

CHAPTER 8

CREWMEMBER'S AIRCRAFT SAFETY BELT MS16070-2, MS16070-3, AND MS16070-21

Section 8-1. Description

8-1. GENERAL.

NOTE

All aircraft installed safety belts, shoulder harnesses, inertia reels and cargo strap assemblies shall be inspected in accordance with applicable aircraft MRC's.

8-2. The Crewmember's Aircraft Safety Belt (figure 8-1), is a safety restraint system to be used by all crewmembers and passengers aboard military aircraft.

8-3. CONFIGURATION.

8-4. Each Safety Belt is made of nylon webbing and is provided with adapters for adjustment. All of the Safety Belt assemblies have a latch and link assembly with a leather protector.

WARNING

All cotton webbing Crewmember's Safety Belts shall be removed from service.

NOTE

Crewmember's Aircraft Safety Belt MS16070-21 will replace the MS16070-2 and MS16070-3 by attrition. Snap hook P/N MS70120 on MS16070-21 Safety Belts is not compatible with H-3 Crew Station 346.

8-5. APPLICATION.

8-6. The Safety Belt shall be worn at all times by aircrewmembers aboard military aircraft as a restraint system during flight as required by NATOP manuals.

NOTE

The Crewmember's Aircraft Safety Belt must be worn high on the chest and snug to prevent inadvertent release of latch mechanism.

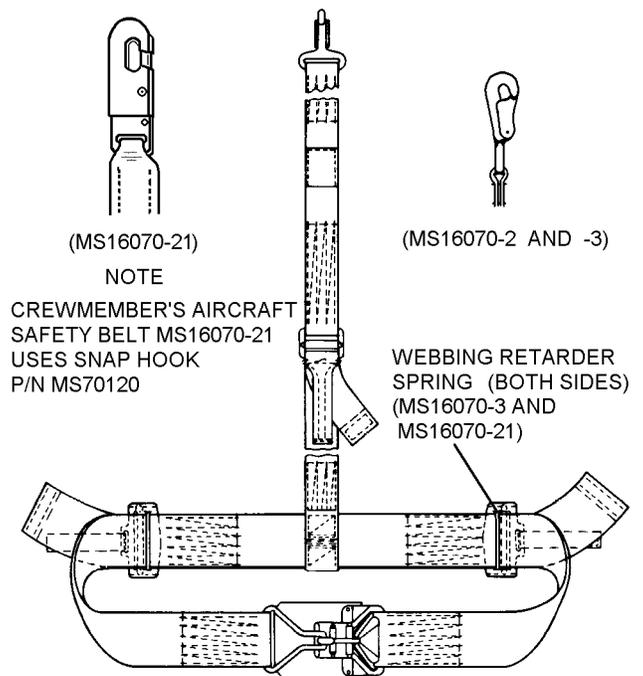


Figure 8-1. Crewmember's Aircraft Safety Belt (MS16070-2, MS16070-3, and MS16070-21)

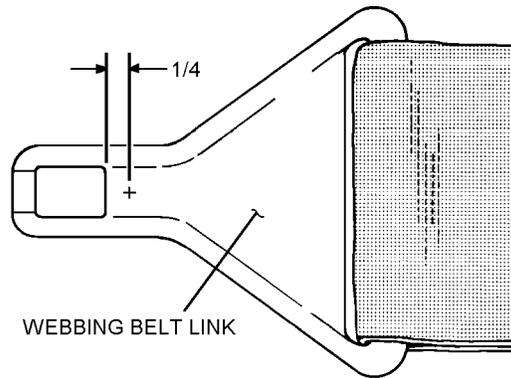
Section 8-2. Modifications

8-7. GENERAL.

8-8. [Table 8-1](#) is the current directive affecting the Crewmember's Aircraft Safety Belt. Modification instructions for Crewmember's Aircraft Safety Belt are listed in [Table 8-2](#).

8-9. CREWMEMBER'S AIRCRAFT SAFETY BELT LATCH MECHANISM. Modify Crewmember's Aircraft Safety Belt Latch Mechanism to correct faulty release tendency as follows:

1. Disengage lapbelt latch mechanism.
2. Drill 1/4-inch hole in webbing belt link on centerline with hole centered exactly 1/4-inch from rectangular latch hole.



Step 2 - Para 8-9

08009002

NOTE

Addition of the nut and bolt will limit link travel within the latch mechanism thereby preventing inadvertent release.

Materials Required

Quantity	Description	Reference Number
As Required	Screw 1/4-20 x 7/16	NIIN 00-988-1722 or Equivalent
As Required	Elastic Stop Nut 1/4-20	NIIN 00-208-1919 or Equivalent

1. Disengage lapbelt latch mechanism.

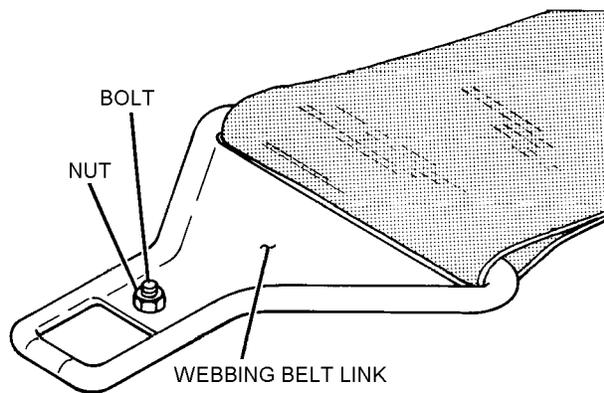
Table 8-1. Crewmember's Aircraft Safety Belt Directives

Description of Modification	Application	Modification Code
Incorporation of webbing retarder springs on Crewmember's Aircraft Safety Belts.	All Crewmember's Aircraft Safety Belts	ACC 645 - TDC 66

Table 8-2. Crewmember's Aircraft Safety Belt Modifications

Description of Modification	Application	Paragraph
Modification of Crewmember's Aircraft Safety Belt Latch Mechanism.	All Crewmember's Aircraft Safety Belts as required	8-9
Modification of Crewmember's Aircraft Safety Belt Webbing End-Stop.	All Crewmember's Aircraft Safety Belts	8-10
Crewmember's Aircraft Safety Belt Chest Strap Extension.	All Crewmember's Aircraft Safety Belts as required	8-11
Incorporation of Webbing Retarder Springs on Crewmember's Aircraft Safety Belt.	All Crewmember's Aircraft Safety Belts	8-12

3. Install a 1/4-inch nut (elastic stop) and bolt through hole drilled in step 2.



Step 3 - Para 8-9

08009003

8-10. CREWMEMBER'S AIRCRAFT SAFETY BELT END-STOP. Crewmember Aircraft Safety Belt End-Stops shall be modified as follows to prevent being pulled through adjustment adapters.

Materials Required

Quantity	Description	Reference Number
As Required	Thread, 6-cord Olive Drab	NIIN 00-559-5211

NOTE

Increasing the thickness of the end stops will prevent them from being inadvertently pulled through the waist adjustment adapters.

1. Fold webbing belt end-stop of short waist belt over to double existing thickness forming four layers of webbing at belt end.

2. Following existing stitch pattern (5-6 stitches per inch) sew the four-thickness fold in place with a single 3 x 3/4 inch box stitch using 6-cord thread.

3. Repeat steps 1 and 2 for each of the short waist belts.

4. Repeat steps 1 and 2 to modify the end-stop of pigtail end of long belt except sew four-thickness fold of end-stop in place using single 1 x 1 3/4-inch box stitch.

8-11. CREWMEMBER'S AIRCRAFT SAFETY BELT CHEST STRAP EXTENSION. Crewmember's Aircraft Safety Belts, which can not be adjusted outward sufficiently to encompass the aircrewmember when wearing body armor or other bulky items, may be lengthened as follows:

Materials Required

Quantity	Description	Reference Number
68 Inches	Webbing, Nylon Type IX, 3 Inch Width	NIIN 00-261-8846 or Equivalent
As Required	Thread, Nylon, Size 6	NIIN 00-204-3749
As Required	Ink, Indelible Laundry, Black	SPE-92 NIIN 00-161-4229

1. Lay belt on work bench with female portion of the buckle laying to the left and male to the right.

2. Separate female portion of the buckle from the webbing by cutting with scissors or razor blade. Remove webbing from adjustment adapter. Discard webbing.

3. Cut a 34 inch length of Type IX webbing. Sear ends.

4. With latch mechanism facing up, thread webbing through buckle 5 inches from back to front.

5. Sew a 4 1/2 inch equally spaced six point W 1/4 inch from webbing edge. Overstitch ends at least 1 inch.

6. Thread opposite end of webbing through adjustment adapter. Fold end 3 times with first fold being 3/4 inch.

7. Sew the four-thickness fold in place with a 2 3/4 x 3/4-inch box stitch using size 6 thread.

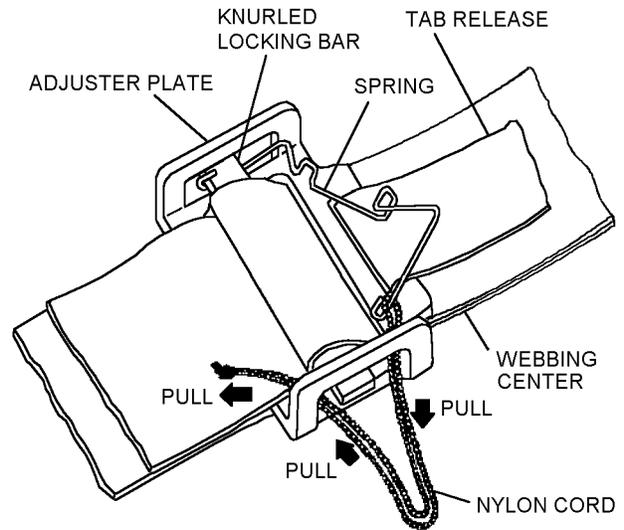
8. Using indelible black ink, stencil LEFT EXTENDED near the buckle end of the webbing, before the fold, in 1/2-inch letters.

9. Repeat steps 2 through 8 with male end, except stencil webbing with RIGHT EXTENDED.

NAVAIR 13-1-6.5

8-12. INSTALLATION OR REPLACEMENT OF CREWMEMBER'S AIRCRAFT SAFETY BELT WEBBING RETARDER SPRINGS. To install the webbing retarder springs on the Crewmember's Aircraft Safety Belt, proceed as follows:

Materials Required		
Quantity	Description	Reference Number
2	Spring, Lapbelt, Web	62B4407 NIIN 00-975-2987
1	Spring, Lapbelt, Web	65D34083-7 NIIN 00-853-5464
16 Inches	Cord, Nylon, Type I	MIL-C-5040E NIIN 01-308-6122
As Required	Ink, Indelible Laundry, Black	SPE-92 NIIN 00-161-4229



Step 2c - Para 8-12

0801202c

NOTE

Care should be taken not to bend the spring when pulling cord through buckle.

d. Pull the cord through the slot and around the locking bar.

e. Press the bar back with thumb, leaving enough space to slide the loop back through the slot, pull cord over knurled locking bar.

f. Snap center of webbing retarder spring into adjuster plate pull-tab slot.

g. Ensure the safety belt webbing is centered on the adjuster plate knurled knob and can be adjusted as desired.

h. Repeat steps 2b thru 2g for other adjusters.

3. (MS16070-2 Safety Belts only) Using black indelible ink, re-identify the belt by marking over the -2 in the part number on the label and replacing it with a -3. The part number should read MS16070-3.

4. Make necessary entries on appropriate forms in accordance with OPNAVINST 4790.2 Series.

1. Check the adjusters on the belt to determine if the springs are installed. If springs are not incorporated, proceed with step 2. (For MS16070-2 safety belts) If springs are incorporated, refer to step 3 for P/N modification.

2. Locate the adjusters on the belt and install springs as follows:

a. Cut a 16-inch length of Type I nylon cord and tie ends together to form a loop.

b. Hook one end of webbing retarder spring under and around flat end of knurled locking bar inside the adjuster plate.

c. Insert unknotted end of loop through the slot of the adjuster plate from the outside and hook loop over the free spring hook end.

Section 8-3. Maintenance

8-13. GENERAL.

8-14. Maintenance or repair actions required on the Crewmember's Aircraft Safety Belt shall be performed by Organizational Level or above.

8-15. INSPECTION.

WARNING

All cotton webbing Crewmember's Safety Belts shall be removed from service.

8-16. The Crewmember's Aircraft Safety Belt shall be subjected to a Place-In-Service Inspection and Special Inspection.

8-17. PLACE-IN-SERVICE INSPECTION. The Crewmember's Aircraft Safety Belt shall be inspected prior to place-in-service. The Place-In-Service Inspection shall be performed in accordance with paragraph 8-18, steps 1 thru 6.

8-18. SPECIAL INSPECTION. The Crewmembers Aircraft Safety Belt shall be inspected every 90 days for personal issue or at intervals to coincide with the assembly in which it is installed. To perform the Special Inspection, proceed as follows:

1. Inspect webbing for wear, fraying, broken stitches, cuts, contamination and fading of material.
2. Inspect hardware for corrosion, security of attachment, cracks, wear and ease of operation.

NOTE

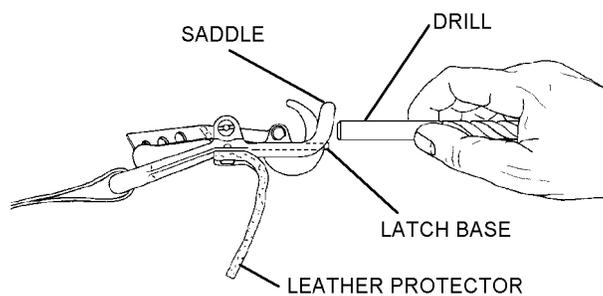
Future procurements of the Crewmember's Aircraft Safety Belt will have the four layers of webbing incorporated at the manufacturer's level. The updated configuration will be initiated through attrition.

3. Inspect waist end-stops for four turns of webbing. Webbing end-stops must have four turns to prevent slippage of the through adjustment adapters. Refer to paragraph 8-10 for corrective procedures.

4. Inspect belt latch mechanism for premature/faulty release tendency.

a. Disengage lap belt latch mechanism.

b. Attempt to insert the shank end of a 23/64-inch drill bit between saddle and latch base while holding centerline of drill parallel to surface of latch base.



Step 4b - Para 8-18

081804b

NOTE

If drill shank cannot be inserted, no corrective action is necessary. If drill shank can be inserted, refer to paragraph 8-9 for corrective procedures.

c. If belt has been modified in accordance with paragraph 8-9, check screw and lock nut for security. If loose, it shall be replaced with a new screw and lock nut. Do not retighten loose lock-nut.

5. Inspect webbing retarder springs on waist belt and tail adjusters for security of attachment. If springs are missing, bent or loose refer to paragraph 8-12 for corrective procedures.

6. Inspect for proper markings. Refer to paragraph 8-21 for marking procedures.

7. For modification of chest strap, refer to paragraph 8-11 for procedures.

8. Repair in accordance with paragraph 8-19.

9. Clean in accordance with paragraph 8-22.

8-19. REPAIR.

8-20. Repairs are limited to minor stitching, restoration of markings, and replacement of retarder springs.

Table 8-3. Safety Belt Markings

Description	Marking	Location	Letter Height
All safety belts shall have an identification label in accordance with MIL-L-15040, Type I, size 1.	[Stencil nomenclature of item] PART NUMBER [stencil applicable number] MFR. [stencil name of manufacturer]	Each half of the safety belt on the outside of the adjustable portion of the webbing, in close proximity to the buckle assembly.	1/2 inch
Notes: 1. All words enclosed by brackets in the column headed MARKINGS shall not be stencilled on the equipment; they are to be regarded as instructions only.			

NOTE

The use of 6-cord is required to make sewing repairs. If a Class 7 sewing machine or equivalent is not readily available to perform repairs, discard belt and replace.

1. No more than three repairs allowed per belt assembly.
2. No more than three broken stitches allowed per repair.

8-21. MARKINGS. Compare markings on Safety Belts to markings listed in table 8-3. Restore faded markings. Correct any markings which do not agree with the table. To change markings, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As required	Ink, Indelible	SPE-92
	Laundry, Black	NIIN 00-161-4229

1. If marking is faded, restore marking.

2. If marking is incorrect, paint out incorrect marking and enter correct marking as close to proper location as possible using black indelible ink.

8-22. CLEANING.

8-23. To clean the Crewmember's Aircraft Safety Belt, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent	MIL-D-16791
As Required	Cloth, cleaning	MIL-C-85043

1. Rinse belt with clean fresh water. Using a cloth and a mixture of clean water and detergent, scrub or wipe contaminated area until area is clean. Rinse a second time with fresh water to remove soap and contaminants. Hang to dry.

2. Remove corrosion in accordance with NAVAIR 01-1A-509 manual.

8-24. SERVICE/SHELF LIFE.

8-25. There is no service/shelf life for nylon webbing.