

## AIRCRAFT COVERING SAFETY TIPS FOR DACRON SKINS

Safety is a personal responsibility. You, as the owner, operator, and chief pilot, are responsible for the airworthiness of your aircraft. Ultimately, you control the life and monitor the level of safety through pre-flight inspections. During pre-flight check for the following:

- A.) Fabric rot
- B.) Thread wear and broken stitches. (Open ends lead to premature seam separation.)
- C.) Chafing and hanger rash
- D.) Fading

Watch you fabric for signs of fading. The **number one** sign of ultraviolet damage is a lightening in the color of the fabric. The Dacron used to cover your aircraft was originally designed for sailboats. Sailors typically stow away their sails after a hard days sailing. Extend your fabric life by using a field storage cover or a hangar.

Life expectancy varies with latitude. The closer to the equator you are, the more intense UV rays get. Also, there are indications that due to environmental factors, like ozone depletion, the amount of solar radiation penetrating the atmosphere is increasing. A conservative estimate on the life span of untreated 3.9 Dacron is 350 exposure hours. Controlled exposure can extend life of untreated sailcloth to 10 years.

Coatings can help extend useful life. Clear coating can double the life of a covering. The disadvantage of this type of process is that the skins become a permanent part of the aircraft. Should a skin need removing for repairs, etc. the coatings may crack and peel giving you a molting snake effect. RANS recommends the Clear coat procedure detailed later in this section.

As mentioned earlier, storage methods can increase life. Tarps and fitted covers are recommended for outside storage. If available, shade hangers are better and fully enclosed hangers are best.

Extend the life of good fabric by making repairs.

- A.) Check for growth of minor rash and pin holes.
- B.) For small cuts or holes 2" or less, sew with a baseball stitch, then apply sail tape or a glue patch.
- C.) Medium sized cuts or holes 2" to 6" can be repaired by applying an adhesive patch and hand stitching.
- D.) Large rips and holes and/or blown out panels 6" or larger should be examined by a professional repair service.

### TESTING FABRIC

- A.) **FADE FACTOR:** Compare the top and bottom surfaces of your wing. Top surfaces of a considerably lighter shade are a cause for concern.
- B.) **FINGER POKE TEST:** Poke the top surface of your wing. A finger poke will not go through good fabric.
- C.) **FABRIC TESTER:** This involves standardized testing with a calibrated scale.  
**MAX:** The maximum value for new fabric is 25#.  
**MIN:** The minimum safe values are 12# or 15# depending on surface tested.

**When in doubt, throw it out! Live to fly again tomorrow!**