



SUPPLEMENTAL INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

AMS SAFE® AVIATION AIRBAG SYSTEM (AMS SAFE AIRBAG) V23 SYSTEM

**for
CubCrafters, Models Sport Cub S1 and S2 Light Sport Aircraft**

SAA Series No. 7065

AmSafe Aviation Document Number E510152 Revision B

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REVISION HISTORY

Updates and revisions to this manual will be distributed only to CubCrafters, Ltd, as necessary. Distribution or notification of these updates to the individual owner/operator of the affected aircraft will be the responsibility of CubCrafters, Ltd.

Access to all applicable and appropriate documentation is available through AmSafe Aviation's web site at www.amsafe.com. Select and click on "New Customer/Partner Site" link on bottom left of page.

NOTE: Registration is by Service Center user and password only. No individual registrations will be processed.

First Time User – Select "Register" button and fill in all information. Under "Notes", indicate Service Center location and number, if applicable. After registration is accepted, enter user name and password and click on "Go" button. This will access the client-specific page which contains associated, most-current AmSafe documents/drawings for the program. Adobe Acrobat (Reader) 5.0 or later version must be used to view, print, or save a copy of desired document/drawing.

It is requested that all aircraft newly equipped with the AmSafe Airbag System be registered with AmSafe through the client web page form.

Rev.	Prepared	Approved	Revision Summary	Date
NC	K. Kleisler	W. Gehret	Initial Issue	09-19-07
A	K. Kleisler	W. Gehret	Changed configuration to -3 in Parts List	07-03-08
B	F. Armenta	W. Gehret	Updated Inflator life limit to 10 years without refurbishment. Updated torque value to 120 for hose connection to inflator.	3-17-09

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INTRODUCTION

DESCRIPTION

This manual contains service and maintenance instructions for the AmSafe Aviation Airbag (AmSafe Airbag), V23 Version, installed on the CubCrafters, Models Sport Cub S1 and S2 Light Sport aircraft. The AmSafe Airbag V23 System is a self-contained, modular, four-point restraint system that provides added protection from serious head-impact injury during a survivable aircraft crash.

SYSTEM OPERATION

Within milliseconds of an injurious crash event, the EMA's crash sensor evaluates the crash pulse and then sends a crash pulse signal through the activation circuit. This signal releases the gas in the inflator, resulting in the airbag within the airbag belt's cover breaking through the cover's tearable seam, and filling the airbag to its fully-inflated state. The inflating airbag will automatically position itself between the forward monument and the occupant thus providing head protection during the most critical time of the event. After airbag deployment, the airbag deflates to enable the occupant to egress the aircraft without obstruction from the airbag.

The crash sensor's predetermined deployment threshold does not allow inadvertent deployment during normal operations, such as hard landings, vibration, or turbulence.

The system is active when it is completely electrically connected. Join (buckle) the four-point restraint in the same manner as any other four-point seatbelt.

SYSTEM COMPONENTS AND PARTS LIST

The AmSafe Airbag V23 System consists of these core components:

- Seatbelt Airbag Assembly (SAA)
- Inflator Assembly
- Electronics Module Assembly (EMA)
- Cable Interface Assembly and Retractable Extension Cable Assembly

The SAA (1A, 1B) consists of two primary subassemblies; the Four-Point Airbag Belt Assy and the Connection Assembly (see Figure 1). The SAA mounts to seat and aircraft structure using existing mounting points. The Retractable Extension Cable Assembly (40) provides the electrical connector to the Inflator Assy (30) and the Cable Interface Assy (41).

The Inflator Assembly (30) (Figure 1) is within the Inflator Cover of the SAA. The Inflator Assembly is designed to be thrust-neutral without modification for shipping and storage.

The Cable Interface Assy connects the EMA (50) to two Retractable Extension Cable Assemblies and also provides a Diagnostic Tool Connector leg (see Figure 1). The Diagnostic Tool Connector connects to the System Diagnostic Tool to facilitate system functional checks.

The EMA, which contains the system electronics and system power (Lithium-type battery), is mounted to aircraft structure.

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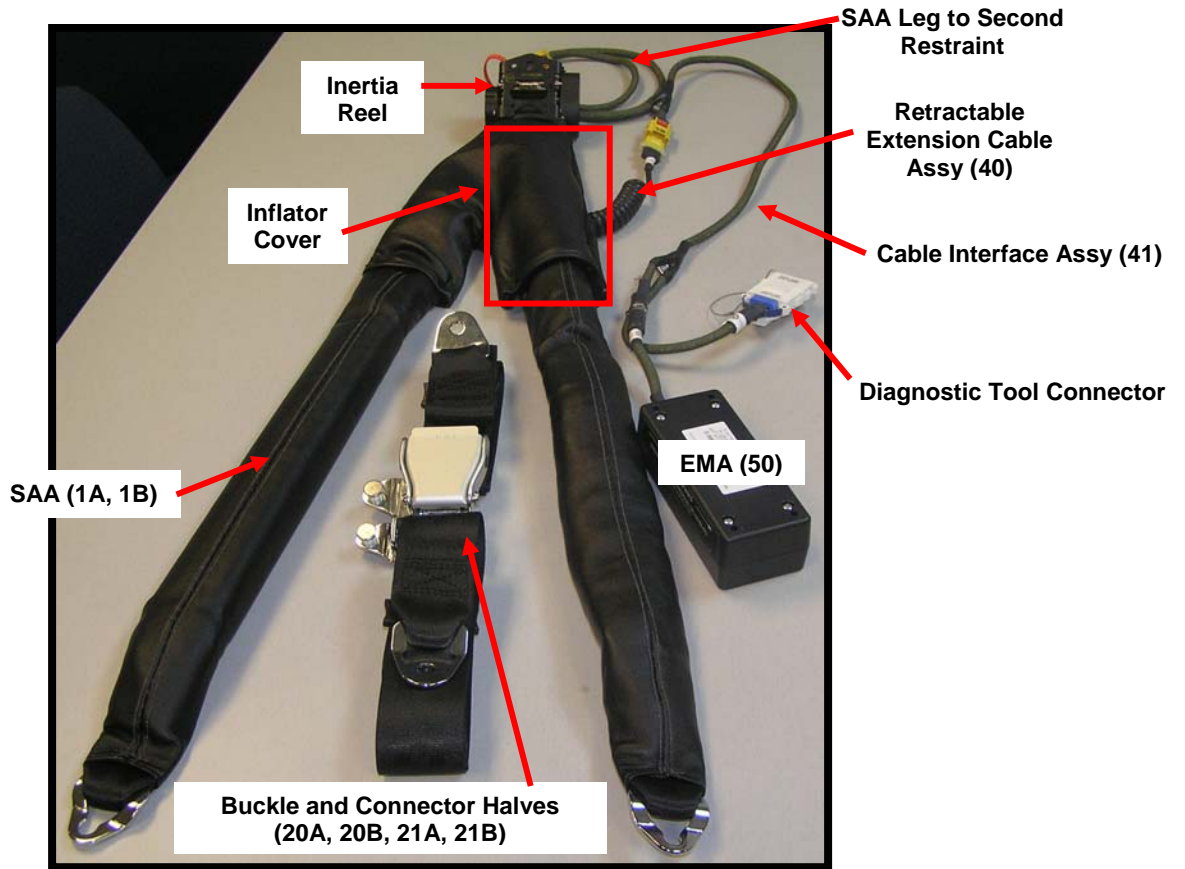


Figure 1 – Representative Four-Point V23 System Components

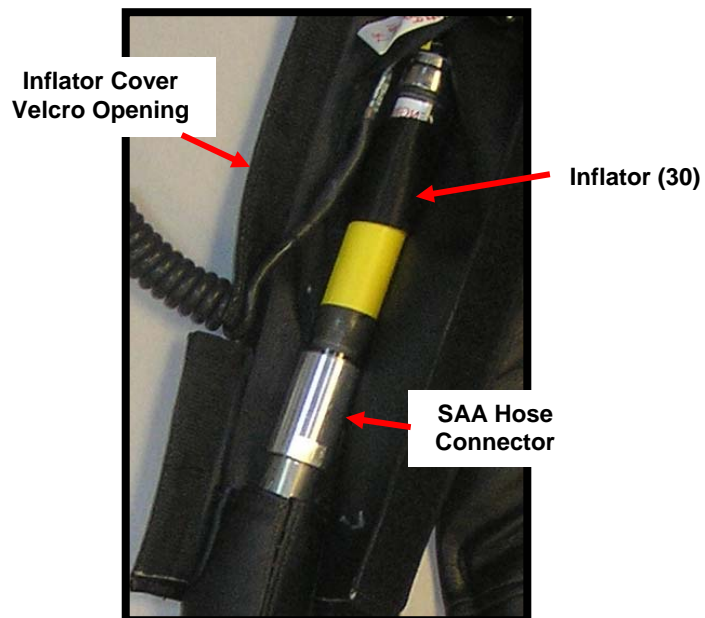


Figure 2 – Inflator within the SAA Inflator Cover

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Figure 3 – V23 System Diagnostic Tool, P/N 508987-401

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Sport Cub Models S1 and S2 AmSafe Airbag System Parts List

Fig. No.	Item No.	Part Number	Part Description	Used On	510061-205-XXXX
1	1A	7065-3-011-XXXX*	AMSAFE AIRBAG V23 SEATBELT AIRBAG ASSEMBLY (FRONT - PILOT SEAT)	A	1
1	1B	7065-3-031-XXXX	AMSAFE AIRBAG V23 SEATBELT AIRBAG ASSEMBLY (REAR - CO-PILOT SEAT)	B	1
1	10A	7065-217011XXXX	FOUR-POINT AIRBAG BELT – FRONT SEAT (PILOT)	A	1
1	10B	7065-219031XXXX	FOUR-POINT AIRBAG BELT – REAR SEAT (CO-PILOT)	B	1
1	20A	7065-221011XXXX	CONNECTOR HALF – FRONT SEAT (PILOT)	A	1
1	20B	7065-221031XXXX	CONNECTOR HALF – REAR SEAT (CO-PILOT)	B	1
1	21A	7065-223011XXXX	BUCKLE HALF – FRONT SEAT (PILOT)	A	1
1	21B	7065-223031XXXX	BUCKLE HALF – REAR SEAT (CO-PILOT)	B	1
2	30	510226-401	INFLATOR ASSEMBLY (ASH-2.2) .51 Moles	A/B	2
	-31	508298-1	STRAP, TIEDOWN	A/B	4
1	40	509828-203	CABLE ASSEMBLY, RETRACTABLE EXTENSION	A/B	2
1	41	508976-221	CABLE INTERFACE ASSEMBLY – Pilot and Co-Pilot	A/B	1
	-42	508346-1	TRACK, CONNECTOR	A/B	1
1	50	508358-421	ELECTRONICS MODULE ASSEMBLY	A/B	1
3	60	508987-401	V23 SYSTEM DIAGNOSTIC TOOL	A/B	A/R

- Item not shown
*XXXX – color code

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MAINTENANCE AND INSPECTION

Maintenance

No other maintenance is required other than an annual inspection and functional testing of the system.

System Functional Testing

WARNING IF AMSAFE AIRBAG SYSTEM IS NOT ELECTRICALLY FUNCTIONAL, ENHANCED OCCUPANT PROTECTION PROVIDED BY THE AMSAFE AIRBAG SYSTEM WILL NOT OCCUR.

Other than annually, a system functional test is to be performed when components are disconnected/reconnected, removed and replaced and when aircraft receives a post-incident inspection as defined in 14CFR Part 830.2. This is the only means by which system functionality can be checked. If, upon disconnecting and reconnecting the system (such as when removing a seat), a system functional test cannot be performed immediately, perform a system functional test at the earliest opportunity.

To perform a functional test for the AmSafe Airbag V23 System, use the V23 System Diagnostic Tool. For complete instructions on the use of the V23 System Diagnostic Tool, please refer to the appropriate V23 SDT Operation and Maintenance Manual as listed in the Reference Documents section.

NOTE: It is required, after completion of functional testing, to document this task as an entry in the aircraft's logbook.

Post-Incident Aircraft Documentation Process

The documentation process for the repair facility is as follows:

1. The repair facility will do a complete inspection of the aircraft as defined by AmSafe maintenance documentation
2. Any discrepancies will be noted and the work order line items will be defined for completion of the aircraft repair.
3. All maintenance/repairs must be accomplished per FAA AC 43.13-1B.
4. Once maintenance/repair is completed and the work order is closed, manufacturer checklist/maintenance documentation is filed with the closed Work Order and must be kept on file for a period of three (3) years.
5. An entry is required to be made in the aircraft logbook stating that the maintenance action for specific items/systems was performed "per AmSafe Supplemental Instructions for Continued Airworthiness, Document No. E510152, Section - Maintenance and Inspection."

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Inspection

A detailed visual inspection should be performed at a minimum of once annually.

<p>Check Seatbelt Airbag Assembly for:</p> <ul style="list-style-type: none"> • Cut or worn edges • Damaged stitching • Broken fabric threads • Holes or tears • Excessive chafe marks • Excessive wear • Excessive fraying • Holes in airbag cover or tear-away seam <p>Note: Slight wear of the webbing or airbag cover is permitted. Excessive web wear that has progressed to cut or worn edges of .25 inches or more should be replaced. Excessive airbag cover wear that has progressed to cut or worn edges of .25 inches or more should be replaced.</p>	<p>Replace belt assembly if any of the following are observed:</p> <ul style="list-style-type: none"> • Frayed webbing is defined as broken filaments 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 fabric is cut or torn from the edge. • The amount of fray exceeds 10% of the width of the webbing and exceeds 8 inches in length. • Webbing with more than 15 broken yarns in locations other than the edge. <p>Webbing that is frayed or distorted sufficiently to cause improper operation of any portion of the restraint system.</p>
<p>Check seat belt hardware (end fittings, buckle, connector) for:</p> <ul style="list-style-type: none"> • Cracks • Dents • Corrosion 	<p>If any cracks are visible on the seat hardware, the assembly should be replaced. Dents or corrosion on the metal components must not affect the functional operation of any parts. Replace assembly if operation is affected.</p>
<p>Check exposed cables for:</p> <ul style="list-style-type: none"> • Fraying • Excessive wear of cable protective sleeving • Tears 	<p>If any exposed cables show signs of excessive wear, the assembly should be replaced.</p>
<p>Check Cable Interface Assembly and Retractable Extension Cable Assembly for:</p> <ul style="list-style-type: none"> • Secure connections and connectors 	
<p>Check Inflator for:</p> <ul style="list-style-type: none"> • Loose Hose connection • Unsecured electrical connections 	
<p>Check EMA for:</p> <ul style="list-style-type: none"> • Loose connections • Loose mounting hardware and cracks or deformation • EMA housing cracks 	

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Cleaning

It is recommended that AmSafe Airbag system components be cleaned on a regular (annual) basis. Build-up of dirt and debris could interfere with system operation, shorten the life of the system, and cause corrosion of metal parts. Surface clean the belt assembly, hoses, cables, inflator assembly, and EMA.

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

Qty	Description	Part Number
AR	Warm water in a spill-resistant container	Standard Issue
AR	Soft lint-free washing cloth	Standard Issue
AR	Sponge or soft brush	Standard Issue
AR	Mild soap	Standard Issue (household dishwasher liquid soap, household laundry detergent)
AR	Leather Cleaner and Conditioner	As required by aircraft Seat manufacturer
AR	Isopropyl Alcohol	Standard Issue

WARNING: DO NOT SOAK PARTS TO BE CLEANED WITH EITHER WATER SOLUTION OR ISOPROPYL ALCOHOL. DOING SO MAY DAMAGE THE AMSAFE AIRBAG SYSTEM.

CAUTION: THE BELT ASSEMBLY MUST NOT BE DRY CLEANED OR IMMERSSED IN WATER.

CAUTION: AVOID EXCESSIVE USE OF WATER WHEN CLEANING. MOISTURE MAY DAMAGE INTERNAL COMPONENTS AND CAUSE COMPONENT FAILURE.

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

CAUTION: WHEN USING ISOPROPYL ALCOHOL, AVOID ANY CONTACT WITH THE WEBBING, AIRBAG COVER, OR GAS HOSE MATERIAL.

When cleaning non-metallic parts, use warm water and household soap/laundry detergent. Care should be taken to use only enough cleaning agent to produce minimal suds. Apply cleaning solution with a damp (wrung-out) washing cloth. Do not leave residue on cleaned areas. Rinse, if necessary, with clear water on a damp (wrung-out) washing cloth. Hand-wash the webbing and gas hose. Gentle scrubbing with a soft brush and cold soapy solution is permissible. Air dry the belt assembly. Do not dry the belt assembly in sunlight or near any source of heat.

Leather airbag covers only:

Hand wash and condition airbag cover with leather cleaning product as directed by leather manufacturer. It is recommended that conditioner be used – following manufacturer’s directions. Condition leather airbag cover after clean and dry. If leather cover is not conditioned, it will crack and dry. Follow leather manufacturer’s instructions for leather conditioner.

Non-leather airbag covers only:

When cleaning using warm water and household soap/laundry detergent, care should be taken to use only enough cleaning agent to produce minimal suds. Apply cleaning solution with a damp (wrung-out) washing cloth. Do not leave residue on cleaned areas. Rinse, if necessary, with clear water on a damp (wrung-out) washing cloth.

If necessary, clean the airbag hardware with a lint-free cloth moistened with isopropyl alcohol.

If cleaning of the EMA is required, cover cable opening into the EMA with pieces of cloth.

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Hand-wash the Inflator and cables with a lint-free cloth moistened with a cold water/mild soap solution.

STORAGE OF SPARES

Inflator Assembly

NOTE: AmSafe Airbag system Inflator must be handled and stored by a person trained in the requirements associated with dangerous goods

Store the Inflator in a cool and dry environment. Acceptable temperature range is -22 to +131°F (-30° to +55°C). The Inflator should be protected from sunlight, dust, moisture, and other contamination. When storing, observe all appropriate Inflator Assembly warnings and cautionary statements as directed in the "Removal and Replacement" section. Observe all local storage regulations.

The maximum continuous storage time for the Inflator is 10 years from date of manufacture, after which the Inflator should be returned to AmSafe Aviation for condemnation. The inflator must be renewed after a continuous storage period of ten (10) years from date of manufacture. The actual maximum storage time of the gas storage container and the internal squib of the Inflator Assembly is in excess of 10 years, allowing a factor of safety for excess storage time and shipment.

Electronics Module Assembly (EMA)

Store the EMA in a cool and dry environment. Acceptable temperature range is -22 to +131°F (-30° to +55°C). The EMA should be protected from sunlight, dust, moisture, and other contamination. When storing, observe all appropriate EMA warnings and cautionary statements as directed in the "Removal and Replacement" section.

The maximum continuous storage time for the EMA is 14 years from date of manufacture, after which the EMA should be discarded. An EMA must be renewed after a period of seven (7) years from date of manufacture and must be returned to AmSafe Aviation for refurbishment.

Seatbelt Airbag Assembly (SAA)

Store the SAA in a cool and dry environment. Acceptable temperature range is -22 to +131°F (-30° to +55°C). The SAA should be protected from sunlight, dust, moisture, and other contamination.

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REMOVAL AND REPLACEMENT

These maintenance instructions provide the necessary detail to remove and replace the AmSafe Airbag V23 System.

WARNING: AVOID MAGNETIC FIELDS IN THE VICINITY OF THE ELECTRONICS MODULE ASSEMBLY. DEPLOYMENT OF THE SYSTEM MAY OCCUR.

WARNING: WHEN REMOVING/STOWING A SEAT FROM THE AIRCRAFT, DISCONNECT CABLE INTERFACE ASSY FROM EMA **BEFORE** REMOVAL OF THE SEAT. AN ELECTRICALLY CONNECTED AMSAFE AIRBAG RESTRAINT SYSTEM MAY RESULT IN DEPLOYMENT OF THE SYSTEM.

WARNING: THE INFLATOR ASSEMBLY IS A STORED, GAS/ENERGETIC MATERIAL DEVICE. SEVERE PERSONAL INJURY OR BODILY HARM MAY BE CAUSED BY MISUSE AND/OR TAMPERING. DO NOT TAMPER WITH OR MISHANDLE THE PRODUCT IN ANY WAY. **NEVER** ATTEMPT TO OPEN THE INFLATOR TO SERVICE THE INFLATOR SYSTEM. **NEVER** APPLY ELECTRICAL CURRENT TO THE ELECTRONICS CONNECTION.

CAUTION: DO NOT DROP THE AMSAFE AIRBAG SYSTEM EMA. DAMAGE TO THE ELECTRONICS, BATTERY, OR SENSOR MAY OCCUR.

Equipment and Materials Required

The following items are required to remove the AmSafe Airbag System.

Description	Part Number
Safety Glasses	Standard Issue
Screwdriver Bit Set, Hex Drive	Standard Issue
Torque Wrenches, In. Lb. Type to accommodate a minimum of 60 In. Lbs of torque	Standard Issue
Thread Locking Compound, Loctite 242	Loctite Corporation 1-800-LOCTITE (562-8483)

The following table identifies the appropriate torque value, tool, and tool size to use for attaching hardware.

Callout/Figure	Part Description	Associated Subassembly	Tool and Size	Torque - In. Lbs.
Figure 6	Hose Connection to Inflator	SAA/Inflator	Torque Wrench, In. Lb type	120

Table 1 - Torque Values and Tool Sizes

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Refer to Figures 1, 2, and 3 and parts list in the INTRODUCTION Section for referenced callouts unless noted.

Removal

WARNING: WHEN REMOVING THE EMA, DISCONNECT CABLE INTERFACE ASSEMBLY BEFORE REMOVING EMA MOUNTING BOLTS. **UNSECURED, ELECTRICALLY CONNECTED EMA MAY RESULT IN INADVERTENT DEPLOYMENT OF THE AIRBAG.**

CAUTION: **VERIFY AMSAFE AIRBAG SYSTEM IS ELECTRICALLY DISCONNECTED BEFORE REMOVAL/REPLACEMENT OF ANY SYSTEM COMPONENTS AND/OR REMOVAL OF THE SAA FROM THE SEAT/AIRCRAFT.**

1. Disconnect the **Cable Interface Assembly** (41) from the **Retractable Extension Cable Assembly** (Figure 1) (40) by sliding the Red Locking Tab backwards to the unlocked position, depressing the Yellow Tab, and then pulling apart both connector halves (Figure 4).

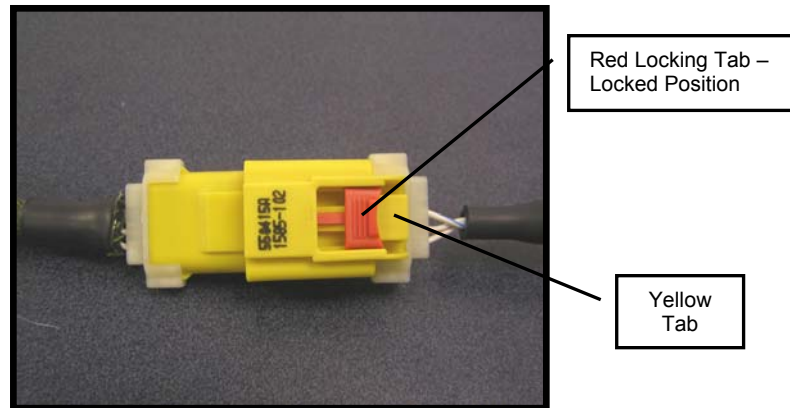


Figure 4 – SAA and Retractable Extension Cable Assembly Electrical Connector

2. Remove strain relief from the **Retractable Extension Cable Assembly's** SAA Connector on the Inertia reel's mounting plate (refer to Sport Cub AmSafe Airbag system installation drawing) taking care not to damage connector or cable.
3. Remove **SAA's** (1A, 1B) inertia reel attachment point from aircraft structure and remainder of restraint from mounting points (refer to Sport Cub AmSafe Airbag system installation drawing). Remove **SAA** from seat of aircraft.

Removal of Inflator within Webbing

- a. Locate **Inflator** (30) within Inflator Cover (Figure 2) of **SAA** by accessing Velcro opening, exposing Inflator.
- b. Remove squib connector from the **Inflator** by squeezing both sides of the connector and gently pulling away from the Inflator (Figure 5).

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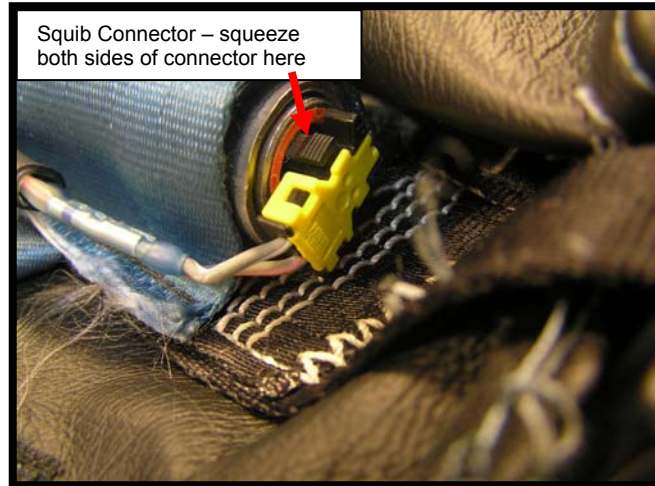


Figure 5 – Electrical Connector of Inflator

- c. Carefully cut nylon ties at both ends of **Inflator** taking care not to cut or damage wires.
- d. Remove **Retractable Extension Cable Assembly** from inside Inflator Cover.

CAUTION: If replacement of **Inflator** is not immediately possible, cover **Inflator** hose connector to protect from debris.

- e. Disconnect the gas hose from the **Inflator** (Figure 6). The gas hose barb is Loctite coated which makes it a very secure fit. Use a second back-off wrench for loosening. DO NOT damage end of gas hose if using any type of locking pliers.

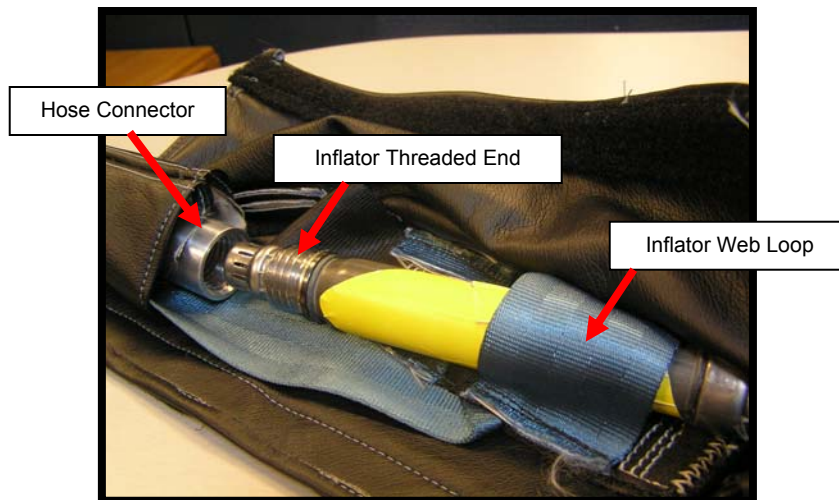


Figure 6 – Hose Connectors of Inflator Assembly

- 4. Disconnect the **Cable Interface Assembly** from the **EMA** (50) by depressing locking mechanism, releasing the connector halves.
- 5. Remove Diagnostic Tool Connector from its mounting location (refer to Sport Cub AmSafe Airbag system installation drawing).

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6. Remove **Cable Interface Assembly**.
7. Remove **EMA** from mounting hardware (refer to Sport Cub installation drawing).

Replacement

Replace all AmSafe Airbag system components with same part number as that of removed assembly. Refer to aircraft AmSafe Airbag system installation instructions and drawing to define cable routing.

WARNING: AVOID MAGNETIC FIELDS AT ALL TIMES IN THE VICINITY OF THE EMA. DEPLOYMENT OF THE SYSTEM MAY OCCUR.

Replacement of Inflator within Webbing

- a. Access Velcro opening to **Inflator Cover** of the **SAA** (1A, 1B). Insert **Inflator** (30) into Inflator Web Loop with the Squib Connector end toward inertia reel assembly (Figure 6).
- b. If present, remove the end cap plug (if new SAA) from restraint assembly gas hose and discard.

NOTE: Apply a thin, even coat of Loctite 242 onto the first three threads of hose connector before attaching to Inflator threaded end. Remove excess compound after installation.

- c. Connect gas hose from restraint assembly to **Inflator** using required in/lbs torque. See Table 1 for torque value. DO NOT twist hose during attachment. The **Inflator** hose connector fitting (Figure 5) must be fully seated onto the gas hose connector for an air-tight fit.
- d. Remove all evidence of previous torque stripe from hose fitting and **Inflator** (as necessary). Apply new torque stripe.
- f. Attach Squib Connector (Figure 5) located on the **Retractable Extension Cable Assembly** (40) to **Inflator**. Orient connector as shown in Figure 5 and seat into **Inflator** until it locks in place.
- g. Attach **Tiedown Straps** (31), or equivalent, at both ends of the **Inflator** securing cable to **Inflator** taking care not to damage cable or involve Web Loop (Figure 7). Use appropriate tool to cut ends of **Tiedown Straps** so as to not leave sharp edges.

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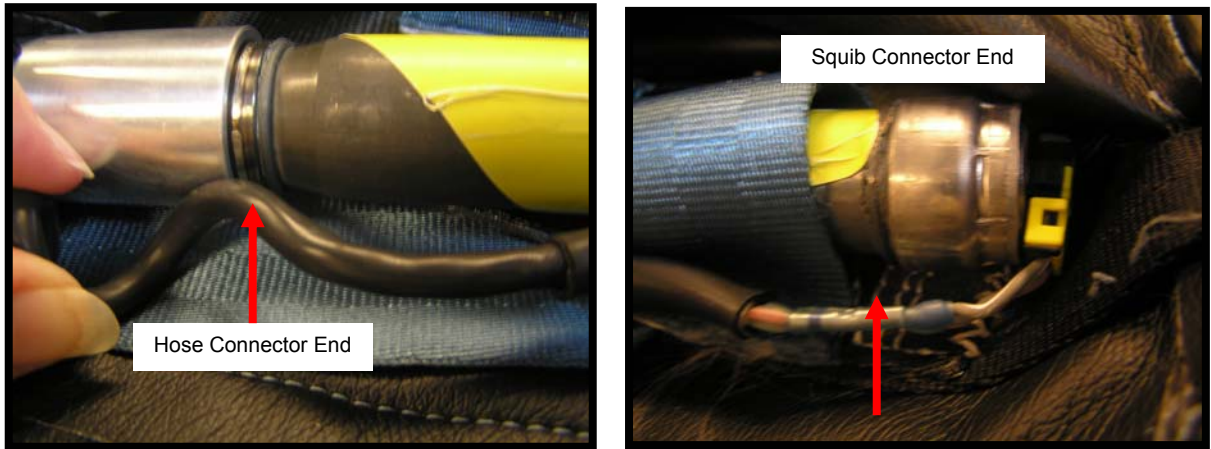


Figure 7 – Tie Points on Inflator

- h. Route remainder of **Retractable Extension Cable Assembly** from inside to outside of Inflator Cover through Velcro closure (Figure 8). This opening is located near the SAA's Hose Connector.
- i. Close Velcro cover over Inflator.

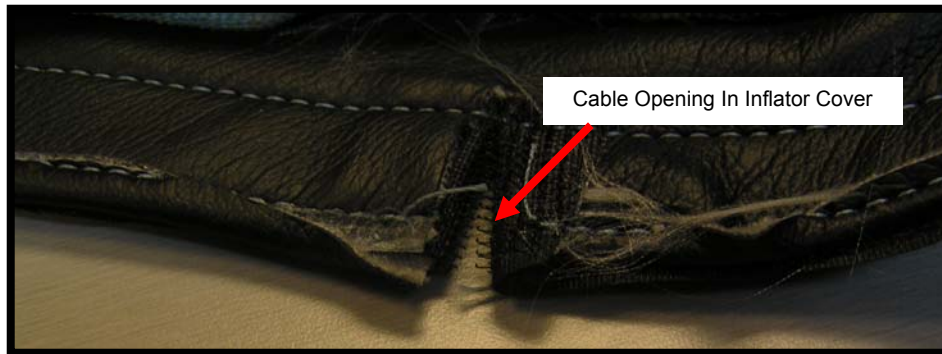


Figure 8 – Retractable Extension Cable Opening Near Hose Connector

1. Attach **Retractable Extension Cable Assembly** SAA Connector to strain relief on inertia reel mounting plate at SAA Connector (refer to Sport Cub AmSafe Airbag system installation drawing for strain relief hardware).
2. Secure restraint system's inertia reel connection point to aircraft structure. Secure lapbelt to aircraft structure or seat mounting point (refer to Sport Cub AmSafe Airbag system installation drawing).
3. Attach **EMA** (50) with mounting hardware and secure (refer to Sport Cub AmSafe Airbag system installation drawing). The arrow on the **EMA** label should face aircraft forward (see Figure 9).

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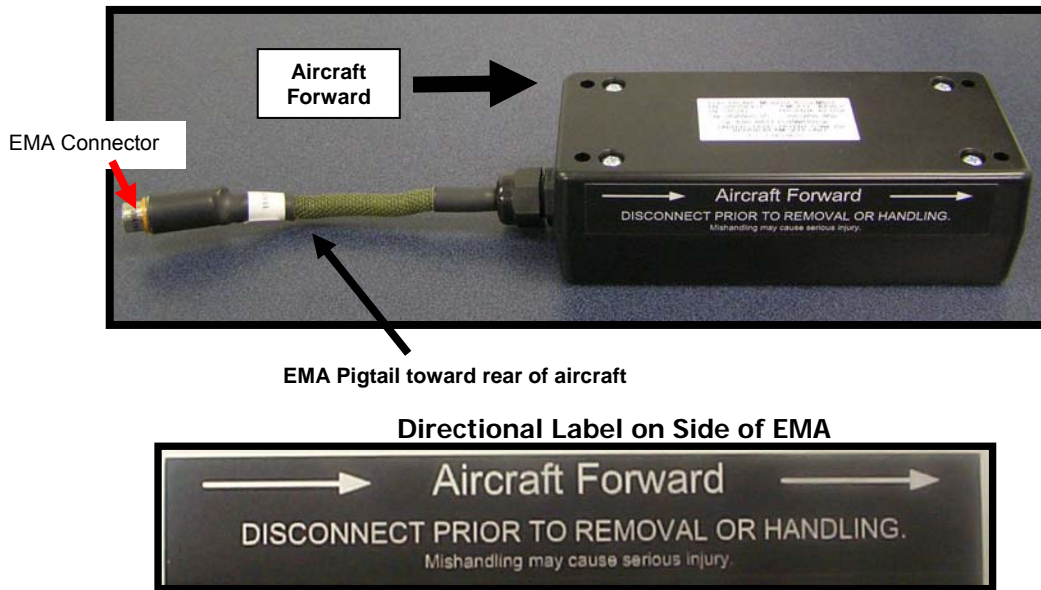


Figure 9 – Typical EMA Aircraft Forward Installation

4. Connect **Cable Interface Assy (40)** to **Retractable Extension Cable Assembly**. Connect mated halves together in proper orientation and slide Red Locking Tab forward to locking position (Figure 4).
5. Connect **EMA** to **Cable Interface Assy's** EMA connector (Figure 9). The connectors are keyed. Align connector halves and seat fully until they lock.
6. Perform functional test on system (refer to V23 System Diagnostic Tool - Operation and Maintenance Manual for testing procedures).

NOTE: It is required, after completion of functional testing, to document this task as an entry in the aircraft's logbook.

AIRWORTHINESS LIMITATIONS

The Airworthiness Limitations section is FAA-approved and specifies maintenance required under §§43.16 and 91.403 of the Federal Aviation Regulations, unless an alternative program has been FAA approved.

Continued or renewed airworthiness of the AmSafe Airbag System is to be determined by means of an inspection and may only be performed by the manufacturer or by agencies specially approved by the aviation authorities.

MANUFACTURER'S DEFINED INSPECTION/LIMITATIONS

Inspection Intervals

Concurrently with the airworthiness inspection of the aircraft.

Concurrently with any unscheduled inspection of aircraft involved in an accident/incident, as defined by 14CFR Part 830.2, under the deployment threshold of the AmSafe Airbag System.

When the equipment has sustained damage.

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When the equipment has been over-stressed or if over-stress is suspected.

Upon expiration of the storage/service life as defined in the following sections.

Inoperable AmSafe Airbag System

System inoperable status is determined by;

- cable or component disconnected while aircraft is in service.
- system diagnostic check determines operable or inoperable seat position(s).
- seatbelt airbag has a tear in airbag cover which exceeds the Inspection criteria or buckle/belt is non-functioning.

Condemnation

The EMA is to be removed for disposal after:

- a maximum storage period of fourteen (14) years calculated from the month of manufacture, or;
- upon expiration of the service life defined as the total sum of storage life and installation life, which must not exceed fourteen (14) years calculated from the month of manufacture.

Upon expiration of the service life (total life), the EMA cannot be renewed.

The Inflator Assembly is to be removed and returned to AmSafe Aviation for disposal after:

- a maximum storage period of ten (10) years calculated from the month of manufacture as indicated in the expiration date stamped on the gas cylinder, or;
- upon expiration of the service life defined as the total sum of storage life and installation life, which must not exceed ten (10) years calculated from the month of manufacture as indicated in the expiration date stamped on the gas cylinder,.

Upon expiration of the service life (total life), the Inflator Assembly cannot be renewed.

Renewal

The EMA is to be removed and returned to AmSafe Aviation for refurbishment after:

- a period of seven (7) years calculated from the month of manufacture regardless of storage or service time or combination of both.

The EMA can only be renewed by the manufacturer.

Upon expiration of the service life (total life), the Inflator Assembly cannot be renewed.

WARRANTY AND RETURN INFORMATION

Warranty

Seller warrants to Buyer AmSafe Airbags subject to this Agreement shall be free from defects in workmanship or material and shall conform to Seller's specifications as set forth in its Declaration of Design and Performance or in the Seat Qualification Statement, or equivalent document, which are acknowledged by buyer and incorporated herein by this reference as if fully set forth below.

All claims for defective AmSafe Airbag system units must be presented to Seller, in writing, within three (3) years after date of manufacture of a defective part; provided, however, in the event of defective webbing, claims must be presented to Seller, in writing, within one (1) year of installation of webbing on the AmSafe Airbag System. Disassembly of any part of the SAA, EMA, Inflator Assy, Cable Interface Assy/Inflator Interface Cable, or the System Diagnostic Tool, unless specified by AmSafe maintenance manual, Service Letter, or Service Bulletin, voids the warranty on that component.

**AMSAFE AVIATION
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Returning AmSafe Airbag System Components and RMA Procedures

AmSafe Airbag system components must be routed to AmSafe Aviation to ensure they are tested and repaired by qualified repair technicians and returned to service by a licensed repairperson. The RMA process described in the following paragraphs must be followed.

RMA Procedures

For Return Material Authorization (RMA) number, contact a Customer Service Sales Analyst at (602) 850-2850, or by email at customerservice@amsafe.com. Identify customer's name, location, contact person, and phone number. Request from the customer service representative a Return Material Authorization number (RMA) for either an AmSafe Airbag system repair/replacement component, calibration check, or for re-calibration of the AmSafe Airbag System Diagnostic Tool.

Mark and identify RMA number on the package label. Mailing address will be provided by customer service at time of contact for either AmSafe Airbag system component and/or System Diagnostic Tool.

Packaging and Shipping Requirements – Inflator Assembly

WARNING: FAILURE TO COMPLY WITH ALL RELEVANT DANGEROUS GOODS REGULATIONS REGARDING THE INFLATION DEVICE MAY RESULT IN CIVIL OR CRIMINAL PENALTIES.

Use the original packaging material in which the inflator was received, when it is in a serviceable condition. The inflation device must be shipped in a container which is DOT approved having been UN tested and marked under UN Performance Oriented Packing (POP). A new UN POP container may be requested in the RMA process.

Use only a UN POP shipping container.

The exterior container shall be labeled durably and legibly to show at least:

- All appropriate hazmat labels per Title 49 CFR Section 172.400.
- All appropriate labels required by country of shipping origin.
- When shipping by air, use cargo plane only label

The exterior container shall be marked durably and legibly to show at least:

- All appropriate hazmat markings per Title 49 CFR Section 172.300.
- All appropriate markings required by country of shipping origin.

Markings such as RMA number and ship-to/from addresses shall be placed to avoid loss or obstruction during opening and closing of the container.

Any person performing shipping functions for the inflation device must be trained in accordance with the requirements contained in Title 49 CFR Section 172.700.

All local and relevant international handling, shipping, transporting regulations must be followed.

For shipment by air, the inflation device is to be shipped by cargo plane only. AmSafe Aviation's preferred carriers for shipment of the inflation device are FedEx and Emery Air Freight.

Ship the component to AmSafe Aviation address as stated in previous **RMA Procedures** section.

**AMSAFE AVIATION
SUPPLEMENTAL INSTRUCTIONS FOR CONTINUED AIRWORTHINESS E510152**

Packaging and Shipping Requirements – AmSafe Airbag System Components except the Inflator Assembly

Use the packaging material in which the AmSafe Airbag System was received, when it is in a serviceable condition. If not serviceable, new materials of the same quality and size shall be used.

“Peanut” type foam materials should not be used for dunnage as it tends to migrate in the container, causing the item to shift which can cause shipping damage. Use a minimum of three inches of cushioning material to prevent movement of the item within the container.

Place the RMA number and ship-to/from addresses to prevent loss or obstruction during opening and closing of the container.

REFERENCE PUBLICATIONS

V23 System Diagnostic Tool, P/N 508987-401 - Operation and Maintenance Manual, AmSafe Document No. E509129.

ENGINEERING ORDER

DRAWING NUMBER		DRAWING TITLE				CHANGE ORIGATION:		ORIGINATED BY: F. Armenta	
E510152		Supplemental Instructions for Continued Airworthiness				CRI-7208		ORIGINATION DATE: 3/6/09	
PRODUCT USED ON CubCrafters						EFFECTIVITY		APPROVALS	
						REV LETTER	B	CHECKED BY	
						RELEASE DATE	3/17/09	1474 3/17/09	
DISPOSITION:		U = USE AS IS R = REWORK N = NO EFFECT S = SCRAP	QTY ON HAND	DISP	QTY ON ORDER	DISP	QTY IN WIP	DISP	DRAWING CHANGE TYPE
N/A									NEW RELEASE:
									ADD PART(S):
									SUB. PART(S):
									DIM CHANGE:
									NOTE CHANGE:
									PICTORIAL
									OTHER
NEXT ASSY						CLASS	MAJOR	MINOR	ENGINEERING
N/A								X	QUALITY
									MANUFACTURING
									MARKETING/CUST
									PLANNING
									CERTIFICATION
PROD. LINE CODE		ITEM TYPE CODE				COLOR CODE			
AFFECTED DOCUMENTS	YES	NO	REASON(S) FOR CHANGE						
MFG/TEST/INSP		X	Inflator life limit has changed						
ICA/SICA	X								
PMA		X							
REGULATORY		X							
AFFECTED DOC. NOS.									
DESCRIPTION OF CHANGE (S):		<p>Notes: Effective 09/01/2006, nomenclature reference to Mesa, Arizona in title block of all drawings shall be changed to Phoenix, Arizona. Effective 05/01/07, nomenclature reference to AM-SAFE in the proprietary block of all drawings shall be changed to AMSAFE.</p> <p>Updated Inflator life limit to 10 years (was 14 years with 7 yr refurbishment)</p>							
FORM I-221 REV 06/07								SHEET 1 OF 1	