

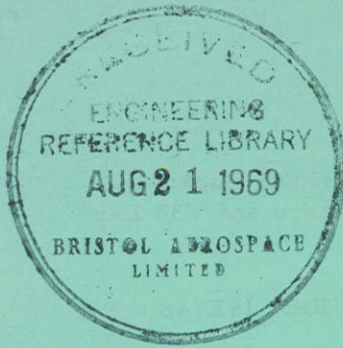
1004 TO - 1004

CC

CANADIAN FORCES

EO 55-45-6A

5 Jun 69



LIST OF FIELD MODIFICATIONS
SAFETY HARNESS - GENERAL

(This EO replaces EO 55-45-6A dated 6 Jan 67)

TABLE OF CONTENTS

SUPERSEDED
BY 3 May 71
TITLE

| LATEST DATE | EO NO | TITLE |
|-------------|------------|--|
| | 55-45-6A/1 | (Replaced by EO 55-45K-6A/2) |
| | /2 | (Replaced by EO 55-45K-6A/3) |
| | /3 | (Replaced by EO 55-45-5A/2) |
| | /4 | (Rescinded) |
| | /5 | (Replaced by EO 55-45G-6A/2) |
| | /6 | (Replaced by EO 55-45G-6A/1) |
| | /7 | (Replaced by EO 55-45-6A/15) |
| 8 Mar 60 | /8 | Lengthening Passenger Safety Harness C119 Aircraft |
| | /9 | (Replaced by EO 55-45G-6A/3) |
| | /10 | (Replaced by EO 55-45-6A/15) |
| 7 Nov 58 | /11 | Shortening 15E/4 & 15E/26 Type Safety Harness |
| 30 Dec 58 | /12 | Tie Down Harness for Emergency Equipment |
| 3 Dec 59 | /13 | Installing Right & Left Hand End Links |
| 21 Oct 60 | /14 | Shoulder Harness Ref. 15E/86 |

RELEASE ^{IS} ~~IS NOT~~ AUTHORIZED BY ENGINEERING

2/4/19

| LATEST DATE | EO NUMBER | TITLE |
|-------------|-------------|---|
| | 55-45-6A/15 | (Rescinded) Removing Type 100B Buckle (1 Air Div) Aerolex From Sabre and T33 Lap Belt |
| | /16 | (Rescinded) Safety Harness Ref. 15E/46 - T33 Aircraft |
| 18 Jun 62 | /17 | Quick Release Buckle Cosmopolitan Passenger Safety Harness |
| | /18 | (Rescinded) MA5 and MA6 Lap Belt Safety Harness Sewing Adjacent to Webbing Adapter |
| | /19 | (Rescinded) Front Belt Bracket Tensile Tester Ref. 15E/6635-21-803-2606 |
| | /20 | (Rescinded) Buckle, Quick Adjustable |
| 8 Apr 63 | /21 | Installation of New Type Adjustment Adapter Part 61C 4148 Belt Lap Type |
| | /22 | (Rescinded) Safety Harness |
| 8 Apr 63 | /23 | MA5 and MA6 Lap Belts 90° Elbow |
| 10 Apr 63 | /24 | Tab - Locking Latch - MA5 and MA6 Lap Belt |
| | /25 | (Rescinded) Passenger Safety Harness |
| | /26 | (Rescinded) Safety Harness - CF104 and CF104D |
| 16 Dec 63 | /27 | Installation of 90 Degree Elbow MA5 and MA6 Lap Belts |
| | /28 | (Rescinded) Automatic Release Latch and Housing MA5 and MA6 Lap Belts |
| 7 Feb 64 | /29 | Safety Harness - T33 Aircraft |
| 13 Feb 64 | /30 | Safety Harness CH112 Helicopter |
| 11 Sep 64 | /31 | Safety Harness T33 Aircraft |
| 12 May 66 | /32 | Automatic Release Latch and Housing MA5 and MA6 Lap Belts |
| | /33 | (Rescinded) Installation of Lap Belt Fastener to MA5 and MA6 |

| LATEST DATE | EO NUMBER | TITLE |
|-------------|-------------|--|
| 14 Apr 65 | 55-45-6A/34 | Lap Belt Extension |
| | /35 | (Rescinded) Flight Engineer Safety Harness |
| 12 May 66 | /36 | Shortening MA6 Shoulder Harness |
| *19 Feb 68 | /37 | Flight Engineers Safety Harness |
| *28 Feb 69 | /38 | Replacement of Shoulder Harness Buckles |
| *28 May 69 | /39 | Extending Length of MD-2 Lap Belt |
| *28 Feb 69 | /40 | Safety Harness-Shoulder Tutor Aircraft |

* Asterisks appearing opposite entries denote changes since last issue.
ISSUED ON AUTHORITY OF THE CHIEF OF THE DEFENCE STAFF



BO NUMBER

DATE

BO NUMBER

DATE

135

136

137

138

139

140

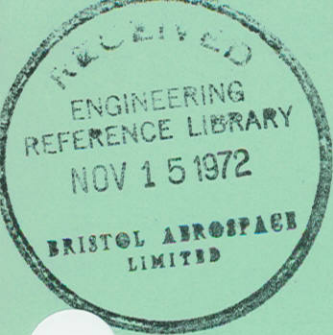
12/11/88

1/12/89

2/23/89

3/22/89

4/27/89



BAD-1ank

CANADIAN FORCES

EO 55-45-6A/43
28 Sep 72

MODIFICATION

REPLACING RETAINING STRAP SNAP HOOK

(This EO replaces EO 55-45-6A/43 dated 2 Mar 71)

| | |
|----------------------------------|---|
| EQUIPMENT AFFECTED: | All Crewman's Restraining Harness |
| AIRCRAFT AFFECTED: | NA |
| TRAINING AIDS AFFECTED: | NA |
| BY WHOM WORK WILL BE PERFORMED: | Operating Units |
| WHEN WORK WILL BE PERFORMED: | Before but not later than next Primary Inspection |
| TRADE(S) AFFECTED: | SS Tech |
| FORM ENTRIES: | NA |
| MODIFICATION OF SPARES IN STOCK: | NA |
| RETURNS: | NA |

SUPERSEDED
BY 5 Jan 73

PURPOSE

1 To provide a snap hook that will not disconnect while in use.

MODIFICATION DATA

2 The following is the sequence of operations:

- (a) Carefully cut stitches on retaining strap and remove existing snap hook.
- (b) Install snap hook NSN 5340-21-102-6725.
- (c) Turn back webbing approximately 9" and resew using a gate pattern stitch with not less than five and not more than seven stitches per inch.
- (d) Tensile test in accordance with EO 55-45-2 Part 3 paragraph 3.

PARTS REQUIRED

3 The following parts are required and are to be demanded non-consumption transaction Code 1 (CFP 181 Annex C, Chapter 7, paragraph 7(k)).

| STOCK NO. | PART | DESCRIPTION | QTY. |
|------------------|-----------|-------------|------|
| 1670-21-860-3788 | C70B51412 | Snap hook | 1 |

RELEASE ~~IS~~ NOT AUTHORIZED
 BY ENGINEERING
 NOV 20 1972
 DATE PROJECT ENGINEER

PARTS RENDERED SURPLUS OR OBSOLETE

4 The following parts are rendered surplus and are to be disposed of in accordance with AMO 00-25-4 paragraph 19(c).

| STOCK NO. | PART | DESCRIPTION | QTY. | DISPOSAL CLASS |
|------------------|-------|-------------|------|----------------|
| 5340-00-664-4065 | NOREF | Snap hook | 1 | C |

WEIGHT, LOADING AND BALANCE DATA

5 NA.

ADDITIONAL DATA

6 It is estimated that approximately 1 man-hour will be required to incorporate this modification.

ISSUED ON AUTHORITY OF THE CHIEF OF THE DEFENCE STAFF

Prepared by:
CFHQ/CTS/DAM3-5-4



MODIFICATION
SAFETY HARNESS - SHOULDER
TUTOR AIRCRAFT

RESERVED
ANTH - 3 May 71

Safety Harness - shoulder -
Type MA6

| | |
|----------------------------------|--|
| EQUIPMENT AFFECTED: | Safety Harness - shoulder - Type MA6 |
| AIRCRAFT AFFECTED: | Tutor Aircraft |
| TRAINING AIDS AFFECTED: | NA |
| BY WHOM WORK WILL BE PERFORMED: | Operating Units and AMDU |
| WHEN WORK WILL BE PERFORMED: | Before or not later than the next Periodic Inspection |
| TRADE(S) AFFECTED: | SS Tech |
| FORM ENTRIES: | CF349, CF355 |
| MODIFICATION OF SPARES IN STOCK: | Prior to Installation |
| RETURNS: | NA |

PURPOSE

1 To modify Tutor aircraft shoulder harness, so straps can be stowed on the seat to allow convenient strap-in.

MODIFICATION DATA

2 The following sequence is to be carried out:

- (a) Remove adjustable straps from harness by sliding end of strap through adjustment buckle.
- (b) Sew a 2" x 1" strip of Velcro pile onto the strap midway between attachment loop and end of sewing on outer face of strap.
- (c) Install adjustable straps.
- (d) Glue a 2" x 2" strip of Velcro hook to each side of the canopy breaker on the seat.
- (e) Carry out same sequence on other seat and shoulder harness.

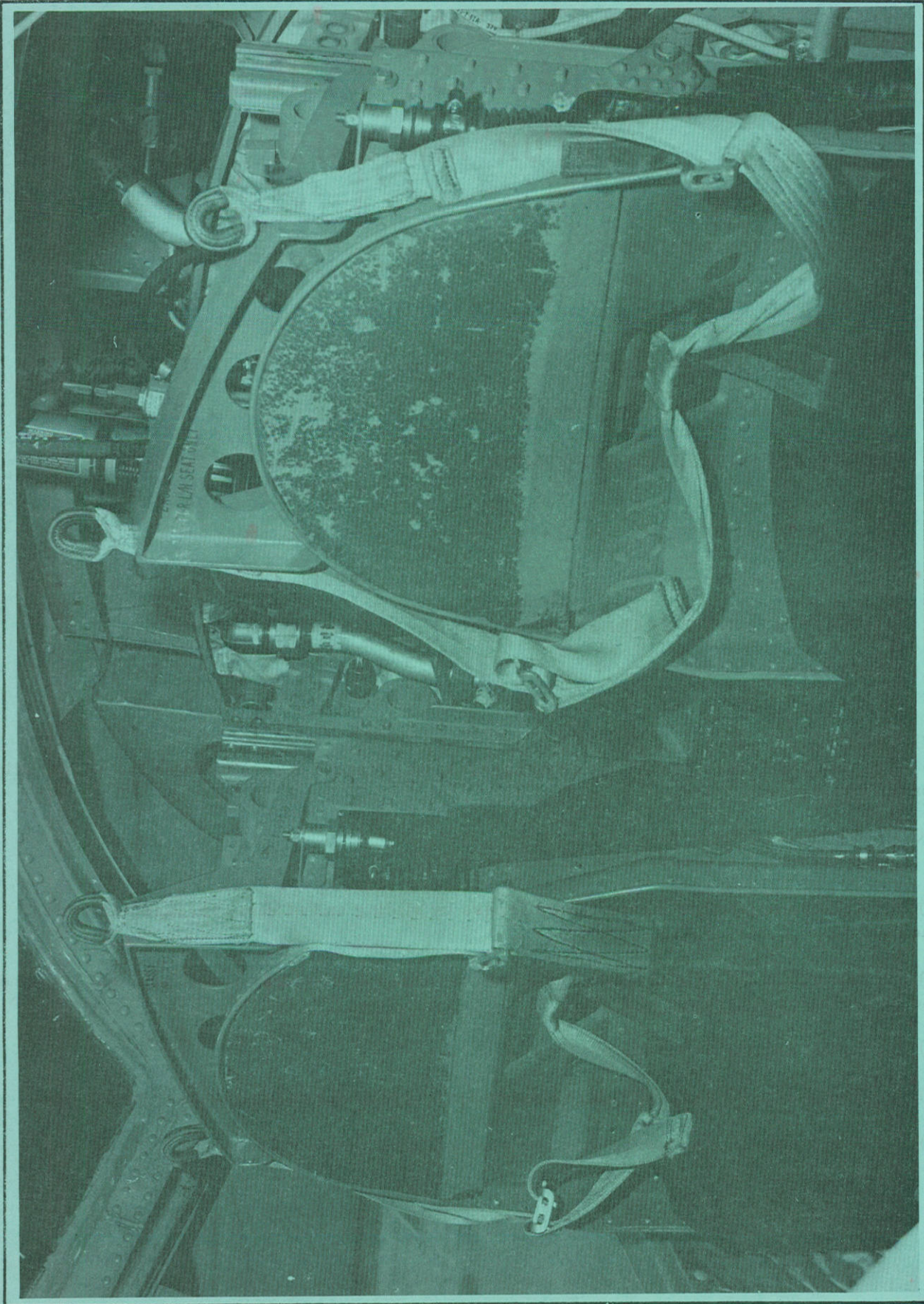


Figure 1

PARTS REQUIRED

3 The following material is required to carry out this modification:

| STOCK NO. | PART | DESCRIPTION | QTY. |
|------------------|------|---------------------------|------|
| 8315-21-820-0326 | | Velcro hook 2" | AR |
| 8315-21-820-5670 | | Velcro pile 2" | AR |
| 8310-21-805-6017 | | Thread nylon black Type E | AR |
| 8040-21-842-7999 | | Cement Bostick 4045 | AR |

PARTS RENDERED SURPLUS OR OBSOLETE

4 Nil.

WEIGHT, LOADING AND BALANCE DATA

5 NA.

ADDITIONAL DATA

6 It is estimated that one man-hour will be required to complete this modification per aircraft.

ISSUED ON AUTHORITY OF THE CHIEF OF THE DEFENCE STAFF

Prepared by:
CFHQ/CTS/DAM4-3



Sc

MODIFICATION EXTENDING LENGTH OF MD-2 LAP BELT

SUPERSEDED

EQUIPMENT AFFECTED: Model MD-2 Lap Belt

AIRCRAFT AFFECTED: All Cessna L19-A and L19-E

TRAINING AIDS AFFECTED: NA

BY WHOM WORK WILL BE PERFORMED: Operating Units

WHEN WORK WILL BE PERFORMED: On or before next Periodic Inspection but not later than May 69

TRADE(S) AFFECTED: Safety Equipment, and Airframe Techs

FORM ENTRIES: CF337, CF335

MODIFICATION OF SPARES IN STOCK: Prior to installation

RETURNS: NA

BY *28 May 69*

PURPOSE

1 To lengthen lap belts NSN 1680-00-516-6543, to allow pilots to hook up the quick release locking buckle when winter clothing or parachutes are worn.

MODIFICATION DATA

2 The following is the sequence of operations:

- (a) Remove belts from aircraft. Cut stitching and remove webbing from the self-locking adjustable buckles, quick release locking buckle, and quick release locking buckle attachment lug.
- (b) Install new webbing Part MILW25361 on the existing harness to obtain maximum length shown in Figures 1 and 2.
- (c) Tensile test in accordance with EO 55-45-2 Part 3 Section 1 paragraphs 3 and 4.
- (d) Re-install in aircraft.

NOTE

Stitching is to be not more than six and not less than five stitches per inch, back stitched not less than 3/4".

RELEASE ~~IS~~ AUTHORIZED
 BY ENGINEERING
1st MAY 69
 DATE PROJECT ENGINEER

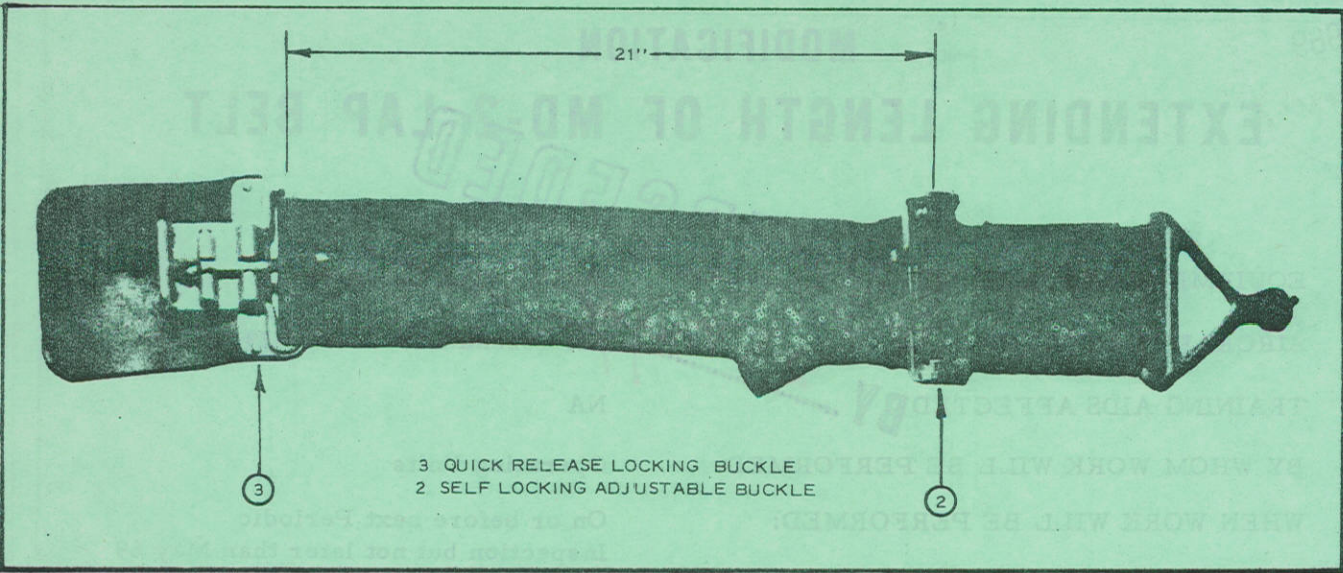


Figure 1

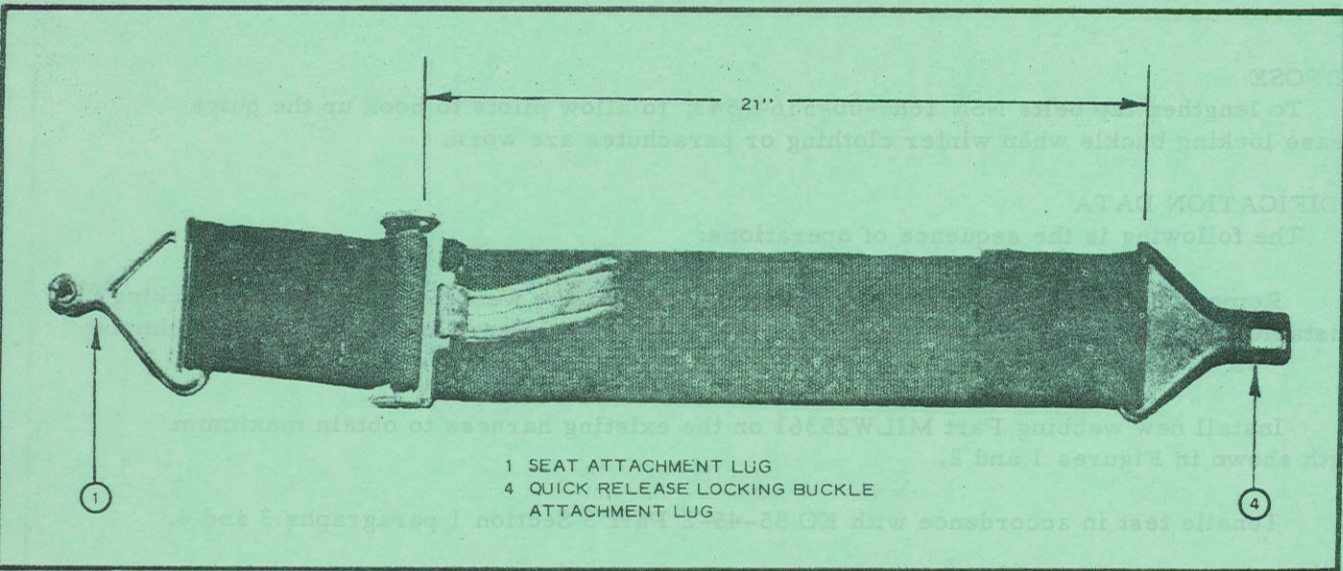


Figure 2

PARTS REQUIRED

3 The following material is required:

| STOCK NO. | PART | DESCRIPTION | QTY. |
|------------------|-----------|---------------------|------|
| 8305-21-811-5286 | MILW25361 | Webbing nylon 3" | 54" |
| 8310-21-806-5032 | MILT7807 | Thread nylon # 5 OD | AR |

PARTS RENDERED SURPLUS OR OBSOLETE

4 The following material is rendered surplus:

| STOCK NO. | PART | DESCRIPTION | DISPOSAL CLASS |
|------------------|-----------|------------------|----------------|
| 8305-21-811-5286 | MILW25361 | Webbing nylon 3" | Scrap |

WEIGHT, LOADING AND BALANCE DATA

5 Negligible.

ADDITIONAL DATA

6 The following additional data applies:

(a) Two man-hours to embody.

(b) Length of modified belts will be 58", measured from the ends of the seat attachment lugs with the quick release locking buckle in the locked position.

ISSUED ON AUTHORITY OF THE CHIEF OF THE DEFENCE STAFF

Prepared by:
CFHQ/CTS/DAM3-5-4

1004 TSD 8 aut

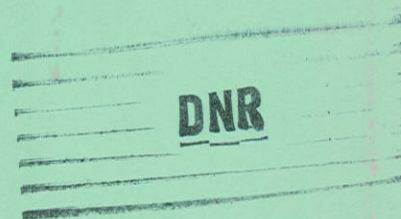
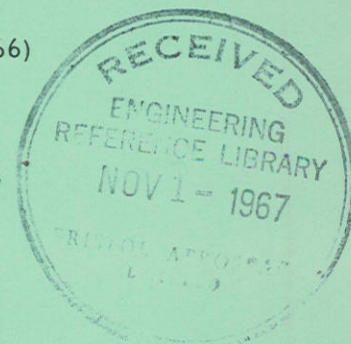
SUPERSEDED

MODIFICATION BY 19 Feb 68

FLIGHT ENGINEERS SAFETY HARNESS

(This EO replaces EO 55-45-6A/37 dated 27 Jan 66)

| | |
|----------------------------------|-------------------------|
| EQUIPMENT AFFECTED: | QCQR Harness |
| AIRCRAFT AFFECTED: | C130E Hercules |
| TRAINING AIDS AFFECTED: | NA |
| BY WHOM WORK WILL BE PERFORMED: | Operating Units |
| WHEN WORK WILL BE PERFORMED: | Not later than 1 Jun 68 |
| TRADE(S) AFFECTED: | SS Tech |
| RCAF FORM ENTRIES: | NA |
| MODIFICATION OF SPARES IN STOCK: | NA |
| RETURNS: | NA |



PURPOSE

1 To provide an improved, lighter and more efficient safety harness for the flight engineer in the event of an unsafe door warning in flight, by using a QCQR harness modified for this purpose.

MODIFICATION DATA

2 The following is the sequence of operations:

- (a) Disassembly, refer to Figure 1, for identification of items mentioned.
 - (1) Lay out harness as shown.
 - (2) Remove back pad.
 - (3) Remove and retain upper lugs, items 1 and 2.
 - (4) Cut main risers as shown, at items 3 and 4.
 - (5) Remove risers from webbing loops, items 5 and 6.
 - (6) Cut stitchings at items 7, 8, 9, and 10, and discard webbing.
 - (7) Remove loose fittings and excess material from main risers.
 - (8) Cut stitchings and remove anchorage "Dee" rings, items 11, 12 and 13, retaining one (1) "Dee" ring.

RELEASE ^{IS} ~~IS NOT~~ AUTHORIZED BY **ENGINEERING**

DATE

PROJECT ENGINEER

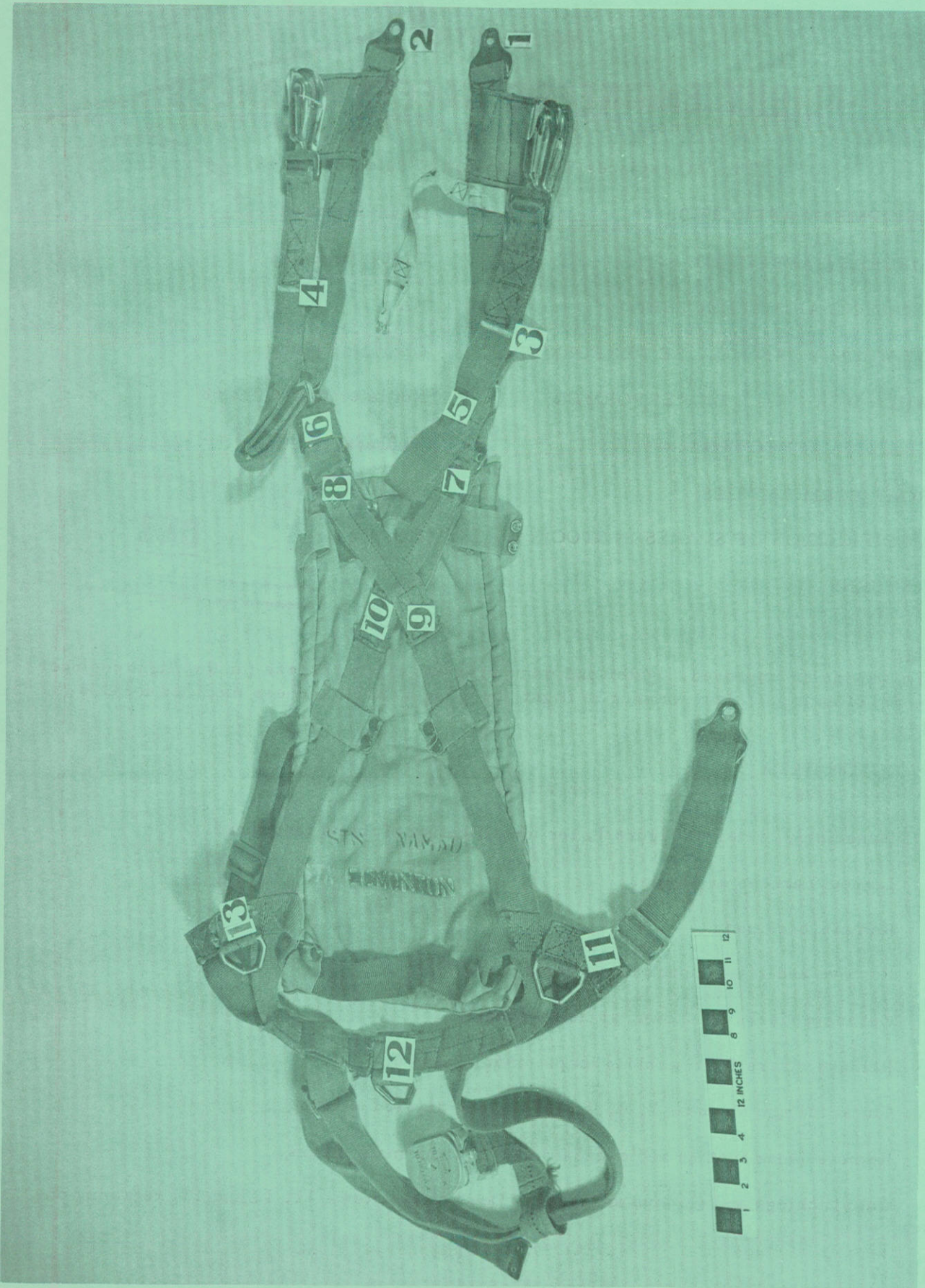


Figure 1

MODIFICATION DATA (Cont'd)

- (9) Remove snap hooks from their retaining clips. Retain snap hooks, and discard retaining clips and webbing to which they were attached.
- (10) Cut off "tang" from both snap hooks, ensuring that edges of cut are smoothed and rounded to prevent damage to webbing later.
- (b) Assembly, refer to Figure 2, for identification of items mentioned:
- (1) Cut seven (7) lengths of webbing (Ref. 8305-21-805-6023) as follows:

| | | | | | |
|-------|----|-----|-------|----|--------|
| 2 pcs | ea | 30" | 2 pcs | ea | 6" |
| 2 pcs | ea | 9" | 1 pc | | 11 ft. |

NOTE

Sear ends to prevent fraying, also sear ends of main risers on harness. New webbing shall be flexed as per EO 55-45-2, Part 3, Section 1, paragraph 10, before installation. Sewing shall be done in a "gate" pattern, 5 to 6 stitches per inch, using #5 nylon thread, Ref. 8310-21-806-5032.

- (2) Thread main riser straps through anchorage "Dee" ring retained in 2(a)(8). Place 2 pieces of 9" webbing on underside of main risers, forming channel, see item 1, and sew at previous positions.
- (3) Pass end of either main riser through buckle (MS22007-1) and fold under 9", (see item 2) and sew as shown at item 3. (This 9" measurement acts as a shoulder support).
- (4) Centre 6" piece of webbing through eye slot of lug, item 4, (retained in 2(a)(3). Pass 30" piece of webbing approximately 5" through same lug eye slot (item 4), fold under and sew through the four thicknesses of webbing as shown at item 5.
- (5) Pass the other end of the 30" length of webbing through the buckle (see item 2), and sew stopper on end as shown at item 6.
- (6) Repeat paragraphs (b)(3), (4) and (5) for the other riser.
- (7) Harnesses having QR boxes, Ref. 1670-21-804-7854, (unmodified), shall have safety clip, (Ref. 1670-00-360-0309) installed, see item 7.
- (8) Replace back pad.
- (9) Manufacture a restraining strap, using the 11 ft. length of 2" nylon webbing, the "Dee" ring, and the buckle supplied, and the 2 snap hooks retained in paragraph 2(a)(9). The webbing shall be passed through the eye slots of the snap hooks, and through the "Dee" ring and adjusting buckle. Fold back the ends at the buckle and at one snap hook a distance of 6" and sew as instructed above. The other snap hook and "Dee" ring will remain free as shown in Figure 3, to allow the strap to be secured around any suitable fixture, or "snapped" to the aircraft floor rings, (with pressure against the strongest part of the snap hook).
- (10) Secure "fixed" snap hook to harness "Dee" ring as in Figure 3, and spot-weld the tongue of the hook in the closed position, to prevent loss of strap from harness.
- (11) Stow completed harness assembly in pilot's radar scope hood stowage compartment in flight deck.

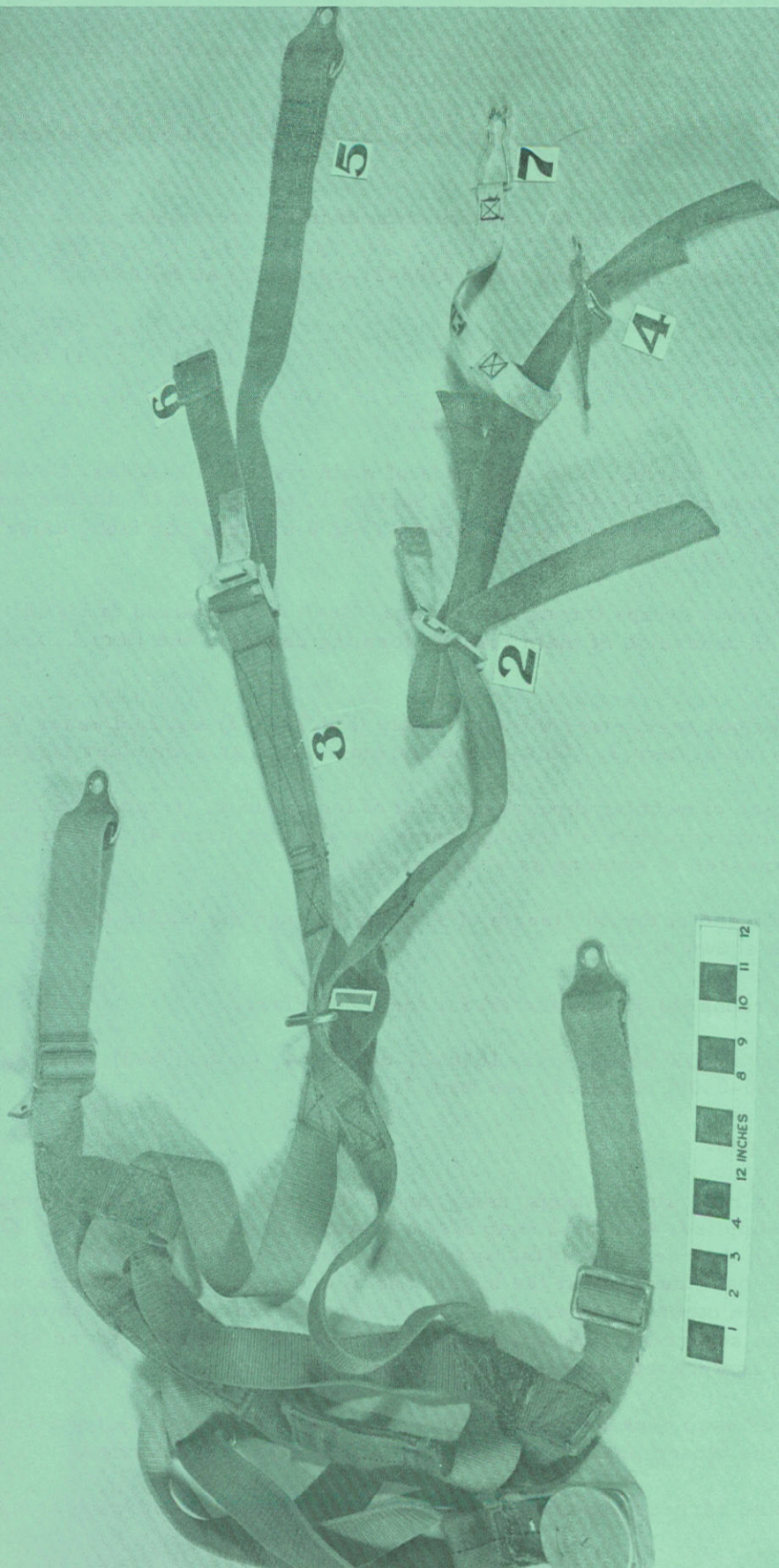


Figure 2



Figure 3

PARTS REQUIRED

3 The following parts are required per harness, (i.e. also per aircraft).

| RCAF STOCK NO. | PART | DESCRIPTION | QTY. |
|------------------|-----------|-----------------------|--------|
| 1670-21-805-4806 | | QCQR harness | 1 |
| 1670-21-805-4768 | | Back pad | 1 |
| 5340-00-473-9829 | MS22007-1 | Buckle, quick adjust. | 1 |
| 8305-21-805-6023 | | Webbing, textile | 20 ft. |
| 8310-21-806-5032 | | Thread, nylon #5 | AR |
| 1670-00-360-0309 | | * Clip, safety | 1 |

* This item required only for use with unmodified QR boxes on harness.

PARTS RENDERED SURPLUS OR OBSOLETE

4 The following parts are rendered surplus:

| RCAF STOCK NO. | PART | DESCRIPTION | QTY. | DISPOSAL CLASS |
|------------------|------|-------------|------|----------------|
| 5340-21-805-4849 | | Ring, "Dee" | 2 | C |
| 5340-21-805-4835 | | Buckle | 2 | C |
| 5340-21-805-4751 | | Buckle | 2 | C |

WEIGHT, LOADING AND BALANCE DATA

5 The effect on weight and C of G of the aircraft with item stowed is negligible.

ADDITIONAL DATA

6 The following additional data applies:

- (a) This safety harness assembly shall be included as part of the aircraft loose equipment.
- (b) Approximately 3 man-hours are required to complete this modification.
- (c) This revision prototyped by CFB Edmonton per ATC Project Directive, Annex A to ATC HQ letter 11500LT-1(SOAE3-2), dated 23 Jun 67.

ISSUED ON AUTHORITY OF THE CHIEF OF THE DEFENCE STAFF

Prepared by:
MATCOM/SSOAC/AE8

1004-8 with



MODIFICATION

SUPERSEDED
BY 2 June 72

SHORTENING MA6 SHOULDER HARNESS

(This EO replaces EO 55-45-6A/36 dated 25 Aug 65)

- EQUIPMENT AFFECTED: MA6 Shoulder Harness
- AIRCRAFT AFFECTED: All Tutor (CT114)
- TRAINING AIDS AFFECTED: Ejection Trainer
- BY WHOM WORK WILL BE PERFORMED: Operating Units, RD and Contractors
- WHEN WORK WILL BE PERFORMED: Before or not later than the next Periodic Inspection
- TRADE(S) AFFECTED: SE Tech
- RCAF FORM ENTRIES: L14-1B, L14-8
- MODIFICATION OF SPARES IN STOCK: Prior to installation
- RETURNS: L90

PURPOSE

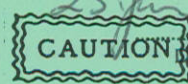
1 To provide a correct shoulder harness adjustment, and to lessen the possibility of the adjusting straps interfering with the lap belt hook lever.

MODIFICATION DATA

2 The following is the sequence of operations:

RELEASE ~~IS NOT~~ AUTHORIZED

BY ENGINEERING



PROJECT ENGINEER

When removing the inertia reel from the ejection seat care should be exercised not to bend the terminal Part AN665-10R on the cable assembly Part 0101279-38. Ref. EO 15-120FA-3, section 2, Figure 2.

- (a) Remove the inertia reel from the ejection seat.
- (b) Measure 5" from the free end of each adjustable strap, and cut off. Remove the shortened straps from the shoulder harness and retain for re-installation, see Figure 1.
- (c) Measure 8" from the slot of each quick release adjustable buckle, and mark the harness, see Figure 1.
- (d) Carefully cut the stitching and move the end of the webbing to the previously marked location. This should result in a double portion, approximately 6" in length.
- (e) Oversee the folded end with a double "W" pattern, using thread nylon, #3, 6 to 8 stitches per inch.

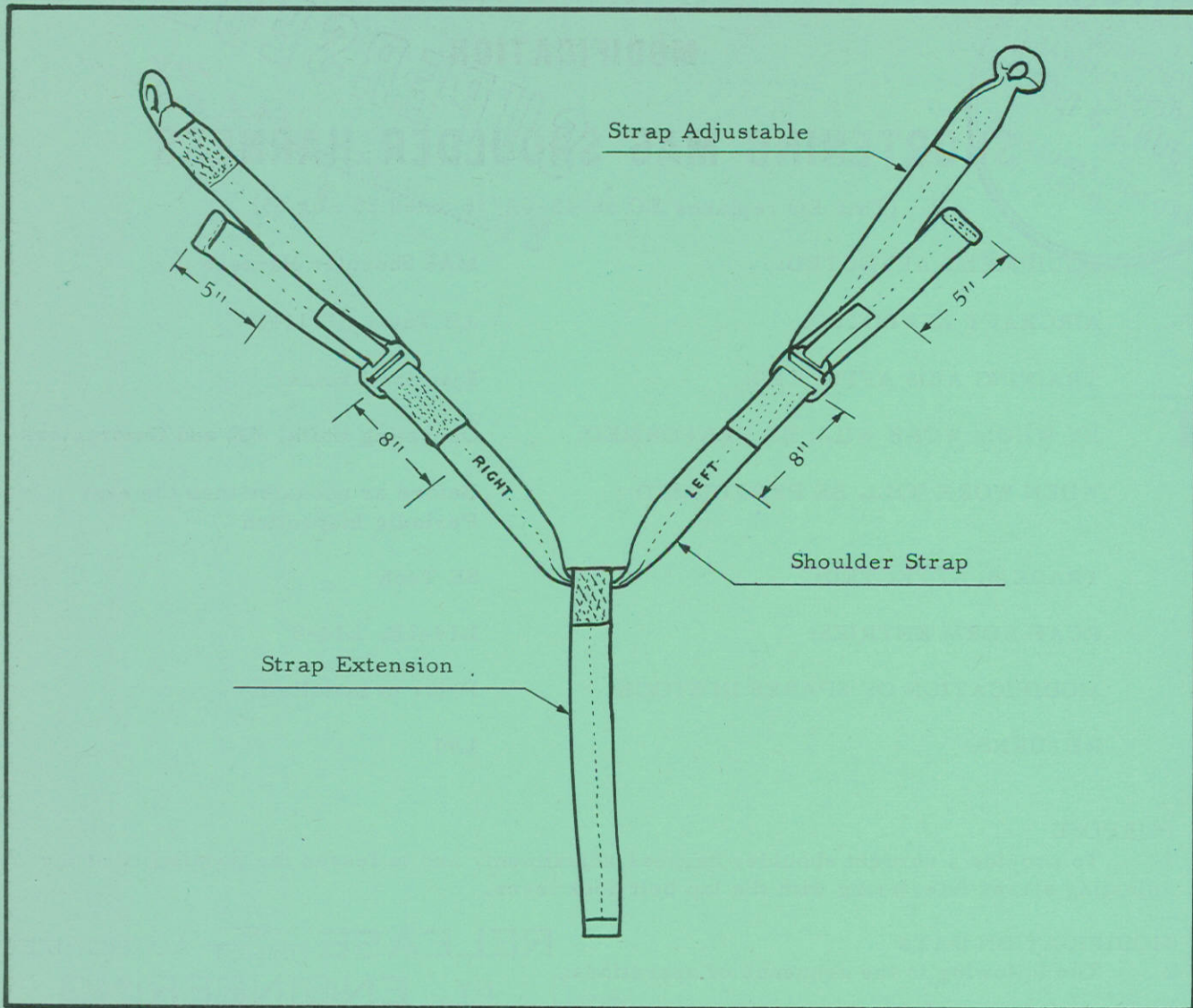


Figure 1 Safety Harness Type MA6

MODIFICATION DATA (Cont'd)

- (f) Re-install the adjustable straps, which were removed by paragraph (b).
- (g) Turn back the end of each adjustable strap to form a stop similar to that removed by paragraph (b), and stitch using thread nylon size E Ref. 8310-21-805-6017.
- (h) Tensile test the harness in accordance with EO 15-120FA-3.
- (j) Re-install the inertia reel to the ejection seat.

PARTS REQUIRED

3 The following parts are required per aircraft:

| RCAF REF. | PART | DESCRIPTION | QTY. |
|------------------|------|------------------------|------|
| 8310-21-840-2143 | | Thread, nylon, .3 cord | AR |
| 8310-21-805-6017 | | Thread, nylon, size E | AR |

PARTS RENDERED SURPLUS OR OBSOLETE

4 NA.

WEIGHT, LOADING AND BALANCE DATA

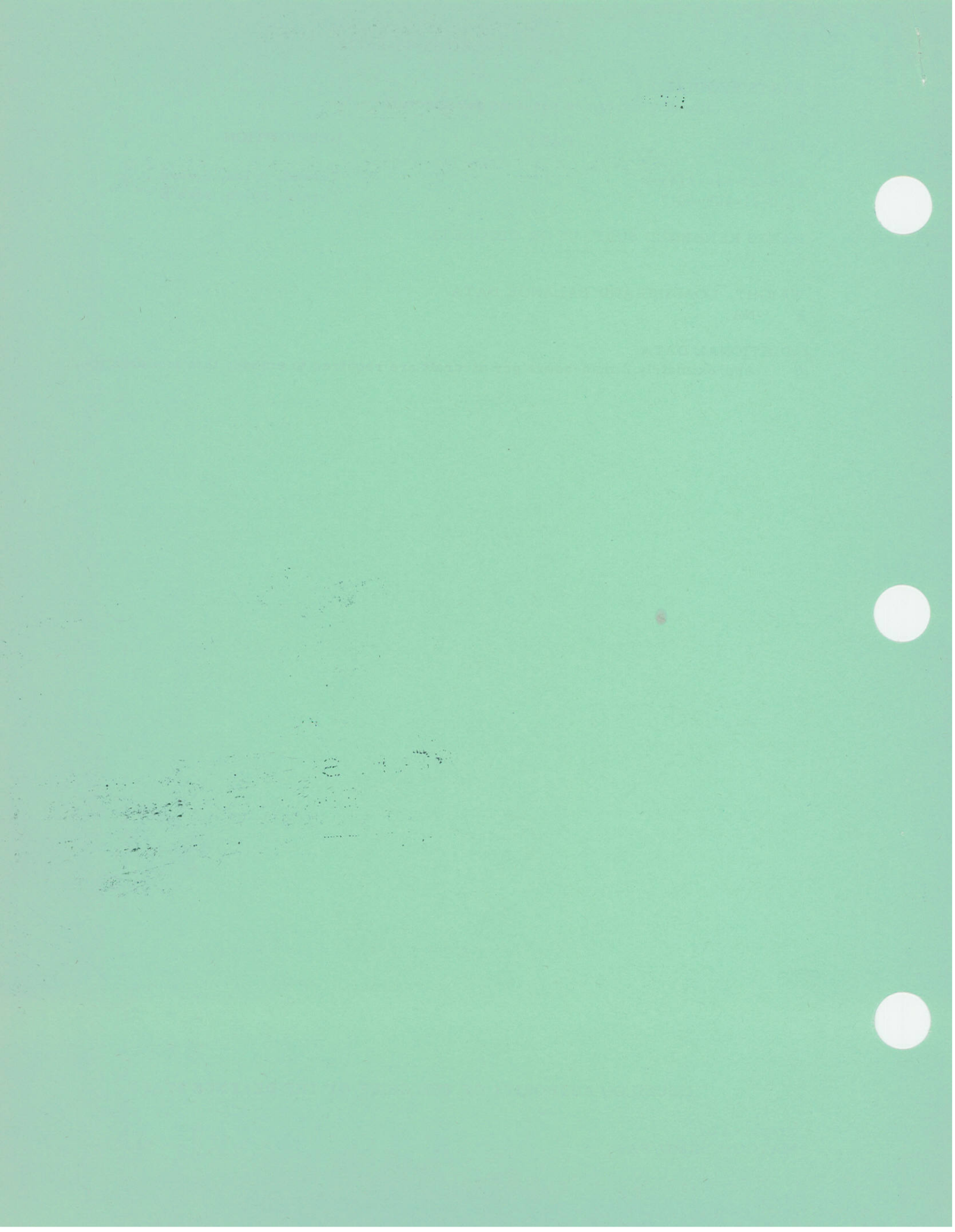
5 NA.

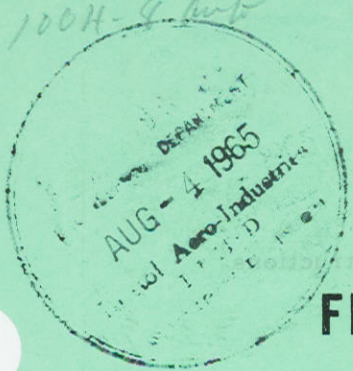
ADDITIONAL DATA

6 Approximately 2 man-hours per aircraft are required to embody this modification.

ISSUED ON AUTHORITY OF THE CHIEF OF THE DEFENCE STAFF

Prepared by:
MATCOM/SAMO/PA3





MODIFICATION

NIA TO CF101
CAIR
JMA

FLIGHT ENGINEER - SAFETY HARNESS

(This EO replaces EO 55-45-6A/35 dated 15 Apr 65)

| | |
|----------------------------------|-------------------------|
| EQUIPMENT AFFECTED: | Harness QC QR |
| AIRCRAFT AFFECTED: | Hercules C130B and E |
| TRAINING AIDS AFFECTED: | NA |
| BY WHOM WORK WILL BE PERFORMED: | Operating Units |
| WHEN WORK WILL BE PERFORMED: | Not later than 1 Jun 65 |
| TRADE(S) AFFECTED: | SE Tech |
| RCAF FORM ENTRIES: | NA |
| MODIFICATION OF SPARES IN STOCK: | NA |
| RETURNS: | NA |

SUPERSEDED
BY 13789
15 October 1965

PURPOSE

1 To provide a safety harness for the flight engineer in the event of an unsafe door warning in flight, by using a QC QR harness and restraining strap.

MODIFICATION DATA

2 The following is the sequence of operations:

- (a) Through normal supply channels, procure ea. one QC QR harness.
- (b) Manufacture a restraining strap using 2" nylon webbing, 10 ft. long and ea. two snap hooks.
- (c) The webbing of the restraining strap shall be folded back through the snap hook a distance of 6", and stitched using 5 to 6 stitches per inch, with nylon cord.
- (d) This harness and restraining strap may be stowed under the lower crew rest bunk on the flight deck.

PARTS REQUIRED

3 The following parts are required per aircraft:

| RCAF REF. | PART | DESCRIPTION | QTY. |
|------------------|------|-----------------|--------|
| 1670-21-805-4806 | | QC QR harness | 1 |
| 1670-21-805-4768 | | Back pad | 1 |
| 5340-00-664-4065 | | Snap hook | 2 |
| 8305-21-805-6023 | | Webbing textile | 11 ft. |
| 8310-21-806-5032 | | Nylon, #5 cord | AR |

RELEASE IS NOT AUTHORIZED

BY ENGINEER
August 12, 1965
DATE PROJECT ENGINEER



PARTS RENDERED SURPLUS OR OBSOLETE

4 Nil.

WEIGHT, LOADING AND BALANCE DATA

5 The weight and balance change to the C130 aircraft resulting from the instructions contained herein is negligible.

ADDITIONAL DATA

6 The following additional data applies:

- (a) This safety harness assembly shall be included as part of the aircraft loose equipment.
- (b) It is estimated that 1/2 man-hour will be required to complete this modification.

OPERATING UNITS: NA
 WHEN WORK WILL BE PERFORMED: BY WHOM WORK WILL BE PERFORMED:
 TRADE(S) AFFECTED: NA
 RCAR FORM ENTRIES: NA
 MODIFICATION OF SPARES IN STOCK: NA
 RETURNS: NA

PURPOSE
1 To provide a safety harness for the flight engineer in the event of an unsafe door warning in flight, by using a QC OR harness and restraining strap.

MODIFICATION DATA
 2 The following is the sequence of operations:
 (a) Through normal supply channels, procure ea. one QC OR harness.
 (b) Manufacture a restraining strap using 2" nylon webbing, 10 ft. long and ea. two snap hooks.
 (c) The webbing of the restraining strap shall be folded back through the snap hook a distance of 6", and stitched using 5 to 6 stitches per inch, with nylon cord.
 (d) This harness and restraining strap may be stowed under the lower crew rest bunk on the right deck.

PARTS REQUIRED
3 The following parts are required per aircraft:

| RCAR REF. | PART | DESCRIPTION | QTY |
|------------------|------|-----------------|-----|
| 1670-21-805-4805 | | QC OR harness | 1 |
| 1670-21-805-4758 | | Back pad | 1 |
| 5240-00-664-4758 | | Webbing textile | 1 |
| 8305-21-805-6033 | | Nylon, 45 cord | 1 |
| 8310-21-805-5032 | | | 1 |

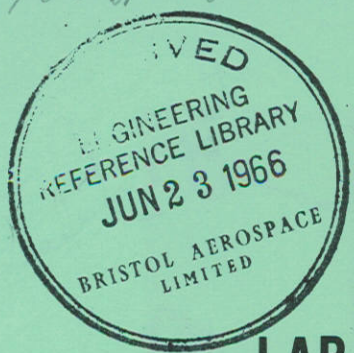
ISSUED ON AUTHORITY OF THE CHIEF OF THE DEFENCE STAFF

Prepared by:
AMC/SAMO/PA3

RELEASE
 BY ENGINEER
 PROJECT ENGINEER

1004-8 amb

D.C.



ROYAL CANADIAN AIR FORCE

EO 55-45-6A/33
12 May 66

MODIFICATION INSTALLATION OF LAP BELT FASTENER TO MA5 AND MA6

(This EO replaces EO 55-45-6A/33 dated 29 Oct 65)

| | |
|----------------------------------|---|
| EQUIPMENT AFFECTED: | MA5 and MA6 Lap Belt |
| AIRCRAFT AFFECTED: | All Tutors (CT114) |
| TRAINING AIDS AFFECTED: | NA |
| BY WHOM WORK WILL BE PERFORMED: | Operating Units, RD and Contractors |
| WHEN WORK WILL BE PERFORMED: | Before or not later than the next Periodic Inspection |
| TRADE(S) AFFECTED: | SE Tech |
| RCAF FORM ENTRIES: | L14-1B, L14-8 |
| MODIFICATION OF SPARES IN STOCK: | Prior to Installation |
| RETURNS: | L90 |

PURPOSE

1 To provide a means of attaching the oxygen hose to the lap belt to prevent injury to the pilot during ejection.

MODIFICATION DATA

2 Ensure that modification EO 05-195A-6A/74 dated 22 Oct 64 "Oxygen Hose Seat Disconnect and Mask Disconnect" has been carried out.

- (a) Remove the left-hand lap belt from the ejection seat.
- (b) Remove the lap belt identification label and reposition so as not to interfere with the leather facing.
- (c) Affix a piece of leather 4" long by 2" wide as shown in Figure 1.
- (d) Install the snap fastener as shown in Figure 1 so that the post penetrates the leather and the lap belt material.
- (e) Re-install lap belt to the seat.

RELEASE ^{IS} ~~IS NOT~~ AUTHORIZED
 BY **ENGINEERING**
 23 June '66 [Signature]
 DATE PROJECT ENGINEER

RESCINDED
 AUTH. App. A. E. C. Dec. List
 1-15 Aug 66

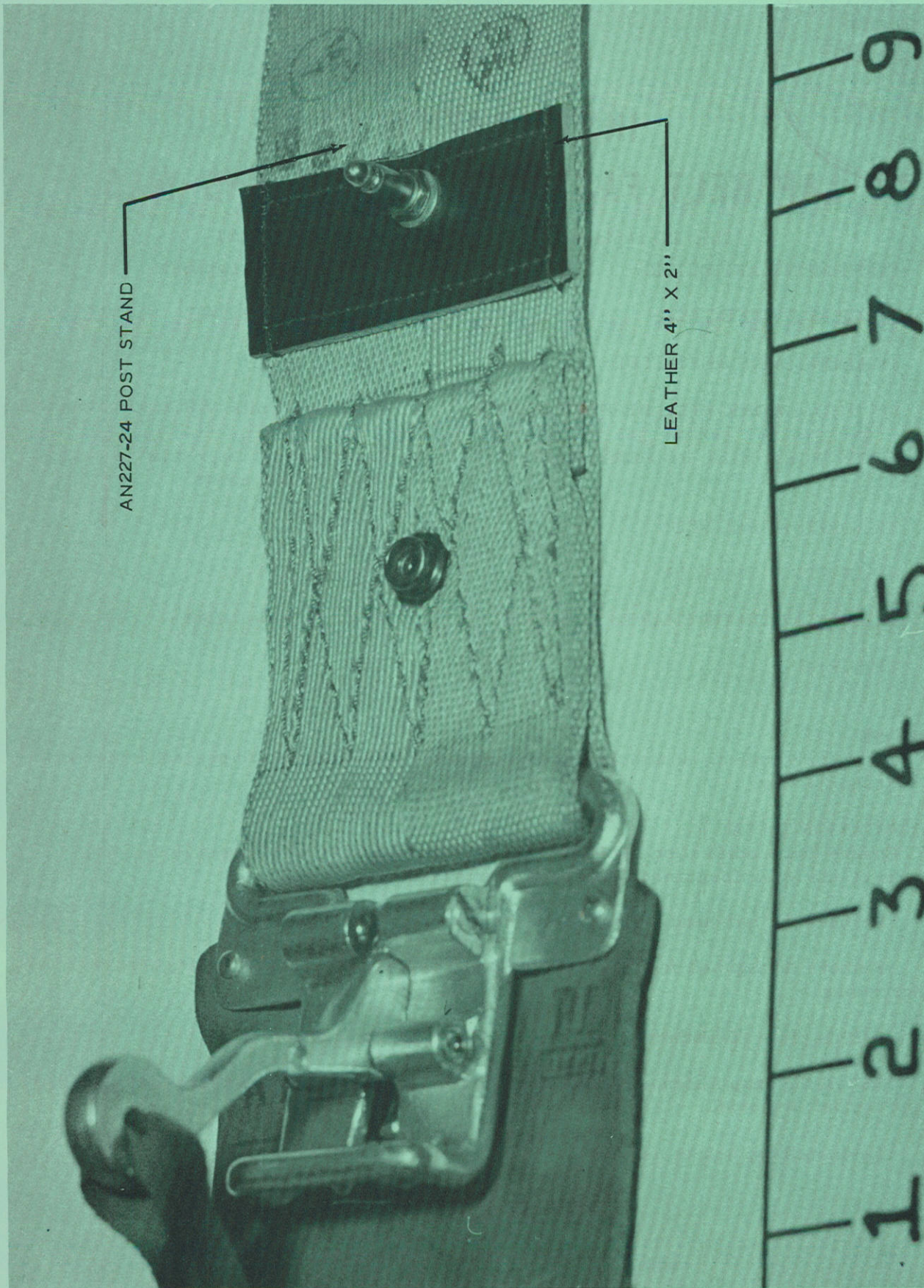


Figure 1 (Issue 1)

PARTS REQUIRED

3 The following parts are required to embody this modification and are to be procured through normal supply channels:

| RCAF REF. | PART | DESCRIPTION | QTY. |
|------------------|----------|-----------------------------|---------|
| 5325-00-276-4919 | AN227-24 | Post stand | 1 |
| 5310-00-595-7672 | AN227-3B | Washer | 1 |
| 5310-00-274-9377 | 364-832C | Nut | 1 |
| 8330-21-804-9998 | | Leather, cattle hide, black | 4" x 2" |

PARTS RENDERED SURPLUS OR OBSOLETE

4 Nil.

WEIGHT, LOADING AND BALANCE DATA

5 The weight and balance change resulting from the instructions contained herein is negligible.

ADDITIONAL DATA

6 It is estimated that 1/4 man-hour will be required to embody this change.

ISSUED ON AUTHORITY OF THE CHIEF OF THE DEFENCE STAFF

Prepared by:
MATCOM/SAMO/PA3

R.C.A.F. MESSAGE

EO 55-45-6A/28
-02

D.C.

FROM: CANAIRMAT

202032Z

51-00-260V

TO: LOGLIST VOODOO

ORIG. No. LOGD4346

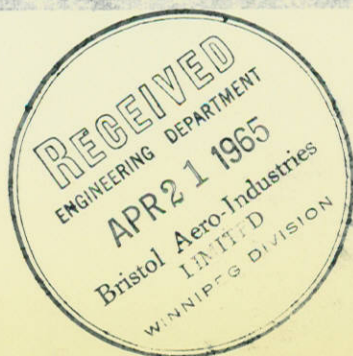
DATE 20 APR 65

INFORMATION

SAFETY EQUIPMENT TECHNICAL PD EO 55-45-6A/28 RESCINDED 25 FEB 64
AND NOW COVERED BY EO 55-45-6A/32 DATED 18 FEB 65 PD ALL MA 5 AND
MA 6 LAP BELTS MODIFIED TO EO 55-45-6A/28 ARE TO BE SHIPPED TO
CE AND PE ESCAPE SYSTEMS UPLANDS PD NEW LAP BELTS SHALL BE ORDERED
AND MODIFIED TO EO 55-45-6A/32 PRIOR TO SEAT INSTALLATION

BURNIAND
BIRNIE
DAVIDSON
EILER
KATOCKI

| | |
|---------------|------------|
| AUTHORIZED BY | |
| ENGINEERING | |
| RELEASED | 21 Apr '65 |
| DATE | |
| SIGNATURE | |
| RETURNED | |
| DATE | |
| SIGNATURE | |



RESCINDED
AUTH. Index 15 Jul 65

R. R. Alder

10/15/64

MOD. HIA TO CARK
REMOVAL OF MA5 & MA6
LAP BELTS MODIFIED TO
EO 55-45-6A/28 IS APPLICABLE
TO ALL A/C IN PLAN T.
[Signature]

BRISTOL AERO-INDUSTRIES LIMITED

R.C.A.F. MESSAGE

8808

FROM: CANAIRMAT 51-00-26CV

CANCELLATION
EO 55-45-6A/28

TO: LOGLIST STARFIGHTER (1004TSD)

ORIG. NO. LOGD9732 DATE 19 FEB 64

INFORMATION

SAFETY EQUIPMENT EO 55-45-6A/28 DATED 21 JAN ⁶⁴ IS HEREBY CANCELLED (PD) ALL INSTALLED
MODIFIED MA5 AND MA6 LAP BELTS ARE TO BE REPLACED IMMEDIATELY (PD) RECENT TRIALS SHOW
UNSATISFACTORY CONDITION EXISTS

Mod not carried out on any A/c
in hangar at this time. HEALEY

30 Mar 64

R. TILLY
J. G. DAVIDSON

[Signature]

- A/c checked
- 17469
- 17483
- 17441
- 17445
- 17447
- 17437
- 17470
- 17398

[Signature]

BRISTOL AERO-INDUSTRIES LIMITED

R.C.A.F. MESSAGE

8808

FROM: CANAIRMAT

51-00-26CV

CANCELLATION

EO 55-45-6A/28

TO:

LOGLIST STARFIGHTER (1004TSD)

ORIG. No. LOGD9732

DATE 19 FEB 64

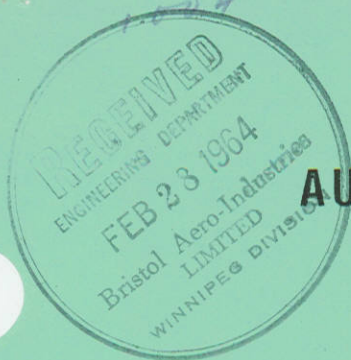
INFORMATION

SAFETY EQUIPMENT EO 55-45-6A/28 DATED 21 JAN ⁶⁴ IS HEREBY CANCELLED (PD) ALL INSTALLED
MODIFIED MA5 AND MA6 LAP BELTS ARE TO BE REPLACED IMMEDIATELY (PD) RECENT TRIALS SHOW
UNSATISFACTORY CONDITION EXISTS

~~→~~ F. HEALY

R. ZILBE

J. G. DAVIDSON



MODIFICATION
AUTOMATIC RELEASE LATCH AND HOUSING
MA5 AND MA6 LAP BELTS

| | |
|----------------------------------|---------------------------------------|
| EQUIPMENT AFFECTED: | MA5 and MA6 Lap Belts |
| BY WHOM WORK WILL BE PERFORMED: | Operating Units |
| WHEN WORK WILL BE PERFORMED: | At or before next Periodic Inspection |
| RCAF FORM ENTRIES: | L14-1B, L14-8 |
| MODIFICATION OF SPARES IN STOCK: | All to be modified |

PURPOSE

1 To provide a more positive separation between the swivel link and latch when automatically released. This modification enlarges the housing mouth and removes half of the housing crown to allow the latch greater travel.

MODIFICATION DATA

2 The following is the sequence of operations:

- (a) Remove the circlip from the latch pin and remove pin and latch from housing.
- (b) Scribe a line from the back of the housing mouth to a point $5/16$ " above the front upper lip of housing mouth, see Figure 2.
- (c) Scribe a line from a point $3/4$ " back on the top of housing to the front of the housing at a point $1/4$ " down from the top, see Figure 2.
- (d) Cut along these lines, taking care that the hacksaw is held at the proper angle to ensure both sides are cut identically.
- (e) Round off the two points thus formed and remove all rough edges. Polish with abrasive cloth, see Figures 1 and 3.
- (f) Remove all filings.
- (g) Re-install the latch, pin and circlip.

NOTE

The hook of latch when in the open position should be flush with the top of the housing mouth.

PARTS REQUIRED

3 Nil.

CANCELLED
AUTH. LOG D9732, 19 Feb 64

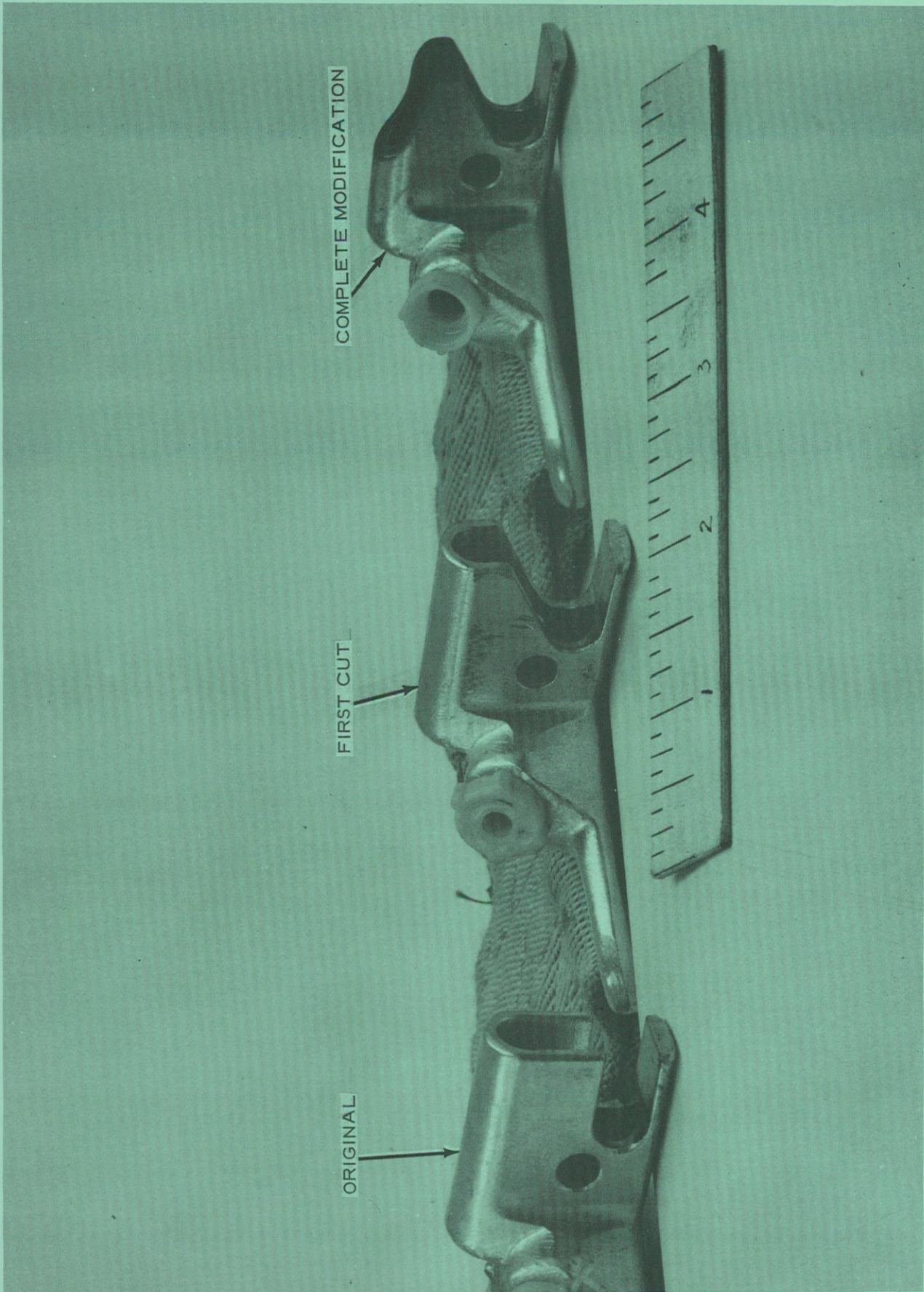


Figure 1

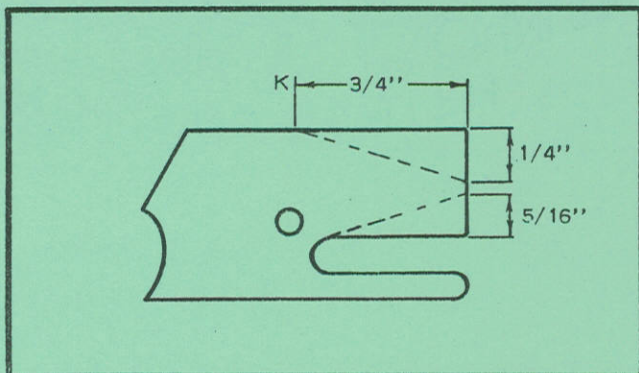


Figure 2

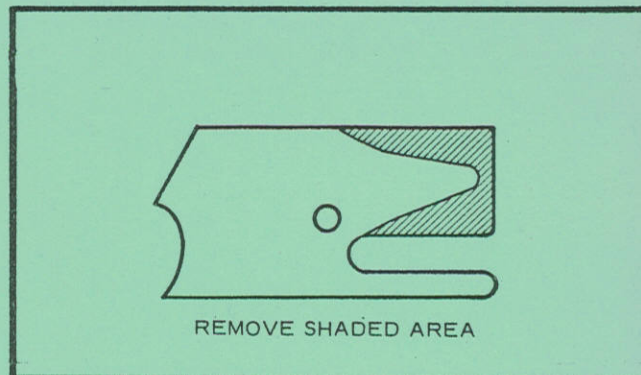


Figure 3

PARTS RENDERED SURPLUS OR OBSOLETE

4 Nil.

WEIGHT, LOADING AND BALANCE DATA

5 NA

ADDITIONAL DATA

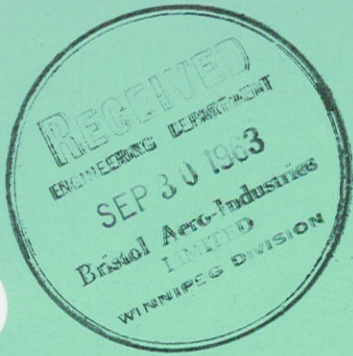
6 It is estimated this modification will require approximately 1 man-hour to complete per lap belt.

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

Prepared by:
AMC/SAMO/PA3

1004-8 auto

DC



MODIFICATION

SAFETY HARNESS - CF104 AND CF104D

(This EO replaces EO 55-45-6A/22 dated 10 Apr 63)

| | |
|----------------------------------|---|
| EQUIPMENT AFFECTED: | Lap Belt and Shoulder Safety Harness CF104 and CF104D Aircraft |
| BY WHOM WORK WILL BE PERFORMED: | Operating Units |
| WHEN WORK WILL BE PERFORMED: | To be completed by 1 Oct 63 |
| RCAF FORM ENTRIES: | L14-1B and Seat L14-8 |
| MODIFICATION OF SPARES IN STOCK: | All to be modified |

PURPOSE

1 The present CF104 and CF104D lap belt does not leave enough belt material at the adjustment buckles for safety or ease of adjustment and the shoulder harness has been found too long. This modification is intended to increase the effective length of the lap belt and decrease the overall length of the shoulder harness.

MODIFICATION DATA

2 The following is the sequence of operations:

(a) Remove stitching used to retain turned over portion of adjustable strap that forms a stop on both the left and right-hand straps. Unfold the webbing and stretch it out flat. Measure 4" from the end and cut off. Sear cut end to prevent ravelling.

(b) If adjustable strap has been removed from adjustment adapter for this rework replace it in the adapter before resewing stop. Resew stop on left and right-hand straps to the original configuration and sewing pattern. Use thread Ref. 32B/383.

(c) Remove tab installed by EO 55-45-6A/22 and install tab manufactured from nylon webbing as follows:

(1) Cut a 16" length of webbing 32B/NIC webbing nylon MIL-W-4088, TS600, type 2, condition "R", 1" wide olive drab and fold in two with one side 1/2" longer than the other. Using the folded end tuck under in a double 1" fold, see Figure 1.

(2) Oversew the folded end with the pattern shown in Figure 1 using thread nylon Ref. 32B/8310-21-806-5032 four to six stitches per inch, see Figure 1.

(3) Take the free ends of the tab, tuck the 1/2" portion around and under the shorter end of the webbing. Sew to the lap belt as shown in Figure 1.

(4) Sew tabs along both sides so that both parts of the tab webbing will be attached to each other, see Figure 2.

RESCINDED

AUTH *Index 15 Jul 65*

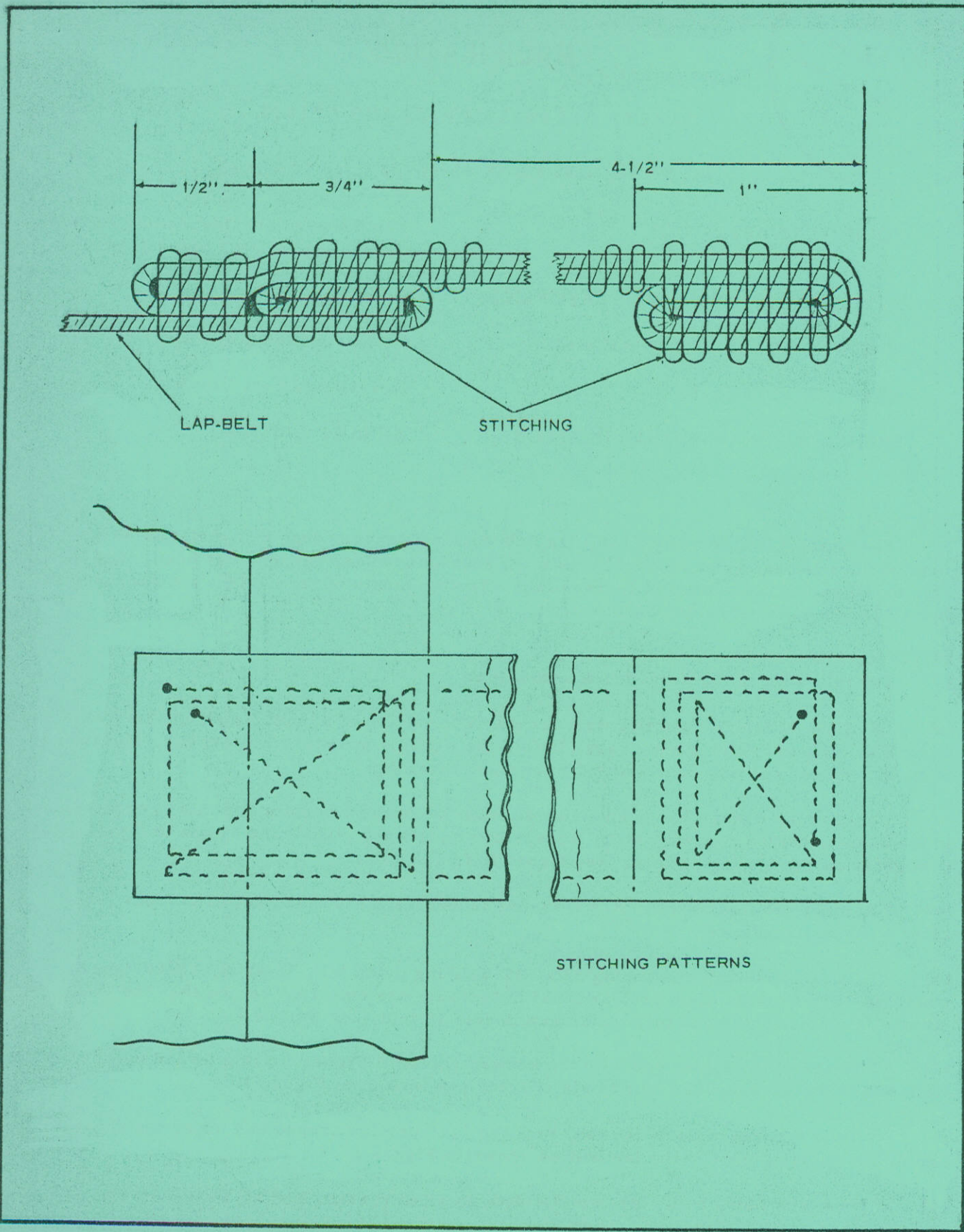


Figure 1 C2 Seat Lap-Belt Extension Tab

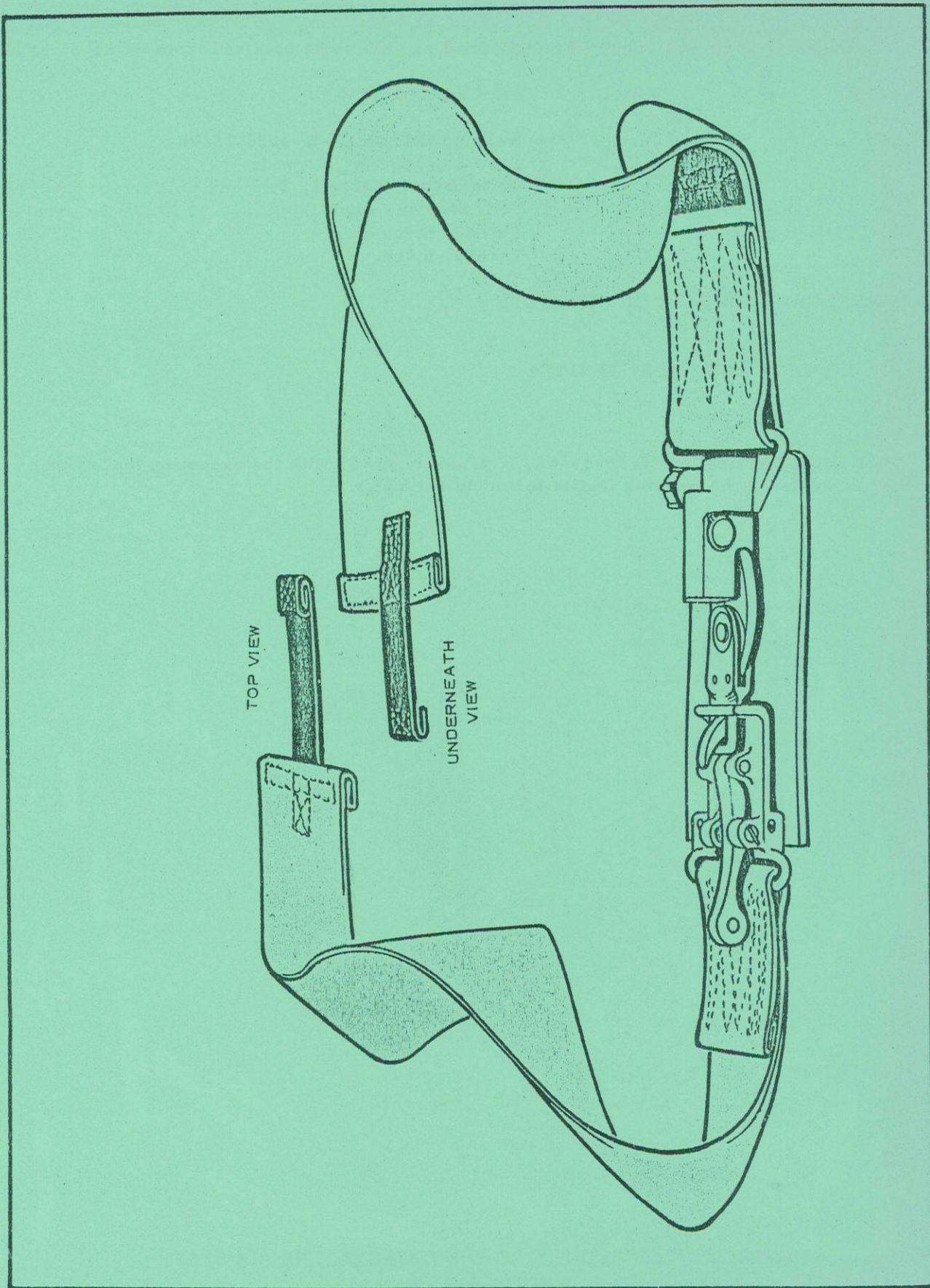


Figure 2 MA6 Lap-Belt Fitted with Extension Tabs

PARTS REQUIRED

3 The following parts are required per aircraft and are to be obtained from RCAF stocks:

| RCAF REF. | PART | DESCRIPTION | QTY. |
|----------------------|------|--|-----------------|
| 32B/NIC | | Webbing nylon MIL-W-4088 TS600 Type 2 Cond. "R", 1" wide (Automatic issue to 1, 2, 3 and 4 FWG and Stn Cold Lake) | 32" per seat |
| 32B/8310-21-806-5032 | | Thread, nylon #5 | AR |
| 32B/383 | | Thread, nylon | AR |

PARTS RENDERED SURPLUS OR OBSOLETE

4 Nil

WEIGHT, LOADING AND BALANCE DATA

5 NA

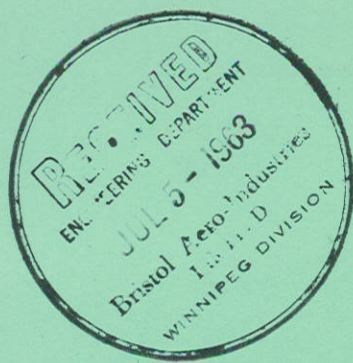
ADDITIONAL DATA

6 This EO is identical to EO 55-45-6A/22 dated 10 Apr 63 with the exception that nylon webbing has replaced the webbing textile formerly called up.

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

Prepared by:
AMC/SAMO/PA3

1004-3 auto



MODIFICATION

PASSENGER SAFETY HARNESS

EQUIPMENT AFFECTED: Passenger Safety Harness - CC106 Aircraft

BY WHOM WORK WILL BE PERFORMED: Operating Units

WHEN WORK WILL BE PERFORMED: At or before next Periodic Inspection

RCAF FORM ENTRIES: L14-1B, L14-6

MODIFICATION OF SPARES IN STOCK: All to be modified

PURPOSE

1 To replace present passenger safety harness release assembly with the FDC 2700 type.

MODIFICATION DATA

- 2 The following is the sequence of operations:
- (a) Remove passenger safety harness lap belts from aircraft seats.
 - (b) Carefully cut existing stitching and remove existing FDC 1650 buckle assembly and release fitting.
 - (c) Install buckle assembly FDA 2707 Ref. 15E/1680-21-808-1464 and release fitting FD 2991 Ref. 15E/1680-21-808-1465 using #3 cord nylon MIL-T-7807 (colour to match webbing) or equivalent. Sewing pattern to be similar to that used on buckle and fitting removed.
 - (d) Tensile test as outlined by EO 55-45-2.
 - (e) Re-install safety harness on passenger seats.

PARTS REQUIRED

3 The following parts are required and have been automatically issued to Stn Trenton:

| RCAF REF. | PART | DESCRIPTION | QTY. |
|----------------------|------|--|------|
| 15E/1680-21-808-1464 | | Buckle assembly FDA 2707 | 1 |
| 15E/1680-21-808-1465 | | Release fitting FD 2991 | 1 |
| 32B/NIC | | #3 cord nylon MIL-T-7807 or equivalent (LPO) | AR |

RESCINDED

AUTH *Index 15 Jul 65*

PARTS RENDERED SURPLUS OR OBSOLETE

4 The following part is rendered surplus and will be disposed of as indicated below:

| RCAF REF. | PART | DESCRIPTION | QTY. | DISPOSAL CLASS |
|-----------|----------|----------------------------|------|----------------|
| | FDC 1650 | Buckle and release fitting | 1 | A |

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

Prepared by:
AMC/SAMO/PA3



MODIFICATION

TAB - LOCKING LATCH - MA5 AND MA6 LAP BELT

| | |
|----------------------------------|--|
| EQUIPMENT AFFECTED: | Ref. 15E/1680-00-516-6544 Lap Belt (MA6) and 15E/1680-00-516-6545 Lap Belt (MA5) |
| BY WHOM WORK WILL BE PERFORMED: | Operating Units |
| WHEN WORK WILL BE PERFORMED: | At or before next Periodic Inspection |
| RCAF FORM ENTRIES: | L14-8, L14-1B |
| MODIFICATION OF SPARES IN STOCK: | All to be modified |

PURPOSE

1 During trials on the CF104 escape system it was found that the MA6 lap belt latch hook lever is prone to interference with personal clothing and thus the lap belt can open inadvertently. Cases have been reported in normal operational service in which the belt has been found unlatched for this reason. This modification is intended to prevent such a possibility. All remarks herein apply to both MA5 and MA6 belts which have basically identical hardware.

MODIFICATION DATA

2 The following modification data apply to the "hook" half of the lap belt:

- (a) Carefully smooth the edges of the hole in the belt hook lever with a small file or emery cloth making sure there are no sharp corners or burrs.
- (b) Cut a 22" length of nylon webbing and insert in the hole in the lever. Fold the webbing as indicated in Figure 1, Detail C.
- (c) Sew the tab formed with 32B/415 nylon thread making a double box pattern at the free end, see Figure 1, Detail A.
- (d) Attach the "button" or female portion of the "press-the-dot" fastener to the tab, 2" from the lever-end. Ensure that the lip on the rim of the button points along the tab towards the lever (if a "dot" is painted on the button this should point away from the lever), see Figure 1, Detail B.
- (e) Mount the "socket" or male portion of the fastener along the centreline of the belt 2" from the hardware attachment end. Figures 2 and 3 show the finished modification as fitted to an MA6 lap belt.

SUPERSEDED

BY 10 Apr 63

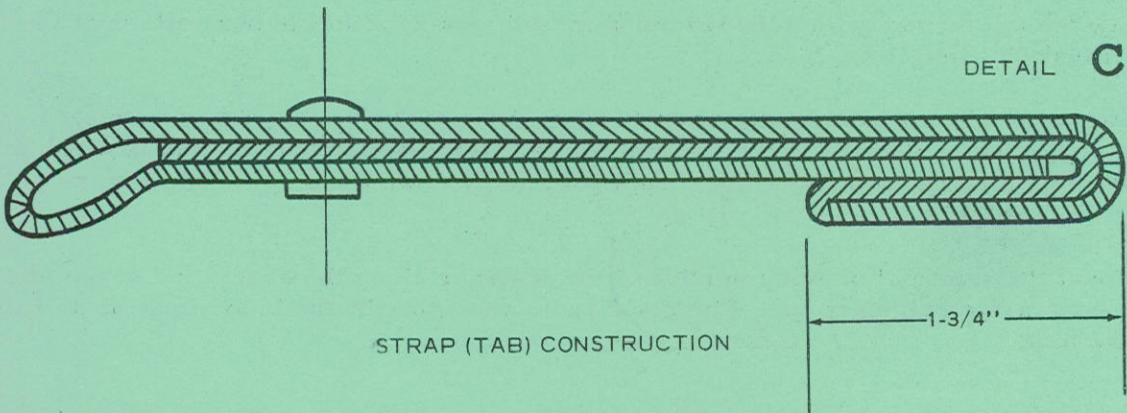
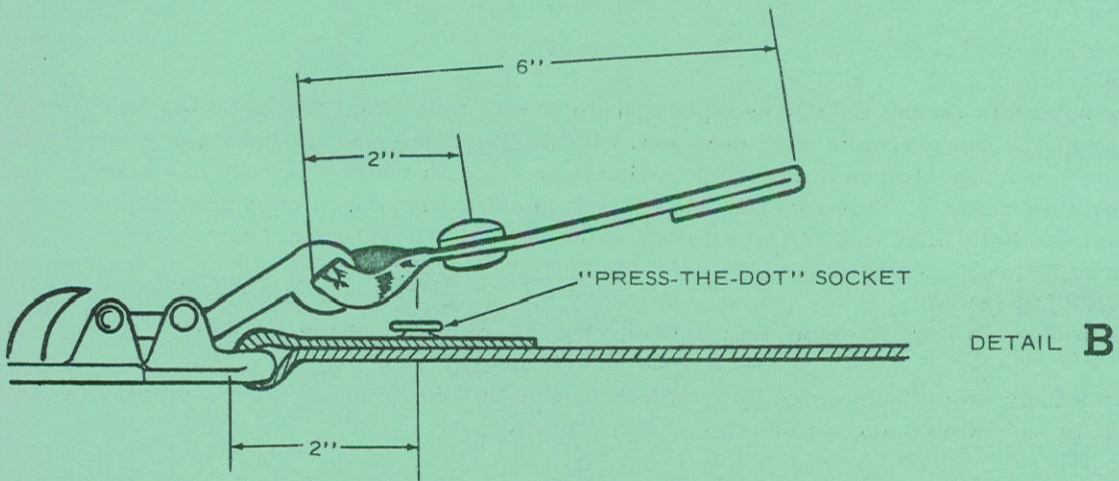
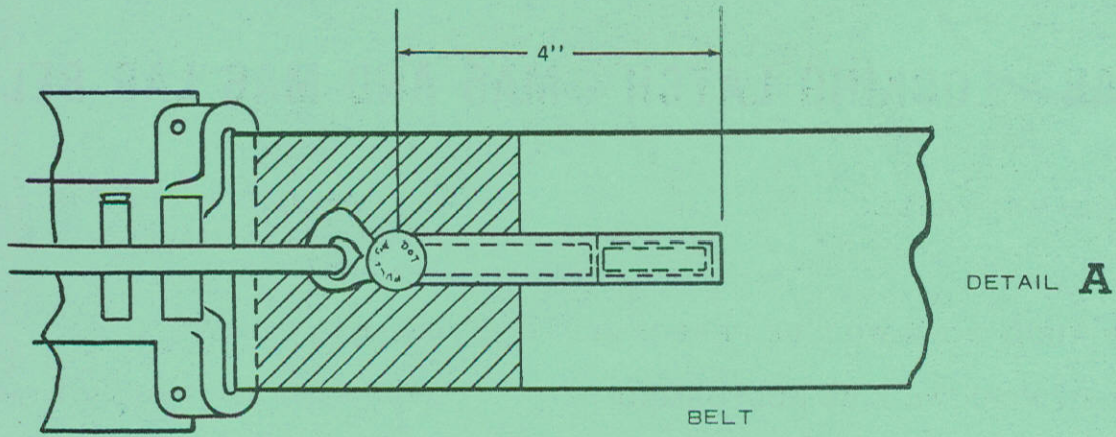


Figure 1 Locking Tab - MA5 and MA6 Lap Belts

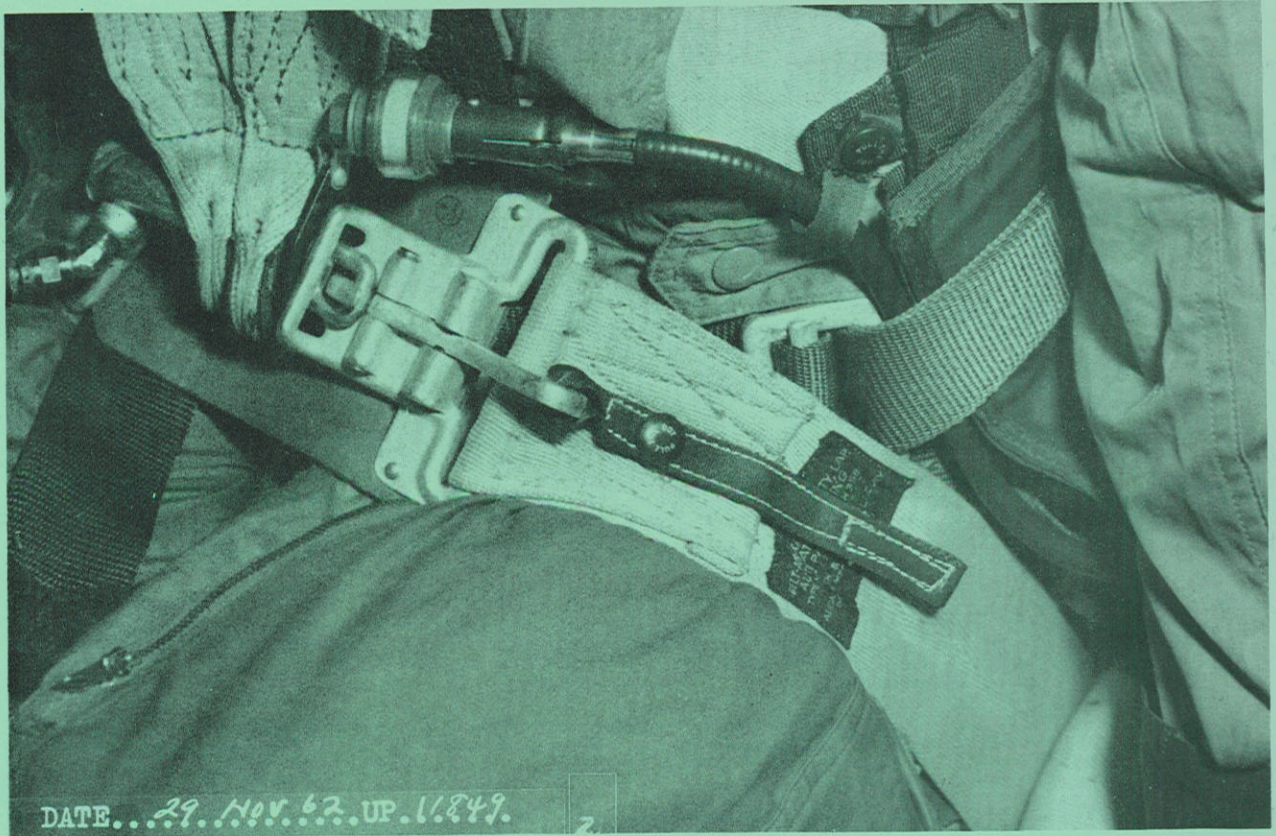


Figure 2 Lap Belt Latch Locking Tab Fitted to MA6 Lap Belt



Figure 3 Lap Belt Tab Installation as Fitted to C2 Ejection Seat

PARTS REQUIRED

3 The following material is required and is to be demanded from RCAF stocks:

| RCAF REF | PART | DESCRIPTION | QTY |
|---------------|------|----------------------------|--------------|
| 32B/461 | | Webbing, nylon, 9/16" wide | 22" per seat |
| 32B/415 | | Thread, nylon | AR |
| 28NS/CF200995 | | Fastener, pull-the-dot | Sets 1 |

PARTS RENDERED SURPLUS OR OBSOLETE

4 Nil

WEIGHT, LOADING AND BALANCE DATA

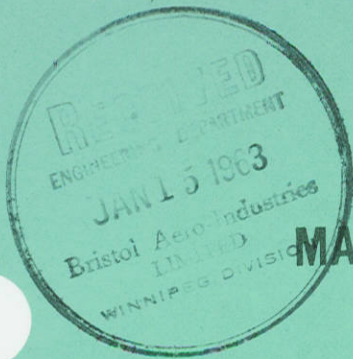
5 The effect of weight on the C of G is negligible.

ADDITIONAL DATA

6 New lap belts MA5 and MA6 received from supply depots will not have this modification embodied, therefore units will have to complete this modification on receipt of belts.

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

Prepared by:
AMC/SAMO/PA3



MODIFICATION

MA5 AND MA6 LAP BELTS 90 DEGREE ELBOW

EQUIPMENT AFFECTED: Lap Belts Safety Harness - CF104 and CF104D Aircraft

BY WHOM WORK WILL BE PERFORMED: Operating Units

WHEN WORK WILL BE PERFORMED: At or before next Periodic Inspection

RCAF FORM ENTRIES: L14-1B, L14-8

MODIFICATION OF SPARES IN STOCK: All to be modified

PURPOSE

1 To eliminate restriction of the pilots right hand, created by the 45° elbow located on the actuator of the automatic release.

MODIFICATION DATA

2 The following is the sequence of operations:

- (a) Ensure that the D ring, D ring safety pin and canopy ejection safety pin are properly installed.
- (b) Disconnect the initiator hose from the lap belt actuator where it connects to the existing 45° elbow. Cap the initiator hose to prevent entry of dirt or foreign material.
- (c) Remove the lap belt from ejection seat.
- (d) Remove existing 45° elbow fitting from the actuating mechanism.
- (e) Install new Parker 90° elbow Ref 15E/4730-00-666-4320.
- (f) After installing 90° elbow, harness is to be tested as outlined in paragraphs 12, 13 and 14 of EO 55-45-2, Part 2, Section 1.
- (g) The initiator hose should fit snugly against the lap belt as shown in Figure 1.
- (h) Re-install lap belt on ejection seat.

PARTS REQUIRED

3 The following part (s) is required to carry out this modification and is to be demanded from RCAF stocks.

| RCAF REF. | PART | DESCRIPTION | QTY. |
|----------------------|------|----------------------------|---------------------------|
| 15E/4730-00-666-4320 | | Elbow, Parker fitting, 90° | CF104 ea 1 CF104D ea 2 |

SUPERSEDED

BY *S. Apr.* 63

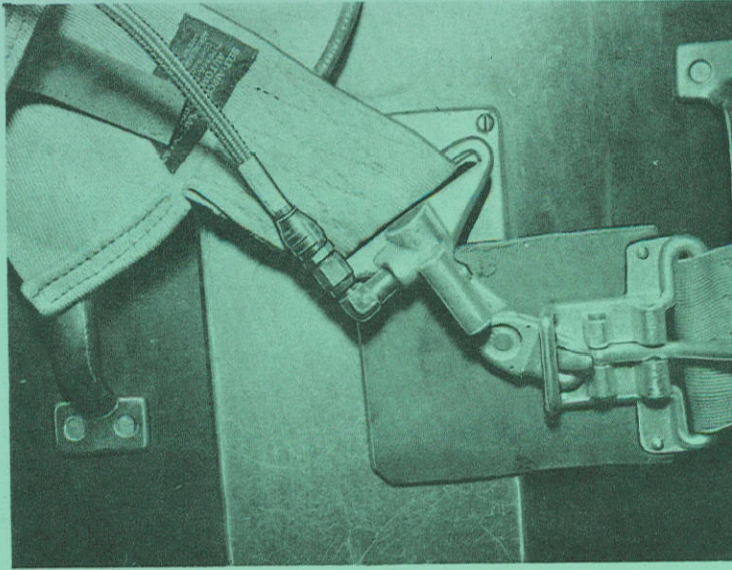


Figure 1

PARTS RENDERED SURPLUS OR OBSOLETE

4 The following part (s) is rendered surplus or obsolete.

| RCAF REF. | PART | DESCRIPTION | QTY. | DISPOSAL CLASS. |
|-----------|---------|-------------|---------------------------|-----------------|
| 28/5/ | AN823-3 | Elbow, 45° | CF104 ea 1 CF104D ea 2 | C |

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

Prepared by:
AMC/SAMO/PA3

10 Apr 63

*Rescinded
1 April 63*

MODIFICATION SAFETY HARNESS

(This EO replaces EO 55-45-6A/22 dated 24 Jan 63)

| | |
|----------------------------------|---|
| EQUIPMENT AFFECTED: | Lap Belt and Shoulder Safety Harness CF104 and CF104D Aircraft |
| BY WHOM WORK WILL BE PERFORMED: | Operating Units |
| WHEN WORK WILL BE PERFORMED: | At or before next aircraft Periodic Inspection |
| RCAF FORM ENTRIES: | L14-1B, Seat L14-8 |
| MODIFICATION OF SPARES IN STOCK: | All to be modified |

PURPOSE

1 The present CF104 and CF104D lap belt does not leave enough belt material at the adjustment buckles for safety or ease of adjustment and the shoulder harness has been found too long. This modification is intended to increase the effective length of the lap belt and decrease the overall length of the shoulder harness.

MODIFICATION DATA

2 The following is the sequence of operations:

- (a) Remove stitching used to retain turned over portion of adjustable strap that forms a stop on both the left and right-hand straps. Unfold the webbing and stretch it out flat. Measure 4" from the end and cut off. Sear cut end to prevent ravelling.
- (b) If adjustable strap has been removed from adjustment adapter for this rework replace it in the adapter before resewing stop. Resew stop on left and right-hand straps to the original configuration and sewing pattern. Use thread Ref. 32B/383.
- (c) Both halves of the lap belt are to have a tab added as follows:
 - (1) Cut a 16" length of webbing 32B/8305-21-804-4761 and fold in two with one side 1/2" longer than the other. Using the folded end tuck under in a double 1" fold, see Figure 1.
 - (2) Oversew the folded end with the pattern shown in Figure 1 using thread nylon Ref. 32B/8310-21-806-5032 four to six stitches per inch, see Figure 1.
 - (3) Take the free ends of the tab, tuck the 1/2" portion around and under the shorter end of the webbing. Sew to the lap belt as shown in Figure 1.
 - (4) Sew tabs along both sides so that both parts of the tab webbing will be attached to each other, see Figure 2.

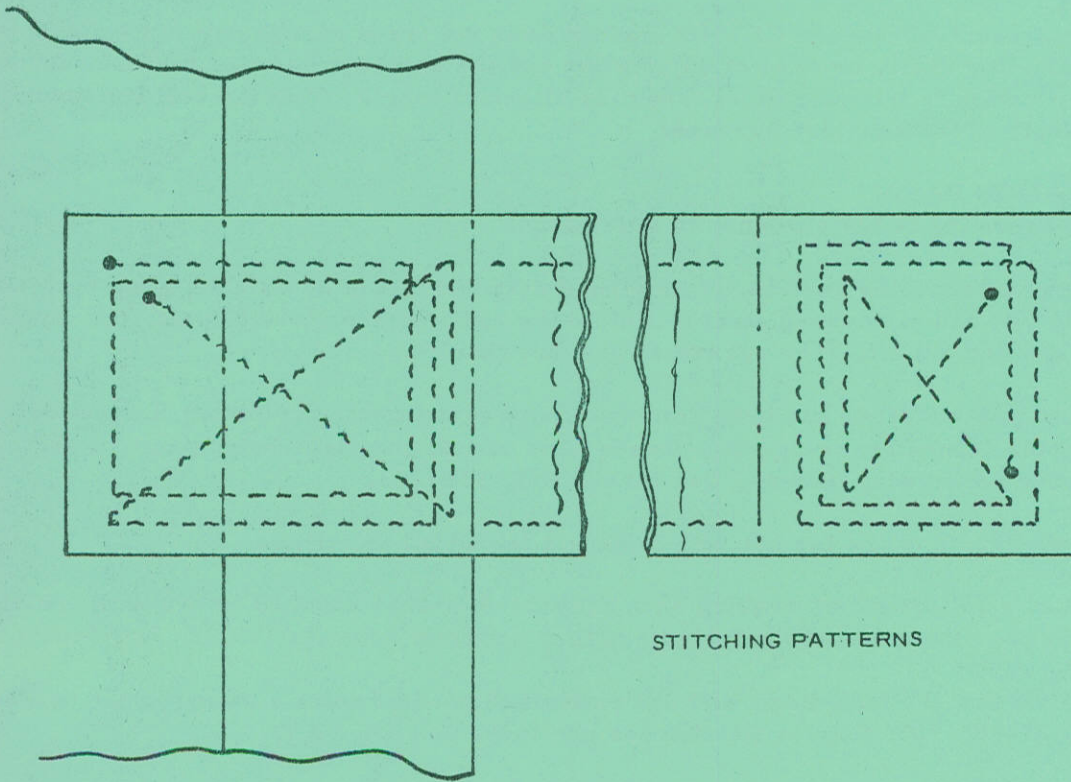
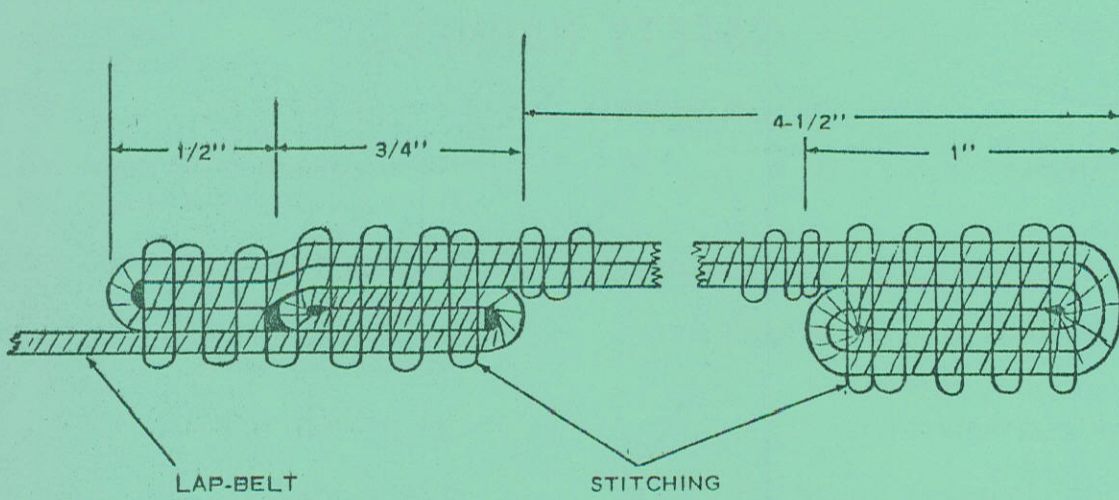


Figure 1 C2 Seat Lap-Belt Extension Tab

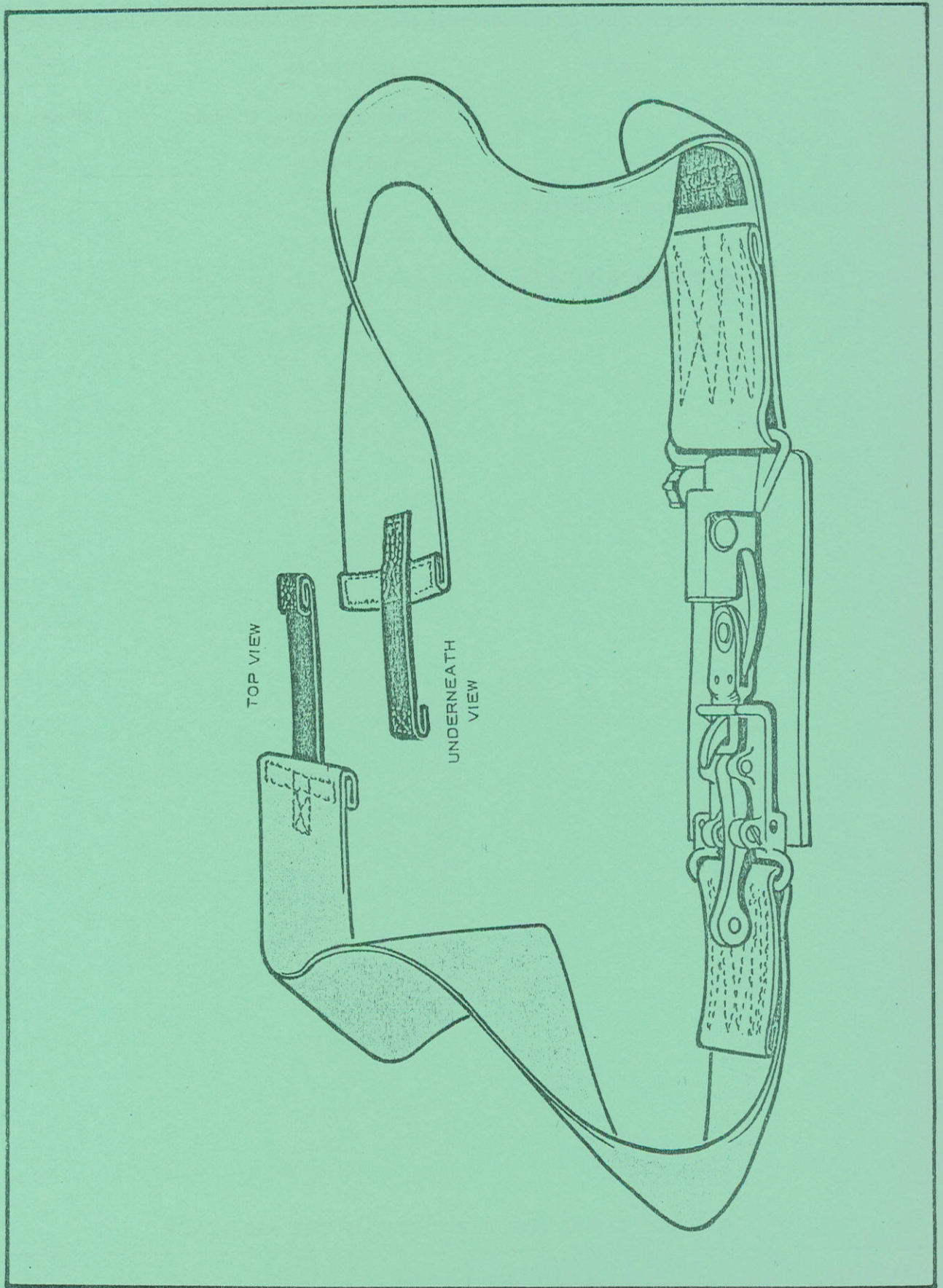


Figure 2 MA6 Lap-Belt Fitted with Extension Tabs

PARTS REQUIRED

3 The following parts are required per aircraft and are to be obtained from RCAF stocks:

| RCAF REF. | PART | DESCRIPTION | QTY. |
|----------------------|------|---------------------------|--------------|
| 32B/8305-21-804-4761 | | Webbing, textile, 1" wide | 32" per seat |
| 32B/8310-21-806-5032 | | Thread, nylon, #5 | AR |
| 32B/383 | | Thread, nylon | AR |

PARTS RENDERED SURPLUS OR OBSOLETE

4 Nil

WEIGHT, LOADING AND BALANCE DATA

5 NA

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

Prepared by:
AMC/SAMO/PA3



MODIFICATION INSTALLATION OF NEW TYPE ADJUSTMENT ADAPTOR PART 61C4148 BELT LAP TYPE

(This EO replaces EO 55-45-6A/21 dated 11 Oct 62)

| | |
|----------------------------------|---|
| EQUIPMENT AFFECTED: | Belt Lap Aircraft Safety MA5 and MA6 incorporating soft sea green coloured dacron webbing |
| BY WHOM WORK WILL BE PERFORMED: | Operating Units |
| WHEN WORK WILL BE PERFORMED: | Before or not later than next Periodic Inspection |
| RCAF FORM ENTRIES: | L14-1B, L14-6 |
| MODIFICATION OF SPARES IN STOCK: | NA |

PURPOSE

- 1 To prevent lap belt slippage by replacing the adjustment adaptors.

MODIFICATION DATA

2 This modification is applicable to CF101, CF104 and CF104D aircraft that now utilize adjustment adaptor Part MS22004-1; and incorporate soft sea green coloured dacron webbing in the lap belt. Equivalent modification TO 13A1-1-521 dated 24 Nov 61 which replaced TO 13A1-1-516 dated 22 Aug 60. The following is the sequence of operations:



Types MA5 and MA6 automatic opening lap belts are ballistic operated when installed on ejection seats; therefore, necessary precautions shall be taken to prevent inadvertent operation of seat ejection ballistic units.

- (a) Remove lap belt from seat assembly; retain all attaching hardware for re-installation.
- (1) Disconnect and immediately cap the initiator hose and elbow on MA5 or MA6 lap belt buckle.
- (b) The modification instructions outlined are to be accomplished on both halves of the lap belt being modified.
- (c) Slide the lap belt center piece adjustment end out of adjuster plate Part MS22004-1, refer Figure 1.
 - (1) It may be necessary on some lap belts to cut and remove the stitching from the webbing adjustment end to allow the webbing end to slide through the adjuster plate.

SUPERSEDED

BY..... 8 Apr 63

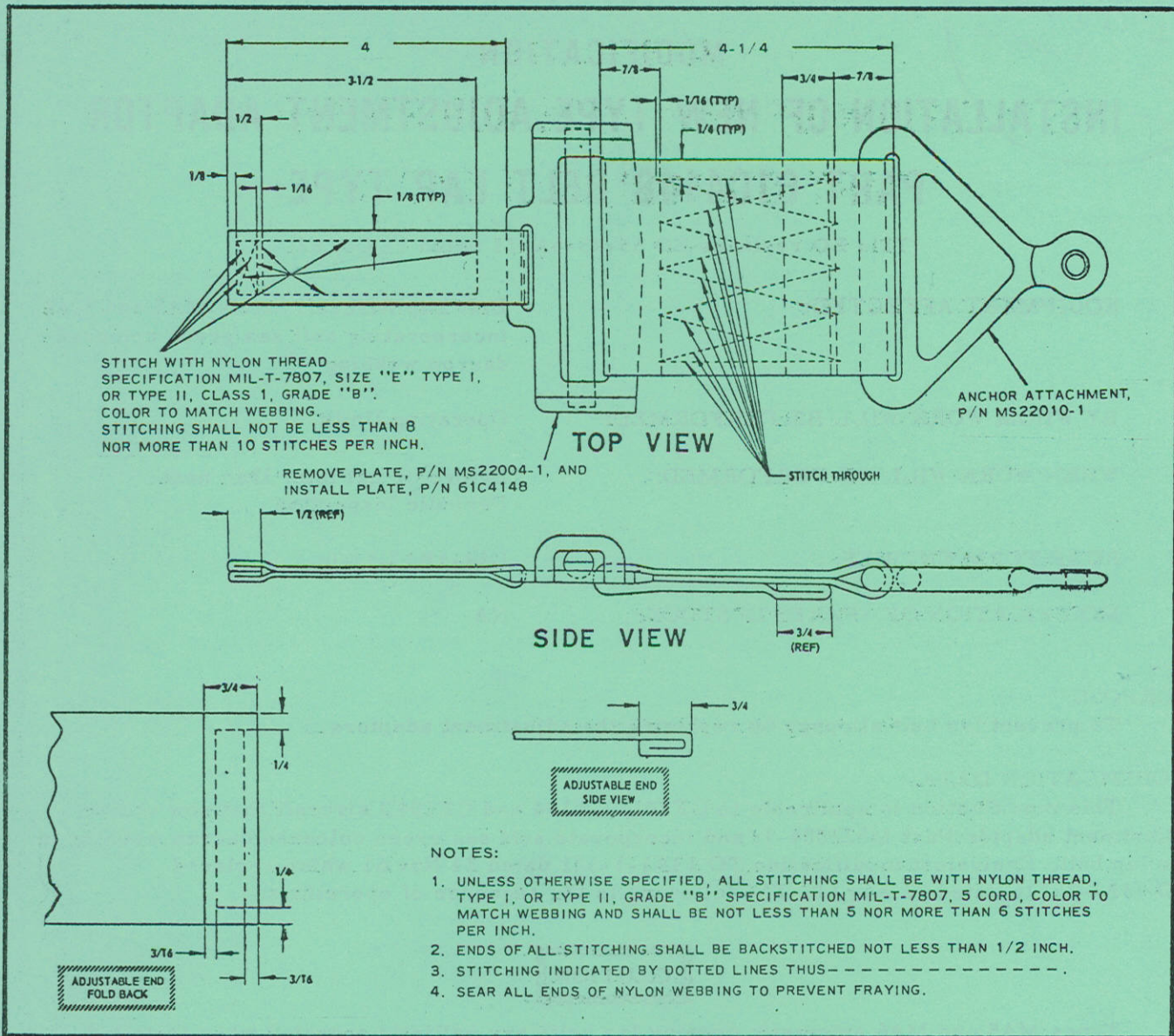


Figure 1

MODIFICATION DATA (Cont'd)

CAUTION

A sharp knife should be used and caution exerted to prevent cutting into the webbing, when stitching is to be cut and removed.

(d) Cut and remove the stitching from the webbing between the adjuster plate Part MS22004-1, and the seat anchor attachment Part MS22010-1.

(1) Separate the adjuster plate Part MS22004-1, from the seat anchor attachment webbing and retain seat anchor attachment webbing for re-assembly.

(e) Cut and remove the stitching from the adjuster release tab, separate the tab and adjuster plate; retain the tab for re-installation.

MODIFICATION DATA (Cont'd)

(f) Install the new adjuster plate Part 61C4148 as follows:

- (1) Slide one end of the adjuster release tab through adjuster release tab slot in new adjuster plate Part 61C4148.
 - (2) Join the two ends of the adjuster release tab, fold in 1/2" of the adjuster release tab end and stitch through. See Figure 1 for fold-in and stitch-through instructions.
 - (3) Slide the 3/4" folded-in webbing end of the seat anchor attachment webbing through the adjuster plate Part 61C4148. See Figure 1 for installation reference.
 - (4) Join the 3/4" folded-in webbing end with the other two webbing folds of the seat anchor attachment and stitch through. See Figure 1 for stitching instructions.
 - (5) Re-install adjustment end through adjuster plate Part 61C4148, in reverse of procedure outlined for removal.
 - (6) If adjustment end stitching was cut and removed in accordance with instructions contained in paragraph 2(c)(1), fold in the webbing end approximately 3/4" and stitch through. See Figure 1 for fold-in and stitching instructions.
- (g) Re-install lap belt on aircraft seat assembly using hardware retained in paragraph 2(a).
- (1) On ejection seats from which MA5 or MA6 lap belts were removed for modification, remove the protector caps from the initiator hose and the elbow on the lap belt buckle and connect the hose to the elbow.

PARTS REQUIRED

3 The following parts are required:

| RCAF REF. | PART | DESCRIPTION | QTY. |
|----------------------|---------|-----------------------|-----------------|
| 15E/1680-21-806-5223 | 61C4148 | Adjustment adaptor | 2 per harness |
| 32B | NIC | Thread nylon size "E" | Automatic issue |
| 32B | NIC | Thread nylon #5 cord | Automatic issue |

PARTS RENDERED SURPLUS OR OBSOLETE

4 The following part is rendered surplus and is to be reported on RDI:

| RCAF REF. | PART | DESCRIPTION | QTY. |
|-----------|-----------|--------------------|---------------|
| 15E | MS22004-1 | Adjustment adaptor | 2 per harness |

WEIGHT, LOADING AND BALANCE DATA

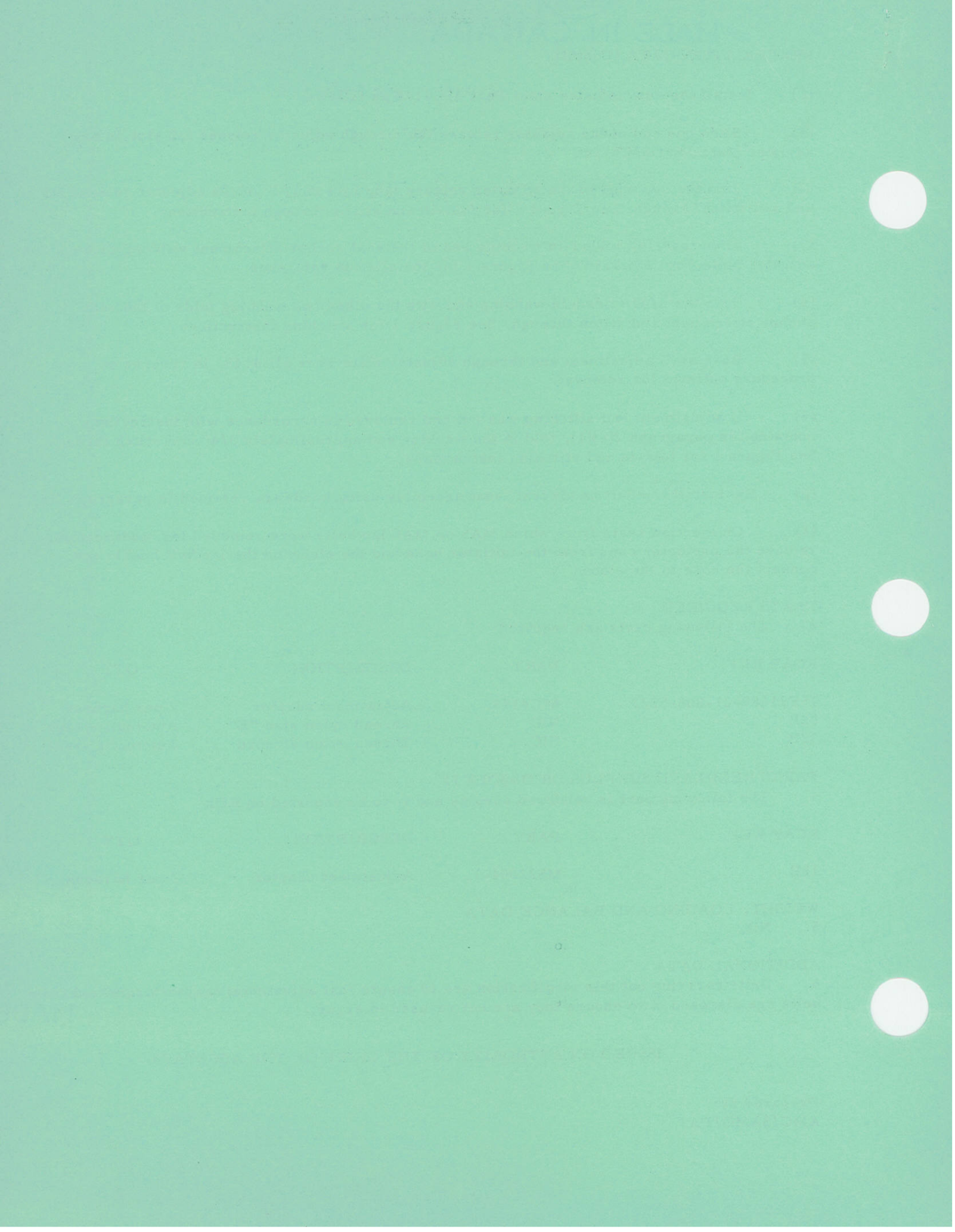
5 Nil.

ADDITIONAL DATA

6 Units carrying out this modification are to ensure that adjustment adaptors removed from belts are disposed of to ensure they are not re-used in error.

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

Prepared by:
AMC/SAMO/PA3





MODIFICATION

BUCKLE, QUICK ADJUSTABLE

| | |
|----------------------------------|---|
| EQUIPMENT AFFECTED: | Safety Harnesses - Chipmunk and Hiller CH112 Aircraft |
| BY WHOM WORK WILL BE PERFORMED: | Operating Units and Repair Depots |
| WHEN WORK WILL BE PERFORMED: | Next Periodic Inspection |
| RCAF FORM ENTRIES: | L14. |
| MODIFICATION OF SPARES IN STOCK: | All to be modified |

PURPOSE

1 To replace adjustment buckles Ref. 15E/1680-21-806-7770 which slip after adjustment, with buckles Ref. 15E/5340-00-605-1645.

MODIFICATION DATA

2 The following is the sequence of operations:

- (a) Remove the safety harnesses that incorporate Ref. 15E/1680-21-806-7770 adjustment buckles from the aircraft.
- (b) Carefully cut stitching securing Ref. 15E/1680-21-806-7770 buckle.
- (c) Remove Ref. 15E/1680-21-806-7770 buckle.
- (d) Install adjustment buckle Ref. 15E/5340-00-605-1645. Sewing is to be carried out as instructed in EO 55-45-2 Repairs.
- (e) Harnesses are to be tested to 1500-lbs after rework.
- (f) Re-install in aircraft.

PARTS REQUIRED

3 The following part is required per harness:

| RCAF REF | PART | DESCRIPTION | QTY |
|----------------------|-------|--------------------------|------|
| 15E/5340-00-605-1645 | 33175 | Buckle, quick adjustable | ea 4 |

PARTS RENDERED SURPLUS OR OBSOLETE

4 The following part is rendered surplus per harness:

| RCAF REF | PART | DESCRIPTION | QTY |
|----------------------|--------|--------------------------|------|
| 15E/1680-21-806-7770 | GQ 818 | Buckle, quick adjustable | ea 4 |

RESCINDED

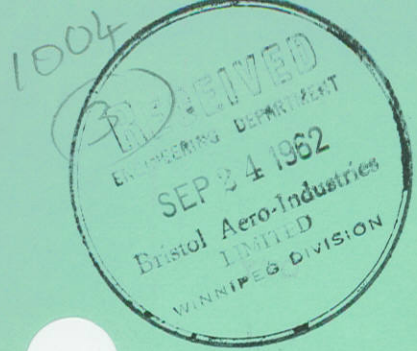
AUTH *Index 15 Jul 65*

WEIGHT, LOADING AND BALANCE DATA

5 NA

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

Prepared by:
AMC/SAMO/PA3



MODIFICATION

FRONT BELT BRACKET TENSILE TESTER

REF 15E/6635-21-803-2606

EQUIPMENT AFFECTED: Tensile Tester Safety Harness
BY WHOM WORK WILL BE PERFORMED: Operating Units
WHEN WORK WILL BE PERFORMED: On receipt of Replacement Part
RCAF FORM ENTRIES: Nil
MODIFICATION OF SPARES IN STOCK: All to be modified

PURPOSE

1 To replace front belt bracket mehanite casting with one manufactured from steel.

MODIFICATION DATA

2 The following is the sequence of operations:

- (a) Arrangements have been made with the company who supplied the RCAF with each 30 tensile testers to replace the original front belt bracket mehanite with one manufactured from steel.
- (b) The front belt bracket mehanite when subjected to certain tensions has been found to fail.
- (c) Units holding Ref. 15E/6635-21-803-2606 tensile tester are to demand immediately a replacement Ref. 15E/6635-21-806-0947 front belt bracket steel and remove the mehanite casting from service.
- (d) Mehanite brackets are to be reported for disposal.
- (e) Each 30 Ref. 15E/6635-21-806-0947 front belt brackets steel have been issued to 1 SD to replace the 30 originally procured.
- (f) Supply depots are to ensure any testers held in stock have the old mehanite bracket replaced with the steel one.

PARTS REQUIRED

3 The following part is required per tester:

| RCAF REF | PART | DESCRIPTION | QTY |
|----------------------|------|--------------------------|------|
| 15E/6635-21-806-0947 | | Front belt bracket steel | ea 1 |

RESCINDED
AUTO Index 15 Jul 65

PARTS RENDERED SURPLUS OR OBSOLETE

4 The following part is surplus and is to be reported to AMC for disposal:

| RCAF REF | PART | DESCRIPTION | QTY |
|----------|------|-----------------------------|------|
| | | Front belt bracket mehanite | ea 1 |

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

Prepared by:
AMC/SAMO/PA3



MODIFICATION

MA5 AND MA6 LAP BELT SAFETY HARNESS SEWING ADJACENT TO WEBBING ADAPTER

| | |
|----------------------------------|--|
| EQUIPMENT AFFECTED: | Lap belts safety harness Type MA5 and MA6 |
| BY WHOM WORK WILL BE PERFORMED: | Operating Units |
| WHEN WORK WILL BE PERFORMED: | To be completed two weeks after receipt of leaflet |
| RCAF FORM ENTRIES: | L14 |
| MODIFICATION OF SPARES IN STOCK: | All to be modified |

PURPOSE

1 To prevent the soft dacron webbing from sliding to one side or the other, where it is attached to the webbing adapters on the latch assembly.

MODIFICATION DATA

2 The following is the sequence of operations:

- (a) It has been reported that the soft green dacron webbing does not support the latching mechanism in the correct position. This condition is caused by the soft green dacron webbing sliding to the side of the webbing adapter, where it gathers, coils and twists the latching mechanism. The coiled webbing fails to give the protection of the wide belt and on ejection the automatic release may fail to function, when the latching mechanism is not supported as required.
- (b) To prevent the webbing from slipping all MA5 and MA6 lap belts incorporating the soft green dacron webbing are to be modified by adding a row of stitching as close as possible to the webbing adapters on the latch assembly, see Figure 1.
- (c) The sewing is to be done using Ref. 32B/388 linen cord #8 waxed, as follows:
 - (1) Use two needles one on each end of the linen cord.
 - (2) Start the stitching approximately 1/8 of an inch from one side. Pass the first needle down through both thicknesses of webbing and draw the #8 cord through approximately half its length. Ensure that sufficient cord is used to complete the sewing. Next, sewing 4 stitches to the inch, pass one needle up and one needle down through the same holes. Stitches are to be pulled tight to add a stiffening effect. Sew across the entire width of the lap belt.
 - (3) Finish off by passing each needle through one thickness of webbing so that the #8 cord ends, come out between the two layers of webbing. Tightly tie the ends with a square knot so that when cut the free ends are concealed between the layers of webbing.

RESCINDED

AUTH *Index 15 Jul 65*

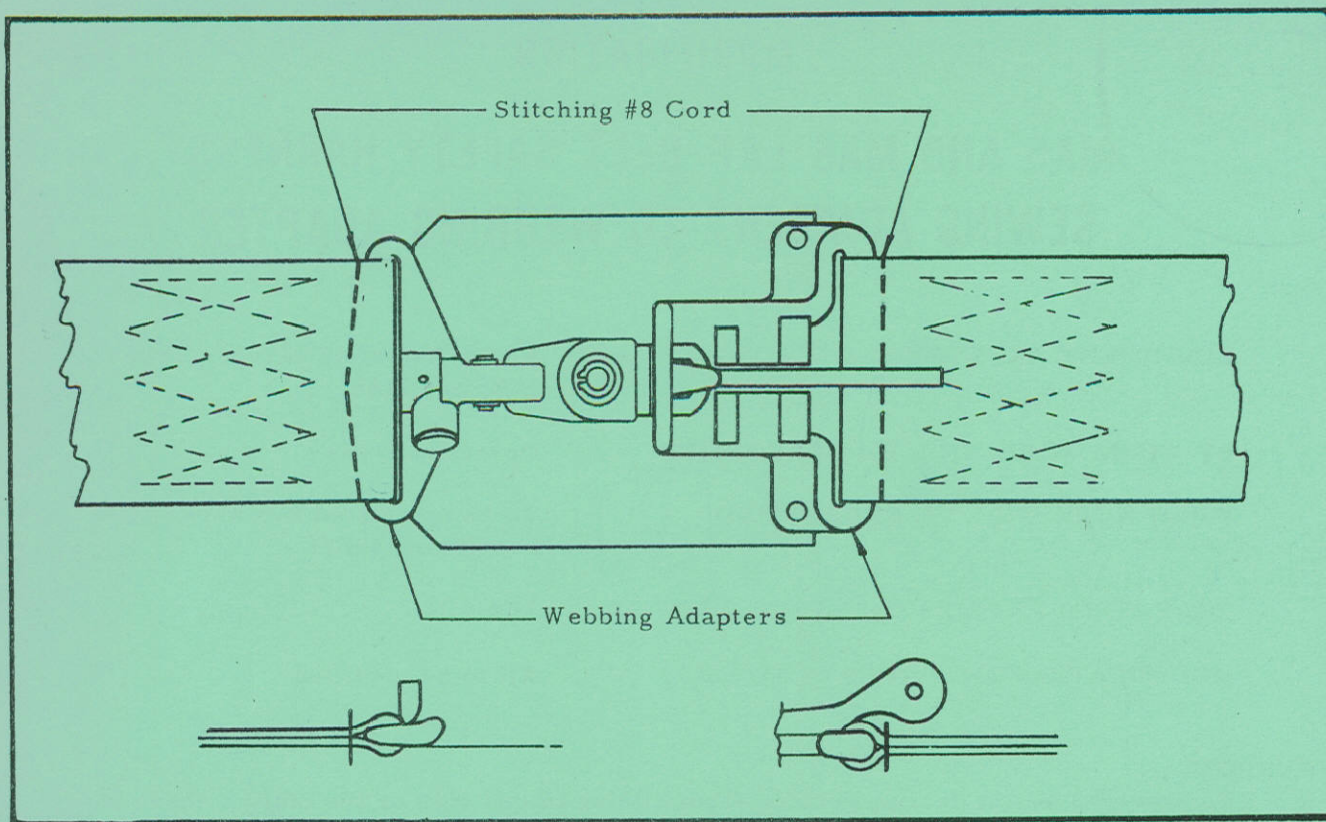


Figure 1

PARTS REQUIRED

3 The following part is required:

| RCAF REF. | PART | DESCRIPTION | QTY. |
|-----------|------|---------------|------|
| 32B/388 | | Cord linen #8 | AR |

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

Prepared by:
AMC/SAMO/PA3

DC

BRISTOL AIRCRAFT (WESTERN) LIMITED

R.C.A.F. MESSAGE

J. J. [unclear] 7302

FROM: 10TSD LINCOLN PARK

57-00-15

REF EO 55-45-6A/16

TO: 1001TSD VANCOUVER

ORIG. NO. T798

DATE 4 APR 62

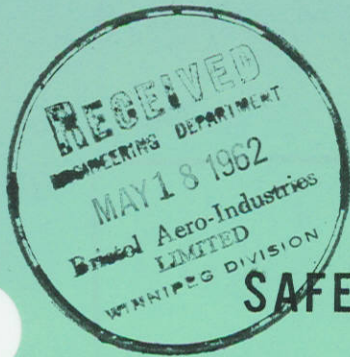
INFORMATION

AMC LOG 3251 2 APR ⁶² ADVISES QUOTE EO 55-45-6A/16 2 TEL ⁶² SAFETY HARNESS REF 15E46 T33
AIRCRAFT PD STRAP ASSEMBLY C FIG 2 CMM 3 INCH PORTION AT END OF STRAP TO BE FOLDED
OVER TO FORM TAB CMM FINISH LENGTH TO BE 21 INCHES PD STRAP D TO BE 24 INCHES FINISHED
LENGTH WITH NO TAB UNQUOTE

Burnand

SUPERSEDED

BY *EO-10 Apr 62*



MODIFICATION

SAFETY HARNESS REF 15E/46 - T33 AIRCRAFT

(This EO replaces EO 55-45-6A/16 dated 2 Feb 62)

EQUIPMENT AFFECTED: Ref. 15E/46 Safety Harness

BY WHOM WORK WILL BE PERFORMED: Operating Units and Repair Depots

WHEN WORK WILL BE PERFORMED: At or before next Periodic Inspection

RCAF FORM ENTRIES: L14

MODIFICATION OF SPARES IN STOCK: All to be modified

PURPOSE

1 To provide a safety harness with improved adjustment features.

MODIFICATION DATA

2 The following is the sequence of operations:

- (a) Remove safety harness Ref. 15E/46 from T33 aircraft.
- (b) Carefully remove all hardware.
- (c) Using new webbing Ref. 32B/8305-21-802-6312 webbing textile dacron Spec MIL-W-19078A reconstruct the harness as illustrated by Figures 1, 2 and 3. Existing hardware to be used. Ref. 15E/49 adjustment adapters are the only type acceptable for this harness.
- (d) Tensile test the harness in accordance with EO 55-45-2.
- (e) Re-install safety harness on aircraft.

RESCINDED

Index 15 Jul 65

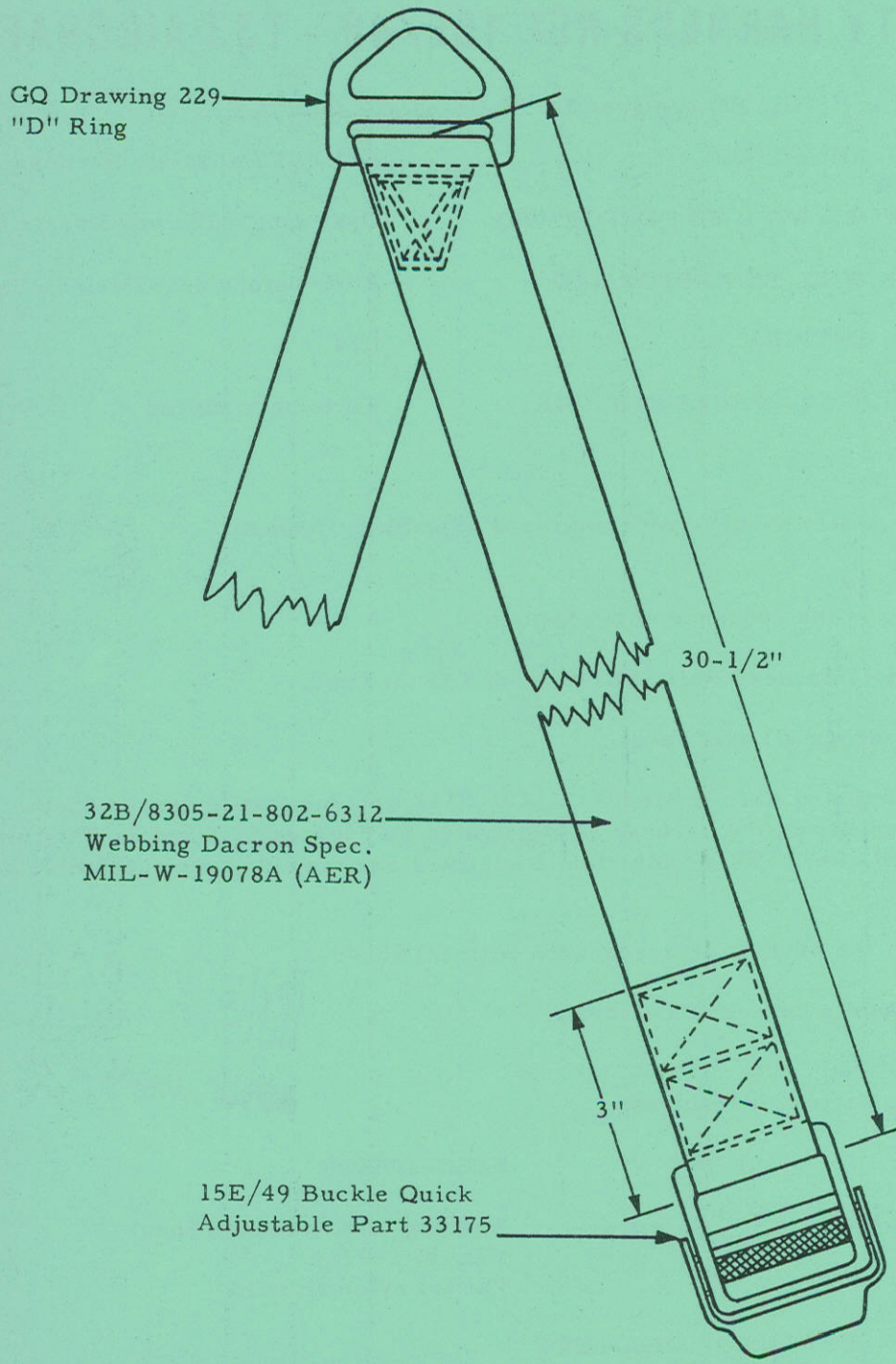
PARTS REQUIRED

3 The following parts are required:

| RCAF REF. | PART | DESCRIPTION | QTY. |
|----------------------|------|------------------------------|----------|
| 32B/8305-21-802-6312 | | Webbing textile dacron Spec. | |
| | | MIL-W-19078A | As req'd |
| 32B/449 | | Thread nylon #6 cord | As req'd |

PARTS RENDERED SURPLUS OR OBSOLETE

4 Old webbing to be utilized by safety equipment section for projects where tensile strength is not a governing factor.



Strap Assembly "A"

Figure 1

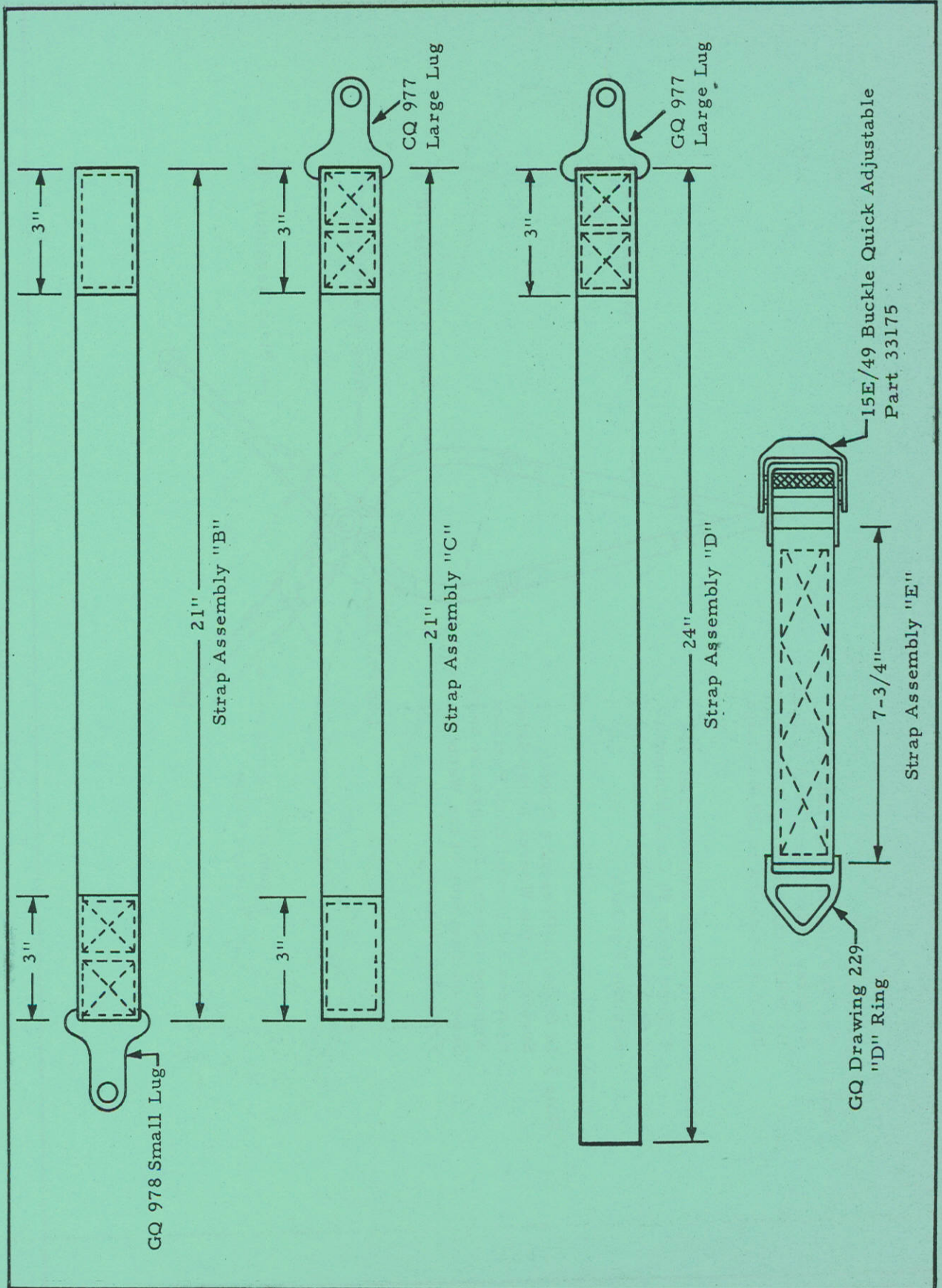


Figure 2 (Issue 1)

Note 1 The Stitching Holding Lap Pad To Strap Assemblies C and D Shall Be Within the Stitching Holding Strap Assemblies to QR Box Lugs

Note 2 Stitches Sewn with Ref. 32B/449 Thread Nylon #6 Cord Minimum 4 Stitches per Inch Maximum 5 Stitches Per Inch

Note 3 In Order to Present a Smooth Surface to the Wearer of the Safety Harness All Turned Back Portions of Webbing securing Fittings are to be Sewn on That Side of the Webbing Away From the Wearer

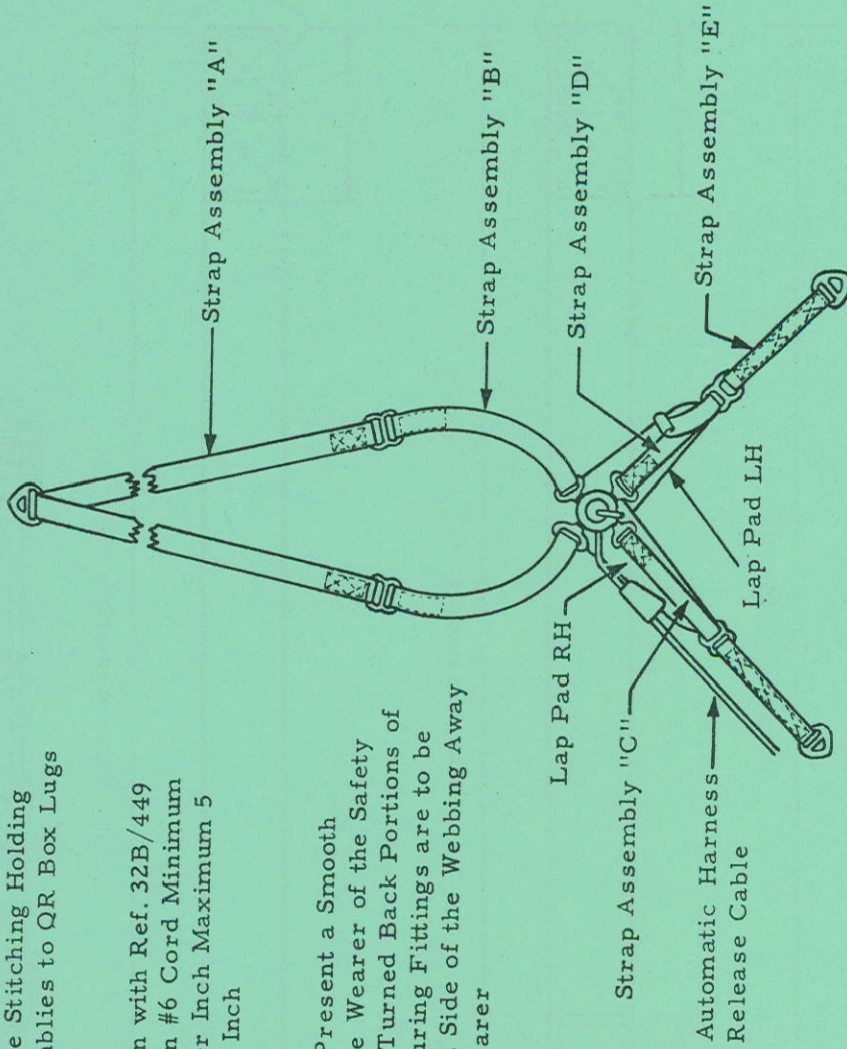


Figure 3

WEIGHT, LOADING AND BALANCE DATA

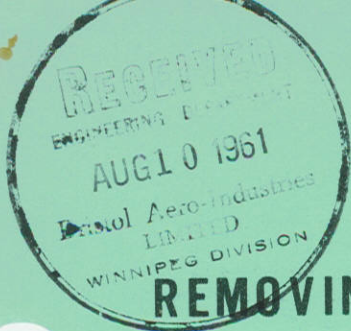
5 NA

ADDITIONAL DATA

6 To identify this harness the letter "M" in one inch size is to be stamped on the GQ label with india ink.

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

Prepared by:
AMC/SEGO/GP



MODIFICATION

REMOVING TYPE 100B BUCKLE (1 AIR DIV) AEROLEX FROM SABRE & T33 LAP BELT

(This EO cancels EO 55-45-6A/7, EO 55-45-6A/10 and AMC LOG 4217 dated 31 May 61)

EQUIPMENT AFFECTED: Lap Belts Sabre and T33 Aircraft

BY WHOM WORK WILL BE PERFORMED: Operating Units, RDs and Contractors

WHEN WORK WILL BE PERFORMED: On completion of modifications
EO 05-5E-6A/323, EO 05-50C-6A/380,
EO 55-20ACA-6A/20, EO 55-20AAA-6A/1

RCAF FORM ENTRIES: L14

MODIFICATION OF SPARES IN STOCK: All to be modified

PURPOSE

1 With the introduction of the low level escape systems modification attaching the arming wire to the console of the aircraft this buckle is no longer required.

MODIFICATION DATA

2 The following is the sequence of operation:-

(a) The Harley buckle type 100B and the Aerolex buckle (used in 1 Air Division) formerly used to attach arming wire of the parachute automatic release mechanism to the safety harness is to be removed on completion of modification EO 05-5E-6A/323, EO 05-50C-6A/380, EO 55-20ACA-6A/20 and EO 55-20AAA-6A/1.

PARTS REQUIRED

3 Nil.

PARTS RENDERED SURPLUS OR OBSOLETE

4 The following parts are rendered surplus or obsolete:-

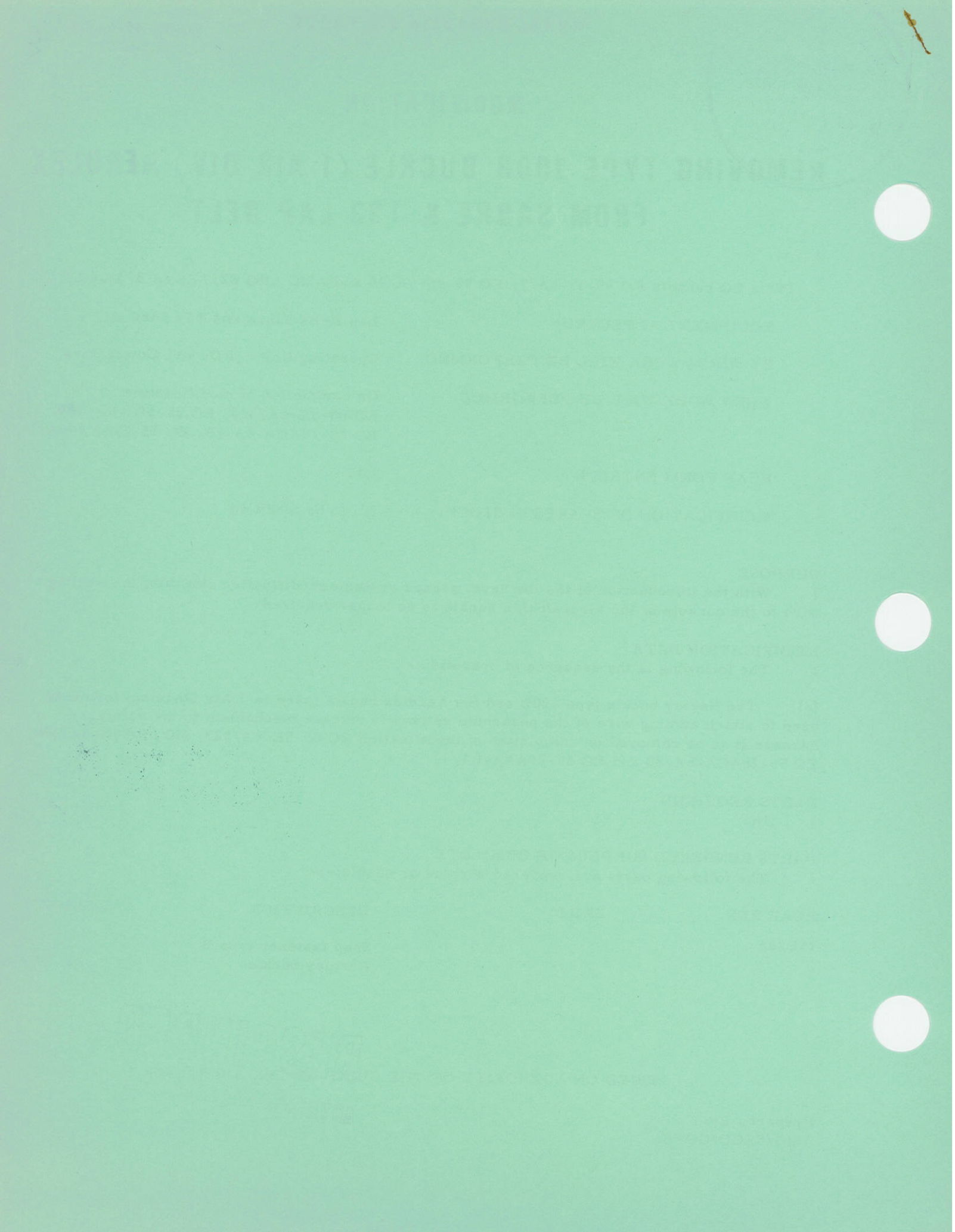
| RCAF REF. | PART | DESCRIPTION | QUANTITY |
|-----------|------|----------------------|----------|
| 15E/63 | | Snap fastener type B | 1 |
| | | Aerolex buckle | 1 |

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

RESCINDED

AUTH. *Order 15 Jul 65*

Prepared By:
AMC/SEGO/GPFS



MODIFICATION

SHOULDER HARNESS REF 15E/86

(This EO replaces EO 05-5E-6A/170 dated 18 Dec 56)

| | |
|----------------------------------|---------------------------------------|
| EQUIPMENT AFFECTED | Safety harness 15E/32 Sabre Aircraft |
| BY WHOM WORK WILL BE PERFORMED: | Operating Units, Contractors and RDs |
| WHEN WORK WILL BE PERFORMED: | At or before next Periodic Inspection |
| RCAF FORM ENTRIES: | L14 |
| MODIFICATION OF SPARES IN STOCK: | All to be modified |

PURPOSE

1 To decrease the overall length of the Ref. 15E/86 shoulder harness and eliminate present adjustment difficulties.

MODIFICATION DATA

2 The following is the sequence of operation:-

- (a) Remove shoulder harness Ref. 15E/86 from the aircraft.
- (b) Carefully cut stitching that retains turned over part of the adjustable straps and remove straps from adjustment adapters. Retain these straps for re-installing after modification of the unadjustable part is completed.
- (c) Carefully cut the stitching where the adjustment adapters are sewn to the shoulder harness and remove the adapters.
- (d) Lay the unadjustable part or "Y" section of the shoulder harness out flat.
- (e) Length of "Y" section from the slot in the inertia reel attachment lug GQ 1001 to the apex of the triangular stitching or yoke is to be 19" plus or minus 1/4". If dimension is not correct within the tolerances carefully remove stitching and re sew in the same pattern to the dimensions outlined above, see Figure 1.
- (f) After dimension as per para. (e) has been arrived at measure a distance of 18" from the apex of the triangular sewing on both forks of the "Y" section. Cut the webbing at this distance. This will allow sufficient webbing to attach to the adjustment adapter and have a three inch sewing pattern, plus the required distance from the adapter to the yoke.
- (g) Pass the ends of the webbing cut as above through the adjustment adapter slots. Before sewing measure from the apex of the triangular sewing to the slot of the adjustment adapter. This distance must be 14" plus or minus 1/4". Any excess webbing not required to complete a three inch sewing pattern may be trimmed off. Sew webbing to adjustment adapter as per Figure 2.

SUPERSEDED

BY 21 Oct 60

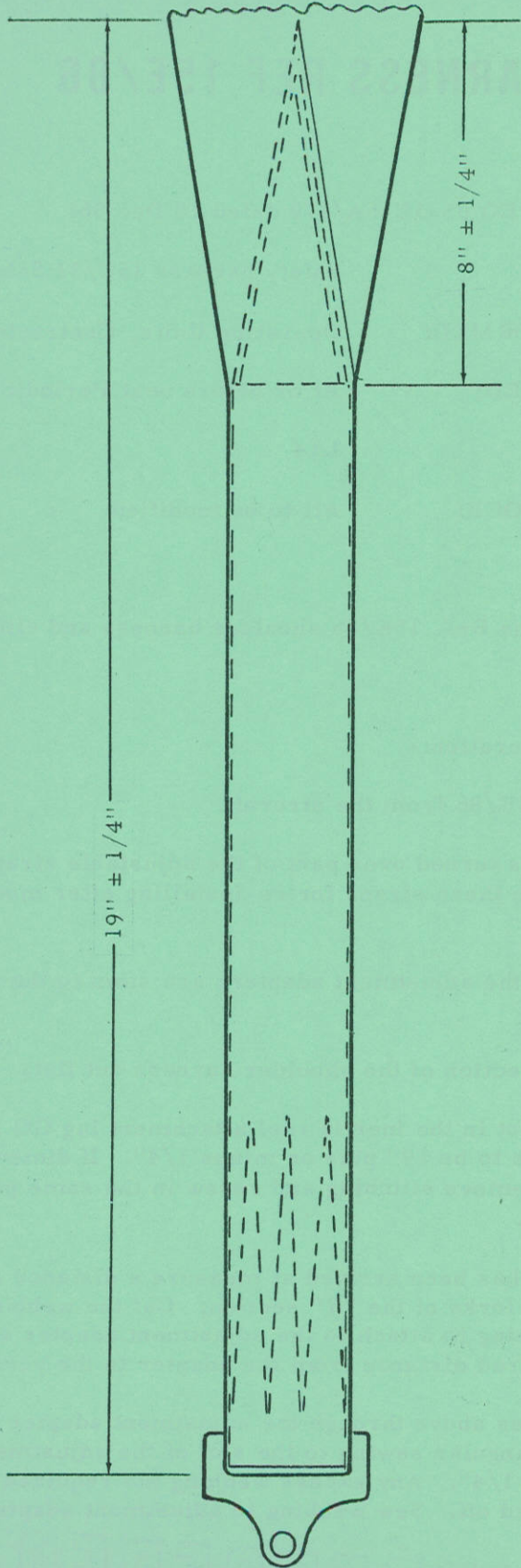


Figure 1

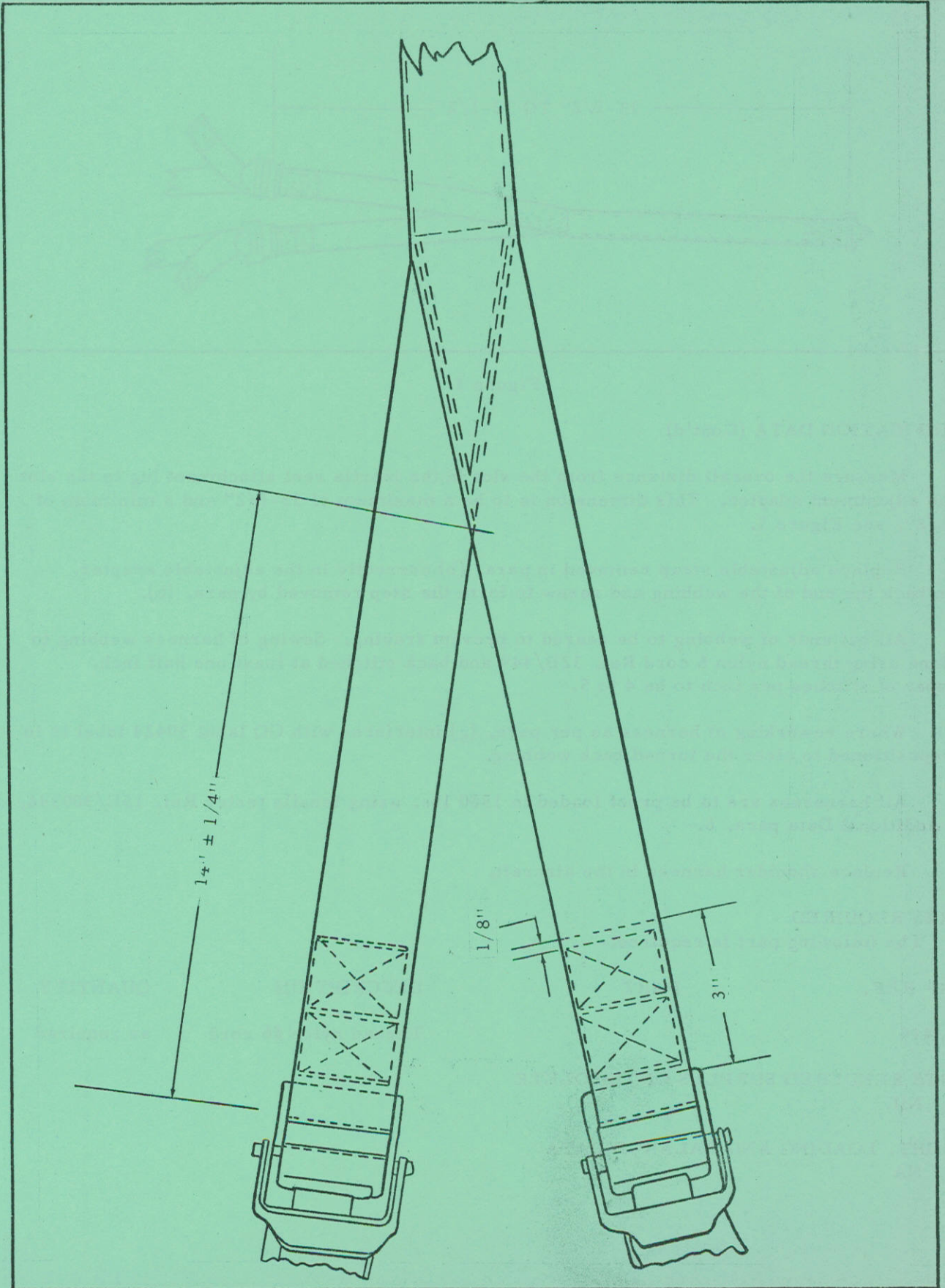


Figure 2

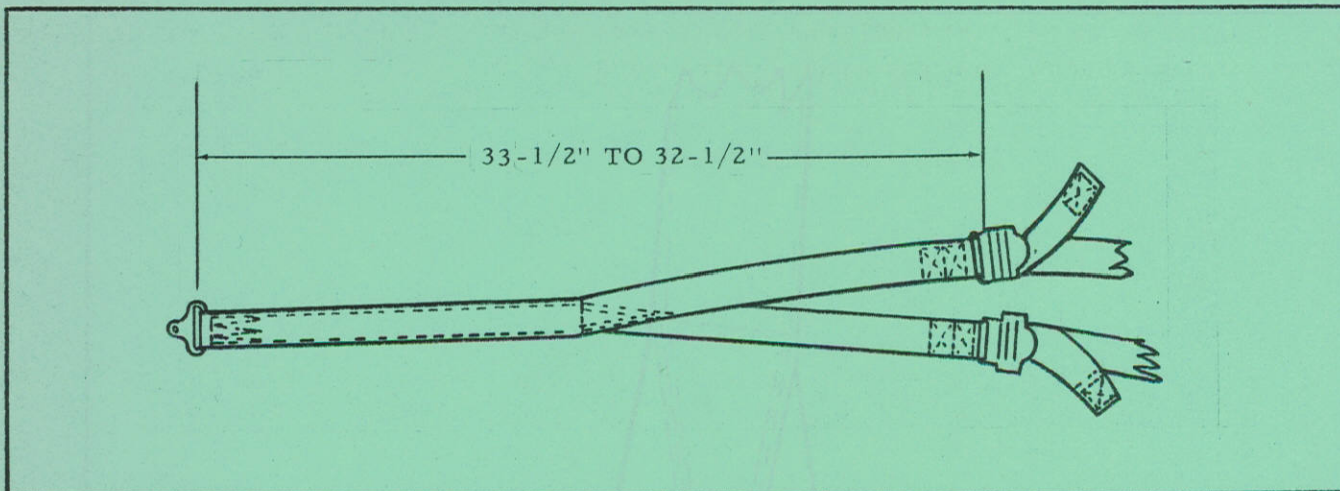


Figure 3

MODIFICATION DATA (Cont'd)

(h) Measure the overall distance from the slot in the inertia reel attachment lug to the slot in the adjustment adapter. This dimension is to be a maximum of 33-1/2" and a minimum of 32-1/2", see Figure 3.

(j) Replace adjustable strap removed in para. (b) correctly in the adjustable adapter. Turn back the end of the webbing and resew to form the step removed by para. (b).

(k) All cut ends of webbing to be seared to prevent fraying. Sewing of harness webbing to be done using thread nylon 6 cord Ref. 32B/449 and back stitched at least one half inch. Number of stitches per inch to be 4 to 5.

(m) Where reworking of harness as per para. (g) interferes with GQ label 30424 label is to be repositioned to clear the turned back webbing.

(n) All harnesses are to be proof loaded to 1500 lbs. using tensile tester Ref. 15E/300344, see Additional Data para. 6.

(p) Replace shoulder harness in the aircraft.

PARTS REQUIRED

3 The following part is required:-

| RCAF REF. | PART | DESCRIPTION | QUANTITY |
|-----------|------|----------------------|-------------|
| 32B/449 | | Thread nylon #6 cord | as required |

PARTS RENDERED SURPLUS OR OBSOLETE

4 Nil.

WEIGHT, LOADING AND BALANCE DATA

5 NA

ADDITIONAL DATA

6 Tensile tester Ref. 15E/300344 has been scaled in CAP 670, Part 10 and will be included in the next amendment. Automatic issue controlled by AMCHQ.

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

Prepared By:-
AMC/SEGO/GP

MODIFICATION
SHORTENING 15E/4 & 15E/26
TYPE SAFETY HARNESS

EQUIPMENT AFFECTED: B14 and B18 Type Safety Harness
 BY WHOM WORK WILL BE PERFORMED: Operating Units
 WHEN WORK WILL BE PERFORMED: At or before next Inspection
 RCAF FORM ENTRIES: Aircraft L14
 MODIFICATION OF SPARES IN STOCK: To be modified only if required

PURPOSE

1 To shorten B14 and B18 safety harness lap strap type when required.

MODIFICATION DATA

2 Instances have occurred where the 15E/4 B14 type and the 15E/26 B18 type safety harness have been found to have the anchor ends of the webbing too long to allow tightening on average size aircrew. Where this unsatisfactory condition exists, the following action is to be taken:-

- (a) Carefully cut the stitching where the webbing joins the self-locking adjustment adapter and the anchor fitting, see Figure 1.
- (b) Remove the webbing and shorten sufficiently to decrease the distance between the above fittings to four and one quarter inches.
- (c) Resew webbing as per Figure 1 using thread, nylon, khaki, heavy #6 cord Ref. 32B/449.

PARTS REQUIRED

3 The following part is required.

| RCAF REF | PART | DESCRIPTION | QUANTITY |
|----------|------|-------------------------------------|-------------|
| 32B/449 | | Thread, nylon, khaki, heavy #6 cord | As required |

SUPERSEDED
 BY 7 Nov 58

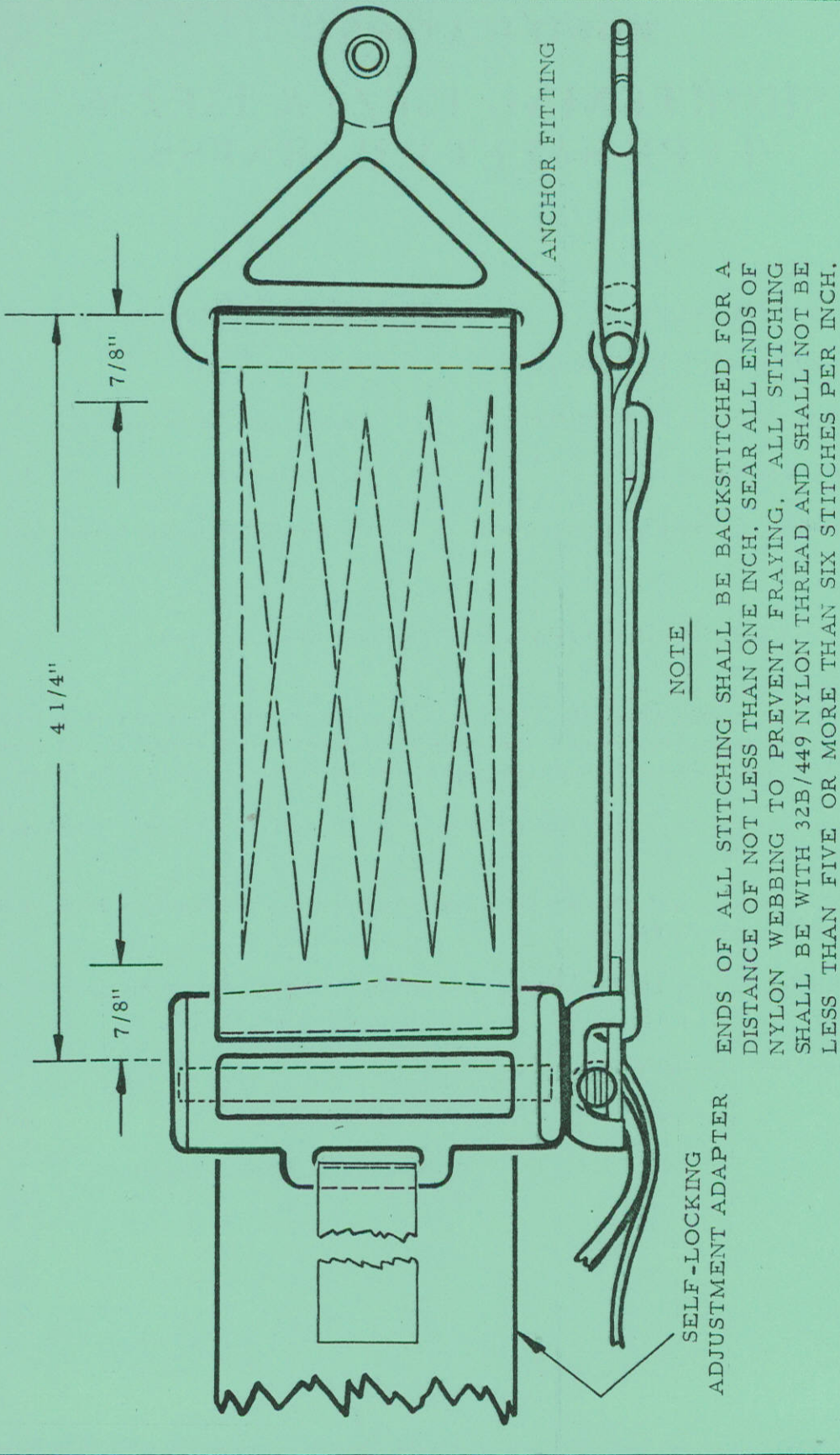
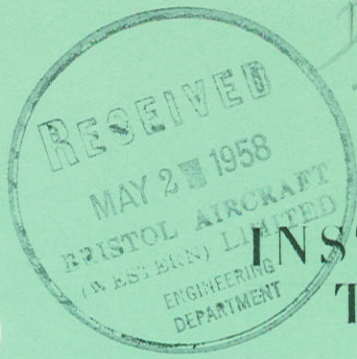


Figure 1



MODIFICATION

INSTALLING PLATES TO SECURE
TYPE 100B SNAP FASTENER
TO SAFETY HARNESS

EQUIPMENT AFFECTED: Safety Harness
Sabre and T33 Aircraft

BY WHOM WORK WILL BE PERFORMED: Operating Units and Contractors

WHEN WORK WILL BE PERFORMED: At next Periodic Inspection

RCAF ENTRIES: L14

MODIFICATION OF SPARES IN STOCK: To be modified before installing on aircraft

PURPOSE

1 To prevent harley buckle from working loose and bolt pulling grommet out of safety harness.

MODIFICATION DATA

2 The following is the sequence of operations:-

- (a) Before removing safety harness from aircraft plates as per Figure 1 are to be manufactured by station workshops. Two plates for each safety harness are required.
- (b) Remove left hand lap strap of safety harness from the aircraft.
- (c) If modification, EO 55-45-6A/7, has been incorporated, dismantle snap fastener from belt and retain all parts except one of the washers AN/960/6 as only one will be required when assembling. If modification, EO 55-45-6A/7, has not been completed, then this modification must be carried out in conjunction with it.
- (d) The brass grommet closest to left hand lap strap lug is to be carefully removed. Plates manufactured as per Figure 1 are to be riveted in position on lap belt as per Figure 3. Copper or aluminum rivets 1/16" in diameter are to be used for this. Slightly larger rivets may be used depending on availability of stocks, however round head style only is to be used. Care must be taken that 5/32" holes in plates line up with hole where grommet was removed. When riveting plates, a snug fit to safety harness must be obtained and any excess length of rivet is to be cut off before peening so that only enough to securely hold plated together is left for peening.
- (e) Attach snap fastener to lap belt in sequence as illustrated by Figure 2.
- (f) Method of further securing snap fastener in position as outlined in EO 55-45-6A/7, para. (e), page 5, and Figure 5, page 4, is to be changed as follows:-

SUPERSEDED
BY... EO 55-45-6A/15

NOTE:

- (1) TO BE MANUFACTURED FROM 30B/523 SHEET ALUMINUM ALLOY .032" THICKNESS.
- (2) ALL CORNERS AND EDGES ARE TO BE ROUNDED.
- (3) RIVET HOLES ARE TO ACCOMMODATE 1/16" DIA. RIVETS. SLIGHTLY LARGER HOLES AND RIVETS MAY BE USED DEPENDING ON AVAILABLE STOCK. RIVETS TO BE COPPER OR ALUMINUM ALLOY, ROUND HEAD.

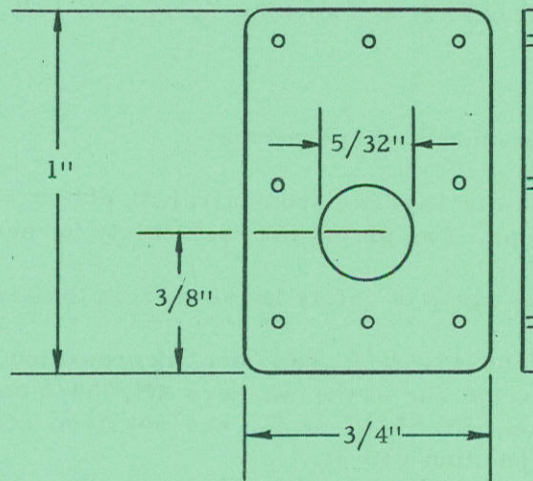


Figure 1

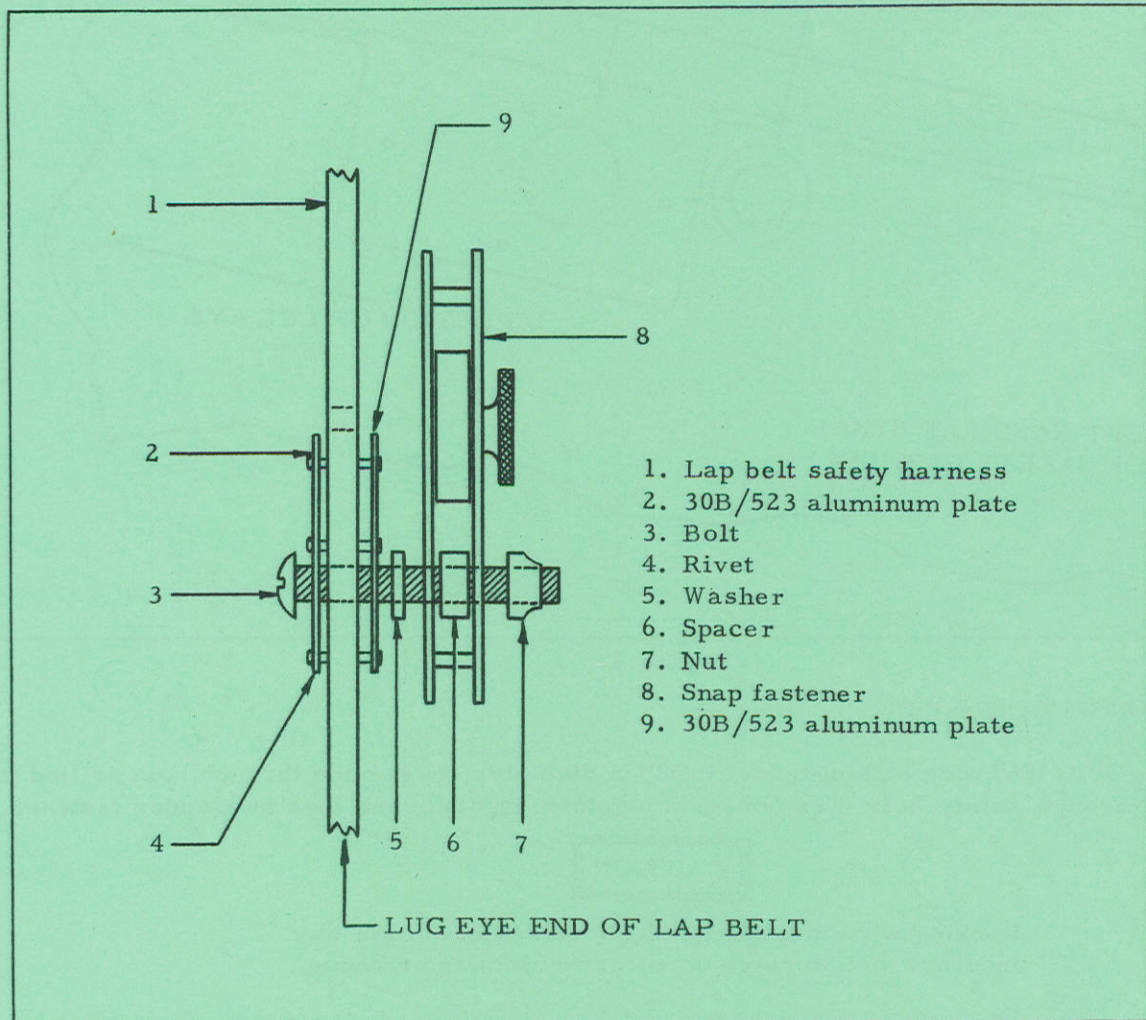


Figure 2

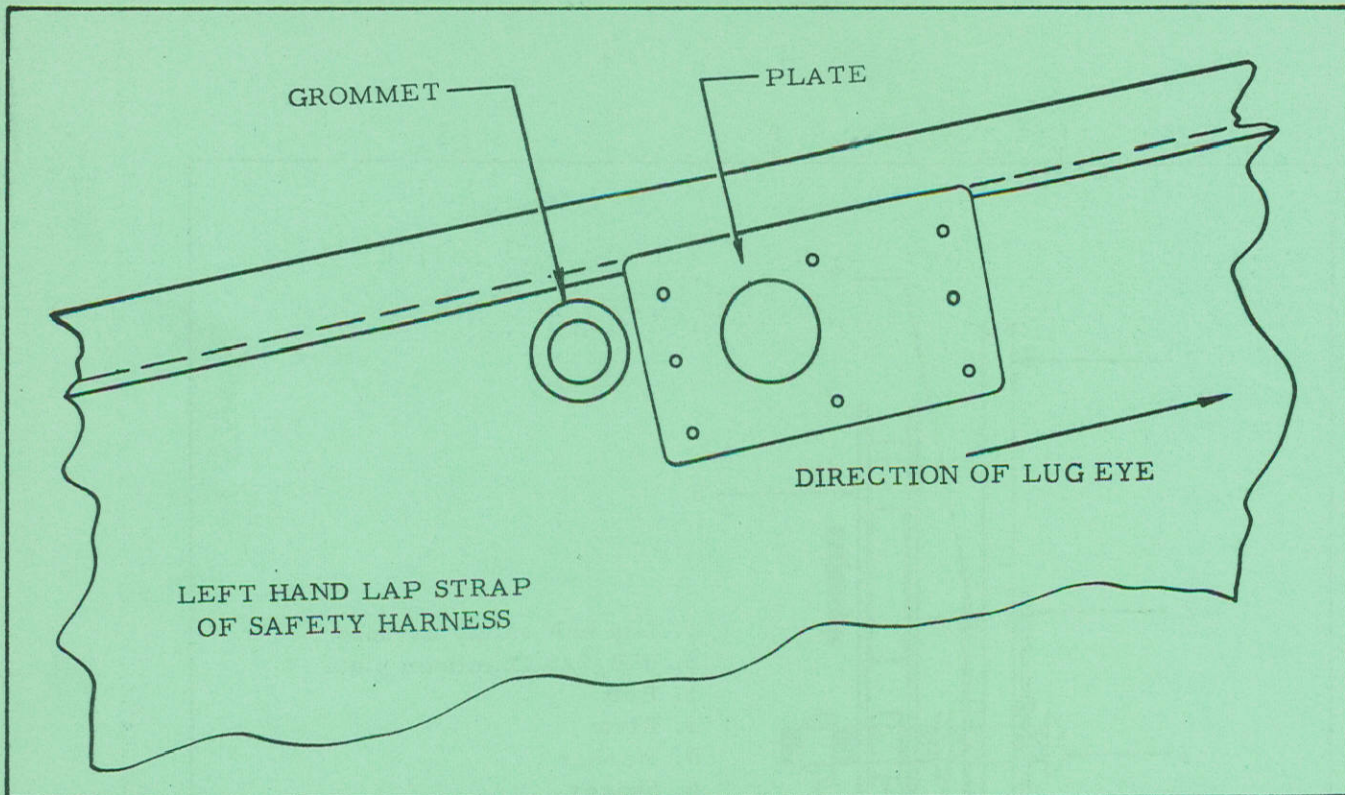


Figure 3

MODIFICATION DATA (Cont'd)

- (1) Using 30B/1861 wire locking monel 0.32" in diameter, pass once through hole drilled in fastener and through safety belt. Tension ends together securely and then tuck under fastener.



Locking wire must be securely tucked out of the way in order not to catch on aircrew clothing or hands.

- (g) Re-install lap belt in the aircraft.

PARTS REQUIRED

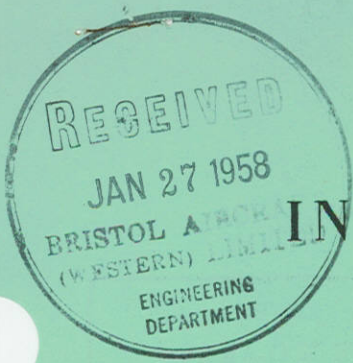
3 The following parts are required:-

| RCAF REF. | PART | DESCRIPTION | QUANTITY |
|-----------|------|--------------------------|----------|
| 30B/523 | | Sheet aluminum alloy | As req'd |
| 30B/1861 | | Wire locking monel 0.32" | As req'd |

PARTS RENDERED SURPLUS OR ABSOLUTE

4 The following part is rendered surplus:-

| RCAF REF. | PART | DESCRIPTION | QUANTITY |
|-----------|------|-------------|----------|
| AN/960/6 | | Washer | ea. 1 |



MODIFICATION
INSTALLING NEW BARREL AND
BREECH BLOCK ASSEMBLY
ON SAFETY HARNESS
AUTO RELEASE MECHANISM

EQUIPMENT AFFECTED: Auto Release Mechanism Safety Harness on Sabre and T33 Aircraft

BY WHOM WORK WILL BE PERFORMED: Operating Units

WHEN WORK WILL BE PERFORMED: First removal of seat or after inadvertent firing but not later than next #2 check

RCAF FORM ENTRIES: E133 Log Book

MODIFICATION OF SPARES IN STOCK: Immediately on receipt of Barrel and Breech Block Assembly

PURPOSE

1 Replacing present barrel and breech block with modified type and installing new inner piston on operating cable.

MODIFICATION DATA

2 The following is the sequence of operations:

- (a) Remove new inner piston from barrel and breech block assembly Ref. 15A/363 and lay aside for installation on operating cable.
- (b) Remove automatic release mechanism from seat.
- (c) Dismantle auto release mechanism removing present barrel and breech block.

NOTE

For dismantling and assembling sequence see EO 55-45-2, Part 33, Section 3.

- (d) Using 3/16" drill enlarge hole as shown in Figure 1. Hole is to be countersunk to fit the chamfer of 1/4" 2BA screw head. Head must fit flush to surface of base plate when tightened.

NOTE

Above drilling is to be carried out by station workshops.

SUPERSEDED

BY EO 55-456-6A/3
24 Jan 58

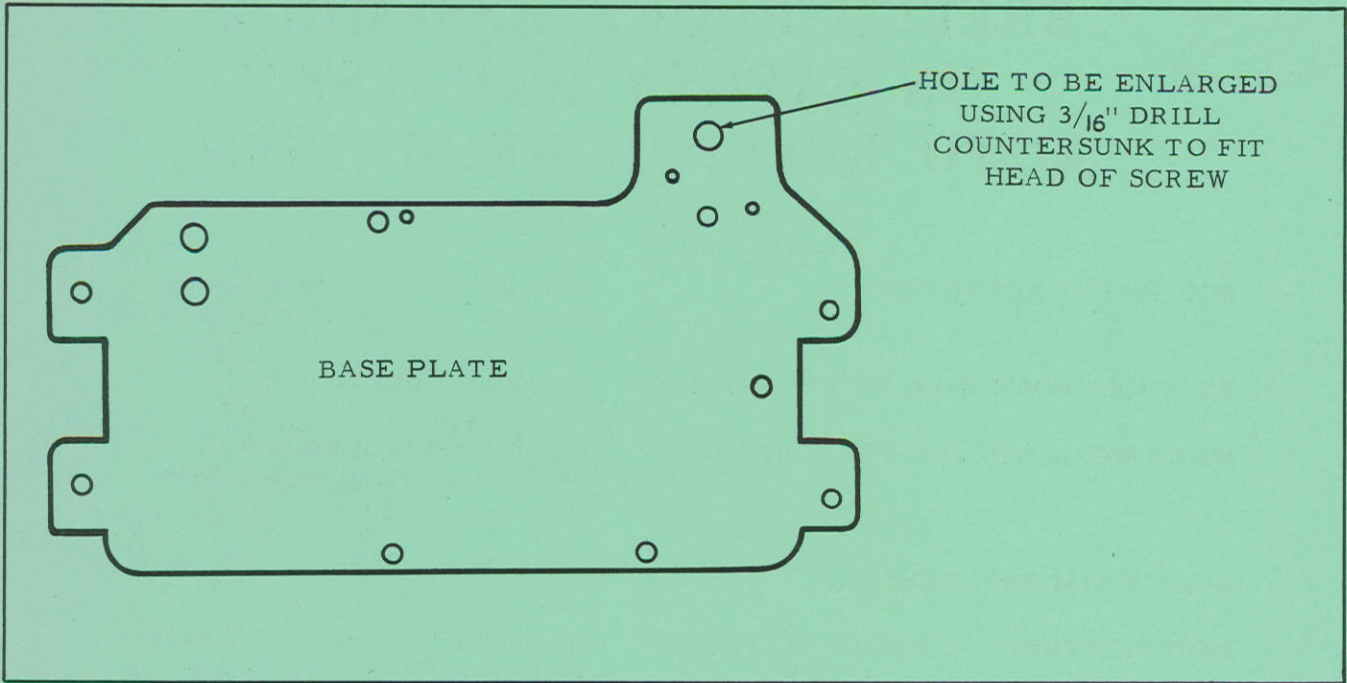


Figure 1

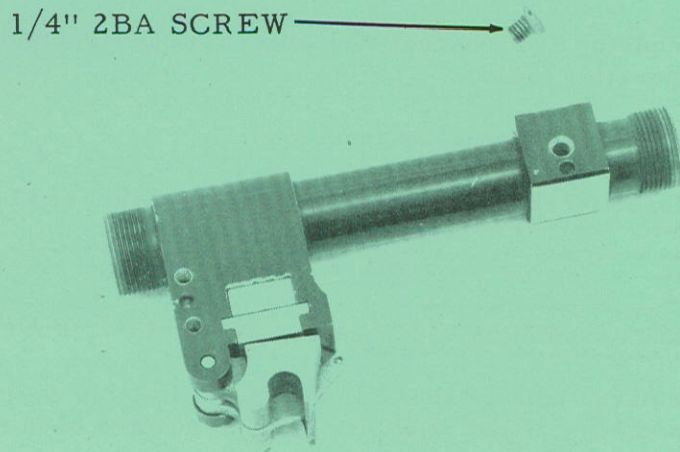


Figure 2

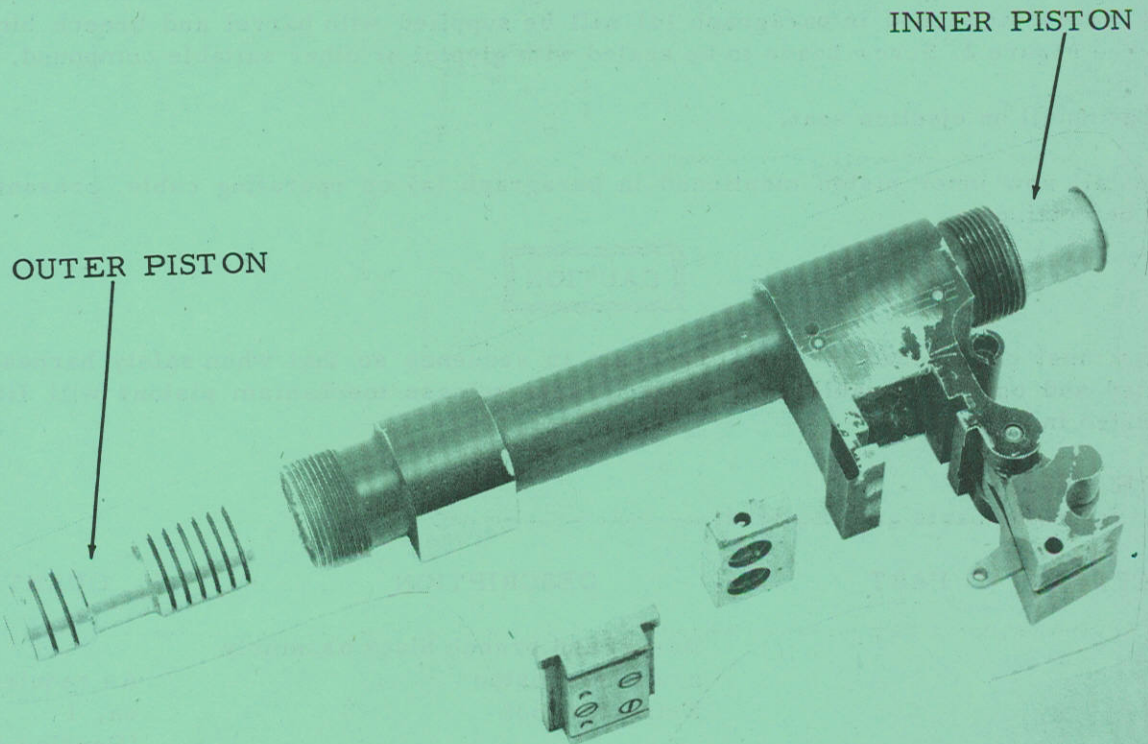


Figure 3

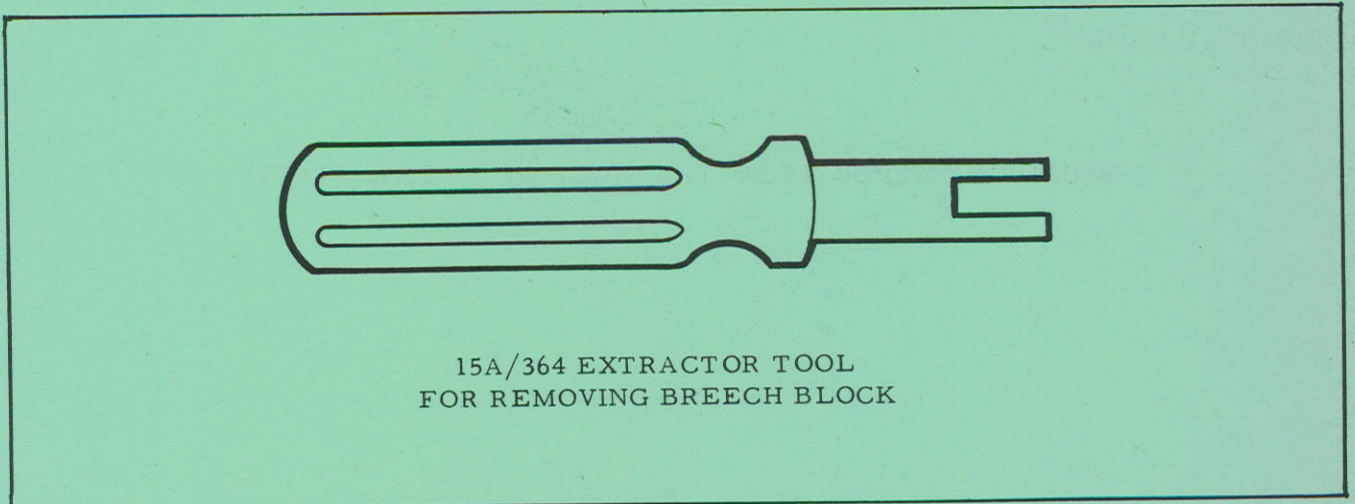


Figure 4

MODIFICATION DATA (Cont'd)

- (e) Re-assemble auto release mechanism using new barrel and breech block. One-quarter inch 2BA screw mentioned in paragraph (d) will be supplied with barrel and breech block assembly, see Figure 2. Screw heads to be sealed with glyptol or other suitable compound.
- (f) Re-install on ejection seat.
- (g) Install new inner piston mentioned in paragraph (a) on operating cable, present outer piston to be retained.



Pistons must be attached to operating cable in sequence so that when safety harness is installed and operating cable assembled to auto release mechanism pistons will fit as illustrated in Figure 3.

PARTS REQUIRED

3 The following parts are required:

| RCAF REF. | PART | DESCRIPTION | QUANTITY |
|-----------|------|--|--|
| 15A/363 | | Barrel and breech block assembly c/w inner piston | As required |
| 15A/364 | | Extractor tool | ea. 1 (Pending scaling in CAP 670) |

4 Barrel and breech block assembly c/w inner piston, (report to AMC for disposal instructions).

WEIGHT, LOADING AND BALANCE DATA

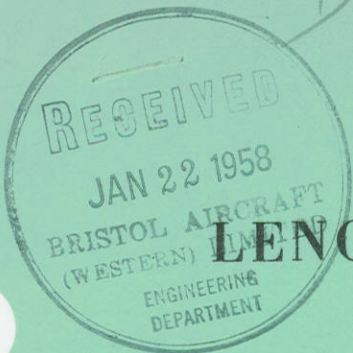
5 NA.

ADDITIONAL DATA

6 NA.

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

Prepared By:
AMC/SEGO/Mis E



MODIFICATION

LENGTHENING PASSENGER SAFETY
HARNES C119 AIRCRAFT

| | |
|----------------------------------|---|
| EQUIPMENT AFFECTED: | Passenger Safety Harness C119 Aircraft |
| BY WHOM WORK WILL BE PERFORMED: | Operating Units |
| WHEN WORK WILL BE PERFORMED: | As soon as possible after receipt of material |
| RCAF FORM ENTRIES: | Nil |
| MODIFICATION OF SPARES IN STOCK: | Before installing on C119 Aircraft |

PURPOSE

1 To make present safety harness large enough to fit MSF parachutists equipped with winter clothing.

MODIFICATION DATA

2 The following is the sequence of operations:

- (a) Remove passenger safety harness from aircraft.
- (b) Cut thread and open up end stop so that webbing may be separated from self-locking adjustment buckles.
- (c) Retain left and right hand portion of lap belt comprising aircraft attachment snap, self-locking adjustment buckle, and connecting webbing in its original state, see Figure 1.
- (d) Remove lever type locking buckle and lever type locking buckle attachment lug from webbing removed in paragraph (b). Discard webbing.
- (e) Using 32B/19 webbing cotton 3" wide and thread nylon 32B/449 make up new belts as illustrated in Figures 2 and 3.

NOTE

Webbing must be inserted in self-locking buckle before end is sewn to form stop.

- (f) Re-install in aircraft.

SUPERSEDED
BY *8 Mar 60*

PARTS REQUIRED

3 The following materials are required:

| RCAF REF. | PART | DESCRIPTION | QUANTITY |
|-----------|------|---------------------------------|-----------|
| 32B/19 | | Webbing cotton 3" wide | As Req'd. |
| 32B/449 | | Thread nylon khaki heavy 6 cord | As Req'd. |

PARTS RENDERED SURPLUS OR OBSOLETE

4 The following material is rendered surplus:

| RCAF REF. | PART | DESCRIPTION | QUANTITY |
|-----------|------|---|----------|
| | | Webbing cotton 3" wide 24" lengths (Return to unit SE Section) | |

WEIGHT, LOADING AND BALANCE DATA

5 NA.

ADDITIONAL DATA

6 NA.

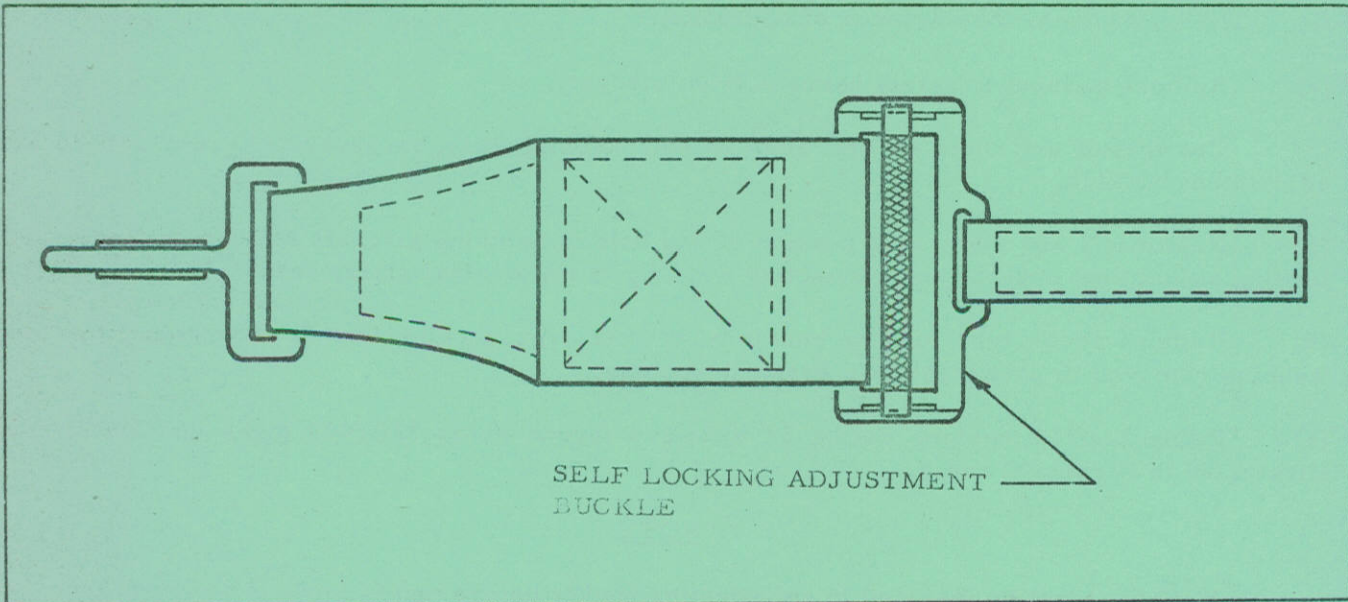


Figure 1

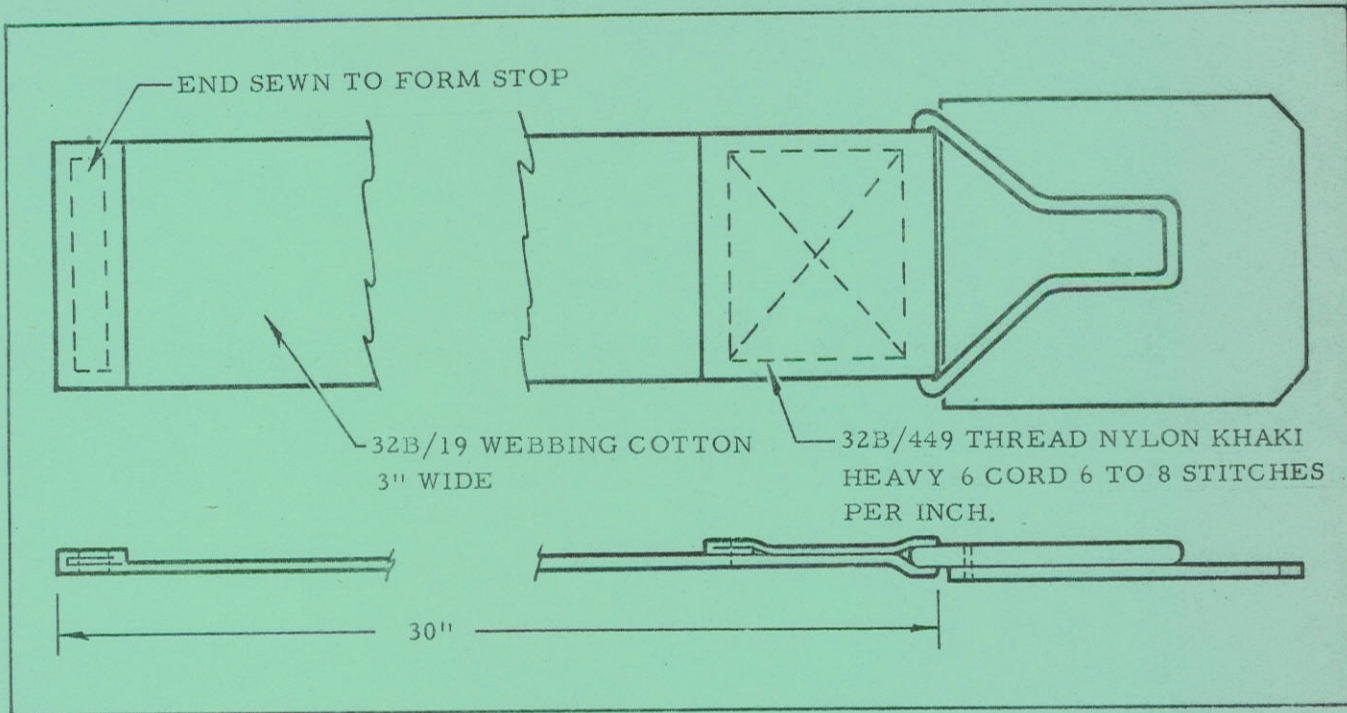


Figure 2

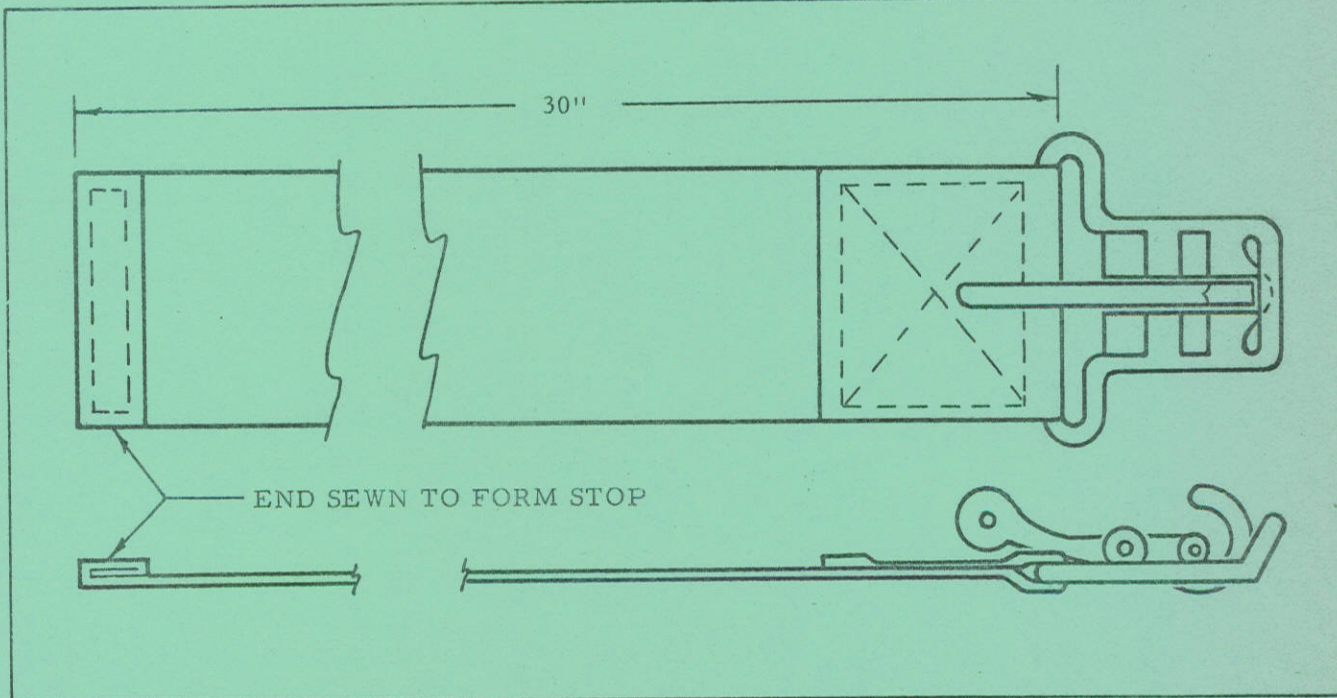
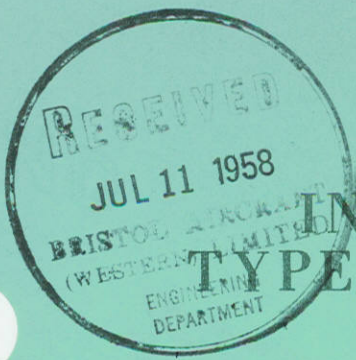


Figure 3

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

Prepared By:
AMC/SEGO/Mis E



MODIFICATION

INSTALLING SNAP FASTENER
TYPE 100B ON GQ SAFETY HARNESS
FOR SABRE AND T33

(This EO replaces EO 55-45-6A/7 dated 22 Jan 58)

- EQUIPMENT AFFECTED: ZB safety harness Sabre and T33 aircraft
- BY WHOM WORK WILL BE PERFORMED: Operating units
- WHEN WORK WILL BE PERFORMED: On Sabre Aircraft as soon as possible
On T33 Aircraft immediately MRP have installed automatic system
- RCAF FORM ENTRIES: Airframe log book
- MODIFICATION OF SPARES IN STOCK: Before installing on T33 or Sabre aircraft

PURPOSE

1 To provide a positive locking buckle for attachment of parachute auto release arming wire to safety harness.

MODIFICATION DATA

2 The following is the sequence of operations:

- (a) Remove present snap hook from harness and discard hook, screw, washer and nut.
- (b) Drill a hole through the underside of the new snap fastener using a 3/32" drill as shown in Figure 1. This hole will be used after fastener is attached to safety belt to further secure fastener in position.

NOTE

Hole is to be through underside only.

(c) Attach snap fastener 15E/63 to LH lap strap in sequence outlined in Figure 2. The brass grommet closest to LH lap strap lug is to be used for this connection.

NOTE

Spacer is to be manufactured locally from 1/4" dural tubing as per Figure 3.

(d) Care must be taken that the snap fastener is positioned as indicated by Figure 4 when nut is securely tightened.

SUPERSEDED
BY EO 55-45-6A/15

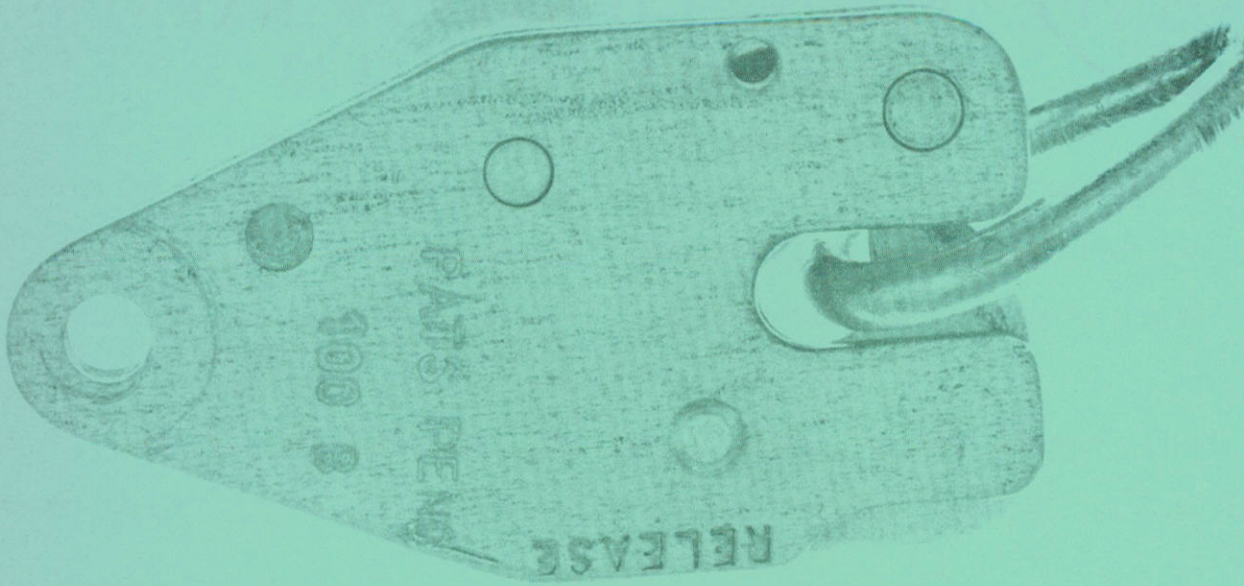
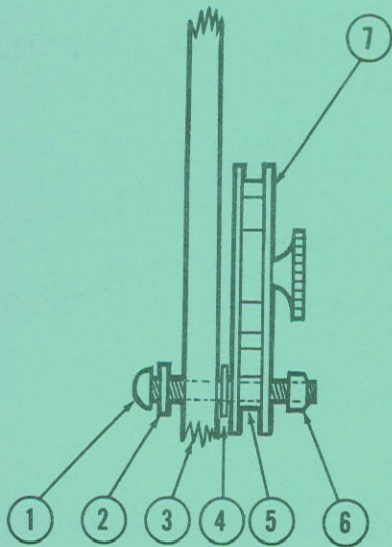


Figure 1



- 1 Screw
- 2 Washer
- 3 Lap Belt Safety Harness
- 4 Washer
- 5 Spacer
- 6 Nut
- 7 Snap Fastener Type 100B

Figure 2

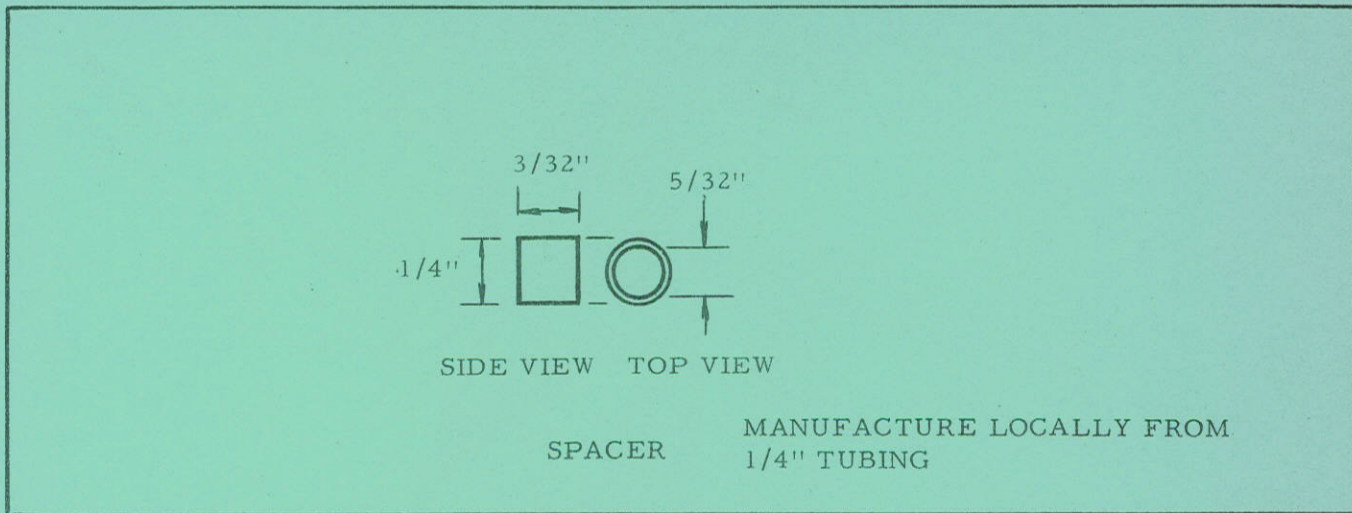


Figure 3

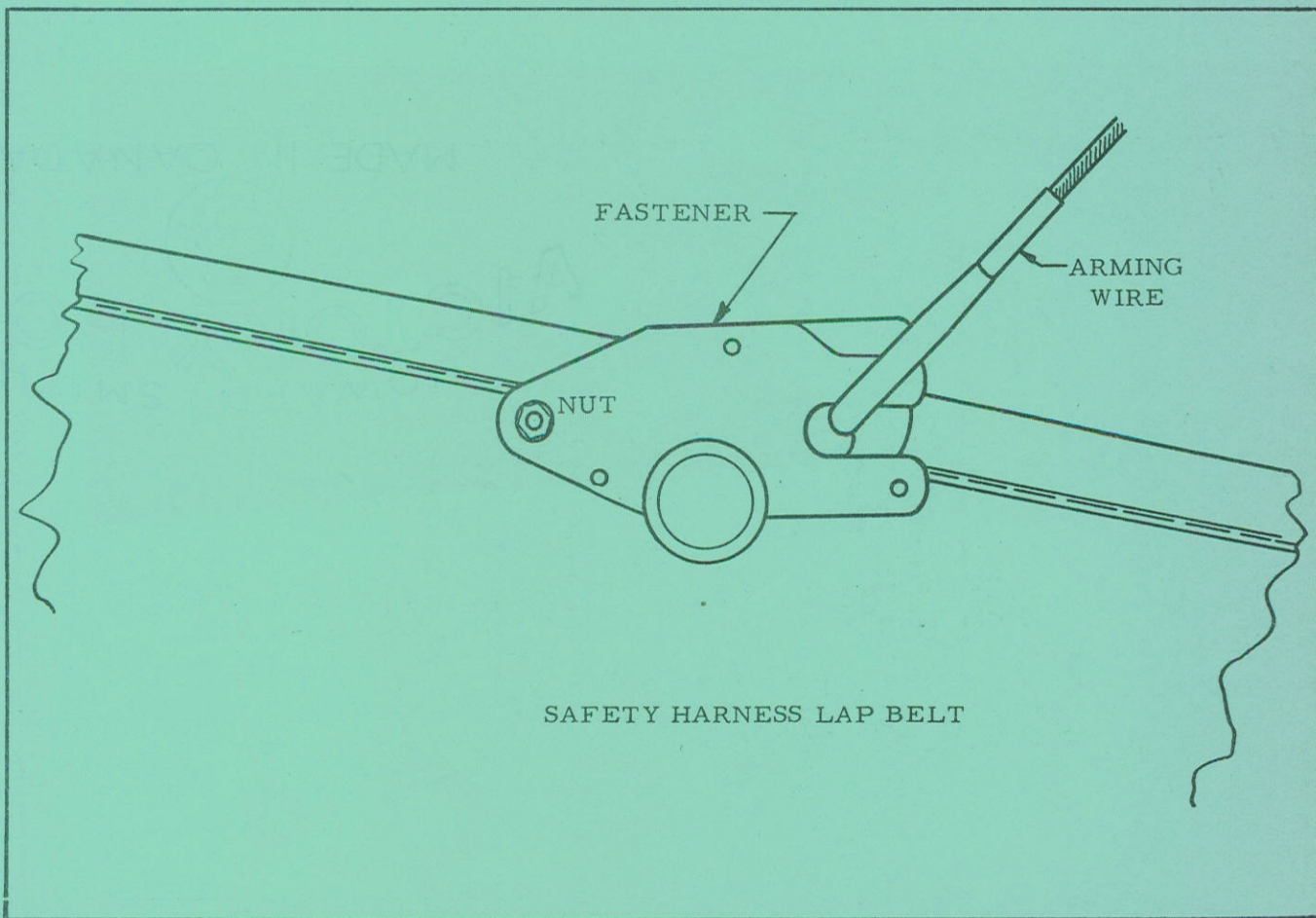


Figure 4 (Issue 1)

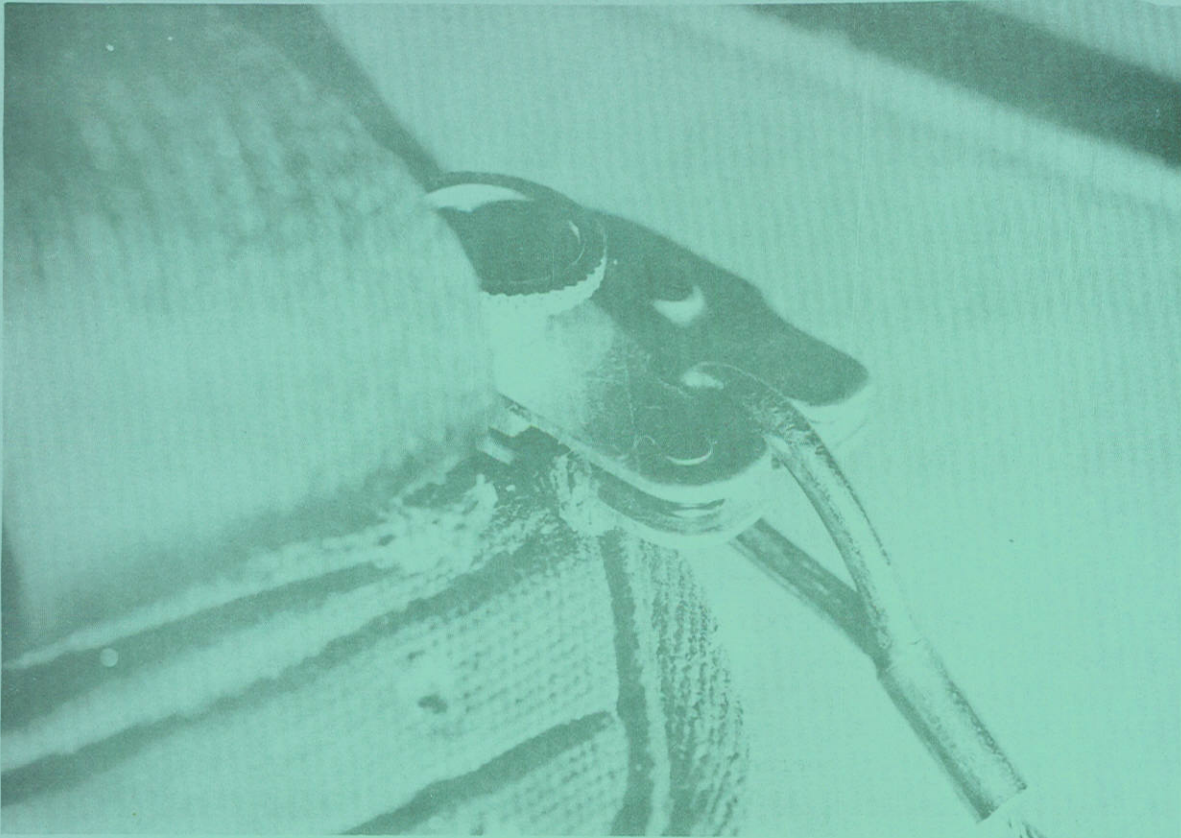
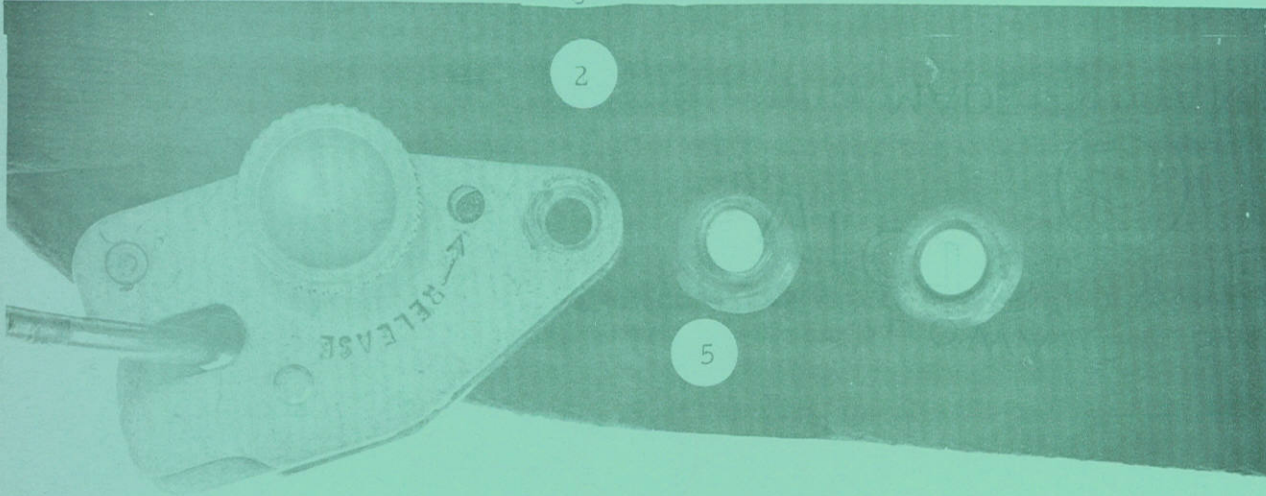


Figure 5



- 1 Screw
- 2 Fastener - Type 100B
- 3 Spacer
- 4 Washer
- 5 Grommet
- 6 Washer
- 7 Nut

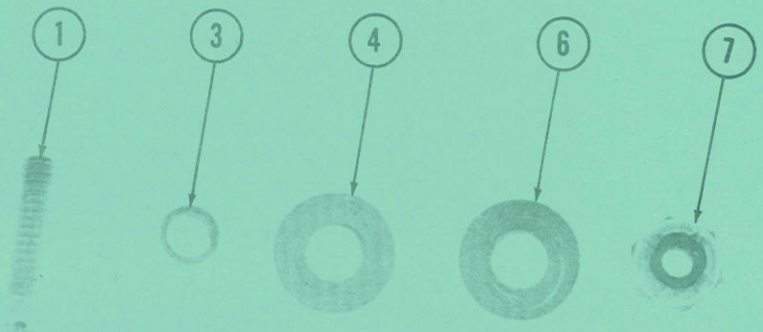


Figure 6

MODIFICATION DATA (Cont'd)

(e) Using 30B/1861 wire locking monel 0.32" in diameter, pass once through hole drilled in fastener, para. 2 (b), and through safety belt. Tension ends together securely and then tuck under fastener. Locking wire must be tucked out of the way in order not to catch on aircrew clothing or hands.

PARTS REQUIRED

3 The following parts are required:

| RCAF REF. | PART | DESCRIPTION | QUANTITY |
|-----------|-------------|---|----------|
| 15E/63 | | Snap fastener type 100B | as req'd |
| 28 | AN/515/6R10 | Screw | as req'd |
| 28 | AN/365/632A | Nut | as req'd |
| 28 | AN/960/6 | Washer (two per assembly) | as req'd |
| | | Dural tubing outside diam. 1/4" inside diam. 5/32" | as req'd |

(Obtainable from unit resources or 1 SD)

PARTS RENDERED SURPLUS OR OBSOLETE

4 The following parts are rendered surplus:

| RCAF REF. | PART | DESCRIPTION | QUANTITY |
|-----------|-----------|-------------|----------|
| | 341 | Snap hook | |
| | 22K3-02 | Nut | |
| | NAS221-10 | Screw | |
| | AN960-10L | Washer | |

WEIGHT, LOADING AND BALANCE DATA

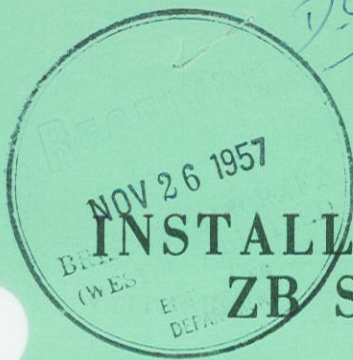
5 NIL

ADDITIONAL DATA

6 NIL

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

Prepared By:
AMC/SEGO/MIS E



DC

ROYAL CANADIAN AIR FORCE

RESTRICTED
EO 55-45-6A/6
18 Oct 57

MODIFICATION

INSTALLING NEW OPERATING CABLES ON
ZB SAFETY HARNESS FOR SABRE
AND T33 AIRCRAFT

EQUIPMENT AFFECTED: ZB Safety Harness Sabre and T33 aircraft

BY WHOM WORK WILL BE PERFORMED: Operating Units

WHEN WORK WILL BE PERFORMED: Immediately on receipt of new operating cable.

RCAF FORM ENTRIES: None

MODIFICATION OS SPARES IN STOCK: All spares to be modified.

PURPOSE

1 To install longer operating cables on Sabre and T33 ZB safety harness.

MODIFICATION DATA

2 The following is the sequence of operations.

- (a) Remove Z type release box from harness.
- (b) Remove operating cable from Z box as outlined in EO 55-45-2 Sec. 1.
- (c) Using new type operating cable re-assemble as per above EO.



Care must be taken to install correct length cable and housing for either T33 of Sabre harness.

NOTE

Length of Sabre operating cable is 29" ± .050".
 Length of T33 operating cable is 38 1/2 ± .050"

(d) Step (b) does not apply to boxes already having cable removed as per AMC log 6991 dated 30 July 57.

SUPERSEDED
BY 53/45 G-6A/H

PARTS REQUIRED

3 The following parts are required:

| RCAF REF | PART | DESCRIPTION | QUANTITY |
|----------|------|-------------------------------|-------------|
| 15E/56 | | Cable assembly Sabre aircraft | As required |
| 15E/57 | | Cable assembly T33 aircraft | As required |

PARTS REQUIRED

4 The following parts are rendered surplus.

| RCAF REF | PART | DESCRIPTION | QUANTITY |
|----------|------|---|----------|
| 15E/47 | | Release cable assembly Sabre aircraft | |
| 15E/48 | | Release cable assembly T33 aircraft (Report to AMC for disposal instruction) | |

WEIGHT, LOADING AND BALANCE DATA

5 NA

ADDITIONAL DATA

6 Nil.

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

Prepared By:
AMC/SEGO/MIS E



MODIFICATION

AUTOMATIC RELEASE DRILLING OF RACK HOUSING

(This EO replaces EO 55-45-6A/5 dated 17 May 57)

| | |
|----------------------------------|---|
| EQUIPMENT AFFECTED: | Harness Automatic Release Mechanism Mk. 1 |
| BY WHOM WORK WILL BE PERFORMED: | Operating Units and Contractor |
| WHEN WORK WILL BE PERFORMED: | As soon as possible |
| RCAF FORM ENTRIES: | E133 Log Book |
| MODIFICATION OF SPARES IN STOCK: | To be modified |

PURPOSE

1 To provide a means of safetying the arming wire to the automatic release mechanism.

MODIFICATION DATA

2 The embodiment of this modification is to be made on all harness auto-release units attached to aircraft ejection seats and held as spares. The following is the sequence of operations:

- (a) Disarm and dismantle auto-release unit, remove the rack housing from the assembly.
- (b) Drill a diagonal hole through the housing using a 1/16 inch diameter drill as shown in detail "A", Figure 1
- (c) Re-assemble auto-release unit and safety-tie arming wire to unit using a single strand of .015 inch inconel or maximum .020 inch soft copper wire by first passing the wire through the diagonal hole in the rack housing then passing one end twice around the stop on the arming wire and tension locking by twisting the ends together as shown in detail "B", Figure 1.

SUPERSEDED
BY EO 55-456-6A/2
9 Dec 1957

NOTE:

USE .015" INCONEL OR
 MAXIMUM .020" SOFT
 COPPER WIRE FOR
 LOCKING PURPOSES.

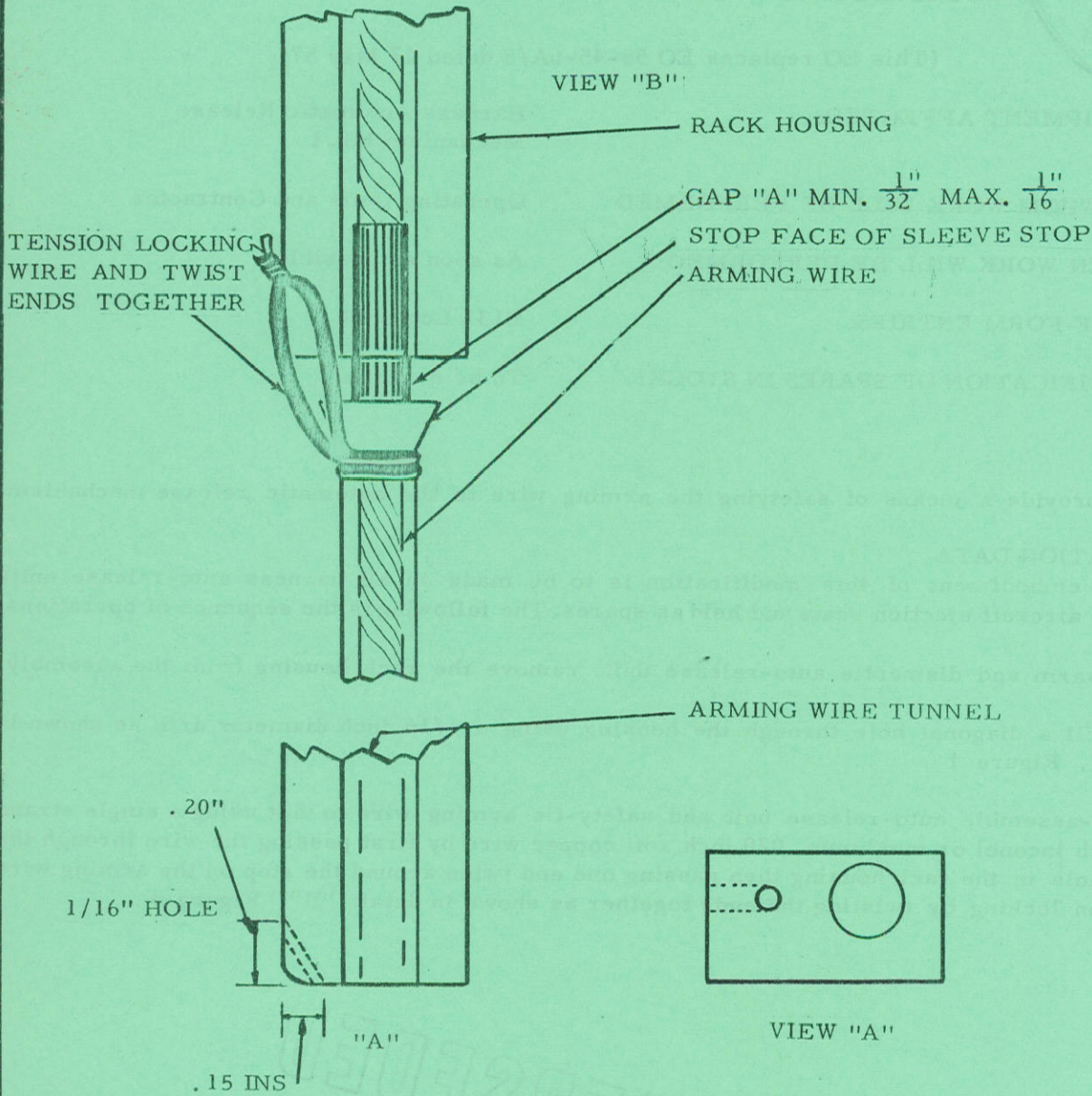


Figure 1 (Issue 1)

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

Prepared By:
 AMC/SEGO/Mis E

MODIFICATION

3



LOCKING DEVICE - ZB HARNESS

ZB CLIP

| | |
|----------------------------------|--|
| EQUIPMENT AFFECTED: | Harness type ZB Ref. 15E/25 Fitted with Locking Clips on Adjusting Buckles |
| BY WHOM WORK WILL BE PERFORMED: | Operating Units |
| WHEN WORK WILL BE PERFORMED: | Next Periodic Inspection |
| RCAF FORM ENTRIES: | E 133 Log Book |
| MODIFICATION OF SPARES IN STOCK: | NA |

PURPOSE

1 To prevent the locking device clip detaching from the buckle and falling amongst the aircraft controls.

MODIFICATION DATA

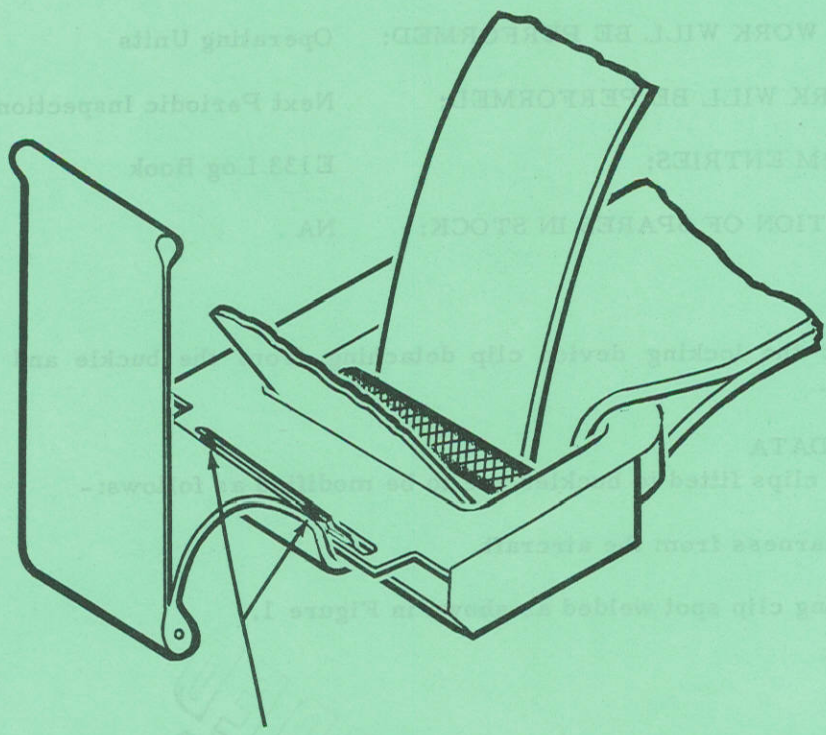
2 All locking clips fitted to buckles are to be modified as follows:-

- (a) Remove harness from the aircraft.
- (b) Have spring clip spot welded as shown in Figure 1.

SUPERSEDED
 BY *55-45-5A/2*

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF
 Prepared By: A.M.C. (R) / M.F.E.

LOCKING DEVICE - NB HARNESS

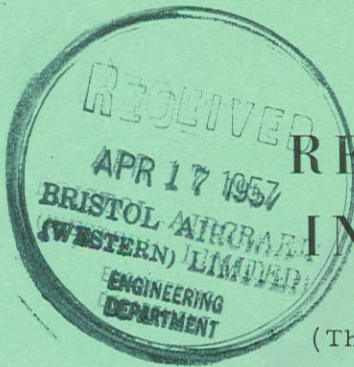


SPOT WELD

LOCKING CLIP

Figure 1

Prepared By: ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF
AMC/SEGO/Mis E



MODIFICATION
RELEASE BOX TYPE Z
INSERTION OF LINER

(This EO replaces EO 55-45-6A/2 dated 10 May 55)

EQUIPMENT AFFECTED: Safety Harness Type ZB
 BY WHOM WORK WILL BE PERFORMED: Operating Units
 WHEN WORK WILL BE PERFORMED: Not later than the next Periodic Inspection
 RCAF FORM ENTRIES: NA
 MODIFICATION OF SPARES IN STOCK: Before Installation

PURPOSE

1 The purpose of this modification is to prevent the lugs breaking through into the centre-bore when inserted into the release box, as shown in Figure 1.

MODIFICATION DATA

2 The embodiment of this modification is to be made on all release boxes attached to the safety harnesses type ZB. The following is the sequence of operation:

- (a) Remove handle and break body of box down into component parts.
- (b) Centre-bore of box to be rebored from .575" (plus .003" or minus .0") to .600" (plus .000" or minus .0005").
- (c) Manufacture a steel sleeve or liner from SAE1025 steel tubing, as shown in Figure 2.
- (d) Press steel sleeve into centre-bore.
- (e) Grind ball-holder from .575" to .555". This operation can be done with a file.
- (f) Grease all parts with grease general purpose 3-GP-682, Stores Ref. 34A/178.
- (g) Re-assemble box using paste adhesive, pliable, Stores Ref. 33C/360 to lock all screws.

PARTS REQUIRED

3 The following part is required per box to effect the modification:

| RCAF REF. | PART | DESCRIPTION | QUANTITY |
|-----------|------|--|----------|
| 30B/1667 | | Tubing, round, steel SAE1025 diameter .625" x .056" wall | As req'd |

SUPERSEDED
 BY EO 55-45K-6A/3
 2/9 Dec 57

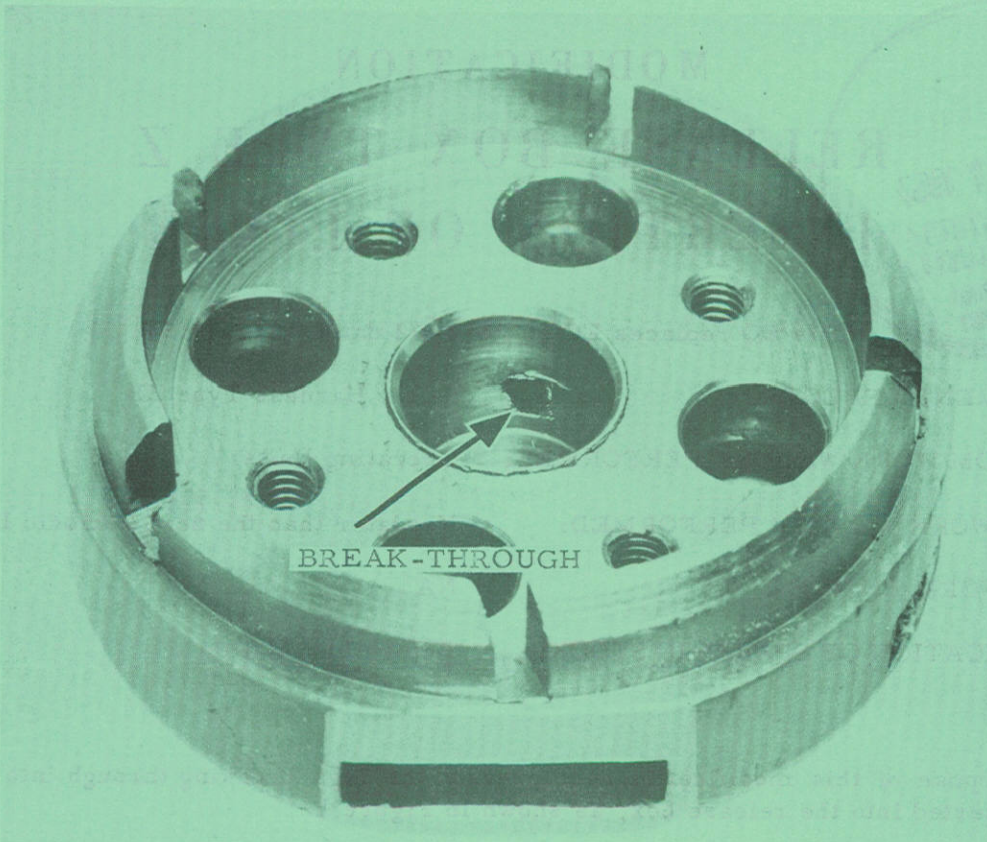


Figure 1

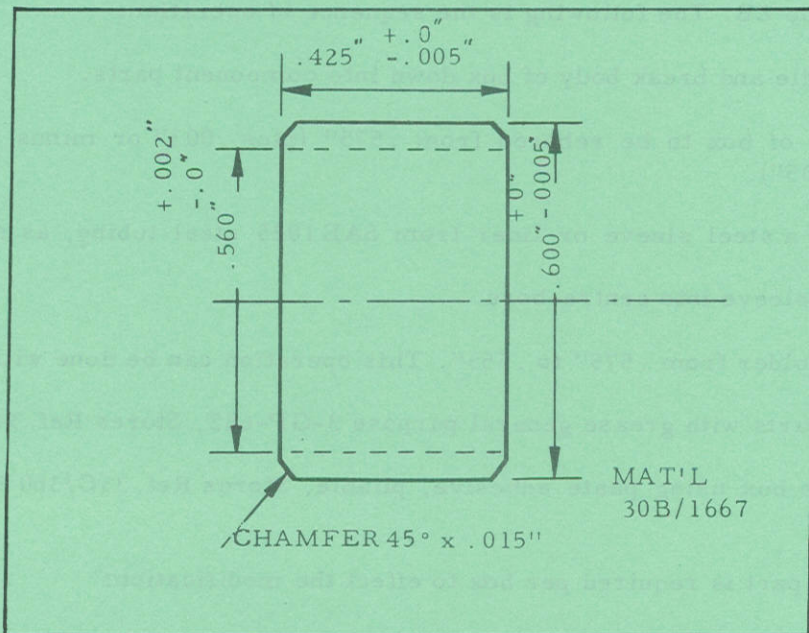


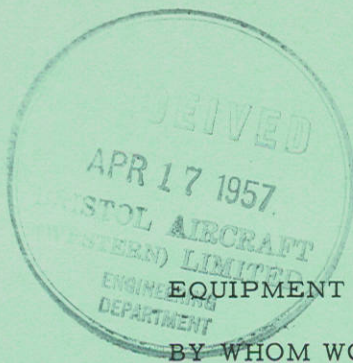
Figure 2

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

Prepared By:
AMC/SEGO/Mis E

22 Mar 55

MODIFICATION RELEASE BOX TYPE Z RETAINING BOLT



EQUIPMENT AFFECTED: Safety Harness Type Z

BY WHOM WORK WILL BE PERFORMED: Operating Units

WHEN WORK WILL BE PERFORMED: Next Minor Inspection

RCAF FORM ENTRIES: NA

MODIFICATION OF SPARES IN STOCK: Before Installation

PURPOSE

1 To prevent damaged threads on the retaining bolt which holds the quick release box in position on the lap pad from stripping the threads inside the box when removing the bolt during periodic inspections.

MODIFICATION DATA

2 This modification is to be accomplished during the next minor inspection of the quick release box by removing the threads for 5/16" from the end of the retaining bolt before assembly, see Figure 1.



Figure 1

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

SUPERSEDED
BY EO 55-45K-6A/Z
d/9 Dec/57

Prepared By:
AMC/SEGO/MIS E

