

McFarlane Aviation Products

Cowl Saver™ Engine Baffle Seal Allows Customized Flexibility for Optimal Cooling

Not only is Cowl Saver™ engine baffle seal material almost friction free against your cowl, but it can also be customized to be extremely flexible for a perfect seal where it contacts the cowl and rigid elsewhere to prevent the seal from blowing past the cowl contact line. With other baffle seal materials, you must compromise and make a choice: either use material that is rigid enough to not blow past the cowl contact line, or use a material that is flexible enough to blend to the intricate contours of the engine cowl to ensure a good seal. Either choice results in less than optimal engine cooling. With Cowl Saver baffle seal material and a little customization before or after installation, you no longer have to compromise. Flexibility can be customized to only the areas of the baffle seal that you want it. With a little extra effort, you can have it all!

The patented Cowl Saver material has a layer of black (clear for older material) PTFE bonded to a flexible reinforced silicone rubber base. The PTFE has thirty times less friction between the baffle seal and the cowl, preventing engine vibration and motion from being transferred to the cowl and airframe. The PTFE also gives the laminate the solid stiffness needed near the engine baffle to prevent the seal from blowing past the cowl contact line. This extra stiffness, however, is not always desirable in the area that the material seals against the contours of the cowl.

Where extra flexibility is needed to make a good air seal, the black (clear for older material) PTFE layer can simply be scored with a razor blade in a cross hatch, diagonal or parallel line pattern. The extreme bond of the PTFE layer is not affected by the scoring. You can control the amount and direction of the extra flexibility! The score line spacing and the extent of the score pattern control the amount of flexibility. The score line orientation and the type of pattern control the direction(s) of flexibility. Score patterns as small as 1/8 inch form little islands of friction free PTFE that has shown good durability while providing the extreme flexibility of soft silicone rubber.

This customization can be performed when doing a new baffle seal installation or to perfect the fit and seal of an existing installation. As long as care is taken to just score the PTFE layer and as little of the silicone as possible (do not cut the fiberglass reinforcing layer), the material will still meet the original AMS3306 specification to which it was certified. Cowl Saver baffle seal material is a product of McFarlane Aviation Products, Baldwin City, Kansas, manufacturers of quality aircraft products for over twenty-five years.
www.mcfarlaneaviation.com

