

Aviation Fabricators
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Document No: AF-501
Revision: (IR)
Date: June 25, 2010

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

For

Heated Windshield Panels

Document No.: AF-501

Revision "IR"

Revision Date: 06/25/10

Applicable to:

**Cessna 401, 401A, 401B, 402, 402A, 402B, 402C,
404, 406, 411, 411A, 414, 414A,
421, 421A, 421B, 421C, 425 Aircraft**

Modified by FAA STC SA00103WI

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 400 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

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Reviewed By: Brian C. Adamson

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
IR	All	Initial Release	06/25/10	

LIST OF EFFECTIVE PAGES

Page	Date	Rev
1	06/25/10	IR
2	06/25/10	IR
3	06/25/10	IR
4	06/25/10	IR
5	06/25/10	IR
6	06/25/10	IR
7	06/25/10	IR
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9	06/25/10	IR
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12	06/25/10	IR

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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 Heated Windshield Panel installations, per installation numbers 42-0118K, 42-0187K, 42-0272K & 42-0274K, when installed in accordance with Aviation Fabricators design data included on STC Drawing List AF-127 and per Supplement Type Certificate (STC) SA00103WI.

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 heated windshield panels, as installed per the Aviation Fabricator STC Drawing List AF-127. 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 SA00103WI.

STC Drawing List: AF-127.

Installation: STC Drawing List: AF-127:

Drawing D-10027 & document AF-126 for p/n's 42-0118K and 42-0274K

Drawing D-10228 & document AF-284 for p/n's 42-0187K and 42-0272K

Parts: Refer to p/n's 42-0118, 42-0187, 42-0272, 42-0274, and respective drawings as listed on STC Drawing List AF-127.

The heated windshield panel is rectangular glass panel, containing electrically heated wires imbedded in the glass which is mounted in a metal frame. The assembly is mounted on the exterior side of the pilot's windshield and is hinged at its base to facilitate windshield cleaning. The heated panel is operated by a circuit breaker type switch located in the console below the throttle quadrant.

Design Change Control

All data and changes to the parts and assemblies will be tracked per STC Drawing List AF-127 Rev J or later approved revision.

Applicable Aircraft

Cessna 401, 401A, 401B, 402, 402A, 402B, 402C, 404, 406, 411, 411A, 414, 414A, 421, 421A, 421B, 421C, and 425 Aircraft

Heated Windshield Panel Assembly

P/N's 42-0118, 42-0187, 42-0272, & 42-0274

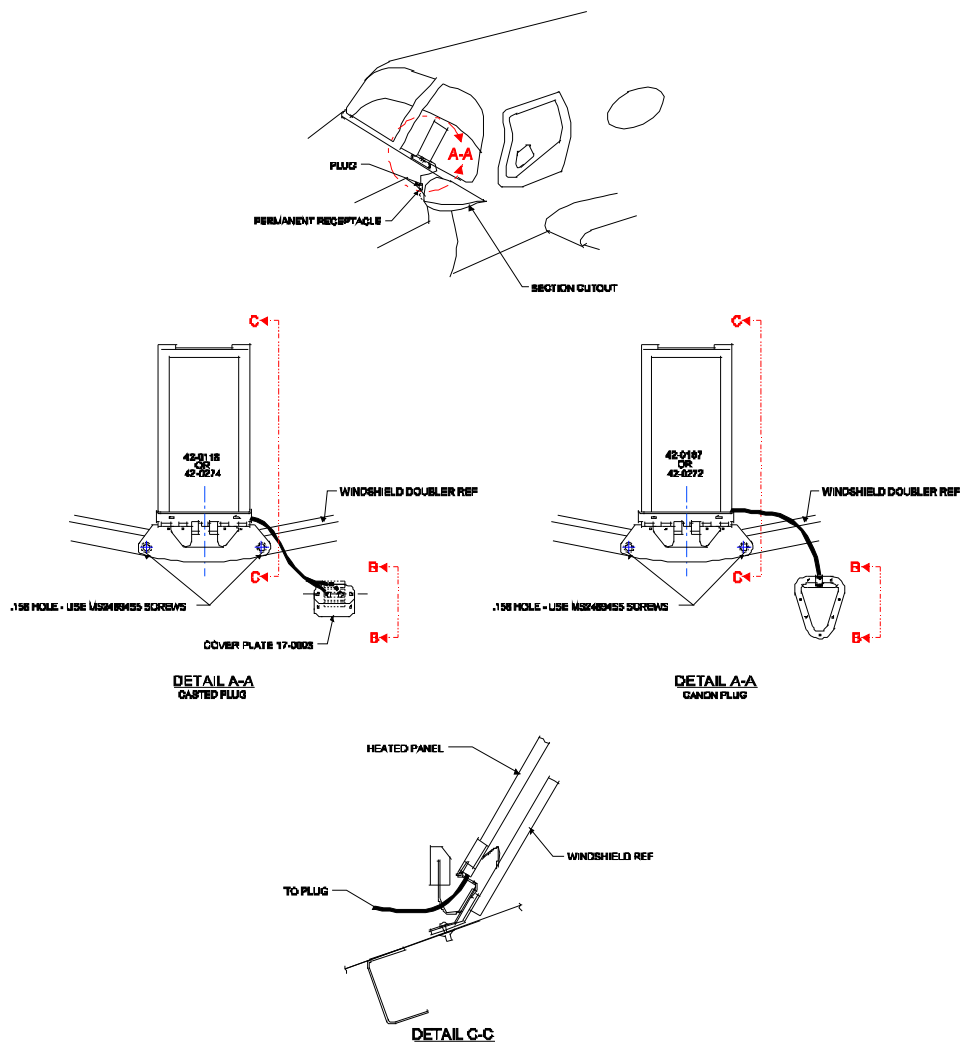


Figure 1.0A

Cast Plug Assembly & Installation

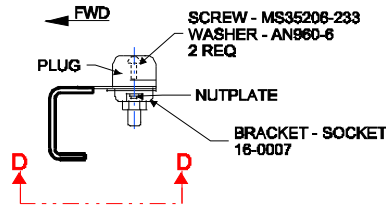
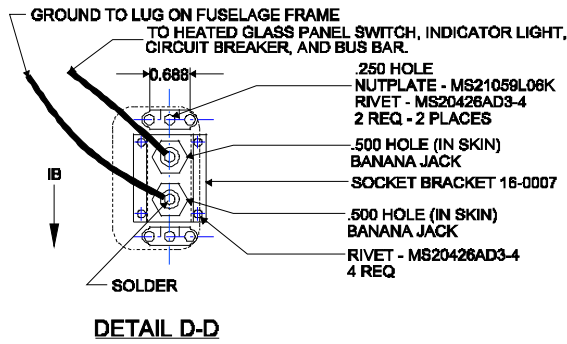


Figure 1.0B

Canon Plug Assembly & Installation

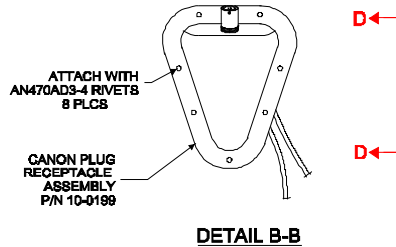
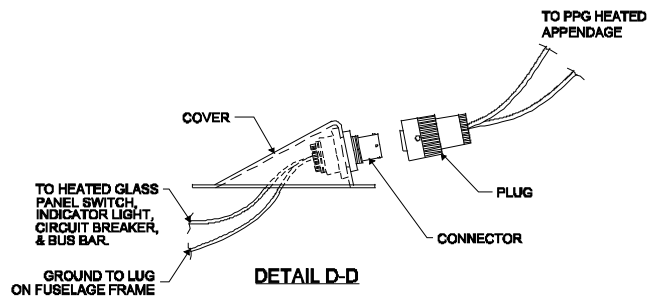


Figure 1.0C

2.0 INSPECTION REQUIREMENTS AND OVERHAUL SCHEDULE

1. To comply with 14 CFR 23.1529, inspect the heated windshield panel per the following table

2. Inspection Time Limit for heated windshield panel assembly installations:
100 hour inspection or annually

3. Recommended Overhaul Periods
No additional overhaul time limitations.

Task Code			Schedule	Date	Mech	Insp
AFI-100	a.	Check wiring for fraying, damage, and security.				
AFI-101	b.	Check panel glass for bubbles, cracks, or breaks.				
AFI-102	c.	Check frame for cracks and security to the aircraft.				
AFI-103	d.	Check for delamination of the panel around the frame assembly.				
AFI-104	e.	Check indicator light for proper operation.				
AFI-105	f.	Check the casted plug assembly for cracks or breaks.				
AFI-106	g.	Check the plug assembly and receptacle for security.				

3.0 DIMENSION AND ACCESS

The installation of the heated windshield panel 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

PARTS LIST	PART NUMBER	WEIGHT INCREASE
12" Heated Windshield Panel w/ Casted Plug	Kit 42-0118K	3 lbs
12" Heated Windshield Panel w/ Canon Plug	Kit 42-0274K	3 lbs
18" Heated Windshield Panel w/ Casted Plug	Kit 42-0187K	4 lbs
18" Heated Windshield Panel w/ Canon Plug	Kit 42-0272K	4 lbs

6.0 TOWING AND TAXIING

No change.

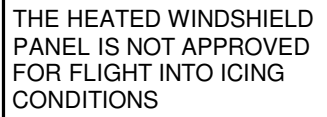
7.0 PARKING AND MOORING

No change.

8.0 PLACARDS AND MARKINGS

3 placards are required in conjunction with this modification:

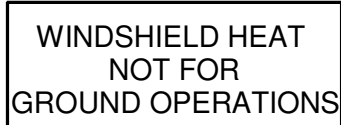
1. Placard p/n 16-0038 to be installed on the instrument panel in plain view of the pilot.



THE HEATED WINDSHIELD
PANEL IS NOT APPROVED
FOR FLIGHT INTO ICING
CONDITIONS

Figure 8.0A

2. Placard p/n 16-0093 to be installed on the instrument panel in plain view of the pilot.



WINDSHIELD HEAT
NOT FOR
GROUND OPERATIONS

Figure 8.0B

3. Placard p/n 16-0253 to be installed near the switch installation on the lower left side of the instrument panel in plain view of the pilot.



HTD
WIND
PANEL

Figure 8.0C

9.0 SERVICE INFORMATION

Service Instructions:

Cleaning:

1. Remove any debris from the panel using a 5% mild detergent mixture with water using a nylon pad.
2. Finish with a 50% mixture of distilled water and isopropyl alcohol.

Maintenance Instructions:

Removal and Installation of Heated Panel:

1. Disconnect the electrical connector located next to the heated panel on the exterior side of the windshield, by removing the two screws and pulling the plug out of the receptacle for the casted plug. Unhook the canon plug from its receptacle by turning it to unlock it.
2. Remove the two screws which attach the panel assembly to the windshield collar and remove the panel from the airplane.
3. If the airplane is to be flown with the heated panel removed, rotate the receptacle plate for a casted plug assembly 180 degrees and replace it to cover the holes in the fuselage skin, also replace the windshield collar screws. No further adjustment is needed for a canon plug assembly.
4. Installation of the heated windshield panel is accomplished in the reverse order of removal.

10.0 AIRWORTHINESS LIMITATIONS

The information contained herein supplements the basic Maintenance Manuals only in those areas listed, when the aircraft is modified in accordance with Aviation Fabricators STC Drawing List AF-127 Rev J or later approved revision. For limitations and procedures not contained in this supplement, consult the basic Airplane Maintenance Manuals.

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.

AIRWORTHINESS LIMITATIONS - LOG OF REVISIONS			
REV.	EFFECTED PAGE (s)	DESCRIPTION of REVISION	DATE
(IR)	All	Initial Release	06/25/2010

AIRWORTHINESS LIMITATIONS

There are no Airworthiness Limitations to the aircraft with the addition of the heated windshield panel assembly installed by this STC.

Distribution:

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.