd: ADDITIONAL ENGINE EXIT AIR DUCTING:

For some of our customers who seem to still have problems with occasional hot temps, an addition of more exit air capacity has worked well. This is most easily accomplished by installing two ducts on the bottom of the lower cowl. Over a 3" wide piece of wood (covered with release tape) layup 3 BID. Cut to the approximate shape shown and attach over a hole cut in the cowl as shown. It's about that simple. These ducts will draw considerably more air out of the lower cowl thus increasing flow over the cylinder fins and "muy-bueno" more BTU's go "adios"!





3rd: But definitely 1st (?) Baffling:

Your engine baffling must be good. This is one of the easiest ways to insure good cooling. We're continually - well, baffled by how just a few small gaps in this pressure cowl can cause tens of degree increases in the cylinder heads. If one piece of the flexible seal material is blown backwards you could easily experience a temperature rise of 25 degrees on at least a couple of the cylinders!

After you've operated your Lancair for a few hours, take a close look at the inside of the upper cowl. You can typically see the markings of the flexible baffling material. If you see any areas where the markings tend to disappear, well that's likely an air leak. Fix it with a new longer (or sometimes shorter) piece of flex material, different layering technique, etc.