

**Issue Date:** 18.12. 2012

**PSB Nr.:** 2012-11-NT-Reserve Loop

**Subject :** Damaged Reserve Loops on Next Tandem Containers

**Status :** Mandatory in combination with AADs which require a „over the pilot chute“ cutter position

**Identification :** Next Tandem / Next Century Tandem  
**(not affected : all other Next models/versions)**

**Background :**

In 2007 Paratec followed a strongly recommended safety advice by Airtec GmbH and re-located the Cypres cutter back from the current „under pilot chute position“ to the original „above pilot chute“ position. Airtec's reasoning was the improved function of the container opening after a Cypres fire, i.e. to avoid further incidents containing hesitations with the under pilot chute configuration at that time.

Very shortly after completing this change, there were sharp notches discovered on the cutter, resulting from the fact that the cutter was now jammed between the P/C grommet and the side flap grommet with the washer's flange deforming the cutter sleeve. A potential loop damage was to be expected in addition to the ones already caused by packing tools and temporary pins.

To avoid this, said grommet's setting direction was reversed with the washer facing away from the cutter. To even improve this, a so called „cutter buffer“ was developed in 2009 which takes off some of the pressure and avoids excess cutter movement between the grommets.

This setup seemed to address all relevant requirements of both companies towards their products.

Despite all these measures taken there were incidents reported lately of heavily damaged reserve loops.

A intensive investigation of each case involving microscopic examination of loops cutters and grommets revealed the following cause.

## Cause :

As the loop is lead through the cutter and the following grommets, it is generally more vulnerable to shear forces and scoring as with the under flap # 1 configuration.

In combination with the high frequency vibrations caused by a set droque, a rotary motion is being transfered to the reserve flaps, generating a slow abrasion effect on the loop.

The 5 incidents notified so far have been isolated and in different locations worldwide. Following investigation it has been found that a combination of incorrect loop length (too long), loose pack job and the effect of the drogue have created the conditions necessary to cause the damage."

## Service Bulletin :

Paratec has worked with great pressure on a technical solution which needed to be easy to implement, enduring and economically feasible. It should take not more than 30 min to do.

The buffering effect of the T 12 coverings have been intensively tested for long term scoring protection from the grinding effects of multiple metal parts acting on the Cypres loop.

This protective cover is to be sewn to the **inside and outside of reserve flap # 3 and to the inside of reserve flap # 4**

Personnel requirement : Parachute Rigger, work level according to regulation of individual governing body

Technical requirement : Single needle sewing machine with 30M thread (size F),  
6 mm ø hollow punch tool

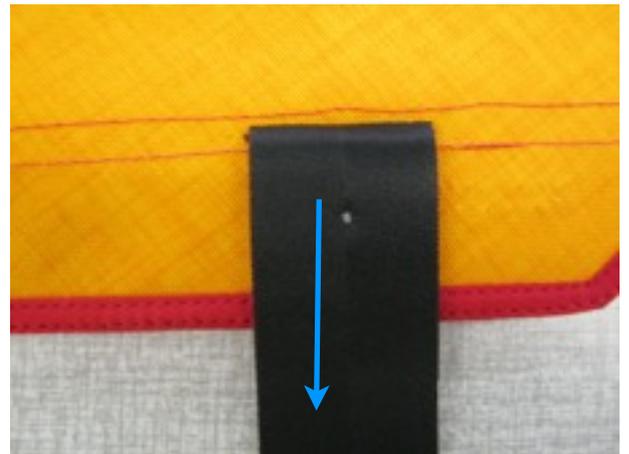
Materials needed : Mil W-4088, Type XII, 4,75" (12 cm) and 2,75" (7 cm) in length  
(can be supplied by Paratec GmbH if needed)

**Step 1:** Remove cutter keeper from flap # 3

**Step 2 : Sewing the protective cover to flap # 3**



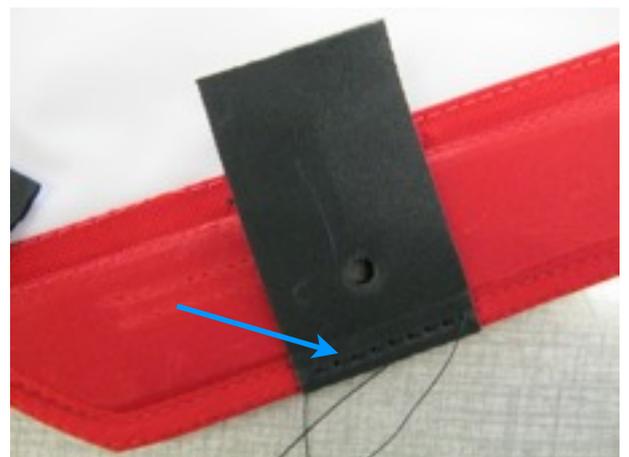
Place 12 cm Type XII piece onto outside of flap, line up with grommet centre and sew it on



Fold over, apply tension, mark centre grommet and punch 1<sup>st</sup> hole. Do not sear !



Turn over flap repeat previous step and punch 2<sup>nd</sup> hole. Do not sear !



Line up holes with grommet and stitch webbing to binding tape edge of flap

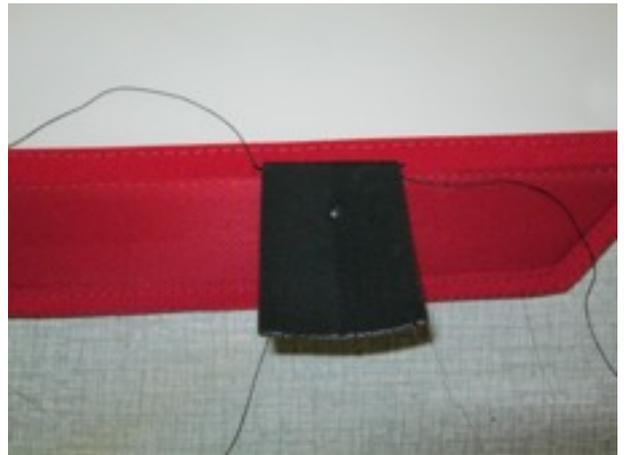


Fold under excess material and sew it on

**Step 3:** Sewing the protective cover to inside flap # 4



On flap # 4 the cover is only sewn to the inside.  
Start in the same way as on previous flap



Fold over webbing, apply tension, mark and punch hole



Fold under excess material and sew on

**Step 4 :** Re-attach cutter keeper



Re-attach cutter keeper according to Airtec Riggers Manual

**Compliance date :** Immediate inspection of loop before next jump by authorised personnel. Decision within personal responsibility whether this TSB is to be carried out immediately or during next maintenance interval based upon appraisal.

**Authority:** Paratec GmbH, Fluplatz, 66798 Wallerfangen

**Distribution:** National Parachuting Organisations, Military Parachuting organisations