

## **INSTRUCTIONS FOR CONTINUED AIRWORTHINESS**

For

Portable Stretcher Assembly

**Document No.: AF-558**

**Revision "IR"**

**Revision Date: 06/10/13**

### **Applicable to:**

Cessna models 170, 170A, 170B, 172, 172A, 172B, 172C, 172D, 172E, 172F, 172G, 172H, 172I, 172K, 172L, 172M, 172N, 172P, 172RG, 172Q, 175, 175A, 175B, 175C, 177, 177B, 177RG, 180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K, 182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, T182, R182, TR182, 185, 185A, 185B, 185C, 185D, 185E, 185F, 205, 205A, 206, P206, P206A, P206B, P206C, P206D, P206E, U206, U206A, U206B, U206C, U206D, U206E, U206F, U206G, TP206A, TP206B, TP206C, TP206D, TP206E, TP206F, TU206A, TU206B, TU206C, TU206D, TU206E, TU206F, TU206G, 207, 207A, T207, T207A, 210, 210A, 210B, 210C, 210D, 210E, 210F, 210G, 210H, 210J, 210K, 210L, 210M, 210N, 210R, T210

**Modified by FAA STC SA2-1178**

The information in the Instruction for Continued Airworthiness is FAA accepted material and complies with 14 CFR 23.1529, Instructions for Continued Airworthiness. It supersedes or adds to that provided in the Maintenance Manual for the Cessna 170, 172, 175, 177, 180, 182, 205, 206, 207, and 210 Series Aircraft, only where covered in the items contained herein. For limitations and procedures not contained in the Supplement, consult the Component Maintenance Manual, or other approved airplane data.

## REVISION PAGE

Document Title: Instructions for Continued Airworthiness

Prepared By: Todd Pogue

Updates to the ICA will be made by Aviation Fabricators Inc. Updates will be listed in the log of revisions and the effective pages will be listed below.

<b>Log of Revisions</b>				
<b>REV. NO.</b>	<b>EFFECTED PAGE(S)</b>	<b>DESCRIPTION</b>	<b>DATE</b>	<b>APPROVED BY</b>
IR	All	Initial Release	06/10/13	JRL

Per the requirement of Appendix G of 14 CFR Part 23 paragraph G23.1 (c), the changes made to the ICA by the applicant will be distributed via mail by means of paper copy.

## TABLE OF CONTENTS

DESCRIPTION	PAGE
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS .....	1
REVISION PAGE .....	2
TABLE OF CONTENTS .....	3
ABBREVIATIONS AND DEFINITIONS.....	4
1.0 INTRODUCTION.....	5
2.0 INSPECTION REQUIREMENTS AND OVERHAUL SCHEDULE.....	8
3.0 DIMENSION AND ACCESS: .....	9
4.0 LIFTING AND SHORING .....	9
5.0 LEVELING AND WEIGHING .....	9
6.0 TOWING AND TAXIING .....	9
7.0 PARKING AND MOORING.....	10
8.0 PLACARDS AND MARKINGS.....	10
9.0 SERVICE INFORMATION .....	10
10.0 AIRWORTHINESS LIMITATIONS .....	12
11.0 TROUBLESHOOTING .....	12

## ABBREVIATIONS AND DEFINITIONS

<b>Abbreviations</b>	<b>Definitions</b>
AML	FAA Approved Model List (AML)
Detailed Inspection (DET)	An intensive examination of a specific item, installation or assembly to detect damage, failure or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirrors, magnifying lenses, etc. may be necessary. Surface cleaning and elaborate access procedures may be required.
FAA	Federal Aviation Administration
FAA MIDO	FAA Manufacturing Inspection District Office
General Visual Inspection (GVI)	A visual examination of an interior or exterior area, installation or assembly to detect obvious damage, failure or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to enhance visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight or droplight and may require removal or opening of access panels or doors. Stands, ladders or platforms may be required to gain proximity to the area being checked.
ICA	Instructions for Continued Airworthiness
Special Detailed Inspection (SDI)	An intensive examination of a specific item, installation , or assembly to detect damage, failure or irregularity. The examination is likely to make extensive use of specialized Inspection Techniques and/or equipment. Intricate cleaning and substantial access or disassembly procedure may be required.
STC	Supplemental Type Certificate

## 1.0 INTRODUCTION

The purpose of this Maintenance Manual Supplement and Instructions for Continued Airworthiness (ICA) is to provide the maintenance technician with the information necessary to ensure the continued airworthiness of the Aviation Fabricators portable stretcher installation, per installation number 41-0110K when installed in accordance with Aviation Fabricators design data included on STC Drawing List AF-159 per Supplement Type Certificate (STC) SA2-1178.

Modifications to an aircraft obligates the operator to include the maintenance information provided by this document into the operators aircraft Maintenance Manual and operator's aircraft scheduled maintenance program. This document defines supplementary maintenance operations and frequencies recommended by Aviation Fabricators Inc., to ensure the aircraft's airworthiness.

The information contained herein addresses the requirements specified in 14 CFR 23.1529, Instructions for Continued Airworthiness and supplements the basic Airplane Maintenance Manual only in those areas listed as pertains to the installation of the portable stretcher, as installed per the Aviation Fabricators STC Drawing List AF-159. For limitations and procedures not contained in this supplement, consult the Airplane Maintenance Manual.

### DATA

All information to support the continued airworthiness of this modification is contained in:

STC SA2-1178.  
STC Drawing List: AF-159.

Installation: Installation Instructions AF-105 for p/n 41-0110K

Parts: p/n 41-0110, Portable Stretcher Assembly

The stretcher is a self contained complete assembly that mounts on the existing seat co-pilot seat rails with the stretcher assembly latch pin locking it into place. The head end of the stretcher (aft) when in position rests on and is supported by the rear seat. The occupant is secured by the right front seat belt over the leg area and the right rear seat belt across the chest area.

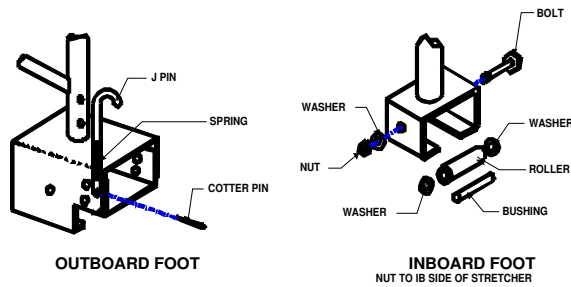
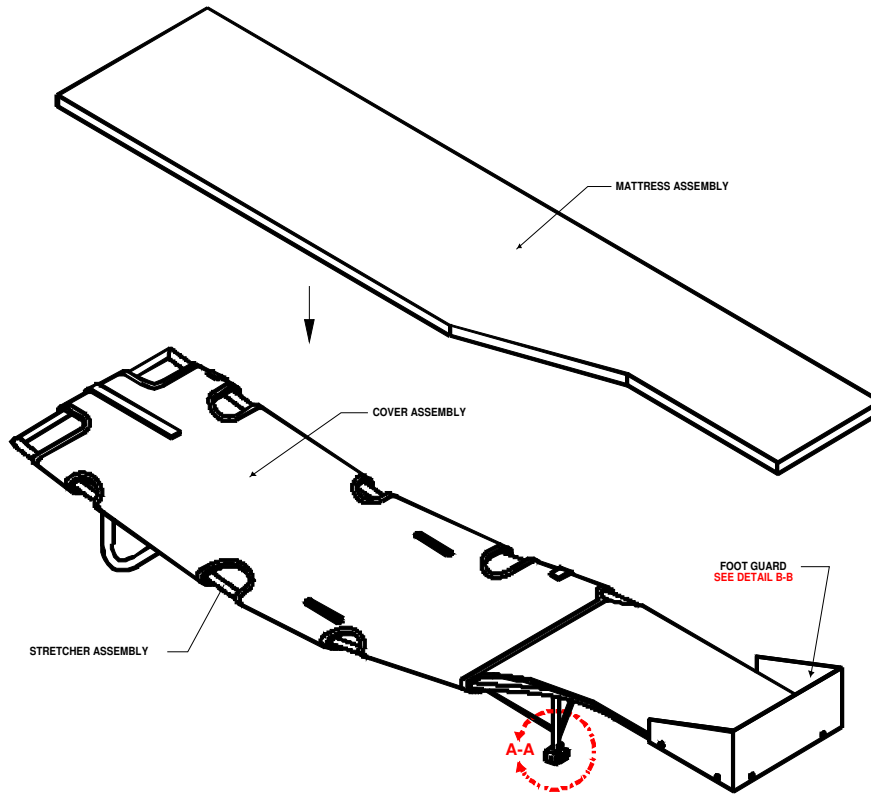
### Design Change Control

All data and changes to the parts and assemblies will be tracked per STC Drawing List AF-159 Rev E or later approved revision.

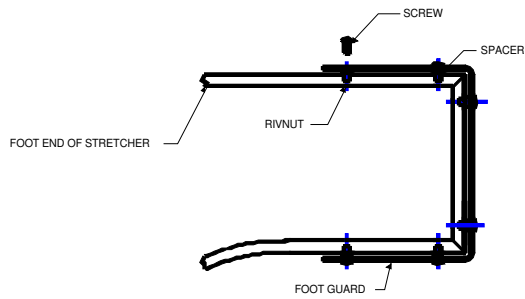
**Applicable Aircraft**

Cessna models 170, 170A, 170B, 172, 172A, 172B, 172C, 172D, 172E, 172F, 172G, 172H, 172I, 172K, 172L, 172M, 172N, 172P, 172RG, 172Q, 175, 175A, 175B, 175C, 177, 177B, 177RG, 180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K, 182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, T182, R182, TR182, 185, 185A, 185B, 185C, 185D, 185E, 185F, 205, 205A, 206, P206, P206A, P206B, P206C, P206D, P206E, U206, U206A, U206B, U206C, U206D, U206E, U206F, U206G, TP206A, TP206B, TP206C, TP206D, TP206E, TP206F, TU206A, TU206B, TU206C, TU206D, TU206E, TU206F, TU206G, 207, 207A, T207, T207A, 210, 210A, 210B, 210C, 210D, 210E, 210F, 210G, 210H, 210J, 210K, 210L, 210M, 210N, 210R, T210

Stretcher Assembly  
P/N 41-0110



**DETAIL A-A**



**DETAIL B-B**

## Figure 1.0A

### 2.0 INSPECTION REQUIREMENTS AND OVERHAUL SCHEDULE

1. To comply with 14 CFR 23.1529, continue the new portable stretcher on the same inspection and maintenance schedule used per the applicable Cessna Maintenance Manual for passenger seats.
  - a. The new portable stretcher requires no service other than inspection at normal inspection interval of 100 hours or annually.
  - b. Perform a detailed visual inspection of the stretcher mattress and cover assemblies to detect apparent or obvious defects or irregularities.

On the mattress assembly, check for cracks and punctures within a 4" diameter circle. The mattress assembly can have no more than three defects found within the 4" diameter circle. If it develops a "lump", check to see if there are no more than two lumps within a 4" diameter circle. Any damage to the mattress assembly outside of the described limits will require it to be replaced.

Visually inspect the cover assembly for holes, punctures, and tears. If the damage to the covering is holes smaller than 1/2" in diameter or a cut at a maximum of 2" in length then the covering is satisfactory. The sewing of the cover assembly cannot have a tear or cut exceeding 1" in length. Any damage to the covering assembly outside of the described limits will require it to be replaced.

- c. Visually inspect the portable stretcher assembly tubing for cracks and deformation. Damaged conditions can be detected as a crack at the edge of the tube or along the length of the tubes or as a crack, tear or cut found on the seat bottom diaphragm. Visually inspect all hardware for excessive wear before and after installation.

There shall be no broken tubes. There shall be no sharp corners, edges, or protrusions that may injure passengers. Replace the tubes if they are bent in such a way that they are more than 2" off center. Replace the stretcher tubes if crack length is found to be .125" or greater. Replace the tube if a dent is found running longer than 3". Replace the stretcher tubes if deformation is greater than .25" the overall thickness of the tube diameter.

Cracked or broken fasteners or fittings are to be replaced with new immediately.

For repair or replacement of damaged or broken parts or assemblies contact Aviation Fabricators Inc.



2. Inspection Time Limit for Portable Stretcher Assembly Installations:

100 hour or annual inspection for the stretcher and restraint systems

Task Code			Schedule	Date	Mech	Insp
AFI-100	a.	Inspect for damage to upholstery.				
AFI-101	d.	Inspect foot fittings for damage, security, and function.				
AFI-102	e.	Inspect stretcher frame for damage, and corrosion.				
AFI-103	f.	Inspect overall stretcher assembly for fit and function.				

**3.0 DIMENSION AND ACCESS:**

The installation of the portable stretcher assembly does not change the dimensions of the aircraft or alter the access to any existing aircraft system.

**4.0 LIFTING AND SHORING**

No change.

**5.0 LEVELING AND WEIGHING**

Stretcher w/ Cover Assembly	=	9 lbs
Mattress Assembly	=	<u>6 lbs</u>
Total	=	15 lbs
Stretcher Length	=	72 inches

**6.0 TOWING AND TAXIING**

No change.

## 7.0 PARKING AND MOORING

No change.

## 8.0 PLACARDS AND MARKINGS

No change.

## 9.0 SERVICE INFORMATION

### Typical Stretcher Service Instructions:

#### A. Upholstery Cleaning:

##### Stretcher Service Instructions

1. Remove the mattress and cover assemblies from the stretcher.
2. Clean covering with Armour All leather cleaner or equivalent.
3. Inspect all attachment fittings and replace if necessary.
4. Inspect overall stretcher for fit and function.

### Typical Stretcher Service Instructions:

Stretcher Assembly (Refer to Figure 1.0A)

To remove:

1. Lift latch pin and slide stretcher forward on seat rails until legs disengage.
2. Turn stretcher on side, top toward you.
3. Slide head backward over rear seat until foot end will pass through door opening.

To remove occupied stretcher from aircraft:

1. Remove right front door of aircraft in accordance with Cessna Service Instructions.
2. Lift latch pin and slide stretcher forward on seat rails until legs disengage.
3. Slide stretcher back over rear seat until foot end will pass through door opening.
4. Maintain in horizontal position, raise high enough to pass over the top of right wing strut, moving forward through door opening until clear.

To install:

1. Open right door and remove right front seat in accordance with Cessna Service Instructions.
2. Insert stretcher through right door by turning on side with the top toward you.
3. Slide head end (large end) through door first. Putting it backward into cabin section and sideways to the right, turning half-over to horizontal slant position until head end is up over the rear seat.
4. Slide the stretcher forward until the legs rest on the right seat rails. Continue forward motion until legs engage in the front notches of seat rails.
5. Hold up latch pin and slide back over rails until latch pin will enter the hole in the seat rail.
6. **\*\*WARNING\*\*** Insure that stretcher does not interfere with rudder pedals when latched in position.

To install occupied stretcher:

1. Open right door and remove right front seat in accordance with Cessna Service Instructions.
2. Remove right front door in accordance with Cessna Service Instructions.
3. Place loaded stretcher on ground in front of right wing, parallel to axis of aircraft, head of stretcher toward tail.
4. Raise the stretcher high enough to pass over the top of the right wing strut, entering door opening head first.
5. Slide it back over rear seat until foot end will enter door and legs of stretcher rest right above seat rails.
6. Slide it forward until legs engage in the front notches of seat rails.
7. Hold up the latch pin and slide stretcher back over rails until latch pin will enter the hole in the seat rail.
8. Insure that stretcher does not interfere with rudder pedals when latched in position.

**Mattress and Seat Cover**

The mattress assembly is removed by lifting it upward from the stretcher assembly. The stretcher cover is removed by unbuckling it from the stretcher frame assembly.

**B. RECOMMENDED OVERHAUL PERIODS**

No additional overhaul time limitations and requirements apply to the Aviation Fabricators Stretcher Assembly Installation.

## **10.0 AIRWORTHINESS LIMITATIONS**

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

There are no Airworthiness Limitations to the aircraft with the addition of the Stretcher Assembly installed by this STC.

## **11.0 TROUBLESHOOTING**

Refer to the existing Aircraft Maintenance Manual for troubleshooting the stretcher installation that is required beyond the information found on the installation document AF-105.

For replacement parts or repair of damage parts:

Contact Aviation Fabricators at (660) 885-8317.

Troubleshooting this installation should only be accomplished by FAA approved repair stations with the appropriate ratings or appropriately rated operator/individuals, with required test equipment and service data.