

Extended Repack Cycles and Service Life Limitations for Precision Aerodynamics Reserve Parachute Canopies

Extended Repack Cycles

Precision Aerodynamics is an ISO 9000 certified company. All of the materials, purchased items and parts used in the fabrication process for Precision reserves are acquired from suppliers on our Approved Supplier list as part of our FAA approved Quality Control system for parachutes produced under FAA TSO C-23.

There are no component parts utilized in these parachutes that necessarily require re-certification at the 120 day repack cycle. Our experience indicates that an extension of the repack cycle to 365 days should not adversely affect the performance of the parachute or compromise safety based on the element of time alone.

Other factors that might affect a parachute's airworthiness could come into play during any repack cycle including:

- 1) Storage temperature, humidity, and ultraviolet radiation
 - a. When not in use, the Precision Reserve should be stored in an environment wherein the temperature is controlled between 60 and 80 deg F and within the relative humidity limits between 30% and 60%. Ultraviolet radiation (daylight) in the storage facility should be zero.
- 2) Damage from normal handling and use
 - a. The entire system should be inspected prior to each use as well as after each use to determine if any damage has occurred during normal use. If the parachute ever becomes wet, a thorough non-agitating rinsing in clean water, drying, inspection, prior to repack are required.
- 3) Other components that make up the system
 - a. Other components that make up the system, like the container, or the reserve deployment freebag and pilot chute, or any other component that contains material unsuitable for an extended repack cycle would disqualify the system from the extension.
- 4) Chain of custody
 - a. Extending the repack cycle to 365 days is keyed on the basis that a logbook be maintained describing a chain of custody, and documenting storage and use as outlined in each of the previous items.

Service Life Limitations

In the USA, the FAA does not impose a service life limit on parachutes. Precision reserve canopies do not carry any "Service Life Limits" per se. Time, in and of itself, does not alter the airworthiness of any of our products.

When stored properly, a new Precision canopy should remain in the same airworthy condition even after 20 years of storage.

It is the responsibility of the assembling/packing rigger to determine the airworthiness of any particular canopy at any given repack cycle. We have always taken the position that it is the rigger's responsibility to determine airworthiness, because after the canopy leaves the original factory environment, we have no control over the manner in which it is used.

As a parachute designer and a parachute rigger, I do have my own professional limitations regarding service life limits for any reserve parachute from any and all manufacturers. I simply will not pack a reserve canopy which is more than 20 years old, and I don't hesitate to share that position with any rigger who asks.

As a rigger, you have to make your own determination because you have this particular canopy in your hands. If you refuse to pack it, does that mean some other rigger may choose to put it back in service? Perhaps, but it is a decision that you have to make using your own judgment as a rigger.

George Galloway, President
Precision Aerodynamics
Master Parachute Rigger 2666652
Seal Symbol TRS
Seat Back Chest