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Restraint System Assembly

Part No.
504920-SERIES

Abbreviated Component Maintenance Manual

With illustrated parts list

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PROPRIETARY NOTICE

NOTICE – FREEDOM OF INFORMATION ACT (5 USC 552) AND DISCLOSURE OF CONFIDENTIAL INFORMATION GENERALLY (18 USC 1905)

Am-Safe Inc is furnishing this document in confidence. The information disclosed herein falls within exemption (b) (4) of 5 USC 552 and the prohibitions of 18 USC 1905.

The Am-Safe Inc. Commercial and Government Entity (CAGE) code: **0FWE1**

TSO NOTICE

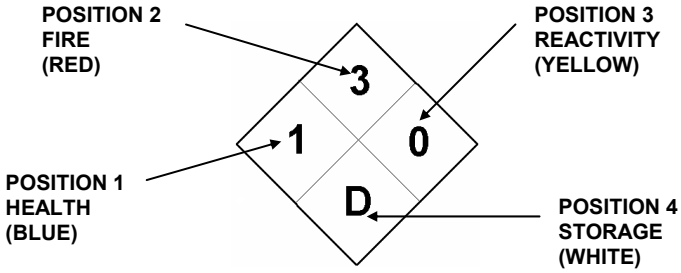
The conditions and test required for TSO approval of this article are minimum performance standards. It is the responsibility of those desiring to install the article either on or within a specific type or class of aircraft to determine that the aircraft installation conditions are within the TSO standards. The article may be installed only if further evaluation by the applicant documents an acceptable installation and is approved by the administrator.

MATERIALS HAZARD RATING CODE

Am-Safe Inc. uses the National Fire Protection Association system to identify the different levels of hazards that are caused by the use of a given material. A Hazard Code identifies three effects of a material on a person: health (eat, drink, touch, and breathe), fire (when and how it burns), and reactivity (chemical explosions). Also, each material is given a storage group for safety.

Each code has three numbers and one letter (for example, 130D) as shown in the Hazard Code symbol below. The three numbers show the hazard levels for health, fire, and reactivity, in that sequence. The range of each number is 0 to 4. The higher the number, the more dangerous the hazard. You must be careful with any material that has a Hazard Code with a 2, 3, or 4. The one letter (A thru E) in the code identifies a specific storage group that is applicable for the material.

If applicable, the materials used for the procedures in this manual are given a Hazard Code. More data on the health and fire levels is shown in on page H-2. Get specific data on a material from the data sheet supplied by the manufacturer of the material.



POSITION 1: HEALTH HAZARD		POSITION 2: FIRE HAZARD	
0	No important hazard	0	Will not burn
1	Irritant Use with caution	1	Must increase the temperature above 93.4 °C to burn
2	Hazardous Prevent continued exposure, inhalation, and contact	2	Must increase the temperature above 37.8 °C to burn
3	Dangerous hazard Use protective clothing together with protection to breathe	3	Fire and explosion hazard at ambient temperature
4	Very bad hazard Do not breathe vapor or come in contact with liquid without approved special protection	4	Highly dangerous fire and explosion hazard
POSITION 3: REACTIVITY HAZARD		**POSITION 4: STORAGE**	
0	Usually stable	A	Acids
1	Unstable if heated	B	Alkalis, cyanides
2	Violent chemical change is possible	C	Oxidizing agents
3	Dangerous explosion is possible	D	Chlorinated hydrocarbons, flammable liquids, materials that are not flammable
4	Very bad explosion hazard quickly go out of the area if materials are exposed to fire	E	Neutral salts and others

HEALTH HAZARD RATING IN POSITION 1

Rating	Description	Effect of Exposure
4	Very bad health hazard	Very short exposures could cause DEATH or CRITICAL REMAINING INJURY even after fast medical treatment. Do not breathe the vapor or come into contact with the liquid without approved protection.
3	Dangerous health hazard	Short exposures could cause DANGEROUS TEMPORARY OR REMAINING INJURY even with fast medical aid. Use approved clothing.
2	Hazardous	Intense or continued exposure could cause TEMPORARY DISABILITY OR POSSIBLE REMAINING INJURY unless medical aid is given immediately.
1	Irritant	May cause IRRITATION on exposure. Only SMALL REMAINING INJURY would be the result without medical treatment. Safety glasses must be worn.
0	No important health hazard	Not hazardous for usual conditions. Special personal protection is not necessary.

FIRE HAZARD RATING IN POSITION 2

Rating	Description	Effect of Exposure
4	Very flammable	Any liquid or gaseous material that is a liquid under pressure with a flash point below 22.8 °C. Also materials that can form explosive mixtures with air, such as dusts or combustible solids, and pressurized small drops of flammable or combustible liquid. PREVENT ALL SOURCES OF IGNITION. NO SMOKING PERMITTED!
3	Highly flammable	Liquids and solids that can start to burn in almost all conditions of ambient temperature. Liquids with a flash point at or above 22.8 °C but below 37.8 °C. Control all sources of ignition. NO SMOKING!
2	Moderately combustible	Materials that must be warm or in an area open to high temperatures before ignition can occur. This rating is applicable to liquids having a flash point above 37.8 °C but below 93.4 °C. Be very careful when near a source of heat.
1	Lightly combustible	Materials that must be hot before ignition can occur. This rating includes materials that will burn in air in an area open to a temperature of 815 °C for 5 minutes or less. Liquids and solids have flash point at or above 93.4 °C.
0	Will not burn	Any material that will not burn in air in an area open to a temperature of 815 °C for 5 minutes.

RECORD OF REVISIONS

For each revision to this ACMM, because of the limited number of pages a complete reissue of the ACMM will accomplish the changes to the content with each page showing the reissue date.

REVISION No.	REVISION DATE	REVISED BY	APPROVED BY	SIGNATURE
RELEASE	02-28-01	S.DAWSON	D.GOETZ	D.G.
1	1-27-03	T.E.KOWALSKI	D.GOETZ	D.GOETZ

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TABLE OF CONTENTS

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INTRODUCTION

How to use this Manual

The instructions in this manual give the data necessary to do all recommended maintenance functions to put the Restraint System in serviceable condition. Standard maintenance procedures that technicians are thought to know are not given in this manual.

Refer to the Table of Contents for a list of subheadings in this manual. The Table of Contents identifies those subheadings that are not applicable, that require no special instructions, or that are scheduled for a subsequent revision.

We recommend that the tests in TESTING AND FAULT ISOLATION be done before the unit is disassembled. These tests can tell the condition of the Restraint System or the most probable cause of any malfunction. Should any malfunction occur, repair as necessary.

To decrease the length of sentences and titles, complete part numbers are not always shown in this manual. A piece of the part number can show applicability to a specific assembly or component. Complete part numbers are always given in the parts list subheading. Refer to the introduction in the ILLUSTRATED PARTS LIST (or CATALOG) to find how to use that subheading.

Related publications that are referred to in this manual are identified in the list that follows:

Document	Publication No.
Abbreviations for Use on Drawings and in Text*	ASME Y1.1 (1989)
Standard Letter Symbols for Units of Measurement*	ANSI/IEEE Std 260 (1978)

*Available from the American National Standard Institute, New York, NY

Verification of these technical instructions is done by performance or by simulation of the necessary procedures. Checks of the manual by the engineering staff make sure the instructions and description data agree with the applicable engineering specifications and drawings and are accurate and sufficient. The level of verification for this manual is as shown:

Subheading	Level of Verification
Testing and Fault Isolation	By performance February 28, 2001
Disassembly	By performance February 28, 2001

Am-Safe Inc. will revise this manual as necessary to give current data. The sources for data supplied in this manual include engineering drawings and change orders released as of February 28, 2001.

Abbreviations

Weights and measurements in this manual are in both U.S. and S.I. (metric) values. The letter symbols for units of measurement and the abbreviations are the same as shown in ANSI/IEEE Std 260 and ASME Y1.1, except as identified below.

Abbreviation	Definition
g	Standard gravity
RF	Reference callout

DESCRIPTION AND OPERATION

1. Description (IPL, Figure 1.)

The Restraint System consists of the following major assemblies:

- Shoulder Strap
- Buckle Half
- Connector Half

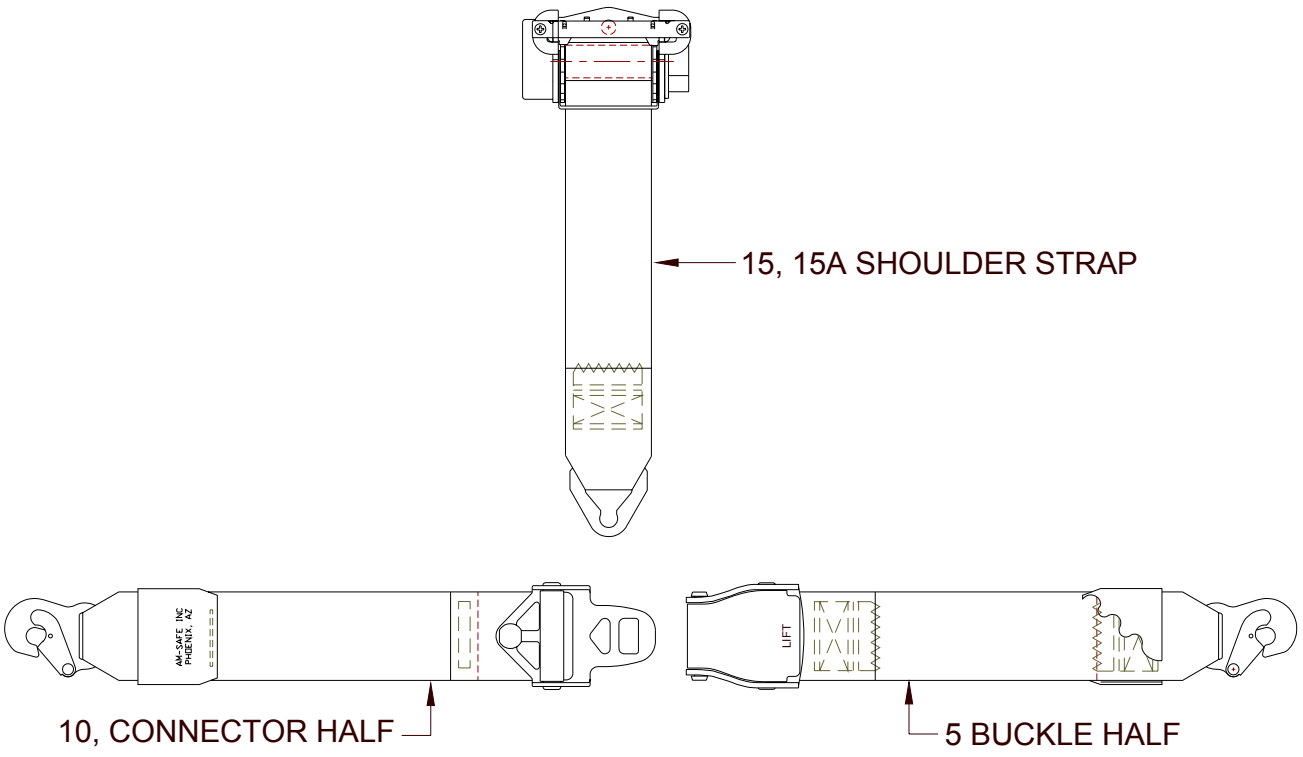
The Restraint System assemblies come together at a common attachment point. The connector slides into the buckle assembly. The shoulder strap attaches to the lap belt connector. Lifting the cover of the buckle will release the connector.

All of the belts and straps are made from nylon webbing. The lap belt is fitted with a sewn in buckle and an adjustable connector. The ends of the lap belts are fitted with sewn-in hook assemblies. Leading particulars for the Restraint System are listed in Table 1.

Identification plates and unit markings are located on each assembly. The Restraint System is hard-mounted directly on the seat or aircraft structure in accordance with the installation instructions supplied by the seat manufacturer.

Use	Personnel Restraint
Type	Restraint System
Shoulder Strap Assy:	
Type	Automatic Inertia Reel
Locking Acceleration	.75 - 1.5 g
Maximum Length	78.5 in (199 cm)
Webbing	Nylon
Lap Belt Assembly:	
Maximum Length	55.0 in (140 cm)
Rated Strength (minimum)	3000 lbs. (1361 kg)
Webbing	Nylon

Leading Particulars
Table 1



Restraint System Assembly
Figure 1

2. Operation

The Restraint System is intended for use by the flight-crew. The system is specially designed to restrain a human body (seat occupant) during all flight altitude and landings. The lap belts can be used separately or with the shoulder strap. The inertia reel bolts onto the seat or airframe. The lap belts are attached to the seat or airframe with sewn-in hook assemblies.

NOTE: Refer to the installation instructions supplied by the seat manufacturer.

A. Shoulder Harness

The shoulder strap consists of a strap fitted with an inertia reel at one end and a connector at the other. The shoulder strap is equipped with an inertia reel, which performs length adjustment by reeling the strap in or out and allow the upper part of the body freedom of movement. Sewn to the other end of the strap is the connector, which is slid over the rivet on the lap belt for donning. For identification purposes the inertia reel is fitted with equipment identification decal

B. Inertia Reel

When the Restraint System is in use, the inertia reel allows unrestricted movement in the seat. The reel extends and retracts the shoulder strap as required. If a sudden acceleration force is applied to the shoulder strap, the inertia reel will automatically lock. The occupant in the seat is held by the shoulder strap. When the shoulder strap is relieved of the force, the locking action of the inertia reel is released and unrestricted movement within the seat is once again permitted

C. Lap Belts

There is a buckle half with a sewn-on buckle and a connector half with an adjustable connector especially designed for length adjustment. For identification purposes the lap belt halves are fitted with a label.

D. Fastening

In the seated position, pull the Shoulder strap connector and slide it over the rivet on the lap belt connector. Insert the lap belt connector into the buckle until the latch block audibly engages the recess in the connector. For shortening the lap belt, pull at the free end of the webbing at the connector half. For lengthening the belt, grasp the connector and rotate it approximately 45°. Pulling at the connector will lengthen the belt

E. Releasing

For releasing the lap belt, lift the buckle cover approx. 30°. This action will release the connector which, can then be withdrawn from the buckle. Place the lap belt portions on the seat to prevent them from being damaged and soiled.

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1. Task– Testing on Aircraft and Shop Test

Use the following procedures to make an analysis of the performance of the restraint system while on the aircraft. Table 102 is a fault isolation guide, which has been keyed to the test procedures. Use it to isolate malfunctions that occur when you do the test.

A. Equipment and Materials

No equipment or materials required.

B. Inspection Intervals

(1) Concurrently with on-aircraft seat inspection or if pulled form aircraft to determine Airworthiness.

(2) When malfunction is reported for failing requirements described in paragraph 1.

C. Procedure

(1) Follow procedures as dictated in table 101

(2) If restraint fails any tests in table 101, remove restraint for further evaluation or overhaul by Am-Safe.

Test No.	Procedure	Limits
1.0	Lap belt	
1.1	Insert connector into buckle.	Connector engages.
1.2	Release connector by lifting the cover approx. 30°.	Connector releases. The buckle cover should return to the closed position.
1.3	Repeat step 1.1 and 1.2 four times	The connector engages and releases. The cover returns to the closed position.
1.4	Adjust webbing in connector half by pulling on the free end of webbing	Webbing must adjust and should not exhibit excessive web fray or any cuts.
1.5	Repeat step 1.4 four times	Webbing must adjust and should not exhibit excessive web fray or any cuts.

Restraint system test
Table 101

Test No.	Procedure	Limits
2.0	Put the inertia reel assembly in a simulated mounting position.	
2.1	Slowly pull the shoulder strap webbing all of the way out of the inertia reel assembly. Observe webbing for freedom of reel action and general appearance.	Webbing extends. Webbing should not exhibit excessive fray or any cuts.
2.2	Slowly let the webbing retract into the inertia reel assembly.	Webbing retracts.
2.3	Repeat steps 1.5 and 1.6 four times.	The webbing extends and retracts smoothly.
2.4	Hold the inertia reel assembly and withdraw approximately 25% of webbing from the reel and rapidly accelerate the webbing until the system locks.	The locking system should lock and webbing should not extend.
2.5	Slowly let the webbing retract into the inertia reel assembly.	Webbing retracts.
2.6	Repeat steps 1.8 and 1.9 four times.	The locking system should lock and the webbing should retract.
2.7	Take the connector of the shoulder strap and slide it over the rivet on the lap belt connector.	The connector should present a small resistance and stay in place. The plastic grommet must not show signs of weakness.
2.8	Remove the shoulder strap connector from the rivet of the lap belt connector.	The connector should present a small resistance and come off the rivet. The plastic grommet must not show signs of weakness.
2.9	Repeat steps 2.7 and 2.8 four times.	The connector should present a small resistance and stay in place. The connector should present a small resistance and come off the rivet. The plastic grommet must not show signs of weakness.

Restraint System Test
Table 101 (cont.)

2. Procedure for Fault Isolation

When a Test Fails:

A. Find the number of the test in table 101 where the failure occurs.

B. Use the fault isolation procedure in table 102 to isolate the malfunction. All fault isolation procedures are keyed to the Test No. Column of Table 101.

C. Refer to the ILLUSTRATED PARTS LIST (IPL) figure 1 for complete item data when repair or replacement of parts is necessary.

Test No. Where Failure Occurs	Probable Cause of Failure	Repair Task
1.1	Damaged connector	Replace connector half.
	Damaged buckle	Replace buckle half.
1.2	Damaged connector	Replace connector half.
	Damaged buckle	Replace buckle half.
1.4	Damaged webbing	Replace connector half.
1.5	Damaged webbing	Replace connector half.
2.1	Damaged inertia reel or webbing	Replace shoulder strap.
2.2	Damaged inertia reel or webbing	Replace shoulder strap.
2.3	Damaged inertia reel or webbing	Replace shoulder strap.
2.4	Damaged inertia reel assembly	Replace shoulder strap.
2.5	Damaged inertia reel assembly	Replace shoulder strap.
2.6	Damaged inertia reel assembly	Replace shoulder strap.
2.7	Damaged shoulder strap connector	Replace shoulder strap.
	Damaged lap belt connector or grommet.	Replace connector half.
2.8	Damaged shoulder strap connector	Replace shoulder strap.
	Damaged lap belt connector or grommet.	Replace connector half.
2.9	Damaged shoulder strap connector	Replace shoulder strap.
	Damaged lap belt connector or grommet.	Replace connector half.

Fault Isolation
Table 102

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DISASSEMBLY

1. Task

   Before you disassemble the Restraint System, use TESTING AND FAULT ISOLATION to examine its condition or to find the most probable cause of its malfunction. This is to prevent disassembly that is not necessary. Do only those procedures of disassembly that are necessary to remove defective parts and to correct malfunctions.

   CAUTION: THE RESTRAINT SYSTEM MAY NOT BE DISASSEMBLED BEYOND THE LEVEL INDICATED BELOW. FURTHER REPAIR OF THIS SYSTEM MAY ONLY BE CARRIED OUT BY AM-SAFE INC. (USA), AM-SAFE LTD. (UK) OR AN AM-SAFE-APPROVED REPAIR STATION. AM-SAFE INC. IS NOT RESPONSIBLE FOR DAMAGE OR MALFUNCTIONS RESULTING FROM ANY UNAUTHORIZED ATTEMPT TO REPAIR OR DISASSEMBLE THE RESTRAINT SYSTEM.

2. Equipment and Materials

   No equipment or materials required.

3. Procedure

   NOTE: Refer to the ILLUSTRATED PART LIST (IPL figure 1) for parts locations.

   A. Lift the buckle cover 90° to release the connector.

   B. Release the shoulder strap connector by pushing it forward off the rivet.

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CLEANING

1. Task

To clean the Restraint System, remove dirt and unwanted oil and grease. This helps the Restraint System to last longer and prevents corrosion of the metal parts. The webbing is to be cleaned with fresh water and a mild soap. The metal fittings are cleaned with a cloth moistened with isopropyl alcohol.

After cleaning the assemblies, protect them from moisture, dirt, or other contamination. Keep them protected until you do a visual check and return the Restraint System to service.

2. Equipment and Materials

WARNING BEFORE YOU USE A CLEANING MATERIAL, YOU MUST KNOW THE HAZARD CODE AND OBTAIN THE NECESSARY PROTECTION. REFER TO THE PAGE ABOUT HAZARD CODES FOR MATERIALS IN THE FRONT OF THIS MANUAL.

NOTE: Equivalent alternatives are permitted for the equipment and materials in this list.

Isopropyl Alcohol **-** Optional source, HAZARD CODE 130D

Mild Soap – Optional source (household dishwasher liquid soap, household laundry detergent)

Lint-free cloth **-** Optional source

Sponge or soft brush - Optional source

3. Procedure

CAUTIONS:

1. THE RESTRAINT SYSTEM **MUST NOT** BE MACHINE-WASHED, BECAUSE THE WEBBING WILL SHRINK AND ITS PERFORMANCE CHARACTERISTICS WILL BE CHANGED SIGNIFICANTLY.

2. THE RESTRAINT SYSTEM MAY BE DRY-CLEANED. HOWEVER, THE WEBBING WILL LOSE ITS ABRASION-RESISTANCE COATING AFTER EACH CLEANING AND ITS SERVICE LIFE WILL THEREFORE BE DECREASED.

3. REFER TO THE “CHECK” SECTION OF THIS MANUAL TO DETERMINE WHEN THE WEBBING OF A RESTRAINT SYSTEM MUST BE REPLACED BY AM-SAFE OR AN AM-SAFE APPROVED REPAIR STATION.

4. WHEN CLEANING THE RESTRAINT SYSTEM, CARE MUST BE TAKEN TO KEEP AWAY FOREIGN MATTER AND CLEANING MEDIA FROM THE HARDWARE ASSEMBLIES.

5. NO SOAP OR WATER IS TO BE USED ON METAL PARTS.

3. A. Cleaning the webbing.

(1) Attach pieces of cloth to cover the metal fittings

(2) Either:

(a) Dry-clean the webbing, (see cautions) or

(b) Hand-wash the webbing: gentle scrub with a soft brush and cold soapy solution is permissible.

(3) Dry the Restraint System in an area that has a good flow of air. Do not dry the Restraint System in sunlight or near any source of heat.

(4) Inspect the dry Restraint System.

B. Cleaning hardware.

WARNING WHEN USING ISOPROPYL ALCOHOL, FOLLOW THE DIRECTIONS AND WARNINGS GIVEN BY THE MANUFACTURER. AVOID ANY CONTACT WITH THE WEBBING MATERIAL.

(1) Clean the hardware with a lint-free cloth moist with isopropyl alcohol.

CHECK

1. Task

   Use visual checks to find damaged or worn parts and parts that show signs of near failure. If you find and correct possible conditions of failure, you can prevent failures in the aircraft and make the equipment more reliable.

2. Equipment and Materials

   No equipment required.

3. Procedures

   A. General

      (1) Make sure that the Restraint System is clean and does not contain:

      - Dirt
      - Oil or grease
      - Other unwanted particles or substances.

      (2) Make sure all parts are satisfactorily attached.

   B. Webbing

      NOTE: Slight wear of the webbing is permitted. However, excessive web wear that has progressed to cut or worn edges must be replaced, as described below.

      (1) Examine webbing for:

      - Cut or worn edges
      - Damaged stitching
      - Broken fabric threads
      - Tears
      - Excessive chafe marks
      - Excessive wear
      - Excessive fusing

      (2) Replace webbing if any of the following are observed:

      - A limited amount of “frayed” webbing will retain sufficient strength necessary to meet the required strength. Frayed webbing is defined as broken filaments from either the warp (longitudinal) yarns or the filler (transverse) yarns. The number of broken filaments should not be sufficient to obscure the identity of any yarn when viewed from a distance of about 8 inches.

- Any web that is cut or torn on the edge should be replaced.
- The amount of fray should be limited to an amount that is less than 10% of the width of the webbing and not to exceed 8 inches in length.
- Webbing with more than 15 broken yarns in locations other than the edge.
- Webbing that is frayed or distorted sufficiently to cause improper operation of any portion of the restraint system.
- A total of 15 stitches can be torn in a stitch pattern before the webbing needs replacement.

(3) Examine labels for legibility.

3. C. Fittings

NOTES: 1. Burrs, nicks and scratches is material raised above the normal surface. This material must be removed to make sure that the parts will fit together correctly.

2. Dents must not damage the finish or functional operation of any parts.

(1) Examine fitting for:

- Burrs, nicks, or scratches
- Cracks
- Dents
- Corrosion

D. Buckle and connector assemblies

(1) Examine buckle and connector for:

- Burrs, nicks, or scratches
- Cracks
- Dents
- Corrosion

E. Reel Assembly

(1) Examine reel assembly for:

- Burrs, nicks, or scratches
- Cracks
- Dents
- Corrosion

(2) Make sure movable parts operate correctly.

4. Inspection for Continued or Renewed Airworthiness

A. General

Inspection of the restraint is in accordance with the “on condition” principle and is governed by an inspection and servicing schedule. The restraint may remain in service until defects are found upon inspection or in use.

As a minimum, Am-Safe recommends a yearly inspection of the restraint. The continued use is subject to the routine inspection interval of the airframe by conducting a functional inspection check of the restraint in accordance with the procedures listed in the TESTING and FAULT ISOLATION and CHECK sections of this CMM. The service life is subject to the periodic inspection while in service and depends on the service environment in which it is used and the degree of use over the installation period. This subsequently places the responsibility for the continued airworthiness of the restraint on the installer/operator since the flight times, usage, and operating environment will vary by operator. The frequency of the inspection interval should be adjusted appropriately by the installer/operator to ensure the continued airworthiness of the restraint. If the restraint is no longer usable based on the inspection for continued or renewed airworthiness, it must be discarded or returned to Am-Safe or an Am-Safe approved repair station for overhaul/repair.

B. Inspection Intervals

- Concurrently with the airworthiness inspection of the airframe.

- When the equipment has sustained damage or whenever malfunctions occur.

- When the equipment is transferred to another owner or for any special reason.

- When the equipment has been over-stressed or if over-stress is suspected. Visual inspection of the restraint will not always reveal the extent of the damage caused by over-stress/crash impact/severe loading conditions. In order to ensure that the original design performance and structural integrity is maintained, the user should remove and replace all restraints within the aircraft after over-stress/crash impact/severe loading conditions have occurred.

C. Inspection Responsibility

Inspection of the restraint for continued or renewed Airworthiness must only be performed by the manufacturer or by agencies specially approved by the aviation authorities.

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REPAIR

1. Task

The primary repair of the Restraint System is replacement of defective parts, and replacement or repair of defective subassemblies. Disassemble the unit only to the level necessary to make repairs. When new parts are necessary, refer to ILLUSTRADED PARTS LIST (IPL) for the correct part numbers, quantities, and hardware that attaches.

CAUTION: THE RESTRAINT SYSTEM MAY NOT BE DISASSEMBLED BEYOND THE LEVEL INDICATED IN THE "DISASSEMBLY" SECTION. FURTHER REPAIR BEYOND THE LEVEL INDICATED BELOW OF THIS SYSTEM MAY ONLY BE CARRIED OUT BY AM-SAFE INC. (USA), AM-SAFE LTD. (UK) OR AN AM-SAFE-APPROVED REPAIR STATION. AM-SAFE INC. IS NOT RESPONSIBLE FOR DAMAGE OR MALFUNCTIONS RESULTING FROM ANY UNAUTHORIZED ATTEMPT TO REPAIR OR DISASSEMBLE THE RESTRAINT SYSTEM.

2. Equipment and materials

WARNING BEFORE USING A MATERIAL, KNOW THE HAZARD CODE AND GET THE NECESSARY PROTECTION. REFER TO THE PAGE ABOUT HAZARD CODES FOR MATERIALS IN THE FRONT OF THIS MANUAL.

NOTE: Equivalent alternatives are permitted for the equipment and materials in this list.

Abrasive cloth (Federal Specification P-C-451) – Optional source

Crocus cloth (Federal Specification P-C-458) – Optional source

Epoxy Paint (Color no. 37038 per Fed-Std 595) – Optional source, HAZARD CODE 230D

Epoxy Primer (Military Specification Mil-P-23377) – Optional source, HAZARD CODE 230D

3. Procedure

CAUTIONS:

1. REPLACEMENT OF DAMAGED METAL PARTS ON THE RESTRAINT SYSTEM IS NOT PERMITTED.
2. REPAIR OF DAMAGED WEBBING ON THE RESTRAINT SYSTEM IS NOT PERMITTED.

(1) Use an abrasive cloth to remove minor nicks and scratches from aluminum parts.

(2) Use crocus cloth to remove minor nicks and scratches from steel parts.

(3) For painted surfaces, apply a coat of epoxy primer followed by a coat of black epoxy paint.

(4) Clean the parts when the repair is complete.

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ASSEMBLY (Including Storage)

1. Task

   This subheading provides instructions to assemble each subassembly and to put the subassemblies together to make a Restraint System. Do only those procedures applicable to the level of disassembly done.

   Refer to paragraph 4 for storage instructions.

2. Equipment and Materials

   No equipment required.

3. Procedure

   None

4. Storage

   A. If you must keep the Restraint in storage, keep it in conditions with a temperature range of -22 to +131 °F (-30 to +55 °C). You must protect the Restraint from sunlight, dust, moisture, and other contamination.

   B. After removal from storage, new restraints shall be subject to an inspection check in accordance with the TESTING and FAULT ISOLATION and CHECK sections of this CMM before installation into the aircraft.

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ILLUSTRATED PARTS LIST

1. Introduction

The ILLUSTRATED PARTS LIST provides illustrations and detailed parts list for the subject equipment in disassembly order.

2. How to Use the Parts List

A. The Detailed Parts List shows assemblies, subassemblies, and detail parts of this unit. The indenture of sub-unit parts shows their relationship to the unit. Part numbers and nomenclature identify each part. Assembly and sub-assembly part numbers in this restraint include four numeric characters at the end of the part number to designate web type and color. In the IPL table the assemblies are defined with black webbing -2251 black nylon for the lap belt portion and -3192 black nylon for the shoulder harness. For any other color, contact AM-SAFE customer service. Item numbers refer to the accompanying illustration. Use them for locating a part that you find in the Reference Designator Index, or illustration.

B. The EFF (Effectivity) Code Column shows the differences between similar units or subassemblies that are in the same parts list.
- If this column is blank, the part goes in all the units shown in that figure.
- If this column has a letter in it, that part only goes into the unit or subassembly that relates to the letter.
- If this column has more than one letter, the part goes into each unit or subassembly that relates to the letters.

C. The Units Per Assembly shows the quantity of each part used in the next higher assembly.

3. Identifying Parts

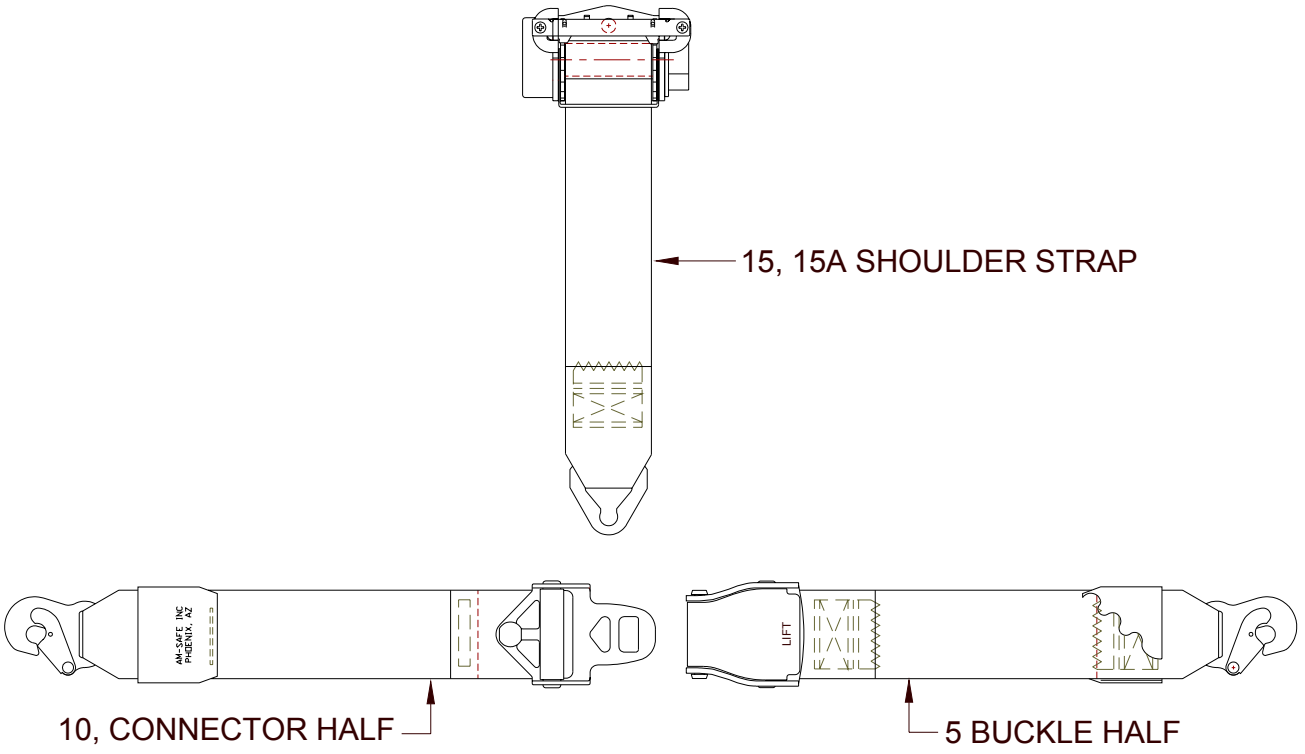
If you do not know a part number, refer to the illustration in which you found the part. Find the item number of the part and refer to the Detailed Parts List.

4. Abbreviations

A. The abbreviation in this parts list agrees with ASME Y1.1.

B. This abbreviation is not standard:

RF - This identifies reference callout.



Restraint System Assembly
Figure 1

FIG. ITEM		PART NUMBER	AIRLINE STOCK NO.	NOMENCLATURE 1234567	EFF CODE	UNIT PER ASSY
				USABLE ON CODES CODE A 504920-401* CODE B 504920-403*		
1	1	504920-401		RESTRAINT SYSTEM	A	RF
	1A	504920-403		RESTRAINT SYSTEM	B	RF
	5	504920-201*		BUCKLE HALF		1
	10	504920-203*		CONNECTOR HALF		1
	15	504920-205**		SHOULDER STRAP	A	1
	15A	504920-207**		SHOULDER STRAP	B	1

* -2251 FOR BLACK NYLON WEBBING, FOR ANY OTHER COLOR, CONTACT AM-SAFE CUSTOMER SERVICE

** -3192 FOR BLACK NYLON WEBBING, FOR ANY OTHER COLOR, CONTACT AM-SAFE CUSTOMER SERVICE