

**Aviation Fabricators Inc.
805 North Fourth Street
Clinton, MO. 64735**

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

For
Stretchers

Document No.: AF-489

Revision "B"

Revision Date: 10/26/12

Applicable to:

**Piper models PA-31, PA-31-300, PA-31-325, PA-31-350,
PA-31P, PA-31P-350, PA-31T, PA-31T1, PA-31T2,
PA-31T3, PA-42, PA-42-720, PA-42-1000**

Modified by FAA STC SA00961WI

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 Piper PA-31 and PA-42 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.

Log of Revisions				
REV. NO.	EFFECTED PAGE(S)	DESCRIPTION	DATE	APPROVED BY
Orig. Issue	All	Initial Release	09/15/09	G.R. Lowe III
A	10, 11	*Added W&B info to Section 5.0 *Added placard p/n's 16-0040 & 16-0041 to Section 8.0, increase total pages to 14	01/07/10	G.R. Lowe III
B	All	*Added Section 11, Trouble Shooting on, page 16 *Updated Figure 1.0A to include both Stretcher Assemblies with Mattress Assemblies and optional portable units in assembly diagram, pgs, 6 & 7 *Updated Weight and Balance data on p 12 *Updated Placard location, p13 *Updated Section 10 with latest layout, p16	10/26/12	G.R. Lowe III

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.

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ABBREVIATIONS AND DEFINITIONS

Abbreviations	Definitions
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 stretcher installation, per installation numbers 72-0176K, 72-0189K, 72-0386K, and 72-0388K, when installed in accordance with Aviation Fabricators design data included on STC Drawing List AF-204 and per Supplement Type Certificate (STC) SA00961WI.

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 Continues Airworthiness and supplements the basic Airplane Maintenance Manual only in those areas listed as pertains to the installation of the stretchers, as installed per the Aviation Fabricators STC Drawing List AF-204. 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 SA00961WI.
STC Drawing List: AF-204.

Installation: STC Drawing List: AF-204:
Drawing D-10130 for p/n's 72-0176K and 72-0189K
Drawing D-10633 for p/n's 72-0386K and 72-0388K

Parts: Refer to p/n's 72-0176, 72-0189, 72-0386 and 72-0388 and respective drawings as listed on STC Drawing List AF-204.

The stretcher is a self contained complete assembly that mounts to the existing seat track, using standard fittings.

Design Change Control

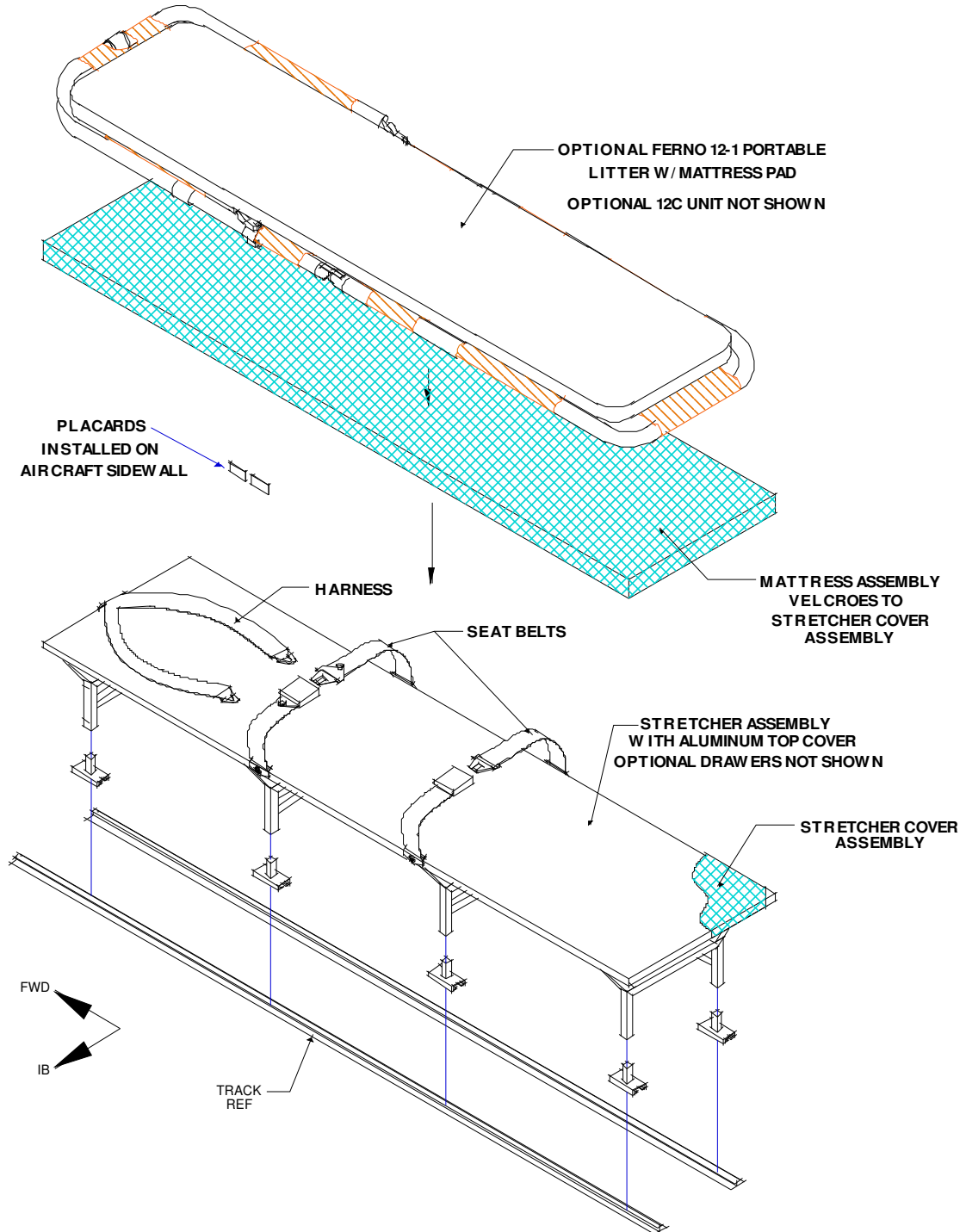
All data and changes to the parts and assemblies will be tracked per STC Drawing List AF-204 Rev C or later approved revision.

Applicable Aircraft

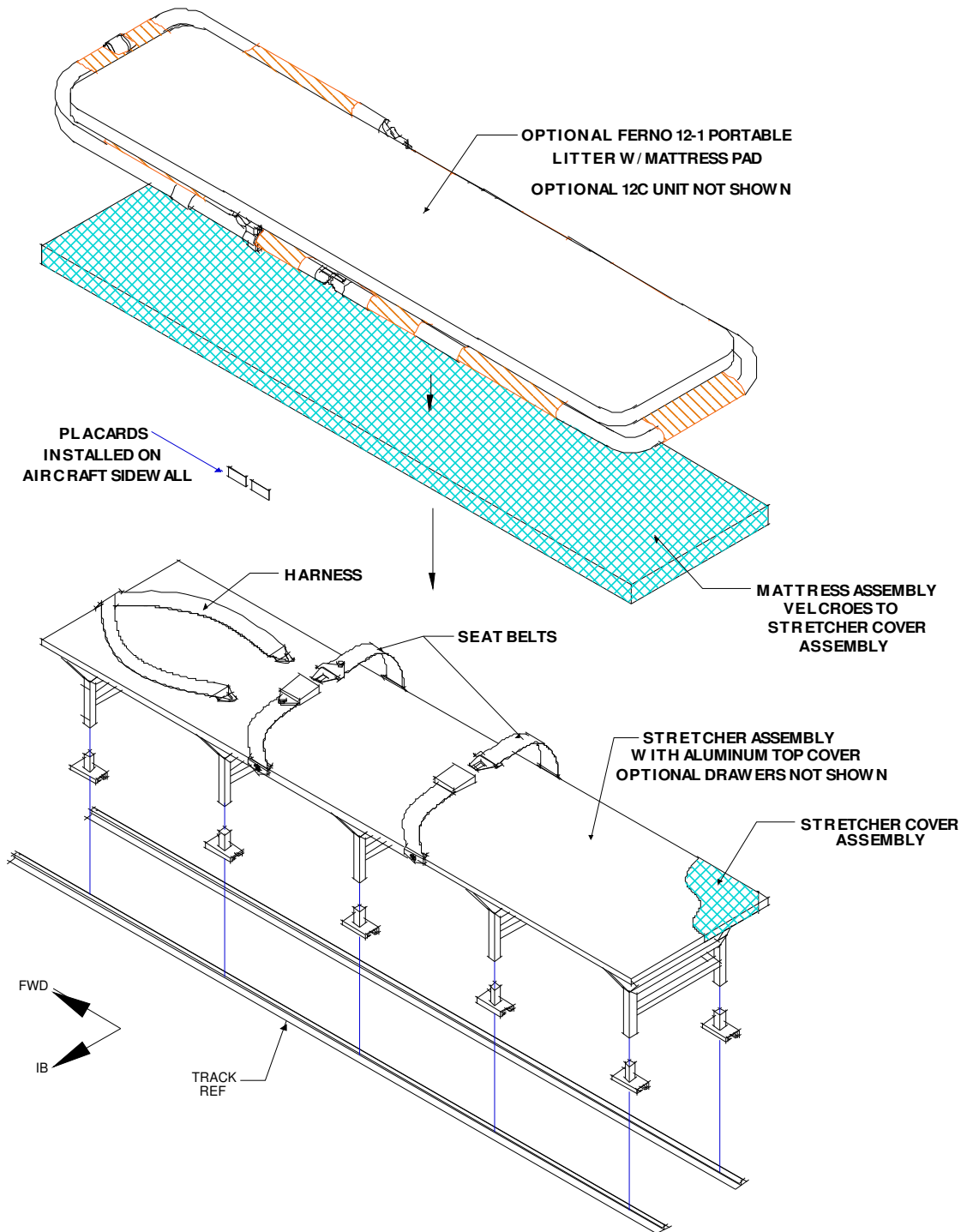
Piper PA-31, PA-31-300, PA-31-325, PA-31-350, PA-31P, PA-31P-350, PA-31T, PA-31T1, PA-31T2, PA-31T3, PA-42, PA-42-720, PA-42-1000 Aircraft

Stretcher Assemblies

P/N's 72-0176 (shown), 72-0189



P/N's 72-0386 (shown), 72-0388



Foot Attachment

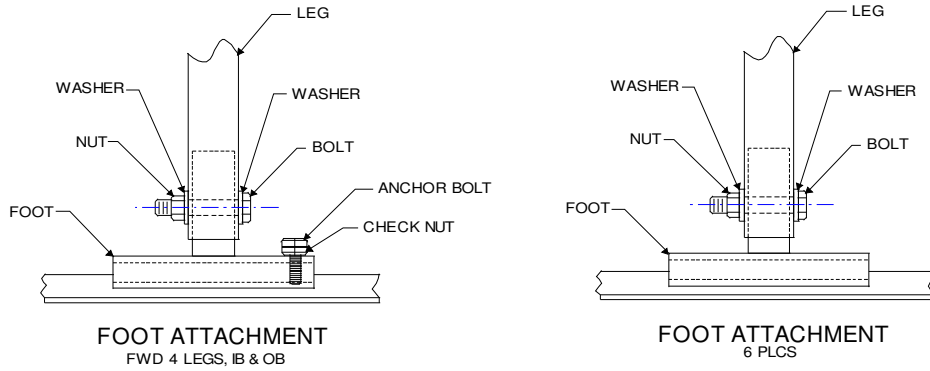


Figure 1.0A

Seat Belt & Shoulder Harness Attachment

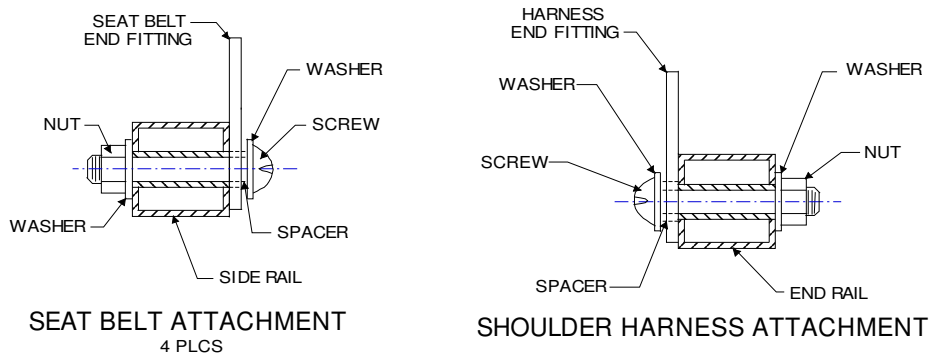


Figure 1.0B

Drawer Attachment

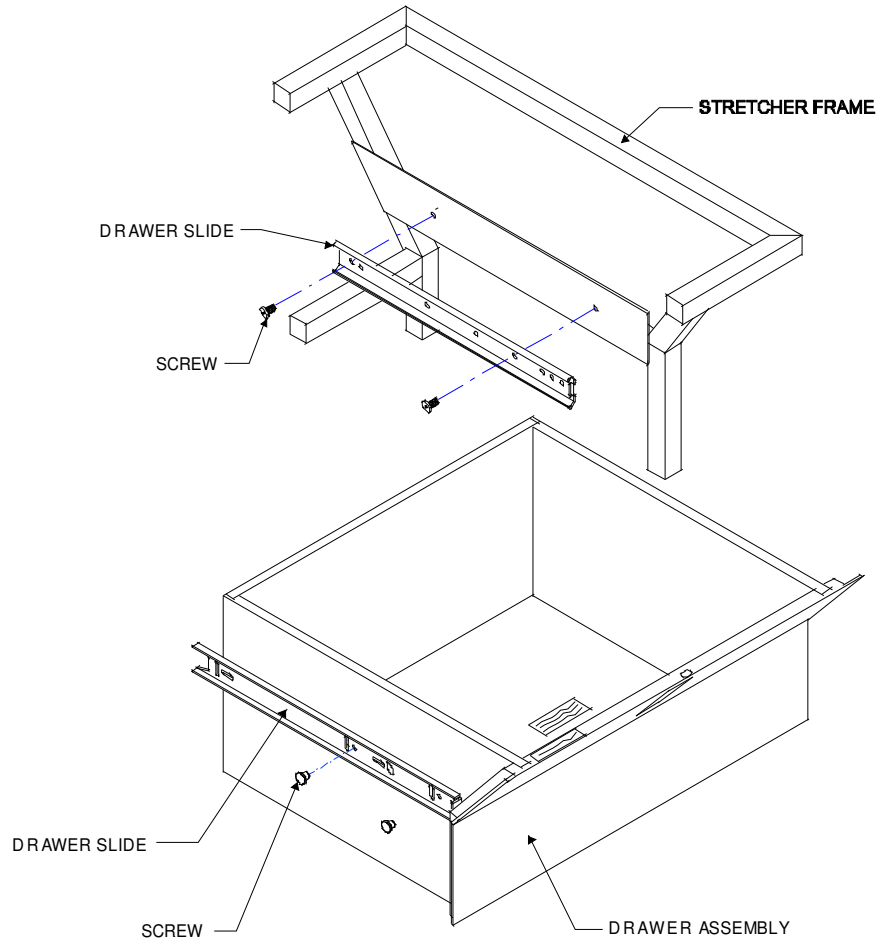


Figure 1.0C

2.0 INSPECTION REQUIREMENTS AND OVERHAUL SCHEDULE

1. To comply with 14 CFR 23.1529, continue the new stretcher and restraint system on the same inspection and maintenance schedule used per the applicable Piper PA-31 and PA-42 Series Maintenance Manual for seats.
 - a. The new stretcher and restraint systems require 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 stretcher cover to detect apparent or obvious defects, deterioration in the form of wear, tears, rips, punctures or irregularities that cause the assembly to become worn or distorted. Replace the mattress assembly if this cover does not fit properly or if it develops a “lumpy” or irregular feel.
 - c. Perform a detailed visual inspection of each stretcher frame assembly including weld joints, diaphragm, fasteners and anchors, track fittings, and restraint systems to detect apparent or obvious defects, corrosion, cracks, large deformations (permanent deformation in frame tubes more than $\frac{1}{4}$ the overall thickness of the tube diameter), irregularities that cause the frame assembly and/or anchor/fitting to become distorted and not fit into the intended seat track/anchor locations. If deformities are found, the stretcher frame assembly must be removed from the aircraft and returned to Aviation Fabricators for repair or replacement.

2. Inspection Time Limit for 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	b.	Inspect safety belts for wear, cuts, fraying, damage, and deterioration.				
AFI-102	c.	Inspect safety belt attachment fittings for wear and damage				
AFI-103	d.	Inspect foot fittings for damage, security, and function.				
AFI-104	e.	Inspect stretcher frame for damage, and corrosion.				
AFI-105	f.	Inspect overall stretcher assembly for fit and function.				

A. The new stretcher and restraint system are on the same inspection and maintenance schedule used per the applicable Piper Maintenance Manual for passenger seats.

3.0 DIMENSION AND ACCESS:

The installation of the 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/ Seat Belts & Cover Assembly = 40 lbs

Mattress Assembly = 10 lbs

Optional Composite Drawer Assembly = 5 lbs each
Typically 3 Installed = 15 lbs

Optional Ferno 12-1 Portable Litter = 15 lbs

Total = 80 lbs

Optional Ferno 12C Portable Litter = 12 lbs

Optional Wooden Drawer Assembly = 7 lbs each
Typically 3 Installed = 21 lbs

Stretcher Length = 72 inches

6.0 TOWING AND TAXIING

No change.

7.0 PARKING AND MOORING

No change.

8.0 PLACARDS AND MARKINGS

1. The forward inboard leg of the stretcher must have placard part number 72-0386-13 installed on it. If drawers are installed it must be placed in the lower front corner of the first drawer assembly.

FORWARD

P/N 72-0386-13

Figure 8.0A

2. Placard part numbers 16-0040 & 16-0041 are to be installed on the aircraft sidewall 6" to 12" above the stretcher frame near the head end so that they are in plain view of the stretcher occupant.

ONLY ONE PERSON
MAY
OCCUPY STRETCHER

P/N 16-0040

SECURE PATIENT WITH
SHOULDER HARNESS
AND BOTH BELTS

P/N 16-0041

Figure 8.0B

3. If optional drawers are installed, placard part number's 17-0156-07 & 17-0156-09 must be installed at the top of the face of the drawer where visible when open or closed.

DURING TAKEOFF & LANDING
DRAWER MUST BE IN STOWED
POSITION

P/N 17-0156-07

CAPACITY OF 15 LBS

P/N 17-0156-09

Figure 8.0C

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. Clean drawer finish using Armour All multi-purpose cleaner or equivalent.
4. Clean and inspect restraint system for damage or excessive wear.
5. Inspect all attachment fittings and replace if necessary.
6. Inspect overall stretcher for fit and function.

Typical Stretcher Service Instructions:

Stretcher Assembly

The stretchers are self contained complete assemblies that mount to the existing aircraft cabin seat track using standard fittings in accordance with approved floor plans.

To remove the stretcher assembly from the foot fittings loosen the standard hardware at the bottom of the each leg and lift the stretcher from the foot assemblies. To remove the foot assemblies from the aircraft seat track loosen the anchor bolt and check nut on each foot and then slide the foot assembly to the end of the track.

To install the stretcher on to the existing seat track, first install the feet by locating them with the stretcher and tightening the anchor bolt and check nut through the foot into the existing holes in seat track so that the foot assembly will not move forward or aft. Then place the stretcher onto the feet by inserting each foot shaft into each leg, place the proper hardware through the holes in the leg and feet, and tighten divan into place. Refer to Figure 1.0A.

Mattress and Seat Cover

The mattress assembly is removed by simply pulling it upward from the Velcro on the stretcher cover. The stretcher cover is removed by pulling it away from the Velcro on underside of the stretcher top frame.

Seat Belt and Shoulder Harness

Seat belt and Shoulder Harness removal is accomplished by loosening attaching hardware and removing from the stretcher frame assembly. Refer to Figure 1.0B.

Drawers

Underseat drawers are removed from the stretcher by removing slide screws attached to the drawer sides. The drawer slides are removed from the stretcher by removing attaching screws. Figure 1.0C.

B. RECOMMENDED OVERHAUL PERIODS

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

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 drawings D-10130 or D-10633.

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.