Brake Parachute Assemblies, Type LB 52 Mk 1 (Ref No 15D/563) and Mk 2 (Ref No 15D/645). (Hunter T7, T8, T8A, T8B, FGA9, FR10, Mk 12) - Introduction of Fork End, Part No F237558, in place of Part No F228549. Brake Parachute Assembly becomes Mk 3 (Ref No 15D/732).

(MOD No GQ/B/12)

(Class B/2, superseding Hunter Mod No 1003)

(AB/E/4162 - 31.1.63)

1 INTRODUCTION

This modification is a design improvement brought about as a result of Service experience.

It introduces a new shackle end to the parachute cable to match the parachute release assembly on aircraft embodying 'Hunter' Modifications No 848 and 850, in order to prevent over-heating of the release slip solenoid.

(1) This modification supersedes the work called for by Mod No Hunter 1003.

2 EMBODIMENT

This modification is to be embodied by:

2nd Line Servicing Units: At the first opportunity and not later than 1 month after receipt of parts.

3rd Line Servicing Units (RSUs): As detailed in AP 3158, Vol 2 Leaflet B6.

4th Line Servicing Units (Repair Depots): Before issue of aircraft.

Aircraft Storage Units: In accordance with the Standard of Preparation.

Equipment Depots: Before issue of equipment.

3 APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately 1/4 man hour.

4 DRAWINGS REQUIRED

No drawings are required for the embodiment of this modification.

5 PARTS AND SPECIAL TOOLS REQUIRED

(1) Parts and/or Materials

The Modification Kit which consists of the following Service Supply items, will be assembled by No 25 Maintenance Unit under

Ref No 15D/751:

Ref No	Part No	Nomenclature	Qty	Class of Equipment
15D/723	F237558	Fork end	1	C
15D/722	STD/1551/1·65	Bolt	2	C
26FX/4488	STD/1718/1	Nut	2	C

All the above items will be issued to the RAF Units at home on issue order - no demands are to be submitted. RAF Units abroad, and all other users, are to demand separately their requirements of kits as listed above, in accordance with current regulations.

(2) Special Tools and/or Test Equipment

No special tools or test equipment are required for the embodiment of this modification.

6 MODIFICATION OF SPARES

The following spare is affected by the embodiment of this modification.

Ref No	Part No	Nomenclature	Qty	Class of Equipment
15D/592	F228547	Shackle Aircraft attachment	1	C
Parts required:				
15D/723	F237558	Fork	1	C
15D/722	STD/1551/1·65	Bolt	2	C
26FX/4488	STD/1718/1	Nut	2	C

Spares will be modified by the Stock Holding Unit.

7 CHANGE OF REFERENCE, PART AND ASSEMBLY NUMBERS

The embodiment of this modification changes Reference, Part and Assembly Numbers as follows:

OLD			NEW	
Ref No	Part/Assy No	Nomenclature	Ref No	Part/Assy No
15D/563	MRI/GQ/306	Parachute Assembly, LB 52 Mk 1	15D/732	MRI/GQ/410
15D/645	MRI/GQ/306	Parachute Assembly, LB 52 Mk 2	15D/732	MRI/GQ/410
15D/592	F228547	Shackle Aircraft Attachment	15D/721	F24686

8 SEQUENCE OF OPERATIONS

The following is the sequence of operations:

(1) Remove the pairs of nuts and bolts securing the fork end, Part No F228549 to the shackle on the aircraft attachment end of the parachute cable. Discard the fork end and the nuts and bolts.

(2) Fit the new fork end (Ref No 15D/723), using new bolts (Ref No 15D/722) and nuts (Ref No 26FX/4488).

(3) Cut back the exposed threaded portion of each bolt to give a ·05 in protrusion, and peen over to lock the nuts.

9 SPECIAL TESTS AFTER EMBODIMENT

No special tests are required after embodiment of this modification.

10 RECORDING ACTION

Record on relevant servicing documents.

11 DISPOSAL OF REDUNDANT PARTS

The undermentioned part rendered redundant by the embodiment of this modification is to be disposed of as scrap in accordance with AP 830 Vol 1 (5th Edition), Leaflet A 18/1:

Ref No	Part No	Nomenclature	Qty	Class of Equipment
15D/NIV	F228549	Fork end	1	C

12 EFFECT ON WEIGHT AND MOMENT

This modification has no effect upon the weight of the parachute assembly.

13 EFFECT ON AIRCRAFT OR EQUIPMENT OPERATION AND HANDLING

This modification does not affect the operation or handling of the aircraft or equipment.

14 EFFECT ON SERVICING AND SERVICING SCHEDULE

(1) This modification does not affect the servicing of the assembly.

(2) This modification does not affect the servicing schedule.

Parachute Assembly Type LB 52 Mk 1 (Ref No 15D/563), Mk 2 (Ref No 15D/645) and Mk 3 (Ref No 15D/563) - Part A - To improve the deployment of the auxiliary parachute, Part B - To strengthen the Bridle Attachment cords. - Hunter T Mk 7, FGA Mk 9 and FR Mk 10 Aircraft.

(MOD No GQ/B/11)

(Class B/2)

(AB/D/4163 - 21.8.63)

1 INTRODUCTION

This modification is a design improvement brought about as a result of Service experience.

Following instances of delayed streams and damaged attachment cords, satisfactory results have been obtained by reducing the area of the auxiliary parachute stowage flaps, removing the nylon loop from the auxiliary stowage, and replacing the bridle attachment cords with 1500 lb nylon braid.

(1) This modification is partially satisfied by and supersedes STI SE/59.

2 EMBODIMENT

This modification is to be embodied by:

2nd Line Servicing Units: At the first opportunity and not later than one month after receipt of parts.

3rd Line Servicing Units (RSUs): As detailed in AP 3158, Vol 2, Leaflet B6.

4th Line Servicing Units (Repair Depot): Before issue of aircraft.

Aircraft Storage Units: In accordance with the Standard of Preparation.

Equipment Depots: Within 3 months of receipt of Modification Leaflet - all stocks.

3 APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately $1\frac{1}{2}$ man hours.

4 DRAWINGS REQUIRED

Drawings No AP 108C-0507-2 Sheet 1 only is incorporated in this leaflet.

5 PARTS AND SPECIAL TOOLS REQUIRED

(1) Parts and/or Materials

The following materials are required and are to be provided under Unit arrangements:

Ref No	Nomenclature	Qty	Class of Equipment
15A/510	Thread, silk, DTD 66H	A/R	C
or			
15D/582	Thread, nylon, S802		C
15D/471	Tape, adhesive, 1 in wide		C
15D/731	Braid, nylon 1500 lb DTD 689/1	$2\frac{1}{4}$ yds	C
15A/527	Tape, $\frac{1}{2}$ in wide F49	A/R	C

(2) Special Tools and/or Test Equipment

No special tools or test equipment are required for the embodiment of this modification.

6 MODIFICATION OF SPARES

The following list shows the spares affected by this modification and the parts required to modify them:

Ref No	Part No	Nomenclature	Qty	Class of Equipment
15D/588	GQ10339	Pack (Parachute Assembly Type - LB 52 Mks 1, 2 and 3)	-	A
Parts required:				
15A/527	-	Tape, $\frac{1}{2}$ in wide Spec F49	2/3 yd	C
15A/510		Thread, silk, DTD66H	A/R	C
or				
15D/582		Thread, nylon, IACS 802	A/R	C

7 CHANGE OF REFERENCE, PART AND ASSEMBLY NUMBERS

There are no changes of Reference, Part or Assembly Numbers as a result of this modification.

8 SEQUENCE OF OPERATIONS

The following is the sequence of operations:

(1) With the auxiliary stowage flaps opened and laid back to expose the inner faces, mark a point on the centre line of each flap $3\frac{1}{2}$ in from the inner edge. At the corner attachment points of each flap place a mark 1 in above the inner edge. Join these two marked corner points with straight lines to the mark on the centre line. Refer to sheet 1 of the drawing.

(2) Unpick the binding tape from the edge now outside the new marking lines, and cut through at one end only. Cut each flap along the marking

lines and re-bind the cut edges with the existing tape, using silk thread (Ref No 15A/510) or nylon thread (Ref No 15D/582). Each flap will now be triangular in shape, with a $\frac{1}{2}$ in wall rising above the stitching securing the inner edge.

(3) Take a $5\frac{1}{2}$ in length of F49 (Ref No 15A/527) tape and mark at 2 in from one end. Lay this 2 in portion on the centre line of the outside face of one flap, with the mark just level with the flap apex. Sew the 2 in length to the flap with one block of stitching, using silk thread (Ref No 15A/510) or nylon thread (Ref No 15D/582).

Fold back the $3\frac{1}{2}$ in free length of the tape over the sewn portion. The end of this free length is then turned under for approximately $\frac{1}{2}$ in refer to sheet 1 of the drawing.

Commencing $\frac{3}{4}$ in below the apex, sew down the free length on to the 2 in portion and the flap. Stitch one complete gate using thread as above. This will leave a $\frac{3}{4}$ in flap loop at the apex end.

Similarly, form tape loops on the remaining three flaps.

Re-number the flaps in the sequence shown on sheet 1 of the drawing.

(4) Carefully cut out the small cord loop at the centre of the auxiliary stowage position. Refer to Section 'A-A' on sheet 1 of the drawing.

(5) Re-pack the assembly in accordance with the instructions given in AP 1182A, Vol 1, Sect 11, Chap 3 (AL 146) or the superseding AP108C-0507-1 (as amended).

9 SPECIAL TESTS AFTER EMBODIMENT

No special tests are required after the embodiment of this modification.

10 RECORDING ACTION

Record on relevant servicing documents.

11 DISPOSAL OF REDUNDANT PARTS

The undermentioned part rendered redundant by the embodiment of this modification is to be disposed of locally in accordance with current regulations:

Ref No	Part No	Nomenclature	Qty	Class of Equipment
15D/595	GQ 30681	Rip cord assembly	1	C

12 EFFECT ON WEIGHT AND MOMENT

This modification has no appreciable effect upon the weight of the assembly.

13 EFFECT ON AIRCRAFT OR EQUIPMENT OPERATION AND HANDLING

This modification does not affect the operation or handling of the aircraft or equipment.

14 EFFECT ON SERVICING AND SERVICING SCHEDULE

(1) (a) The method of folding and stowing the main canopy and securing the auxiliary parachute to the pack apron remains unchanged.

(b) Position the small end of the auxiliary parachute centrally in its stowage space and compress straight-down, ensuring that all slack fabric is neatly stowed under the upper coil of the spring in a manner which will not impede the extension of the spring.

Hold in this position.

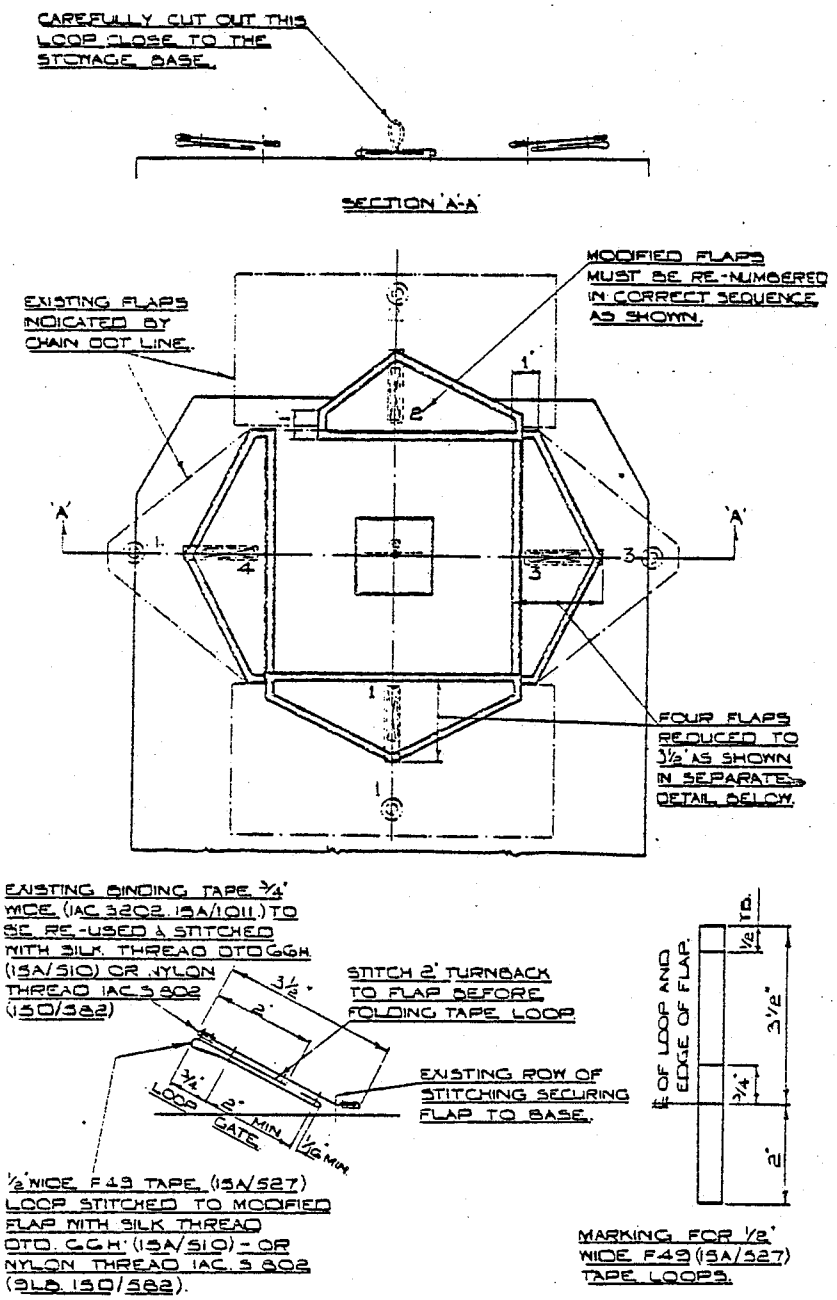
Feed a length of cord (50 lb or 100 lb as available) through the four tape loops in sequence, and draw the flaps inwards over the compressed parachute.

Pull up tightly and tie off with a double reef knot. This knot would be located between flaps Nos 2 and 3, to simplify the withdrawal of the cord and knot before closing the second (port side) door of the aircraft compartment. Ripcord assembly (Ref No 15D/595) is now no longer required.

Stow the complete assembly in the aircraft compartment in the normal manner. The closing of the starboard door will hold the compressed auxiliary in position.

Cut and remove the draw cord holding the four flaps in position. Close the port door.

(2) This modification affects the servicing schedule.



PARACHUTE ASSEMBLY TYPE LB 32 MK 3 & 2.
MODIFICATION OF AUXILIARY STOWAGE FLAPS.

Drg No AP 108C-0507-2
Sheet 1

Brake Parachute Assembly Type LB 52 Mk 1 (15D/563), Mk 2 (15D/645) and Mk 3 (15D/732) - Hunter T Mk 7, T Mk 8, T Mk 8B, T Mk 8C, FGA Mk 9, FR Mk 10. To strengthen the main pack flap covering the strop and cable stowage.

(MOD No GQ/B/27)

(Class: C/3 NCP)

(AB/D/5339 - 2.6.65)

1 INTRODUCTION

This modification is a design improvement resulting from Service experience. This experience reveals the tendency of the flap to tear adjacent to the pack mouth-lock slots, with the consequent possibility that the parachute may fail to deploy. The modification provides for the addition of two parallel lengths of webbing which will transfer loads from the mouth-locks to the main lift web.

(1) This modification does not supersede, partially supersede or satisfy the work called for by any other approved modification, Command Modification, STI, SI or SRIM.

2 EMBODIMENT

After receipt of leaflet, this modification is to be embodied within six months or at next minor, major or bay servicing, whichever is the sooner. (DCI T158/1964 (RAF) para 15 refers).

3 APPROXIMATE TIME REQUIRED FOR EMBODIMENT

The work will take approximately one man hour.

4 DRAWINGS REQUIRED

Drawing No AP 108C-0507-2 is incorporated in this leaflet.

5 PARTS AND SPECIAL TOOLS REQUIRED.

(1) Parts and/or materials

(a) The Modification Kit will not be assembled.

(b) The following materials are required and are to be provided under Unit arrangements:

Ref No	Part No	Nomenclature	Qty	Class of Equipment
15D/746	IAC/S680A	Webbing, nylon $1\frac{3}{4}$ in, 3000 lb Spec IAC S 608	$36\frac{1}{2}$ in	C
15A/510	DTD/66	Thread, silk, white, heavy Spec DTD 66H	A/R	C
15D/582	IAC/S802	Thread, nylon, 10 lb BS, Spec IAC S 802	A/R	C

(2) Special Tools and/or Test Equipment

No special tools or test equipment are required for the embodiment of this modification.

6 MODIFICATION OF SPARES

The following list shows the spare affected by this modification and the parts required to modify it:

Ref No	Part No	Nomenclature	Qty	Class of Equipment
15D/588	GQ 10339	Pack	1	B

Parts required:

As listed at para 5.

7 CHANGE OF REFERENCE, PART AND ASSEMBLY NUMBERS

There are no changes of Reference, Part or Assembly Numbers as a result of this modification.

8 SEQUENCE OF OPERATIONS

The following is the sequence of operations:

Note...

Before any electrical circuit is disturbed or disconnected, all electrical power supplies in, to or from the aircraft are to be disconnected. Power supplies are to be reconnected only when the person responsible for embodying or inspecting the modification is satisfied that all action has been taken to make the aircraft safe for re-connection.

When nuclear safety may be affected, the prescribed routing of electrical cables must be strictly followed.

(1) Remove the cable and parachute assembly from the pack.

(2) The new reinforcing webbing on the main pack flap, when attached must be in alignment with the existing webbings on the upper panel of the canopy stowage compartment. To ensure accurate alignment, prior to removal of the flap, pencil-mark two lines running down the flap from the inner edge of each existing webbing to the outer edge of each cable mouth-lock slot. Also on the flap, mark the horizontal centre-lines of both mouth-lock slots. These marks will assist in the location of the

non-stitched portion of the inner edge of each new webbing. The non-stitched portions form the cable stowage pockets on the modified flap. Refer to drawing.

(3) Carefully unpick the horizontal seam securing the main flap to the upper panel of the canopy stowage compartment and remove the flap. On the flap, unpick the stitching securing the two cable stowage pockets and discard the pockets.

Note...

For Units having to modify a large number of packs it will be time-saving to prepare handed templates, as shown on the drawing with which to mark the new webbings. With the exception of the unstitched portions of the webbings, which face inwards when attached, the template markings are identical for left- and right-hand webbings.

(4) Take two 18½ in cut lengths of 1¾ in wide 3000 lb nylon webbing (Ref No 15D/746) and mark for left- and right-hand attachment, in accordance with the template dimensions.

(5) Form a ½ in turnback at the lower end of the right-hand webbing and lay this end level with the bottom edge of the flap. The inner edge of the webbing is laid on the marked line running down the flap to the outer edge of the right-hand mouth-lock slot. The centre-point of the 3¼ in length from which the stitching is to be omitted is laid on the edge of the slot in alignment with the previously-marked slot centre-line. A 3½ in free length of webbing will protrude clear of the top edge of the flap.

(6) Using heavy white silk thread (Ref No 15A/510) or 10 lb nylon thread (Ref No 15D/582), stitch the webbing to the flap, following a sewing line 1/16 in from the edges and also across the width of the webbing at both ends of the flap. From the top and bottom ends of the non-stitched portion, the sewing line is angled across the webbing to join the right-hand line at points 1 1/8 in above and below the slot centre- line. Refer to drawing. Sew with a pitch of 7 to 11 stitches per inch and lock the stitching by over-sewing for a minimum of ½ in.

Repeat the above operations to secure the left-hand webbing to the flap, with the non-stitched portion facing inwards.

(7) Prior to re-attaching the flap to the pack upper panel, carefully unpick the side seams joining the panel to the pack wall, over a length of approximately 17½ in on each side measured from the open end of the pack. This unpicking is essential for machining purposes.

(8) Locate the top edge of the flap in the original position on the bottom edge of the pack panel and overlap the free lengths of the new webbings on to the two existing webbings. Re-stitch the flap to the panel, on the lines of the original double row, using heavy silk or nylon thread (Ref No 15A/510 or 15D/582), pitched at 7 to 11 threads per inch. Lock the stitching by over-sewing at both ends of the seam.

Form a ½ in turnback at the upper free ends of the new webbings and sew them to the existing webbings. Each overlapped join is made with two

gate patterns of stitching covering a total length of 3 in, using heavy silk or nylon thread as above, pitched at 7 to 11 stitches per inch. Refer to drawing. Lock each gate by oversewing for a minimum of $\frac{1}{2}$ in.

(9) Re-form the pack side seams on the original sewing lines, employing the same thread and stitching procedure as detailed above.

9 SPECIAL TESTS AFTER EMBODIMENT

No special tests are required after the embodiment of this modification.

10 RECORDING ACTION

Record in the relevant Servicing Documents.

11 DISPOSAL OF REDUNDANT PARTS

No parts are rendered redundant by the embodiment of this modification.

12 EFFECT ON WEIGHT AND MOMENT

This modification has no effect upon weight.

13 EFFECT ON AIRCRAFT OR EQUIPMENT OPERATION OR HANDLING

This modification does not affect the operation or handling of the aircraft or equipment.

14 EFFECT ON SERVICING AND SERVICING SCHEDULE

(1) This modification has only a minor effect upon the servicing.

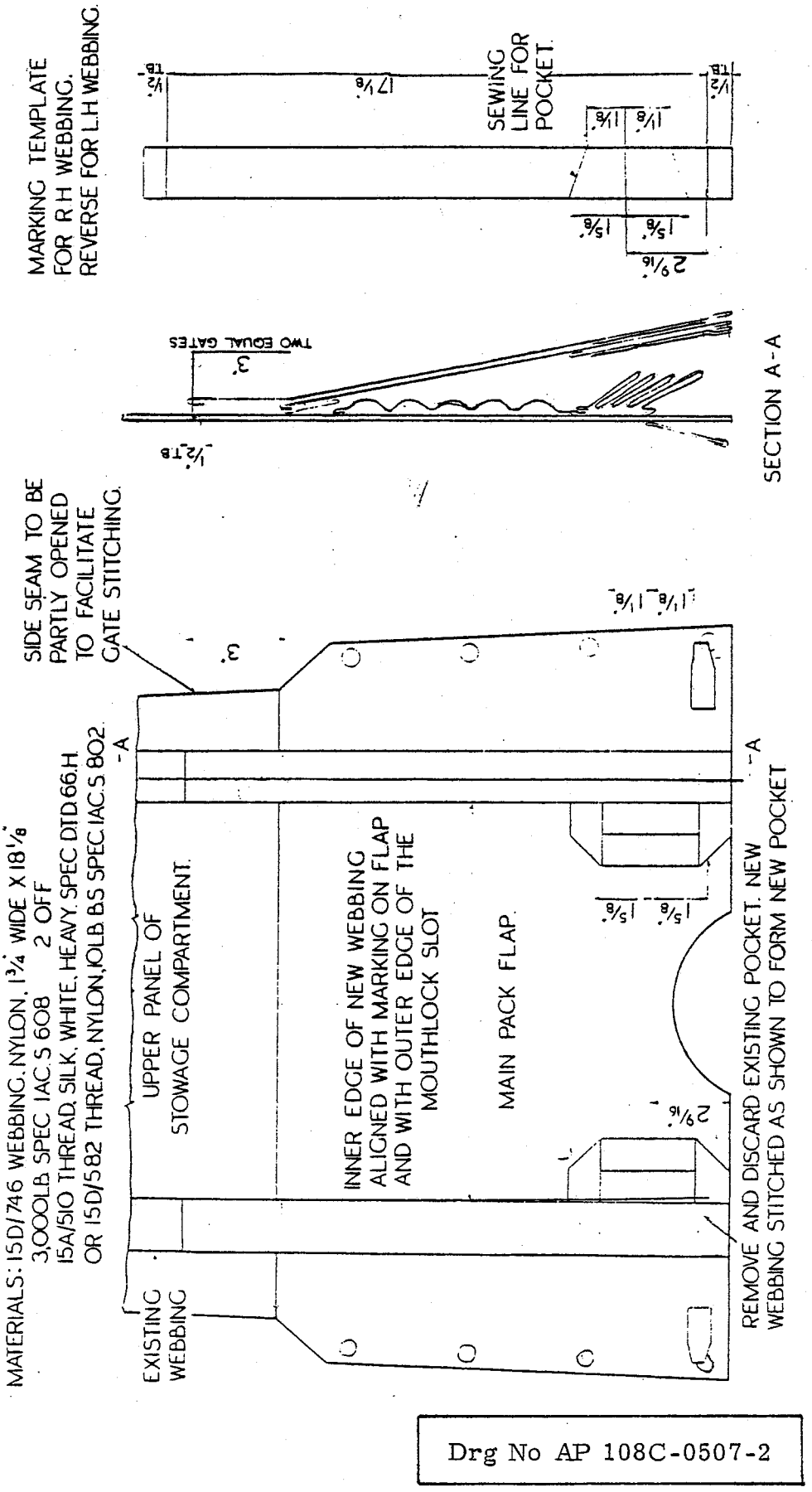
Packing Instructions - AP 1182A, Vol 1 (2nd Edition), Sect 11, Chap 3:

After Para 12 of the above Chapter, add the following note:

Note...

When Mod No GQ/B/27 is embodied, the bights of cable are passed through the mouth-lock loops and into the pockets formed by the non-stitched portions of the flap reinforcing webbings.

(2) This modification affects the servicing schedule.



Drg No AP 108C-0507-2

Printed in England for Her Majesty's Stationery Office by Flight Refuelling Limited, Wimborne. Dmd. 8233520. 1514. 4/82