

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

## **INSTRUCTIONS FOR CONTINUED AIRWORTHINESS**

For  
Shoulder Harness Kit Installation

**Document No.: AF-572**

**Revision "IR"**

**Revision Date: 01/02/14**

### **Applicable to:**

Cessna 500, 501, 550, S550, 551, 560, 650

### **Modified by FAA STC ST00716WI**

The information in the Instruction for Continued Airworthiness is FAA accepted material and complies with 14 CFR 25.1529, Instructions for Continued Airworthiness. It supersedes or adds to that provided in the Maintenance Manual for the Cessna 500, 550, S550, 560, 650 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.

The information in the Instruction for Continued Airworthiness is FAA accepted material and complies with 14CFR 23.1529, Instructions for Continued Airworthiness. It supersedes or adds to that provided in the Maintenance Manual for the Cessna 501, 551 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> |
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Per the requirement of Appendix H of 14CFR Part 25 paragraph H25.1 (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

| <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, hanger 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 shoulder harness kit installations, per installation numbers 42-0254K, 42-0259K, 42-0287K, 42-0304K, & 42-0305K, when installed into the aircraft passenger cabin in accordance with Aviation Fabricators design data included on Drawing List AF-288 and per Supplement Type Certificate (STC) No. ST00716WI.

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 25.1529, Instructions for Continued Airworthiness and supplements the basic Airplane Maintenance Manual only in those areas listed as pertains to the installation of the shoulder harness kits, as installed per the Aviation Fabricators Drawing List AF-288. For limitations and procedures not contained in this supplement, consult the basic Airplane Maintenance Manual.

### DATA

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

STC ST00716WI.  
STC Drawing List: AF-288.

Installation: Installation Instruction D-10252 for p/n 42-0254K, 42-0259K  
Installation Instruction D-10314 for p/n 42-0287K  
Installation Instruction D-10368 for p/n 42-0304K, 42-0305K

Parts: p/n 42-0254-01, RH Gusset Assembly  
p/n 42-0259-01, LH Gusset Assembly  
p/n 42-0304-01, RH Gusset Assembly  
p/n 42-0305-01, LH Gusset Assembly  
p/n 32-0181, Gusset Assembly

The shoulder harness kits are installed by attaching a gusset assembly behind the side wall of the passenger cabin to structure using cherry rivets. The side wall is then reinstalled with a hole locating the nutplate attached to the gusset into which the shoulder harness end fitting is bolted.

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**Design Change Control**

All data and changes to the parts and assemblies will be tracked per STC Drawing List AF-288 Rev J or later approved revision.

**Applicable Aircraft**

Cessna 500, 501, 550, S550, 551, 560, 650

Shoulder Harness Gusset Installation  
P/N 42-0287K

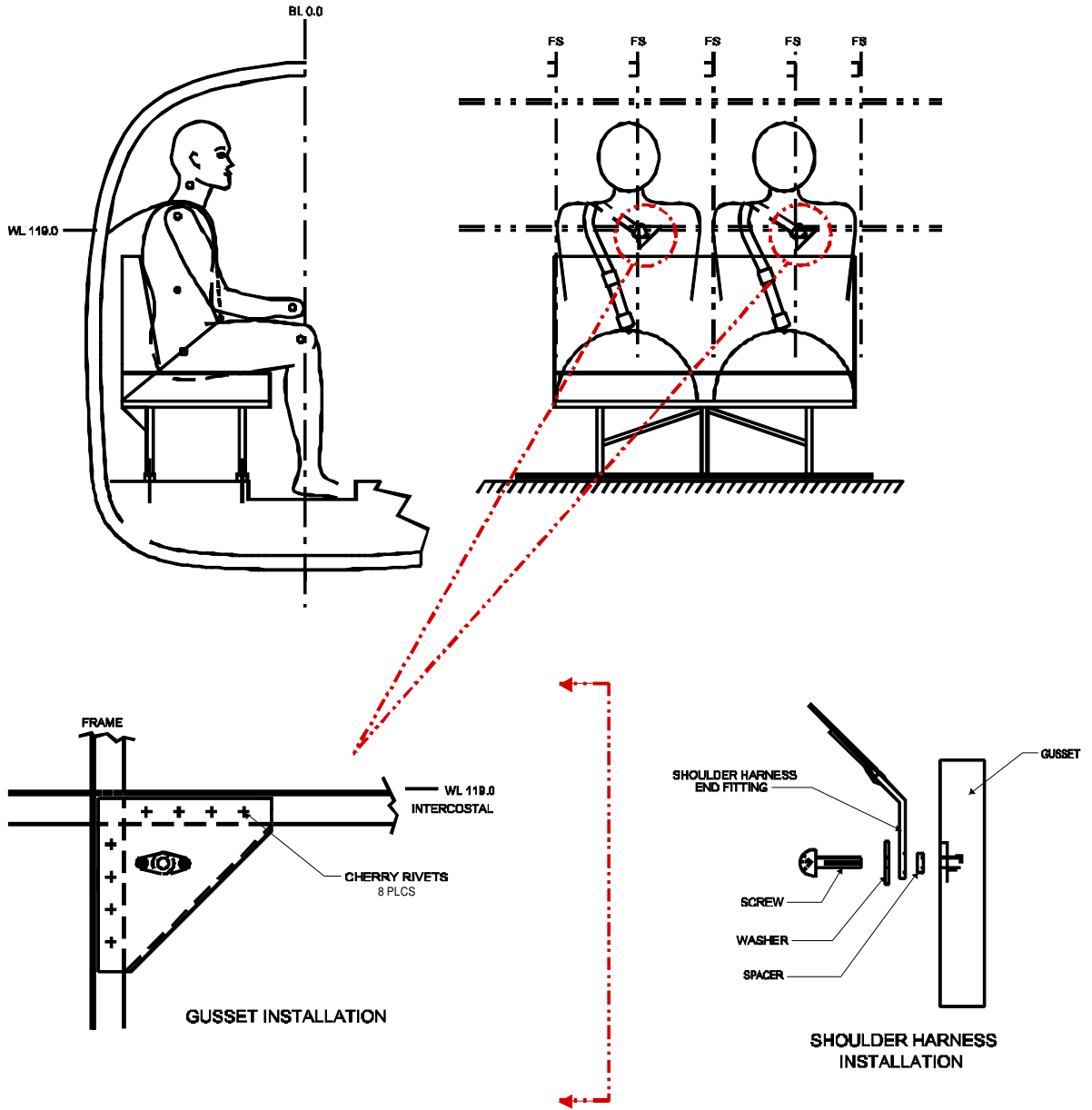


Figure 1.0A

Shoulder Harness Gusset Installation

P/N 42-0254K (Shown), 42-0259K (Opposite)

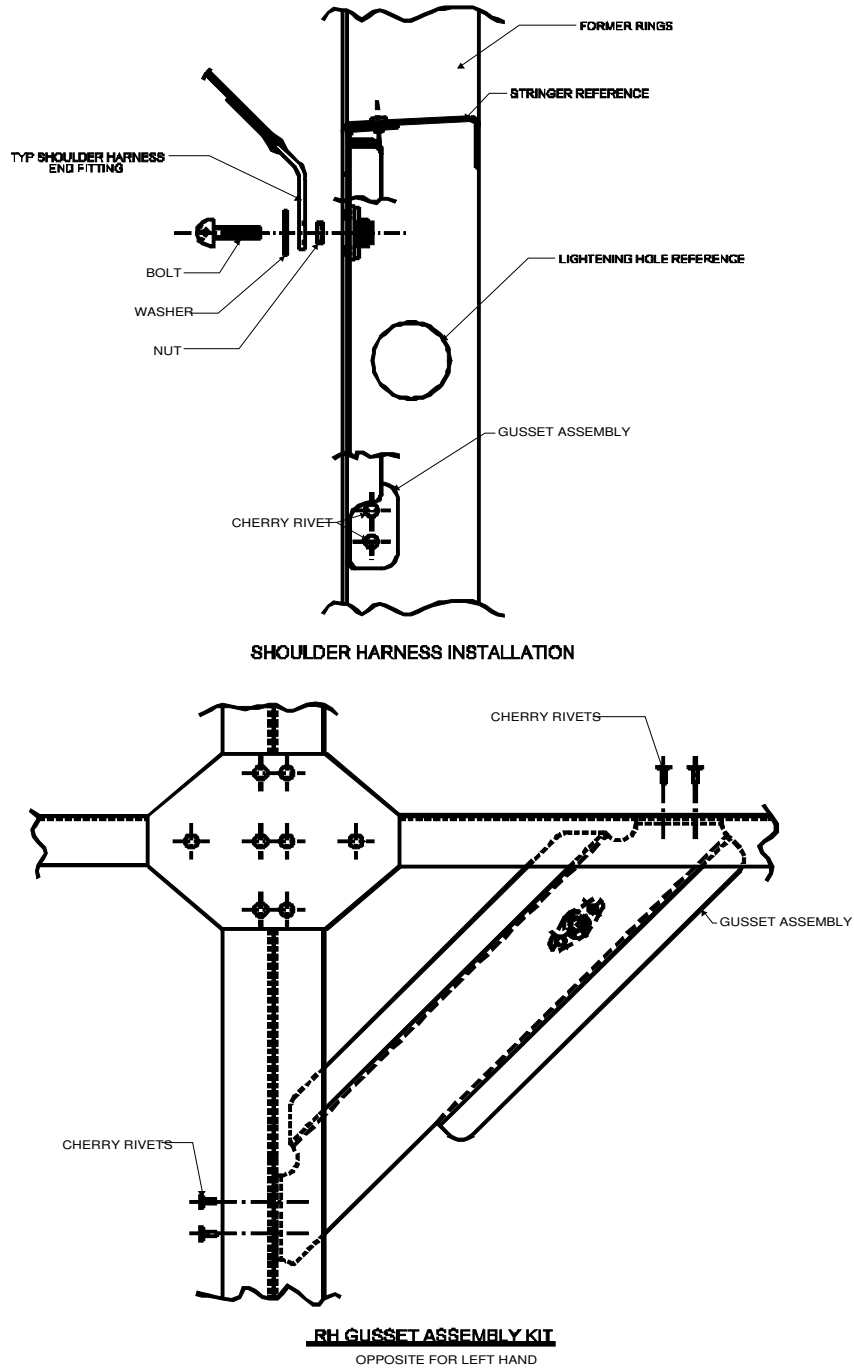
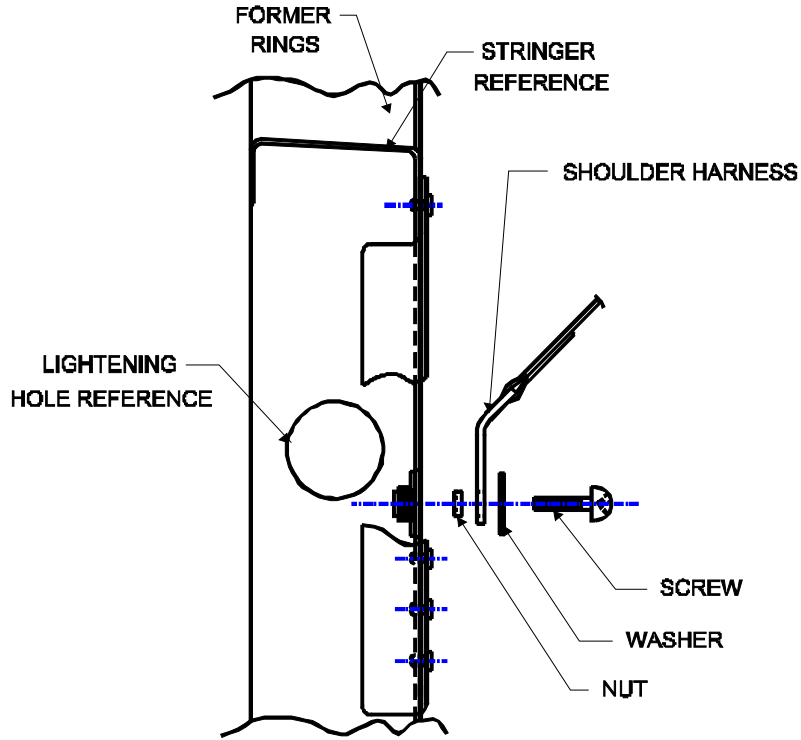


Figure 1.0B

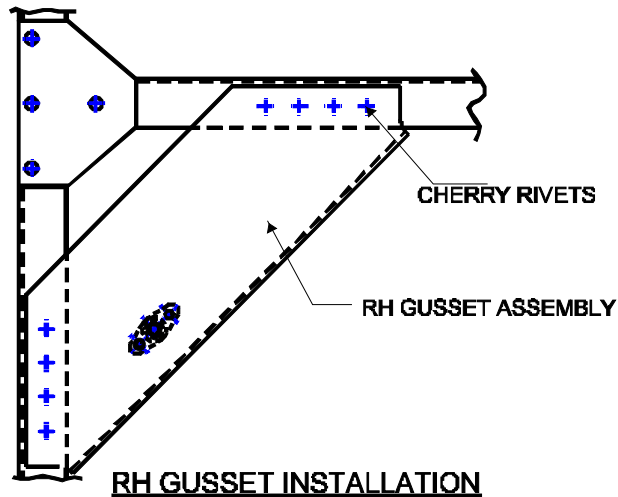


Shoulder Harness Gusset Installation

P/N 42-0304K (Shown), 42-0305K (Opposite)



**SHOULDER HARNESS INSTALLATION**



**RH GUSSET INSTALLATION**

P/N 42-0304K  
OPPOSITE FOR LEFT HAND

**Figure 1.0C**

## 2.0 INSPECTION REQUIREMENTS AND OVERHAUL SCHEDULE

1. To comply with 14 CFR 25.1529, continue the new shoulder harness kit installation on the same inspection and maintenance schedule used per the Cessna Maintenance Manual for seats and divans.
  - a. The new shoulder harness kit requires no service other than inspection at normal Phase 4 inspection schedule of 800 hours or 24 months whichever occurs first.
  - b. Perform a detailed visual inspection of the sidewall gusset to detect apparent or obvious defects, corrosion, cracks, large deformations, or irregularities that cause the gusset assembly to become distorted and not function properly. If deformities are found, the gusset assembly must be removed from the aircraft. Contact Aviation Fabricators for replacement.

Table 2.0

| Task Code |    |  | Schedule | Date | Mech | Insp |
|-----------|----|--|----------|------|------|------|
| AFI-100   | a. | Inspect safety belts for wear, cuts, fraying, damage, and deterioration. |          |      |      |      |
|           |    |  |          |      |      |      |
| AFI-101   | b. | Inspect safety belt attachment fittings for wear and damage              |          |      |      |      |
|           |    |  |          |      |      |      |
| AFI-102   | c. | Inspect gusset assembly for defects, corrosion, cracks, or deformations. |          |      |      |      |
|           |    |  |          |      |      |      |

Note A. The new shoulder harness kit is on the same inspection and maintenance schedule used per the Cessna Maintenance Schedule for passenger seats.

### 3.0 DIMENSION AND ACCESS:

The installation of the new shoulder harness kit 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

No change.

### 6.0 TOWING AND TAXIING

No change.

### 7.0 PARKING AND MOORING

No change.

### 8.0 PLACARDS AND MARKINGS

(1) Placard is required in conjunction with this modification:

1. A placard stating "to install harness over seat occupant's fwd shoulder" is sewn on to shoulder harness and should be legible and easily viewed by the seat occupant.



Figure 8.0A

## 9.0 SERVICE INFORMATION

### Typical Shoulder Harness Kit Service Instructions:

#### A. Cleaning:

##### Shoulder Harness Kit Service Instructions

1. Clean restraint w/ Armour All multi-purpose cleaner or equivalent
2. Inspect restraint system for damage or excessive wear.
3. Inspect all attachment fittings and hardware and replace if necessary.

### Typical Shoulder Harness Kit Maintenance Instructions:

#### Seat Belt and Shoulder Harness

Shoulder Harness removal is accomplished by loosening attaching hardware and removing from the aircraft sidewall. The seat belt is removed per the divan installation from either the existing seat track or from an attaching point on the divans.

Installation of the shoulder harness is accomplished by tightening the attaching hardware through the harness end fitting into the side wall gusset attached to the aircraft structure. The seat belt is installed per the divan installation by using a tie down fitting to the seat track or using hardware to attach it to a point on the divan. Refer to Figure 1.0A, 1.0B, and 1.0C.

#### B. RECOMMENDED OVERHAUL PERIODS

No additional overhaul time limitations and requirements apply to the Aviation Fabricators' shoulder harness kit installations.

## **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 shoulder harness kit installed by this STC.

## **11.0 TROUBLESHOOTING**

Refer to the existing Aircraft Maintenance Manual for troubleshooting the shoulder harness kit installation that is required beyond the information found on STC Drawing List AF-288.

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.