

## WINTERIZATION KITS

Since most of the engines powering the personal aircraft we fly are air-cooled, cold winter air can prevent them from reaching their proper operating temperatures. Although we've yet to see a cylinder run too cool, that's not the case with engine oil. Ideally, an air-cooled engine's normal oil temperature will be somewhere between 175 and 200 deg. F. In winter, a torrent of arctic air flowing through the oil cooler makes achieving the ideal temps almost impossible.

As a result, manufacturers devised various additional baffling systems, often known as winterization kits, to partially block the oil cooler and allow the oil to reach its normal operating temperature. Related drawings showing the winterization kit for a Bonanza (top) and installed location of a Diamond DA20's baffling (bottom) are at right.

If your flivver is an older one, it's likely your winterization kit baffling has long since been forgotten on some maintenance shop's floor. What to do? You can go without, or you might be able to buy a new one from the manufacturer. You might also be able to fabricate a replacement from some sheet aluminum and a few rivets (it's best to have a real one to use as a template if you choose this route). A strip of duct tape on the oil cooler has been rumored to work well, also.

But remember: If you install a winterization kit and then fly off to warmer climes, be aware your next takeoff could result in overheated oil.

