

Serviceordre – Materiell

Materiellsjef F/NLF kommuniserer pålegg omkring forhold som ansees som vesentlige for å oppnå de målsettinger som er satt for materiellarbeidet via denne Service ordre. Målgruppen for Serviceordre er Materiellkontrollører, Hovedinstruktører og andre nøkkelpersoner i miljøet.

SERVICEORDRE – 2007- 5

HENVISNING:	PdF Service Bulletine # 25-63-30
FORMÅL:	Flytting av kutter til Cypres
STATUS:	Obligatorisk og ved neste hovedkontroll/ompakk
IDENTIFIKASJON:	Atom Legend Atom Legend R Atom Legend S Atom Legend M Atom Legend Classic og Millenium Atom NG Atom Evolution Atom 35
BAKGRUNN:	Behov for å forbedre kutterposisjonen. Se også bakgrunn i SO 2007-02.
SERVICE:	Kutterens skal flyttes over pilotskjermen, slik det fremgår av den vedlagte Servicebulletinen fra PdF.
UTFØRELSE:	Utføres av MR ved neste HK eller ompakk.
DISTRIBUSJON:	Klubber Hovedinstruktører Materiellkontrollører SU Sky Design F/NLFs Internet sider Hærens Jegerkommando Luftfartstilsynet

Oslo, 20. mars 2007

Rolf I Sotberg
materiellsjef F/NLF

Service Bulletin

Title : Improvement of the Harness/container

Block 1 Technical Background

- a) Applicability : Single harness/containers: Type 34 since October, 11th 1994, Type 37, Type 35, ATCL A, ATCL B, ATCLC, ATCLD, ATEV, ATVL, ATML
 Parachutes with the reserve upper flat inserted in the lower flap
Dual harness/containers: 740-1 (ATOM TANDEM)
- b) Reason : Improvement of the cutter position
- c) Description : Relocation of the cutter above the pilot chute as described on the following pages.
- d) Compliance : As a precaution, it shall be done at the next periodic inspection/packing of the reserve according to the technical manual or the local regulation but no later than 120 days from the last inspection/packing, whichever is earlier.
- e) Approval : The technical content of this service bulletin has been approved by Aerazur according to Part 21 - §21A.211.
- f) Labour : Senior or master rigger or equivalent according to the local regulation.
- g) Weight and balance : Non applicable
- h) Reference document : Technical communications
 CT_07_001_AT for Atom (T0000 excepted)
 CT_07_001_AX for Axis & Atom 0000
 CT_07_001_TDM for Atom Tandem
- i) Publication concerned : Technical manuals to be completed with general packing instructions available on Web site.
- j) Interchangeability : Non applicable

Block 2 Information about equipment

- a) Material : KIT P/N P2007910200 for Atom (T0000 excepted)
 KIT P/N P2007910201 for Axis & Atom T0000
 KIT P/N P2007910202 for Atom Tandem
- b) Supplier : AERAZUR / Parachutes de France, 2 rue Maurice Mallet,
 92130 Issy les Moulineaux, France
 Web site : www.parachutes-de-France.com
 E-mail : infopdf@zodiac.com
 Tel : +33 (0)1 41 23 23 23,
 Fax : +33 (0)1 46 48 83 41



Block 3 Accomplishment instructions :

According to instructions and drawings described on the following pages.

Block 4 Diffusion

DGAC – GSAC – FFP
 ARZ – Dealers – Users

Block 5 Quality and R&D Department Approvals

Date	Name	Visa
08.03.2007	P. CHAVANON	
08.03.2007	B. DELAHOUCHE	

AERAZUR
PARACHUTES DE FRANCE
2, rue Maurice Mallet
92130 Issy les Moulineaux
Tel: 33 1 41232323
Fax: 33 1 48468341

Technical Communication

FAA qualified rigger or foreign equivalent

Version 1 du 17/01/06

CT_07_001_AT
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Concerned equipments:

ATOM Legend (T000 to T2)	PN: ATCL B
ATOM Legend R (T000 to T2)	PN: ATCL B
ATOM Legend S (All containers sizes)	PN: ATCL C
ATOM Legend M (All containers sizes)	PN: ATCL D
ATOM Classic & Millenium (All containers sizes)	PN: ATCL A
ATOM NG (All containers sizes)	PN: Type 34
ATOM Evolution (All containers sizes)	PN: ATEV & Type 35
ATOM 35 (All containers sizes)	PN: ATML & Type 35

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Tools required :

- Scissors (seam ripper or snips optional)
- Double face adhesive tape (optional)
- Marking pen
- Hot knife.
- 2 template (cardboard or plastic) for marking (designed as enclosed drawings)
- Die cutter diameter 7 mm (9/32'')

Machine required:

- Straight Stitch (adjustment 5-6 stitches for 2 cm- 3/4''length)

Matérials required:

- Nylon binding tape 1 Inch type III 200 mm (8'')
- Type XII webbing 60 mm + 70 mm (2 3/8'' + 2 3/4'')
- Thread nylon type 30/3

or KIT CUTTER.ATOM EXCEPT 0000 PN: P2007910200

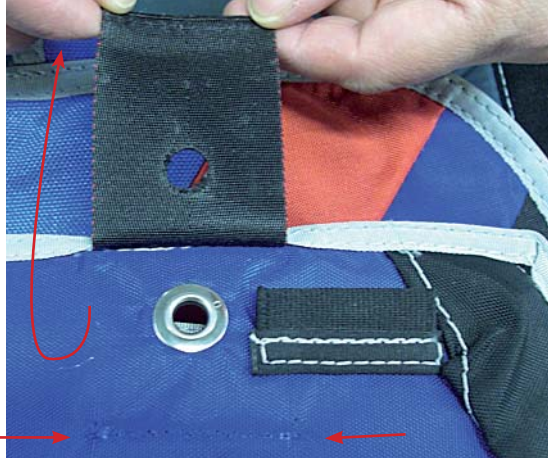
+ Elastic cutter keeper (included in installation kit Cypres or Vigil, or unstitch from rig to be modified)

Time required: 15-30 min.

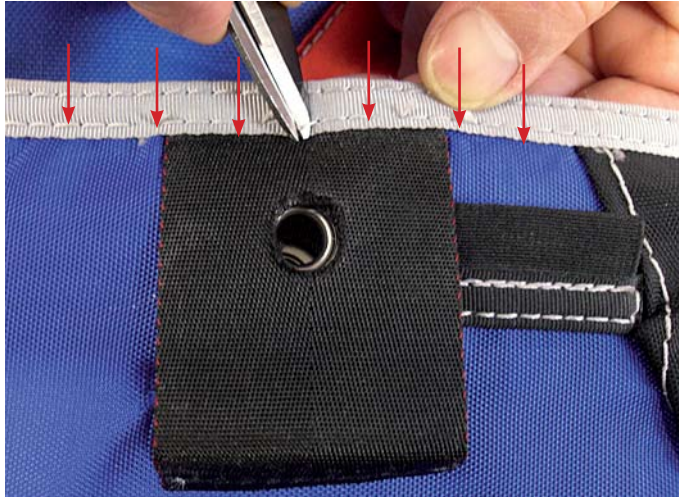
1) Dismantling:

Remove the elastic cutter keeper from original place carrying out the following steps onto the reserve inner central flap:

- Unstitch the triple-stitch holding the drilled Type XII webbing above central flap grommet.



- Unstitch the inboard stitching of Type XII binding (about 3/4" - 2 cm - on both sides of Type XII).



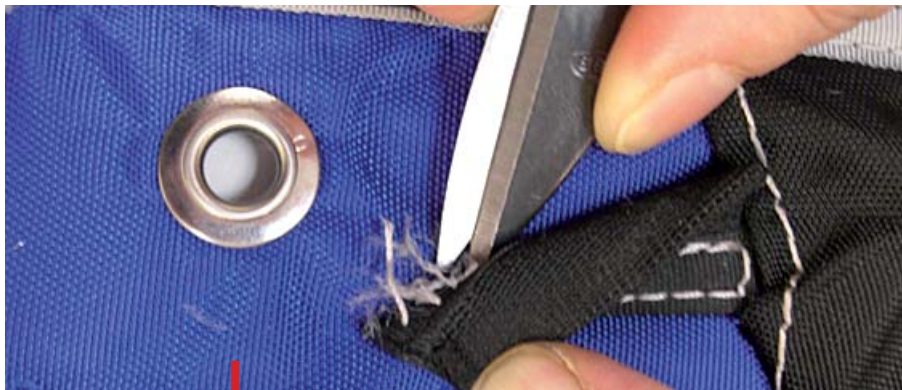
- Lift binding tape and cut Type XII webbing as close as possible to the outboard binding stitching.



- Fold back the binding tape and sew using straight stitch above the original inboard binding stitching. (with stop of 5/8" - 1,5 cm length at beginning & end)



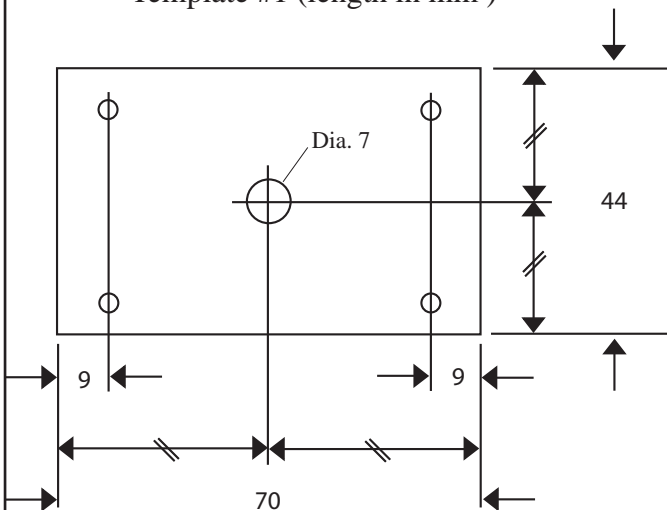
- Carefully remove the square stitching which fixed the elastic cutter keeper (from above) and separate for further assembling steps.



2) Preparation: (This step is not necessary using Pdf's upgrading kit PN: P2007910200)

- Using template #1 and hot knife, cut a 70 mm (2 3/4") type XII webbing length , drill a center hole using Die cutter diameter 7 mm (9/32") then use hot finition. Mark 4 points as shown.

Template #1 (length in mm)

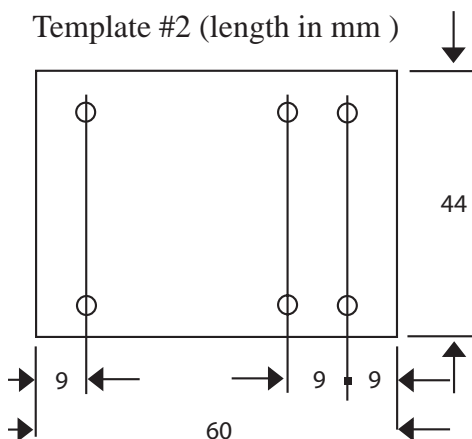


Type XII 70 mm worked with template #1



- Using template #2 and hot knife, cut a 60 mm (2 3/8") type XII webbing length. Mark 6 points as shown.

Template #2 (length in mm)



Type XII 60 mm worked with template #2



3) General positioning:

The cutter keeper upgrade kit is always placed on the lateral reserve flap to the side where the elastic pocket for AAD unit is opening.

This pocket for AAD unit opening side can change regarding to the model of rig which should be upgraded (see following figures).

MEMENTO : The lateral flap where cutter keeper is fitted will always become the first flap to close above the reserve pilotchute during reserve packing



EXAMPLE
ATOM LEGEND R



EXAMPLE
ATOM LEGEND S

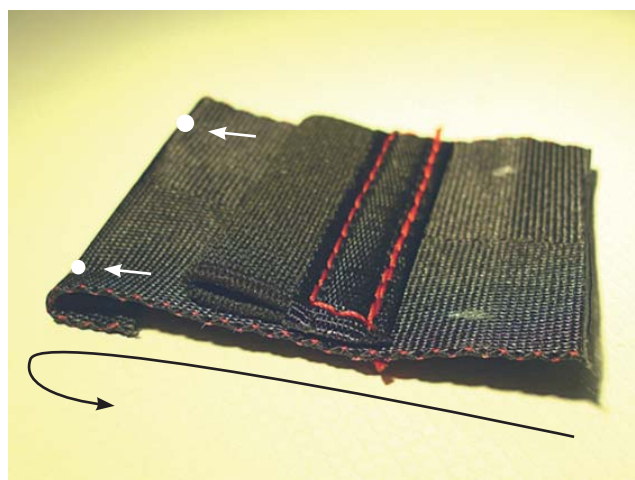
4) Assembling:

Place the binding edge of cutter elastic keeper close to the two internal spot of 60 mm type XII.

Sew the elastic keeper using a box stitch with stop on one of larger side of box



Use the two spots placed toward elastic side of keeper to fold back type XII webbing underneath (eventually hold with double-face adhesive)



Place the prepared 60 mm Type XII webbing onto the reserve lateral flap: always on the side where elastic AAD unit pocket is opening.

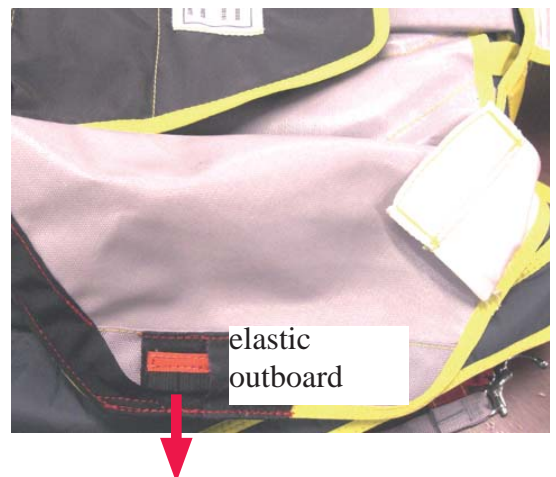
Positioning marks to place webbing are:

- Folded edge of Type XII webbing up against the outboard edge of lateral flap binding
- Lateral edge of Type XII webbing against the lateral flap grommet

! WARNING: whatever upgraded flap (left or right) the elastic part of the cutter keeper must always be placed toward outboard flap !



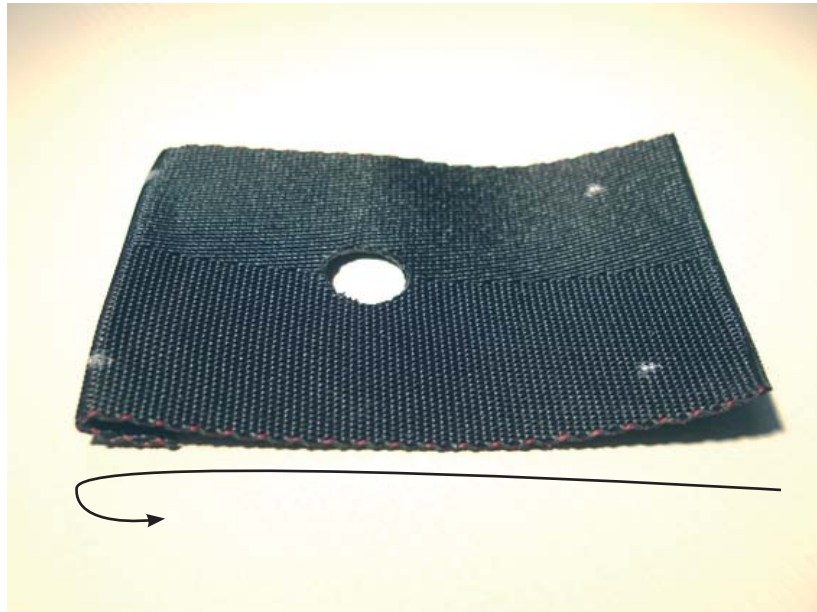
VERSION LEGEND S



Sew the folded type XII edge using a back & forth stitch (overlaying the binding outboard stitch)



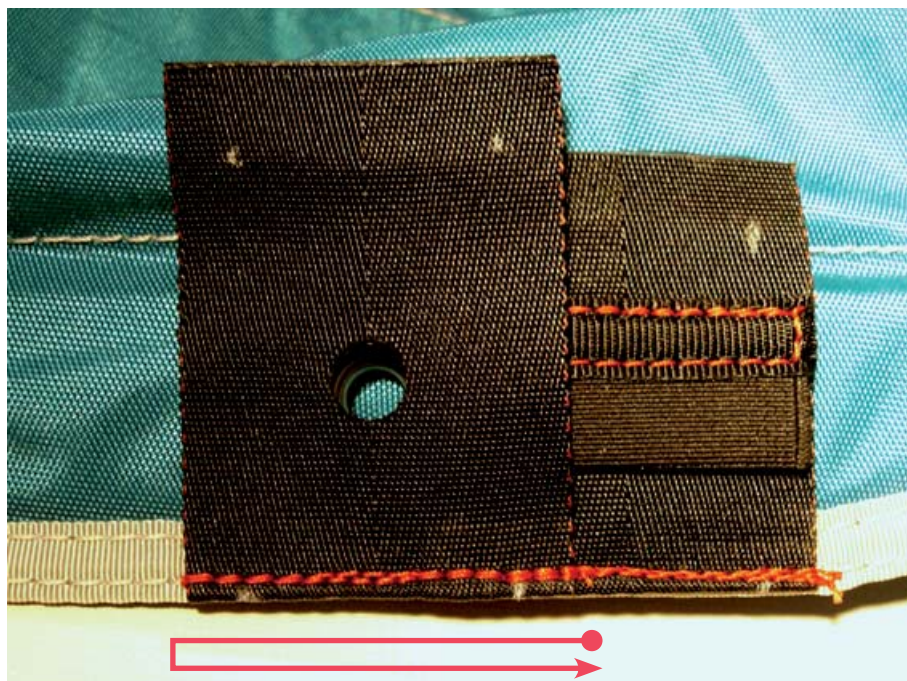
Use two spots of the drilled 70 mm Type XII webbing to fold back underneath (eventually hold with double-face adhesive)



Place Type XII webbing using following marks:

- Hole webbing axis superimpose with grommet central axis.
- Folded edge of Type XII webbing up against the outboard edge of lateral flap binding.

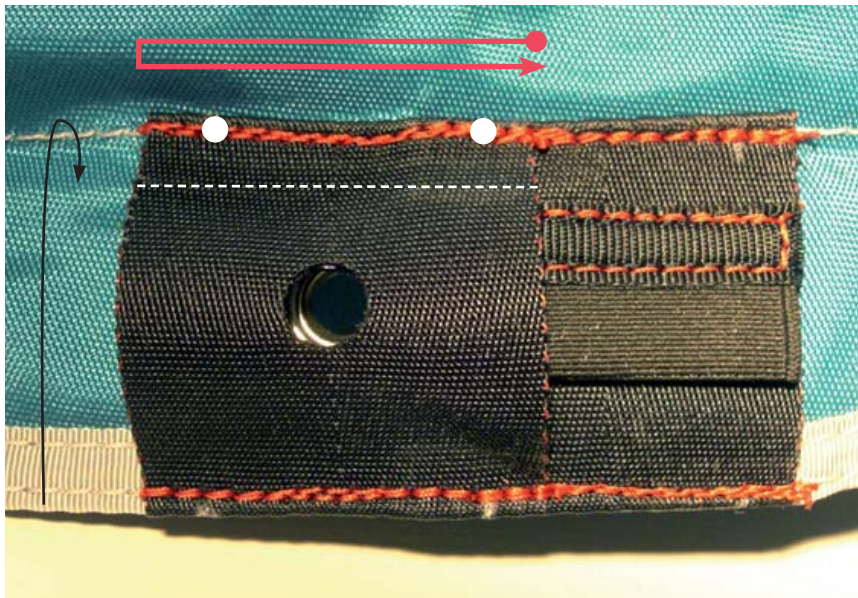
Sew the folded type XII edge using a back & forth stitch (overlaying the binding outboard stitch).



- Fold underneath Type XII webbing in the two remaining spots axis (eventually hold with double-face adhesive)
- Level the two spots with the inboard stitching of lateral flap plate housing.
- Sew the folded Type XII edge using a back & forth stitch (overlaying the plate housing inboard stitch).



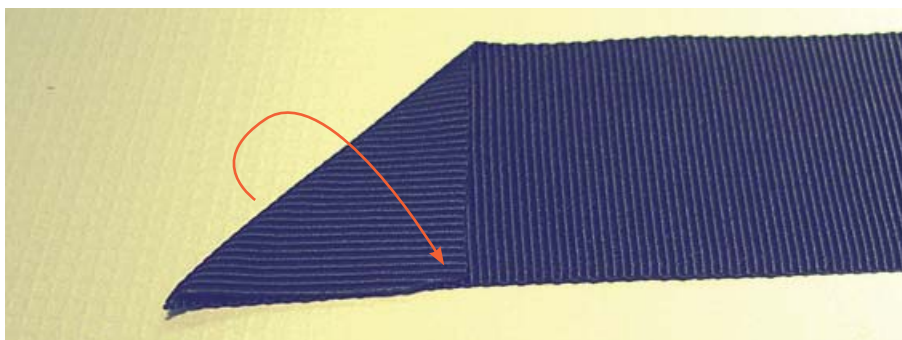
- Fold underneath drilled Type XII webbing in the two remaining spots axis (eventually hold with double-face adhesive)
- Level the two spots with the inboard stitching of lateral flap plate housing.
- Sew the folded Type XII edge using a back & forth stitch (overlaying the plate housing inboard stitch).
- A slight slack in webbing must appear to let enough space for AAD cutter.

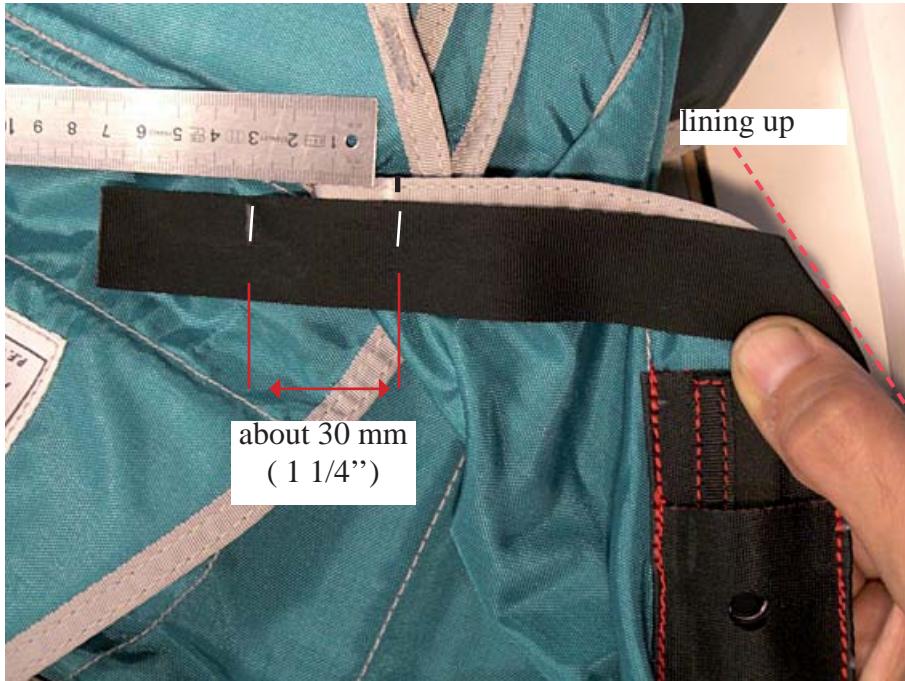


Measure and mark a 20 mm (3/4") distance from the point where lateral flap and inner reserve central flap are assembled



Fold back in arrowhead one ending of the 200 mm (8") length of 3/4" type III binding tape.

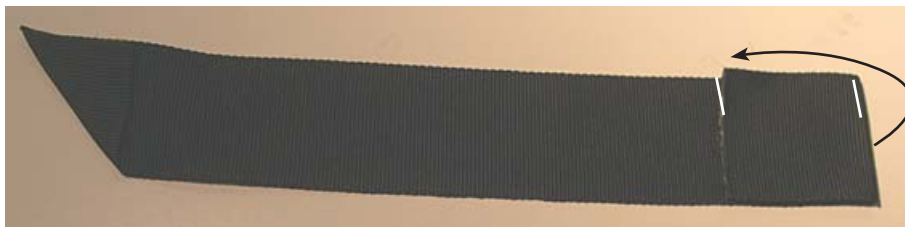




Place the 1''Type III tape to line up the previous fold with the outboard curved shape of lateral flap.

Once placed mark the tape to level with the previous mark on lateral flap. Then add another mark 30 mm further.

Cut (hot knife) the 1'' type III tape at this last mark (the final length of tape is variable as lateral flap size depend from



Fold back 1''type III tape at 30 mm mark, to same face than arrowhead fold



Place the prepared 1''type III tape (fold located underneath) at the lateral flap mark.

Sew the outboard edge of 1'' type III with stitching laying over the outboard lateral flap binding stitch (with triple stop starting at the mark & stop stitch back and forth laying over binding stitch as shown at ending)

Stitch the inboard edge of 1" type III tape (with triple stop at beginning & end of stitch).

The stitch ending must stop when meeting the inboard stitch of lateral plate housing.



Using hot knife carefully carry out a slit (about 15 mm - 9/16") into the lower part of inner reserve central flap in the axis of elastic AAD unit pocket opening & axis of previous cutter tunnel (see detailed figure)



AERAZUR
PARACHUTES DE FRANCE
2, rue Maurice Mallet
92130 Issy les Moulineaux
Tel: 33 1 41232323
Fax: 33 1 46488341

Technical Communication

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Tools required :

- Scissors (seam ripper or snips optional)
- Double face adhesive tape (optional)
- Marking pen
- Hot knife.
- 2 template (cardboard or plastic) for marking (designed as enclosed drawings)
- Die cutter diameter 7 mm (9/32'')

Machine required:

- Straight Stitch (adjustment 5-6 stitches for 2 cm- 3/4''length)

Matérials required:

- Nylon binding tape 1 Inch type III 200 mm (8'')
- Type XII webbing 50 mm + 70 mm (2'' + 2 3/4'')
- Thread nylon type 30/3

or

KIT CUTTER PYRO. AXIS/AT.0000 PN: P2007910201

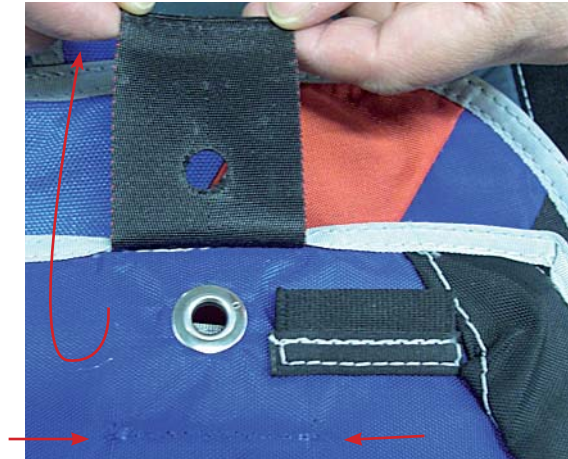
+ Elastic cutter keeper (included in installation kit Cypres or Vigil, or unstitch from rig to be modified)

Time required: 15-30 min.

1) Dismantling:

Remove the elastic cutter keeper from original place carrying out the following steps onto the reserve inner central flap:

- Unstitch the triple-stitch holding the drilled Type XII webbing above central flap grommet.



- Unstitch the inboard stitching of Type XII binding (about 3/4'' - 2 cm - on both sides of Type XII).



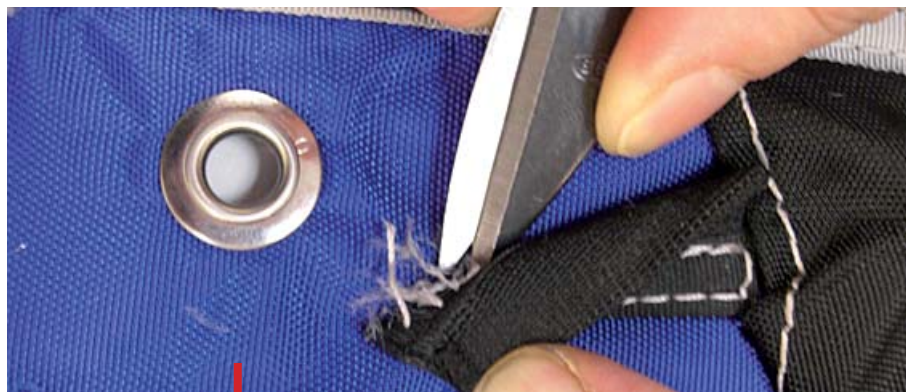
- Lift binding tape and cut Type XII webbing as close as possible to the outboard binding stitching.



- Fold back the binding tape and sew using straight stitch above the original inboard binding stitching. (with stop of 5/8" - 1,5 cm length at beginning & end)



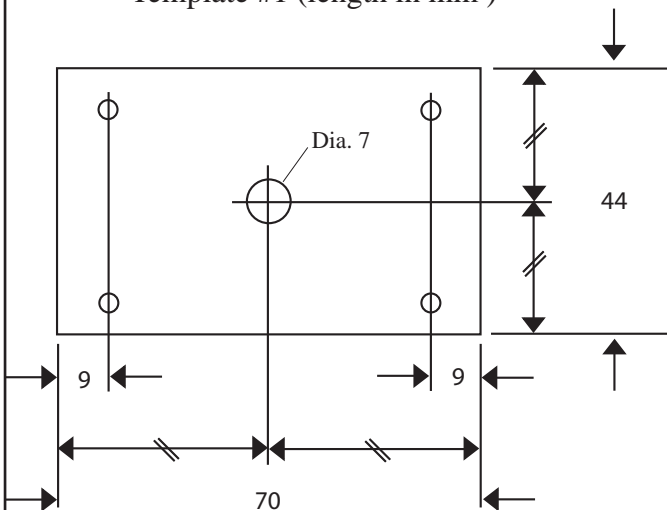
- Carefully remove the square stitching which fixed the elastic cutter keeper (from above) and separate for further assembling steps.



2) Preparation: (This step is not necessary using Pdf's upgrading kit PN: P2007910201)

- Using template #1 and hot knife, cut a 70 mm (2 3/4") type XII webbing length , drill a center hole using Die cutter diameter 7 mm (9/32") then use hot finition. Mark 4 points as shown.

Template #1 (length in mm)

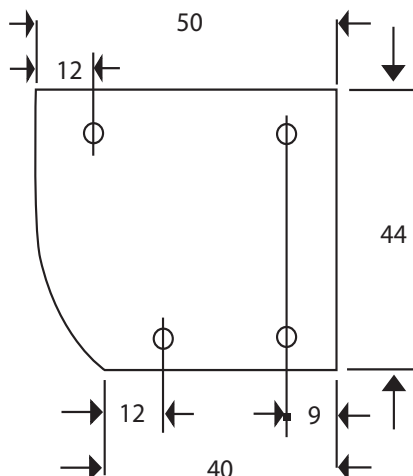


Type XII 70 mm worked with template #1



- Using template #2B and hot knife, cut a 50 mm (2") type XII webbing length, cut the curved edge of webbing and mark 6 points as shown.

Template #2B (length in mm)



Type XII 50 mm worked with template #1



3) General positioning:

The cutter keeper upgrade kit is always placed on the lateral reserve flap to the side where the elastic pocket for AAD unit is opening.

This pocket for AAD unit opening side can change regarding to the model of rig which should be upgraded (see following figures).

MEMENTO : The lateral flap where cutter keeper is fitted will always become the first flap to close above the reserve pilotchute during reserve packing.

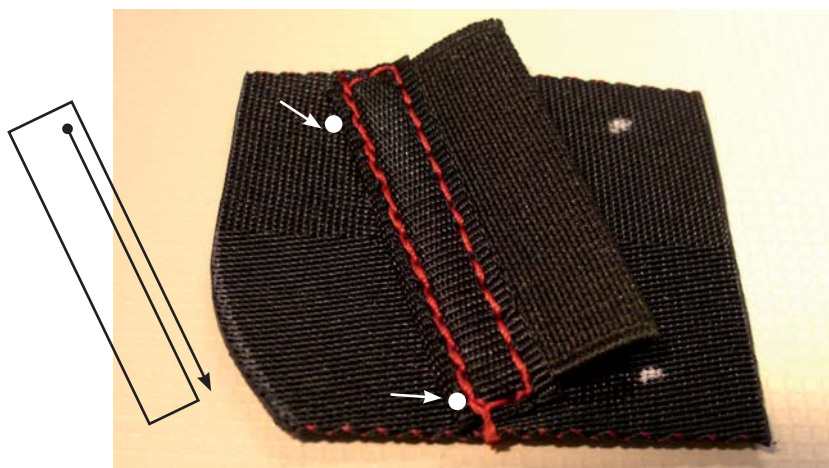


EXAMPLE
ATOM LEGEND R
T0000

4) Assembling:

Place the binding edge of cutter elastic keeper close to the two diagonal spot of 50 mm type XII. (elastic part toward inboard)

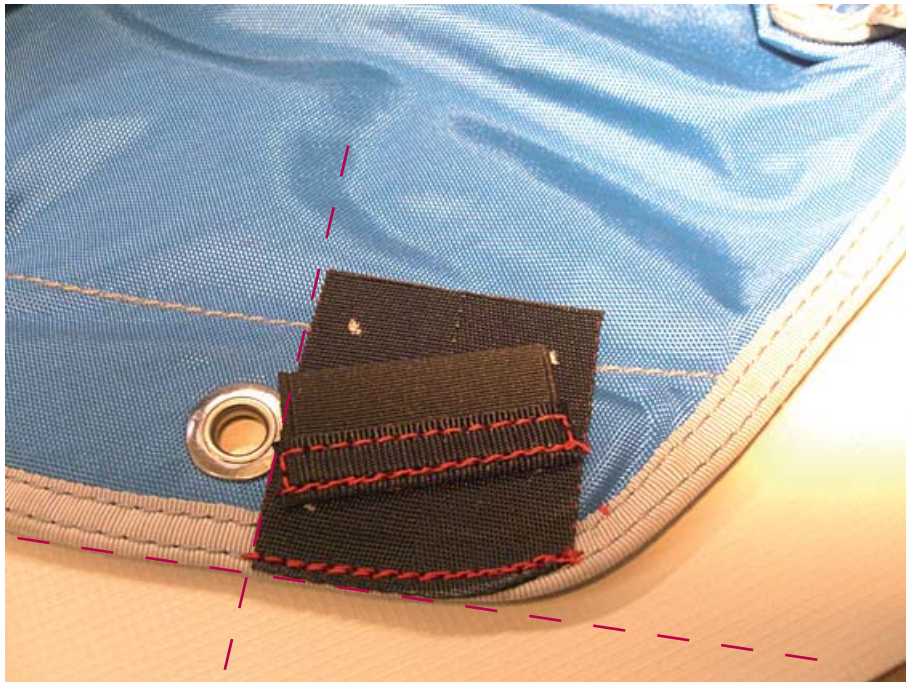
Sew the elastic keeper using a box stitch with stop on one of larger side of box .



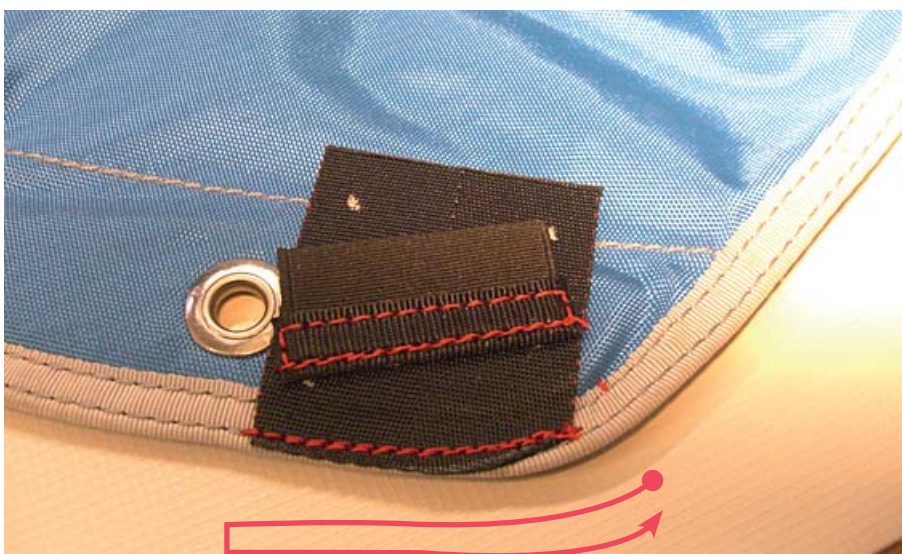
Place the prepared 60 mm Type XII webbing onto the reserve lateral flap: always on the side where elastic AAD unit pocket is opening.

Positioning marks to place webbing are:

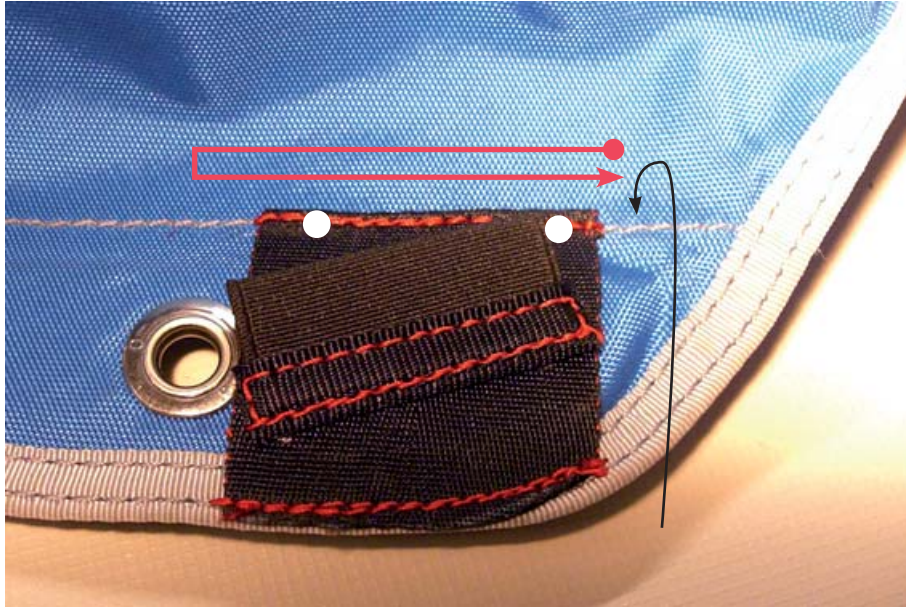
- Curved edge of Type XII webbing up against the outboard edge of lateral flap binding
- Lateral edge of Type XII webbing against the lateral flap grommet
- Elastic part of cutter keeper directed as shown.



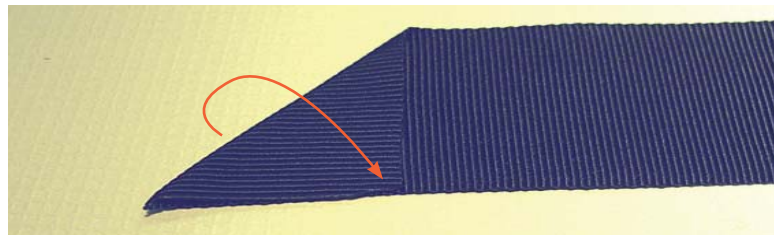
Sew the Curved type XII edge using a back & forth stitch (overlaying the binding outboard stitch)



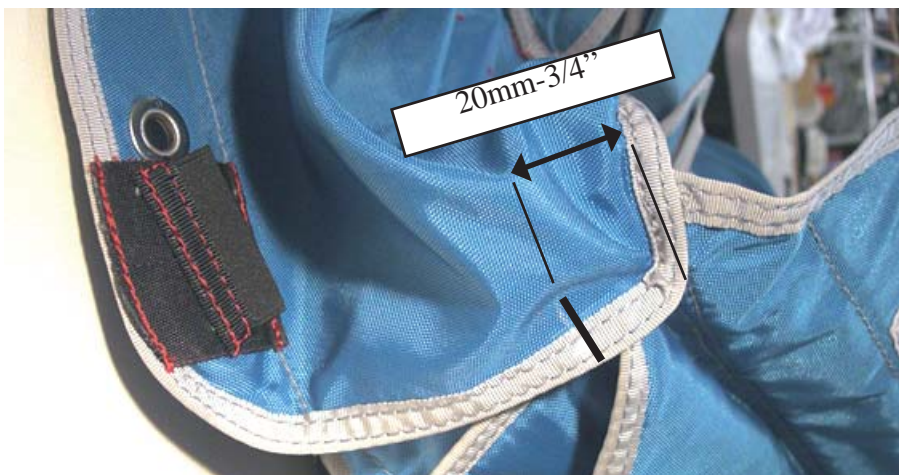
- Fold underneath Type XII webbing in the two remaining spots axis (eventually hold with double-face adhesive)
- Level the two spots with the inboard stitching of lateral flap plate housing.
- Sew the folded Type XII edge using a back & forth stitch (overlaying the plate housing inboard stitch).

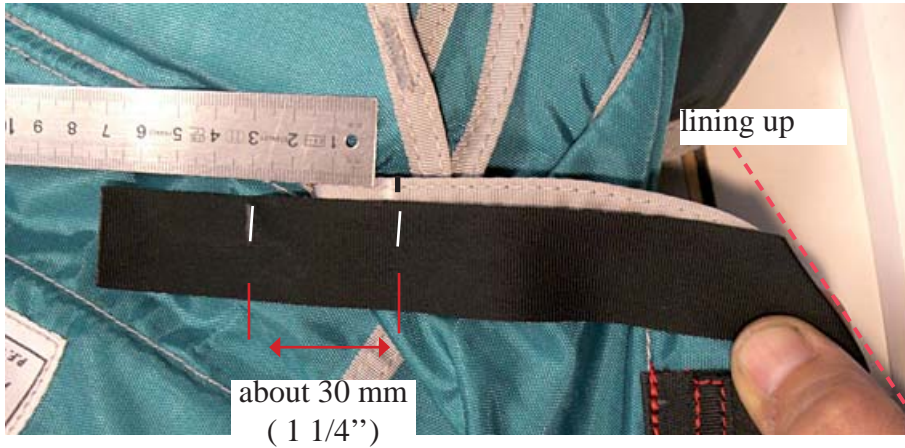


Fold back in arrowhead one ending of the 200 mm (8'') length of 1'' type III binding tape.



Measure and mark a 20 mm (3/4'') distance from the point where lateral flap and inner reserve central flap are assembled

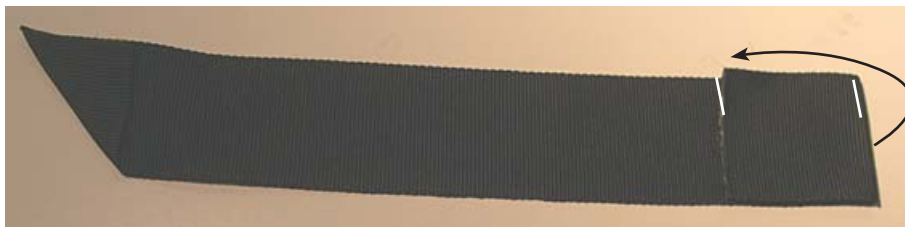




Place the 1' Type III tape to line up the previous fold with the outboard curved shape of lateral flap.

Once placed mark the tape to level with the previous mark on lateral flap. Then add another mark 30 mm further.

Cut (hot knife) the 1' type III tape at this last mark (the final length of tape is variable as lateral flap size depend from container size)



Fold back 1' type III tape at 30 mm mark, to same face than arrowhead fold



Place the prepared 1'' type III tape (fold located underneath) at the lateral flap mark.

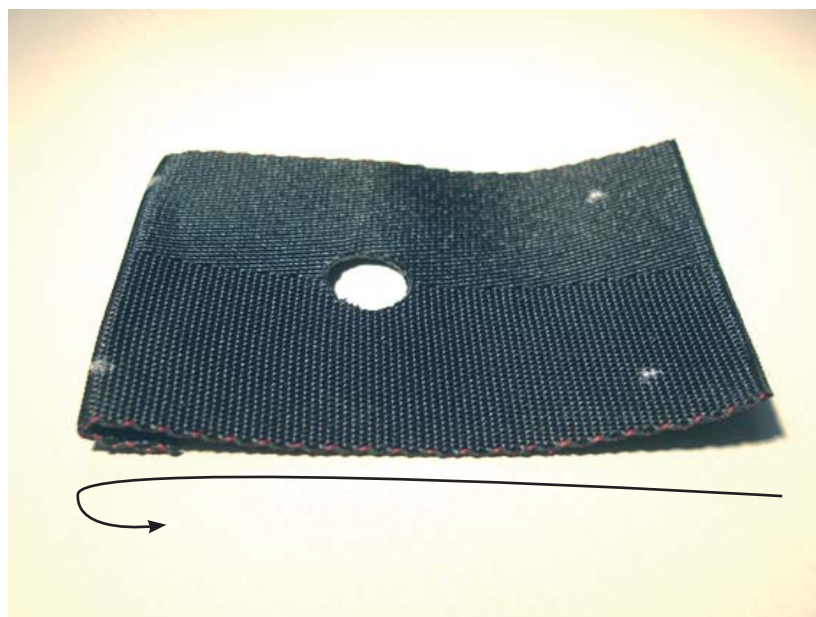
Sew the outboard edge of 1'' type III with stitching laying over the outboard lateral flap binding stitch (with triple stop starting at the mark & stop stitch back and forth laying over binding stitch as shown at ending)

Stitch the inboard edge of 1" type III tape (with triple stop at beginning & end of stitch).

The stitch ending must stop when meeting the inboard stitch of lateral plate housing.



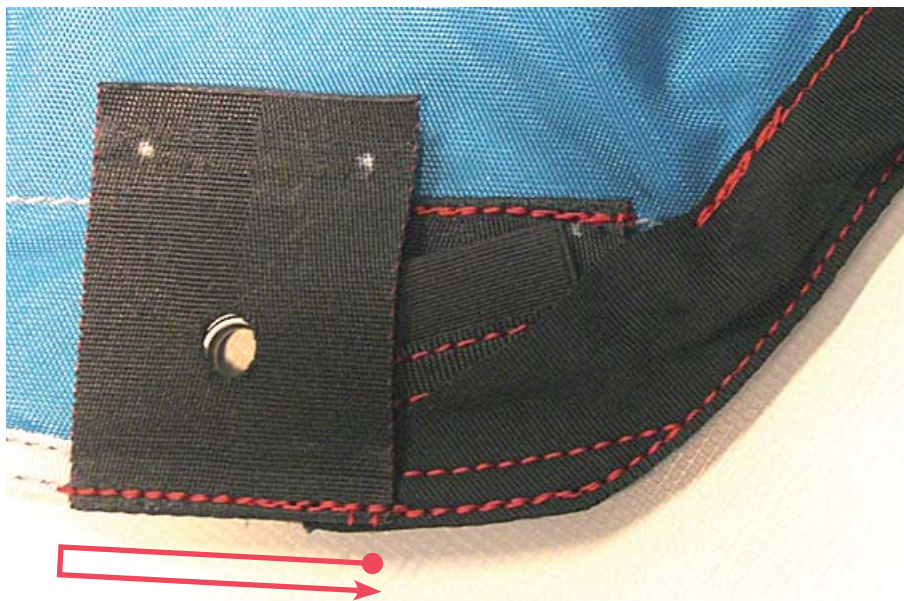
Use two spots of the drilled 70 mm Type XII webbing to fold back underneath (eventually hold with double-face adhesive)



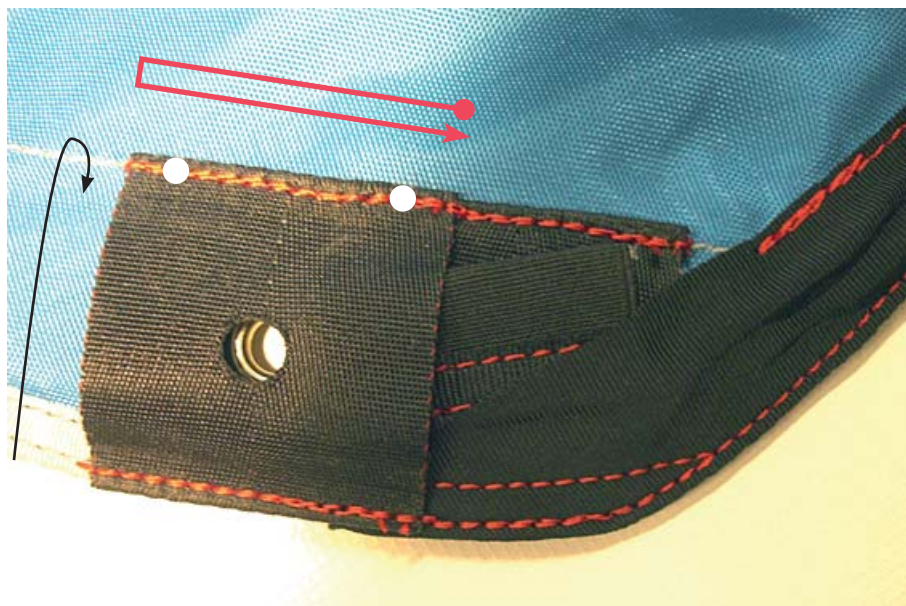
Place Type XII webbing using following marks:

- Hole webbing axis superimpose with grommet central axis.
- Folded edge of Type XII webbing up against the outboard edge of lateral flap binding.

Sew the folded type XII edge using a back & forth stitch (overlaying the binding outboard stitch).



- Fold underneath drilled Type XII webbing in the two remaining spots axis (eventually hold with double-face adhesive)
- Level the two spots with the inboard stitching of lateral flap plate housing.
- Sew the folded Type XII edge using a back & forth stitch (overlaying the plate housing inboard stitch).
- A slight slack in webbing must appear to let enough space for AAD cutter.



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2, rue Maurice Mallet
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Using hot knife carefully carry out a slit (about 15 mm - 9/16") into the lower part of inner reserve central flap in the axis of elastic AAD unit pocket opening & axis of previous cutter tunnel (see detailed figure)



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92130 Issy les Moulineaux
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Fax: 33 1 46488341

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Concerned equipments: ATOM Tandem Type 740-1

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PARACHUTES DE FRANCE
2, rue Maurice Mallet
92130 Issy les Moulineaux
Tel: 33 1 41232323
Fax: 33 1 46488341

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Tools required :

- Scissors (seam ripper or snips optional)
- Double face adhesive tape (optional)
- Marking pen
- Hot knife.
- 2 template (cardboard or plastic) for marking (designed as enclosed drawings)
- Die cutter diameter 7 mm (9/32")

Machine required:

- Straight Stitch (adjustment 5-6 stitches for 2 cm- 3/4" length)

Matériaux required:

- Nylon binding tape 1 Inch type III 200 mm (8")
- Type XII webbing 65 mm + 75 mm + 75 mm (2 1/2" + 3" + 3")
- Thread nylon type 30/3

OR

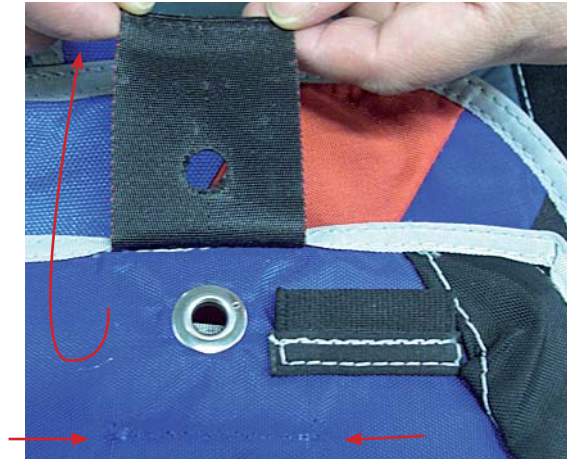
KIT CUTTER PYRO. TDM/SMM PN: P2007910202

+ Elastic cutter keeper (included in installation kit Cypres or Vigil, or unstitch from rig to be modified)

1) Dismantling:

Remove the elastic cutter keeper from original place carrying out the following steps onto the reserve inner central flap:

- Unstitch the triple-stitch holding the drilled Type XII webbing above central flap grommet.



- Unstitch the inboard stitching of Type XII binding (about 3/4" - 2 cm - on both sides of Type XII).



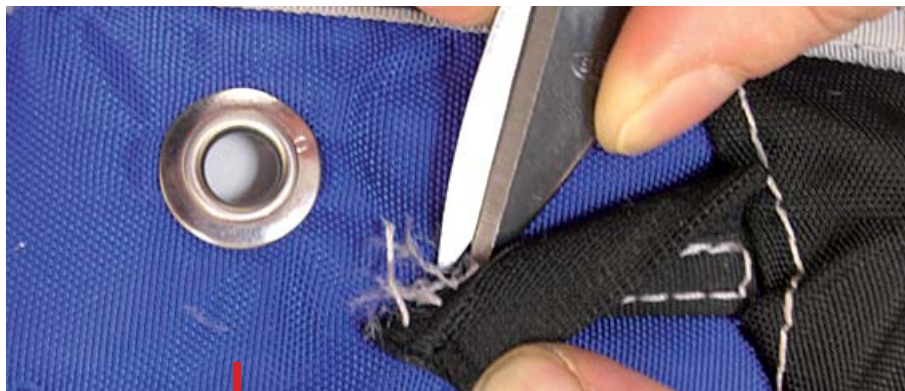
- Lift binding tape and cut Type XII webbing as close as possible to the outboard binding stitching.



- Fold back the binding tape and sew using straight stitch above the original inboard binding stitching. (with stop of 5/8" - 1,5 cm length at beggining & end)



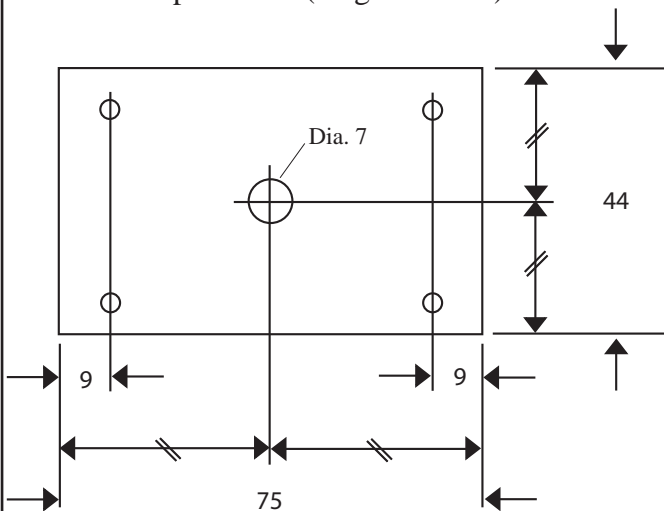
- Carefully remove the square stitching which fixed the elastic cutter keeper (from above) and separate for further assembling steps.



2) Preparation: (This step is not necessary using Pdf's upgrading kit PN: P2007910202)

- Using template #1B and hot knife, cut a 75 mm (3'') type XII webbing length , drill a center hole using Die cutter diameter 7 mm (9/32'') then use hot finition . Mark 4 points as shown.

Template #1B (length in mm)

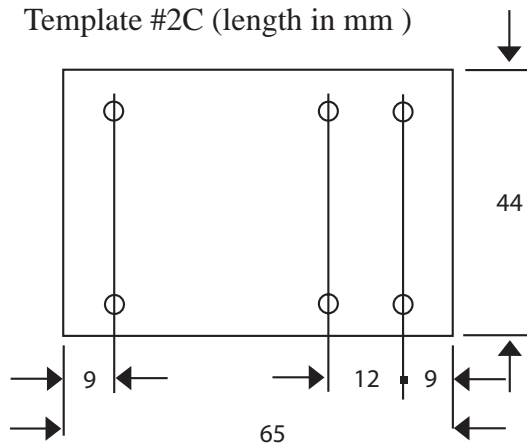


Type XII 75 mm worked with template #1B



- Using template #2C and hot knife, cut a 65 mm (2 1/2'') type XII webbing length. Mark 6 points as shown.

Template #2C (length in mm)



Type XII 65 mm worked with template #2C



3) General positioning:

The cutter keeper upgrade kit is always placed on the lateral reserve flap to the side where the elastic pocket for AAD unit is opening.

This pocket for AAD unit opening side can change regarding to the model of rig which should be upgraded (see following figures).

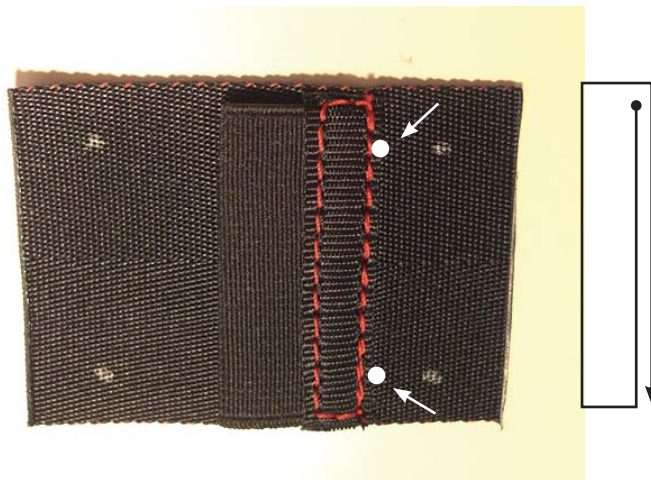
MEMENTO : The lateral flap where cutter keeper is fitted will always become the first flap to close above the reserve pilotchute during reserve packing



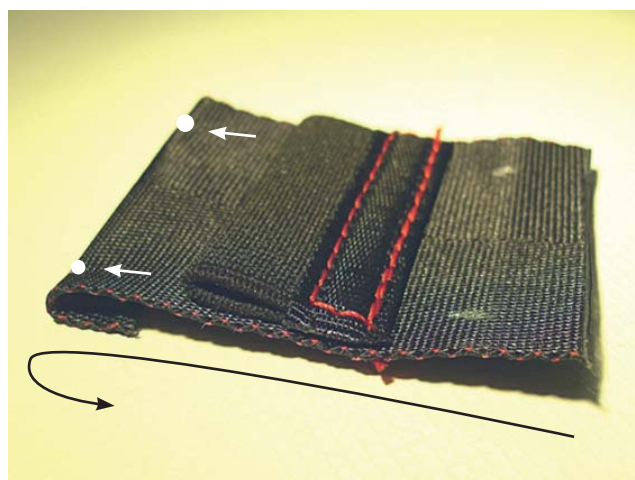
4) Assembling:

Place the binding edge of cutter elastic keeper close to the two internal spot of 60 mm type XII.

Sew the elastic keeper using a box stitch with stop on one of larger side of box



Use the two spots placed toward elastic side of keeper to fold back type XII webbing underneath (eventually hold with double-face adhesive)

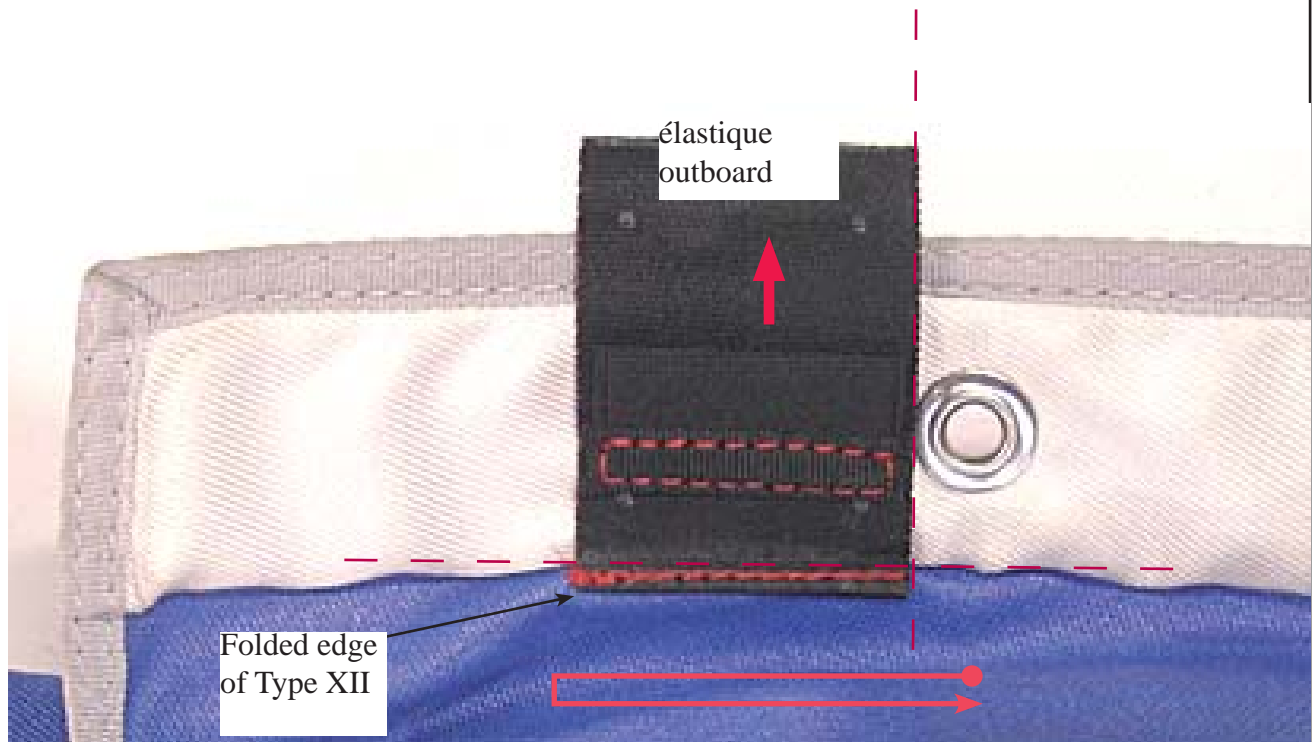


Place the prepared 65 mm Type XII webbing onto the reserve lateral flap: always on the side where elastic AAD unit pocket is opening.

The positioning marks to place webbing are:

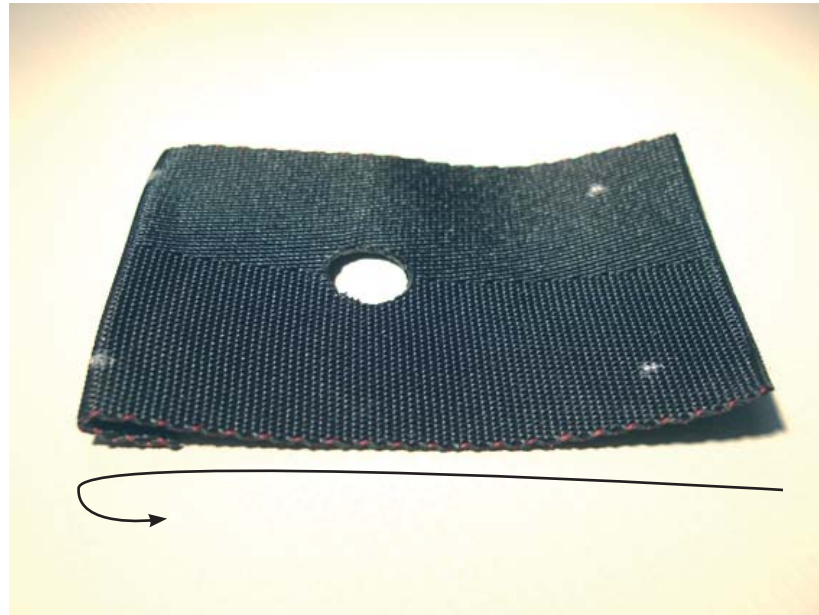
- Folded edge of Type XII webbing just over the inboard edge of lateral flap textile housing.
- Lateral edge of Type XII webbing against the lateral flap grommet

! WARNING: whatever upgraded flap (left or right) the elastic part of the cutter keeper must always be placed toward outboard flap !



Sew the folded type XII edge using a back & forth stitch (just over the edge of lateral flap plate housing)

Use two spots of the drilled 75 mm Type XII webbing to fold back underneath (eventually hold with double-face adhesive)



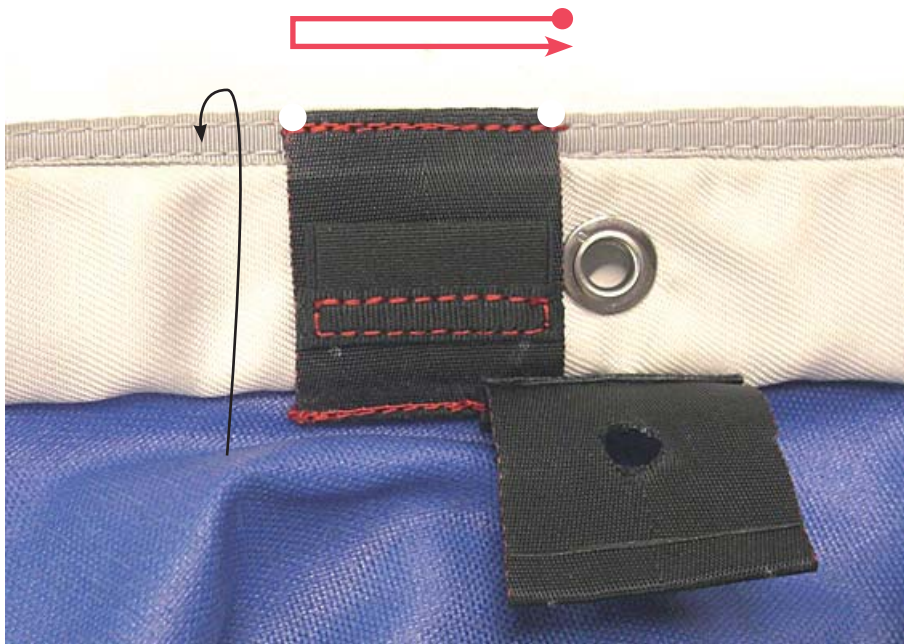
Place Type XII webbing using following marks:

- Hole webbing axis superimpose with grommet central axis.
- Folded edge of Type XII webbing just over the inboard edge of lateral flap textile housing.

Sew the folded type XII edge using a back & forth stitch (overlaying the binding outboard stitch).



- Fold underneath Type XII webbing in the two remaining spots axis (eventually hold with double-face adhesive)
- Level the two spots with outboard edge of lateral flap binding.
- Sew the folded Type XII edge using a back & forth stitch (overlaying the binding outboard stitch).



- Fold underneath drilled Type XII webbing in the two remaining spots axis (eventually hold with double-face adhesive)
- Level the two spots with outboard edge of lateral flap binding.
- Sew the folded Type XII edge using a back & forth stitch (overlaying the binding outboard stitch).
- A slight slack in webbing must appear to let enough space for AAD cutter.



Measure and mark a 20 mm (3/4") distance from the point where lateral flap and inner reserve central flap are assembled

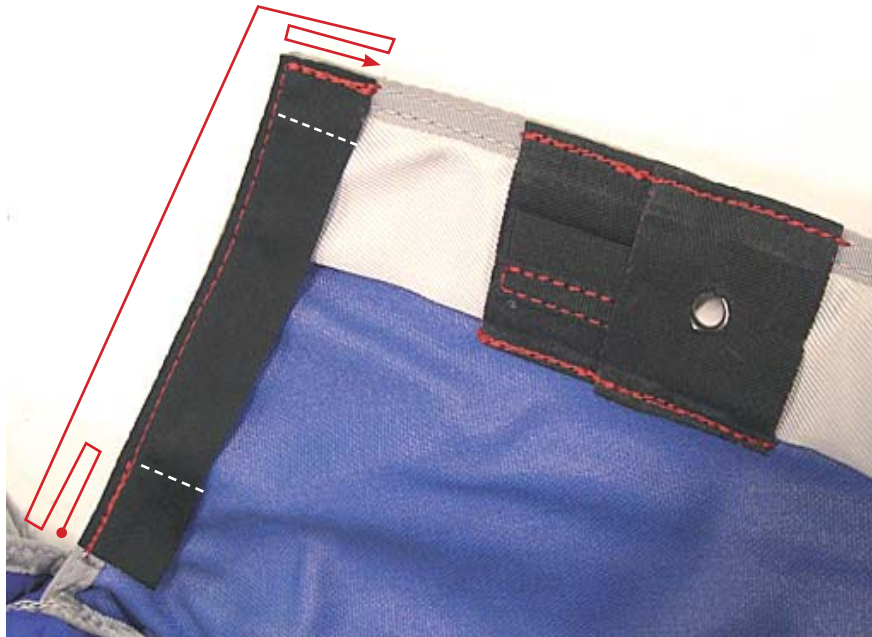


Mark the 3/4" Type III binding tape (1 mark at 40mm - 1 5/8" from ending , 1 mark at 20mm-3/4" from the other) and fold back at marks.



Place 1" Inch Type III , fold back underneath , with mark side 40 mm against the previous mark carried out on lateral flap.

Sew the outboard edge of 1" type III with stitching laying over the outboard lateral flap binding stitch (with triple stop starting at the mark & triple stop perpendicular at ending)



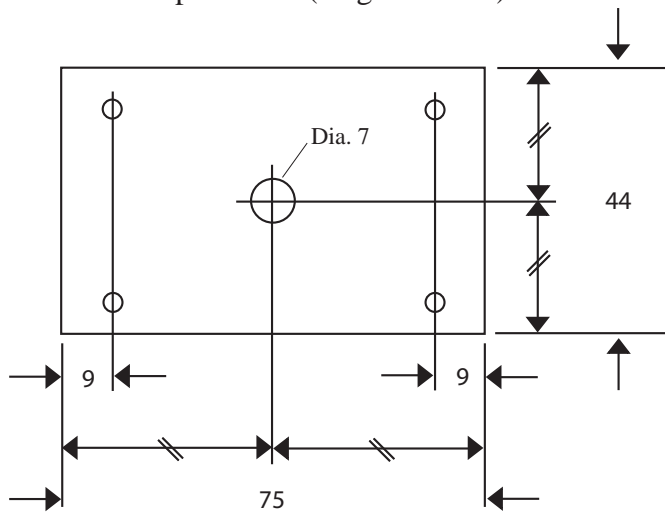
Stitch the inboard edge of 1" type III tape (with triple stop at beginning & end of stitch).

The stitch ending must stop when meeting the inboard limit of lateral plate housing .



- Using template #1B and hot knife, cut a 75 mm (3'') type XII webbing length , **without drilling the webbing**. Mark 4 points as shown.

Template #1B (length in mm)



Type XII 75 mm worked with template #1B
without drilling the webbing



Use two spots of the drilled 75 mm Type XII webbing to fold back underneath (eventually hold with double-face adhesive)



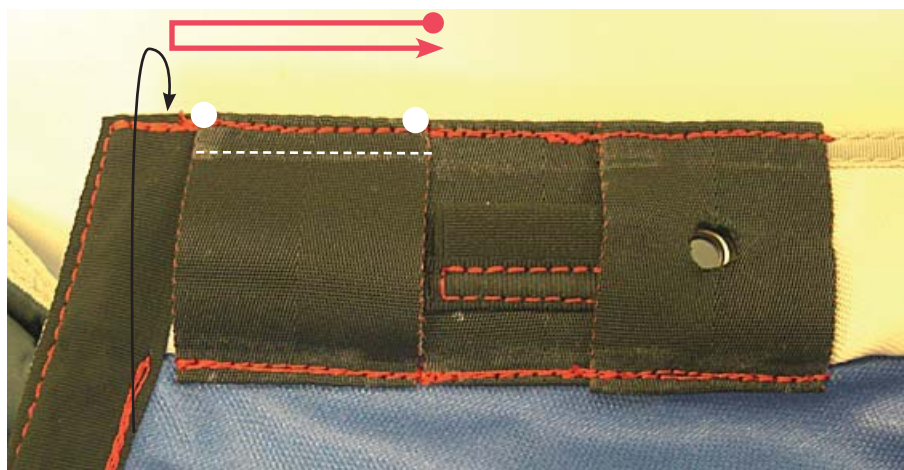
Place Type XII webbing using following marks:

- Type XII webbing placed just between lateral tape tunnel and webbing where cutter keeper fitted.
- Folded edge of Type XII webbing just over the inboard edge of lateral flap textile housing.

Sew the folded type XII edge using a back & forth stitch (just over the edge of lateral flap plate housing)



- Fold underneath Type XII webbing in the two remaining spots axis (eventually hold with double-face adhesive)
- Level the two spots with outboard edge of lateral flap binding.
- Sew the folded Type XII edge using a back & forth stitch (overlaying the binding outboard stitch).
- A slight slack in webbing must appear to let enough space for AAD cutter.



AERAZUR
PARACHUTES DE FRANCE
2, rue Maurice Mallet
92130 Issy les Moulineaux
Tel: 33 1 41232323
Fax: 33 1 46488341

Technical Communication

FAA qualified rigger or foreign equivalent

Version 1 du 17/01/06

CT_07_001_TDM
Attached to BS_25-63-30
Date: 08/03/2007
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Using hot knife carefully carry out a slit (about 15 mm - 9/16”) into the lower part of inner reserve central flap in the axis of elastic AAD unit pocket opening & axis of previous cutter tunnel (see detailed figure)

