



U.S. Department of
Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020
2/28/2011

Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR §43.9, Part 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty for each such violation. (49 U.S.C. §46301(a))

1. Aircraft	Nationality and Registration Mark N2158U	Serial No. 501-0091	
	Make Cessna	Model 501	Series
2. Owner	Name (As shown on registration certificate) RBK Aviation Inc.	Address (As shown on registration certificate) Address 595 State Highway 434	
		City Ten Sleep State Wyoming Zip 82442-8856 Country USA	

3. For FAA Use Only

4. Type		5. Unit Identification			
Repair	Alteration	Unit	Make	Model	Serial Number
<input type="checkbox"/>	<input checked="" type="checkbox"/>	AIRFRAME	_____	(As described in Item 1 above)	_____
<input type="checkbox"/>	<input type="checkbox"/>	POWERPLANT			
<input type="checkbox"/>	<input type="checkbox"/>	PROPELLER			
<input type="checkbox"/>	<input type="checkbox"/>	APPLIANCE	Type		
			Manufacturer		

6. Conformity Statement

A. Agency's Name and Address		B. Kind of Agency	
Name Northern Air Inc.		<input type="checkbox"/> U.S. Certificated Mechanic	<input type="checkbox"/> Manufacturer
Address 5500 44th St SE		<input type="checkbox"/> Foreign Certificated Mechanic	C. Certificate No.
City Grand Rapids State MI		<input checked="" type="checkbox"/> Certificated Repair Station	N81R812N
Zip 49512 Country USA		<input type="checkbox"/> Certificated Maintenance Organization	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 5 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Extended range fuel per 14 CFR Part 43 App. B <input type="checkbox"/>	Signature/Date of Authorized Individual 3/1/10
--	--

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 5 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY	<input type="checkbox"/> FAA Flt Standards Inspector	<input type="checkbox"/> Manufacturer	<input type="checkbox"/> Maintenance Organization	<input type="checkbox"/> Person Approved by Canadian Department of Transport
	<input type="checkbox"/> FAA Designee	<input checked="" type="checkbox"/> Repair Station	<input type="checkbox"/> Inspection Authorization	Other (Specify)

Certificate or Designation No. N81R812N	Signature/Date of Authorized Individual 3/1/10
---	--

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

N2158U USA

Nationality and Registration Mark

3/1/2010

Date

Removed existing aircraft pilot and copilot seatbelt assemblies.

Installed Sierra Industries inertial reel assemblies on pilot and copilot seats per Sierra industries inc. STC SA8828SW drawing list no. SI220-000, Rev.A Kit serial No. 0055.

No ICA required. Maintain in accordance with Cessna 500 series Maintenance manual. Completed log entry and no change in weight and balance.

-----END-----

☐ Additional Sheets Are Attached



US Department
of Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020
11/30/2007

Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR §43.9, Part 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. §44701). Failure to report can result in a civil penalty for each such violation. (49 U.S.C. §46301(a))

1. Aircraft	Nationality and Registration Mark USA N2158U	Serial No. 501-0091	
	Make Cessna	Model 501	Series
2. Owner	Name (As shown on registration certificate) RBK Aviation Inc	Address (As shown on registration certificate) Address 595 State Hwy 434	
		City Ten Sleep State WY Zip 82442-8856 Country USA	

3. For FAA Use Only

4. Type		5. Unit Identification			
Repair	Alteration	Unit	Make	Model	Serial No.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	AIRFRAME	_____	(As described in Item 1 above)	_____
<input type="checkbox"/>	<input type="checkbox"/>	POWERPLANT			
<input type="checkbox"/>	<input type="checkbox"/>	PROPELLER			
<input type="checkbox"/>	<input type="checkbox"/>	APPLIANCE	Type Manufacturer		

6. Conformity Statement

A. Agency's Name and Address		B. Kind of Agency	
Name Mayday Avionics, Inc.		<input type="checkbox"/> U. S. Certificated Mechanic	<input type="checkbox"/> Manufacturer
Address 5500 44th St. SE		<input type="checkbox"/> Foreign Certificated Mechanic	C. Certificate No.
City Grand Rapids State MI		<input checked="" type="checkbox"/> Certificated Repair Station	YXXR387Y
Zip 49512 Country USA		<input type="checkbox"/> Certificated Maintenance Organization	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 5 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Extended range fuel per 14 CFR Part 43 App. B <input type="checkbox"/>	Signature/Date of Authorized Individual Garry Molegraaf SEP 24 2007
--	--

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 5 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ Approved ☐ Rejected

BY	FAA Fit. Standards Inspector	Manufacturer	Maintenance Organization	Persons Approved by Canadian Department of Transport
	FAA Designee <input checked="" type="checkbox"/>	Repair Station	Inspection Authorization	Other (Specify)

Certificate or Designation No. YXXR387Y	Signature/Date of Authorized Individual Garry Molegraaf SEP 24 2007
--	--

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

USA N2158U

Nationality and Registration Mark

9-24-07

Date

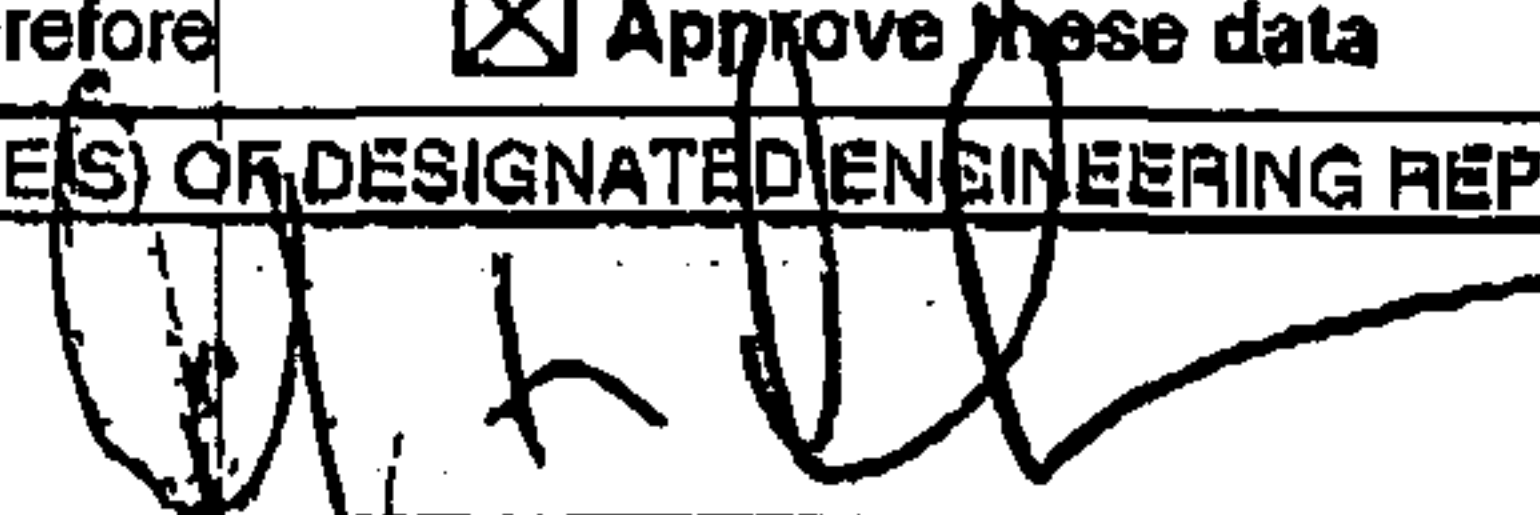
Removed the Sperry RD-600 HSI. Installed a Honeywell RD-600A HSI and a RI-106 Instrument Remote Control in accordance with the Mayday Avionics, Inc. drawing number RD600A.501.N2158U, Rev IR, dated 9-12-07 per the FAA form 8110-3, dated 9-21-07; Cessna Factory drawing number 34-21-08, figure 2, dated Sep 1/80; AC 43-13-1B, Chapter 11; and AC 43-13-2A, Chapter 11.

The RD-600A is installed in place of the RD-600 and uses its existing interfaces along with the addition of the RI 106 Remote Control. Instructions for Continued Airworthiness for the RD-600A are contained within the Mayday Avionics, Inc. document number RD600A.ICA.N2158U, Rev. IR, dated 9-21-07 (or later) as attached.

All equipment has been ground checked in accordance with the appropriate installation manual for proper operation and to ensure that it does not adversely affect any other onboard equipment.

All work performed in accordance with AC 43-13-1B and AC 43-13-2A. Pertinent details of this installation are on file at this repair station under Work Order 46339. The Weight & Balance change is negligible, the Equipment List has been revised, and a logbook entry completed.

☐ Additional Sheets Are Attached

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION				DATE Sept-21-2007	
STATEMENT OF COMPLIANCE WITH THE FEDERAL AVIATION REGULATIONS					
AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION					
MAKE Cessna		MODEL NO. 501		TYPE (Airplane, Radio, Helicopter, etc.) Airplane	
NAME OF APPLICANT Private Consultant to MAYDAY AVIONICS INC.					
LIST OF DATA					
IDENTIFICATION		TITLE			
Drawing Rd600A.501.N2158U		RD600A HIS UPDATE(REV-I/R DATED 09/12/07)			
PURPOSE OF DATA		In support of major modification for S/N 501-0091			
APPLICABLE REQUIREMENTS (List specific sections)					
23.1309					
23.1351					
23.1357					
23.1365					
CERTIFICATION - Under authority vested by direction of the Administrator and in accordance with conditions and limitations of appointment under Part 183 of the Federal Aviation Regulations, data listed above and on attached sheets numbered <u>as above</u> have been examined in accordance with established procedures and found to comply with applicable requirements of the Federal Aviation Regulations.					
<input type="checkbox"/> Recommend approval of these data <input checked="" type="checkbox"/> Approve these data					
I (We) Therefore					
SIGNATURE(S) OF DESIGNATED ENGINEERING REPRESENTATIVE(S)		DESIGNATION NUMBERS(S)		CLASSIFICATION(S)	
		DERT-510004-CE		System & Equipment Flight Analyst	
Andrew K. Anderson					



SPERRY RD-600A HORIZONTAL SITUATION INDICATOR

Instructions for Continued Airworthiness



5500 44TH STREET SE
GRAND RAPIDS, MI 49512

Phone: (616) 957-4920
Fax: (616) 957-2218

Document number: RD600A.ICA.N2158U
Rev. IR, Date: September 21, 2007

**THIS ICA IS PART OF THE AIRCRAFT'S
INSPECTION/MAINTENANCE
REQUIREMENTS**

LOG OF REVISIONS

Rev.	Date	Description of Change	Affected Pages
IR	9-21-07	Initial Release.	All

Vertical black lines in the margin indicate the revised portions of affected pages.

SPERRY RD-600A HSI
Instructions for Continued Airworthiness

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SPERRY RD-600A HSI
Instructions for Continued Airworthiness

SECTION I - GENERAL

1. INTRODUCTION

In accordance with FAR 23.1529 and 14 CFR Part 23 Appendix G, this document identifies the Instructions for Continued Airworthiness (ICA) for the alteration of the above aircraft by installation of a Sperry RD-600A Horizontal Situation Indicator.

A. Referenced Publications

- 1) The Cessna factory drawing number 34-21-08, figure 2, dated Sep 1/80.
- 2) The RD-600A Maintenance Manual, P/N 34-22-19.
- 3) The SPZ-500 Maintenance Manual, P/N 15-1146-02.
- 4) AC 43-13-1B, Chapter 11 and AC 43-13-2A, Chapter 11.
- 5) Cessna Model 501 Maintenance Manual.

* Or later FAA approved revisions to the above referenced publications.

2. DESCRIPTION

For pertinent details of the installation, reference Block 8 of the attached FAA form 337 dated _____.

3. CONTROL, OPERATION INFORMATION

Reference the RD-600A/SPZ-500 Maintenance Manuals for equipment operating procedures.

4. SERVICING INFORMATION

Reference the RD-600A/SPZ-500 Maintenance Manuals for servicing procedures.

SPERRY RD-600A HSI
Instructions for Continued Airworthiness

SECTION II - MAINTENANCE

1. MAINTENANCE INSTRUCTIONS

The RD-600A is designed and manufactured to allow "on condition" maintenance. On condition maintenance is described as follows:

- 1) There are no periodic service requirements necessary to maintain continued airworthiness.
- 2) No maintenance is required until the equipment does not properly perform it's intended function.

When service is required, a complete performance test should be accomplished following any repair action. Consult the appropriate unit Maintenance/Overhaul Manual for complete performance test information.

As an option, the system operator may perform a visual inspection of the condition and security of the various system components mounting, associated structure, connectors, wiring and wiring support and routing at the aircraft annual inspection, or other periodic maintenance interval as defined by the Cessna Model 501 Maintenance Manual.

2. TROUBLESHOOTING INFORMATION

Refer to the RD-600A/SPZ-500 Maintenance Manuals.

3. REMOVAL AND REPLACEMENT INFORMATION

Refer to the SPZ-500 Maintenance Manual.

4. DIAGRAMS

N/A

5. SPECIAL INSTRUCTION REQUIREMENTS

N/A

6. APPLICATION OF PROTECTIVE TREATMENTS

N/A.

SPERRY RD-600A HSI
Instructions for Continued Airworthiness

SECTION II- MAINTENANCE (CONTINUED)

7. DATA RELATIVE TO STRUCTURAL FASTENERS

N/A

8. LIST OF SPECIAL TOOLS

N/A

9. FOR COMMUTER CATEGORY AIRCRAFT

N/A

10. RECOMMENDED OVERHAUL PERIODS

No additional overhaul time limitations.

SECTION III - AIRWORTHINESS LIMITATIONS

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

No additional airworthiness limitations.

SECTION IV - REVISIONS

To revise this ICA; a letter must be submitted to the local FSDO with a copy of the revised FAA form 337, and revised ICA. The FAA inspector accepts the change by signing Block 3 and including the following statement:

The attached revised/new Instructions for Continued Airworthiness (dated _____) for the above aircraft or component major alteration have been accepted by the FAA, suspending the Instructions for Continued Airworthiness (dated _____).

Once the revision has been accepted a maintenance record entry shall be made identifying the revision, its location, and date of the FAA form 337.



U.S. Department of
Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act 1958)

1. Aircraft	Make Cessna	Model CE-501
	Serial No. 501-0091	Nationality and Registration Mark USA - N2158U
2. Owner	Name (As shown on registration certificate) RBK Aviation Inc.	Address (As shown on registration certificate) 595 State Highway 434 Ten Sleep, WY 82442

3. For FAA Use Only

"The technical data identified herein has been found to comply with applicable airworthiness requirements and is hereby approved for use only on the above described aircraft, subject to conformity inspection by a person authorized in §43.7"

8-14-2007

Date

Bruce Hanson
Signature

4. Unit Identification

5. Type

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	----- (As described in item 1 above) -----			<input type="checkbox"/>	<input checked="" type="checkbox"/>
POWERPLANT				<input type="checkbox"/>	<input type="checkbox"/>
PROPELLER				<input type="checkbox"/>	<input type="checkbox"/>
APPLIANCE	Type			<input type="checkbox"/>	<input type="checkbox"/>
	Manufacturer			<input type="checkbox"/>	<input type="checkbox"/>

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
RBK Aviation - Anthony Cirincione 595 State Highway 434 Ten Sleep, WY 82442	<input checked="" type="checkbox"/> U.S. Certified Mechanic <input type="checkbox"/> Foreign Certified Mechanic <input type="checkbox"/> Certified Repair Station <input type="checkbox"/> Manufacturer	A&P 3118770 IA

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date 27 AUG 2007	Signature of Authorized Individual <i>Anthony Cirincione</i>
---------------------	---

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☐ APPROVED ☐ REJECTED

BY	<input type="checkbox"/> FAA Flt Standards Inspector	<input type="checkbox"/> Manufacturer	<input checked="" type="checkbox"/> Inspection Authorization	Other (Specify)
	<input type="checkbox"/> FAA Designee	<input type="checkbox"/> Repair Station	<input type="checkbox"/> Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection 27 AUG 2007	Certificate or Designation No. A&P 3118770 IA	Signature of Authorized Individual <i>Anthony Cirincione</i>
--	--	---

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

N2158U

CESSNA 501

S/N 501-0091

Date: 8/1/2007

Install overflow bottle (PN 2003-0002) to capture vented hydraulic fluid. Refer to Cessna drawing 6517001 DCN 052A.

- A. Install the AN832-4D Bulkhead Union and AN960KD716L Washer and secure with a AN 960KD716L washer and AN924-4D nut.
- B. Install one each NAS1612-4 Gasket, AN6289D4 Nut, and AN833-4D Bulkhead Elbow on the top of the 6517001-9 Adapter.
- C. Install the adapter and one NAS1612-4 Gasket on the bulkhead union.
- D. Install the 2003-0002 Bottle in the adapter. Secure the bottle with safety wire.
- E. Remove the existing hydraulic overflow line assembly. Retain the clamps and hardware.
- F. Install the new line assemblies from the hydraulic reservoir to the bottle adapter and overflow vent.
- G. Secure with the retained clamps and hardware.

Instructions for Continued Airworthiness: Make write-in change to AFM and Flight Crew Checklists:

Preflight - Add new item in Aft Baggage Compartment, after "Hydraulic Fluid Quantity - Check," as follows: "Ecology Bottle - Less than 1/2 Full"

There are no other operational changes.

Update Weight and Balance Data:

Weight Added = 0.60 pounds at FS 352.5, moment = +211.5.

☐ Additional Sheets Are Attached

MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)				Form Approved OMB No. 2120-0020	
				For FAA Use Only	
				Office Identification SW 17	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This form is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).					
1. Aircraft	Make Cessna			Model 501	
	Serial No. 501-0091			Nationality and Registration Mark N2158U	
2. Owner	Name (As shown on registration certificate) RBK Aviation, Inc.			Address (As shown on registration certificate) P.O. Box 236 Wilson, Wyoming 83014-0236	
3. For FAA Use Only					
4. Unit Identification					5. Type
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~ (As described in item 1 above) ~~~~~				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				
6. Conformity Statement					
A. Agency's Name and Address		B. Kind of Agency		C. Certificate No.	
Sierra Industries Ltd 122 Howard Langford Drive Uvalde, Texas 78801		U.S. Certificated Mechanic		SI6R285J Limited Airframe Limited Powerplant Limited Radio	
		Foreign Certificated Mechanic			
		X Certified Repair Station			
		Manufacturer			
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.					
Date October 19, 2006		Signature of Authorized Individual <div style="text-align: center;">Steve Lawrence </div>			
7. Approval for Return to Service					
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED					
BY	FAA Fit. Standards Inspector	Manufacturer	Inspection Authorization		Other (Specify)
	FAA Designee	X Repair Station	Person Approved by Transport Canadian Airworthiness Group		
Date of Approval or Rejection 10-19-2006		Certificate or Designation No. SI6R285J		Signature of Authorized Individual <div style="text-align: center;">Xavier Ybarra </div>	

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Installed Sierra Industries, Ltd. Couch Assembly.

Installation performed in accordance with the following drawings and report:

Sierra Industries, Ltd. Drawing 13-10001, Rev. IR, DCN 1,2, dated 11-9-95- "Couch Assembly Cessna Citation I".

Sierra Industries, Ltd. Drawing 13-10002, Rev. IR, DCN 1,2, dated 10-4-95- "Couch Installation Cessna Citation I".

Sierra Industries, Ltd. Drawing 13-10003, Rev. IR, DCN 1, 2, dated 10-4-95- "Couch Installation Details Cessna Citation I".

Schwartz Engineering Co. Report AT-92-37, Rev. IR, 1-14-93- "Structural Substantiation, Couch Assembly and Installation For Cessna Citation I".

Installed Sierra Industries, Ltd. Barrel Couch Assembly

Installation performed in accordance with the following drawing and reports:

Sierra Industries, Inc. Drawing SI180-110-1, Rev. A, 3-11-93- "Barrel Couch Assembly".

Aerodesign Aircraft Eng. Inc. Report #1797-2, Rev. IR, 10-13-06- "Structural Substantiation, Barrel Seat Assembly And Installation- Cessna Model 500 Series Aircraft".

Schwartz Eng. Co. Report AT-94-32, Rev. IR, 8-1-94- "Structural Substantion Of A Barrel Couch Installation In A Cessna Citation".

Installed Sierra Industries, Ltd. One-Piece cabin armrest.

Installation performed in accordance with the following reports and drawings:

Aerodesign Aircraft Engineering Report # 1697-1 Rev. IR dated 12-6-95, Structural Substantiation, Armrest Assembly and Installation-Cessna Citation.

Sierra Industries, Inc. Drawing SI-430-900 Rev. A., dated 12-5-1995, Armrest Installation.

Sierra Industries, Inc. Drawing SI-430-901 Rev. IR dated 12-5-1995, Armrest Detail Assembly.

Approved by FAA Form 8110-3 dated October 13, 2006 and signed by R.M. Howard, Jr. DERT-710134-SW, Structures.

Reference new Weight and Balance.

All pertinent details of this alteration are on file with Sierra Industries, Ltd. under work order# 522-09-2006.

Note:

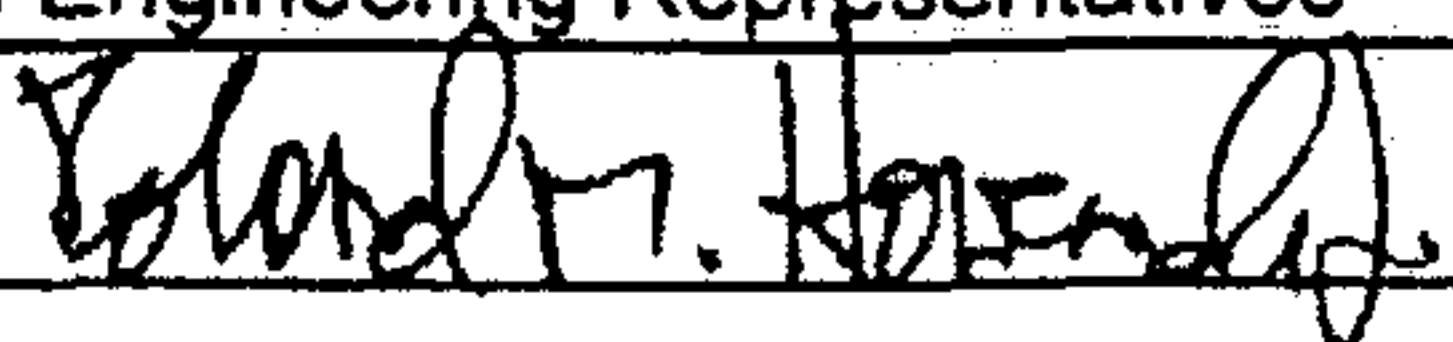
Aircraft Total Time: 7578.1

Landings: 8974

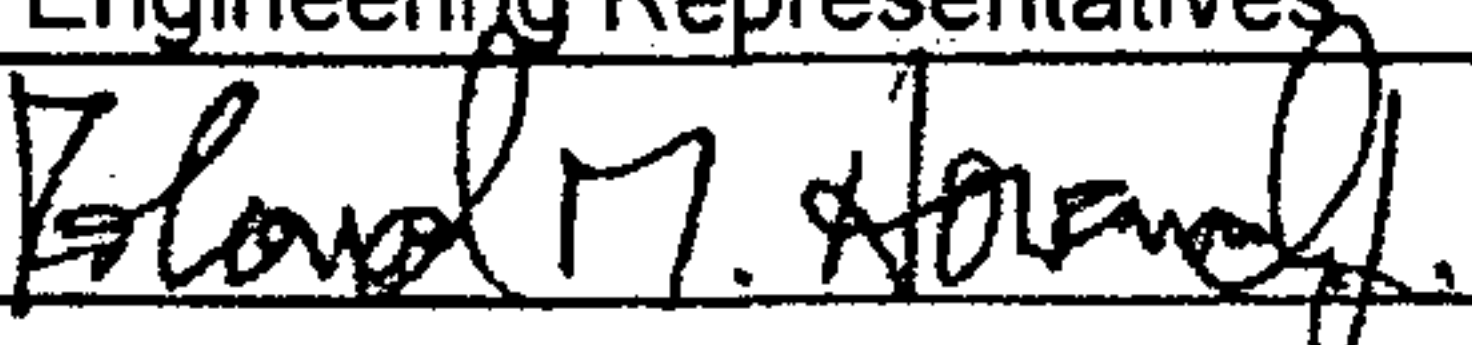
----- E N D -----

☐ Additional Sheets Are Attached

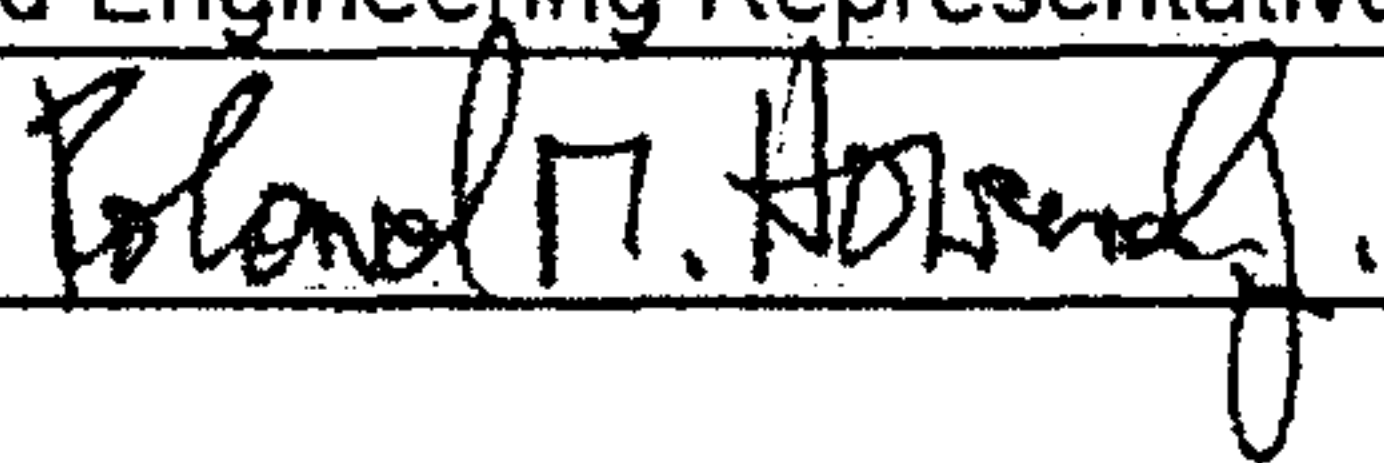
0610-24

U.S. Department of Transportation Federal Aviation Administration			Date OCT 13 2006
STATEMENT OF COMPLIANCE WITH THE FEDERAL AVIATION REGULATIONS			
Aircraft or Aircraft Component Identification			
Make CESSNA AIRCRAFT	Model No. 501	Type (Airplane, Radio, Helicopter, etc.) AIRPLANE	Name of Applicant SIERRA INDUSTRIES
LIST OF DATA			
Identification	Title		
SIERRA INDUSTRIES INC.			
DWG. SI180-110-1, REV. A, 3-11-93	BARREL COUCH ASSEMBLY		
AERODESIGN AIRCRAFT ENG. INC.			
REPORT #1797-2, REV. IR, 10-13-06	STRUCTURAL SUBSTANTIATION, BARREL SEAT ASSEMBLY AND INSTALLATION - CESSNA MODEL 500 SERIES AIRCRAFT		
SCHWARTZ ENG. CO.			
REPORT AT-94-32, REV. IR, 8-1-94	STRUCTURAL SUBSTANTIATION OF A BARREL COUCH INSTALLATION IN A CESSNA CITATION		
<p>A compliance inspection may be required, and is not approved with this data. Contact the FAA concerning requirements.</p> <p>STRUCTURAL APPROVAL ONLY</p> <p>only for Model 501, S/N 501-0091, N2158U</p>			
Purpose of Data SUPPORT OF MAJOR ALTERATION; DESIGN APPROVAL ONLY			
Applicable Requirements (List specific sections)			
FAR 23.301(a)(b)(c), 23.303, 23.305(a), 23.307(a), 23.561(b)(3), 23.603(a)(b), 23.605(a), 23.613(a)(b)(c), 23.615(a), 23.625(a)(b)(c)(d), 23.785(a)(b)(f)(1)			
In accordance with the aircraft's original certification basis per the TCDS A27CE.			
CERTIFICATION - under authority vested by direction of the Administrator and in accordance with limitations of appointment under Part 183 of the Federal Aviation Regulations, data listed above and on attached sheets numbered <u> (none) </u> have been examined in accordance with established procedures and found to comply with applicable requirements of the Federal Aviation Regulations.			
<input type="checkbox"/> Recommend approval of these data <input checked="" type="checkbox"/> Approve these data			
I (We) Therefore			
Signature(s) of Designated Engineering Representatives		Designation Number(s)	Classifications
R.M. Howard, Jr. 		DER-T-710134-SW	Structures

0610-25

U.S. Department of Transportation Federal Aviation Administration STATEMENT OF COMPLIANCE WITH THE FEDERAL AVIATION REGULATIONS			Date OCT 13 2006
Aircraft or Aircraft Component Identification			
Make CESSNA AIRCRAFT	Model No. 501	Type (Airplane, Radio, Helicopter, etc.) AIRPLANE	Name of Applicant SIERRA INDUSTRIES
LIST OF DATA			
Identification	Title		
SIERRA INDUSTRIES INC. DWG. 13-10001, REV. IR, DCN 1,2, dated 11-9-95 DWG. 13-10002, REV. IR, DCN 1,2, dated 10-4-95 DWG. 13-10003, REV. IR, DCN 1,2, dated 10-4-95 SCHWARTZ ENGINEERING CO. RPT. AT-92-37, REV. IR, 1-14-93			
COUCH ASSEMBLY CESSNA CITATION I COUCH INSTALLATION CESSNA CITATION I COUCH INSTALLATION DETAILS CESSNA CITATION I STRUCTURAL SUBSTANTIATION, COUCH ASSEMBLY AND INSTALLATION FOR CESSNA CITATION I A compliance inspection may be required, and is not approved with this data. Contact the FAA concerning requirements. STRUCTURAL APPROVAL ONLY only for model 501, S/N 501-0091, N2158U			
Purpose of Data SUPPORT OF MAJOR ALTERATION; DESIGN APPROVAL ONLY			
Applicable Requirements (List specific sections) FAR 23.301(a)(b)(c), 23.303, 23.305(a), 23.307(a), 23.561(b)(3), 23.571, 23.603(a)(b), 23.605(a), 23.613(a)(b)(c), 23.615(a), 23.625(a)(b)(c)(d), 23.785(a)(b)(g)(2) In accordance with the aircraft's original certification basis per the TCDS A22CE.			
CERTIFICATION - under authority vested by direction of the Administrator and in accordance with limitations of appointment under Part 183 of the Federal Aviation Regulations, data listed above and on attached sheets numbered ___(none)___ have been examined in accordance with established procedures and found to comply with applicable requirements of the Federal Aviation Regulations. <input type="checkbox"/> Recommend approval of these data I (We) Therefore <input checked="" type="checkbox"/> Approve these data			
Signature(s) of Designated Engineering Representatives		Designation Number(s)	Classifications
R.M. Howard, Jr. 		DER-710134-SW	Structures

0610-22

U.S. Department of Transportation Federal Aviation Administration			Date OCT 13 2006
STATEMENT OF COMPLIANCE WITH THE FEDERAL AVIATION REGULATIONS			
Aircraft or Aircraft Component Identification			
Make CESSNA AIRCRAFT	Model No. 501	Type (Airplane, Radio, Helicopter, etc.) AIRPLANE	Name of Applicant SIERRA INDUSTRIES
LIST OF DATA			
Identification	Title		
AERODESIGN AIRCRAFT ENGINEERING REPORT #1697-1, REV. IR, 12-6-95 SIERRA INDUSTRIES INC. DWG. SI-340-900, REV. A, 12-5-95 DWG. SI-340-901, REV. IR, 12-5-95 "STRUCTURAL SUBSTANTIATION, ARMREST ASSEMBLY AND INSTALLATION - CESSNA CITATION ARMREST INSTALLATION ARMREST DETAIL ASSEMBLY A compliance inspection may be required, and is not approved with this data. Contact the FAA concerning requirements. STRUCTURAL APPROVAL ONLY only for Model 501, S/N 501-0091, N2158U			
Purpose of Data SUPPORT OF MAJOR ALTERATION; DESIGN APPROVAL ONLY			
Applicable Requirements (List specific sections) FAR 23.301(a)(b)(c), 23.303, 23.305(a), 23.307(a), 23.561(b)(3), 23.603(a)(b), 23.605(a), 23.613(a)(b)(c), 23.615(a), 23.625(a)(b)(c), 23.787(a)(e)			
CERTIFICATION - under authority vested by direction of the Administrator and in accordance with limitations of appointment under Part 183 of the Federal Aviation Regulations, data listed above and on attached sheets numbered ____ (none) ____ have been examined in accordance with established procedures and found to comply with applicable requirements of the Federal Aviation Regulations. I (We) Therefore <input type="checkbox"/> Recommend approval of these data <input checked="" type="checkbox"/> Approve these data			
Signature(s) of Designated Engineering Representatives		Designation Number(s)	Classifications
R.M. Howard, Jr. 		DER-710134-SW	Structures



US Department
of Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approval
ONB No. 2120-0020

For FAA Use Only

Office Identification

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make Cessna	Model 501
	Serial No. 501-0091	Nationality and Registration Mark USA N2158U
2. Owner	Name (As shown on registration certificate) RBK Aviation, Inc.	Address (As shown on registration certificate) 595 State Highway 434 Ten Sleep, WY 82442-8856

3. For FAA Use Only

4. Unit Identification				5. Type	
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	(As described in item 1 above)				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address Mayday Avionics, Inc. 5500 44 th Street SE Grand Rapids, MI 49512	B. Kind of Agency		C. Certificate No. YXXR387Y Radio 1,2,3 Instrument 3 Ltd. Airframe
	<input type="checkbox"/>	U.S. Certificated Mechanic	
	<input type="checkbox"/>	Foreign Certificated Mechanic	
	<input checked="" type="checkbox"/>	Certificated Repair Station	
	<input type="checkbox"/>	Manufacturer	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments here to have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date 2-2-07	Signature of Authorized Individual Edmund Enail
----------------	--

7. Approval for Return To Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ ☒ APPROVED ☐ ☐ REJECTED

BY	FAA Fit. Standards Inspector	Manufacturer	Inspection Authorization	Other (Specify)
	FAA Designee	Repair Station	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection 2-2-07		Certificate or Designation No. YXXR387Y	Signature of Authorized Individual Edmund Enail	

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify aircraft nationality and registration mark and date work completed.)

Cessna, 501, S/N: 501-0091, USA N2158U

Approved the Dual Garmin GNS430W GPS-WAAS Navigation System as installed in accordance with the FAA form 337 dated 2-1-07, the Garmin 400W Series Installation Manual, AC 43-13-1B Chapter 11, AC 43-13-2A Chapter 2, and AC 20-138A Paragraph 8c for IFR En Route, Terminal, and Non-Precision Approach. This is a follow-on approval based on Garmin AT STC SA01933LA.

The #1 GNS 430W is located in the left avionics stack below the #1 EX500 MFD. The GNS 430W utilizes a newly installed Garmin GAD 42 to display its steering information on the pilot's RD 600 HSI and the 332C-10 #2 RMI. The RD 600 HSI is interfaced with the existing Sperry SPZ-500 Flight Guidance System. The CDI navigation source select switch (VLOC/GPS annunciate), OBS select switch (OBS annunciate), and the GPS alert annunciators; INTG, MSG, WPT, TERM, and APR are located within the GNS430W display.

The #2 GNS 430W is located in the right avionics stack below the #2 EX500 MFD. The GNS 430W utilizes a newly installed Garmin GAD 42 to display its steering information on the RD 44 #2 HSI and 332C-10 #2 RMI. The RD 44 is interfaced with the existing Sperry SPZ-500 Flight Guidance System. The CDI navigation source select switch (VLOC/GPS annunciate), OBS select switch (OBS annunciate), and the GPS alert annunciators; INTG, MSG, WPT, TERM, and APR are located within the GNS430W display.

The GNS 430W GPS-WAAS Navigation System was ground and flight checked in accordance with the Mayday Avionics, Inc. GPS Non-Precision Approach Flight Test Plan. The GNS430W GPS meets the minimum accuracy requirements of AC 20-138A Paragraphs 22 and 23 for GPS IFR En Route, Terminal, and Non-Precision Approach.

Vertical coupling of the autopilot for approaches has been demonstrated to meet its intended function and provides safe and proper operation in accordance with AC 20-138A, Paragraph 23 (4)(vi)(A).

The Mayday Avionics, Inc. Airplane Flight Manual Supplement for the GNS430W, Document No.: GNS430W.AFMS.N2158U, Rev IR, with embedded FAA form 8110-3 dated 2-1-07 (or later) is required and was placed in the Airplane Flight Manual.

The Dual GNS430W GPS-WAAS Navigation System is approved for IFR En Route, Terminal, and Non-Precision Approach only and the "GPS #1 LIMITED TO VFR USE ONLY" and "GPS #2 LIMITED TO VFR USE ONLY" placards may be removed.

END

GPS - IFR GROUND AND OPERATIONAL FLIGHT CHECK PROCEDURES / REPORT FORM

The following outlines the test procedures to approve a GPS system for IFR enroute and non-precision approaches, IAW requirements described in FAA advisory Circular AC 20-138A. Other tests may be performed in accordance With manufacturers procedures described appropriate installation manuals.

Fail **Pass**

1). Perform VHF comm interference tests on the following frequencies, testing for GPS signal degradation for a period of 35 seconds each.

121.150, 121.175, 121.200, 131.250, 131.275, 131.300
radios with 8.33 kHz spacing, 121.185, 121.190, 130.285, 131.2900

☐ ☒

2). Assure continuity of navigation during normal aircraft maneuvering (e.g., bank angles of 30 degrees, 360 turns both left and right, and normal pitch angles associated with approaches, missed approaches, and departures.

☐ ☒

3). Verify operation of overall system including, *waypoint hold and sequencing, direct to, intercept and track to, turn anticipation, and overall operations on all types of procedures including S turns.*

☐ ☒

4). Verify that all interfaced equipment operates properly, and displays correct information. I.e., Encoder, Fuel Flow, Annunciators, Maps, related switching and dimming.

☐ ☒

5). Verify GPS operation has no adverse affect on all other systems and equipment, including EMI / RFI interference.

☐ ☒

6). Evaluate all modes of Flight Guidance System and verify proper operations of interface during each mode of operations while coupled to the GPS. Verify and evaluate steering response during a variety of track and mode changes, including transitions between enroute and approach.

☐ ☒

7). Using the interfaced navigation display, verify Flight Technical Error (FTE) can be maintained at less than 1.0 NM enroute and 0.25 NM non-precision approach.
Ref. AC 20-138A par. 23, b. (3).

☐ ☒

8). Fly at least one "coupled approach" plus two others, and record the accuracy of the GPS receiver by comparing GPS coordinates to published coordinates.

☐ ☒

AIRPORT KLAN RUNWAY# 28L

PUBLISHED LAT N 42° 46.68

LON W 084° 34.44

GPS LAT N 42° 46.68

LON W 084° 34.49

ERROR 222.5

☐ ☒

GPS LAT N 42° 46.68

LON W 084° 34.50

ERROR 267

☐ ☒

GPS LAT N 42° 46.68

LON W 084° 34.50

ERROR 267

☐ ☒

GPS: model GNS430W

s/n 23400460

GPS: sw levels main 2.00

GPS 2.4

Com 7.00

VLOC 3.02

GS 4.0

I CERTIFY THAT THE DATA CONTAINED HEREIN ACCURATELY REFLECTS THE INFORMATION OBTAINED DURING THE PERFORMANCE OF AN OPERATIONAL FLIGHT CHECK

IO 2.2
Stage 1 2.01
Stage 2 2.00

SIGNATURE OF PILOT

[Signature]

CERTIFICATE No. 3118770 APP

SIGNATURE OF TECHNICIAN

[Signature]

DATE 2-1-07

MAKE / MODEL Cessna 501

A/C REG. N21580

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GPS - IFR GROUND AND OPERATIONAL FLIGHT CHECK PROCEDURES / REPORT FORM

The following outlines the test procedures to approve a GPS system for IFR enroute and non-precision approaches, IAW requirements described in FAA advisory Circular AC 20-138A. Other tests may be performed in accordance With manufacturers procedures described appropriate installation manuals.

Fail Pass

- 1). Perform VHF comm interference tests on the following frequencies, testing for GPS signal degradation for a period of 35 seconds each.

121.150, 121.175, 121.200, 131.250, 131.275, 131.300
radios with 8.33 kHz spacing, 121.185, 121.190, 130.285, 131.2900

☐ ☒

- 2). Assure continuity of navigation during normal aircraft maneuvering (e.g., bank angles of 30 degrees, 360 turns both left and right, and normal pitch angles associated with approaches, missed approaches, and departures.

☐ ☒

- 3). Verify operation of overall system including, *waypoint hold and sequencing, direct to, intercept and track to, turn anticipation, and overall operations on all types of procedures including S turns.*

☐ ☒

- 4). Verify that all interfaced equipment operates properly, and displays correct information. I.e., Encoder, Fuel Flow, Annunciators, Maps, related switching and dimming.

☐ ☒

- 5). Verify GPS operation has no adverse affect on all other systems and equipment, including EMI / RFI interference.

☐ ☒

- 6). Evaluate all modes of Flight Guidance System and verify proper operations of interface during each mode of operations while coupled to the GPS. Verify and evaluate steering response during a variety of track and mode changes, including transitions between enroute and approach.

☐ ☒

- 7). Using the interfaced navigation display, verify Flight Technical Error (FTE) can be maintained at less than 1.0 NM enroute and 0.25 NM non-precision approach.
Ref. AC 20-138A par. 23, b. (3).

☐ ☒

- 8). Fly at least one "coupled approach" plus two others, and record the accuracy of the GPS receiver by comparing GPS coordinates to published coordinates.

☐ ☒

AIRPORT KLAN RUNWAY # 28L

PUBLISHED LAT N 42° 46.68

LON W 084° 34.44

GPS LAT N 42° 46.68

LON W 084° 34.49

ERROR 222.5

☐ ☒

GPS LAT N 42° 46.68

LON W 084° 34.50

ERROR 267

☐ ☒

GPS LAT N 42° 46.68

LON W 084° 34.50

ERROR 267

☐ ☒

GPS: model GNS 430W

s/n 23400470

GPS: sw levels

main 2.00

GPS 2.4

Com 7.00

Vloc 5.02

G/S 4.00

I CERTIFY THAT THE DATA CONTAINED HEREIN ACCURATLY REFLECTS THE INFORMATION OBTAINED DURING THE PERFORMANCE OF AN OPERATIONAL FLIGHT CHECK

IO 2.2
Stage 1 2.01
Stage 2 2.00

SIGNATURE OF PILOT

CERTIFICATE No. 3118770 ATP

SIGNATURE OF TECHNICIAN

Edward E. Smith

DATE 2-1-07

MAKE / MODEL Cessna 501

A/C REG. N21580



Gerald R. Ford International Airport
P.O. Box 888316
Grand Rapids, MI 49588-8316
FAA CRS YXXR387Y

**FAA APPROVED
AIRPLANE FLIGHT MANUAL SUPPLEMENT**

FOR

AIRCRAFT MAKE:	<u>Cessna</u>
AIRCRAFT MODEL:	<u>501</u>
AIRCRAFT SERIAL NO.:	<u>501-0091</u>
REGISTRATION NO.:	<u>N2158U</u>

WITH

**DUAL GARMIN GNS 430W VHF COMMUNICATIONS
TRANSCEIVER / VOR/ILS RECEIVER / GPS-WAAS
NAVIGATION SYSTEM**

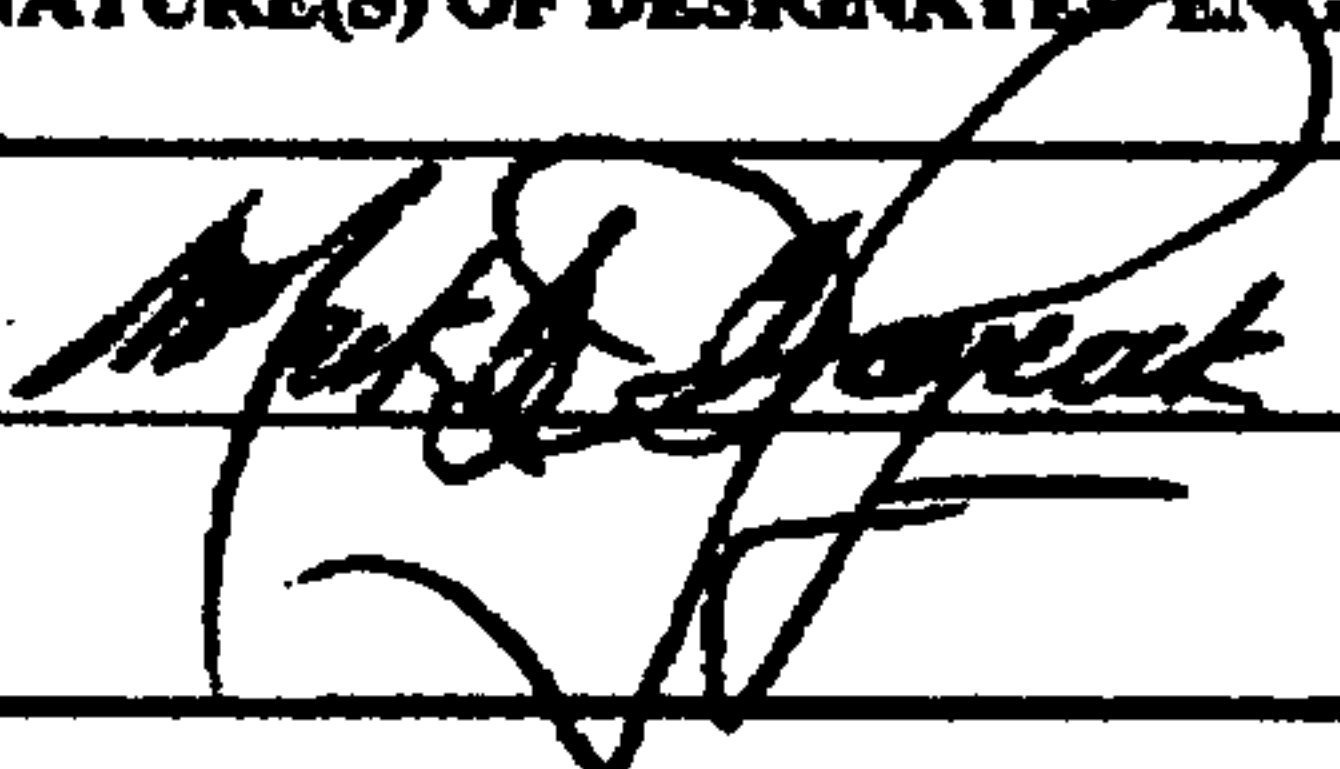
This supplement must be attached to the FAA Approved Airplane Flight Manual when the Dual GARMIN GNS 430W VHF Communications Transceiver / VOR/ILS Receiver / GPS-WAAS Navigation System is installed in accordance with FAA Form 337 dated 2-2-07.

The Information contained herein supplements or supersedes the basic Airplane Flight Manual only in those areas listed herein. For limitations, procedures, and performance information not contained in this document, consult the basic Airplane Flight Manual.

FAA APPROVED: See Page 2

MAYDAY AVIONICS, INC.
P.O. BOX 888316
GRAND RAPIDS, MI 49588-8316
FAA CRS YXXR387Y

DUAL GARMIN GNS 430W
COM TRANSCEIVER/
VOR/ILS/GPS-WAAS
NAVIGATION SYSTEM

US DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION		DATE FEB/01/2007	
STATEMENT OF COMPLIANCE WITH THE FEDERAL AVIATION REGULATIONS			
AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION			
MAKE	MODEL NO.	TYPE (Airplane, Radio, Helicopter)	NAME OF APPLICANT
Cessna	501	AIRPLANE	Mayday Avionics, Inc.
LIST OF DATA			
IDENTIFICATION	TITLE		
Mayday Avionics, Inc. Document Number GNS430W.AFMS.N2158U Rev. IR	FAA Approved Airplane Flight Manual Supplement for a GARMIN GNS 430W Com Transceiver/VOR/ILS/ GPS-WAAS Navigation System. This approval is valid only for Cessna, 501, Serial Number 501-0091.		
PURPOSE OF DATA To Support an FAA Form 337 Major Alteration			
APPLICABLE REQUIREMENTS (List specific sections) 14CFR Part 23 -23.1581; 23.1583(m); 23.1585(j)			
CERTIFICATION - Under authority vested by direction of the Administrator and in accordance with conditions and limitations of appointment under Part 183 of the Federal Aviation Regulations, data listed above and on the attached sheets numbered _____ n/a _____ have been examined in accordance with established procedures and found to comply with applicable requirements of the Federal Aviation Regulations. <input type="checkbox"/> Recommend approval of these data I XX Therefore <input checked="" type="checkbox"/> Approve these data			
SIGNATURE(S) OF DESIGNATED ENGINEERING REPRESENTATIVE(S)		DESIGNATION NUMBER(S)	CLASSIFICATION(S)
 Mark D. Haycock		DEFT500112CE	Flight Analyst, Special

FAA Form 8110-3 (11-70) SUPERSEDES PREVIOUS EDITION

GPO 901-613

Doc. No: GNS430W.AFMS.N2158U

Rev. IR

Page 2 of 14

FAA Approved Date: FEB/01/2007

MAYDAY AVIONICS, INC.
P.O. BOX 888316
GRAND RAPIDS, MI 49588-8316
FAA CRS YXXR387Y

DUAL GARMIN GNS 430W
COM TRANSCEIVER/
VOR/ILS/GPS-WAAS
NAVIGATION SYSTEM

LOG OF REVISIONS

REV	AFFECTED PAGES	DESCRIPTION	DATE	FAA APPROVAL
IR	All	Initial Release		MD Haycock FEB/01/2007

Vertical black lines in the margin indicate the revised portions of affected pages.

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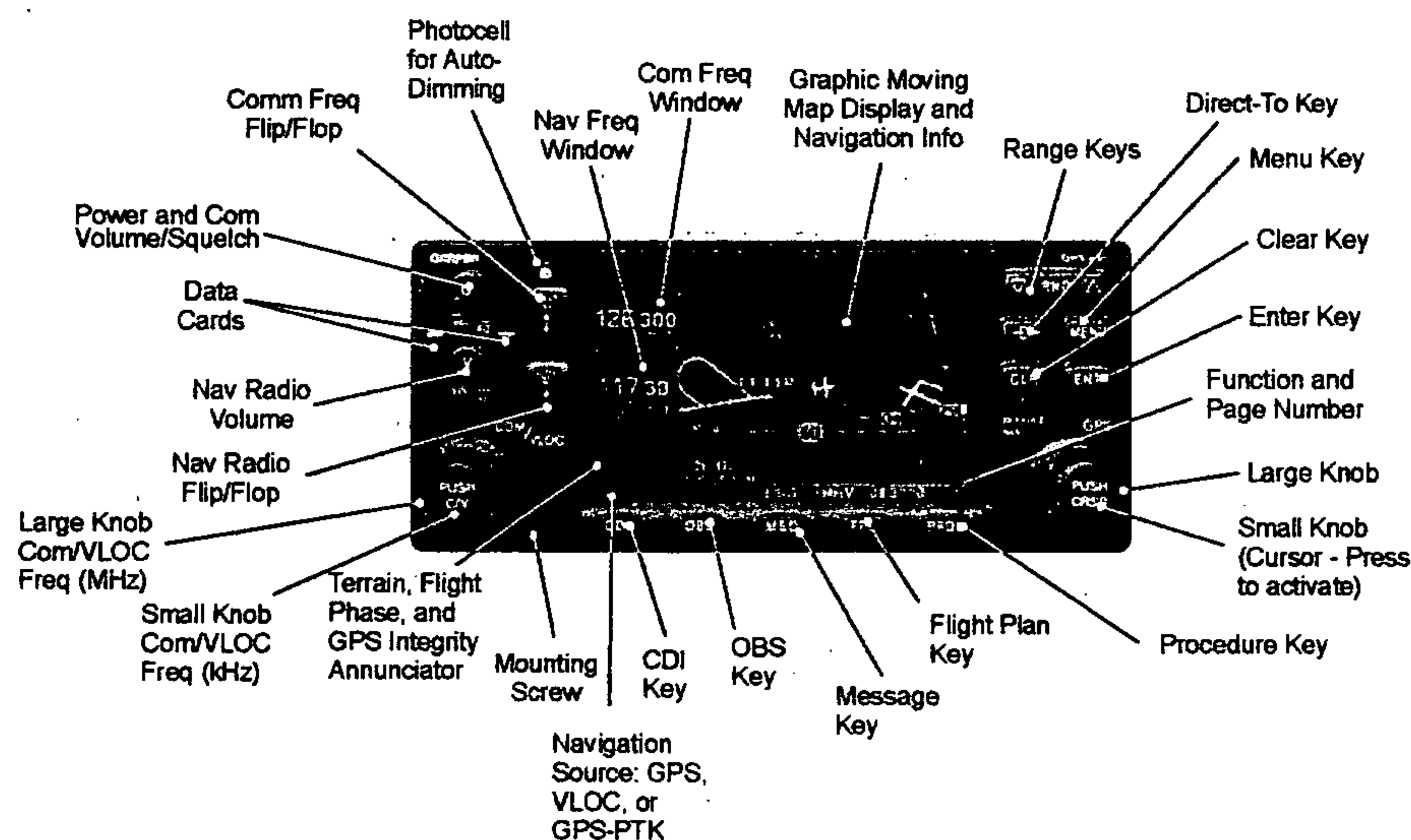
I. GENERAL

A. GARMIN GNS 430W GPS/WAAS NAV/COM

The Garmin GNS 430W GPS/WAAS Navigator is a panel-mounted product that contains a GPS/WAAS Receiver for GPS approved primary navigation, (plus VHF COM and VHF NAV radios) in an integrated unit with a moving map and color display. The GNS 430W unit features a graphical display, which may also be used to depict traffic, weather, or terrain data.

The navigation functions are operated by dedicated keys and graphical menus, which are controlled by the buttons and the dual concentric rotary knob along the bottom and right side of the display.

The VHF COM and VHF NAV radio functions are controlled via dedicated buttons and knobs on the left side of the display and adjacent to frequencies they are controlling.



I. GENERAL (CONTINUED)

B. OPERATION

GPS/WAAS TSO-C146a Class 3 Operation: The Garmin GNS 430W uses GPS and WAAS (within the coverage of a Space-Based Augmentation System complying with ICAO Annex 10) for enroute, terminal area, non-precision approach operations (including "GPS", "or GPS", and "RNAV" approaches), and approach procedures with vertical guidance (including "LNAV/VNAV" and "LPV").

Navigation is accomplished using the WGS-84 (NAD-83) coordinate reference datum. GPS navigation data is based upon use of only the Global Positioning System (GPS) operated by the United States of America.

C. CLASS II OCEANIC, REMOTE, AND OTHER OPERATIONS

The Garmin GNS 430W, as installed, has been found to comply with the requirements for GPS primary means of Class II navigation in oceanic and remote airspace, when used in conjunction with Garmin Prediction Program part number 006-A0154-03. Oceanic operations are supported when the GNS 430W unit annunciates OCN. This provides an alarm limit of four nautical miles and a mask angle of five degrees. The GNS 430W also has the ability to predict RAIM availability at any waypoint in the database if WAAS corrections are expected to be absent or disabled. This does not constitute an operational approval for Oceanic or Remote area operations. Additional equipment installations or operational approvals may be required.

1. Redundant VHF COM and VHF NAV systems may be required for other than U.S. 14 CFR Part 91 operations. Check foreign regulation requirements as applicable.
2. Operations approval may be granted for the use of the GNS-430W unit RAIM prediction function in lieu of the Prediction Program for operators requiring this capability. Refer to your appropriate civil aviation authorities for these authorizations.

II. LIMITATIONS

A. PILOT'S GUIDE

The GARMIN 400W Series Pilot's Guide, part number and revision listed below (or later revisions), must be immediately available for the flight crew whenever navigation is predicated on the use of the GNS 430W.

- 400W Series Pilot's Guide & Reference P/N 190-00356-00 Rev A
- 400W/500W Series Display Interfaces P/N 190-00356-31 Rev A

B. SYSTEM SOFTWARE

The system must utilize the Main and GPS software versions listed below (or later FAA approved versions). The software versions are displayed on the self-test page immediately after turn-on for approximately 5 seconds or they can be accessed in the AUX pages.

Subsequent software versions may support different functions. Check the 400W Series Pilot's Guide for further information.

Sub-System	Software Version
	At Time Of Installation
Main	2.00
GPS	2.4

C. NAVIGATION DATABASE

One of the following GNS 430W database cards listed in the table below (or later FAA approved versions) must be installed.

1. IFR enroute and terminal navigation is prohibited unless the pilot verifies the currency of the database or verifies each selected waypoint for accuracy by reference to current approved data.
2. GPS instrument approaches using the GNS-430W are prohibited; unless, the GNS-430W approach data is verified by the pilot or crew to be current. Instrument approaches must be accomplished in accordance with an approved instrument approach procedure that is loaded from the GNS-430W Series unit database.

Approved Navigation Database Cards

Part Number	Revision	Description
010-10546-00	B or later	Data Card, WAAS, IFR, World Wide
010-10546-01	B or later	Data Card, WAAS, IFR, Americas
010-10546-02	B or later	Data Card, WAAS, IFR, International

II. LIMITATIONS (CONTINUED)

D. TERRAIN DATABASE

The GNS 430W supports Terrain and requires a Terrain database card to be installed in order for the feature to operate. The table below lists compatible database cards for the 400W series. Each of the data base cards contains the following data:

1. The Terrain Database has an area of coverage from North 75° Latitude to South 60° Latitude in all longitudes.
2. The Airport Terrain Database has an area of coverage that includes the United States, Canada, Mexico, Latin America, and South America.
3. The Obstacle Database has an area of coverage that includes the United States, and is updated as frequently as every 56 days.

NOTE: The area of coverage may be modified as additional terrain data sources become available.

Approved Terrain Database Cards

Part Number	Revision	Description
010-10201-20	C or later	Data Card, TAWS / Terrain, 128MB
010-10201-21	A or later	Data Card, TAWS / Terrain, 256MB

E. NAVIGATION

No navigation is authorized north of 89° (degrees) north latitude or south of 89° (degrees) south latitude.

II. LIMITATIONS (CONTINUED)

F. IFR OPERATIONAL LIMITATIONS

This system does not currently comply with US 14 CFR part 91, SFAR 97 requirements for TSO-C146a equipment. Until complete compliance is demonstrated and approved by the FAA, authorization to conduct any GPS or WAAS operation under Instrument Flight Rules (IFR) requires that:

1. Aircraft using the GPS or WAAS capability of the GNS 430W series navigation equipment under IFR must be equipped with an approved and operational alternate means of navigation appropriate to the flight with the exception of oceanic and remote operations.
2. For flight planning purposes, if an alternate airport is required it must have an approved instrument approach procedure other than GPS or RNAV that is anticipated to be operational and available at the estimated time of arrival. All equipment required for this procedure must be installed and operational.
3. For flight planning purposes, Garmin Prediction Program part number 006-A0154-03 (with the GA 35, P/N 013-00235-00 antenna selected) should be used to confirm the availability of RAIM for the intended flight in accordance with the local aviation authority guidelines for TSO-C129a equipment. WAAS NOTAMs (or their absence) and generic prediction tools do not provide an acceptable indication of availability.
4. When flight planning an LNAV/VNAV or LPV approach, operators should use the Garmin Prediction Program part number 006-A0154-03 (with the GA 35, P/N 013-00235-00 antenna selected) in addition to any NOTAMs issued for the approach.

G. APPROACHES

1. During GPS approaches, the pilot must verify the GNS 430W is operating in the approach mode. (LNAV, LNAV+V, L/VNAV, or LPV)
2. When conducting approaches referenced to true North, the heading selection on the AUX pages must be adjusted to TRUE.
3. Accomplishment of an ILS, LOC, LOC-BC, LDA, SDF, MLS, VOR approach, or any other type of approach not approved for GPS overlay, is not authorized with GPS navigation guidance.
4. Use of the GNS 430W VOR/LOC/GS receiver to fly approaches not approved for GPS requires VOR/LOC/GS navigation data to be present on the external indicator (i.e. proper CDI source selection).
5. Except in emergency conditions, IFR approaches are prohibited whenever any physical or visual obstruction (such as a throw-over yoke) restricts pilot view or access to the GNS 430W unit or the affected HSI/CDI.

II. LIMITATIONS (CONTINUED)

H. TERRAIN DISPLAY

Terrain refers to the display of terrain information. Pilots are NOT authorized to deviate from their current ATC clearance to comply with terrain/obstacle alerts. Terrain unit alerts are advisory only and are not equivalent to warnings provided by TAWS. Navigation must not be predicated upon the use of the terrain display.

The terrain display is intended to serve as a situational awareness tool only. By itself, it may not provide either the accuracy or the fidelity on which to base decisions and plan maneuvers to avoid terrain or obstacles.

I. TRAFFIC DISPLAY

Traffic may be displayed on the 400W Series unit when connected to an approved optional TCAS, TAS, or TIS traffic device. These systems are capable of providing traffic monitoring and alerting to the pilot. The display of traffic is an aid to visual acquisition and may not be utilized for aircraft maneuvering. Display of this traffic data and related operations are described in the 400W Series unit Pilot's Guide.

III. EMERGENCY PROCEDURES

A. EMERGENCY PROCEDURES

No Change.

B. ABNORMAL PROCEDURES

1. If the Garmin GNS 430W GPS navigation information is not available, or is invalid, utilize other remaining operational navigation equipment installed in the airplane as appropriate. If the GNS 430W loses GPS position and reverts to Dead Reckoning mode (indicated by the annunciation of "DR" in the lower left of the display), the moving map will continue to be displayed. Aircraft position will be based upon the last valid GPS position and estimated by Dead Reckoning methods. Changes in airspeed or winds aloft can affect the estimated position substantially. Dead Reckoning is only available in Enroute mode; Terminal and Approach modes do not support DR.
2. If a "Loss of Integrity" (INTEG) message is displayed during:
 - Enroute/Terminal: continue to navigate using GPS equipment and periodically cross-check the GPS guidance to other approved means of navigation.
 - GPS Approach: GPS approaches are not authorized under INTEG
 - Execute missed approach or revert to alternate navigation.
3. During a GPS LPV precision approach or GPS LNAV/VNAV approach, the GNS 430W will downgrade the approach if the Horizontal or Vertical alarm limits are exceeded. This will cause the vertical guidance to flag as unavailable. The procedure may be continued using the LNAV only minimums.
4. During any GPS approach in which precision and non-precision alarm limits are exceeded, the GNS 430W will flag the lateral guidance and generate a system message "ABORT APPROACH loss of navigation". Immediately upon viewing the message the unit will revert to Terminal alarm limits. If the position integrity is within these limits lateral guidance will be restored and the GPS may be used to execute the missed approach, otherwise alternate means of navigation should be utilized.

IV. NORMAL PROCEDURES

A. DETAILED OPERATING PROCEDURES

Refer to the 400W Series Pilot's Guide, P/N 190-00356-00 for normal operating procedures. This includes all GPS operations, VHF COM and NAV, and Multi-Function Display information. For information on SkyWatch or Stormscope operation and displays see the Garmin 400W/500W Series Display Interfaces Pilot's Guide Addendum, P/N 190-00356-31.

Although intuitive and user friendly the GNS-430W requires a reasonable degree of familiarity to prevent operations without becoming too engrossed at the expense of basic instrument flying in IMC and basic see-and-avoid in VMC. Pilot workload will be higher for pilots with limited familiarity in using the unit in an IFR environment, particularly without the autopilot engaged. Use of an autopilot is strongly encouraged when using the GNS 430W in IMC conditions

B. PILOT'S DISPLAY

The #1 GNS 430W System course data will appear on the Pilot's HSI. The source of data is either GPS or VLOC as annunciated on the GNS 430W display above the CDI key. The #2 GNS 430W System course data will appear on the Co-Pilot's HSI. The source of data is either GPS or VLOC as annunciated on the GNS 430W display above the CDI key.

The #1 or #2 GNS 430W may also display NAV data on the Co-Pilot's RMI when selected.

C. CIRCUIT PROTECTION

The Dual GNS 430W installation is protected by four circuit breakers on the avionics buss located on the copilot's side panel:

1. 2 - 5-amp, 28 VDC, circuit breakers (marked "COM 1" & "COM 2").
2. 2 - 5-amp, 28 VDC, circuit breakers (marked "GPS 1" & "GPS 2").

D. CROSSFILL OPERATIONS

Crossfill capabilities exist between the number one and number two GNS 430W Systems. Refer to the Garmin 400W Series Pilot's Guide for detailed crossfill operating instructions.

IV. NORMAL PROCEDURES (CONTINUED)

E. APPROACHES WITH VERTICAL GUIDANCE

The GNS 430W supports three types of GPS approaches with vertical guidance: LPV approaches, LNAV/VNAV (annunciated as L/VNAV) approaches, and LNAV approaches with advisory vertical guidance (annunciated as LNAV+V). For LNAV approaches with advisory vertical guidance, the GNS 430W will annunciate LNAV+V indicating vertical guidance is available. LNAV minimums will be controlling in this case.

NOTE: If flying an LPV or LNAV/VNAV approach, be prepared to fly the LNAV only approach prior to reaching the final approach fix (FAF). If the GPS integrity is not within vertical approach limits, the system will flag the vertical guidance. This may be annunciated by a downgrade to LNAV message.

For additional information on approaches with vertical guidance refer to the 400W Series unit Pilot's Guide.

F. AUTOPILOT OPERATION

The Garmin GNS 430W may be coupled to autopilot in the aircraft. For autopilot operational instructions, refer to the FAA approved Flight Manual or Flight Manual Supplement for the autopilot.

G. COUPLING THE AUTOPILOT DURING APPROACHES

The Garmin GNS 430W may be coupled to the autopilot using the Flight Director NAV mode for enroute and terminal operations. For approaches, the flight director should be switched to APR mode at the final approach fix. This will allow coupling to the vertical component of the GPS approach information.

In the event of a loss of GPS signal during a GPS approach, the autopilot will revert to a wings level in ROLL mode, the HSI and Flight Director will FLAG and the GNS-430W will PROMPT the pilot enable the approach outputs.

IV. NORMAL PROCEDURES (CONTINUED)

H. WFDE PREDICATION PROGRAM

The Garmin WAAS Fault Detection and Exclusion (WFDE) Prediction Program is required for Remote/Oceanic operations and may be required for IFR Enroute/Terminal and Approach operations; reference the Limitations section of this manual.

The Prediction Program should be used in conjunction with the Garmin 400W/500W Simulator. After entering the intended route of flight in the Simulator flight plan the pilot selects the FDE Prediction Program under the Options menu of the Simulator program.

For detailed information refer to the WFDE prediction program instructions (190-00643-01). The availability of FDE is only required for Oceanic or Remote operations; RAIM is required for IFR Enroute/Terminal operations; and Approach availability should be validated whenever conducting RNAV(GPS) approaches.

V. PERFORMANCE

No change

VI. WEIGHT AND BALANCE

See current weight and balance data.

VII. DESCRIPTION AND OPERATION

See the 400W Series Pilot's Guide for a complete description of the GNS 430W system.



US Department
of Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approval
ONB No. 2120-0020

For FAA Use Only

Office Identification

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make Cessna	Model 501
	Serial No. 501-0091	Nationality and Registration Mark USA N2158U
2. Owner	Name (As shown on registration certificate) RBK Aviation, Inc.	Address (As shown on registration certificate) 595 State Highway 434 Ten Sleep, WY 82442-8856

3. For FAA Use Only

--	--	--	--	--	--

4. Unit Identification				5. Type	
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	(As described in item 1 above)				x
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address Mayday Avionics, Inc. 5500 44 th Street SE Grand Rapids, MI 49512	B. Kind of Agency		C. Certificate No. YXXR387Y Radio 1,2,3 Instrument 3 Ltd. Airframe
	<input type="checkbox"/>	U.S. Certificated Mechanic	
	<input type="checkbox"/>	Foreign Certificated Mechanic	
	<input checked="" type="checkbox"/>	Certificated Repair Station	
	<input type="checkbox"/>	Manufacturer	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments here to have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date 2-1-07	Signature of Authorized Individual Richard G. Brooks
----------------	---

7. Approval for Return To Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ ☒ APPROVED ☐ ☐ REJECTED

BY	FAA Ftl. Standards Inspector	x	Manufacturer	Inspection Authorization	Other (Specify)
	FAA Designee		Repair Station	Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection 2-1-07	Certificate or Designation No. YXXR387Y	Signature of Authorized Individual Richard G. Brooks
---	--	---

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify aircraft nationality and registration mark and date work completed.)

Cessna, 501, S/N 501-0091, USA N2158U

Removed the following Collins equipment: Dual VHF-20 COM's, Dual VIR-30 NAV's, Dual TDR-90 Transponders. Also removed a Gables G-4606 Control Unit, Avidyne CD ROM Data loader, Avidyne FlightMax MFD, Garmin GPS 400 GPS Receiver, GA 56 GPS Antenna, Dual NAT 80-020 Intercoms, and Dual Avtech 1630-1 Audio Panels.

Installed Dual Avidyne EX 500 MFD's in accordance with the Avidyne STC SA00161B0. The #1 EX500 MFD is located at the top of the left avionics stack in place of the removed FlightMax 750 MFD. This unit will perform all weather radar functions of the existing weather radar system. The #1 EX500 is interfaced to the existing WX500 Stormscope, SkyWatch 497, and the KGP 560 EGPWS. The #2 EX500 MFD is located at the top of the right avionics stack and is configured as a standard MFD. The #2 EX500 displays weather data from the newly installed XMD-076A. Both units are interfaced to the newly installed #1 & #2 GNS 430W's. Instructions for Continued Airworthiness for the EX500's are contained within the attached Avidyne document number AVMFD-083, Rev. 02, dated 2-06-03 (or later appropriate revision).

Installed a Heads-Up Technologies XMD 076 XM Satellite Weather/Radio Datalink Receiver in accordance with Avidyne STC SA00161B0. The XMD 076 is located in the cabin aft of the copilot divider and displays its data on the #2 EX500 MFD. The XM Radio portion of the datalink system is controlled by an XMC050-02 Remote Control. The XMD 076 receives a signal from the newly installed Comant CI 420-1 XM Antenna (located at Sta. 183.7 in place of the removed GA 56 GPS Antenna). Instructions for Continued Airworthiness for the XMD 076 are contained within the attached Heads-Up Technologies document number XMD076-S35-ICA, Rev. -, dated 7/15/04.

Installed a Comant CI 490-1 Iridium Antenna and a fabricated Antenna Doubler in accordance with Mayday Avionics, Inc. drawing number CI490-1.501.N2158U, Rev IR, dated 1-11-07 per the attached FAA form 8110-3 dated 1-30-07; AC 43-13-1B Chapters 4, 6, 7, & 11; and AC 43-13-2A Chapters 1, 3, & 13. The CI 490-1 is located on top of the aircraft at ST. 240. Instructions for Continued Airworthiness for the CI 490-1 Iridium Antenna and doubler are contained within the attached Mayday Avionics, Inc. document number CI490-1.ICA.N2158U, dated 1-31-07, or later approved revision.

CONTINUED

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify aircraft nationality and registration mark and date work completed.)

Cessna, 501, S/N 501-0091, USA N2158U

Installed Dual Garmin GNS 430W GPS/WAAS Navigation Systems with Garmin GAD 42 Interface Adapter Units in accordance Mayday Avionics, Inc. drawing numbers: GNS430.501.N2158U, Rev. IR, dated 1-11-07 per the FAA form 8110-3, dated 1-30-07 and GNS4302.501.N2158U, Rev. IR, dated 1-11-07 per the FAA form 8110-3, dated 1-30-07; the Garmin GNS 430W Installation Manual, P/N 190-00356-02; AC 20-138A; AC 43.13-1B, Chapter 11; and AC 43.13-2A, Chapter 2. This is a follow on approval based on Garmin AT, Inc. STC Number SA01933LA.

The GNS 430W's receive a signal from the newly installed Dual Garmin GA 35 GPS/WAAS Antennas. Both GA 35 antennas were installed on top of the fuselage above the cockpit at Sta. 196.5 in accordance with the Mayday Avionics, Inc drawing numbers GA35-1.501.N2158U, Rev IR, dated 1-11-07 per the FAA form 8110-3, dated 1-30-07 and GA35-2.501.N2158U, Rev IR, dated 1-11-07 per the FAA form 8110-3, dated 1-30-07; AC 43-13-1B Chapters 4, 6, 7, & 11; and AC 43-13-2A Chapters 1, 3, & 13. Instructions for Continued Airworthiness for the #1 and #2 GA 35's are contained within the Mayday Avionics, Inc. document number GA35.ICA.N2158U, Rev. IR, dated 1-31-07 (or later) as attached.

The #1 GNS 430W is located in the left avionics stack below the #1 EX500 MFD. The GNS 430W utilizes a newly installed Garmin GAD 42 to display its steering information on the pilot's RD 600 HSI and the 332C-10 #2 RMI. The RD 600 HSI is interfaced with the existing Sperry SPZ-500 Flight Guidance System. The GNS 430W is also interfaced to the existing Shadin Digidata, KGP 560 EGPWS, WX 500 Stormscope, and SkyWatch 497; and the newly installed Dual EX500's, #1 GTX 327 Transponder, #1 GMA 340 Audio Panel, and the #2 GNS 430W. The #1 Garmin GNS 430W GPS receiver is limited to VFR only and a "GPS #1 LIMITED TO VFR USE ONLY" placard is installed in accordance with AC20-138A, paragraph 9. Instructions for Continued Airworthiness for the GNS 430W and GAD 42 are contained within the attached Mayday Avionics, Inc. document number GNS430W.ICA.N2158U, Rev. IR, dated 1-31-07 (or later) as attached.


The #2 GNS 430W is located in the right avionics stack below the #2 EX500 MFD. The GNS 430W utilizes a newly installed Garmin GAD 42 to display its steering information on the RD 44 #2 HSI and 332C-10 #2 RMI. The RD 44 is interfaced with the existing Sperry SPZ-500 Flight Guidance System. The #2 GNS 430W is also interfaced to the existing WX 500 Stormscope and SkyWatch 497; and the newly installed #2 EX500 MFD, #2 GTX 327 Transponder, #1 GMA 340 Audio Panel, and the #1 GNS 430W. The #2 Garmin GNS 430W GPS receiver is limited to VFR only and a "GPS #2 LIMITED TO VFR USE ONLY" placard is installed in accordance with AC20-138A, paragraph 9. Instructions for Continued Airworthiness for the GNS 430W and GAD 42 are contained within the attached Mayday Avionics, Inc. document number GNS430W.ICA.N2158U, Rev. IR, dated 1-31-07 (or later) as attached.

All items were ground checked in accordance with their respective installation manuals for proper operation and to ensure no adverse reactions occurred to other onboard systems or equipment.

All work performed in accordance with AC 20-138A, AC 43-13-1B, and AC 43-13-2A. Pertinent details of this installation are on file at this repair station under Work Order 45958. The weight/balance and equipment lists have been revised and a logbook entry completed.

END

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION STATEMENT OF COMPLIANCE WITH THE FEDERAL AVIATION REGULATIONS			DATE <div style="text-align: center;">January 30, 2007</div>																					
AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION																								
MAKE <div style="text-align: center;">CESSNA</div>	MODEL NO. <div style="text-align: center;">501</div>	TYPE (Airplane, Radio, Helicopter) <div style="text-align: center;">AIRPLANE</div>	NAME OF APPLICANT <div style="text-align: center;">MAYDAY AVIONICS</div>																					
LIST OF DATA																								
IDENTIFICATION <u>Report</u> 13-1321-1 <u>Drawing</u> CI-490-1.501.N2158U GA35-1.501.N2158U GA35-2.501.N2158U	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Rev. -</td> <td style="width: 15%;">01/30/07</td> <td>Structural Analysis Report Antenna Installations In Cessna 501 Aircraft</td> </tr> <tr> <td>Rev. IR</td> <td>01/11/07</td> <td>Iridium Antenna Doubler</td> </tr> <tr> <td>Rev. IR</td> <td>01/11/07</td> <td>#1 GPS Antenna Doubler</td> </tr> <tr> <td>Rev. IR</td> <td>01/11/07</td> <td>#2 GPS Antenna Doubler</td> </tr> <tr> <td colspan="3" style="text-align: center;">.....END.....</td> </tr> <tr> <td colspan="3" style="text-align: center;">EFFECTIVITY: A/C SERIAL NO. 501-0091 ONLY</td> </tr> <tr> <td colspan="3" style="padding-top: 10px;"> NOTES: 1) This approval is for engineering design data only and is not an installation approval. It indicates the data listed above demonstrates compliance only with the regulations specified by paragraph and subparagraph listed below as "APPLICABLE REQUIREMENTS". Compliance with additional regulations not listed here may be required. This form does constitute FAA approval of the engineering design data necessary for substantiation of compliance to necessary structural requirements for the alteration. 2) The structural report referenced above contains inspection intervals for the GPS and Iridium antenna installations that must be included in the Instructions for Continued Airworthiness required by FAR 23.1529. </td> </tr> </table>			Rev. -	01/30/07	Structural Analysis Report Antenna Installations In Cessna 501 Aircraft	Rev. IR	01/11/07	Iridium Antenna Doubler	Rev. IR	01/11/07	#1 GPS Antenna Doubler	Rev. IR	01/11/07	#2 GPS Antenna DoublerEND.....			EFFECTIVITY: A/C SERIAL NO. 501-0091 ONLY			NOTES: 1) This approval is for engineering design data only and is not an installation approval. It indicates the data listed above demonstrates compliance only with the regulations specified by paragraph and subparagraph listed below as "APPLICABLE REQUIREMENTS". Compliance with additional regulations not listed here may be required. This form does constitute FAA approval of the engineering design data necessary for substantiation of compliance to necessary structural requirements for the alteration. 2) The structural report referenced above contains inspection intervals for the GPS and Iridium antenna installations that must be included in the Instructions for Continued Airworthiness required by FAR 23.1529.		
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PURPOSE OF DATA In support of a major alteration. The approval is design data approval only and is not an installation approval.																								
APPLICABLE REQUIREMENTS (List specific sections) 14 CFR Part 23 through Amendment 23-55: 23.301(a)(b), 23.303, 23.305(a)(b), 23.307(a), 23.365(a)(b)(c)(d), 23.571(c), 23.573(b), 23.575, 23.603(a)(b), 23.605(a), 23.607(b), 23.609(a)(b), 23.611, 23.613(a)(b)(d), 23.619, 23.625(a)																								
CERTIFICATION - Under authority vested by direction of the Administrator and in accordance with conditions and limitations of appointment under Part 183 of the Federal Aviation Regulations, data listed above and on the attached sheets numbered <u>n/a</u> have been examined in accordance with established procedures and found to comply with applicable requirements of the Federal Aviation Regulations. I (We) Therefore <input type="checkbox"/> Recommend approval of these data <input checked="" type="checkbox"/> Approve these data																								
SIGNATURE(S) OF DESIGNATED ENGINEERING REPRESENTATIVE(S)		DESIGNATION NUMBER(S)	CLASSIFICATION(S)																					
<div style="text-align: center;">Timothy A. Wolff</div>		<div style="text-align: center;">DERT-410167-CE</div>	<div style="text-align: center;">Structures</div>																					

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION STATEMENT OF COMPLIANCE WITH THE FEDERAL AVIATION REGULATIONS			DATE January 30, 2007
AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION			
MAKE Cessna	MODEL NO. 501	TYPE (Airplane, Radio, Helicopter, etc.) Airplane	NAME OF APPLICANT MayDay Avionics Inc
LIST OF DATA			
IDENTIFICATION	TITLE		
Wiring Diagram GNS430.501.N2158U	GNS430 W #1 GPS WIRING DIAGRAM REV IR DATED 01-22-07		
GNS4302.501.N2158U	GNS430 W #2 GPS WIRING DIAGRAM REV IR DATED 01-22-07		
<p>NOTE: "This approval is for engineering design data only and is not an installation approval. It indicates the data listed above demonstrates compliance only with the regulations specified by paragraph and subparagraph listed below as "APPLICABLE REGULATIONS" (compliance with additional Regulations here may be required). This form does not constitute FAA approval of all the engineering data necessary for substantiation of compliance to necessary requirements for the entire alteration".</p>			
PURPOSE OF DATA In support of a major alteration to Cessna 501 s/n 501-0091 only.			
APPLICABLE REQUIREMENTS (List specific sections) FAR PART 23.1301 (a) (Amdt 23-20), 23.1357 (c)(1)(2) (Amdt 23-43), 23.1365 (a) (Amdt 23-49).---end---			
CERTIFICATION - Under authority vested by direction of the Administrator and in accordance with conditions and limitations of appointment under Part 183 of the Federal Aviation Regulations, data listed above and on attached sheets numbered <u>XXX</u> have been examined in accordance with established procedures and found to comply with applicable requirements of the Federal Aviation Regulations.			
<input type="checkbox"/> Recommend approval of these data <input checked="" type="checkbox"/> Approve these data			
I (We) Therefore			
SIGNATURE(S) OF DESIGNATED ENGINEERING REPRESENTATIVE(S)	DESIGNATION NUMBERS(S)	CLASSIFICATION(S)	
 Donald R White	DERY 405196-NE	System & Equipment E/E	

United States Of America
Department of Transportation - Federal Aviation Administration
Supplemental Type Certificate

Number SA00161BO

This Certificate issued to Avidyne Corporation
55 Old Bedford Road
Lincoln, Massachusetts 01773

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 23 of the Federal Aviation Regulations.

Original Product Type Certificate Number : See attached FAA Approved Model List (AML), Document No. AVMFC-076, Rev (-), dated February 6, 2003, or later FAA-approved revisions for the list of approved airplane models and applicable regulations.
Make :
Model :

Description of Type Design Change:

Installation of Avidyne Corporation Model 700-00007-XXX-() Multi-Function Display in accordance with Avidyne Corporation Master Document List, Document No. AVMFD-088, Revision 04, dated February 6, 2003, or later FAA-approved revisions.

Limitations and Conditions:

1. The MFD integrates with separately approved system installations. Adherence to the limitations in the appropriate Aircraft Flight Manual Supplements for those systems is mandatory.
2. Instructions for Continued Airworthiness (ICA), Avidyne Corporation Document AVMFD-083, Revision 02, dated February 6, 2003, or later FAA accepted revision shall be made available to the operator at the time of installation.
3. Compatibility of this design with previously approved modifications must be determined by the installer.

If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application : September 10, 2002

Date reissued :

Date of issuance : February 6, 2003

Date amended :



By direction of the Administrator

Robert G. Mann
(Signature)

Robert G. Mann
Manager
Boston Aircraft Certification Office

(Title)

1. Introduction

This document is the FAA Approved Model List for STC No. SA00161BO for the installation of the Avidyne 700-00007-XXX-() Multi-Function Display into eligible aircraft. Revisions to the AML must be coordinated through the STC holder, and requires FAA approval.

IMPORTANT NOTICE

This STC is only applicable to the 14CFR Part 23 Class I, II, and III aircraft, as defined in Advisory Circular AC 23.1309-1C, which are listed in this AML.

When installed in Class III aircraft, an independent lightning detection and display system complying to TSO-C110a must also be installed for operations in IMC and FAA Approved Flight Manual Supplement, Document 600-00083-001, Rev (-), dated September 05, 2003, or later FAA approved revision is required and must be carried aboard the aircraft during all flights.

Installation in 14CFR Part 23 Class IV, Part 25, Part 27 and Part 29 aircraft are not authorized under this STC.

FAA Approved Date: SEP 05 2003

3. Approved Model List – Part 23 Class III

Aircraft Make	Aircraft Model(s)	Type Certificate Number	Certification Basis
Aerostar Aircraft Corporation	PA-60-700P (Aerostar 700P)	A17WE	14 CFR 23
Cessna Aircraft Company	208, 208A, 208B	A37CE	FAR23
	401, 401A, 401B, 402, 402A, 402B, 402C, 411, 411A, 414, 414A, 421, 421A, 421B, 421C, 425	A7CE	CAR3
	404, 406	A25CE	FAR23
	441	A28CE	FAR23
	501, 551	A27CE	FAR23
	525, 525A	A1W1	FAR23
De Havilland Inc.	(Twin Otter) DHC-6-1, DHC-6-100, DHC-6-200, DHC-6-300	A9EA	CAR3
Fairchild	SA26-T, SA26-AT, SA226-T, SA226-AT, SA226-T(B), SA227-AT, SA227-TT	A5SW	CAR3
	SA-226-TC, SA227-AC (C-26A), SA227-BC (C-26A), SA227-PC	A8SW	FAR23
	SA227-CC, SA227-DC	A18SW	FAR23
Learjet	23	A5CE	CAR3
Mitsubishi Heavy Industries, Ltd.	MU-2B, MU-2B-10, MU-2B-20, MU-2B-15, MU-2B-30, MU-2B-35, MU-2B-25, MU-2B-36, MU-2B-26	A2PC	CAR 3
	MU-2B-25, MU-2B-35, MU-2B-26, MU-2B-36, MU-2B-26A, MU-2B-36A, MU-2B-40, MU-2B-60	A10SW	CAR 3
Partenavia Costruzioni Aeronauticas S.p.A.	"SPARTACUS", AP68TP 600 "VIATOR", VA300	A31EU	FAR23
Piaggio Aero Industries S.p.A.	P-180	A59EU	14 CFR 23
Pilatus Aircraft Limited	PC-12, PC-12/45	A78EU	FAR23

FAA Approved Date: SEP 05 2003

***FlightMax EX500-Series
Instructions For Continued Airworthiness***

**AVIDYNE
CORPORATION**

**55 Old Bedford Road
Lincoln, MA 01773**

Document Number		AVMFD-083	Control Category	CC2
Revision	Description		ECO	Date
00	Initial Release		02-334	11/21/02
01	Change to incorporate FAA comment in Section 16		02-355	12/06/02
02	Update to reference AML		03-054	2/06/03

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1. Introduction

1.1 Aircraft Description

Make:

Model:

Reference Avidyne 700-00007-XXX-() MFD Approved Model List
STC No. SA00161BO

1.2 Scope

This document identifies the Instructions For Continued Airworthiness (ICA) for the modification of the above aircraft by installation of an Avidyne 700-00007-XXX-() EX500-Series Multi-Function Display (MFD).

This ICA satisfies the requirements of 14 CFR 23.1529.

1.3 Applicability

This document applies to aircraft altered by the installation of an Avidyne 700-00007-XXX-() FlightMax EX500-Series Multi-function Display (MFD).

1.4 Definitions and Abbreviations

ICA - Instructions for Continued Airworthiness

STC - Supplemental Type Certificate

MFD - Multi-function Display

AEG - Aircraft Evaluation Group

1.5 Precautions

This section not applicable.

1.6 Units of Measure

This section not applicable.

1.7 Referenced Publications

FlightMax EX500-Series MFD Installation Manual, P/N 600-00079-000

FlightMax EX500-Series MFD Pilot's Guide, P/N 600-00078-000

1.8 Distribution

This Instructions For Continued Airworthiness is to be furnished with new production EX500-Series MFD's and is to become part of the permanent aircraft record upon installation.

A current revision of this ICA shall be available on the Avidyne website at www.avidyne.com (Technical Publications in the Products section).

2. Description

The Avidyne 700-00007-XXX-() MFD is a radio rack mounted Multi-Function Display that provides the following capabilities:

1. A moving map display that provides terrain, geo-political boundaries, airspace, nav aids, airports, airways, and obstacles;
2. Used with an external traffic detection system, it displays a pictorial representation of nearby transponder-equipped aircraft overlaid on the moving map display;
3. Used with an external lightning detection system, it presents a visual display of lightning strikes or cells overlaid on the moving map display;
4. Used with an external radar receiver/transmitter, it displays radar echo image data on a radar display page, or overlaid on the moving map display;
5. Used with an external Terrain Awareness Warning System, it displays EGPWS terrain image data on a TAWS display page;
6. Used with an external GPS navigator, it displays the current active flight plan overlaid on the moving map display and in textual formats;
7. Using an internal digital data link transceiver, it displays strategic weather information in graphical and textual formats.

3. Control and operation information

The Front Bezel serves as the physical interface to the pilot and consists of the following user interface controls and display:

1. Ten backlit line select keys;
2. Variable function knobs, as discussed below;
3. An LCD active matrix color graphics display;
4. Display brightness control with backlit labeling;
5. Power on-off pushbutton with backlit labeling;
6. A USB port for performing nav database updates.

The system is equipped with two sets of concentric knobs; the two left knobs select bearing line and radar tilt in Map, Radar, and TAWS pages, while the two right knobs select page and range on Map, Radar, and TAWS pages, and page and line selection on other pages. Complete operational details are provided in the referenced FlightMax EX500-Series MFD Pilot's Guide.

4. Servicing information

This section is not applicable.

5. Maintenance instructions

Scheduled Maintenance Program tasks to be added to the aircraft operator's appropriate aircraft maintenance program are as follows:

5.1 Recommended periodic scheduled servicing tasks

The Avidyne EX500-Series MFD contains a 3-volt lithium battery that maintains CMOS memory on an internal processor board and should be replaced after 10 years of service, or when CMOS memory fails to retain configuration data, whichever occurs first. The Avidyne EX500 must be returned to an authorized FAA repair station to perform this maintenance function. Failure of the CMOS memory is indicated by the message "WARNING: CMOS battery failure. Check database expiration date. Press any bezel key to continue" on a blue background prior to system boot up. After system boot up, the MFD will function normally, but will not have retained the system date and time. If the system is interfaced to the GNS 430 through ARINC 429, it will acquire current date and time from the GNS 430 when valid data is received.

5.2 Recommended periodic scheduled preventive maintenance tests/checks

None required.

5.3 Recommended periodic scheduled inspections

None required.

5.4 Recommended periodic structural inspections

None required.

6. Troubleshooting information

The Avidyne MFD incorporates a message bar located at the bottom of the display. Messages are generated by the system and displayed on the message bar and are helpful in troubleshooting system problems. Refer to Sensor manufacturer installation and users manual to assist in troubleshooting. The following tables present the messages that are generated by each application.

Table 1 - GPS/FMS Messages

Message	Meaning/Action
Nav Source Is Not Communicating	No RS 232 or ARINC 429 GPS data is being received.
Nav Source Data Is Not Valid	Data is being received from the external GPS. However, insufficient information is available from the GPS to determine position. <ul style="list-style-type: none"> ○ Verify that the GPS has determined its "fix" or location
Nav Source Data Format Error	The MFD does not recognize the data being received from the GPS.
Nav Source Can't Open Port (err=x)	The MFD is incorrectly setup with two devices on the same port.
Nav Source Reconnecting ...	The data between the MFD and the GPS is being synchronized.
Heading Data Is Not Valid	When the GPS is being used as the heading source, heading data is no longer available from the GPS. <ul style="list-style-type: none"> ○ Verify that the GPS has determined its "fix" or location.

Table 2 - Lightning Messages

Message	Meaning/Action
Lightning Sensor Error	The sensor system has reported an error. <ul style="list-style-type: none"> ○ Refer to lightning sensor user's manual to troubleshoot.
Lightning Sensor Has Failed	The sensor system has reported an error. <ul style="list-style-type: none"> ○ Refer to lightning sensor user's manual to troubleshoot.
Lightning Sensor Is Not Communicating	Communication of strike data from the lightning sensor to the MFD has been lost. <ul style="list-style-type: none"> ○ Verify that the sensor is turned on.
Lightning Heading Source Failed	When the lightning sensor is being used as the heading source, heading data is no longer available from the sensor. <ul style="list-style-type: none"> ○ Refer to lightning sensor user's manual to troubleshoot.
Lightning -Antenna Location Changed (Maintenance Mode)	Present when the antenna installation configuration between the MFD and the WX500 is different.

Table 3 - Traffic Messages

Message	Meaning/Action
Traffic Sensor Is Not Communicating	The traffic sensor is reporting a failure condition or not receiving valid data. <ul style="list-style-type: none"> ○ Refer to traffic system user's manual to troubleshoot.
TCAD Altitude Unavailable {TCAD}	Altitude data is not being received by the traffic sensor. <ul style="list-style-type: none"> ○ Verify that the sensor is turned on. ○ Refer to traffic sensor user's manual to troubleshoot.
Traffic Sensor Heading Source Is Failed {TCAS, TAS}	When the traffic sensor is being used as the heading source, heading data is no longer available from the sensor. <ul style="list-style-type: none"> ○ Refer to traffic sensor user's manual to troubleshoot.

Table 4 - RADAR Messages

Message	Meaning/Action
Radar Sensor Data Is Invalid	Data received from the RADAR sensor system can not be used by the EX500 <ul style="list-style-type: none"> ○ Cycle power on the EX500. ○ Refer to RADAR Sensor user's manual to troubleshoot.
Radar Sensor Has Failed	The RADAR sensor system has reported an error. <ul style="list-style-type: none"> ○ Refer to RADAR Sensor user's manual to troubleshoot.
Radar Sensor Is Not Communicating	Communication of return data from the RADAR sensor to the MFD has been lost. <ul style="list-style-type: none"> ○ Verify that the RADAR sensor is turned on.
Invalid GPS Data and Radar is ON	The RADAR is ON and the EX500 has no ground speed data available from the GPS/FMS. <ul style="list-style-type: none"> ○ Verify the GPS/FMS is ON. ○ Refer to RADAR Sensor user's manual to troubleshoot.
Radar Automatic Standby Disabled	The RADAR is ON, the EX500 RADAR automatic standby mode is disabled, and the EX500 has no ground speed data available from the GPS/FMS.

Table 5 - TAWS Messages

Message	Meaning/Action
TAWS Display Failed	An incorrect system configuration or failure in one of the system components has occurred. <ul style="list-style-type: none"> ○ Verify that the sensor is turned on.
TAWS Display Initializing	If message does not clear within 60 seconds, communication between the EX500 and the terrain sensor has not been established. <ul style="list-style-type: none"> ○ Verify that the sensor is turned on. ○ Refer to terrain sensor user's manual to troubleshoot.
TAWS Not Communicating	Indicates that the EX500 is not receiving data from the terrain sensor. <ul style="list-style-type: none"> ○ Verify that the sensor is turned on. ○ Refer to TAWS sensor user's manual to troubleshoot.
TAWS Display Unavailable	The TAWS Sensor has declared itself inoperative. <ul style="list-style-type: none"> ○ Verify that the sensor inputs to the TAWS are turned on. ○ Refer to TAWS sensor user's manual to troubleshoot.
TAWS Sensor Self-Test	The TAWS Sensor is performing a Self-Test. The message will remain until the self-test is finished. <ul style="list-style-type: none"> ○ Verify that the "INHIBIT" mode has been not been selected at the separate TAWS control panel. ○ Refer to TAWS sensor user's manual to troubleshoot.
TAWS Display Inhibited	The TAWS sensor is in the "Self-Test" mode. <ul style="list-style-type: none"> ○ Verify that the "Self-Test" mode has been not been selected at the separate TAWS control panel. ○ Refer to TAWS sensor user's manual to troubleshoot.

Table 6 - Datalink Messages

Message	Meaning/Action
Datalink Sensor Data Is Invalid	The EX500 has received unreadable satellite data.
Datalink Sensor Configuration Error	The EX500 is improperly configured for datalink. <ul style="list-style-type: none">○ Requires factory servicing. Refer to Factory Service Policies section of this manual.
Datalink Sensor Is NOT Communicating	The EX500 is experiencing a communication failure with the internal Satellite transceiver. <ul style="list-style-type: none">○ Requires factory servicing. Refer to Factory Service Policies section of this manual.

Table 7 - Heading Messages

Message	Meaning/Action
Synchro Heading is NOT Valid	The EX500 not receiving or is receiving bad heading synchro data.

Upon loss of unit functionality post-installation, the following post-flight actions may be taken:

- i. Perform post-installation checkout procedures in accordance with the procedures contained within the FlightMax EX500-Series MFD Installation Manual,
- ii. Perform installation checkout or self-test procedures for sensors (EGPWS, RADAR, etc.) interfaced to the EX500,
- iii. Contact Avidyne for return authorization and instructions. Contact information is available at www.avidyne.com.

7. Removal and replacement information

Removal and replacement instructions, including system set-up and installation verification, are contained in the referenced FlightMax EX500-Series MFD Installation Manual. Unit removal, installation, setup and checkout should be performed by an Avidyne Authorized Service Center. A current list of authorized centers may be found on the Web at www.avidyne.com.

7.1 Removal

To remove the EX500 MFD from the radio rack, loosening the unit locking key with 3/32" Allen wrench having a minimum length of 3.5 inches. With power off the system, pull the unit from its rack.

7.2 Installation

With power off the system, insert the EX500 MFD into the radio rack tray and tighten the locking key with a 3/32" Allen wrench having a minimum length of 3.5 inches.

Upon reinstallation, a functional check should be performed in accordance with the System Setup and Checkout procedures detailed in Section 7.3

7.3 System Setup and Checkout

Any time the Avidyne MFD is removed and sent to the factory for service, or is replaced with another unit, these system setup procedures should be performed to assure that the unit is properly configured for the installation. System set-up and installation verification procedures are contained in the FlightMax EX500-Series MFD Installation Manual.

8. Diagrams

This section is not applicable.

9. Special inspection requirements

This section is not applicable.

10. Application of protective treatments

This section is not applicable.

11. Data

This section is not applicable.

12. List of special tools

A size 3/32" Allen wrench, with a minimum length of 3.5 inches, is required to loosen the tray locking mechanism.

13. For commuter category aircraft

This section is not applicable.

14. Recommended overhaul periods

This section is not applicable.

15. Airworthiness limitation section

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.

There are no additional airworthiness limitations as a result of this modification.

16. Revision

Revisions to this document shall be coordinated through the Boston Aircraft Certification Office, the Kansas City AEG, and the STC holder. Inquiries relating to the ICA should be made to Avidyne Corporation. If you would like to be notified of future revisions to this manual please furnish the information listed below:

Name
Address
City, State, and Zip Code
Part Number of Manual
Current Revision Status of Manual

Please submit this information to:

Avidyne Corporation
55 Old Bedford Road
Lincoln, MA 01773

Avidyne Corporation
55 Old Bedford Road
Lincoln, MA 01773

FAA APPROVED

AIRPLANE FLIGHT MANUAL SUPPLEMENT

FOR AIRCRAFT Cessna 501
Listed in Avidyne 700-00007-XXX-0 Approved Model List

WITH

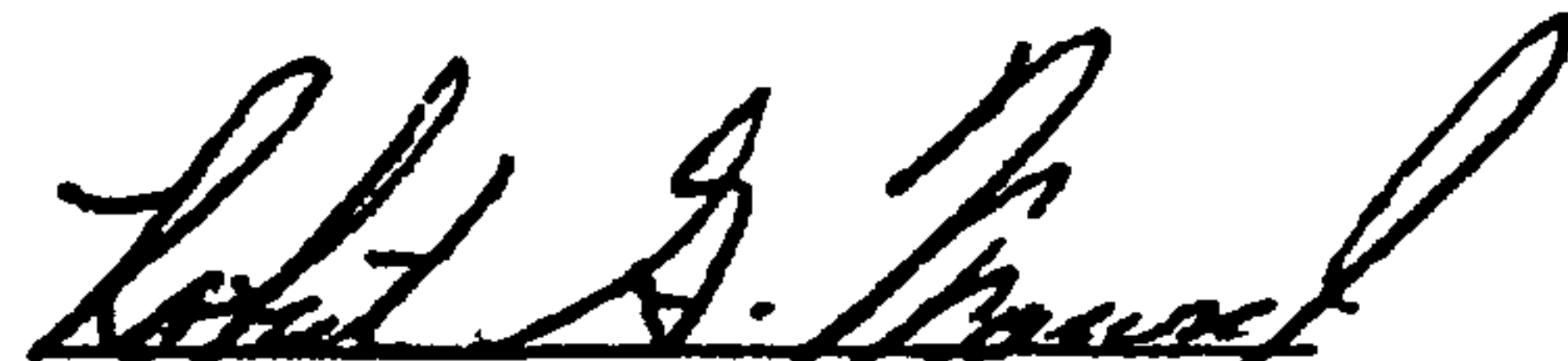
AVIDYNE FLIGHTMAX 700-00007-XXX-0
EX500 MULTI-FUNCTION DISPLAY (MFD)

REG. NO. N21854

SER. NO. 501-0091

This supplement must be attached to the applicable FAA Approved Airplane Flight Manual when an Avidyne FlightMax 700-00007-XXX-0 is installed in the aircraft so designated in the Approved Model List which accompanies STC #SA00161BO. The information contained herein supplements or supersedes the basic manual only in those areas listed. For limitations and procedures not contained in this supplement consult the basic Airplane Flight Manual.

FAA APPROVED:


Robert G. Mann, Manager
Boston Aircraft Certification Office
Federal Aviation Administration
Burlington, MA.

FAA APPROVED
Date: SEP 05 2003

Page 1 of 4
P/N 600-00083-000

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Avidyne Corporation
55 Old Bedford Road
Lincoln, MA 01773

LOG OF REVISIONS

Revision Number	Revised Pages	Description of Revisions	FAA Approval	Date
(-)	ALL	Initial Release	See Page 1 for signature	

A vertical black line in the margin shows revised portions of affected pages.

FAA APPROVED
Date: SEP 05 2003

Page 2 of 4
P/N 600-00083-000

Avidyne Corporation
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Lincoln, MA 01773

SECTION I – GENERAL

Avidyne FlightMax EX500, P/N 700-00007-XXX-(), is a multi-function display capable of presenting information from multiple sensors. Information shown on the FlightMax display is intended as an aid to situational awareness. This supplement is applicable to aircraft with gross take-off weights (GTOW) in excess of 6000 lbs.

SECTION II LIMITATIONS

1. The Avidyne FlightMax EX500 may only be operated in IMC conditions as a radar display when used in conjunction with an independent lightning detection and display system.

SECTION III EMERGENCY PROCEDURES

No Change

SECTION IV NORMAL PROCEDURES

IMC Operations with Weather Radar

While operating in IMC conditions with weather radar active, activate lightning detection system and monitor. Correlate lightning strike information with painted radar information to confirm proper system operation.

In the event that radar data and lightning do not coincide, contact ATC for the latest severe weather information.

SECTION V PERFORMANCE

No Change

SECTION VI WEIGHT AND BALANCE

No Change

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SECTION VII SYSTEM DESCRIPTION

No Change

SECTION VIII AIRCRAFT HANDLING

No Change

SECTION IX SUPPLEMENTS

This document must be added to the supplements section of aircraft
POH/AFM

SECTION X SAFETY INFORMATION

No Change



Instructions for Continued Airworthiness

XMD076 XM WX Datalink Receiver Installations on STC SA00161BO AML Aircraft

DOCUMENT NO.: XMD076-S35-ICA

REVISION: -

REVISION DATE: 07/15/2004

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**RECORD OF REVISIONS**

Revisions to this document shall be coordinated through the Boston Aircraft Certification Office, the Kansas City AEG, and the STC holder.

When changes to this document are required, these changes will be distributed by postal or electronic mail (pdf format), as required, to authorized users of this STC.

This page provides a record of manual revisions. In the spaces provided, log individual page updates and replace the superceded pages as instructed by the change package.

REVISION	REVISED PAGES		DESCRIPTION	BY
	DATE	PAGES		
-	07/15/04	ALL	Initial Release	JH

**SERVICE BULLETIN LIST**

When a Service Bulletin is received for this assembly, perform the instructions given, log it into the Service Bulletin List given below, and insert the Service Bulletin into this section to maintain a historical record.

NOTE: Alert Service Bulletins are produced on blue colored paper with the heading ALERT.
When an ALERT Service Bulletin is received, take immediate action.

SERVICE BULLETIN NUMBER	ORIGINAL ISSUE DATE	REVISION NUMBER AND DATE	DATE OF INCORPORATION INTO MANUAL

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1.0 INTRODUCTION

1.1 Purpose

This ICA document provides maintenance information as a result of this Supplemental Type Certificate (STC) modification. This ICA satisfies the requirements of 14CFR 23.1529

1.2 Applicability

The ICA applies to aircraft altered by the installation of the XMD076-01 XM WX Receiver as a broadcast datalink sensor for the cockpit MFD.

1.3 Definitions and Abbreviations

ICA – Instructions for Continued Airworthiness

STC – Supplemental Type Certification

XM WX – XM Radio Inc. Weather Data Broadcast

MFD – Multi-Function Display

AEG – Aircraft Evaluation Group

1.4 Precautions

This section is not applicable.

1.5 Units of Measure

This section is not applicable.

1.6 Reference Documents

FAA AC43.13-1B

Acceptable Methods, Techniques and Practices – Aircraft
Inspection and Repair

HUT XMD076-3

Installation Manual, XMD076 XM WX Datalink Receiver

1.7 Distribution

This ICA is to be furnished with new production XMD076-01 receivers and obligates the aircraft operator to include this information in the Operator's Aircraft Maintenance Manual and the operator's Aircraft Scheduled Maintenance Program.



2.0 Modification Description

This modification consists of the installation of the Heads Up Technologies XMD076-01 XM Weather (WX) Datalink Receiver as an optional sensor to the cockpit MFD.

The XMD076 XM WX System is a broadcast datalink for the cockpit MFD to access streaming weather data transmitted from XM Radio, Inc. It is a remote mounted "sensor" which requires power, ground and a connection to an external antenna. It interfaces to the MFD over a single receive/transmit pair of RS232 signals.

The XMD076-01 XM WX Receiver is illustrated below.

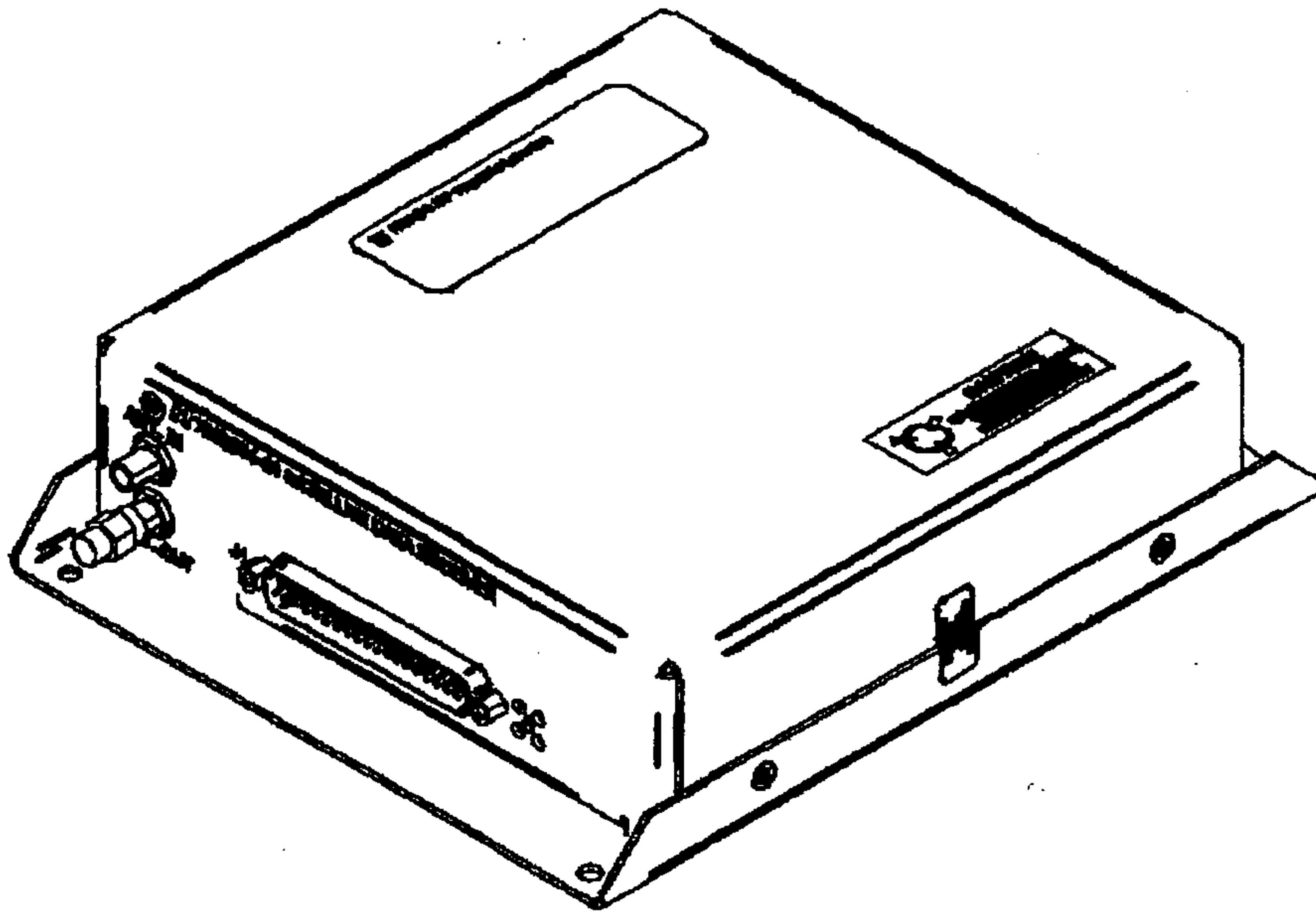


Figure 2-1 - XMD076-01



3.0 System Operation

All operation of the XMD076 is performed with the MFD. The front bezel of the MFD serves as the user interface to the pilot. A general operating procedure is provided below to verify the operation of the XMD076 receiver and the datalink to the MFD. Refer to the actual installed MFD operational manual for detailed instructions, as needed.

3.1 General Operating Instructions

NOTE: Full operation of the receiver requires an active subscription service with XM Radio. Without activation, the receiver is not capable of decoding the weather data broadcast. In addition, the antenna connected to the receiver must have line-of-sight reception of one or both XM radio satellites. Without activation, some operation can be checked such as signal reception and the communication link between the receiver and the MFD.

3.1.1 System Test (Activation Not Required)

1. Move aircraft to an outdoor area with a clear view of the southern sky, free of buildings, trees or other obstructions.
2. Apply power to the XMD076 receiver and any other system applicable to the MFD equipment. Some installations may include a WX Data power switch, if equipped, toggle to the ON position. The receiver is equipped with an on-board red LED indicator to show the receiver is powered-on.
3. Power up the MFD. Go into Maintenance Mode using the procedure in the MFD installation manual and select the RS232 port to which the XM Receiver is wired, as required.
4. Restart the MFD. Select the Trip page on the MFD. Press the Display button until Broadcast (a down pointing arrow) Status is displayed in the Display button label.
5. The MFD will report the Receiver ID Number and Signal Quality of the XMD076. If successful, the communication link between the MFD and receiver is operational. If the Signal Quality is reported as Good, the antenna and cabling are installed correctly and are operating normally and, the aircraft is in view of at least one of the XM satellites.

NOTE: The Receiver ID number must be presented to the aircraft owner, who will need it to buy the subscription service and for other customer service needs with XM Radio.

6. If the Signal Quality is reported as Marginal, Weak, or None, reposition the aircraft away from obstructions to get a better view to the sky. If after verification of the aircraft position the Signal Quality is still not Good, inspect the antenna and cable.
7. If the Signal Quality and Receiver ID are not reported, the configuration of or wiring to the MFD is incorrect, or the XM receiver is powered off.



4.0 Inspection Procedures

4.1 Inspection Schedule

This installation does not require scheduled inspections and are on condition only.

4.2 Inspection procedures

All inspection methods are a surveillance visual inspection. This type of inspection is a close intensive inspection of highly defined structural details, searching for evidence of structural irregularities and discrepancies such as wear, deterioration, damage, corrosion, fatigue, etc.

Adequate lighting is required and where necessary, inspection aids such as mirrors, bore scopes and other optical enhancement equipment should be used. Surface cleaning and access procedures may be required to gain an acceptable proximity (typically within 3-feet), to the item under inspection.

4.3 Special Inspection Requirements

Special inspection techniques are not required.



5.0 Maintenance Instructions

This section provides the necessary information to inspect the systems, including functional and structural checks.

5.1 Scheduled Maintenance

This aircraft modification does not require scheduled service or preventative maintenance tasks added to the aircraft operators existing maintenance program.

Repairs are to be performed when deemed necessary as a result of the scheduled inspections and as required by the aircraft operator to resolve operational issues.

5.2 Special Tools and Equipment

Maintenance for this installation does not require special tools and equipment.

5.3 Application of Protective Treatments

None required.

5.4 Requirements for Commuter Category Aircraft

This section is not applicable.

5.5 Recommended Overhaul Periods

None required.

5.6 Diagrams and Data

This section is not applicable.



6.0 System Troubleshooting

A system component fault isolation matrix is provided in Table 6-1 to aid maintenance personnel in troubleshooting the system.

Refer to the aircraft modification log for the general location of the installed receiver and antenna. Replacement part numbers of the receiver and accessories are located in the installation manual.

Table 6-1 – Fault Isolation Matrix

PROBLEM	CAUSE(S)	ACTION(S)
MFD reports a communication error with the receiver.	C/B pulled or defective.	Reset or replace C/B in Galley Cabinet C/B Panel.
	Receiver power not enabled	Verify receiver P1-18 is energized. If the installation is equipped with a optional receiver power switch, it must be in the ON position. If the installation is not equipped with a power switch, verify P1-18 is connected to P1-19 of receiver harness. If the receiver is powered, the power indicator will illuminated. Note: The power indicator is viewed on the receiver, next to the main connector.
	Defective or damaged communication cable from receiver to MFD.	Inspect wiring and connectors, repair or replace as required.
	Power ok, faulty receiver.	Replace receiver.
	Aircraft voltage too low.	Verify system power is between 9.0VDC and 30VDC.
Signal Quality poor or not present.	Loose or defective cable to antenna.	Check cable connectors or cable.
	Aircraft not positioned to provide the antenna a clear view of the XM satellites.	Evaluate aircraft location and improve as required.
	Defective antenna or receiver	Refer to Section 7.
Signal Quality good or marginal but no Wx Data.	Receiver subscription not activated or expired.	Call XM Radio customer service or go to XM Radio's website at www.xmradio.com . The receiver ID # is required.



7.0 Servicing Information

7.1 Removal and Installation

Installation information, including system set-up and installation verification procedures are contained in the XMD076 Installation Manual. Removal, installation, set-up and checkout shall be performed by qualified personnel.

To remove the XMD076:

1. Disconnect wiring and cable connectors from the receiver.
2. Remove the (4) mounting screws attaching the receiver to the aircraft structure.

To install the XMD076 perform the above steps in reverse order, including:

1. Tighten SMA plug to 8 – 10 in lbs.
2. Perform system check as described in Section 3.

7.2 Technical Support

Technical support or service questions may be submitted 24 hours a day and 7 days a week to the following:

Email:	<u>service@heads-up.com</u>
Fax:	972-407-1758
Voice:	972-407-1131 and 800-367-4770

A Heads Up Technologies customer support representative will respond as soon as possible. Heads Up Technologies business hours are 8:00 AM to 5:00 PM Central Time, Monday through Friday.

Issues with the MFD must be resolved through the MFD manufacturer.

7.3 General Service Procedures

Service of a XMD076 component performed at the factory typically includes an overhaul consisting of a thorough inspection, repair as needed and functional tests. Antennas that are used in this system are not serviceable and can only be inspected and tested. Faulty or damaged antennas must be replaced.

Prior to returning a unit in for service, contact Heads Up Technologies (as shown above) to obtain a Return Merchandise Authorization (RMA) number.

Prepare a packing slip that includes the part number(s) and serial number(s) of the items to be returned, along with a complete description of the problem, requested service and special instructions. The packing slip must also include a contact name, daytime telephone number and return shipping address.

To return an item, securely pack it in the original shipping container, if possible. Write the RMA number on the outside of the container and ship it to the address provided by the Heads Up Technologies customer service representative.



8.0 Airworthiness Limitations

The recommended structural inspections types and intervals for this aircraft modification are provided in Section 4.0. These listed inspections have been determined through evaluation to be not required for the continued airworthiness of the aircraft.

This installation does not include any mandatory continued airworthiness activities.

Note: If new inspection procedures and techniques are required as a result of repairs, they must be included in the instructions for continued airworthiness for the repaired aircraft.

This 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.

**GARMIN VHF COMMUNICATIONS TRANSCEIVER /
VOR/ILS RECEIVER / GPS-WAAS NAVIGATION SYSTEM
MODEL GNS 430W WITH GARMIN INTERFACE
ADAPTOR MODEL GAD 42**

Instructions for Continued Airworthiness



5500 44TH STREET SE
GRAND RAPIDS, MI 49512

Phone: (616) 957-4920
Fax: (616) 957-2218

Document number: GNS430W.ICA.N2158U
Rev. IR, Date: **January 31, 2007**

**THIS ICA IS PART OF THE AIRCRAFT'S
INSPECTION/MAINTENANCE
REQUIREMENTS**

LOG OF REVISIONS

Rev.	Date	Description of Change	Affected Pages
IR	1-31-07	Initial Release.	All

Vertical black lines in the margin indicate the revised portions of affected pages.

GARMIN GNS 430W GPS-WAAS NAVIGATION SYSTEM
Instructions for Continued Airworthiness

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GARMIN GNS 430W GPS-WAAS NAVIGATION SYSTEM
Instructions for Continued Airworthiness

SECTION I - GENERAL

1. INTRODUCTION

In accordance with FAR 23.1529 and 14 CFR Part 23 Appendix G, this document identifies the Instructions for Continued Airworthiness (ICA) for the alteration of the above aircraft by installation of a DUAL Garmin VHF Communications Transceiver / VOR/ILS Receiver / GPS-WAAS Navigation System Model GNS 430W with Garmin GAD 42 Interface Adaptor Units.

A. Referenced Publications

- 1) The GNS 430W Installation Manual, P/N 190-00356-02.
- 2) The GNS 430W Pilot's Guide, P/N 190-00356-00.
- 3) The GAD 42 Installation Manual, P/N 190-00159-00.
- 4) The GAD 42 Maintenance Manual, P/N 190-00159-01.
- 5) AC 20-138A; AC 43-13-1B Chapter 11; and AC 43-13-2A Chapter 2.
- 6) Cessna Model 501 Maintenance Manual.

* Or later FAA approved revisions to the above referenced publications.

2. DESCRIPTION

For pertinent details of the installation, reference Block 8 of the attached FAA form 337 dated 2-01-07.

3. CONTROL, OPERATION INFORMATION

Reference the GNS 430W Pilot's Guides for equipment operating procedures.

4. SERVICING INFORMATION

Reference the GNS 430W Pilot's Guide for Data Base update procedures.

GARMIN GNS 430W GPS-WAAS NAVIGATION SYSTEM

Instructions for Continued Airworthiness

SECTION II - MAINTENANCE

1. MAINTENANCE INSTRUCTIONS

GNS 430W

In the event of system failure, return the unit to the manufacturer or an approved Garmin repair station. The GNS 430W is designed to detect internal failure. A thorough self-test is executed automatically upon application of power to the unit and a built-in test is continuously executed. Detected errors are indicated on the equipment via failure annunciators and maintenance is "on-condition".

Operation of the GNS 430W is not permitted unless an inspection as described in this section has been completed within the preceding 12 calendar months. Conduct a visual inspection on the GNS 430W and its wire harness to insure installation integrity, inspect the unit for security of attachment, inspect all knobs and buttons for legibility, and inspect condition of wiring, routing and attachment/clamping. Reference the GNS 430W Installation Manual for instruction on cleaning and battery replacement procedures.

GAD 42

Maintenance of the GAD 42 is "on condition". Periodic maintenance is not required. Reference the GAD 42 Maintenance Manual.

2. TROUBLESHOOTING INFORMATION

Refer to the GNS 430W Installation Manual or the GAD 42 Maintenance Manual.

3. REMOVAL AND REPLACEMENT INFORMATION

If the GNS 430W is removed for repair and reinstalled, an operational checkout should be performed per the Installation Manual's "Post Installation Checkout Procedures".

If the GAD 42 is removed and reinstalled, a functional check of the equipment should be conducted in accordance with the GAD 42 Installation Manual.

4. DIAGRAMS

N/A

5. SPECIAL INSTRUCTION REQUIREMENTS

N/A

6. APPLICATION OF PROTECTIVE TREATMENTS

N/A.

GARMIN GNS 430W GPS-WAAS NAVIGATION SYSTEM
Instructions for Continued Airworthiness

SECTION II- MAINTENANCE (CONTINUED)

7. DATA RELATIVE TO STRUCTURAL FASTENERS

N/A

8. LIST OF SPECIAL TOOLS

N/A

9. FOR COMMUTER CATEGORY AIRCRAFT

N/A

10. RECOMMENDED OVERHAUL PERIODS

No additional overhaul time limitations.

SECTION III - AIRWORTHINESS LIMITATIONS

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

1. AIRPLANE FLIGHT MANUAL SUPPLEMENT

A. GPS IFR OPERATIONS

An FAA Approved Airplane Flight Manual Supplement must be attached to the FAA approved Airplane Flight Manual when the GNS 430W GPS Receiver is approved for IFR En Route, Terminal, and Non-Precision Approach Operations.

B. GPS VFR OPERATIONS

A placard stating: "GPS LIMITED TO VFR USE ONLY" must be located on the instrument panel when the GNS 430W GPS Receiver is **NOT** approved for IFR operations.

Mayday Avionics, Inc.
Gerald R. Ford International Airport
5500 44th Street S.E.
Grand Rapids, MI 49512
FAA CRS YXXR387Y

Cessna
501
S/N 501-0091
N2158U

GARMIN GNS 430W GPS-WAAS NAVIGATION SYSTEM
Instructions for Continued Airworthiness

SECTION IV - REVISIONS

To revise this ICA; a letter must be submitted to the local FSDO with a copy of the revised FAA form 337, and revised ICA. The FAA inspector accepts the change by signing Block 3 and including the following statement:

The attached revised/new Instructions for Continued Airworthiness (dated _____) for the above aircraft or component major alteration have been accepted by the FAA, suspending the Instructions for Continued Airworthiness (dated _____).

Once the revision has been accepted a maintenance record entry shall be made identifying the revision, it's location, and date of the FAA form 337.

DUAL GARMIN GPS-WAAS ANTENNAS MODEL GA 35

Instructions for Continued Airworthiness



5500 44TH STREET SE.
GRAND RAPIDS, MI 49512

Phone: (616) 957-4920
Fax: (616) 957-2218

Document number: GA35.ICA.N2158U
Rev. IR, Date: **January 31, 2007**

**THIS ICA IS PART OF THE AIRCRAFT'S
INSPECTION/MAINTENANCE
REQUIREMENTS**

LOG OF REVISIONS

Rev.	Date	Description of Change	Affected Pages
IR	1-31-07	Initial Release.	All

Vertical black lines in the margin indicate the revised portions of affected pages.

GARMIN GA 35 GPS-WAAS ANTENNA
Instructions for Continued Airworthiness

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GARMIN GA 35 GPS-WAAS ANTENNA
Instructions for Continued Airworthiness

SECTION I - GENERAL

1. INTRODUCTION

In accordance with FAR 23.1529 and 14 CFR Part 23 Appendix G, this document identifies the Instructions for Continued Airworthiness (ICA) for the alteration of the above aircraft by installation of Dual Garmin GA 35 GPS-WAAS Antennas. The #1 and #2 GA 35's are interfaced with the respective Garmin GNS 430W GPS-WAAS Navigation System.

A. Referenced Publications

- 1) The Garmin GNS 430W Installation Manual, P/N 190-00356-02
- 2) The GA 35 Installation Manual, P/N 190-00569-00.
- 3) AC 20-138A; AC 43-13-1B Chapters 4, 6, 7, & 11; and AC 43-13-2A Chapters 1, 3, & 13.
- 4) Wolff Aerospace Inc. Structural Analysis Report, Report Number 13-1321-1, Rev. -, dated 1-30-07.
- 5) Cessna Model 501 Maintenance Manual.

* Or later FAA approved revisions to the above referenced publications.

2. DESCRIPTION

For pertinent details of the installation, reference Block 8 of the attached FAA form 337 dated 02-01-07.

3. CONTROL, OPERATION INFORMATION

N/A.

4. SERVICING INFORMATION

N/A.

GARMIN GA 35 GPS-WAAS ANTENNA
Instructions for Continued Airworthiness

SECTION II - MAINTENANCE

1. MAINTENANCE INSTRUCTIONS

GA 35

Removal of the antenna is "on-condition" of failure. The GA 35 is non-repairable and must be replaced in the event of failure. Within 12 calendar months, visually inspect the antenna and its mounting.

GA 35 Antenna Doublers

Because cutouts were made in the fuselage skin for the antenna connectors, doublers were added to the aircraft at the antenna installation locations to ensure the structural integrity of the aircraft. Both GA 35 antennas are located on the top of the fuselage at STA 196.5. A stress analysis and damage tolerance assessments were performed in accordance with the Wolff Aerospace Inc. Structural Analysis Report, Report Number 13-1321-1, Rev. -, dated 1-30-07. The damage tolerance assessment establishes the inspection intervals for the modification. The inspection intervals are defined in the following table:

DUAL GA 35 ANTENNA INSTALLATION		
LOCATION	INSPECTION INTERVALS (Aircraft landings)	
	THRESHOLD	RECURRING
Antenna Connector Hole	49,900	49,900
Antenna Fastener Holes	13,933	13,933
If any cracks are detected, the skin panel and doubler must be replaced or other approved repair accomplished.		

Inspection Procedures

These antenna inspection intervals may be aligned with the existing aircraft maintenance program, provided the maintenance check or recurring check occurs before the above inspection intervals. If the maintenance check or recurring check occurs after the above inspection intervals, the above inspection intervals apply.

The connector hole and fastener holes should be inspected using eddy current inspection techniques. For the connector holes, the inspector should look for cracks on the surfaces of the skin and doubler around the connector hole. For the fastener holes, the inspector should look for cracks on the surfaces of the skin and doubler around the fastener holes.

GARMIN GA 35 GPS-WAAS ANTENNA
Instructions for Continued Airworthiness

SECTION II- MAINTENANCE (CONTINUED)

2. TROUBLESHOOTING INFORMATION

Refer to the GNS 430W Installation Manual.

3. REMOVAL AND REPLACEMENT INFORMATION

If the GA 35 is removed and reinstalled or replaced, verify proper operation by successful completion of the GNS 430W self-test.

If the aircraft is to fly with the GA 35 antenna removed, a patch plate should be installed and sealed with a sealant that meets the requirements of SAE AMS-S-8802 such as Flamemaster CS3204 class B.

4. DIAGRAMS

N/A

5. SPECIAL INSTRUCTION REQUIREMENTS

N/A

6. APPLICATION OF PROTECTIVE TREATMENTS

The GA 35 antenna should be sealed with a sealant that meets the requirements of SAE AMS-S-8802 such as Flame Master CS3204B1/2.

7. DATA RELATIVE TO STRUCTURAL FASTENERS

N/A

8. LIST OF SPECIAL TOOLS

N/A

9. FOR COMMUTER CATEGORY AIRCRAFT

N/A

10. RECOMMENDED OVERHAUL PERIODS

No additional overhaul time limitations.

Mayday Avionics, Inc.
Gerald R. Ford International Airport
5500 44th Street S.E.
Grand Rapids, MI 49512
FAA CRS YXXR387Y

Cessna
501
S/N 501-0091
N2158U

GARMIN GA 35 GPS-WAAS ANTENNA
Instructions for Continued Airworthiness

SECTION III - AIRWORTHINESS LIMITATIONS

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

No additional airworthiness limitations.

SECTION IV - REVISIONS

To revise this ICA; a letter must be submitted to the local FSDO with a copy of the revised FAA form 337, and revised ICA. The FAA inspector accepts the change by signing Block 3 and including the following statement:

The attached revised/new Instructions for Continued Airworthiness (dated _____) for the _____ above aircraft or component major alteration have been accepted by the FAA, suspending the Instructions for Continued Airworthiness (dated _____).

Once the revision has been accepted a maintenance record entry shall be made identifying the revision, it's location, and date of the FAA form 337.

COMANT CI 490-1 IRIDIUM ANTENNA

Instructions for Continued Airworthiness



5500 44TH STREET SE
GRAND RAPIDS, MI 49512

Phone: (616) 957-4920
Fax: (616) 957-2218

Document number: CI490-1.ICA.N2158U
Rev. IR, Date: January 31, 2007

**THIS ICA IS PART OF THE AIRCRAFT'S
INSPECTION/MAINTENANCE
REQUIREMENTS**

LOG OF REVISIONS

Rev.	Date	Description of Change	Affected Pages
IR	1-31-07	Initial Release.	All

Vertical black lines in the margin indicate the revised portions of affected pages.

CI 490-1 IRIDIUM ANTENNA
Instructions for Continued Airworthiness

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CI 490-1 IRIDIUM ANTENNA
Instructions for Continued Airworthiness

SECTION I - GENERAL

1. INTRODUCTION

In accordance with FAR 23.1529 and 14 CFR Part 23 Appendix G, this document identifies the Instructions for Continued Airworthiness (ICA) for the alteration of the above aircraft by installation of a Comant CI 490-1 Iridium Antenna. The CI 490-1 was installed to interface to a portable satellite telephone. The interface plug is located behind the co-pilot's seat.

A. REFERENCED PUBLICATIONS

- 1) AC 43-13-1B Chapters 4, 6, 7, & 11, and AC 43-13-2A Chapters 1, 3, & 13.
- 2) Wolff Aerospace Inc. Structural Analysis Report, Report Number 13-1321-1, Rev. -, dated 1-30-07.
- 3) Cessna Model 501 Maintenance Manual.

2. DESCRIPTION

For pertinent details of the installation, reference Block 8 of the attached FAA form 337 dated 2-01-07.

3. CONTROL, OPERATION INFORMATION

N/A.

4. SERVICING INFORMATION

N/A.

CI 490-1 IRIDIUM ANTENNA
Instructions for Continued Airworthiness

SECTION II- MAINTENANCE

1. MAINTENANCE INSTRUCTIONS

CI 490-1 Antenna

No scheduled maintenance is required to ensure continued airworthiness of the CI 490-1 Antenna. Removal of this component is "on-condition" of failure. Inspections and/or system verification checks are only required in the event of a system failure.

As an option, the system operator may perform a visual inspection of the condition and security of the various system components mounting; associated structure, connectors, wiring and wiring support and routing at the aircraft annual inspection, or other periodic maintenance interval as defined by the Cessna Model 501 Maintenance Manual.

CI 490-1 Antenna Doubler

Because cutouts were made in the fuselage skin for the antenna connectors, a doubler was added to the aircraft at the Iridium Antenna installation location to ensure the structural integrity of the aircraft. The Iridium Antenna is located on the top of the fuselage at STA 240. A stress analysis and damage tolerance assessments were performed in accordance with the Wolff Aerospace Inc. Structural Analysis Report, Report Number 13-1321-1, Rev. -, dated 1-30-07. The damage tolerance assessment establishes the inspection intervals for the modification. The inspection intervals are defined in the following table:

CI 490-1 IRIDIUM ANTENNA INSTALLATION		
LOCATION	INSPECTION INTERVALS (Aircraft landings)	
	THRESHOLD	RECURRING
Antenna Connector Hole	41,860	41,860
Antenna Fastener Holes	21,817	21,817
If any cracks are detected, the skin panel and doubler must be replaced or other approved repair accomplished.		

These antenna inspection intervals may be aligned with the existing aircraft maintenance program, provided the maintenance check or recurring check occurs before the above inspection intervals. If the maintenance check or recurring check occurs after the above inspection intervals, the above inspection intervals apply.

CI 490-1 IRIDIUM ANTENNA
Instructions for Continued Airworthiness

SECTION II – MAINTENANCE (CONTINUED)

1. MAINTENANCE INSTRUCTIONS (Continued)

Inspection Procedures

The connector hole and fastener holes should be inspected using eddy current inspection techniques. For the connector holes, the inspector should look for cracks on the surfaces of the skin and doubler around the connector hole. For the fastener holes, the inspector should look for cracks on the surfaces of the skin and doubler around the fastener holes.

2. TROUBLESHOOTING INFORMATION

N/A

3. REMOVAL AND REPLACEMENT INFORMATION

If the aircraft is to fly with the CI 490-1 antenna removed, a patch plate should be installed and sealed with a sealant that meets the requirements of SAE AMS-S-8802 such as Flamemaster CS3204 class B.

4. DIAGRAMS

N/A

5. SPECIAL INSTRUCTION REQUIREMENTS

N/A

6. APPLICATION OF PROTECTIVE TREATMENTS

The CI 490-1 antenna should be sealed with a sealant that meets the requirements of SAE AMS-S-8802 such as Flame Master CS3204B1/2.

7. DATA RELATIVE TO STRUCTURAL FASTENERS

N/A

8. LIST OF SPECIAL TOOLS

N/A

9. FOR COMMUTER CATEGORY AIRCRAFT

N/A

10. RECOMMENDED OVERHAUL PERIODS

No additional overhaul time limitations.



Mayday Avionics, Inc.
Gerald R. Ford International Airport
5500 44th Street S.E.
Grand Rapids, MI 49512
FAA CRS YXXR387Y

Cessna
501
S/N 501-0091
N2158U

CI 490-1 IRIDIUM ANTENNA
Instructions for Continued Airworthiness

SECTION III - AIRWORTHINESS LIMITATIONS

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

No additional airworthiness limitations.

SECTION IV - REVISIONS

To revise this ICA; a letter must be submitted to the local FSDO with a copy of the revised FAA form 337, and revised ICA. The FAA inspector accepts the change by signing Block 3 and including the following statement:

The attached revised/new Instructions for Continued Airworthiness (dated _____) for the above aircraft or component major alteration have been accepted by the FAA, suspending the Instructions for Continued Airworthiness (dated _____).

Once the revision has been accepted a maintenance record entry shall be made identifying the revision, it's location, and date of the FAA form 337.



US Department
of Transportation
Federal Aviation
Administration**MAJOR REPAIR AND ALTERATION**
(Airframe, Powerplant, Propeller, or Appliance)

For FAA Use Only

Office Identification

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This form is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make Cessna	Model 501
	Serial No. 501-0091	Nationality and Registration Mark N2158U
2. Owner	Name (As shown on registration certificate) RBK Aviation, Inc.	Address (As shown on registration certificate) P.O. Box 236 Wilson, Wyoming 83014-0236


3. For FAA Use Only

4. Unit Identification				5. Type	
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~ (As described in item 1 above) ~~~~~				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

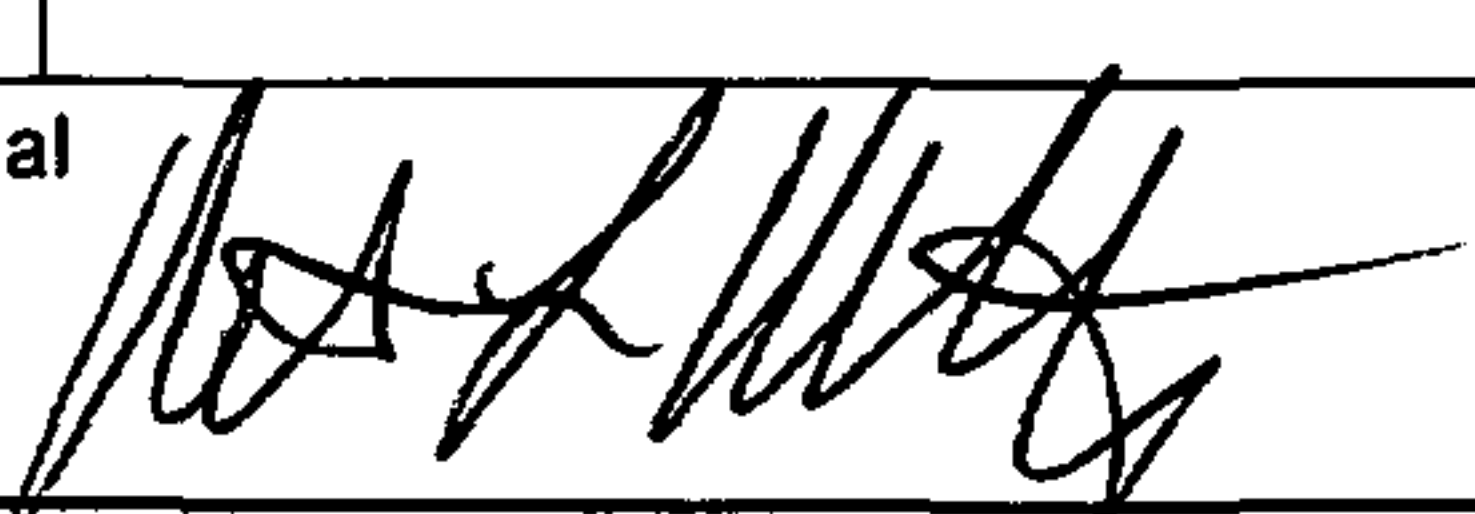
6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
Sierra Industries Ltd 122 Howard Langford Drive Uvalde, Texas 78801	<input type="checkbox"/> U.S. Certificated Mechanic	SI6R285J Limited Airframe Limited Powerplant Limited Radio
	<input type="checkbox"/> Foreign Certificated Mechanic	
	<input checked="" type="checkbox"/> Certificated Repair Station	
	<input type="checkbox"/> Manufacturer	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date December 20, 2006	Signature of Authorized Individual Frank Alejandro 
----------------------------------	--

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED					
BY	FAA Flt. Standards Inspector	Manufacturer	Inspection Authorization	Other (Specify)	
	FAA Designee	<input checked="" type="checkbox"/> Repair Station	Person Approved by Transport Canadian Airworthiness Group		
Date of Approval or Rejection 12-20-2006		Certificate or Designation No. SI6R285J	Signature of Authorized Individual Robert L. Montgomery 		

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Modified the existing cockpit glareshield by installation of an annunciator support. Installed the annunciator, fire warning switch annunciators to the modified glareshield.

Modification performed using Sierra Industries Ltd. Drawings SI430-100 Rev. A dated 4/22/2004 "Cessna Citation Glareshield Modification" and Drawing SI430-110 Rev. A dated 4/22/2004 "Details- Cessna Citation Glareshield Modification". Approved by FAA Form 8110-3 dated Oct. 13, 2006 signed by R.M. Howard Structures DER # DERT-710134-SW.

Structural Substantiation of the Glareshield modification was performed per Aerodesign Aircraft Engineering., Inc Report #5110-1 Rev. IR dated 5/7/2004.

Approved by FAA Form 8110-3 dated Oct. 13, 2006 signed by R.M. Howard Structures DER # DERT-710134-SW.

Pertinent details of this modification are on file with Sierra Industries, Ltd. under Work Order Number# 522-09-2006.

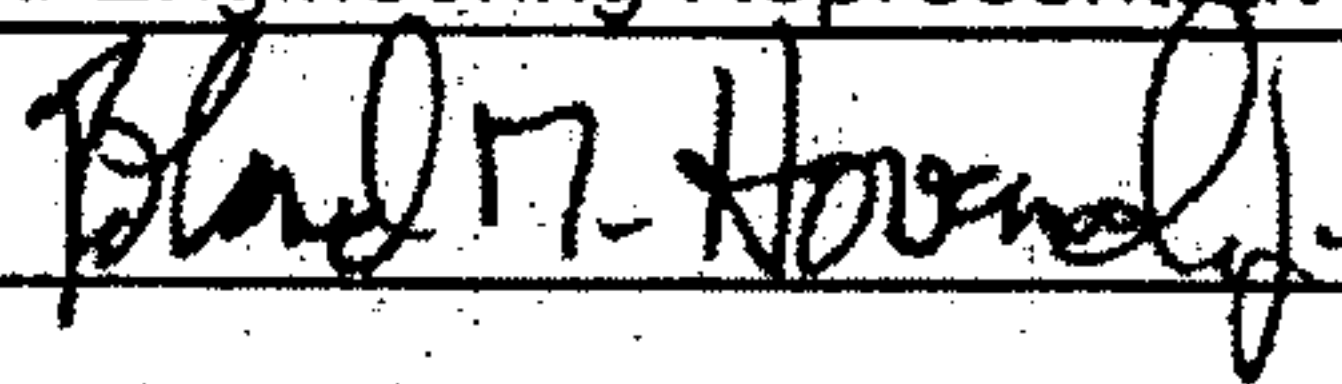
Note:

Aircraft Total Time: 7578.1

Landings: 8974

----- E N D -----

☐ Additional Sheets Are Attached

U.S. Department of Transportation Federal Aviation Administration			Date OCT 13 2006
STATEMENT OF COMPLIANCE WITH THE FEDERAL AVIATION REGULATIONS			
Aircraft or Aircraft Component Identification			
Make CESSNA AIRCRAFT	Model No. 501	Type (Airplane, Radio, Helicopter, etc.) AIRPLANE	Name of Applicant SIERRA INDUSTRIES
LIST OF DATA			
Identification	Title		
SIERRA INDUSTRIES LTD.			
DWG. SI430-100, REV. A, 4-22-04	CESSNA CITATION GLARESHIELD MODIFICATION		
DWG. SI430-110, REV. A, 4-22-04	DETAILS - CESSNA CITATION GLARESHIELD MODIFICATION		
AERODESIGN AIRCRAFT ENG., INC.			
REPORT #5110-1, REV. IR, 5-07-04	STRUCTURAL SUBSTANTIATION GLARESHIELD MODIFICATION - CESSNA MODEL 500 SERIES AIRCRAFT		
<p>Note: The above data and this approval cover only the glareshield modification and installation design. This data does not provide for other items such as electrical systems approval, pilot visibility, etc. Contact the FAA for clarification or requirements for these issues.</p> <p>STRUCTURAL APPROVAL ONLY</p> <p>only for Model 501, S/N 501-0091, N2158U</p>			
Purpose of Data SUPPORT OF MAJOR ALTERATION; DESIGN APPROVAL ONLY			
Applicable Requirements (List specific sections) FAR 23.301(a)(b)(c), 23.303, 23.305(a), 23.307(a), 23.561(b)(3), 23.603(a)(b), 23.605(a), 23.613(a)(b)(c), 23.615(a), 23.625(a)(b)(c)			
<p>CERTIFICATION - under authority vested by direction of the Administrator and in accordance with limitations of appointment under Part 183 of the Federal Aviation Regulations, data listed above and on attached sheets numbered ____ (none) ____ have been examined in accordance with established procedures and found to comply with applicable requirements of the Federal Aviation Regulations.</p> <p>I (We) Therefore <input type="checkbox"/> Recommend approval of these data</p> <p><input checked="" type="checkbox"/> Approve these data</p>			
Signature(s) of Designated Engineering Representatives		Designation Number(s)	Classifications
R.M. Howard, Jr. 		DER-710134-SW	Structures



US Department
of Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification

UWOY B/K

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make CESSNA	Model CE-501
	Serial No. 501-0091	Nationality and Registration Mark N2158U
2. Owner	Name (As shown on registration certificate) RBK AVIATION, INC.	Address (As shown on registration certificate) RED REFLET RANCH 357 ROAD 58 TEN SLEEP, WY 82442-8854

3. For FAA Use Only

The technical data identified herein has been found to comply with applicable airworthiness requirements and is hereby approved for use only on the above described aircraft, subject to conformity inspection by a person authorized in §43.7

1-03-2005 *[Signature]*
Date Signature

4. Unit Identification

5. Type

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	(As described in Item 1 above)				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address RICHARD A. ROHSNER PO BOX 8 357 ROAD 58 TEN SLEEP, WY 82442	B. Kind of Agency	C. Certificate No. A&P 452745635 IA
	<input checked="" type="checkbox"/> U.S. Certified Mechanic	
	<input type="checkbox"/> Foreign Certified Mechanic	
	<input type="checkbox"/> Certified Repair Station	
	<input type="checkbox"/> Manufacturer	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date 11/11/04	Signature of Authorized Individual <i>Richard A. Rohsner</i> RICHARD A. ROHSNER
------------------	--

7. Approval for Return To Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY	FAA Flt. Standards Inspector	Manufacturer	<input checked="" type="checkbox"/>	Inspection Authorization	Other (Specify)
	FAA Designee	Repair Station			

Date of Approval or Rejection 1-04-2005	Certificate or Designation No. A&P 452745635 IA	Signature of Authorized Individual <i>Richard A. Rohsner</i> RICHARD A. ROHSNER
--	--	--

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Aircraft: The following alteration accomplished to Cessna CE-501, S/N 501-0091, N2158U completed 11-11-04.

Purpose: The purpose of this FAA 337 is to obtain approval for Garmin GPS 400, VFR, IFR enroute and non-precision approaches.

Approved Installation: The GPS 400 installation was accomplished by Mayday Avionics CRS IT5R947M at Grand Rapids, Michigan. See FAA APPROVED FORM 337 dated 02-09-01 for installation details.

Basis for Approval: The following paragraphs from AC 20-138A provide basis for IFR APPROVAL:

8C(1) III (B). Minor alteration installation, based on single HSI interface and STC installation procedures.

Ground checks: 22 a. (1)(2)(3)(I)(II) c. (1)(2)(3)(4)(5) Installed performance ground test. The system operated in accordance with manufacturers specifications and did not interfere with other equipment installed in the aircraft.

Flight Checks: 23 a. b. (1)(2)(3)(4)(I)(II)(III)(IV)(V)(5)(6)(7)(8) A flight data evaluation was conducted and the installation was found to be acceptable. A functional flight test was performed. All functions of the GPS system interface, controls and system operation were checked and found to be correct. Three approaches were conducted and found to be correct. The results of flight test were logged in the aircraft records.

Placards: The placard stating "GPS NOT APPROVED FOR IFR" has been replaced by "GPS APPROVED FOR IFR ENROUTE, TERMINAL AND NON-PRECISION APPROACH OPERATIONS", and was mounted in full view of the Pilot.

Documents provided:

GPS 400 Pilots Guide 190-00140-60 Rev. B 08/02

GPS 400 Quick Reference Manual

FAA Approved Flight Manual Supplement dated 11/11/04

Instructions for continued Airworthiness (ICA) RBK Doc. 58U ICA

Weight & Balance: There were no additional changes in weight and balance or equipment list.

-----END-----

☒ Additional Sheets Are Attached



US Department
of Transportation

Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification

GL-19 *[Signature]*

INSTRUCTIONS: Print or type all entries. See FAR 43.9 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make Cessna Aircraft Co.	Model C501
	Serial No. 501-0091	Nationality and Registration Mark N2158U
2. Owner	Name (As shown on registration certificate) RBK Aviation, Inc.	Address (As shown on registration certificate) Red Reflet Ranch 357 Road 58 Ten Sleep, WY 82442-8854

3. For FAA Use Only

4. Unit Identification				5. Type	
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~ (As described in Item 1 above) ~~~~~				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
ElectroSonics 4391 International Gateway Columbus, OH 43219	<input type="checkbox"/> U.S. Certified Mechanic	UO22221L Accessory Class 2, & 3 Limited Airframe Instrument Class 1, and 3, Radio Class 1, 2, & 3
	<input type="checkbox"/> Foreign Certified Mechanic	
	<input checked="" type="checkbox"/> Certificated Repair Station	
	<input type="checkbox"/> Manufacturer	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date October 30, 2004	Signature of Authorized Individual <i>[Signature]</i> Inspector
---------------------------------	---

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ **APPROVED** ☐ **REJECTED**

BY	FAA Flt. Standards Inspector	Manufacturer	Inspection Authorization	Other (Specify)
	FAA Designee	<input checked="" type="checkbox"/> Repair Station	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection October 30, 2004		Certificate or Designation No. UO22221L	Signature of Authorized Individual <i>[Signature]</i> Inspector	

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets, Identify with aircraft nationality and registration mark and date work accomplished.)

Cessna Citation 501 N2158U s/n 501-0091

Removed the existing Honeywell altitude Indicator, Honeywell Air Data Computer and Barry Controls Air Data Computer Mounting Tray. Installed an IS&S Analog Interface Unit (AIU), 2 each Air Data Display Units (ADDU), 2 each Configuration Modules, in accordance with option -01 of ElectroSonics Top drawing No.ES551-120028-01 Rev.(C), dated August 08, 2003 and approved by ElectroSonics Supplemental Type Certificate **ST01558CH-D**, "Installation of a Innovation Solutions & Support Air Data Computer..." dated June 05, 2002.

Minor deviations were made in the installation mounting of the AIU in accordance with ElectroSonics drawing ES501-120091-11 rev (A); modification of the left side instrument panel to allow the mounting of the Standby Altimeter were performed in accordance with ElectroSonics drawing ES501-120091-13, rev (A) and the mounting of the relay box assembly was performed in accordance with ElectroSonics drawing ES501-120091-12, rev (A) all of which was approved by DERT-410167-CE and documented on FAA form 8110-3 dated 10/25/04. Minor deviations in electrical integration were made in accordance with ElectroSonics drawings 1005076, rev (A), 1005077, rev (A), 1005078, rev (A) and 1005079, rev (A), approved by DERY-405201-CE and documented on FAA form 8110-3 dated 10/28/04. Wires not used were capped and stowed in accordance with AC43.13-1B Chapter 11, Section 11 Clamping, para. 11-146 thru 11-147, Section 12 Wire Insulation and Lacing String Tie, para. 11-155 through 11-159, Section 15 Grounding and Bonding para. 11-186, 11-187, 11-193, 11-194, Section 16 Wire Marking para. 11-205, 11-206, 11-207, 11-214 and Section 19 Unused Connectors and Unused Wires para. 11-260.

Relocated the Sandel Fuel Flow Indicator/Counter from the lower outboard left side instrument panel, to the lower outboard right side instrument panel, this work was performed in accordance with ElectroSonics drawing ES501-120091-13, rev (A) approved by DERT-410167-CE and documented on FAA form 8110-3 dated 10/25/04.

The Airplane Flight Manual Supplement for the Air Data Sensor System ElectroSonics document No. ES551-120028-100 Rev.(B) dated August 08, 2003 was inserted into the Airplane Flight Manual.

The Maintenance Manual Supplement for the Air Data System ElectroSonics document No. ES551-120028-200 Rev.(IR) and the "Instructions for Continued Airworthiness for Cessna 501, 551" ElectroSonics document No. ES551-120028-201 Rev. (IR) were provided to the owner/operator.

Operational authority for flights in RVSM environments must be obtained by the owner/operator through their local FAA FSDO office.

The owner/operator must comply with the equipment manufacturer's and the above maintenance manual supplement to ensure continued airworthiness any time the equipment is removed and / or repaired and reinstalled.

Revised the Aircraft Weight and Balance and Aircraft Equipment List.

Ground tests prove satisfactory and show no electrical or radio interference between existing and installed systems. Revised supplemental electrical loading report. Refer to revised weight and balance / supplemental equipment list for part number and serial number changes.

This modification was accomplished and recorded under ElectroSonics work order No. 183692.

The Instructions for Continued Airworthiness are part of the aircraft's inspection and/or maintenance program for this aircraft operated under this chapter. An entry for this alteration has been made in the aircraft's maintenance records as required by 14 CFR 43, Section 43.9 as referenced on this FAA form 337.

-----End-----

☒ Additional Sheets Are Attached

FAA APPROVED

AIRPLANE FLIGHT MANUAL SUPPLEMENT

FOR


CESSNA

501, 551

SERIAL NUMBER: 501-0091

REGISTRATION NUMBER: N2158U

This supplement must be attached to the FAA Approved Airplane Flight Manual. The information contained herein supplements or supersedes the basic Flight Manual only in those areas listed, when the aircraft is modified by **STC SA01558CH-D** for dual Innovative Solutions and Support Air Data Systems. For limitations, procedures and performance data not contained in this supplement, consult the basic Airplane Flight Manual.

FAA Approved: 
Tim Winiesdorffer
DAS Administrator, DAS 3 CH
ElectroSonics
Columbus, OH

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LOG OF REVISIONS

REVISION NO.	REVISED PAGES	DESCRIPTION OF REVISION	FAA APPROVAL
I.R.	ALL	Initial Release	05-03-2002 Tim Winiesdorffer
B	9 thru 13	Added the 501 with FJ44-2A engines	08-08-2003 Tim Winiesdorffer

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FAA Approved Date: August 08, 2003

Document Number: ES551-120028-100

Revision B

Page 2 of 13

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SECTION I - INTRODUCTION

The Innovative Solutions and Support (IS&S) Air Data System is designed to replace existing air data equipment that has been factory installed in Cessna Citation 501, 551 aircraft. The factory system consists of a single air data computer that outputs analog signals to drive the pilot's altimeter, the vertical modes of the flight director system and other equipment that requires analog air data. The only other altimetry system is a stand-alone altimeter installed on the copilot's instrument panel.

Installed for the purpose of meeting Reduced Vertical Separation Minimums (RVSM) requirements, the IS&S air data system utilizes dual Air Data Display Units (ADDU) to acquire and process the necessary air data information required for the aircraft. The ADDU is a combination air data computer and altimeter and is panel mounted in place of the original altimeter for both pilot and copilot. In addition to driving each altimeter, the ADDU outputs digital data to a single aircraft interface unit (AIU) designed to convert the digital information to analog signals required by the remaining analog aircraft equipment. In addition, the ADDU's have dual ARINC 429 outputs available to provide air data information to accessory equipment such as flight management systems and cabin information systems if desired. A panel-mounted switch allows the pilot to select ADDU No.1 or ADDU No. 2 as the air data source for the single AIU, adding a level of redundancy not previously available.

This installation has an **optional** dual-element temperature probe to allow derivation of temperature corrected air data.

With the installation of the dual, electric ADDU's, a standby altimeter, directly plumbed to the number two aircraft static source is added to meet the requirements of 14 CFR Part 25.1309. The altimeter incorporates internal lighting plus a vibrator. The altimeter receives power from the aircraft main bus during normal operations and from the standby battery (Jet Pak) during emergency operations. The Standby Altimeter operates with the Standby Attitude indicator. The Standby Attitude switch must be ON for both the standby attitude and standby altimeter lights and a vibrator to function,

SECTION II - OPERATING LIMITATIONS

1. The equipment installed under this approval meets the requirements of FAA Interim Guidance 91-RVSM. This approval, however, does not constitute an airworthiness or operating approval for RVSM operation. RVSM airworthiness approval is a separate certification and must be obtained prior to obtaining RVSM operating approval. RVSM airworthiness approval may be obtained concurrent with this installation approval or subsequent to this approval.

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SECTION III - OPERATING PROCEDURES

A. EMERGENCY PROCEDURES

1. LOSS OF BOTH GENERATORS

- Follow procedures specified in the aircraft flight manual
- With the Battery Switch in **EMER**, both pilot and copilot Altimeters are inoperative
- Use the Standby Altimeter as the primary height keeping source

NOTE

The emergency battery pack powers the standby attitude indicator plus instrument lighting for the right hand instrument panel. The emergency battery pack also provides power for instrument lighting and vibrator on the standby altimeter.

- Ensure the Standby Battery Pack is **ON**

B. ABNORMAL PROCEDURES

1. FAILED AIR DATA DISPLAY UNIT (ADDU)

- LCD Display of failed ADDU will be blank
- Ensure **ADDU 1 / ADDU 2** switch is selected to the functioning ADDU

NOTE

The **ADDU 1 / ADDU 2** switch has two functions:

- a. Selects ADDU source for the AIU (i.e. flight director and autopilot interface)
- b. Selects altitude source for the transponders

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SECTION III - OPERATING PROCEDURES (continued)

B. ABNORMAL PROCEDURES (continued)

2. LOSS OF ALTITUDE REPORTING INFORMATION

If altitude reporting information is lost:

- ensure Transponder Control is selected to Altitude Reporting ON
- Select another altitude source using the ADDU 1 / ADDU 2 transfer switch

NOTE

The ADDU 1 / ADDU 2 switch has two functions:

- a. Selects ADDU source for the AIU (i.e. flight director and autopilot interface)
- b. Selects altitude source for the transponders

3. AUTOPILOT/FLIGHT DIRECTOR WILL NOT FLY VERTICAL MODES

The autopilot/flight director will not fly Altitude Hold, Altitude Preselect, Indicated Airspeed, Vertical Speed or VNAV:

- If AIU FAIL Annunciated, select the other ADDU using the ADDU 1 / ADDU 2 transfer switch
- If problem still exists, cycle the AIU circuit breaker
- If problem still exists, consult the aircraft flight manual and operating manual for autopilot/flight director procedures

C. NORMAL PROCEDURES

1. GENERAL

The IS&S Air Data System consists of the following equipment:

- Pilot and Copilot Air Data Display Units (ADDU) (combination altimeter and air data computer)
- Analog Interface Unit (AIU) – translates digital information from either ADDU to analog information for use by the flight director/autopilot system and other accessories
- Standby Altimeter – required to meet FAA reliability requirements
- Dual Element Temperature Probe – allows for temperature corrected air data information used by accessory systems

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SECTION III - OPERATING PROCEDURES (continued)

C. NORMAL PROCEDURES (continued)

2. SYSTEM CONTROL

The following circuit breakers provide protection for the IS&S Air Data Equipment:

ADDU # 1	2 amp	28VDC	LH Main Crossover Bus
ADDU # 2	2 amp	28VDC	RH Main Bus
AIU # 1	1 amp	28VDC	LH Main Crossover Bus
AIU REF	1 amp	26VAC	26 VAC Main Bus
TAS HTR	15 amp	28VDC	Temp Probe Heat RH Main Bus (OPTIONAL)

3. ANNUNCIATION

ADDU 1
ADDU 2 The ADDU 1/ADDU 2 (green/amber) switch/annunciator selects the air data source for transponder altitude reporting and air data inputs to the Analog Interface Unit (AIU)

AIU FAIL The AIU FAIL (amber) annunciator illuminates to advise that the Analog Interface Unit (AIU) is no longer outputting valid data.

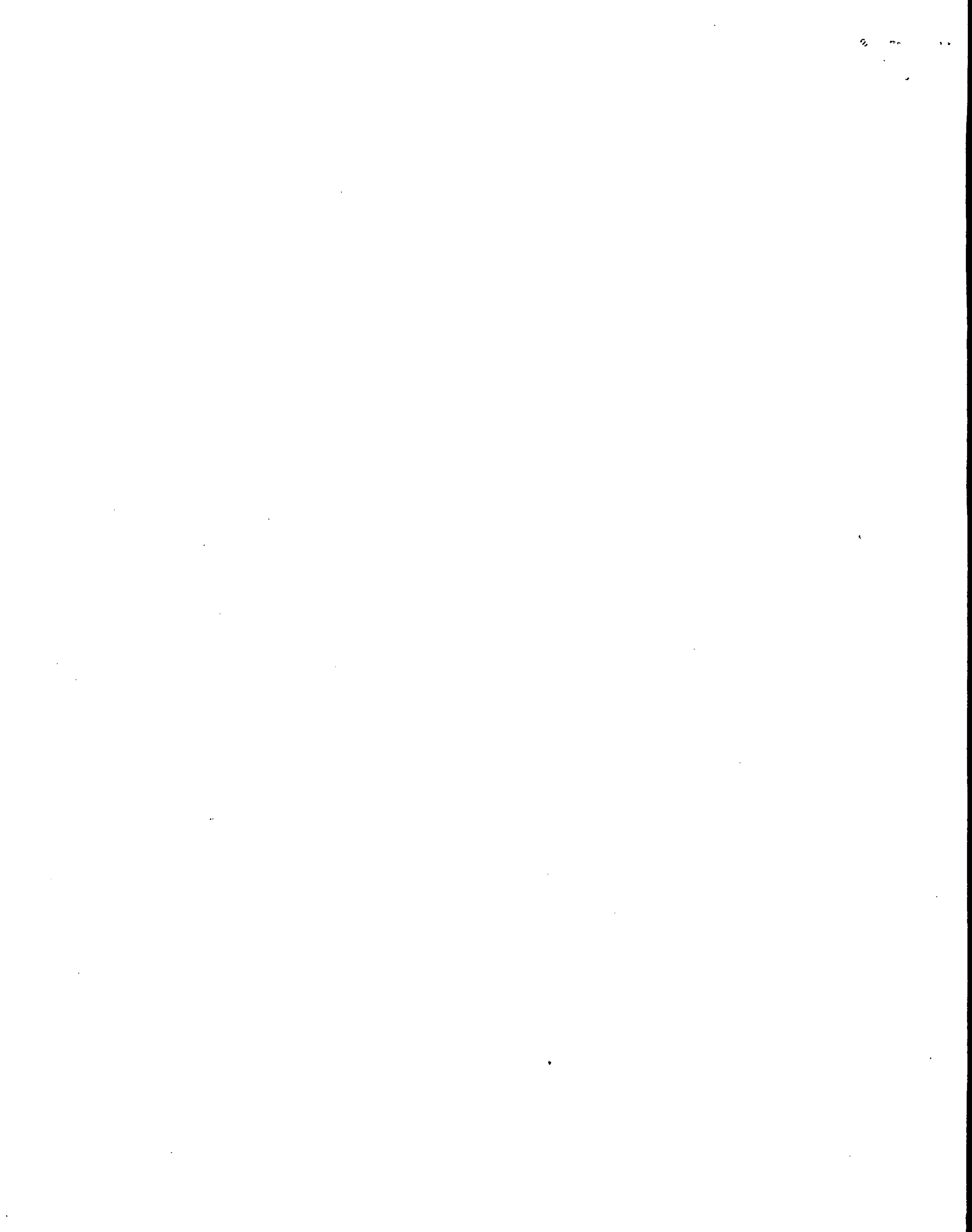
4. SELF TEST

On power up, each ADDU will perform a diagnostic self-test. The self test will conclude with the aircraft configuration displayed on the LCD readout for 5 seconds. The aircraft configuration is the aircraft model (i.e. C 501).

Pilot initiated testing is possible but is not a pre-flight requirement. To conduct a pilot initiated test:

- Use a small, pointed instrument to depress the test button in the lower left-hand corner of the ADDU bezel.
- The ADDU will drive the altitude pointer to 0
- The LCD display will illuminate all segments and annunciations
- All numerical readings and the altitude pointer will sequentially increment from 0 to 9
- Depressing the BARO knob during the numerical incrementing will cause any fault codes to display on the LCD display. Each time the baro knob is depressed, the fault codes will advance to the next code if multiple faults are present
- The test concludes when the aircraft configuration is displayed on the LCD.

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SECTION III - OPERATING PROCEDURES (continued)

C. NORMAL PROCEDURES (continued)

5. OPERATING PROCEDURES

a. ADDU

The ADDU is capable of displaying altitude in feet or meters and baro scale in inches of Mercury (inHg) or Hectapascals (Hpa). At initial power on, the ADDU will default to the settings that were effective at the last power interruption.

Changing the Baro Scale from inHg to Hpa

- Depress and hold the Baro Knob for more than 4 seconds, but less than 8 seconds. Each depression will toggle the baro scale between inHg and Hpa.

Changing the Altitude Readout from Feet to Meters

- Depress the Baro Knob for more than 8 seconds. Each depression will toggle the altitude readout between feet and meters.

b. ALTITUDE REPORTING

Altitude reporting may be supplied from either ADDU. Selecting ADDU 1 provides altitude information from the pilot's ADDU for either transponder. Selecting ADDU 2 provides altitude information from the pilot's ADDU for either transponder.

c. FLIGHT DIRECTOR INTERFACE

Either ADDU may be used to supply outputs to the AIU and hence the flight director/autopilot. Selecting ADDU 1 uses the pilot's ADDU as the air data source for the AIU. Selecting ADDU 2 uses the copilot's ADDU as the air data source for the AIU.

d. TEMPERATURE PROBE HEAT (OPTIONAL)

Temperature probe heating is controlled by the pitot heat switch. The temperature probe is heated anytime the pitot heat switch is selected ON. Aircraft limitations for use of pitot heat on the ground must be observed.

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SECTION IV - PERFORMANCE

Cessna Citation 501 (JT15D-1/1A/1B engines).

Altimeter Position Correction Chart (Figure 4-5) of the Basic Flight Manual is no longer valid. The Altimeter Position Correction Chart for the Standby System is presented in Figure 4.1. The Altimeter Position Correction Chart for the Pilot's and Copilot's Systems is presented in Figure 4.2.

The following document was created using the Citation 501 Airplane Flight Manual 501FM, Original Release as a reference. These corrections are based on the utilization of the IS&S Configuration Module 9B-03508-15.

Cessna Citation 501 (FJ44-2A engines-STC ST09559AC).

Altimeter Position Correction Chart (Figure 4-5) of the Basic Flight Manual is no longer valid. The Altimeter Position Correction Chart for the Standby System is presented in Figure 4.3. The Altimeter Position Correction Chart for the Pilot's and Copilot's Systems is presented in Figure 4.4.

The following document was created using the Citation 501 Airplane Flight Manual 501FM, Original Release as a reference. These corrections are based on the utilization of the IS&S Configuration Module 9B-03508-15.

Cessna Citation 551.

Altimeter Position Correction Chart (Figure 4-4) of the Basic Flight Manual is no longer valid. The Altimeter Position Correction Chart for the Standby System is presented in Figure 4.3. The Altimeter Position Correction Chart for the Pilot's and Copilot's Systems is presented in Figure 4.4.

The following document was created using the Citation 551 Airplane Flight Manual 551FM-30 as a reference. These corrections are based on the utilization of the IS&S Configuration Module 9B-03508-15.

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ALTIMETER POSITION CORRECTION - FEET (CESSNA 501-JT-15D-1/1A/1B engines only)

**STANDBY ALTIMETER CONDITIONS: ALL FLIGHT CONFIGURATIONS
EXAMPLE**

AIRSPEED	INDICATED PRESSURE ALTITUDE	ALTIMETER POSITION CORRECTION	ACTUAL PRESSURE ALTITUDE
200 KIAS	20,000 FEET	-69 FEET	19,931 FEET

ALT FT	A I R S P E E D - K I A S																		
	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280
0	-17	-19	-21	-23	-25	-27	-29	-31	-33	-35	-37	-39	-41	-43	-45	-47	-49	-51	-54
1000	-18	-20	-22	-24	-26	-28	-30	-32	-34	-36	-38	-40	-42	-44	-46	-48	-51	-53	-55
2000	-18	-20	-22	-24	-26	-28	-30	-32	-35	-37	-39	-41	-43	-45	-48	-50	-52	-55	-57
3000	-19	-21	-23	-25	-27	-29	-31	-33	-36	-38	-40	-42	-44	-47	-49	-51	-54	-56	-59
4000	-20	-22	-24	-26	-28	-30	-32	-35	-37	-39	-41	-44	-46	-48	-51	-53	-55	-58	-60
5000	-20	-22	-25	-27	-29	-31	-33	-36	-38	-40	-43	-45	-47	-50	-52	-55	-57	-60	-62
6000	-21	-23	-25	-28	-30	-32	-34	-37	-39	-41	-44	-46	-49	-51	-54	-56	-59	-62	-64
7000	-22	-24	-26	-28	-31	-33	-36	-38	-40	-43	-45	-48	-50	-53	-55	-58	-61	-64	-66
8000	-22	-25	-27	-29	-32	-34	-37	-39	-42	-44	-47	-49	-52	-55	-57	-60	-63	-66	-68
9000	-23	-25	-28	-30	-33	-35	-38	-40	-43	-46	-48	-51	-54	-56	-59	-62	-65	-68	-71
10000	-24	-26	-29	-31	-34	-36	-39	-42	-44	-47	-50	-52	-55	-58	-61	-64	-67	-70	-73
11000	-25	-27	-30	-32	-35	-38	-40	-43	-46	-48	-51	-54	-57	-60	-63	-66	-69	-72	-75
12000	-25	-28	-31	-33	-36	-39	-42	-44	-47	-50	-53	-56	-59	-62	-65	-68	-71	-74	-78
13000	-26	-29	-32	-34	-37	-40	-43	-46	-49	-52	-55	-58	-61	-64	-67	-70	-73	-77	-80
14000	-27	-30	-33	-36	-38	-41	-44	-47	-50	-53	-56	-60	-63	-66	-69	-73	-76	-79	-83
15000	-28	-31	-34	-37	-40	-43	-46	-49	-52	-55	-58	-62	-65	-68	-72	-75	-78	-82	-85
16000	-29	-32	-35	-38	-41	-44	-47	-51	-54	-57	-60	-64	-67	-70	-74	-77	-81	-85	-88
17000	-30	-33	-36	-39	-42	-46	-49	-52	-56	-59	-62	-66	-69	-73	-76	-80	-84	-87	-91
18000	-31	-34	-37	-41	-44	-47	-51	-54	-57	-61	-64	-68	-72	-75	-79	-83	-87	-90	-94
19000	-32	-35	-39	-42	-45	-49	-52	-56	-59	-63	-67	-70	-74	-78	-82	-86	-89	-93	-98
20000	-33	-36	-40	-43	-47	-51	-54	-58	-61	-65	-69	-73	-77	-80	-84	-88	-93	-97	-101
21000	-34	-38	-41	-45	-49	-52	-56	-60	-64	-67	-71	-75	-79	-83	-87	-92	-96	-100	-104
22000	-35	-39	-43	-47	-50	-54	-58	-62	-66	-70	-74	-78	-82	-86	-90	-95	-99	-104	-108
23000	-37	-40	-44	-48	-52	-56	-60	-64	-68	-72	-76	-81	-85	-89	-94	-98	-103	-107	-112
24000	-38	-42	-46	-50	-54	-58	-62	-66	-71	-75	-79	-83	-88	-92	-97	-102	-106	-111	-116
25000	-39	-43	-48	-52	-56	-60	-64	-69	-73	-77	-82	-86	-91	-96	-100	-105	-110	-115	-120
26000	-41	-45	-49	-54	-58	-62	-67	-71	-76	-80	-85	-90	-94	-99	-104	-109	-114	-119	-124
27000	-42	-47	-51	-56	-60	-65	-69	-74	-78	-83	-88	-93	-98	-103	-108	-113	-118	-123	-129
28000	-44	-48	-53	-58	-62	-67	-72	-77	-81	-86	-91	-96	-101	-107	-112	-117	-123	-128	-134
29000	-46	-50	-55	-60	-65	-70	-74	-79	-84	-90	-95	-100	-105	-111	-116	-122	-127	-133	-139
30000	-47	-52	-57	-62	-67	-72	-77	-82	-88	-93	-98	-104	-109	-115	-120	-126	-132	-138	-144
31000	-49	-54	-59	-65	-70	-75	-80	-86	-91	-97	-102	-108	-114	-119	-125	-131	-137	-143	-150
32000	-51	-56	-62	-67	-72	-78	-83	-89	-95	-100	-106	-112	-118	-124	-130	-136	-143	-149	-155
33000	-53	-59	-64	-70	-75	-81	-87	-93	-99	-104	-110	-117	-123	-129	-135	-142	-148	-155	-162
34000	-55	-61	-67	-73	-79	-84	-90	-96	-103	-109	-115	-121	-128	-134	-141	-148	-154	-161	-168
35000	-58	-64	-70	-76	-82	-88	-94	-100	-107	-113	-120	-126	-133	-140	-147	-154	-161	-168	-175
36000	-60	-66	-73	-79	-85	-92	-98	-105	-111	-118	-125	-132	-139	-146	-153	-160	-168	-175	-183
37000	-63	-69	-76	-82	-89	-96	-102	-109	-116	-123	-130	-138	-145	-152	-160	-167	-175	-183	-191
38000	-66	-72	-79	-86	-93	-100	-107	-114	-121	-129	-136	-144	-151	-159	-167	-175	-183	-191	-199
39000	-69	-76	-83	-90	-97	-105	-112	-119	-127	-135	-142	-150	-158	-166	-174	-183	-191	-200	-208
40000	-72	-79	-87	-94	-102	-110	-117	-125	-133	-141	-149	-157	-166	-174	-183	-191	-200	-209	-218
41000	-75	-83	-91	-99	-107	-115	-123	-131	-140	-148	-156	-165	-174	-183	-192	-201	-210	-219	-229

Figure 4.1

Use or disclosure of the data on this sheet page or image is subject to the restrictions noted on the first or title page.

ALTIMETER POSITION CORRECTION – FEET (CESSNA 501-JT-15D-1/1A/1B engines only)

PILOT'S AND COPILOT'S ALTIMETER SYSTEMS CONDITIONS: ALL FLIGHT CONDITIONS

EXAMPLE:

AIRSPEED	INDICATED PRESSURE ALTITUDE	ALTIMETER POSITION CORRECTION	ACTUAL PRESSURE ALTITUDE
160 KIAS	10,000 FEET	-39 FEET	9,961 FEET

ALT FT	A I R S P E E D - K I A S																		
	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280
0	-17	-19	-21	-23	-25	-27	-29	-31	-33	-35	-37	-39	-41	-27	-11	0	0	0	0
1000	-18	-20	-22	-24	-26	-28	-30	-32	-34	-36	-38	-40	-37	-21	-3	0	0	0	0
2000	-18	-20	-22	-24	-26	-28	-30	-32	-35	-37	-39	-41	-31	-14	0	0	0	0	0
3000	-19	-21	-23	-25	-27	-29	-31	-33	-36	-38	-40	-40	-25	-6	0	0	0	0	0
4000	-20	-22	-24	-26	-28	-30	-32	-35	-37	-39	-41	-36	-18	0	0	0	0	0	0
5000	-20	-22	-25	-27	-29	-31	-33	-36	-38	-40	-43	-29	-10	0	0	0	0	0	0
6000	-21	-23	-25	-28	-30	-32	-34	-37	-39	-41	-40	-22	-2	0	0	0	0	0	0
7000	-22	-24	-26	-28	-31	-33	-36	-38	-40	-43	-34	-15	0	0	0	0	0	0	0
8000	-22	-25	-27	-29	-32	-34	-37	-39	-42	-44	-28	-6	0	0	0	0	0	0	0
9000	-23	-25	-28	-30	-33	-35	-38	-40	-43	-40	-20	0	0	0	0	0	0	0	0
10000	-24	-26	-29	-31	-34	-36	-39	-42	-44	-34	-12	0	0	0	0	0	0	0	0
11000	-25	-27	-30	-32	-35	-38	-40	-43	-46	-26	-3	0	0	0	0	0	0	0	0
12000	-25	-28	-31	-33	-36	-39	-42	-44	-40	-18	0	0	0	0	0	0	0	0	0
13000	-26	-29	-32	-34	-37	-40	-43	-46	-33	-9	0	0	0	0	0	0	0	0	0
14000	-27	-30	-33	-36	-38	-41	-44	-47	-25	0	0	0	0	0	0	0	0	0	0
15000	-28	-31	-34	-37	-40	-43	-46	-41	-17	0	0	0	0	0	0	0	0	0	0
16000	-29	-32	-35	-38	-41	-44	-47	-34	-7	0	0	0	0	0	0	0	0	0	0
17000	-30	-33	-36	-39	-42	-46	-49	-25	0	0	0	0	0	0	0	0	0	0	0
18000	-31	-34	-37	-41	-44	-47	-43	-16	0	0	0	0	0	0	0	0	0	0	0
19000	-32	-35	-39	-42	-45	-49	-34	-5	0	0	0	0	0	0	0	0	0	0	0
20000	-33	-36	-40	-43	-47	-51	-26	0	0	0	0	0	0	0	0	0	0	0	0
21000	-34	-38	-41	-45	-49	-45	-16	0	0	0	0	0	0	0	0	0	0	0	0
22000	-35	-39	-43	-47	-50	-37	-5	0	0	0	0	0	0	0	0	0	0	0	0
23000	-37	-40	-44	-48	-52	-28	0	0	0	0	0	0	0	0	0	0	0	0	0
24000	-38	-42	-46	-50	-49	-17	0	0	0	0	0	0	0	0	0	0	0	0	0
25000	-39	-43	-48	-52	-41	-5	0	0	0	0	0	0	0	0	0	0	0	0	0
26000	-41	-45	-49	-54	-31	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27000	-42	-47	-51	-55	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28000	-44	-48	-53	-46	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29000	-46	-50	-55	-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30000	-47	-52	-57	-25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31000	-49	-54	-53	-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32000	-51	-56	-44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33000	-53	-59	-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34000	-55	-61	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35000	-58	-55	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36000	-60	-43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37000	-63	-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38000	-66	-16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39000	-59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40000	-47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41000	-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Figure 4.2

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ALTIMETER POSITION CORRECTION – FEET (CESSNA 551-All/501-FJ44-2A Engines only)

STANDBY ALTIMETER CONDITIONS: ALL FLIGHT CONFIGURATIONS

EXAMPLE:

AIRSPEED	INDICATED PRESSURE ALTITUDE	ALTIMETER POSITION CORRECTION	ACTUAL PRESSURE ALTITUDE
200 KIAS	20,000 FEET	-69 FEET	19,931 FEET

ALT FT	A I R S P E E D - K I A S																		
	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280
0	-17	-19	-21	-23	-25	-27	-29	-31	-33	-35	-37	-39	-41	-43	-45	-47	-49	-51	-54
1000	-18	-20	-22	-24	-26	-28	-30	-32	-34	-36	-38	-40	-42	-44	-46	-48	-51	-53	-55
2000	-18	-20	-22	-24	-26	-28	-30	-32	-35	-37	-39	-41	-43	-45	-48	-50	-52	-55	-57
3000	-19	-21	-23	-25	-27	-29	-31	-33	-36	-38	-40	-42	-44	-47	-49	-51	-54	-56	-59
4000	-20	-22	-24	-26	-28	-30	-32	-35	-37	-39	-41	-44	-46	-48	-51	-53	-55	-58	-60
5000	-20	-22	-25	-27	-29	-31	-33	-36	-38	-40	-43	-45	-47	-50	-52	-55	-57	-60	-62
6000	-21	-23	-25	-28	-30	-32	-34	-37	-39	-41	-44	-46	-49	-51	-54	-56	-59	-62	-64
7000	-22	-24	-26	-28	-31	-33	-36	-38	-40	-43	-45	-48	-50	-53	-55	-58	-61	-64	-66
8000	-22	-25	-27	-29	-32	-34	-37	-39	-42	-44	-47	-49	-52	-55	-57	-60	-63	-66	-68
9000	-23	-25	-28	-30	-33	-35	-38	-40	-43	-46	-48	-51	-54	-56	-59	-62	-65	-68	-71
10000	-24	-26	-29	-31	-34	-36	-39	-42	-44	-47	-50	-52	-55	-58	-61	-64	-67	-70	-73
11000	-25	-27	-30	-32	-35	-38	-40	-43	-46	-48	-51	-54	-57	-60	-63	-66	-69	-72	-75
12000	-25	-28	-31	-33	-36	-39	-42	-44	-47	-50	-53	-56	-59	-62	-65	-68	-71	-74	-78
13000	-26	-29	-32	-34	-37	-40	-43	-46	-49	-52	-55	-58	-61	-64	-67	-70	-73	-77	-80
14000	-27	-30	-33	-36	-38	-41	-44	-47	-50	-53	-56	-60	-63	-66	-69	-73	-76	-79	-83
15000	-28	-31	-34	-37	-40	-43	-46	-49	-52	-55	-58	-62	-65	-68	-72	-75	-78	-82	-85
16000	-29	-32	-35	-38	-41	-44	-47	-51	-54	-57	-60	-64	-67	-70	-74	-77	-81	-85	-88
17000	-30	-33	-36	-39	-42	-46	-49	-52	-56	-59	-62	-66	-69	-73	-76	-80	-84	-87	-91
18000	-31	-34	-37	-41	-44	-47	-51	-54	-57	-61	-64	-68	-72	-75	-79	-83	-87	-90	-94
19000	-32	-35	-39	-42	-45	-49	-52	-56	-59	-63	-67	-70	-74	-78	-82	-86	-89	-93	-98
20000	-33	-36	-40	-43	-47	-51	-54	-58	-61	-65	-69	-73	-77	-80	-84	-88	-93	-97	-101
21000	-34	-38	-41	-45	-49	-52	-56	-60	-64	-67	-71	-75	-79	-83	-87	-92	-96	-100	-104
22000	-35	-39	-43	-47	-50	-54	-58	-62	-66	-70	-74	-78	-82	-86	-90	-95	-99	-104	-108
23000	-37	-40	-44	-48	-52	-56	-60	-64	-68	-72	-76	-81	-85	-89	-94	-98	-103	-107	-112
24000	-38	-42	-46	-50	-54	-58	-62	-66	-71	-75	-79	-83	-88	-92	-97	-102	-106	-111	-116
25000	-39	-43	-48	-52	-56	-60	-64	-69	-73	-77	-82	-86	-91	-96	-100	-105	-110	-115	-120
26000	-41	-45	-49	-54	-58	-62	-67	-71	-76	-80	-85	-90	-94	-99	-104	-109	-114	-119	-124
27000	-42	-47	-51	-56	-60	-65	-69	-74	-78	-83	-88	-93	-98	-103	-108	-113	-118	-123	-129
28000	-44	-48	-53	-58	-62	-67	-72	-77	-81	-86	-91	-96	-101	-107	-112	-117	-123	-128	-134
29000	-46	-50	-55	-60	-65	-70	-74	-79	-84	-90	-95	-100	-105	-111	-116	-122	-127	-133	-139
30000	-47	-52	-57	-62	-67	-72	-77	-82	-88	-93	-98	-104	-109	-115	-120	-126	-132	-138	-144
31000	-49	-54	-59	-65	-70	-75	-80	-86	-91	-97	-102	-108	-114	-119	-125	-131	-137	-143	-150
32000	-51	-56	-62	-67	-72	-78	-83	-89	-95	-100	-106	-112	-118	-124	-130	-136	-143	-149	-155
33000	-53	-59	-64	-70	-75	-81	-87	-93	-99	-104	-110	-117	-123	-129	-135	-142	-148	-155	-162
34000	-55	-61	-67	-73	-79	-84	-90	-96	-103	-109	-115	-121	-128	-134	-141	-148	-154	-161	-168
35000	-58	-64	-70	-76	-82	-88	-94	-100	-107	-113	-120	-126	-133	-140	-147	-154	-161	-168	-175
36000	-60	-66	-73	-79	-85	-92	-98	-105	-111	-118	-125	-132	-139	-146	-153	-160	-168	-175	-183
37000	-63	-69	-76	-82	-89	-96	-102	-109	-116	-123	-130	-138	-145	-152	-160	-167	-175	-183	-191
38000	-66	-72	-79	-86	-93	-100	-107	-114	-121	-129	-136	-144	-151	-159	-167	-175	-183	-191	-199
39000	-69	-76	-83	-90	-97	-105	-112	-119	-127	-135	-142	-150	-158	-166	-174	-183	-191	-200	-208
40000	-72	-79	-87	-94	-102	-110	-117	-125	-133	-141	-149	-157	-166	-174	-183	-191	-200	-209	-218
41000	-75	-83	-91	-99	-107	-115	-123	-131	-140	-148	-156	-165	-174	-183	-192	-201	-210	-219	-229
42000	-79	-87	-96	-104	-112	-121	-129	-138	-147	-155	-164	-173	-183	-192	-201	-211	-220	-230	-240
43000	-83	-92	-101	-109	-118	-127	-136	-145	-154	-164	-173	-182	-192	-202	-212	-222	-232	-242	-253

Figure 4.3

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CRS: AE1R005K

ALTIMETER POSITION CORRECTION - FEET (CESSNA 551-AII/501-FJ44-2A Engines only)**PILOT'S AND COPILOT'S ALTIMETER SYSTEMS CONDITIONS: ALL FLIGHT CONFIGURATIONS****EXAMPLE:**

AIRSPPEED	INDICATED PRESSURE ALTITUDE	ALTIMETER POSITION CORRECTION	ACTUAL PRESSURE ALTITUDE
160 KIAS	10,000 FEET	-39 FEET	9,961 FEET

ALT FT	A I R S P E E D - K I A S																		
	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280
0	-17	-19	-21	-23	-25	-27	-29	-31	-33	-35	-37	-39	-41	-27	-11	0	0	0	0
1000	-18	-20	-22	-24	-26	-28	-30	-32	-34	-36	-38	-40	-37	-21	-3	0	0	0	0
2000	-18	-20	-22	-24	-26	-28	-30	-32	-35	-37	-39	-41	-31	-14	0	0	0	0	0
3000	-19	-21	-23	-25	-27	-29	-31	-33	-36	-38	-40	-40	-25	-6	0	0	0	0	0
4000	-20	-22	-24	-26	-28	-30	-32	-35	-37	-39	-41	-36	-18	0	0	0	0	0	0
5000	-20	-22	-25	-27	-29	-31	-33	-36	-38	-40	-43	-29	-10	0	0	0	0	0	0
6000	-21	-23	-25	-28	-30	-32	-34	-37	-39	-41	-40	-22	-2	0	0	0	0	0	0
7000	-22	-24	-26	-28	-31	-33	-36	-38	-40	-43	-34	-15	0	0	0	0	0	0	0
8000	-22	-25	-27	-29	-32	-34	-37	-39	-42	-44	-28	-6	0	0	0	0	0	0	0
9000	-23	-25	-28	-30	-33	-35	-38	-40	-43	-40	-20	0	0	0	0	0	0	0	0
10000	-24	-26	-29	-31	-34	-36	-39	-42	-44	-34	-12	0	0	0	0	0	0	0	0
11000	-25	-27	-30	-32	-35	-38	-40	-43	-46	-26	-3	0	0	0	0	0	0	0	0
12000	-25	-28	-31	-33	-36	-39	-42	-44	-40	-18	0	0	0	0	0	0	0	0	0
13000	-26	-29	-32	-34	-37	-40	-43	-46	-33	-9	0	0	0	0	0	0	0	0	0
14000	-27	-30	-33	-36	-38	-41	-44	-47	-25	0	0	0	0	0	0	0	0	0	0
15000	-28	-31	-34	-37	-40	-43	-46	-41	-17	0	0	0	0	0	0	0	0	0	0
16000	-29	-32	-35	-38	-41	-44	-47	-34	-7	0	0	0	0	0	0	0	0	0	0
17000	-30	-33	-36	-39	-42	-46	-49	-25	0	0	0	0	0	0	0	0	0	0	0
18000	-31	-34	-37	-41	-44	-47	-43	-16	0	0	0	0	0	0	0	0	0	0	0
19000	-32	-35	-39	-42	-45	-49	-34	-5	0	0	0	0	0	0	0	0	0	0	0
20000	-33	-36	-40	-43	-47	-51	-26	0	0	0	0	0	0	0	0	0	0	0	0
21000	-34	-38	-41	-45	-49	-45	-16	0	0	0	0	0	0	0	0	0	0	0	0
22000	-35	-39	-43	-47	-50	-37	-5	0	0	0	0	0	0	0	0	0	0	0	0
23000	-37	-40	-44	-48	-52	-28	0	0	0	0	0	0	0	0	0	0	0	0	0
24000	-38	-42	-46	-50	-49	-17	0	0	0	0	0	0	0	0	0	0	0	0	0
25000	-39	-43	-48	-52	-41	-5	0	0	0	0	0	0	0	0	0	0	0	0	0
26000	-41	-45	-49	-54	-31	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27000	-42	-47	-51	-55	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28000	-44	-48	-53	-46	-8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29000	-46	-50	-55	-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30000	-47	-52	-57	-25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31000	-49	-54	-53	-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32000	-51	-56	-44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33000	-53	-59	-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34000	-55	-61	-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35000	-58	-55	-5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36000	-60	-43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37000	-63	-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38000	-66	-16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39000	-59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40000	-47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
41000	-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
42000	-17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
43000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Figure 4.4

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FAA Approved Date: August 08, 2003

Document Number: ES551-120028-100

Revision B

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ElectroSonics
4391 International Gateway
Columbus, Ohio 43219
CRS: AE1R005K

Aircraft Maintenance Manual
Supplement for:
Cessna
501, 551

FAA APPROVED

AIRPLANE MAINTENANCE MANUAL SUPPLEMENT

CESSNA

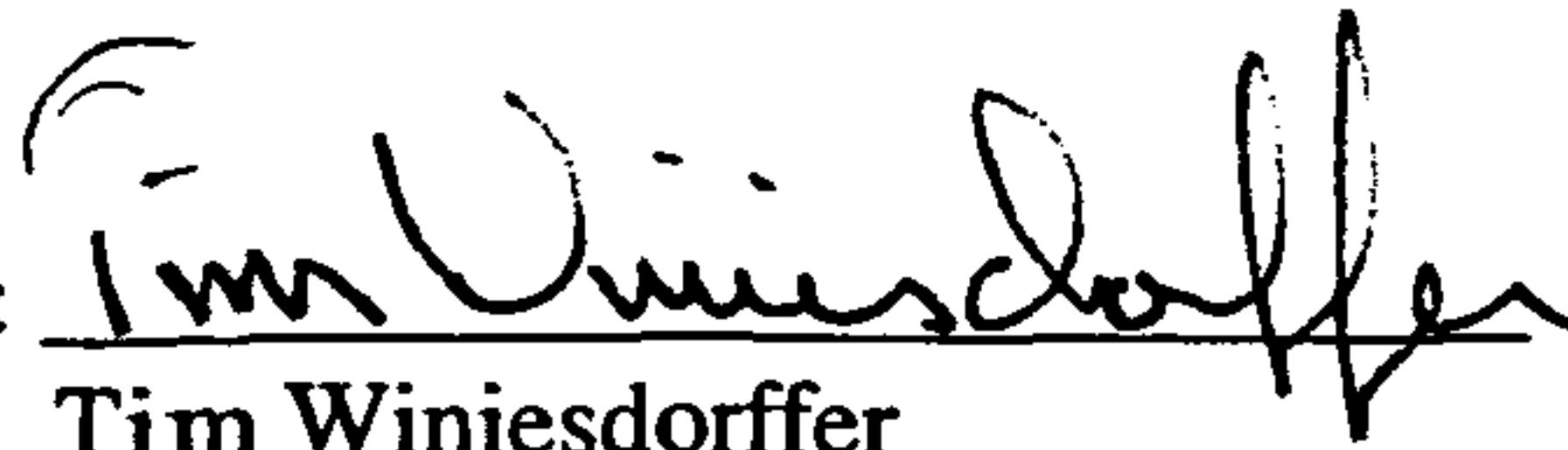
501, 551

SERIAL NUMBER: 501-0091

REGISTRATION NUMBER: N2158U

This supplement must be attached to the Airplane Maintenance Manuals. The information contained herein supplements the basic Maintenance Manuals only in those areas listed, when the aircraft is modified by STC SA01558CH-D installation of a Innovative Solutions & Support (ISS) Air Data Computer System. For limitations and procedures not contained in this supplement, consult the basic Airplane Maintenance Manuals.

The inspections and airworthiness limitations specified in this section are FAA approved. This section specifies inspections and other maintenance required under sections 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

FAA APPROVED: 
Tim Winiesdorffer
DAS Administrator, DAS 3CH
ElectroSonics
Columbus, Ohio

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FAA Approved Date: April 25, 2002

Document
Number: ES551-120028-200

Revision I.R.

Page 1 of 5

LOG OF REVISIONS

REVISION NO.	REVISED PAGES	DESCRIPTION OF REVISION	FAA APPROVAL
I.R.	ALL	Initial Release	Tim Winiesdorffer

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FAA Approved Date: April 25, 2002

Document

Number: ES551-120028-200

Revision I.R.

Page 2 of 5

CHAPTER 5 - TIME LIMITS / MAINTENANCE CHECKS

5.1 SCHEDULED MAINTENANCE CHECKS

Forward Pressure Bulkhead Penetration

Initial Inspection: 4,216 pressurization cycles

Subsequent Inspection: Each additional 4,216 pressurization cycles

*** Note: One pressurization cycle is defined as 1 flight.**

CHAPTER 53 - FUSELAGE MAINTENANCE PRACTICES -GENERAL

EXTERIOR FUSELAGE

1. Inspect the following:

The exterior fuselage in the vicinity of the forward pressure bulkhead in the vicinity of the cable feed-thru connector (see ElectroSonics drawing ES551-120028-12 or ES551-120028-22).

- Specifically, the area under and around the connector, including the doublers.

SECTION 53-0 - EXTERIOR FUSELAGE BULKHEAD PENETRATION

1. Manufacture templates from 2024-T3/0.050, drawings provided at the end of this supplement.
2. Using eddy current inspection techniques, inspect rivets, cable feed-thru connector hole for cracks using the manufactured templates.
3. Using the appropriate template, start with the smallest diameter inspection guide and increase the circular search pattern progressively by one size until each hole has been inspected out to the third inspection guide.
4. If any cracks are detected, an approved repair must be accomplished

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FAA Approved Date: April 25, 2002

SECTION 53-0 - EXTERIOR FUSELAGE – (continued)

BULKHEAD FEED-THRU REMOVAL

1. Remove sealant from around base of feed-thru.
2. Remove hardware securing feed-thru to bulkhead.
3. Lift feed-thru clear of bulkhead.

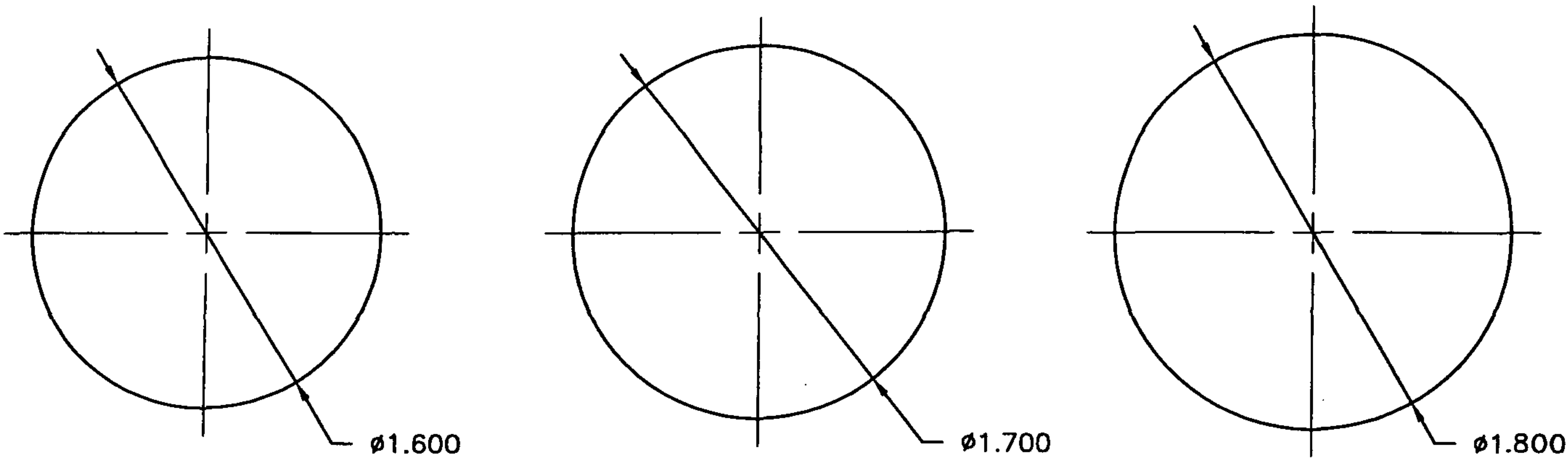
BULKHEAD FEED-THRU INSTALLATION

1. Ensure area has been cleaned and properly treated for corrosion prevention in accordance with manufacturer's instructions.
2. Secure feed-thru to bulkhead as applicable.
3. Seal feed-thru with Mil-S-8802F, Type 2, Class B sealant.

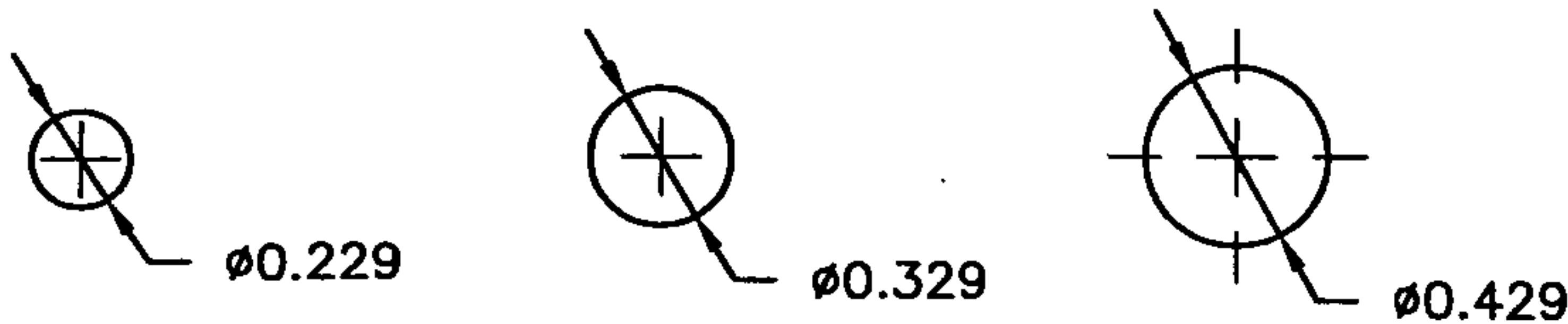
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FAA Approved Date: April 25, 2002

EDDY CURRENT CIRCLE TEMPLATES FOR FORWARD BULKHEAD PENETRATION



ø1.500 CONNECTOR FEED-THRU HOLE



ø0.129 AD4 RIVET HOLES

ELECTROSONICS		EDDY CURRENT TEMPLATES		
		FAA APPROVED DATE 04/25/02	DWG NO. ES551-120028-200	REV IR
DRAWN BY SP	SCALE 1:1	W.O. 105653	S/N	PAGE 5 OF 5
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FAA ACCEPTED

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

CESSNA

501, 551

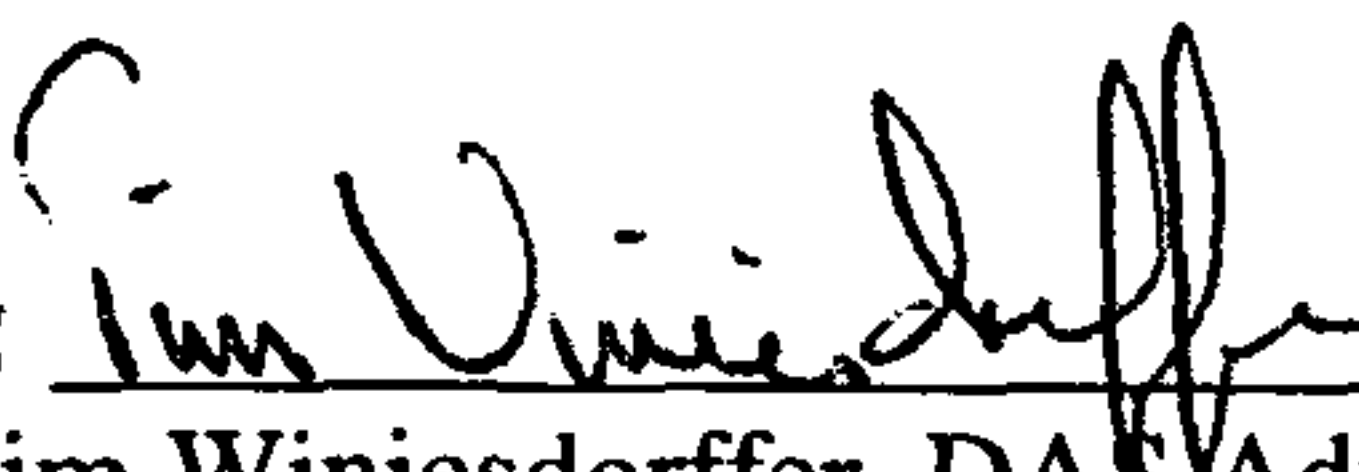
SERIAL NUMBER: 501-0091

REGISTRATION NUMBER: N2158U

This document must be attached to the Airplane Instructions for Continued Airworthiness (Maintenance Manuals). The information contained herein supplements the basic Instructions for Continued Airworthiness only in those areas listed, when the aircraft is modified by FAA STC **SA01558CH-D** for the installation of the Innovative Solutions & Support Air Data System. For limitations and procedures not contained in this document, consult the basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

The inspections specified in this document are FAA accepted. If applicable, the referenced airworthiness limitations are FAA approved. This section specifies inspections and other maintenance required under sections 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

FAA ACCEPTED:


Tim Winiesdorffer, DAS Administrator
DAS 3CH
ElectroSonics
Columbus, Ohio

LOG OF REVISIONS

REVISION NO.	REVISED PAGES	DESCRIPTION OF REVISION	FAA APPROVAL
IR	ALL	Initial Release	05-03-2002 Tim Winiesdorffer

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CHAPTER 1 INTRODUCTION

1.1 Scope/Purpose/Applicability/Distribution

The Instructions for Continued Airworthiness (ICA) described herein are applicable only to those aircraft modified by the FAA STC identified on the cover page. These ICA describe the recommended and required maintenance procedures for the Innovative Solutions & Support Air Data System, and are to be distributed only to applicable certifying authorities and aircraft operators.

1.2 References

ElectroSonics Top Drawing, Dwg. No. ES551-120028-01.

Innovative Solutions & Support Air Data System –

Operation and Installation Manual, Analog Interface Unit 1D-81040-15.

Operation and Installation Manual, Air Data Display Unit 1D-81030-16.

Operation and Installation Manual, Analog Interface Unit 1D-81040-26.

Rosemount Aerospace Inc., Dwg. No. 102AU1AG

1.3 Definitions/Abbreviations/Acronyms/Symbolization

ICA	Instructions for Continued Airworthiness
IS&S	Innovative Solutions & Support
RAI	Rosemount Aerospace Inc.

CHAPTER 2 INSPECTION REQUIREMENTS AND OVERHAUL SCHEDULE

2.1 Inspection Requirements

None of the components installed for this modification require periodic maintenance.

If the Innovative Solutions & Support Air Data System indicates a failure of the system, isolate the failure using the Innovative Solutions & Support Air Data System, using the Operation and Installation Manual, Analog Interface Unit 1D-81040-15, the Operation and Installation Manual, Air Data Display Unit 1D-81030-16, the Operation and Installation Manual, Analog Interface Unit 1D-81040-26, and the Rosemount Aerospace Inc. Sensor, Total Temperature Dwg. No. 102AU1AG.

2.2 Component Overhaul Schedule

None of the components installed for this modification require scheduled overhaul.

CHAPTER 3 DIMENSIONS AND ACCESS

3.1 Aircraft Features

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

3.2 Location of Access Panels

Gaining access to the following will provide access to the Innovative Solutions & Support Air Data System, associated controls, and wire harnessing:

- Nose Avionics Bay.
- Instrument Panel.
- Co-pilots Arm Rest

ElectroSonics Top Drawing, Dwg No ES551-120028-01, for equipment locations.

CHAPTER 4 LIFTING AND SHORING

4.1 Jacking Information

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

4.2 Lifting Instructions

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

4.3 Shoring Instructions

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

CHAPTER 5 LEVELING AND WEIGHING

5.1 Leveling Information

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

5.2 Weighing and Determination of Center of Gravity Instructions

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

CHAPTER 6 TOWING AND TAXIING

6.1 Tow Instructions

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

6.2 Taxiing Instructions

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

CHAPTER 7 PARKING AND MOORING

7.1 Mooring Information

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

7.2 Parking Information

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

7.3 Storage Limitations

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

CHAPTER 8 PLACARDS AND MARKINGS

8.1 Placard and Marking Information

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).



CHAPTER 9 SERVICING

9.1 Servicing Information

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

9.2 Lubrication Information

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

9.3 Equipment Required for Servicing

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

9.4 Consumable Materials

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

CHAPTER 10 AIRWORTHINESS LIMITATIONS

10.1 Airworthiness Limitations Information

Refer to ElectroSonics Maintenance Manual Supplement ES551-120028-200 for the inspection of the forward pressure bulkhead penetration.

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US Department
of Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification

SPZ 6L-19 FOL

INSTRUCTIONS: Print or type all entries. See FAR 43.9 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make Cessna Aircraft Co.	Model C501
	Serial No. 501-0091	Nationality and Registration Mark N2158U
2. Owner	Name (As shown on registration certificate) RBK Aviation, Inc.	Address (As shown on registration certificate) Red Reflet Ranch 357 Road 58 Ten Sleep, WY 82442-8854

3. For FAA Use Only

4. Unit Identification

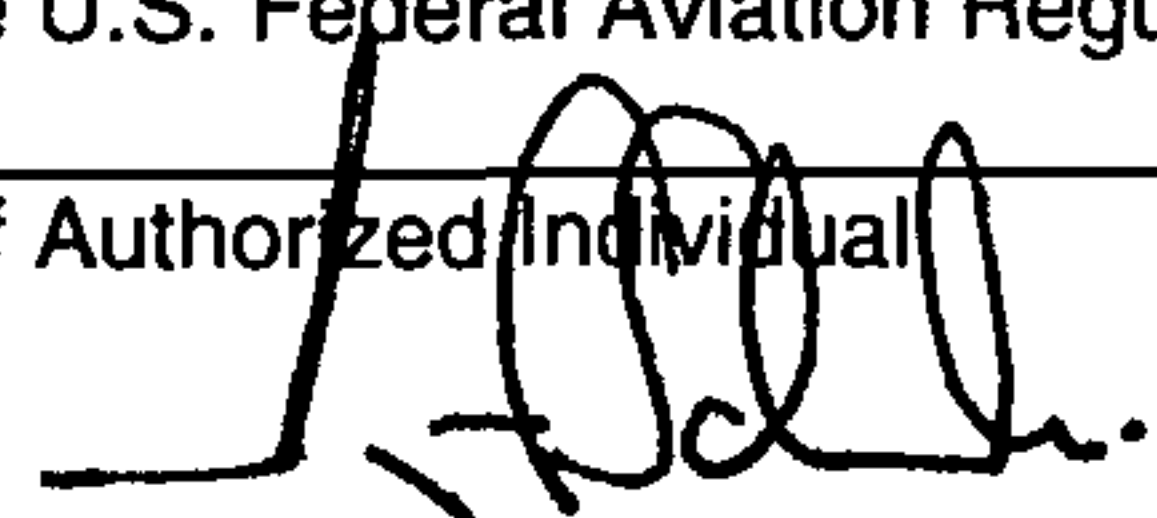
5. Type

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~ (As described in Item 1 above) ~~~~~				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

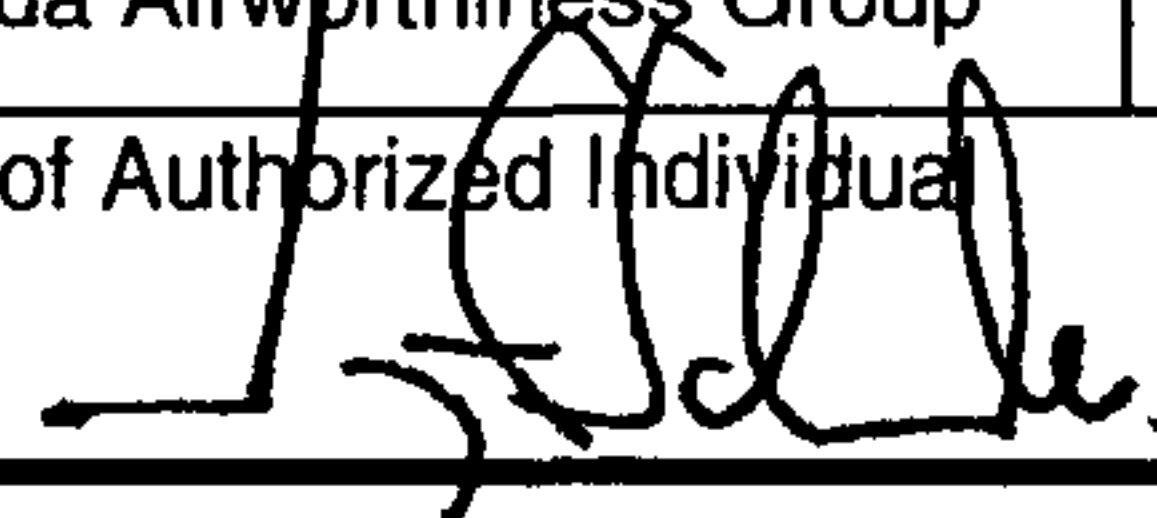
A. Agency's Name and Address ElectroSonics 4391 International Gateway Columbus, OH 43219	B. Kind of Agency	C. Certificate No. UO22221L Accessory Class 2, & 3 Limited Airframe Instrument Class 1, and 3, Radio Class 1, 2, & 3
	<input type="checkbox"/> U.S. Certified Mechanic	
	<input type="checkbox"/> Foreign Certified Mechanic	
	<input checked="" type="checkbox"/> Certificated Repair Station	
	<input type="checkbox"/> Manufacturer	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date October 30, 2004	Signature of Authorized Individual  Inspector
---------------------------------	--

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY	FAA Flt. Standards Inspector	Manufacturer	Inspection Authorization	Other (Specify)
	FAA Designee	<input checked="" type="checkbox"/> Repair Station	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection October 30, 2004		Certificate or Designation No. UO22221L	Signature of Authorized Individual  Inspector	

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets, Identify with aircraft nationality and registration mark and date work accomplished.)

Cessna Citation 501 N2158U s/n 501-0091

The aircraft was inspected and found to conform with Garrett Aviation Services Supplemental Type Certificate **ST01637CH** *Certification of Reduced Vertical Minimums* (RVSM) operational capability dated May 06, 2002. The "FAA Approved Airplane Flight Manual Supplement (AFMS) for Cessna Citation Model 500/501 and 551 Series Aircraft Equipped with a Single Flight Director with Reduced Vertical Separation Minimum (RVSM) Capability" document 50-8008-003 Rev. (A) dated June 03, 2002 was inserted into the Airplane Flight Manual. "Instructions for Initial and Continued Airworthiness for Cessna Citation Model 500/501 and 550/551 Series Aircraft Qualified for Operations in Reduced Vertical Separation Minimum (RVSM) Airspace", Garrett Aviation Services Doc. No. 50-8008-004 Rev. (F) was provided to the owner/operator.

This installation unto itself does not constitute RVSM operational approval; the owner/operator must obtain a valid letter of authorization from its FAA FSDO for flight operations in special use airspace.

No change to electrical loading.

No change to weight and balance.

This alteration was accomplished and recorded under ElectroSonics work order No.183692.

An entry for this alteration and the Instructions for Continued Airworthiness have been made in the aircraft's maintenance records as required by 14 CFR 43, section 43.9 as referenced on this FAA form 337.

----- end -----

☒ Additional Sheets Are Attached

United States of America
Department of Transportation -- Federal Aviation Administration

Supplemental Type Certificate

Number SA01637CH

This certificate issued to Garrett Aviation Services
1200 North Airport Drive
Capital Airport
Springfield, IL 62707

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 23 of the Federal Aviation Regulations. See Type Certificate Data Sheet A27CE for complete certification basis.

Original Product - Type Certificate Number : A27CE

Make : Cessna Aircraft Company
Model : 501 ; 551

Description of Type Design Change:

Certification of Reduced Vertical Separation Minimum (RVSM) operational capability initiated in accordance with FAA Approved Instructions for Initial and Continued Airworthiness, Garrett Aviation Services Doc. No. 50-8008-004, Revision A, dated April 23, 2002, or later FAA approved revision.

Limitations and Conditions:

- 1) Compatibility of this design change with previously approved modifications must be determined by the installer.
- 2) FAA Approved Airplane Flight Manual Supplement, Garrett Aviation Services Doc. No. 50-8008-001, Revision "Orig. Issue", approved May 6, 2002, or later FAA approved revision; or Garrett Aviation Services Doc. No. 50-8008-003, Revision "Orig. Issue", approved May 6, 2002, or later FAA approved revision, as applicable, is required on board the modified aircraft.
- 3) FAA Approved Instructions for Initial and Continued Airworthiness, Garrett Aviation Services Doc. No. 50-8008-004, Revision A, dated April 23, 2002, or later FAA approved revision, is required for this certification.
- 4) If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application : May 6, 2002

Date reissued :

Date of issuance : May 6, 2002

Date amended :



By direction of the Administrator

Charles L. Smalley
(Signature)

Charles L. Smalley
Manager, Systems and Flight Test Branch
Chicago Aircraft Certification Office

(Title)

Garrett Aviation Services
1200 North Airport Drive
Springfield, IL 62707
Document No. 50-8008-003
KSR Document No. R02-447

AFM Supplement For
Cessna Citation
Series 500/501 and 551
Single Flight Director Installed

FAA APPROVED AIRPLANE FLIGHT MANUAL SUPPLEMENT

FOR

CESSNA

CITATION SERIES 500/501 AND 551 AIRCRAFT

EQUIPPED WITH

A SINGLE FLIGHT DIRECTOR

WITH

REDUCED VERTICAL SEPARATION MINIMUM (RVSM) CAPABILITY

Reg. No. N 21580


S/N 0091

This supplement must be attached to the FAA Approved Flight Manual, as shown in the table below, when the aircraft is modified in accordance with Supplemental Type Certificate Number ST01639CH/SA01637CH, and the maintenance instructions for Initial and Continued Airworthiness contained therein and in accordance with the ElectroSonics Supplemental Type Certificate ST01392CH-D or SA01558CH-D, as appropriate.

AIRCRAFT	AFM DOCUMENT NO.
500	500FM
501	501FM
551	551FM

The information contained herein supplements or supersedes the basic manual only in those areas listed. For Limitations, Procedures, and Performance information not contained in this Supplement, consult the basic Airplane Flight Manual.

FAA Approved: 

 Charles L. Smalley, Manager
Systems & Flight Test Branch
Chicago Aircraft Certification Office
Federal Aviation Administration
Des Plaines, IL

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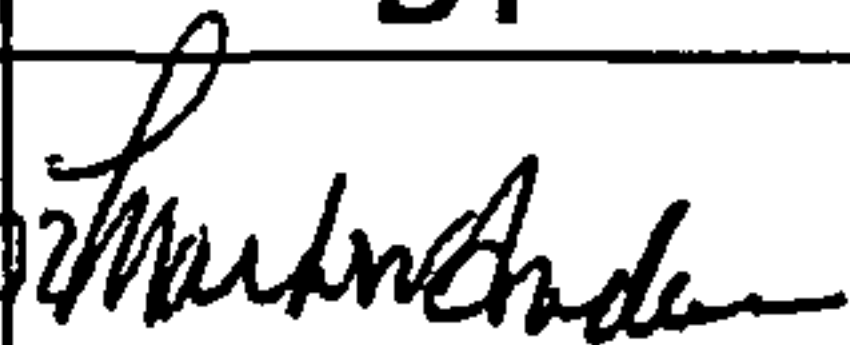
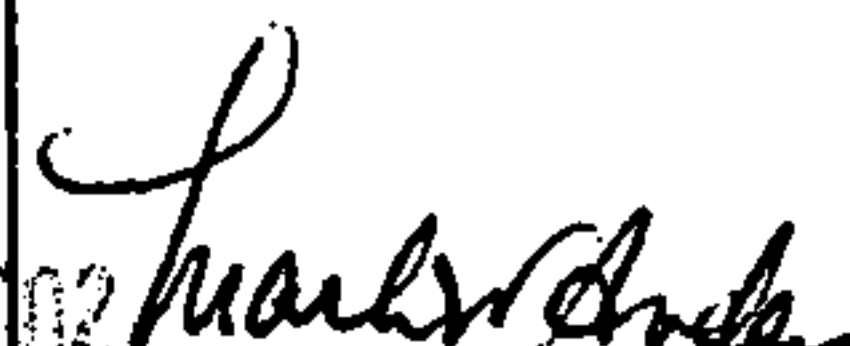
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Garrett Aviation Services
1200 North Airport Drive
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AFM Supplement For
Cessna Citation
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FAA APPROVED AIRPLANE FLIGHT MANUAL SUPPLEMENT

LOG OF REVISIONS

REV. NO.	EFFECTED PAGE (s)	DESCRIPTION	DATE	APPROVED BY
Orig. Issue	All	Complete supplement	MAY 06 2002	
A	1 2 6	Included reference to equipment STC. Updated Log of Revisions. Included reference to equipment STC, AIU P/N 9B-81040-26, and optional requirements for TAT probe installation.	JUN 03 2002	

NOTE: All revisions are indicated by a black vertical line along right margin.

FAA APPROVED AIRPLANE FLIGHT MANUAL SUPPLEMENT

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Garrett Aviation Services
1200 North Airport Drive
Springfield, IL 62707
Document No. 50-8008-003
KSR Document No. R02-447

AFM Supplement For
Cessna Citation
Series 500/501 and 551
Single Flight Director Installed

FAA APPROVED AIRPLANE FLIGHT MANUAL SUPPLEMENT

SECTION I – INTRODUCTION

NO CHANGE.

FAA APPROVED AIRPLANE FLIGHT MANUAL SUPPLEMENT

SECTION II – OPERATING LIMITATIONS

General

This aircraft has been evaluated in accordance with 14CFR, Part 91, Appendix G, "Operation in Reduced Vertical Separation Minimum (RVSM) Airspace", and FAA Memorandum 91-RVSM, Change 1, dated 30 June 1999, "Interim Guidance Material on the Approval of Operators/Aircraft for RVSM Operations" and is qualified for operation as a group aircraft in RVSM airspace. This finding does not constitute approval to conduct Reduced Vertical Separation Minimum operations.

Altitude Display Differences

The Pilot's and Copilot's displayed altitude must remain within 200 feet of each other, at all times, during RVSM operation. If the Pilot's and Copilot's displayed altitude deviates by more than 200 feet, RVSM operation is not permitted.

Air Data Computer

During RVSM operations, the same ADDU must provide input to the autopilot and the transponder.

FAA APPROVED AIRPLANE FLIGHT MANUAL SUPPLEMENT

SECTION II – OPERATING LIMITATIONS

Altimetry System Instrumentation

The following equipment must be installed and operational per FAA STC ST01392CH-D or SA01558CH-D to enter RVSM airspace:

Description	Manufacturer	Model	Part Number
Air Data Display Unit #1 (ADDU1)	IS&S	ADDU	9D-80130-16
Air Data Display Unit #2 (ADDU2)	IS&S	ADDU	9D-80130-16
Analog Interface Unit (AIU)	IS&S	AIU	9B-81040-15 or 9B-81040-26
Configuration Module #1 (CM1) ⁽¹⁾	IS&S	CM	9B-03508-15
Configuration Module #2 (CM2) ⁽¹⁾	IS&S	CM	9B-03508-15
Transponder #1 & #2 ^{(2) (3)}	Collins or Honeywell	TDR-90 or XS-850	622-1270-001 or 7510774-901
Autopilot	Sperry/Honeywell	SP-200	4008519-941
Altitude Alerter	Intercontinental Dynamics or Honeywell	~ or VN-212	540-23989-311 or 4020571-904
Standby Altimeter ⁽⁴⁾	As noted	As noted	As Noted
Total Air Temperature (TAT) Probe ⁽⁵⁾	Rosemount	~	102AU1AG

NOTES

1. When the IS&S Configuration Module (P/N 9B-03508-15) is correctly installed, the Air Data Display Units (ADDU) will display "CES1" at start-up. If either ADDU does not display "CES1" at start-up, RVSM operations are prohibited.
2. Any Transponder that meets or exceeds the requirements of one of the following Technical Standard Orders (TSO) may be substituted for those listed. TSO-C66a or TSO-C47c (Mode C); TSO-C112 (Class 2a; Mode S); TSO-C112a (Mode S).
3. If only one transponder is operational, it must be capable of reporting from either the pilot's or copilot's ADDU.
4. For RVSM operations, a standby altimeter that meets or exceeds the requirements of TSO-C10b must be installed.
5. For RVSM operations, the TAT Probe, (if installed), must be installed at Station 81.0 below the right hand nose baggage door.

Any deviation from this equipment list (except as noted) invalidates RVSM approval of this aircraft; however, operations outside of RVSM airspace may be conducted as required.

Garrett Aviation Services
1200 North Airport Drive
Springfield, IL 62707
Document No. 50-8008-003
KSR Document No. R02-447

AFM Supplement For
Cessna Citation
Series 500/501 and 551
Single Flight Director Installed

FAA APPROVED AIRPLANE FLIGHT MANUAL SUPPLEMENT

SECTION III – OPERATING PROCEDURES

EMERGENCY PROCEDURES

NO CHANGE.

FAA APPROVED AIRPLANE FLIGHT MANUAL SUPPLEMENT

SECTION III - OPERATING PROCEDURES

ABNORMAL PROCEDURES

1. Failure of ADDU1 in RVSM Airspace

- A. Determine Aircraft Altitude Using Copilot's Altimeter (ADDU2).
- B. Verify Autopilot/Altitude Hold, Altitude Alerter And Transponders Are Selected To ADDU2 (Copilot's ADDU) By Selecting The ADDU1/ADDU2 Transfer Switch To ADDU2.
- C. Cross-Check Aircraft Altitude Using Standby Altimeter- Record Each Altimeter Reading. The Difference Between The Copilot ADDU And The Standby Altimeter Readings Should Be Noted For Use In Additional Contingency Situations. Repeat Procedure Each Hour.
- D. Notify ATC Of Loss Of Redundancy Of Primary Altimetry Systems.

2. Failure of ADDU2 in RVSM Airspace

- A. Determine Aircraft Altitude Using Pilot's Altimeter (ADDU1).
- B. Verify Autopilot/Altitude Hold, Altitude Alerter And Transponders Are Selected To ADDU1 (Pilot's ADDU) By Selecting The ADDU1/ADDU2 Transfer Switch To ADDU1.
- C. Cross-Check Aircraft Altitude Using Standby Altimeter- Record Each Altimeter Reading. The Difference Between The Pilot ADDU And The Standby Altimeter Readings Should Be Noted For Use In Additional Contingency Situations. Repeat Procedure Each Hour.
- D. Notify ATC Of Loss Of Redundancy Of Primary Altimetry Systems.

FAA APPROVED AIRPLANE FLIGHT MANUAL SUPPLEMENT

SECTION III - OPERATING PROCEDURES – ABNORMAL PROCEDURES

3. Failure of The Altitude Hold Function in RVSM Airspace

- A. Ensure Autopilot/Altitude Hold Function Is Disengaged.
- B. If AIU Fail Is Annunciated For The Selected ADDU, Select The Other ADDU Using The ADDU1/ADDU2 Transfer Switch.
- C. Re-Engage Autopilot/Altitude Hold Function.
- D. If Problem Still Exists,
 - 1. Evaluate Capability To Maintain Altitude Within +/- 300 Feet Of Assigned Altitude Using Pilot Altimeter (ADDU1).
 - 2. Ensure the ADDU1/ADDU2 Transfer Switch Is Selected To ADDU1.
- C. Notify ATC Of The Loss Of The Altitude Hold Capability.
- D. Depart RVSM Airspace If Required By ATC.

4. Failure of Both ADDU1 And ADDU2 in RVSM Airspace

- A. Ensure Autopilot Disengaged.
- B. Maintain Altitude Using Standby Altimeter. ⁽⁶⁾
- C. Monitor Altitude Using Standby Altimeter.
- D. Notify ATC Of Loss Of All Primary Altimetry Systems.
- E. Depart RVSM Airspace If Required By ATC.

NOTES
6. Refer to basic Airplane Flight Manual: Copilot Altimeter Position Error Chart to determine correct altitude for current flight conditions.

FAA APPROVED AIRPLANE FLIGHT MANUAL SUPPLEMENT

SECTION III - OPERATING PROCEDURES - ABNORMAL PROCEDURES

5. Divergence of Primary Altimeters By More Than 200 ft in RVSM Airspace

- A. Determine Defective System By Cross-Checking Each Primary Altimeter With The Standby Altimeter.
- B. If Able To Determine Which Altimetry System Is Correct, Select Autopilot/Altitude Hold, Altitude Alerter and Transponders To The Correct ADDU Using The ADDU1/ADDU2 Transfer Switch.
- C. If Unable To Determine Accuracy Of Either Altimetry System Proceed With The **Failure Of Both ADDU1 And ADDU2 in RVSM Airspace** Procedure.
- D. Notify ATC Of Divergence Of Primary Altimeters And/Or Loss Of The Primary Altimetry Systems.
- E. Depart RVSM Airspace If Required By ATC.

6. Failure of Altitude Alert in RVSM Airspace

- A. Ensure Autopilot Engaged With Altitude HOLD Selected.
- B. Monitor Altitude And Maintain Altitude Within +/- 300 Feet Of Assigned Altitude.
- C. Notify ATC Of Loss Of Altitude Alert System.
- D. Depart RVSM Airspace If Required By ATC.

FAA APPROVED AIRPLANE FLIGHT MANUAL SUPPLEMENT

SECTION III – OPERATING PROCEDURES

NORMAL PROCEDURES

1. EXTERIOR PREFLIGHT INSPECTION

- A. Left Static Ports.....COVER REMOVED AND WARM
Upper and Lower Static Ports CLEAR
Surrounding Airframe CHECK FOR DAMAGE/PAINT CHIPS ⁽⁷⁾
- B. Left Pitot ProbeCOVER REMOVED AND HOT
CHECK FOR DAMAGE
- C. Right Pitot ProbeCOVER REMOVED AND HOT
CHECK FOR DAMAGE
- D. Right Static PortsCOVER REMOVED AND WARM
Upper and Lower Static Ports CLEAR
Surrounding Airframe CHECK FOR DAMAGE/PAINT CHIPS ⁽⁷⁾

2. RVSM SERVICEABILITY CHECKS

A. BEFORE STARTING ENGINES

1. Altimeters.....MAX DIFFERENCE 75 FT ⁽⁸⁾
2. Altitude Preselect Controller CHECKED⁽⁹⁾

B. AFTER STARTING ENGINES

1. Autopilot/Altitude Hold..... CHECKED

NOTES

7. No paint ridges or non-homogenous paint distribution shall be allowed near the static ports. The static ports must also be inspected for corrosion, elongation, deformation, and/or obstruction and the operator must ensure that no foreign matter is found within the port orifice.
8. Ensure matched baro settings.
9. See RVSM serviceability procedures.

FAA APPROVED AIRPLANE FLIGHT MANUAL SUPPLEMENT

SECTION III – OPERATING PROCEDURES - NORMAL PROCEDURES

C. CRUISE

1. Cross-check Altimeters MAX DIFFERENCE 200 FT ⁽¹⁰⁾
2. Altimeters RECORD ALTIMETERS SETTINGS ⁽¹¹⁾
3. Altitude Hold performance ±65 FT ⁽¹²⁾

NOTES

10. Ensure matched baro settings (29.92in Hg or 1013mb) and record setting in the flight plan master log.
11. Record Pilot, Copilot and Standby altimeter readings in flight plan Master Log upon entering RVSM airspace for contingency situations.
12. Tolerance is ±65 FT of altitude set in the altitude preselect controller.

3. RVSM SERVICEABILITY PROCEDURES

Altitude Preselect Controller

1. Select Pilot ADDU (ADDU1).
2. Set Altimeters To The Closest 100 feet.
3. Match Preselect Altitude To Indicated Altitude.
4. Using The Pilot's ADDU BARO Knob Increase/Decrease Indicated Altitude Until The Altitude Deviation Alerts Occurs. Altitude Deviation Alert Tolerance Is 300 feet ± 50 feet.
5. Select Copilot ADDU (ADDU2) And Repeat Items 2-4 Using The Copilot's Altimeter.

2
R
Q

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Springfield, IL 62707
Document No. 50-8008-003
KSR Document No. R02-447

AFM Supplement For
Cessna Citation
Series 500/501 and 551
Single Flight Director Installed

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SECTION IV – PERFORMANCE

NO CHANGE.

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Document No. 50-8008-003
KSR Document No. R02-447

AFM Supplement For
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Single Flight Director Installed

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SECTION V – APPENDIX

NO CHANGE.

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Document No. 50-8008-003
KSR Document No. R02-447

AFM Supplement For
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Single Flight Director Installed

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SECTION VI – SUPPLEMENTS

NO CHANGE.

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Document No. 50-8008-003
KSR Document No. R02-447

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SECTION VII – WEIGHT & BALANCE, DATA & AIRPLANE EQUIPMENT LIST

NO CHANGE.

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Document No. 50-8008-003
KSR Document No. R02-447

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FAA APPROVED AIRPLANE FLIGHT MANUAL SUPPLEMENT

SECTION VIII – ADVISORY INFORMATION

NO CHANGE.

CESSNA Citation 501 N2158U
S/N 501-0091 10-30-04

**INSTRUCTIONS FOR INITIAL AND CONTINUED AIRWORTHINESS
FOR CESSNA MODEL 500/501 AND 550/551 SERIES AIRCRAFT
QUALIFIED FOR OPERATIONS IN
REDUCED VERTICAL SEPARATION MINIMUM (RVSM) AIRSPACE**

Prepared For
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Supplemental Type Certificate No. ST01636CH/SA01637CH
Garrett Aviation Services Doc. No. 50-8008-004
March 19, 2002
Revision A, 23 April 2002
Revision B, 22 May 2002
Revision C, 10 June 2002
Revision D, 1 October 2002
Revision E, 16 July 2003
Revision F, 8 September 2003

Signature Page**Document:**

Garrett Aviation Services Doc. No. 50-8008-004

Revision A, 23 April 2002

Revision B, 22 May 2002

Revision C, 10 June 2002

Revision D, 1 October 2002

Revision E, 16 July 2003

Revision F, 8 September 2003

**INSTRUCTIONS FOR INITIAL AND CONTINUED AIRWORTHINESS
FOR CESSNA MODEL 500/501 AND 550/551 SERIES AIRCRAFT
QUALIFIED FOR OPERATIONS IN
REDUCED VERTICAL SEPARATION MINIMUM (RVSM) AIRSPACE**

Reviewed By



Mark Reynolds

Certification Leader, DAS Administrator

Garrett Aviation Services - Springfield

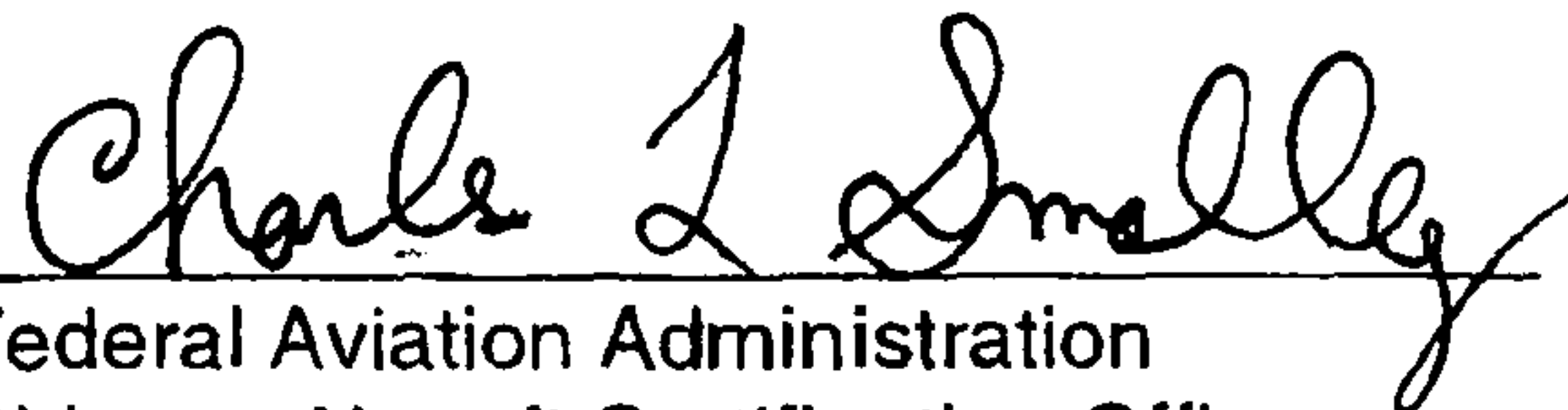
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Federal Aviation Administration

Chicago Aircraft Certification Office

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Log Of Revisions

Rev	Date	Affected Pages	Initial
	March 19, 02	Original Release	RTM
A	Apr 23, 02	Title page - vi, 1.1-1.2, 2.2-2.7, 3.1-3.2, 4.1-4.2 Inserted documentation to allow for dual AIU installation, TAT probe location definition, additional transponder requirements and other miscellaneous corrections.	RTM
B	May 22, 02	Title page - iv, vi, 1.2, 2.1 - 2.5, 2.7, 3.1 - 3.4 Made corrections based on AEG Review, Added note and correction to Tables 2.2 & 3.1. Included reference to equipment STC, TAT probe installation requirements and aircraft exterior modifications related to RVSM compliance. Modified Figure 3.1 and added Figure 3.2	RTM
C	June 10, 02	Title page - iv, 2.7 Corrected skin overlay change in thickness tolerances and allowance for skin overlay thickness minimums.	RTM
D	Oct. 1, 02	Title page - iv, 2.3 Included Honeywell/Sperry SP-200, P/N 4008519-811 & 4008519-911 to Table 2.1.	RTM
E	July 16, 03	<ul style="list-style-type: none"> - All Pages: Reformatted entire document to Garrett Aviation Services format including the removal of the Document Control Page (page ii). Removed "change bars" for all previous revisions. Changed "Cessna Citation" to "Cessna Model" in the entire document. - Pages iii, 1.1 – 1.3: Removed FAA signature blocks and outline of initial and continued air-worthiness tasks from section 1.2. - Pages iv – v: Updated Table of Contents and List of Tables. - Page 2.1: Changed "will be granted" to "may be granted". Added text to address airplanes equipped with Williams FJ44 engines. - Page 2.4: Updated component information. - Pages 2.5 & 2.6: Divided Section 2.4.1 into airworthiness and operational approval sections. Updated Revision level of Skin Mapping Document. - Page 2.7: Divided Section 2.4.2 into 12 and 24 month titled sections. All required tasks completely written out. - Page 2.8: Section 2.4.3 All required tasks completely written out. - Page 2.9: Updated Rev level for Skin Map document. - Page 3.1: Removed requirement to file copy of results with Garrett Aviation Services. - Page 3.5: Changed flight segment length from "1 hour" to "at least 30 minutes". 	BW

Log Of Revisions

Rev	Date	Affected Pages	Initial
<u>F</u>	<u>8 Sept., 2003</u>	- Page v, Table of Contents: Updated to reflect previous revisions to the document. - Page vi, List of Tables: Updated page numbers for Tables 2.1 and 2.2	

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1.0 Airworthiness Limitations

1.1 General Requirements

The Cessna Model 500, 501, 550 and 551 aircraft have been shown to qualify for operation in Reduced Vertical Separation Minimum (RVSM) airspace as group airplanes in accordance with Title 14 of the Code of Federal Regulations (14CFR), Part 91, Appendix G, "Operation in Reduced Vertical Separation Minimum (RVSM) Airspace", and FAA Memorandum 91-RVSM, Change 1, dated 30 June 1999, "Interim Guidance for Approval of Aircraft for Reduced Vertical Separation Minimum (RVSM) Flight". This qualification is based on analysis of the configuration and performance of the air data, automatic altitude control, altitude alerting, and altitude reporting systems. These systems must be maintained in accordance with the inspections and tests specified in this document and other current maintenance practices, to guarantee initial and continued compliance to RVSM specifications.

The owner/operator of the airplane seeking approval for operations in RVSM airspace must add the initial and continued airworthiness inspection and test instructions contained in this document to their existing maintenance and flight operations programs for the airplane to conduct operations in RVSM airspace. Any deviation from these procedures must be coordinated through Garrett Aviation Services and the responsible airworthiness authority prior to operation in RVSM airspace.

The information presented in this document supplements or supersedes the existing maintenance requirements only in those areas specified. Refer to the manufacturer's requirements and procedures for maintenance procedures pertaining to the airplane's systems and specific avionics equipment not covered in these instructions.

1.2 Initial and Continued Airworthiness Requirements

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. Both the Pilot's and Copilot's altimetry systems must be inspected and verified to the tolerances presented in this document. It is noted that there are no Airworthiness Limitations associated with the RVSM airworthiness compliance of the Cessna Model 500, 501, 550 or 551 aircraft.

2.0 Airplane Maintenance

2.1 Introduction

The Cessna Model 500, 501, 550 and 551 aircraft have been shown to qualify for operation in RVSM airspace as group airplanes based on analysis of the configuration and performance of the air data, automatic altitude control, altitude alerting, and altitude reporting systems. These systems must be maintained in accordance with this document and other current maintenance practices, to guarantee initial and continued compliance to RVSM specifications. Revisions/changes to the Instructions for Continued Airworthiness will be distributed in accordance with Garrett Aviation Services Policies & Procedures System (GAPPS) procedure number QP 04-007, "Customer and Regulatory Notification Process for Garrett Products".

Prior to applying for RVSM operational approval, the operator of each Cessna Model 500, 501, 550 or 551 aircraft must first conduct the inspections, tests, and all other requirements for initial airworthiness compliance as presented in Section 2.4.1 of this document. The operator should coordinate with the appropriate FAA Flight Standards District Office (FSDO) to determine what documentation must be provided to prove compliance with the requirements for initial airworthiness. When compliance with the initial airworthiness tasks has been demonstrated, RVSM operational approval may be granted by the FSDO. After initial airworthiness has been granted, the airplane must be maintained in accordance with the continued airworthiness requirements presented in Section 2.4.2 of this document.

2.2 Aircraft Configuration

The Cessna Model 500, 501, 550 and 551 aircraft are equipped with two independent air data systems comprised of independent, cross-coupled static sources, air data computers, and altimeters. The aircraft are also equipped with single autopilot and altitude alerting installations and two altitude-reporting transponders. The installation and operation of these systems have been shown to meet RVSM requirements.

The Cessna Model 500 aircraft is equipped with either two JT15D-1, JT15D-1A, or JT15D-1B engines, and is certified to operate up to FL410 and $M_{MO}=0.70$.

The Cessna Model 501 aircraft is equipped with either two:

JT15D-1, JT15D-1A, or JT15D-1B engines, and is certified to operate up to FL410 and $M_{MO}=0.70$.

OR

Williams FJ44-2A engines (STC number ST09559AC) and is certified to operate up to FL430 and $M_{MO}=0.70$.

The Cessna Model 550 and 551 aircraft are equipped with two JT15D-4 engines, and are certified to operate up to FL430 and $M_{MO}=0.70$.

Any future engine changes/modification, including hush kits, may affect RVSM performance, and hence, these instructions. Contact Garrett Aviation Services if such engine changes/modifications are, or shall be, conducted.

The Cessna Model 500 and 501 equipped with "Longwing" and "Eagle" STC modifications have been shown to have no affect on the RVSM qualification or performance of these airplanes, and may be incorporated without changing the RVSM qualification of the airplane.

The Cessna Model 500, 501, 550, and 551 aircraft can have a Total Air Temperature (TAT) probe (P/N 102AU1AG) located at station 81.0 below the right hand nose baggage door as a part of the Electrosonics STC ST01392CH-D or SA01558CH-D. Relocation of this probe (if installed) may invalidate the defined SSEC for this aircraft and the associated RVSM approval/compliance for this aircraft. Removal of this probe and operation of this aircraft with this probe removed will not affect the RVSM approval/compliance for this aircraft.

2.3 Aircraft System Description

Static pressure information is provided to the air data display unit (ADDU) through cross-coupled static sources located on the left and right sides of the fuselage. The ADDUs, through a static source error correction, incorporated in the Configuration Module, provide corrected altitude information to the altimeters for display. The autopilot and altitude alerter receives altitude deviation data from the Pilot's or the Copilot's air data display unit. Each altimeter provides altitude data to their respective transponders for altitude reporting. The aircraft system components approved for RVSM operations on the Cessna Model 500, 501, 550 or 551 aircraft are presented in Table 2.1.

The components listed in Table 2.1 must be maintained in accordance with approved maintenance practices, and the Initial and Continued Airworthiness instructions presented in this document. RVSM compliance was demonstrated with the following antennas installed on the test aircraft:

1. A flight phone antenna (typically 7.0 inches tall or less) located at FS 62.0 on the right hand side of the aircraft,
2. An L-Band antenna (typically 3.5 inches tall or less) located at FS 76.5 on the left hand side of the aircraft, and
3. An L-Band antenna (typically 3.5 inches tall or less) located at FS 58.0 on the left hand side of the aircraft.

Contact Garrett Aviation Services prior to the installation of any additional antennas forward of the static ports as installation of additional antennas may invalidate the RVSM certification for these aircraft.

**TABLE 2.1 Required Avionics and Air Data Components for RVSM Operation
Cessna Model 500, 501, 550 or 551 Aircraft**

Description	Manufacturer	Model	Part Number
Air Data Display Unit #1 (ADDU1)	IS&S	ADDU	9D-80130-16
Air Data Display Unit #2 (ADDU2)	IS&S	ADDU	9D-80130-16
Analog Interface Unit (AIU1)	IS&S	AIU	9B-81040-15 or 9B-81040-26
Analog Interface Unit (AIU2) ⁽¹⁾	IS&S	AIU	9B-81040-15 or 9B-81040-26
Configuration Module #1 & #2 ⁽²⁾ (CM1 & CM2)	IS&S	CM	9B-03508-15
Transponder #1 & #2 ⁽³⁾⁽⁴⁾	Collins or Honeywell	TDR-90 or XS-850	622-1270-001 or 7510774-901
Autopilot	Sperry/Honeywell	SPZ-500	550/551 Airplanes: 4008519-941
			500/501 Airplanes: 4008519-811 4008519-911
Altitude Alerter	Intercontinental Dynamics or Honeywell	~ or VN-212	540-23989-311 or 4020571-904
Standby Altimeter ⁽⁵⁾	As Noted	As Noted	As Noted
Total Air Temperature (TAT) Probe ⁽⁶⁾	Rosemount	~	102AU1AG

- Note:
1. A second Analog Interface Unit (AIU2) will be installed on aircraft equipped with dual flight directors.
 2. When the IS&S Configuration Module (P/N 9B-03508-15) is correctly installed, the Air Data Display Units (ADDU) will display "CES1" at start-up. If either ADDU does not display "CES1" at start-up, RVSM operations are prohibited.
 3. Any transponder that meets or exceeds the requirements of one of the following Technical Standard Orders (TSO) may be substituted for those listed. TSO-C74b or TSO-C74c (Mode C); TSO-C112 (Class 2a; Mode S); TSO-C112a (Mode S).
 4. Only one transponder is required to be operational for operations in RVSM airspace and it must be capable of reporting altitude information from either the Pilot or Copilot's ADDU.
 5. Any standby altimeter that meets or exceeds the requirements of TSO-C10b may be substituted for the unit listed.
 6. For RVSM operations, the TAT probe, (if installed), must be installed on Station 81 below the right hand nose baggage door. Relocation of this probe may invalidate the defined SSEC for this aircraft and the associated RVSM approval/compliance for this aircraft.

This document does not constitute approval for installation of the components listed in Table 2.1. This document is invalid unless these components have been installed per ElectroSonics Supplemental Type Certificate ST01392CH-D or SA01558CH-D and approved by the appropriate Certifying Authority as a separate, independent approval. Replacement of the listed equipment must be accomplished with units of identical part number. If alternate avionics equipment is to be or intended to be installed, a re-evaluation of the configuration for equivalent RVSM performance must be conducted and approved.

2.4 Requirements For RVSM Initial And Continued Airworthiness

The following inspections, tests, and/or procedures must be included in the basic maintenance plan for the Cessna Model 500, 501, 550 or 551 aircraft seeking approval for operations in RVSM airspace to ensure initial and continued airworthiness for RVSM operation. Both systems (Pilot/Copilot) must be maintained in accordance with these instructions. The information presented in this Section supplements or supersedes the basic airplane manuals only in those areas specified. Normal air data system maintenance specified in the maintenance manual must still be followed as required. For maintenance procedures pertaining to the airplane's systems and specific avionics equipment not covered in these instructions, see the manufacturer's requirements and procedures.

2.4.1 Servicing Information For Initial Airworthiness

1. The following inspections/tests are required for RVSM initial airworthiness approval:
 - a. Verify the correct avionics components are installed in accordance with Section 2.3 Table 2.1.
 - b. Implement the static port refinishing process specified in Garrett Doc. No. 48-8408-001, "Citation RVSM Port Preparation Procedure for Initial and Continued Airworthiness", Revision NC, dated January 18, 2002, which is presented in Appendix A of this document.
 - c. Conduct the air data system accuracy check presented in Section 3.1.1 using accurate ground test equipment, and verify the air data system errors are within specified RVSM tolerances.
 - d. Conduct the following inspections for the RVSM Critical Region.
 1. Conduct a visual inspection of the RVSM Critical Region and mark the RVSM Critical Region defined by defined in Section 3.1.2 and Figure 3.1. Place the RVSM modification compliance Placard on the aircraft as defined in Section 3.1.2 and Figures 3.1 and 3.2.
 2. Verify the absence of skin waviness, scratches, damage, and prior repairs in this region.
 3. Verify entire inspection area meets any criteria found in the Cessna Model 500 Series Structural Repair Manual, Chapter 51-00-03, Aerodynamic Surfaces - Description. Repair any discrepancies found using standard procedures found in the Structural Repair Manual. If any repairs are made, complete the tasks required in Section 2.4.3.
 4. Visually inspect the area around each static heater port to ensure that it complies with Figure 1 in Appendix A, including the transition from painted to unpainted surface.

5. Verify that any placards or stencils are located outside of the RVSM Critical Area defined in Figure 3.1.
- e. Map the skin of the aircraft in the RVSM Critical Region as specified in Garrett Aviation Services Doc. No. 50-8432-001, Reduced Vertical Separation Minimum Skin Waviness Inspection Procedures For The Cessna Model 500/501, 550/551, S550 And 560 Citation Aircraft, Revision C, dated 1 July 2003. Once the skin is mapped the results should be compared with the tolerances in Table 2.2. If the aircraft exceeds the allowances in Table 2.2, contact Garrett Aviation Services.
 - f. Conduct the in-flight autopilot altitude hold check described in Section 3.1.3 and verify that the airplane can maintain the specified tolerance.

Inspections 1.c, 1.d and 1.e must be conducted at ambient temperature (50° to 95°F). The aircraft does not need to be jacked or leveled to conduct these inspections and tests. No access or inspection panels are required to be opened in order to conduct these inspections and tests.

2. The following items must be accomplished by the owner/operator in order to achieve RVSM operational approval:
 - a. Revise the Minimum Equipment List (MEL) or a suitable alternative method to specify minimum equipment requirements for RVSM operation (see Section 4.1).
 - b. Verify that all flight crews are familiar with operational conditions and procedures presented in the Airplane Flight Manual Supplement (AFMS) and all other contingencies necessary for the safe operation of the Cessna Model 500, 501, 550 or 551 aircraft in RVSM airspace. Note that RVSM-specific airspace procedures (contingencies and other such protocols) may differ from region to region (i.e. Europe, North Atlantic, Pacific).

2.4.2 Servicing Information For Continued Airworthiness

2.4.2.1 Twelve (12) Month Inspection Requirements

After initial airworthiness approval has been granted, the following tasks must be conducted every 12 months in service:

7. Verify the correct avionics components are installed in accordance with Section 2.3 Table 2.1.
8. Conduct the air data system accuracy check presented in Section 3.1.1 using accurate ground test equipment, and verify the air data system errors are within specified RVSM tolerances.
9. Conduct the following inspections for the RVSM critical region:
 - a. Conduct a visual inspection of the RVSM Critical Region and verify that the RVSM Critical Region corner markings as defined in Section 3.1.2 and Figure 3.1 are discernable and in good condition. Verify that the RVSM modification compliance Placard as defined in Section 3.1.2 and Figures 3.1 and 3.2 is in place and readable.
 - b. Verify the absence of waviness, scratches, damage, and prior repairs.
 - c. Verify that the entire inspection area meets any criteria found in the Cessna Model 500 Series Structural Repair Manual, Chapter 51-00-03, Aerodynamic Surfaces - Description. Repair any discrepancies found using standard procedures found in the Structural Repair Manual. If any repairs are made, complete the tasks required in Section 2.4.3.
 - d. Verify that all placards or stencils are located outside of the RVSM Critical Area defined in Figure 3.1.

2.4.2.2 Twenty Four (24) Month Inspection Requirements

In addition to the Tasks required every 12 months in service, the following additional task must be completed every 24 months in service:

- Conduct the in-flight autopilot altitude hold check described in Section 3.1.3. Verify the airplane can maintain the specified tolerance.

2.4.3 Damage Within The RVSM Critical Region

If damage is sustained within the RVSM Critical Region (defined in Figure 3.1) that results in any defect greater than 10 % of the sheet thickness (Cessna Model 500 Series Structural Repair Manual, Chapter 51-10-01, Section 2.A.(1)) repair as specified. After the repair is completed, the following tasks must be completed:

1. Implement the static port refinishing process specified in Garrett Doc. No. 48-84080-001, "Citation RVSM Port Preparation Procedure for Initial and Continued Airworthiness", Revision NC, dated January 18, 2002, which is presented in Appendix A of this document.
2. Conduct the air data system accuracy check presented in Section 3.1.1 using accurate ground test equipment, and verify the air data system errors are within specified RVSM tolerances.
3. Conduct the following inspections for the RVSM critical region:
 - a. Conduct a visual inspection of the RVSM Critical Region and mark the RVSM Critical Region defined by defined in Section 3.1.2 and Figure 3.1. Place the RVSM modification compliance Placard on the aircraft as defined in Section 3.1.2 and Figures 3.1 and 3.2.
 - b. Verify the absence of skin waviness, scratches, damage in this region.
 - c. Verify that the entire inspection area meets any criteria found in the Cessna Model 500 Series Structural Repair Manual, Chapter 51-00-03, Aerodynamic Surfaces - Description. If any discrepancies are found, repair the discrepancy using standard procedures found in the Structural Repair Manual and repeat the Tasks outlined in this section.
 - d. Visually inspect the area around each static heater port to ensure that it complies with Figure 1 in Appendix A, including the transition from painted to unpainted surface.
 - e. Verify that any placards or stencils are located outside of the RVSM Critical Area defined in Figure 3.1.
4. Map the skin of the aircraft in the RVSM Critical Region as specified in Garrett Aviation Services Doc. No. 50-8432-001, Reduced Vertical Separation Minimum Skin Waviness Inspection Procedures For The Cessna Model 500/501, 550/551, S550 And 560 Citation Aircraft, Revision C, dated 1 July 2003. Once the skin is mapped the results should be compared with the tolerances in Table 2.2. If the aircraft exceeds the allowances in Table 2.2, contact Garrett Aviation Services.

2.4.4 Skin Contour Requirements

Garrett Aviation Services Doc. No. 50-8432-001, Rev C, dated 1 July 2003, defines the skin mapping procedures and the skin locations at which the skin contour measurements will be taken for the Cessna Model 500, 501, 550 and 551 aircraft. Table 2.2 defines the minimum and maximum allowable thickness for each horizontal skin line and the skin overlap. The data collected during the skin mapping procedure must fall within the tolerances specified in Table 2.2. There is a pair of columns that give the minimum and maximum allowable thickness if 2 flexible rules are placed on each frame and a second pair of columns that give the values if 3 flexible rules are placed on each frame. The minimum and maximum allowable changes in the thickness for adjacent locations along the rigid rule are given in Table 2.2 as well. These values are unaffected by the number of flexible rules used.

The change in thickness is defined in Equation 1.

$$\Delta\text{Thickness} = \text{Thickness}_{\text{forward}} - \text{Thickness}_{\text{aft}} \quad (1)$$

The smaller location numbers are defined as forward. An example of this calculation is shown in Equation 2.

$$\Delta\text{Thickness}_1 = \text{Thickness}_1 - \text{Thickness}_2 \quad (2)$$

Table 2.2 Skin Waviness and Skin Overlay Inspection Tolerances

Flexible Rule Graduation	Aircraft Side	Thickness (in)				Change in Thickness (in)	
		2 Flexible Rules		3 Flexible Rules		Thickness (in)	
		Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
11.0	Left	0.031	0.050	0.051	0.070	-0.007	0.010
	Right	0.032	0.050	0.052	0.070	-0.007	0.010
10.0	Left	0.011	0.052	0.031	0.072	-0.016	0.015
	Right	0.005	0.054	0.025	0.074	-0.018	0.016
9.0	Left	0.024	0.065	0.044	0.085	-0.017	0.018
	Right	0.005	0.052	0.025	0.072	-0.017	0.013
8.0	Left	0.017	0.071	0.037	0.091	-0.018	0.024
	Right	0.005	0.045	0.025	0.065	-0.018	0.017
7.0	Left	0.012	0.063	0.032	0.083	-0.024	0.022
	Right	0.005	0.058	0.025	0.078	-0.021	0.024
6.0	Left	0.005	0.060	0.025	0.080	-0.020	0.016
	Right	0.005	0.090	0.025	0.110	-0.029	0.020
5.0	Left	0.000	0.070	0.020	0.090	-0.035	0.026
	Right	0.010	0.085	0.030	0.105	-0.030	0.028
4.0	Left	0.016	0.057	0.036	0.077	-0.014	0.013
	Right	0.032	0.062	0.052	0.082	-0.014	0.022
3.0	Left	0.024	0.049	0.044	0.069	-0.012	0.015
	Right	0.026	0.053	0.046	0.073	-0.014	0.012
Skin Overlay (See Note 1)	Left	0.033	0.051	0.033	0.051	-0.012	0.008
	Right	0.031	0.057	0.031	0.057	-0.012	0.009
2.0	Left	0.023	0.048	0.043	0.068	-0.009	0.011
	Right	0.030	0.055	0.050	0.075	-0.013	0.016
1.0	Left	0.023	0.058	0.043	0.078	-0.014	0.022
	Right	0.024	0.057	0.044	0.077	-0.013	0.011

Note 1: The Skin Overlay measurement does not utilize flexible rules so its tolerances are unaffected by the number of flexible rules specified in Table 2.2. Skin Overlay thickness measurements less than the indicated minimum specified in Table 2.2 should be acceptable as long as the corresponding changes in thickness tolerances are still maintained.

3.0 Maintenance Instructions

3.1 Maintenance Schedule and Required Inspections/Tests

The Cessna Model 500, 501, 550 or 551 aircraft seeking approval for operations in the RVSM airspace must be maintained in accordance with the instructions provided in this Section to ensure initial and continued compliance to RVSM systems and performance requirements. These inspections/tests include an air data system accuracy check, visual inspection of the static ports and surrounding region and an in-flight autopilot (altitude hold) performance test. The maintenance intervals and required tasks are summarized in Sections 2.4.1, 2.4.2 and Section 4. All air data system maintenance requirements specified in the approved maintenance manual must also be followed.

3.1.1 Air Data System Maintenance Procedures

The ADDU's and altimeters must be maintained in accordance with the manufacturer's maintenance manual, airplane maintenance manual and appropriate regulations. However, these components must also meet the accuracy tolerances shown in Table 3.1, when wired together as a system.

Test Procedure

Equipment Required:

Calibrated Digital Air Data Test Equipment with a combined accuracy/repeatability specification of less than ± 20 ft for the test altitude range shown in Table 3.1.

This test must be performed on the aircraft using a calibrated digital air data test equipment, and is to be performed for both Pilot's and Copilot's air data systems.

1. Perform a pitot-static system leak check as described in the Maintenance Manual. For the static leak check, set the air data test unit at 30,000 feet and an indicated airspeed of 200 knots. Leak rate is not to exceed 300 feet/min.
2. Verify that the altitude indicator baro is set to 29.92 in Hg (1013.25 mb).
3. Apply the reference altitude and Mach (or airspeed) for the test condition.
4. Record the altitude displayed by the Pilot's and Copilot's altimeters.
5. Verify that the indicated altitudes are within allowable tolerances.
6. Repeat steps 3 through 5 for all test conditions listed in Table 3.1.
7. File the results with the aircraft maintenance records.

**TABLE 3.1 ADDU and Altimeter Functional Test Specification for
Cessna Model 500, 501, 550 or 551 Aircraft**

Leak Rate ⁽¹⁾ :								
Condition Number	Test Set Mach Number	Test Set Airspeed (kt)	Test Set Altitude (ft)	Pilot Altitude (ft)	Copilot Altitude (ft)	Nominal Altitude (ft)	Min Allowable Altitude	Max Allowable Altitude
1	0.400	149	29,000			28,906	28,854	28,958
2	0.500	188	29,000			28,847	28,795	28,899
3	0.600	228	29,000			28,763	28,711	28,815
4	0.700	268	29,000			28,714	28,662	28,766
5	0.400	130	35,000			34,911	34,859	34,962
6	0.500	164	35,000			34,855	34,803	34,907
7	0.600	199	35,000			34,775	34,723	34,827
8	0.700	235	35,000			34,728	34,676	34,780
9	0.400	119	40,000			39,912	39,860	39,964
10	0.500	146	40,000			39,857	39,805	39,909
11	0.600	177	40,000			39,777	39,725	39,829
12	0.700	209	40,000			39,731	39,679	39,783
Air Data Test Set Information								
Manufacturer:				Model:				
Serial Number:				Date of Calibration:				
Accuracy Specification:								

Note 1: For leak test, set the air data test unit at 30,000 feet and an indicated airspeed of 200 knots. Leak rate is not to exceed 300 ft/min.

3.1.2 Visual Inspection Of The Region Surrounding The Static Ports (RVSM Critical Region)

Inspection Procedure

Equipment Required: None.

Small markings must be applied to the corners of the RVSM Critical Region to allow for easy identification. These markings may be ANY shape or color; with the only requirement that they are visible to an individual conducting an inspection.

Figure 3.1 defines the RVSM Critical Region which extends from the skin abutment on Frame 117 to a line 16 inches forward of the skin abutment, and from a line 10 inches above the skin overlay to a line 3 inches below the skin overlay.

A placard, as shown in Figure 3.2, with the following wording must be installed on the aircraft as shown in Figure 3.1.

Modifications To The Exterior Of The
Aircraft May Affect RVSM Certification.
Refer To Garrett Aviation Services
Doc. No. 50-8008-004 For Requirements

Prior to all flights in RVSM airspace, the operator (flight crew) must visually inspect the RVSM Critical Region for obvious damage or deformation, such as paint chips, creases, dents or bulges in the skin or non-flush or missing fasteners due to foreign object damage, service vehicles, etc. The static port orifices must also be inspected for corrosion, elongation, deformation, and/or obstruction and the operator (flight crew) must ensure that no foreign matter is found within the port orifice. If damage or surface irregularities are found, repair the damage in accordance with the maintenance manual and/or structural repair manual. See Section 2.4.3.

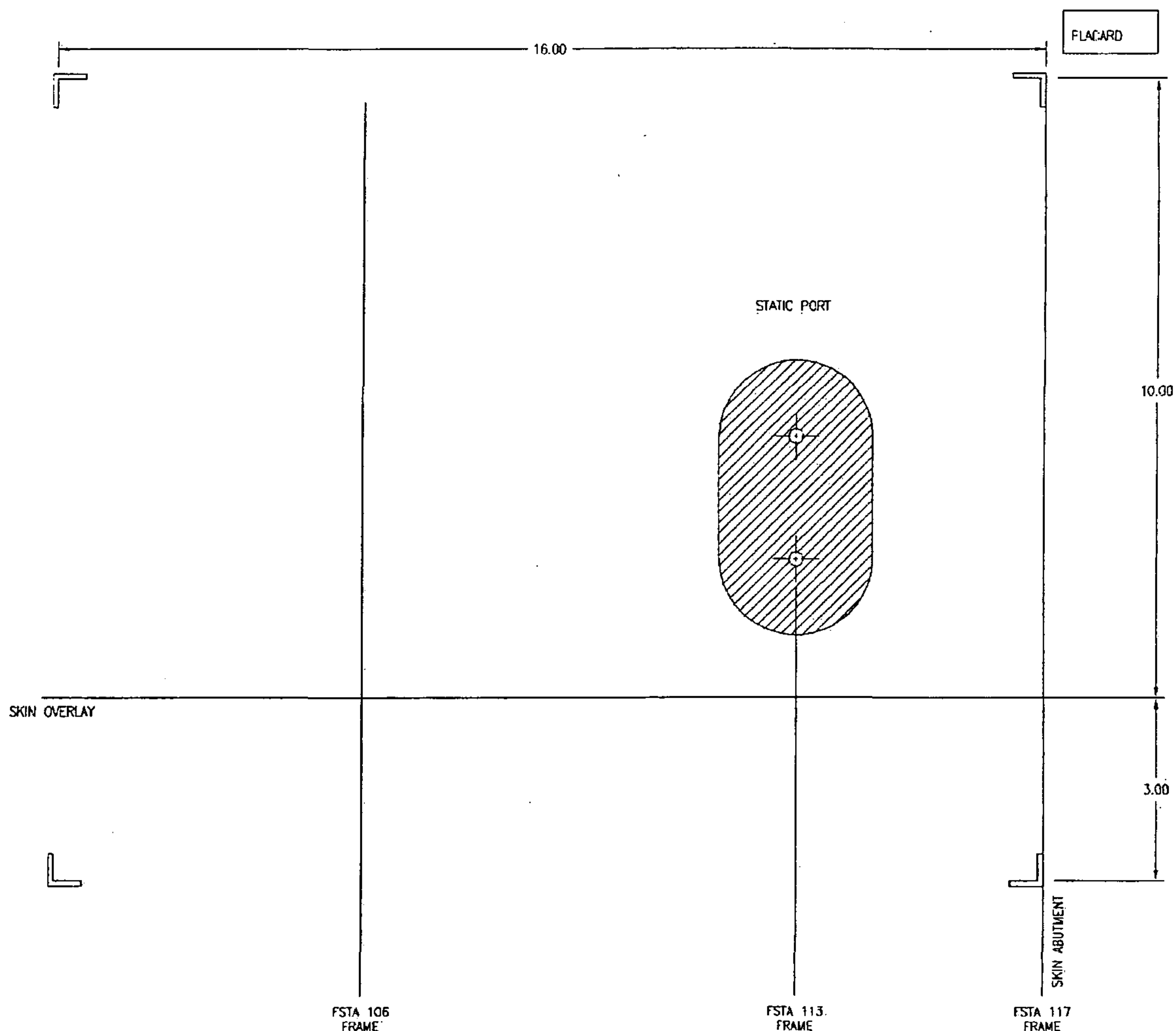


FIGURE 3.1 RVSM Critical Region Definition, Left Side Shown

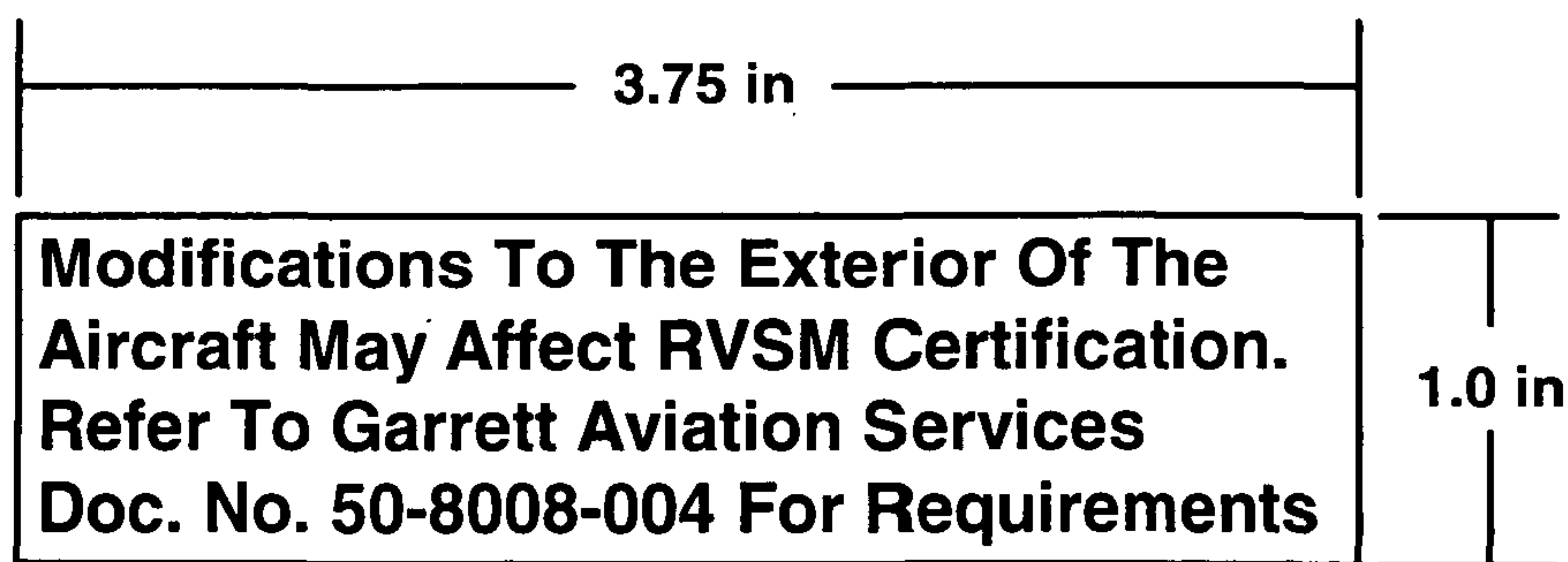


FIGURE 3.2 RVSM Critical Region Placard

3.1.3 Autopilot (Altitude Hold) Performance Test

RVSM operation requires that the autopilot system accurately maintains selected altitude during non-turbulent, non-gusty cruise flight. Perform required autopilot checks and/or maintenance in accordance with the component and airplane maintenance manuals. Also perform the following in-flight altitude hold performance test every 24 months.

Test Procedure

Equipment Required: None.

During normal RVSM cruise flight (at an altitude between FL290 and FL410, Baro settings of 29.92 in Hg or 1013 mb and non-turbulent, non-gusty conditions) and with the autopilot/altitude hold engaged, record the data from the primary displays (using Table 3.2) every 5 minutes for a flight segment at least 30 minutes length. The maximum altitude deviation shown on the display should not exceed +/-65 ft.

**TABLE 3.2 RVSM Autopilot Performance Check Table,
Cessna Model 500, 501, 550 or 551 Cruise Conditions**

Airplane:				Date:		
Enroute To:				Pilot:		
Time (Minutes)	Pilot's Altimeter	Copilot's Altimeter	Pilot's Mach	Copilot's Mach	Pilot's KCAS	Copilot's KCAS
0:00						
0:05						
0:10						
0:15						
0:20						
0:25						
0:30						
0:35						
0:40						
0:45						
0:50						
0:55						
1:00						

3.2 Troubleshooting Information

The following information provides instructions for corrective action upon failure of the inspections/tests presented in Section 3.1.

3.2.1 Air Data System

If the air data system is found to exceed the requirements of Table 3.1, service the Pitot-static system in accordance with the maintenance manual. Check and drain the Pitot-static lines, conduct a leak check, and repeat the RVSM air data ground test in accordance with the procedures provided in Section 3.1.1. If the requirements of Table 3.1 are again exceeded, service the ADDU's and/or altimeters per the manufacturer's service requirements. The serviced units must be re-tested upon re-installation in the airplane per the requirements of Section 3.1.1.

3.2.2 RVSM Critical Region Inspection And Static Port Integrity

If a visual inspection of the RVSM Critical Region, defined in Figure 3.1, indicates that damage, deformation, repairs, etc. exists that may impact air data system accuracy, then the operator should conduct inspection/repairs per the maintenance and/or structural repair Manuals. All repairs within the RVSM Critical Region must remain internal. If internal repairs are not possible, the inspection and tests presented in Section 2.4.3 must be conducted.

3.2.3 Autopilot (Altitude Hold) Check

If the autopilot cannot maintain altitude to within ± 65 feet from the selected cruise altitude, repeat the autopilot check per Section 3.1.3 ensuring the Mach number remains constant and the air remains stable during the entire check. If the check still fails, conduct autopilot component and/or servicing checks as specified in the component and airplane maintenance manuals. Repeat the test presented in Section 3.1.3, as required, to ensure that the altitude hold accuracy is maintained.

3.3 Installation/Removal Of RVSM-Relevant Components

Installation and/or removal of all avionics equipment should be conducted in accordance with current maintenance practices. The air data system accuracy check outlined in Section 3.1.1 shall be conducted upon removal and/or installation of an air data unit.

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4.0 Summary Of Operational Requirements And Conditions

To ensure compliance with RVSM altimetry system accuracy and integrity requirements during RVSM operations, the Citation Cessna 500, 501, 550 or 551 aircraft must incorporate the Minimum Equipment List (MEL) changes, required operational conditions, and special flight crew training.

4.1 Minimum Equipment List (MEL) Revision

The Cessna Model 500, 501, 550 or 551 aircraft qualified for operations in the RVSM airspace must have their MEL revised to require that the following equipment must be operational for dispatch into RVSM airspace:

- Two (2) air data display units,
- One (1) or Two (2) analog interface unit(s), (as required by equipment STC),
- Two (2) configuration modules,
- One (1) automatic flight control system with altitude hold,
- One (1) altitude alerter and
- One (1) SSR altitude reporting transponder (already required for non-RVSM dispatch).

In lieu of an MEL change, the AFM supplement may serve as the vehicle for identifying the minimum equipment requirements for RVSM operation. This should be coordinated through the FSDO when applying for Operational Approval.

4.2 Operational Conditions

4.2.1 Pre-Flight Inspection Of The RVSM Critical Region

A pre-flight inspection of the RVSM Critical Region is required prior to operation in RVSM airspace.

4.2.2 ADDU1 Or ADDU2 Failure

In case of ADDU1 or ADDU2 failure, a series of steps must be taken by the Pilot to ensure the airplane can appropriately maintain altitude for the remainder of the RVSM operation. These steps are summarized in the AFM supplement.

4.2.3 Detection Of Dual Altitude Display Fault

To ensure a dual display fault in the air data system remains detectable, the Pilot shall note the difference between the primary altimeters, and the difference between each primary altimeter and the standby altimeter, prior to entry into RVSM airspace. Pilot should also note airspeed and Mach number.

In addition to the hourly (required) cross-cockpit checks during RVSM operations, an additional check will be made between the primary altimeters and the standby altimeter. The differences between the altitude displayed on each of the primary altimeters and the standby altimeter should remain constant at a constant Mach number. Some small variation can be expected, but both primary altitude indicator displays should not diverge significantly throughout RVSM cruise flight, relative to the standby altimeter display at a constant Mach number. In all cases, the two primary altimeters must agree to within +/-200 feet, otherwise, ATC must be notified and contingency procedures executed. Table 4.1 may be used to record these altitude comparison data.

TABLE 4.1 Altimeter Display Tracking Form

Date:				Pilot:		
Departing From:				Copilot:		
Destination:						
Time (Interval)	Time (GMT)	Pilot Mach	Pilot Alt	Copilot Mach	Copilot Alt	Standby Alt
Prior to ATC Clearance						
+1 hour						
+2 hours						
+3 hours						
+4 hours						
+5 hours						
+6 hours						

4.3 Flight Crew Training

All flight crews must have knowledge and understanding of standard RVSM operating practices and Air Traffic Control contingencies. In addition, all flight crews must have knowledge and understanding of the information contained in this document. The operations manual should be revised to include these RVSM-specific limitations and/or procedures, if necessary.

The Flight Crew should be familiar with the specific operational guidelines and contingency procedures that may be unique from one region of RVSM airspace to another (i.e. North Atlantic, European, Pacific, West Atlantic Route System, etc.).

NOTES

APPENDIX A
CITATION RVSM PORT PREPARATION PROCEDURE
FOR INITIAL AND CONTINUED AIRWORTHINESS

GARRETT AVIATION



SPRINGFIELD, ILLINOIS

Document Number: 48-8408-001

Document Title: Citation RVSM Port Preparation Procedure for Initial
and Continued Airworthiness

Written By: Roger Huneycutt, KSR

Checked By: Gary Shroyer, Garrett SPI

Approval: Terry Marshall, KSR

Approval: 17044

Approval: Gary Shroyer

Approval: Terry Marshall

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Date: January 18, 2002		Document No.: 48-8408-001
Prepared By: R.H.		Revision: -
Approved By: GES	Section: Static Port Skin Preparation	Page: 2 of 3

1.0 INTRODUCTION

This procedure establishes the static port refinishing process for the Cessna Model 500/501/550/551 RVSM group.

2.0 REFERENCES

MATERIALS: The following materials or equivalent are acceptable:

Purpose	Material	Company	Address
Strip Paint	Oakite 157	Oakite Products, Inc.	50 Valley Rd. Berkley Heights, NJ 07922
Strip Paint	Strypeeze	Savegran Company	259 Lenox P.O. Box 130 Norwood, MA 02062
Strip Paint	Turco T-6776 LO	ELF Atochem Turco Division	Commercially available
Polish Aluminum to Mirror Finish	Tripoli T-41 Polishing Compound	Commercially available	Commercially available
Protect Paint During Mask & Strip Procedure	UUP268 Amd. 1, Grade B	Kraft Paper	Commercially available
Barrier Material, Water & Grease Proof	MIL-B-121C Grade A, Type 2 Class 1	Commercially available	Commercially available
Tape Masking	P-703	Johnson & Johnson Permacel Division	U.S. Hwy 1 P.O. Box 671 New Brunswick, NJ 08903
Protect Area during stripping	Tape, Polyethylene Coated Paper # 6223	Borden, Inc.	Borden Chemical Division 1700 Winnetka Ave. Northfield, IL 60093
Protect Area during stripping	Polyethylene Plastic 0.004 inch thick	Commercially available	Commercially available
Feather Paint Edge Smooth	ScotchBrite Roloc Type A Fine	3M Company	3M St. Paul MN 55144
Cleaning	Wiping Cloth (White, Oil Free)	Commercially available	Commercially available
Cleaning	Isopropyl Alcohol TT-I-735	Commercially available	Commercially available

3.0 PROCEDURE

Caution: Observe Safety Precautions Listed in Cessna 500 Series Maintenance Manual, Section 20-31-00

1. Protect static ports from any residue generated by the paint removal and aluminum polishing process.
2. Remove any placards within the shaded area defined by Figure 1 and within a zone that extends from the top to the bottom and ten (10) inches forward from the center of this area.
3. Thoroughly clean airplane surface to remove all grease and other dirt, which might keep the stripping agent from attacking paint.
4. Mask the area to be stripped to correspond to the shaded area defined by Figure 1.
5. Strip paint from aircraft within masked area (2.50 X 4.00 +/- 0.0125 in. , Ref. Figure 1). Paint and existing primer should be removed down to bare aluminum. Clean area and allow drying.

NOTE: Ensure mechanical methods used do not scratch or in other ways damage the surface area being stripped

6. Remove masking material.
7. "Feather" paint edge around static ports to produce a smooth transition to the area of bare aluminum surrounding the Static Ports using Fine ScotchBrite as listed.
8. Polish the bare aluminum area around the static ports using Tripoli T-41 Polishing Compound.
9. Replace any removed placards in a location that is either above or aft of the static port critical area.

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Date: January 18, 2002		Document No.: 48-8408-001
Prepared By: R.H.		Revision: -
Approved By: GES	Section: Static Port Skin Preparation	Page: 3 of 3

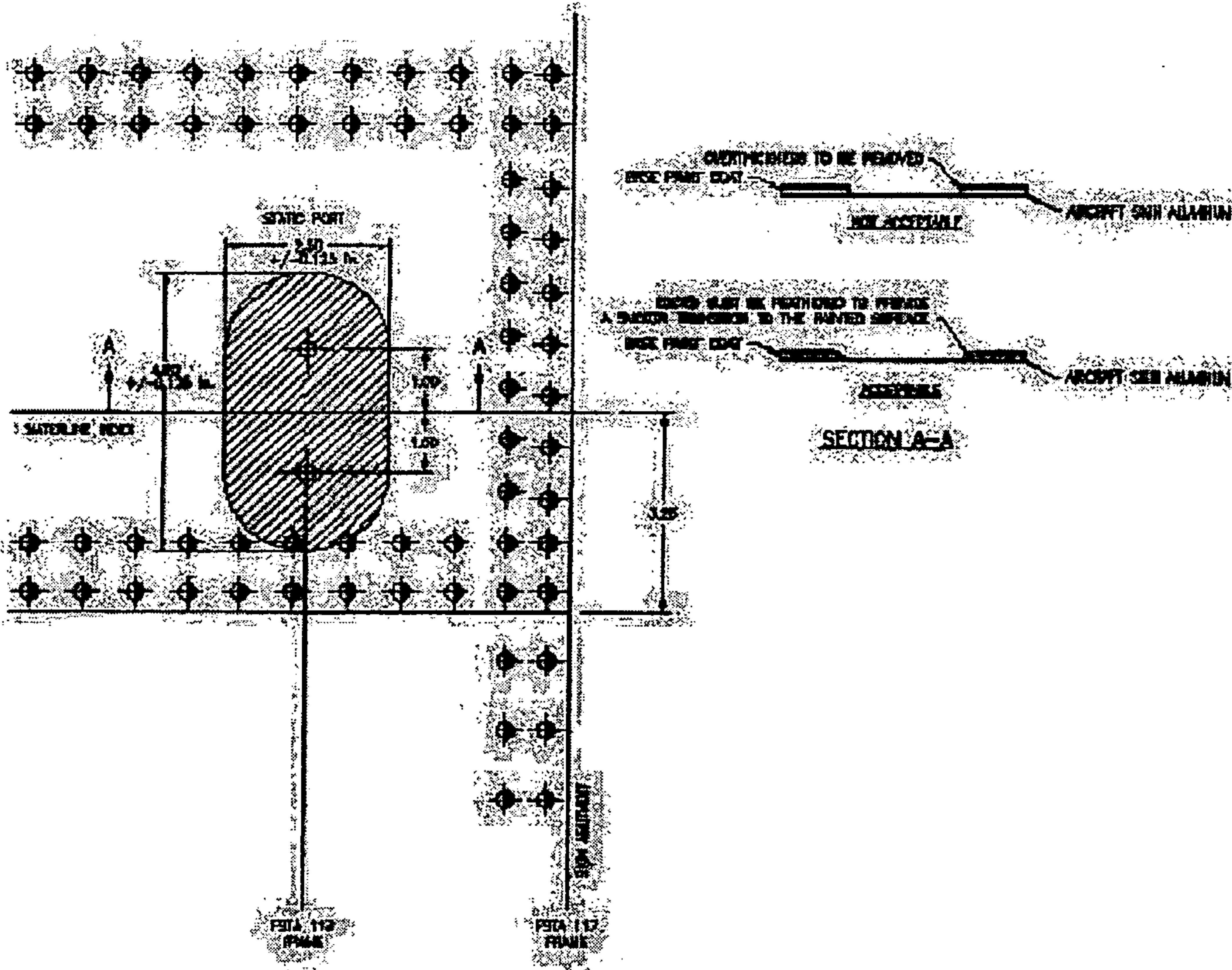
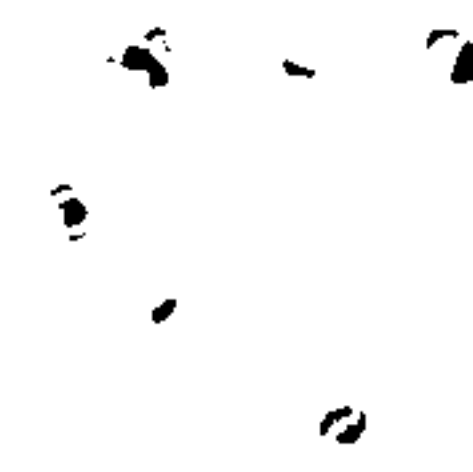
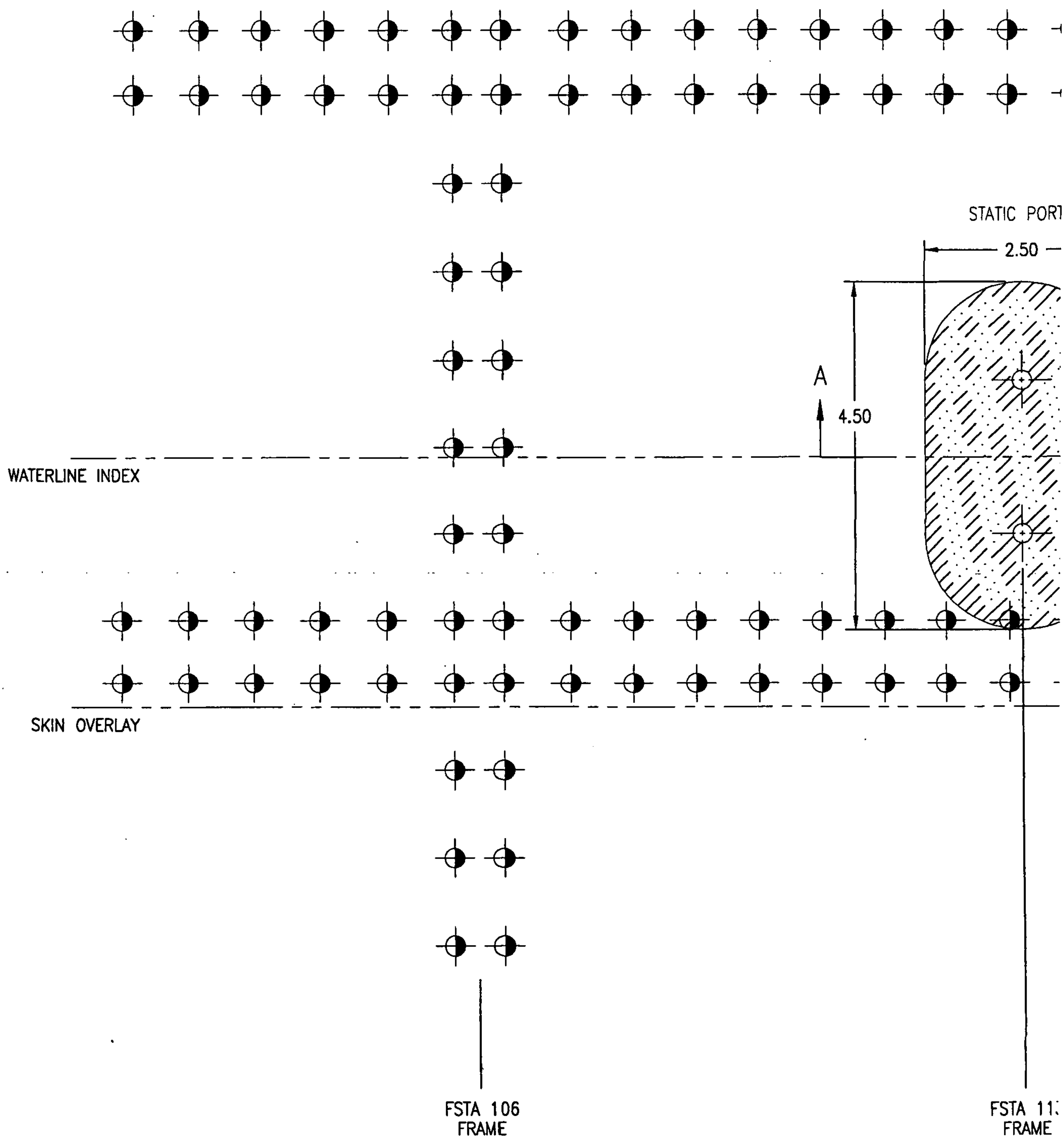


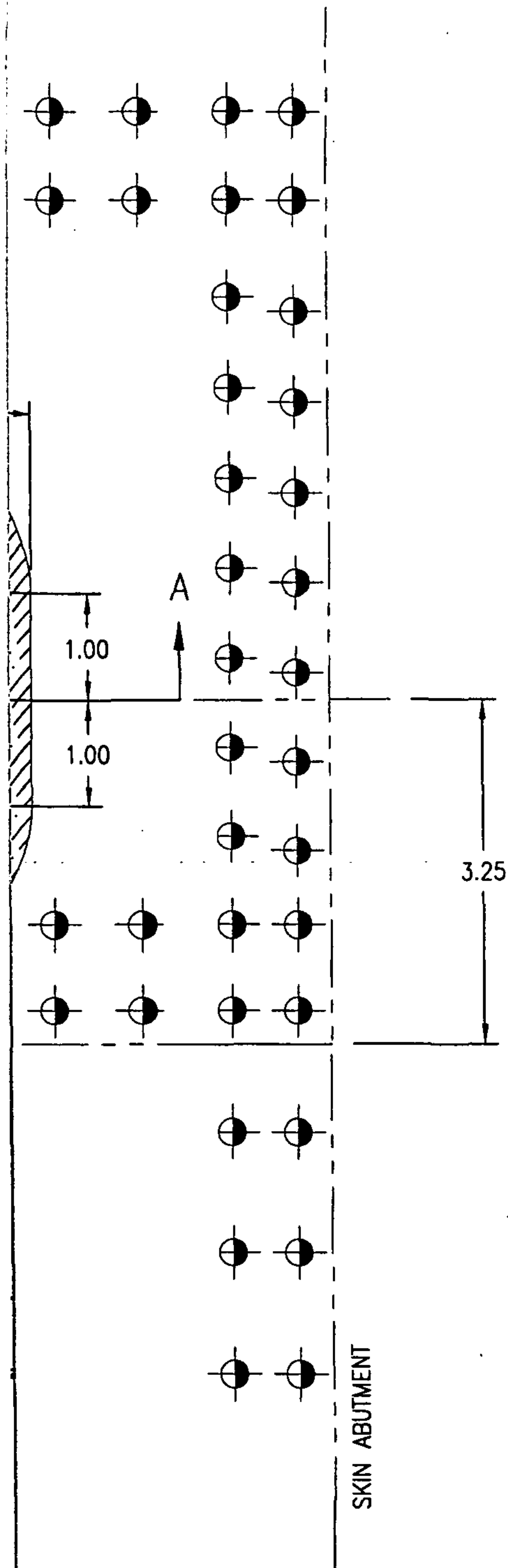
Figure 1:
Static Port Preparation Area



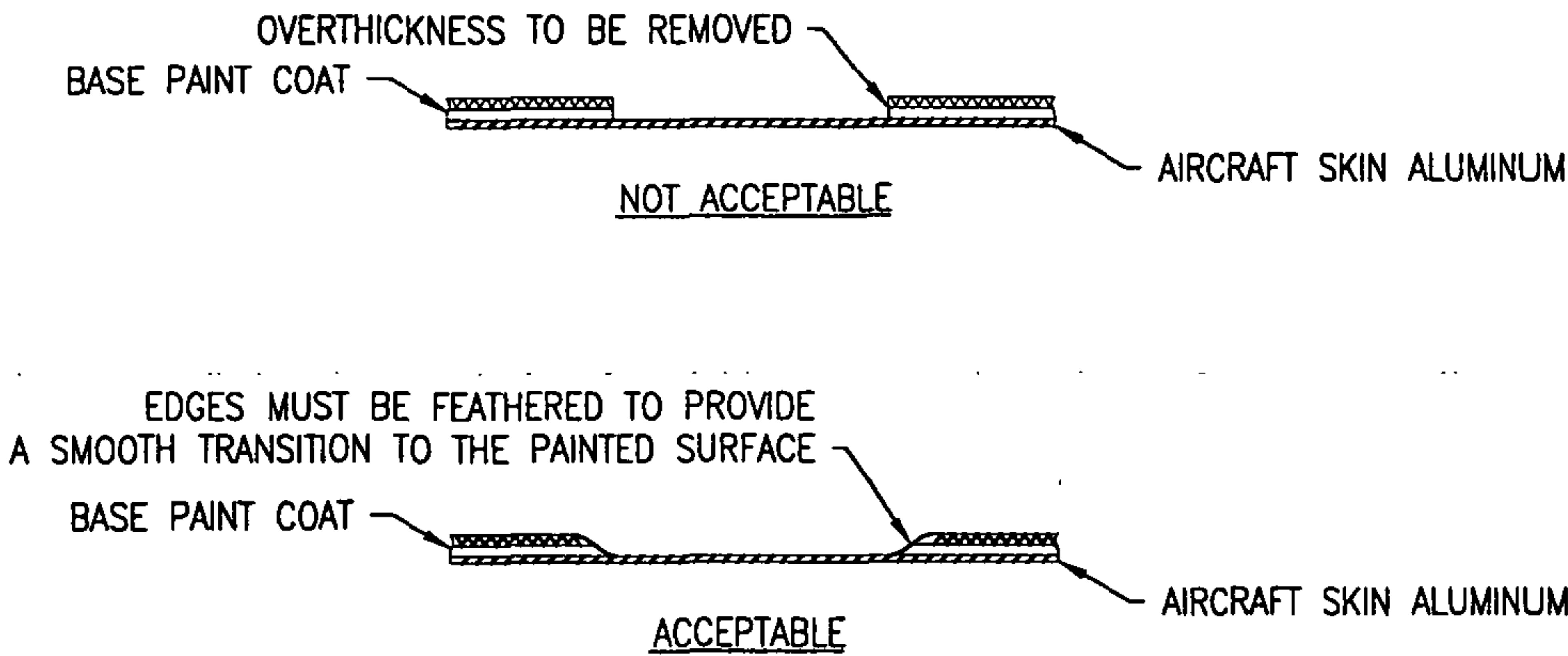




REVISIONS			
REV	DESCRIPTION	DATE	APRVD



FSTA 117
FRAME



SECTION A-A

A/C MODEL		CESSNA 500			
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES DECIMALS .XX ± .05 ANGULAR ± 0.5° .XXX ± .010 DO NOT SCALE DRAWING		TITLE CESSNA 500 SERIES RVSM MODIFICATION			
		Garrett Aviation Services 1200 North Airport Drive Capital Airport Springfield, Illinois 62707-8417			
DRAWN BY J. SHROYER	CAGE CODE 1HZR5	DATE 11/09/01		DWG NO. 50-2454-002	REV —
CHKD BY	SIZE B	ACAD FILE 502454002-01		S/N —	SHEET 1 OF 2
APRVD BY	SCALE 2:1				

GARRETT
AVIATION



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US Department
of Transportation

Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification

SPI 61-19 F02

INSTRUCTIONS: Print or type all entries. See FAR 43.9 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make Cessna Aircraft Co.	Model 501
	Serial No. 501-0091	Nationality and Registration Mark N2158U
2. Owner	Name (As shown on registration certificate) RBK Aviation Inc.	Address (As shown on registration certificate) Red Reflet Ranch 357 Road 58 Ten Sleep, WY 82442-8854

3. For FAA Use Only

The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized by FAR PART 43, Section 43.7.

SPI FSDO **OCT 26 2004**
DISTRICT OFFICE DATE SIGNATURE OF FAA INSPECTOR

4. Unit Identification

5. Type

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	(As described in Item 1 above)				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

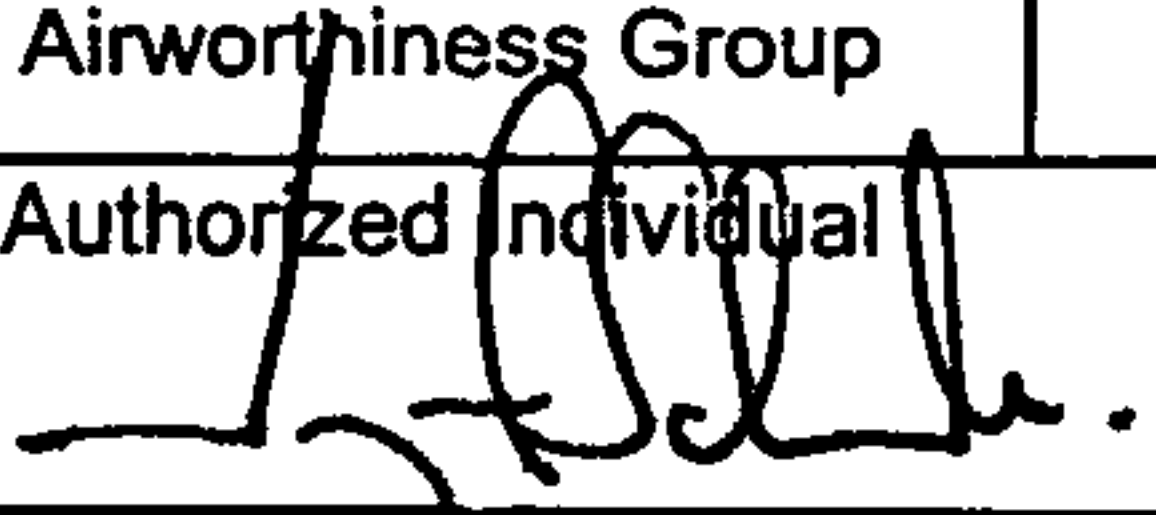
A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
ElectroSonics 4391 International Gateway Columbus, OH 43219	<input type="checkbox"/> U.S. Certified Mechanic	UO22221L Accessory Class 2, & 3 Limited Airframe Instrument Class 1, and 3, Radio Class 1, 2, & 3
	<input type="checkbox"/> Foreign Certified Mechanic	
	<input checked="" type="checkbox"/> Certificated Repair Station	
	<input type="checkbox"/> Manufacturer	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date October 30, 2004	Signature of Authorized Individual  Inspector
---------------------------------	--

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY	FAA Flt. Standards Inspector	Manufacturer	Inspection Authorization	Other (Specify)
	FAA Designee	<input checked="" type="checkbox"/> Repair Station	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection October 30, 2004		Certificate or Designation No. UO22221L	Signature of Authorized Individual  Inspector	

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets, identify with aircraft nationality and registration mark and date work accomplished.)

Cessna C501 S/N 501-0091 N2158U

Installed a single Honeywell KGP-560 GA-EGPWS "TAWS B" system into this aircraft.

The Honeywell KGP-560 GA-EGPWS (TSO-C151b, Class B) was installed in accordance with the Bendix/King "KGP 560 System Installation Manual" 006-10611-0003, FAA Advisory Circular AC23-18 and ElectroSonics electrical drawing no. 1005080, rev (A) approved by DERY-405201-CE and documented on FAA form 8110-3 dated 10/21/04. Mechanical mounting of equipment was performed in accordance with ElectroSonics dwg no. ES501-300091-12, rev (A) for the Computer rack at fuselage station 59.0, a Baker Summing Amplifier was installed in accordance with ElectroSonics dwg no. ES501-300091-11, rev (A) at Fuselage station 141.0 and Installed Annunciator assemblies on the Left side Instrument panel in accordance with ElectroSonics dwg no. ES501-300091-13, rev (A), all of which were approved by DERT-410167-CE and documented on FAA form 8110-3 dated 10/21/04 and AC43.13-1B, Chapter 11, Section 10 Service Loop Harness (Plastic Tie Strips), paragraph 11-135 through 11-139, Section 11 Clamping, paragraph 11-146 through 11-147, Section 12 Wire Insulation and Lacing String Tie, paragraph 11-155 through 11-159, Section 16 Wire Marking paragraph 11-205 through 11-220 and Section 19 Unused Connectors and Unused Wires paragraph 11-260.

The newly installed Honeywell KGP-560 GA-EGPWS, displays on the previously installed Avidyne "FlightMax 750", Multifunction Display.

Ground tests were performed in accordance with Honeywell KGP-560 GA-EGPWS 066-10611-0003, rev 3, dated June 16, 2003, proving satisfactory and show no electrical or radio interference between existing and installed systems.

A similar installation of this same equipment has been previously installed under STC SA00886WI-D on a Pilatus PC-12

An Electrical Load Analysis was performed in accordance with AC 43.13-2A Chapter 2, Paragraph 27 and found to be within limits.

Revised the Aircraft Weight and Balance/Supplemental Equipment List.

FAA approved Airplane Flight Manual Supplement, ElectroSonics document 1005234 Rev (A) was inserted into the Airplane Flight Manual.

The Honeywell KGP-560 General Aviation Enhanced Ground Proximity Warning System (GA-EGPWS) is classified as "TAWS TSO-C151a Class B Equipment". Updates of the "Terrain Data Base" are the responsibility of the owner/operator and must remain current at all times.

Work performed under ElectroSonics work order 183692.

The Maintenance Manual Supplement, Instructions for Continued Airworthiness, as issued to Cessna Aircraft 501, s/n 50150-091, ElectroSonics Document 1005235, Rev. (B), attached to this 337 were prepared in accordance with 14 CFR Part 23 Section 23.1529. The Instructions for Continued Airworthiness are part of the aircraft's inspection and/or maintenance program for this aircraft operated under this chapter. An entry for this alteration and the Instructions for Continued Airworthiness have been made in the aircraft's maintenance records as required by 14 CFR 43, Section 43.9 as referenced on this FAA form 337.

End

☒ Additional Sheets Are Attached

ElectroSonics
Port Columbus International Airport
4391 International Gateway
Columbus, Ohio 43219
CRS UO22221L

Instructions for Continued Airworthiness

Make Cessna Aircraft Company
Model(s) Citation 501

FAA ACCEPTED

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS SUPPLEMENT

**FOR A
Honeywell KGP-560 Class B (GA-EGPWS)
Installed in**

**CESSNA AIRCRAFT COMPANY
C501**

AIRCRAFT SERIAL NUMBER: 091

AIRCRAFT REGISTRATION: N2158U

This document must be attached to the Airplane Instructions for Continued Airworthiness (Maintenance Manuals). The information contained herein supplements the basic Instructions for Continued Airworthiness only in those areas listed, when the aircraft is modified in accordance with FAA form 337 dated 10-30-2004 for the installation of an Honeywell KGP-560 Class B (GA-EGPWS) system. For limitations and procedures not contained in this document, consult the basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

The inspections specified in this document are FAA accepted. If applicable, the identified airworthiness limitations in Chapter 10 are FAA approved. This section specifies inspections and other maintenance required under sections 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

ElectroSonics
Port Columbus International Airport
4391 International Gateway
Columbus, Ohio 43219
CRS UO22221L

Instructions for Continued Airworthiness

Make Cessna Aircraft Company
Model(s) Citation 501

LOG OF REVISIONS

REVISION NO.	REVISED PAGES	DESCRIPTION OF REVISION	FAA ACCEPTED
A	ALL	Initial Release	10-21-04
B	3, 6	Removed L-3 Stormscope from page 3, added statement that Terrain Database updates are the responsibility of the owner operator.	10-26-04

ElectroSonics
Port Columbus International Airport
4391 International Gateway
Columbus, Ohio 43219
CRS UO22221L

Instructions for Continued Airworthiness

Make Cessna Aircraft Company
Model(s) Citation 501

CHAPTER 1 INTRODUCTION

1.1 Scope/Purpose/Applicability

This document provides information about the Honeywell KGP-560 Class B (GA-EGPWS) system. This includes Description and Operation, Troubleshooting, Removal and Installation, Adjustment and Test, and other related information. It is intended that the information in this document be combined with detailed aircraft installation documentation for operator specific maintenance procedures. Consult the aircraft equipment list to determine the equipment location and configuration.

The Instructions for Continued Airworthiness (ICA) described herein are applicable only to those aircraft identified on the cover page. These ICA describe the recommended and required maintenance procedures for an Honeywell KGP-560 Class B (GA-EGPWS) system.

1.2 References

- KGP-560 Computer Installation - **ES501-300091-12**
- Annunciators Install - **ES501-300091-13**
- KGP-560 Electrical Interconnect - **1005080**
- Summing Amp Installation - **ES501-300091-11**
- Honeywell/Bendix/King KGP 560 Installation manual 006-10611-0003 Revision 3 June 16, 2003 or later approved Revision.

1.3 Definitions/Abbreviations/Acronyms/Symbolization

ICA	Instructions for Continued Airworthiness.
GA-EGPWS	General Aviation-Enhanced Ground Proximity Warning System

ElectroSonics
Port Columbus International Airport
4391 International Gateway
Columbus, Ohio 43219
CRS UO22221L

Instructions for Continued Airworthiness

Make Cessna Aircraft Company
Model(s) Citation 501

CHAPTER 2 INSPECTION REQUIREMENTS AND OVERHAUL SCHEDULE

2.1 Inspection Requirements

Inspection Requirements are contained in the FAA Approved Airworthiness Limitations, Chapter 10 of this supplement. No further inspections are required.

MODEL	NOMENCLATURE	LOCATION	REQUIRED MAINT.
KGP-560	GA-EGPWS	Nose Avionics Bay	During each annual or 100 hour inspection
M1091	Summing Amp	Cockpit CoPilots Armrest	ON CONDITION

2.2 Component Overhaul Schedule

None of the components installed for this modification require scheduled overhaul.

CHAPTER 3 DIMENSIONS AND ACCESS

3.1 Aircraft Features

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

3.2 Location of Access Panels

Gaining access to the following will provide access to the;

MODEL	NOMENCLATURE	LOCATION	FLIGHT STATION
KGP-560	GA-EGPWS	Nose Avionics Bay	FS 59.0
M1091	Summing Amp	Cockpit CoPilots Armrest	FS 141.0

CHAPTER 4 LIFTING AND SHORING

4.1 Jacking Information

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

4.2 Lifting Instructions

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

4.3 Shoring Instructions

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

CHAPTER 5 LEVELING AND WEIGHING

5.1 Leveling Information

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

5.2 Weighing and Determination of Center of Gravity Instructions

The existing weight and balance procedure in the aircraft maintenance manual does not change. This type design change requires upon initial installation that the aircraft be weighed per the maintenance manual instructions or the weight and balance be calculated and a new center of gravity (C.G.) determined. Additionally, the new C.G. must fall with-in the manufacturer published limits.

CHAPTER 6 TOWING AND TAXIING

6.1 Tow Information

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

6.2 Taxiing Instructions

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

CHAPTER 7 PARKING AND MOORING

7.1 Mooring Information

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

7.2 Parking Information

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

7.3 Storage Limitations

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

7.4.2 Wires/Coax Cables

During ON-condition or regularly scheduled maintenance, inspect the wires and coax cables following the guidelines listed in AC 43.13-1B Chapter 11 as necessary.

ElectroSonics
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4391 International Gateway
Columbus, Ohio 43219
CRS UO22221L

Instructions for Continued Airworthiness

Make Cessna Aircraft Company
Model(s) Citation 501

CHAPTER 7 PARKING AND MOORING(continued)

7.4.3 Annunciators/Relays

If an annunciator bulb needs replacement, use a bulb with the same type and voltage rating as originally installed. If a relay malfunctions, replace it with an airworthy relay having the same part number. If a combination annunciator/relay unit is used, remove the unit and have it repaired by a factory-rated service center. If the aircraft is to fly with a relay or annunciator removed, secure the connector(s) as necessary and placard the aircraft accordingly. After re-installation of the unit, accomplish the appropriate Post Installation/Ground Test Checkout in the Honeywell/Bendix/King KGP 560 Installation manual.

7.4.4 GPS Antenna

N/A

7.4.5 Temperature Probe

N/A

7.4.6 Regional Terrain Database Updates

The Honeywell KGP-560 General Aviation Enhanced Ground Proximity Warning System (GA-EGPWS) is classified as "TAWS TSO-C151a Class B Equipment". Updates of the "Terrain Data Base" are the responsibility of the owner/operator and must remain current at all times. Regional Terrain databases can be ordered for card updates or another region by contacting:

Honeywell International Inc.
Aerospace Electronic Systems
One Technology Center
23500 West 105th Street
Olathe, Kansas 66061 USA
Attn: Navigation Services MS-66

Telephone: (800) 247-0230 within the United States or Canada
(913) 712-3145 outside of the United States or Canada
Fax: (913) 712-3904
e-mail: nav.database@honeywell.com

CHAPTER 8 PLACARDS AND MARKINGS

8.1 Placard and Marking Information

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

CHAPTER 9 SERVICING

9.1 Periodic Maintenance

FAR Part 23.1529 and 25.1529 Instructions for Continued Airworthiness is met per the following Instructions:

Design and manufacture of the equipment will provide for installation so as not to impair the airworthiness of the aircraft.

KGP-560 GA-EGPWS

If the unit should require maintenance, remove the unit and have it repaired by an appropriately rated Honeywell approved Instrument Service Center. If the aircraft is to fly with the KGP-560 removed, secure the connector(s) as necessary and placard the aircraft accordingly. After reinstallation of the unit, accomplish the appropriate Post Installation/Ground Test Checkout in the Honeywell/Bendix/King KGP 560 Installation manual.

During each annual or 100-hour inspection of the aircraft, perform a Level 2 Self-Test of the KGP-560 as defined in the Post Installation/Ground Test Checkout in this document.

9.2 INSTALLATION CONFIGURATION & CHECKOUT

Introduction

The procedures for programming the Configuration Module, ground testing the KGP-560 GA-EGPWS after it is installed in the aircraft and installing the Regional Terrain Database card are described in the Honeywell/Bendix/King KGP 560 Installation manual.

Configuration is explained in the first part of this section. The configuration process and the tools needed are described below.

The Post-installation Checkout, verifies the proper operation of the KGP-560 GA-EGPWS system. These procedures are used after the units have been installed and the configuration module has been programmed. Thereafter, these procedures can be used as an operational check. These tests are performed on the ground.

While many of these tests can be performed indoors, the aircraft may need to be outdoors, away from signal obstructions, so that GPS is able to receive satellites before the system can be fully tested.

9.2 INSTALLATION CONFIGURATION & CHECKOUT(continued)

Introduction

The process for installing or changing the Regional Terrain Database card is described in section 5.3 of the Honeywell/Bendix/King KGP 560 Installation manual. The appropriate Database card must be installed for the system to operate normally.

Installation Sequence

This section will describe the normal sequence for new installations of the KGP-560 GA-EGPWS system. Honeywell recommends following this sequence until achieving a comfortable level of experience with the KGP-560 system.

Installation Sequence:

1. Perform system installation design per Section 4 of the Honeywell/Bendix/King KGP 560 Installation manual.
2. Ensure KGP-560 system and aircraft installation is ready for installation per the details in Section 2 of the Honeywell/Bendix/King KGP 560 Installation manual.
3. Perform Installation Wiring Verification per instructions in Section 5.2 of the Honeywell/Bendix/King KGP 560 Installation manual.
4. Perform Terrain Database Installation & Verification per Section 5.3 of the Honeywell/Bendix/King KGP 560 Installation manual.
5. Perform Configuration Module programming per Section 5.4.4. of the Honeywell/Bendix/King KGP 560 Installation manual.
6. Perform Post Installation Ground Test/Checkout per Section 5.5. of the Honeywell/Bendix/King KGP 560 Installation manual.
7. Perform System Self-Test per Section 5.6. of the Honeywell/Bendix/King KGP 560 Installation manual.

The wiring and securing hardware shall also be visually inspected in conjunction with the manufacturer's scheduled "Phase 5" inspection (reference chapter 5 of the maintenance manual).

During this inspection a General Visual (GV) inspection for cracks, deterioration and corrosion is to be made of the Honeywell KGP-560 Class B (GA-EGPWS) system components and wiring.

ElectroSonics
Port Columbus International Airport
4391 International Gateway
Columbus, Ohio 43219
CRS UO22221L

Instructions for Continued Airworthiness

Make Cessna Aircraft Company
Model(s) Citation 501

Upon removal and reinstallation of the system component(s) each component(s) attachment points shall be visually inspected for cracks, corrosion or any unusual wear that could affect the integrity of attachment points. The security of attachment in regards to the component(s) and mating connectors should be ensured as well as cleanliness of the connectors and surrounding areas.

The wiring and securing hardware inspection shall be accomplished in accordance with AC43.13-1B chapter 11 Section 1 Inspection and Care of Electrical Systems and Section 8 Wiring Installation Inspection Requirements as applicable.

NOTE: If any indication of defects are noted, further inspections should be performed and appropriate engineering disposition obtained.

9.3 Lubrication Information

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

9.4 Equipment Required for Servicing

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

9.4 Consumable Materials

No change to basic Airplane Instructions for Continued Airworthiness (Maintenance Manuals).

CHAPTER 10 AIRWORTHINESS LIMITATIONS

10.1 Inspections

NONE



US Department
of Transportation

Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification
62-19

INSTRUCTIONS: Print or type all entries. See FAR 43.9 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make Cessna	Model 501
	Serial No. 501-0091	Nationality and Registration Mark N2158U
2. Owner	Name (As shown on registration certificate) RBK Aviation Inc.	Address (As shown on registration certificate) 1625 Fish Creek Rd PO Box 236 Wilson, Wyoming 83014-0236

3. For FAA Use Only

4. Unit Identification

5. Type

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~ (As described in Item 1 above) ~~~~~			X	
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
Garrett Aviation Services 1200 North Airport Dr. Capital Airport Springfield, IL 62707	<input type="checkbox"/> U.S. Certified Mechanic	UO2R221L Accessory Class 1, 2, & 3 Airframe Class 1, 3, & 4 Instrument Class 1, 2, 3, & 4 Power Plant Class 3 Radio Class 1, 2, & 3
	<input type="checkbox"/> Foreign Certified Mechanic	
	<input checked="" type="checkbox"/> Certificated Repair Station	
	<input type="checkbox"/> Manufacturer	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date 3-12-2004	Signature of Authorized Individual <i>Michael W. Lohman</i> Inspector
--------------------------	---

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ **APPROVED** ☐ **REJECTED**

BY	FAA Flt. Standards Inspector	Manufacturer	Inspection Authorization	Other (Specify)
	FAA Designee	<input checked="" type="checkbox"/> Repair Station	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection 3-12-2004		Certificate or Designation No. UO2R221L	Signature of Authorized Individual <i>Michael W. Lohman</i> Inspector	

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets, Identify with aircraft nationality and registration mark and date work accomplished.)

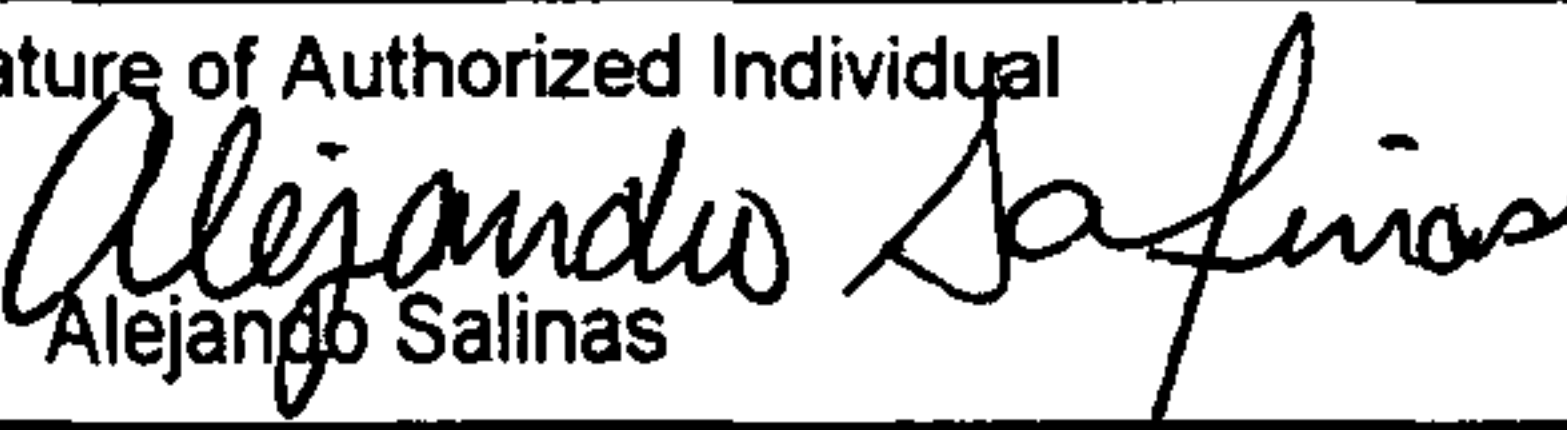
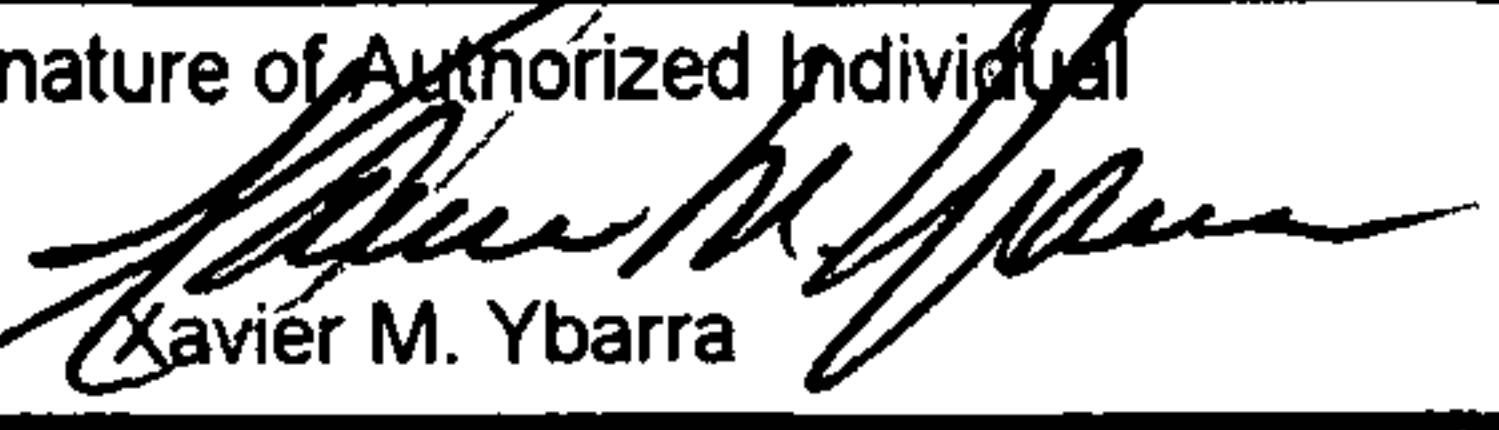
Cessna Model 501 S/N 501-0091

Performed FJ44 Eagle II – Customer Information Letter number 1002515 dated 3/1/2004 – Title:
Inlet Attach Flange Rivet Inspection.

Repaired engine inlets, Sierra Industries part number SI360-475-1 (LH) and SI360-475-2 (RH) in
accordance with AERODESIGN Aircraft Engineering, Inc. Report number 4980-5 Rev. IR approved
by DERT-710134-SW and documented on FAA Form 8110-3 dated March 12, 2004.

-----END-----

☒ Additional Sheets Are Attached

US Department of Transportation Federal Aviation Administration				MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)				Form Approved OMB No. 2120-0020	
								For FAA Use Only	
								Office Identification SAT FSDD SW17	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This form is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).									
1. Aircraft		Make Cessna				Model 501			
		Serial No. 501-0091				Nationality and Registration Mark N2158U			
2. Owner		Name (As shown on registration certificate) RBK Aviation, Inc.				Address (As shown on registration certificate) P.O. Box 236 Wilson, Wyoming 83014-0236			
3. For FAA Use Only									
4. Unit Identification								5. Type	
Unit		Make		Model		Serial No.		Repair	Alteration
AIRFRAME		~~~~~ (As described in item 1 above) ~~~~~							X
POWERPLANT									
PROPELLER									
APPLIANCE		Type							
		Manufacturer							
6. Conformity Statement									
A. Agency's Name and Address				B. Kind of Agency				C. Certificate No.	
Alejandro Salinas 513 Old Carrizo Road Uvalde, Texas 78801				<input checked="" type="checkbox"/> U.S. Certificated Mechanic				AP450634057	
				<input type="checkbox"/> Foreign Certificated Mechanic					
				<input type="checkbox"/> Certificated Repair Station					
				<input type="checkbox"/> Manufacturer					
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.									
Date 09-04-2002				Signature of Authorized Individual  Alejandro Salinas					
7. Approval for Return to Service									
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED									
BY		FAA Ftl. Standards Inspector		Manufacturer		Inspection Authorization		Other (Specify)	
		FAA Designee	<input checked="" type="checkbox"/>	Repair Station		Person Approved by Transport Canadian Airworthiness Group			
Date of Approval or Rejection 9/4/02			Certificate or Designation No. SI6R285J			Signature of Authorized Individual  Xavier M. Ybarra			

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

INSTALLATION OF QUICK RELEASE NOSE RADOME LATCH MECHANISMS IN ACCORDANCE WITH SIERRA INDUSTRIES, INC., DRAWING LIST NO. SI160-000, REV. B, DATED JULY 13, 1992 OR LATER FAA APPROVED REVISION.

INSTALLATION APPROVED BY SIERRA INDUSTRIES, INC., STC #SA8458SW.

FUNCTIONAL TEST OF THE RADOME LATCHING MECHANISM PERFORMED AND FOUND SATISFACTORY.

WEIGHT AND BALANCE CHANGE IS NEGLIGIBLE.

PERTINENT DETAILS OF THIS ALTERATION ARE ON FILE WITH SIERRA INDUSTRIES INC., UNDER WORK ORDER #5198.

NOTE: AIRCRAFT HOURS: 6865.8 Hrs LANDINGS: 8051

----- E N D -----

☐ Additional Sheets Are Attached

United States of America
Department of Transportation — Federal Aviation Administration
Supplemental Type Certificate

Number SA8458SW

This certificate, issued to Sierra Industries Inc.
P. O. Box 5184
Uvalde, TX 78802-5184

certifies that the change in the type design for the following product, with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 23 of the Federal Aviation Regulations.

Original Product — Type Certificate Number: A27CE

Make: Cessna

Model: 501, and 551

SIERRA INDUSTRIES, INC.	
THIS S.T.C. IS ISSUED FOR THE FOLLOWING AIRCRAFT:	
MAKE: Cessna	MODEL: 501
REG: N2158U	S/N: 501-0091
S.O. OR W.O. NO.: 5198	
ONLY THE ORIGINAL ISSUE RED INK STAMPED S.T.C. COPY IS CONSIDERED VALID BY SIERRA.	

Description of Type Design Change:

Installation of quick release nose radome latch mechanisms in accordance with Sierra Industries Inc., drawing list no. SI160-000, Rev. B, dated July 13, 1992 or later FAA approved revision.

Limitations and Conditions:

Compatibility of this modification with previously installed equipment must be determined by installer.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: April 6, 1992

Date received:

Date of issuance: October 14, 1992

Date amended:



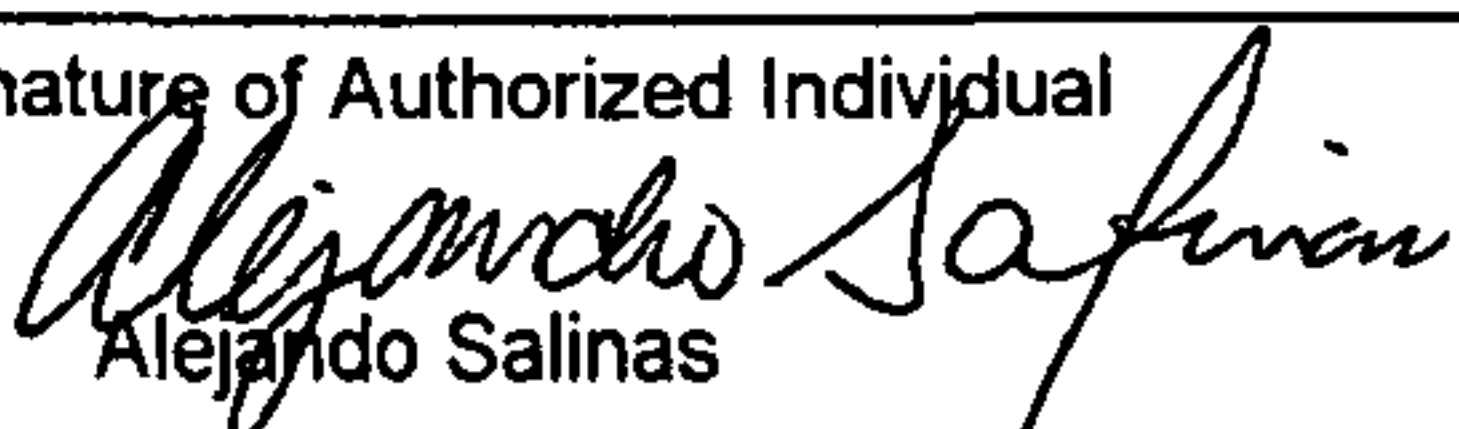
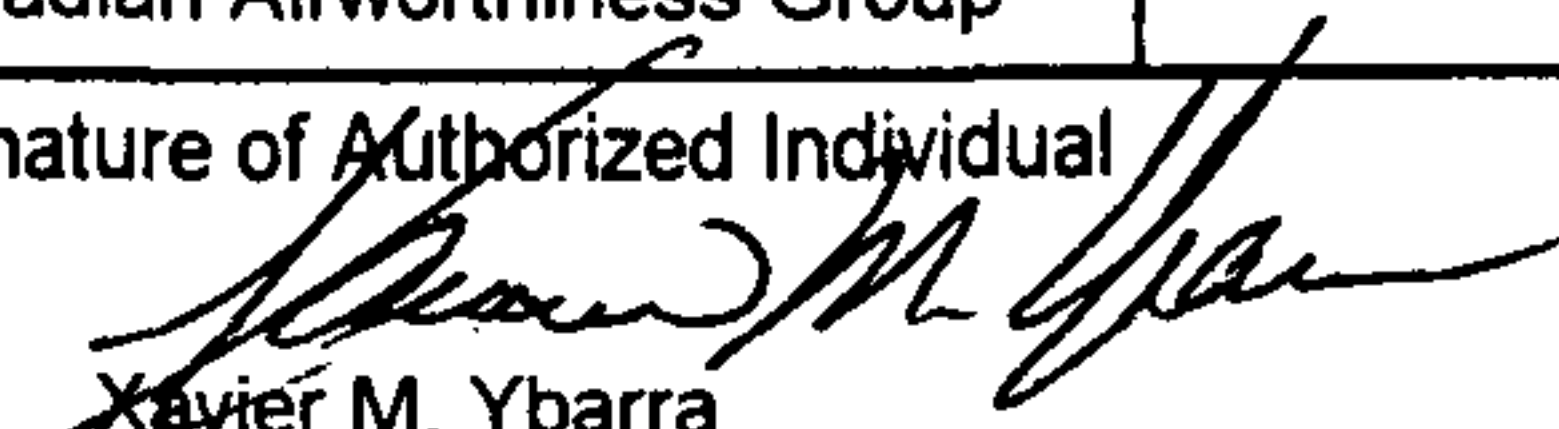
By direction of the Administrator

for Mark R. Schilling, Manager
Special Certification Office

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.

US Department of Transportation Federal Aviation Administration				MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)				Form Approved OMB No. 2120-0020	
								For FAA Use Only	
								Office Identification SAT FSDO SWN	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This form is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).									
1. Aircraft		Make Cessna				Model 501			
		Serial No. 501-0091				Nationality and Registration Mark N2158U			
2. Owner		Name (As shown on registration certificate) RBK Aviation, Inc.				Address (As shown on registration certificate) P.O. Box 236 Wilson, Wyoming 83014-0236			
3. For FAA Use Only									
4. Unit Identification								5. Type	
Unit		Make		Model		Serial No.		Repair	Alteration
AIRFRAME		~~~~~ (As described in item 1 above) ~~~~~							X
POWERPLANT									
PROPELLER									
APPLIANCE		Type							
		Manufacturer							
6. Conformity Statement									
A. Agency's Name and Address				B. Kind of Agency				C. Certificate No.	
Alejandro Salinas 513 Old Carrizo Road Uvalde, Texas 78801				<input checked="" type="checkbox"/> U.S. Certificated Mechanic				AP450634057	
				<input type="checkbox"/> Foreign Certificated Mechanic					
				<input type="checkbox"/> Certificated Repair Station					
				<input type="checkbox"/> Manufacturer					
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.									
Date 09-04-2002				Signature of Authorized Individual  Alejandro Salinas					
7. Approval for Return to Service									
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED									
BY	FAA Fit. Standards Inspector		Manufacturer		Inspection Authorization		Other (Specify)		
	FAA Designee	<input checked="" type="checkbox"/>	Repair Station		Person Approved by Transport Canadian Airworthiness Group				
Date of Approval or Rejection 9/4/02			Certificate or Designation No. SI6R285J		Signature of Authorized Individual  Xavier M. Ybarra				

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

REMOVAL OF MECHANICAL FACTORY NOSE BAGGAGE DOOR STOP ASSEMBLIES AND INSTALLATION OF PNEUMATIC GAS CYLINDER BAGGAGE DOOR OPENERS IN ACCORDANCE WITH SIERRA INDUSTRIES INC. DRAWING LIST SI-380-000 REV. C, DATED SEPTEMBER 24, 1996, OR LATER FAA APPROVED REVISIONS.

WORK ACCOMPLISHED IN ACCORDANCE WITH STC #SA09229SC

WEIGHT AND BALANCE CHANGE NEGLIGIBLE.

PERTINENT DETAILS OF THIS ALTERNATION ARE ON FILE WITH SIERRA INDUSTRIES, INC. UNDER WORK ORDER #5198.

TOTAL AIRCRAFT HOURS: 6865.8 Hrs

LANDINGS: 8051

----- E N D -----

☐ Additional Sheets Are Attached

United States Of America
Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

Number SA09229SC

This Certificate issued to Sierra Industries Inc.
P. O. Box 5184
Uvalde, TX 78802-5184

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 21 of the Regulations.

Original Product Type Certificate Number:

* (see continuation sheet)

Make:

* (see continuation sheet)

Model:

* (see continuation sheet)

SIERRA INDUSTRIES, INC.

**THIS S.T.C. IS ISSUED FOR THE
FOLLOWING AIRCRAFT:**

MAKE: Cessna **MODEL:** 501

REG: N2158U **S/N:** 501-0091

S.O. OR W.O. NO.: 5198

**ONLY THE ORIGINAL ISSUE RED INK STAMPED
S.T.C. COPY IS CONSIDERED VALID BY SIERRA.**

Description of Type Design Change: Removal of mechanical factory nose baggage door stop assemblies and installation of pneumatic gas cylinder baggage door openers in accordance with Sierra Industries Inc. drawing list SI-380-000 Rev. C, dated September 24, 1996, or later FAA approved revisions.

Limitations and Conditions:

FAR 43 is adequate to insure Continued Airworthiness of this modification. Compatibility of this design change with previously approved modifications must be determined by the installer.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: May 24, 1996

Date reissued: November 22, 1996

Date of issuance: November 06, 1996

Date amended:



By direction of the Administrator

A.J. Merrill
(Signature)

A.J. Merrill
Manager, Special Certification Office
Southwest Region

(Title)

THE UNIVERSITY OF CHICAGO
LIBRARY
1207 EAST 58TH STREET
CHICAGO, ILL. 60637
TEL: 773-936-3700
FAX: 773-936-3701
WWW.CHICAGO.EDU

United States Of America
Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate
(Continuation Sheet)

Number SA09229SC

Date of Issuance: November 06, 1996

<i>Model</i>	<i>Make (Serial Number)</i>	<i>Original Product Type Certificate Number</i>	<i>Part * of the * Regulations</i>
Cessna 500	500-0001 and after	A22CE	FAR 25
Cessna 550	550-0001 and after	A22CE	FAR 25
Cessna S550	S550-0001 and after	A22CE	FAR 25
Cessna 560	560-0001 and after	A22CE	FAR 25
Cessna 501	501-0001 and after	A27CE	FAR 23
Cessna 551	551-0001 and after	A27CE	FAR 23

US Department
of Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification

SATBDO SW17

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This form is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make Cessna	Model 501
	Serial No. 501-0091	Nationality and Registration Mark N2158U
2. Owner	Name (As shown on registration certificate) RBK Aviation, Inc.	Address (As shown on registration certificate) P.O. Box 236 Wilson, Wyoming 83014-0236


3. For FAA Use Only

4. Unit Identification				5. Type	
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~ (As described in item 1 above) ~~~~~				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement


A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
Robert L. Montgomery HCR 77 Box 3538 Uvalde, TX 78801	<input type="checkbox"/> U.S. Certificated Mechanic	A & P 452273309
	<input type="checkbox"/> Foreign Certificated Mechanic	
	<input checked="" type="checkbox"/> Certificated Repair Station	
	<input type="checkbox"/> Manufacturer	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date 09-04-2002	Signature of Authorized Individual Robert L. Montgomery 
---------------------------	---

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY	FAA Fit. Standards Inspector	Manufacturer	Inspection Authorization	Other (Specify)
	FAA Designee	<input checked="" type="checkbox"/> Repair Station	Person Approved by Transport Canadian Airworthiness Group	
Date of Approval or Rejection 9/4/02		Certificate or Designation No. SI6R285J	Signature of Authorized Individual Xavier M. Ybarra 	

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Installation of Williams/Rolls FJ44-2A engines in accordance with Sierra Industries Drawing SI360-000, dated February 02, 2002, or later FAA approved revision.

Sierra Industries, Inc. Airplane Flight Manual Supplement for Cessna Citation Model 501, Document SRW137, dated March 14, 2002.

Work accomplished in accordance with Sierra Industries, Inc. STC #ST09559AC.

New actual weight and balance dated September 4, 2002 included in aircraft records.

Pertinent details of this installation are on file with Sierra Industries, Inc., under Work Order #5198.

NOTE:

Total Aircraft Hours: 6865.8

Landings: 8051

----- E N D -----

☐ Additional Sheets Are Attached

United States Of America
Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

Number ST09559AC

This Certificate issued to Sierra Industries, Inc.
P.O. Box 5184
Uvalde, TX 78802-5184

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 21 of the Federal Aviation Regulations.

Original Product Type Certificate Number: A27CB

Make: Cessna

Model: 501

SIERRA INDUSTRIES, INC.

**THIS STC IS ISSUED FOR THE
FOLLOWING AIRCRAFT:**

MAKE: Cessna **MODEL:** 501

REG: N2158U **S/N:** 501-0091

S.O. OR W.O. NO.: 5198

**ONLY THE ORIGINAL ISSUE RED INK STAMPED
S.T.C. COPY IS CONSIDERED VALID BY SIERRA.**

Description of Type Design Change: Installation of Williams/Rolls FJ44-2A engines in accordance with Sierra Industries Drawing SI360-000, dated 02/27/2002, or later FAA approved revision.

Sierra Industries, Inc. Airplane Flight Manual Supplement for Cessna Citation Model 501, Document SRW137, dated March 14, 2002.

Limitations and Conditions: Installation of the STC SA732NW is required for this modification. Compatibility of this design change with previously approved modifications must be determined by the installer. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: June 12, 1998

Date reissued:

Date of issuance: March 14, 2002

Date amended:


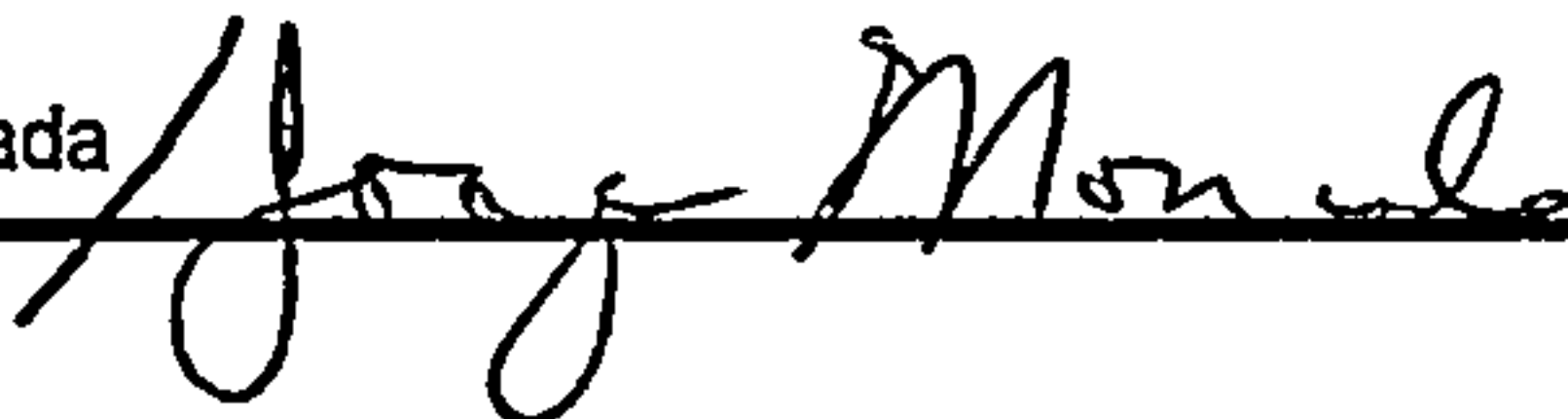


By direction of the Administrator

[Signature]
(Signature)
Michele M. Owley
Manager, Airplane Certification Office,
Southwest Region

(Title)

SIERRA INDUSTRIES, INC.
THIS S.T.C. IS ISSUED FOR THE
FOLLOWING AIRCRAFT:
MAKE: _____
MODEL: _____
REG: _____
S.N.: _____
S.T.C. NO. _____
S.T.C. COPY IS CONSIDERED VALID BY SIERRA.
ONLY THE ORIGINAL ISSUE BEING STAMPED

MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)				Form Approved OMB No. 2120-0020	
				For FAA Use Only	
				Office Identification <i>5417 PR</i>	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This form is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).					
1. Aircraft	Make Cessna		Model 501		
	Serial No. 501-0091		Nationality and Registration Mark N2158U		
2. Owner	Name (As shown on registration certificate) RBK Aviation Inc		Address (As shown on registration certificate) PO Box 236 Wilson, Wyoming 83014-0236		
3. For FAA Use Only					
4. Unit Identification					5. Type
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	<i>~~~~~ (As described in item 1 above) ~~~~~</i>			X	
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				
6. Conformity Statement					
A. Agency's Name and Address		B. Kind of Agency		C. Certificate No.	
Sierra Industries Garner Municipal Airport Garner Field Road Uvalde, Texas 78802				CRS # SI6R285J Limited Airframe Limited Engine	
		U.S. Certificated Mechanic			
		Foreign Certificated Mechanic			
		X Certificated Repair Station			
		Manufacturer			
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.					
Date 09-08-2001		Signature of Authorized Individual  Gary J. Cooper			
7. Approval for Return to Service					
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED					
BY	FAA Fit. Standards Inspector	Manufacturer	Inspection Authorization		Other (Specify)
	FAA Designee	X Repair Station	Person Approved by Transport Canadian Airworthiness Group		
Date of Approval or Rejection 9/08/01		Certificate or Designation No. SI6R285J		Signature of Authorized Individual  Joaquin Moncada	

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Installed Eagle SP performance system, including recontoured wing leading edge, increased gross weight, and increased fuel capacity, and other minor refinements in accordance with FAA sealed Drawing List 10, Sierra Industries Drawing List 10, revision D, dated March 22, 1990 or later FAA approved revision. Approved by STC SA 732 NW.

See new Aircraft Flight Manual Supplement for revised operating limitations.

See new Weight and Balance Manual Supplement for revised weight and balance.

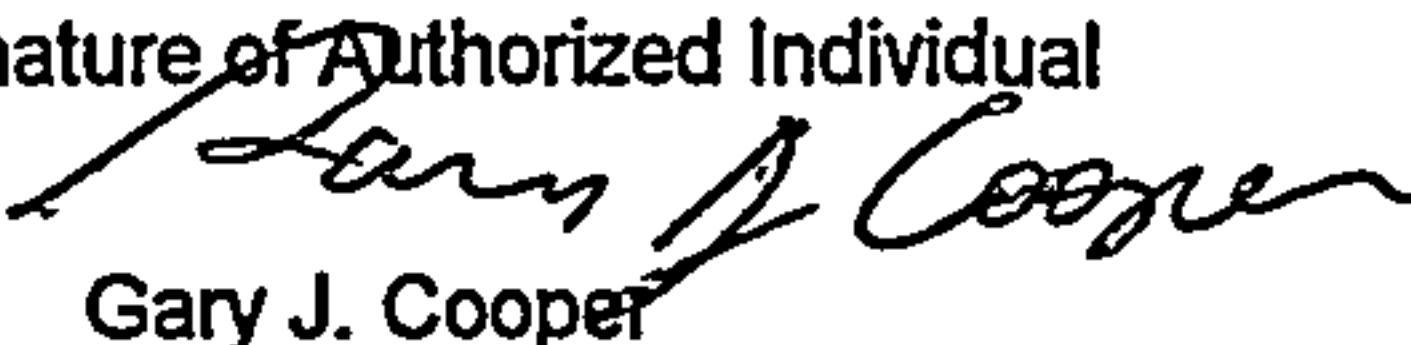

Equipment list revised.

Pertinent details of this modification are on file with Sierra Industries Inc., under work order #13699/4803.

Note: Aircraft total time: 6784.1 hours and 8004 Landings.

----- E N D -----

☐ Additional Sheets Are Attached

MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)				Form Approved OMB No. 2120-0020	
				For FAA Use Only	
				Office Identification <i>5412 R</i>	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This form is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).					
1. Aircraft	Make Cessna	Model 501		Nationality and Registration Mark N2158U	
	Serial No. 501-0091				
2. Owner	Name (As shown on registration certificate) RBK Aviation Inc		Address (As shown on registration certificate) PO Box 236 Wilson, Wyoming 83014-0236		
3. For FAA Use Only					
4. Unit Identification					5. Type
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	<i>~~~~~ (As described in item 1 above) ~~~~~</i>			X	
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				
6. Conformity Statement					
A. Agency's Name and Address		B. Kind of Agency		C. Certificate No.	
Sierra Industries Garner Municipal Airport Garner Field Road Uvalde, Texas 78802				CRS # SI6R285J Limited Airframe Limited Engine	
		U.S. Certificated Mechanic			
		Foreign Certificated Mechanic			
		X Certificated Repair Station			
		Manufacturer			
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.					
Date 09-08-2001		Signature of Authorized Individual  Gary J. Cooper			
7. Approval for Return to Service					
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED					
BY	FAA Flt. Standards Inspector		Manufacturer	Inspection Authorization	Other (Specify)
	FAA Designee	X	Repair Station	Person Approved by Transport Canadian Airworthiness Group	
Date of Approval or Rejection 9/08/01		Certificate or Designation No. SI6R285J		Signature of Authorized Individual  Joaquin Moncada	

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Performed repairs to corrosion found on left wing fuel bays between wing station WS 47.50 and W.S. 74.50.

Corrosion repairs performed following procedures outlined in Sierra Industries Repair Procedures SI-00725 Rev. B, dated 4/5/96. Manufacture and installation of wing doublers performed in accordance with Sierra Industries Drawing SI501-0091 Revision IR dated 6/08/01.

Structural substantiation of wing corrosion repairs approved by FAA Form 8110-3 Report Number RKG2028 Revision IR dated 7/13/01.

Weight and balance change negligible.

Pertinent details of this repair are under Sierra Industries Inc. Work Order Number 13669/4803.

Aircraft total time 6784.1 hours and 8004 landings.

----- E N D -----

☐ Additional Sheets Are Attached



US Department
of Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make CESSNA	Model 501SP
	Serial No. 501-091	Nationality and Registration Mark USA N2158U
2. Owner	Name (As shown on registration certificate) RBK Aviation, Inc.	Address (As shown on registration certificate) 1625 Fish Creek Road Wilson, WY 83014

3. For FAA Use Only

THE DATA IDENTIFIED HEREIN COMPLIES WITH THE
APPLICABLE AIRWORTHINESS REQUIREMENTS AND IS
APPROVED FOR THE ABOVE DESCRIBED AIRCRAFT, SUBJECT
TO CONFORMITY INSPECTION BY A PERSON AUTHORIZED IN
FAR 43, SECTION 43.7.

DATE July 23, 2001 OFFICE: Milwaukee FSDO GL-13

SIGNATURE: [Signature] Darrell C. McGillion

4. Unit Identification

5. Type

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~ (As described in Item 1 above) ~~~~~				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type			RECEIVED APR 02 2001 BY: _____	
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address Mayday Avionics, Inc. 5500 44th Street SE Grand Rapids, MI 49512	B. Kind of Agency <input type="checkbox"/> U.S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input checked="" type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. 1T5R947M
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D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date JUL 27 2001	Signature of Authorized Individual <u>[Signature]</u>
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7. Approval for Return To Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY	FAA Flt. Standards Inspector	Manufacturer	Inspection Authorization	Other (Specify)
	FAA Designee	Repair Station	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection JUL 27 2001		Certificate or Designation No. 1T5R947M	Signature of Authorized Individual <u>[Signature]</u>	

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Approved the previously installed GARMIN GPS400 GPS System for IFR Enroute, Terminal, and non-precision GPS approach. This System consists of the GPS400 Receiver and the GA56 GPS antenna. This system is TSO'd per C129 A1.

The GPS400 is located in the center instrument panel. At this location in the cockpit there should be no adverse enviromental effects on the GPS System.

This System displays its left/right steering information on the Pilot's Sperry RD650 HSI and is also interfaced with the Sperry SPZ200 autopilot.

The NAV/GPS transfer switch is located above the Pilot's ADI/FDI and repeated within the GPS400. The GPS400 is within 13 inches of the Pilot's ADI/FDI so the annunciators (MSG, WPT, TERM, APR, OBS, AUTO) are located within the GPS400.

This system was installed in accordance with the GARMIN GPS400 Installation Manual as a guideline. The wiring harnesses are routed with the existing avionics harnesses. Reference FAA 337 forms on this aircraft dated 02/09/2001 for further details on this installation. The initial approval basis for this approval is STC SA00800W1. This System is approved for enroute, terminal, and non-precision approach only.

The aircraft has been flown per Mayday Avionics, Inc. FAA Approved Flight Test Plan and meets the minimum accuracy requirements of AC20-138. Mayday Avionics, Inc. FAA Approved Flight Manual Supplement for the GARMIN GPS400 for this aircraft dated JUL 23 2001 is required for this approval.

[illegible]☐ Additional Sheets Are Attached



US Department
of Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification

6109

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make CESSNA	Model CE-501
	Serial No. 501-0091	Nationality and Registration Mark USA N2158U
2. Owner	Name (As shown on registration certificate) RBK Aviation, Inc.	Address (As shown on registration certificate) 1625 Fish Creek Road Wilson, Wyoming 83014

3. For FAA Use Only

THE DATA IDENTIFIED HEREIN COMPLIES WITH THE
APPLICABLE AIRWORTHINESS REQUIREMENTS AND IS
APPROVED FOR THE ABOVE DESCRIBED AIRCRAFT, SUBJECT
TO CONFORMITY INSPECTION BY A PERSON AUTHORIZED IN
FAR 43, SECTION 43.7.

DATE: March 22, 2001 OFFICE: Milwaukee FSDO GL-13

SIGNATURE: [Signature] Darrell C. McCullion

4. Unit Identification

5. Type

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~ (As described in Item 1 above) ~~~~~				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
Mayday Avionics, Inc. 5500 44th Street SE Grand Rapids, MI 49512	<input type="checkbox"/> U.S. Certificated Mechanic	1T5R947M
	<input type="checkbox"/> Foreign Certificated Mechanic	
	<input checked="" type="checkbox"/> Certificated Repair Station	
	<input type="checkbox"/> Manufacturer	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date 3-22-01	Signature of Authorized Individual <u>[Signature]</u>
-----------------	--

7. Approval for Return To Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY	FAA Fit. Standards Inspector	Manufacturer	Inspection Authorization	Other (Specify)
	FAA Designee <input checked="" type="checkbox"/>	Repair Station	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection 3-22-01		Certificate or Designation No. 1T5R947M	Signature of Authorized Individual <u>[Signature]</u>	

NOTICE
Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

NOTICE
Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished
(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed)

8. Description of Work Accomplished
(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed)

Installed Shadin DigiData Fuel Flow system. This system consists of the indicator P/N 912802-03-G, and the OAT probe. This is TSO'd per C44a and C106.

It is located in an existing instrument hole in the pilot's instrument panel. The OAT probe is installed on the bottom of the aircraft. Reference FAA 337 form on this aircraft dated 3-22-01 for further details on its doubler and installation.

This system is interfaced with the existing fuel flow system, the Garmin GPS400 GPS receiver and the aircraft compass system for HDG reference.

This System's fuel flow data is for reference only and the aircraft instrument panel has been placarded as follows:

"SHADIN FUEL FLOW DATA FOR REFERENCE ONLY"

This System was installed using STC SA1461GL and the Shadin Company DigiData Fuel/Airdata Computer Installation Manual, P/N IM2803 revision C dated May 9, 1996, and AC43-13-1B, Chapter 11, and AC43-13-2A, Chapter 2 as a guideline.

Reference attached Mayday Avionics, INC. document number ICAFF/501-0091 dated 03/20/2001 for Instructions for Continued Airworthiness.

The weight and balance has been revised and the log book entry completed.

[illegible]☒ Additional Sheets Are Attached



US Department
of Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification
GL09

[Signature]

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make CESSNA	Model CE-501
	Serial No. 501-0091	Nationality and Registration Mark USA N2158U
2. Owner	Name (As shown on registration certificate) RBK Aviation, Inc.	Address (As shown on registration certificate) 1625 Fish Creek Road Wilson, Wyoming 83014

3. For FAA Use Only

The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR Part 43, Section 43.7.

GL09

MAR 22 2001

District Office

Date

[Signature]
Signature of FAA Inspector

4. Unit Identification

5. Type

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~ (As described in Item 1 above) ~~~~~				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
Mayday Avionics, Inc. 5500 44th Street SE Grand Rapids, MI 49512	<input type="checkbox"/> U.S. Certificated Mechanic	IT5R947M
	<input type="checkbox"/> Foreign Certificated Mechanic	
	<input checked="" type="checkbox"/> Certificated Repair Station	
	<input type="checkbox"/> Manufacturer	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date MAR 22 2001	Signature of Authorized Individual <i>[Signature]</i>
---------------------	--

7. Approval for Return To Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY	FAA Flt. Standards Inspector	Manufacturer	Inspection Authorization	Other (Specify)
	FAA Designee <input checked="" type="checkbox"/>	Repair Station	Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection MAR 22 2001	Certificate or Designation No. IT5R947M	Signature of Authorized Individual <i>[Signature]</i>
--	--	--

NOTICE
Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

NOTICE
Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

1010

8. Description of Work Accomplished
(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

8. Description of Work Accomplished
(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Installed Shadin OAT probe assembly at fuselage station 40.5. Reference Mayday Avionics, Inc. drawing, TMPRB501 dated 03/22/01, for further details on its doubler and installation.

The OAT probe was installed using its installation manual and AC43-13-2A, chapter 3 as a guideline. Reference the attached documents for the Instructions for Continued Airworthiness (ICA) on the OAT probe installation. An airframe log book entry has also been made to reflect these ICA's.

The wiring between the Shadin OAT probe and the Shadin Digidata Fuel/Airdata Computer is running thru an existing bulkhead connector using AC43-13-1B, chapter 11 as a guideline.

The weight and balance has been revised and the log book entry completed.

[illegible]☒ Additional Sheets Are Attached

Date: 3/22/01 A/C Make: Cessna A/C Model: CE-501

A/C Serial Number: 501-0091 Registration No.: N2158U

1. Introduction: This document contains the Instructions for Continued Airworthiness relating to FAA form 337 for the above aircraft dated MAR 22 2001 regarding the installation of the Shadin OAT Probe Assembly Kit P/N 681201-1.
2. Description: The OAT Probe, P/N 681201, is located on the bottom of the fuselage. It is interfaced with the Shadin Digidata Fuel/Airdata Computer only.
3. Control: N/A
4. Servicing: N/A
5. Maintenance Instructions: Maintenance of the Temp Probe is "On Condition" only.

Reference the Cessna Maintenance Manual for the Model 500 Citation, Citation I, P/N 500MM030 revision 30 dated May 1, 1996 or later approved revision, chapter 5 "Time Limits/Maintenance Checks" for further instructions.

6. Trouble Shooting: Refer to Shadin Digidata Operation Guide, P/N 2802, page 8 "Test Function" for procedures to activate the diagnostic software of the system.
7. Removal and Replacement: Reference the Shadin Digidata Fuel/Airdata Computer Installation Manual, P/N IM2803 Rev. C dated May 9, 1996, or later approved revision, Section 6.0 "Post Installation Check", for procedures to verify proper operation of the equipment in the event that the OAT probe is replaced.
8. Diagrams: Reference Mayday Avionics, Inc.
IMPRB501 dated 03/22/01
9. Special Inspection Requirements: N/A
10. Application of Treatments: N/A
11. Data: N/A
12. Special Tools: N/A
13. Commuter Aircraft: N/A
14. Recommended overhaul periods: No additional overhaul time limitations.

15. Airworthiness Limitations: None.

16. Revision: If a revision is necessary, a letter will be submitted to the local FSDO with a copy of the revised FAA form 337 and ICA. The FAA inspector accepts the change by signing Block 3 and includes the statement:

"The attached revised/new Instructions for Continued Airworthiness dated (mm/dd/yy) for the above aircraft or component major alteration have been accepted by the FAA, suspending the Instructions for Continued Airworthiness dated (mm/dd/yy)."

Once the revision has been accepted a maintenance record entry will be made identifying the revision, its location, and date of the FAA form 337.

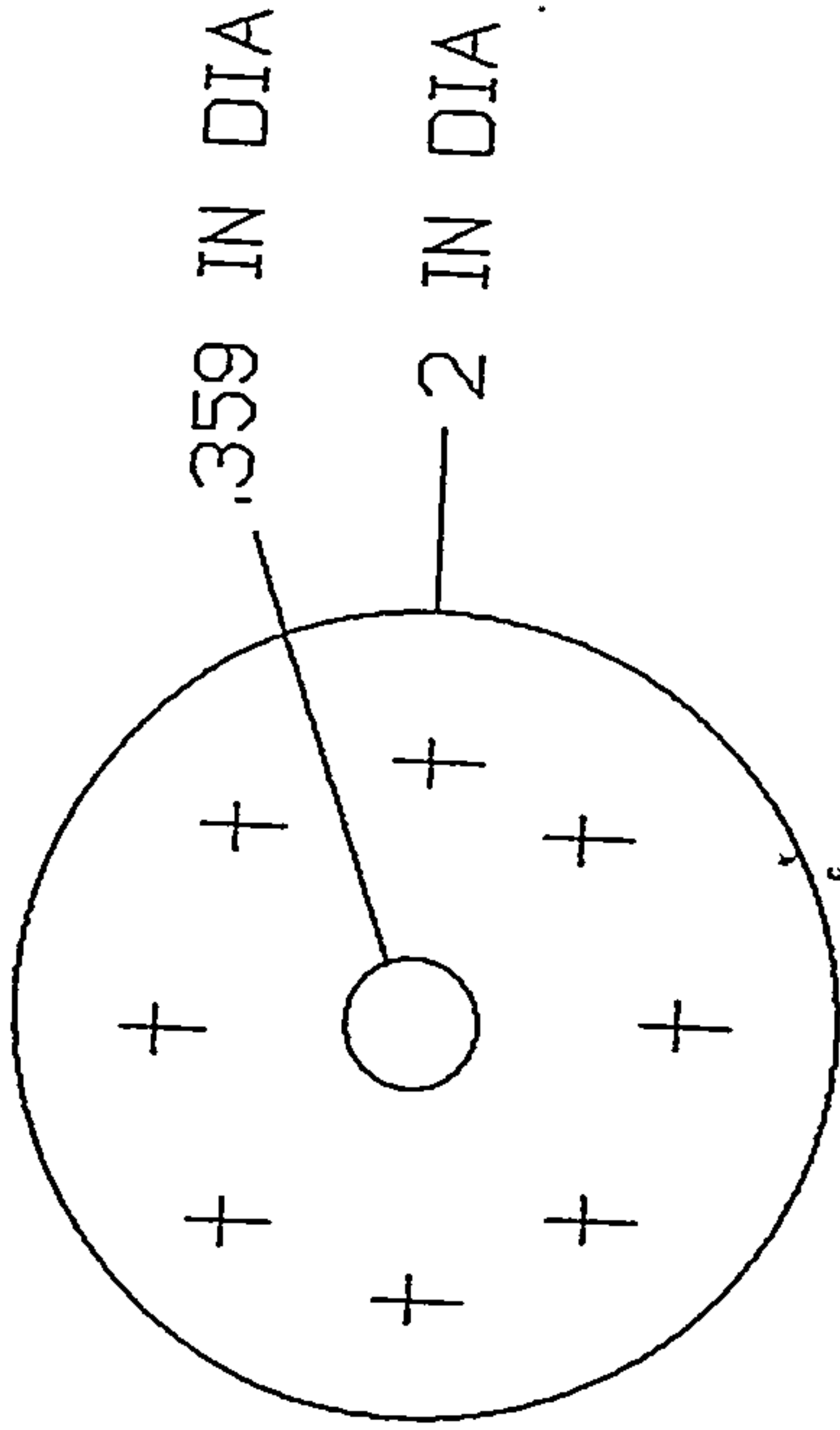
This record becomes a permanent part of the maintenance requirements for the aircraft.

2000

2

2

TEMPERATURE PROBE



DOUBLER .040

SKIN .032

RIVETS NAS1097AD4 8 ea.

MOUNTED IN NOSE OUTSIDE OF PRESS.VESSEL
AT F.S. 40.5 BOTTOM SIDE OF AIRCRAFT
DEBURR ETCH AND ZINC CHROMATE
DOUBLER - MAINTAIN MINIMUM EDGE
DISTANCES AND RIVET SPACING

SHADIN OAT PROBE PN 681201

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		TEMP PROBE	
DECIMALS .XX ± .05 XXX ± .000	ANGULAR °.05	MAYDAY AVIONICS, INC. 5500 44TH. ST. SE. GRAND RAPIDS, MI 49512 (616) 957-4920	
DO NOT SCALE DRAWING		SIZE 1/4"	DWG NO. TMPRB501
DRAWN BY RGB	DATE 3-22-01	REV	SHEET OF 1
SCALE NONE	REG N2584	S/N 0091	SHEET OF 1



U.S. Department of
Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification

GL09

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act 1958)

1. Aircraft	Make CESSNA	Model 501SP
	Serial No. 501-091	Nationality and Registration Mark N2158U
2. Owner	Name (As shown on registration certificate) RBK AVIATION, INC.	Address (As shown on registration certificate) 1625 FISH CREEK RD. WILSON WYOMING, 83014

3. For FAA Use Only

4. Unit Identification				5. Type	
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	(As described in item 1 above)				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address NORTHERN AIR, INC. 5500 44 TH ST SE GRAND RAPIDS, MI 49512	B. Kind of Agency <input type="checkbox"/> U.S. Certified Mechanic <input type="checkbox"/> Foreign Certified Mechanic <input checked="" type="checkbox"/> Certified Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. N81R812N
---	---	--------------------------------

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date 2/13/01	Signature of Authorized Individual
-----------------	--

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY	FAA Flt Standards Inspector	Manufacturer	Inspection Authorization	
	FAA Designee	X Repair Station	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection 2/13/01	Certificate or Designation No. N81R812N	Signature of Authorized Individual 		BY:

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

INSTALLED PATCH FOR REMOVED TRIMBLE P/N 16248-20 GPS ANTENNA JUST FORWARD OF F.S.151.00 AND OUTBOARD OF AIRCRAFT CENTER LINE ON RIGHT SIDE PER DER THOMAS A. KNOTT DERT-405106-CE, DRAWING #501-0091-53-1 REVISION I.R. DATED 2/8/01, AND FAA FORM 8110-3 DATED 2/8/01.

END

☐ Additional Sheets Are Attached

3423



MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved OMB No. 2120-0020
For FAA Use Only
Office Identification GL09

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make Cessna	Model 501SP <i>7</i> <i>501-501</i>
	Serial No. 501-091	Nationality and Registration Mark USA N2158U
2. Owner	Name (As shown on registration certificate) RBK Aviation, Inc.	Address (As shown on registration certificate) 1625 Fish Creek Road Wilson, WY 83014

3. For FAA Use Only	
The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR Part 43, Section 43.7 GL09 2-9-01 <i>Ralph J. Payne</i> District Office Date Signature of FAA Inspector	

4. Unit Identification				5. Type	
Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~ (As described in Item 1 above) ~~~~~				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement		
A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
Mayday Avionics, Inc. 5500 44th Street SE Grand Rapids, MI 49512	<input type="checkbox"/> U.S. Certificated Mechanic	IT5R947M
	<input type="checkbox"/> Foreign Certificated Mechanic	
	<input checked="" type="checkbox"/> Certificated Repair Station	
	<input type="checkbox"/> Manufacturer	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date <i>2/09/01</i>	Signature of Authorized Individual <i>Kenneth Malone</i>	RECEIVED FEB 13 2001
7. Approval for Return To Service		

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED					
BY	FAA Flt. Standards Inspector	Manufacturer	Inspection Authorization	Other (Specify)	
	FAA Designee	<input checked="" type="checkbox"/> Repair Station	Person Approved by Transport Canada Airworthiness Group		
Date of Approval or Rejection <i>2/09/01</i>		Certificate or Designation No. IT5R947M	Signature of Authorized Individual <i>Kenneth Malone</i>		

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

NOTICE

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Removed Trimble 2000 GPS system and installed a Garmin GPS400 GPS System. This system consists of the GPS400 and the GA56 GPS antenna. This system is TSO'd C129 A1. The GPS400 is located in the center instrument panel. The antenna is located on top of the aircraft. Reference 337 form on this aircraft dated 2-9-01 for further details. The GPS400 system is interfaced to the pilot's Sperry RD650 HSI and the Sperry SPZ200 Autopilot. The NAV/GPS transfer switch is located above the pilot's ADI/FDI. The GPS400 is within 13 inches of the pilot's ADI/FDI so the warning annunciators (MSG, WPT, TERM, APR, OBS, AUTO) are located within the GPS400. This installation does NOT incorporate an ILS over-ride feature. The GPS400 is interfaced with the existing mode C encoder and the aircraft's transponder/encoder system has been checked for proper operation using 91.217 as a guideline. The GPS400 GPS is approved for VFR only and the aircraft instrument panel has been placarded as follows:

GPS NOT APPROVED FOR IFR

This installation was done using the Garmin GPS400 Installation Manual and AC43-13-1B, Chapter 11 and AC43-13-2A, Chapter 2 & 3 as a guideline. This system has been ground checked and meets the requirements outlined for post installation checkout in the Garmin GPS400 Installation Manual. The initial approval basis for this installation is STC SA00800WI.

Removed Narco KW56 weather radar system and installed Bendix/King RDR2000 weather radar with Avdyne 5RR-MFC-3XX flight situation display system. This system consists of the Bendix/King ART-2000 weather radar receiver/transmitter, the Avdyne Display PN D98-00001-45 and the Avdyne Data Loader PN 98-00003-01. The Avdyne display incorporates software release 5. This Avdyne system is TSO'd per C113 and C63c.

☐ Additional Sheets Are Attached

Cessna 501SP
N2158U
Page 2

The display is located in the space vacated by the removed radar indicator in center instrument panel. The data loader is located in the lower left co-pilot's instrument panel. The ART-2000 is located on the forward bulkhead on the same frame as the removed KWX56 weather radar antenna. The installed ART-2000 weighs less than the removed KWX56 antenna. The wiring for the Avidyne/ART-2000 penetrates the forward pressure bulkhead through the existing hole the removed radar wiring used.

The Avidyne system receives its nav information from the Garmin GPS400 GPS. It displays weather radar information from the Bendix/King ART2000 weather radar, traffic advisory information from the BF Goodrich SkyWatch system and Stormscope from the BFG WX-500 Stormscope. The Avidyne moving map/charts system is approved for reference only and the instrument panel has been placarded as follows:

"Avidyne Charts and Navigator approved for reference only"

This system was installed using the Avidyne Installation Manuals and AC43-13-1B, Chapter 11 and AC43-13-2A, Chapter 2 as a guideline. This system has been ground checked and flight checked using the procedures outlined in the Avidyne Installation Manual. The initial approval of this system is based on STC SA00072B0. Flight Manual Supplement dated FEB 2 2001 is required for this installation.

Installed BF Goodrich Avionics Systems WX-500 Stormscope System. This system consists of the WX-500 Remote Processor and the NY163 Stormscope Antenna. This system is TSO'd per C-110a.

The processor is located in the avionics compartment in the nose of the aircraft. The antenna is installed on the bottom of the aircraft. Reference FAA 337 form on this aircraft dated 2-9-01 for further details on the antenna mounting. This system displays its information on the Avidyne FlightMax 750, as a display and the controls, and on the Garmin GPS400 as a display only. Reference the Avidyne FlightMax Pilot's Guide and the Garmin 400 Series Pilot's Guide Addendum for details on this display and the Stormscope operation.

This system was installed using the BF Goodrich Avionics Systems WX-500 Installation Manual and AC43-13-1B, Chapter 11 and AC43-13-2A, Chapter 2 & 3 as a guideline.

[illegible]

Installed BF Goodrich Avionics Systems SKY497 SkyWatch Traffic Advisory system. This system consists of the TRC497 Receiver/Transmitter and the NY164 Antenna.

The Receiver/Transmitter is located in the avionics compartment in the nose of the aircraft. The antenna is located on top of the fuselage. Reference FAA 337 form dated 2-9-01 for further details on its installation. This system display is displayed on the Avidyne FlightMax 750 multi-function display, as a display and the controls, and on the Garmin GPS400 as a display only.

The initial approval basis for the SkyWatch installation is STC SA00733GH. The SkyWatch Flight Manual Supplement dated FEB 2 - 2001 are required for this installation. This installation was done using the BF Goodrich Avionics systems Installation Manual and AC43-13-1B, Chapter 11 and AC43-13-2A, Chapter 2 & 3 as a guideline.

Installed Dual Northern Airborne Technologies AA80-020 Intercoms for pilot and co-pilot. These units are located in the pilot's and co-pilot's instrument panels respectively. They were installed per the Northern Airborne Technologies AA80 Installation Instructions using AC43-13-1B, Chapter 11 and AC43-13-2A, Chapter 2 as a guideline.

Installed Avionics Innovations AICD-6 Compact disk player. This system consists of teh changer PN 16006-00 and the controller PN 16001-28V. This system is located under the first passenger seat behind the co-pilot's seat.

This system's audio is interfaced to the Northern Airborne AA80 intercom. The intercom will mute the music audio automatically when the com receive audio is present to the crew.

This system was installed using the Avionics Innovations AICD Installation Manual using AC43-13-1B, chapter 11 and AC43-13-2A, chapter 2 & 3 as a guideline. The initial approval of this system is based STC SA00697LA.

Installed Ameri-King AK551-18 28VDC to 14VDC power converter. This unit is TSO'd per C71. This unit is located inside the co-pilot's arm-rest. This unit supplies 14VDC to two outlets on the either side of the aircraft by the club seating tables in the cabin - for passenger use only. This system can be controlled by the crew by a remote on/off circuit breaker switch located in the cockpit.

This system was installed using the Ameri-King AK551 installation instructions and AC43-13-1B, chapter 11 and AC43-13-2A, chapter 2 as a guideline.

The weight and balance has been revised and the log book entry completed.

[illegible]

1000

1000



US Department
of Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification
GL09

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).

1. Aircraft	Make Cessna	Model 501SP
	Serial No. 501-091	Nationality and Registration Mark USA N2158U
2. Owner	Name (As shown on registration certificate) RBK Aviation, Inc.	Address (As shown on registration certificate) 1625 Fish Creek Road Wilson, WY 83014

3. For FAA Use Only

The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR Part 43, Section 43.7.

GL09 01-31-01

District Office

Date

Signature of FAA Inspector

4. Unit Identification

5. Type

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~ (As described in Item 1 above) ~~~~~				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
Mayday Avionics, Inc. 5500 44th Street SE Grand Rapids, MI 49512	<input type="checkbox"/> U.S. Certificated Mechanic	IT5R947M
	<input type="checkbox"/> Foreign Certificated Mechanic	
	<input checked="" type="checkbox"/> Certificated Repair Station	
	<input type="checkbox"/> Manufacturer	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date 2/09/01	Signature of Authorized Individual <i>Kenneth Malone</i>
------------------------	---

7. Approval for Return To Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED				RECEIVED FEB 13 2001 BY: _____
BY	FAA Fit. Standards Inspector	Manufacturer	Inspection Authorization	
	FAA Designee	<input checked="" type="checkbox"/> Repair Station	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection 2/09/01		Certificate or Designation No. IT5R947M	Signature of Authorized Individual <i>Kenneth Malone</i>	

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Removed the existing Cessna installed transponder antenna from station 166.25 and installed it at station 207. Installed BF Goodrich NY-163 Stormscope antenna at station 166.25 in place of transponder antenna. Reference Mayday Avionics drawing WX500501 for further details on these antenna mounting and doubler plates.

Installed BF Goodrich NY-164 SkyWatch antenna on top of the aircraft at station 156. Reference Mayday Avionics drawing SKY501 for further details on its mounting and doubler plate.



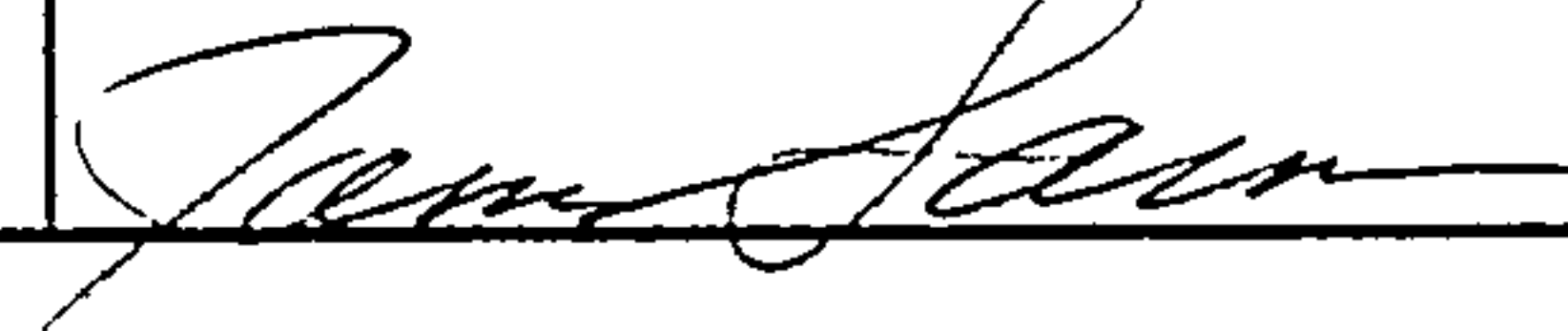
Installed Garmin GA56 GPS antenna on top of the aircraft at station 183.7. Reference Mayday Avionics drawing GA56C501 for further details on its mounting and doubler plate.

The above items were installed using the respective installation manual and AC43-13-2A, chapter 3 as a guideline. The weight and balance has been revised and the log book entry completed.

[illegible]☐ Additional Sheets Are Attached

RECEIVED

OCT 27 1999

 US Department of Transportation Federal Aviation Administration				MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)				Form Approved OMB No. 2120-0020 For FAA Use Only Office Identification: SW05 RLO	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).									
1. Aircraft		Make Cessna				Model 501			
		Serial No. 501-0091				Nationality and Registration Mark N2158U			
2. Owner		Name (As shown on registration certificate) AVL #1 Inc.				Address (As shown on registration certificate) 2700 East bypass 6 Ste. 2222 College Station, Tx. 77845			
3. For FAA Use Only									
4. Unit Identification								5. Type	
Unit	Make		Model		Serial No.			Repair	Alteration
AIRFRAME	(As described in Item 1 above)							X	
POWERPLANT									
PROPELLER									
APPLIANCE	Type								
	Manufacturer								
6. Conformity Statement									
A. Agency's Name and Address				B Kind of Agency			C Certificate No		
James Sammons 910 Wayside Way Richardson, Tx. 75080				<input checked="" type="checkbox"/> U S Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Manufacturer			430470346 A&P		
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.									
Date 10/22/99				Signature of Authorized Individual 					
7. Approval for Return To Service									
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED									
BY	FAA Fit. Standards Inspector	Manufacturer	<input checked="" type="checkbox"/>	Inspection Authorization			Other (Specify)		
	FAA Designee	Repair Station		Person Approved by Transport Canada Airworthiness Group					
Date of Approval or Rejection 10/22/99		Certificate or Designation No 4304703461A		Signature of Authorized Individual 					

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Date: 10/21/99 Aircraft Ce-501 S/N: 501-0091 T.T:5796.3

- 1) Received the R/H aileron from customer.
- 2) Installed in holding fixture.
- 3) Remove the P/N 5524115-143 I/B end rib and discarded.
- 4) Located, drilled to full size and de-burred a factory new -143 rib.

I certify that I have inspected the inside of the right hand aileron in the area of the I/B end rib for hidden damage and corrosion. None found. (O.K. to close). James Lam 430470346IA

- 5) Installed the end rib listed above in item # 4 using original type fasteners.
- 6) Painted end rib and balance checked I.A.W. Cessna 500 series maintenance manual.

-----END.

☐ Additional Sheets Are Attached



APPLICATION FOR AIRWORTHINESS CERTIFICATE

INSTRUCTIONS — Print or type. Do not write in shaded areas; these are for FAA use only. Submit original only to an authorized FAA Representative. If additional space is required, use an attachment. For special flight permits complete Sections II and VI or VII as applicable.

I. AIRCRAFT DESCRIPTION	1. REGISTRATION MARK N2158U	2. AIRCRAFT BUILDER'S NAME (Make) Cessna Citation	3. AIRCRAFT MODEL DESIGNATION CE-501	4. YR MFR 1979	FAA CODING 2076603
	5. AIRCRAFT SERIAL NO 501-0091	6. ENGINE BUILDER'S NAME (Make) Pratt & Whitney	7. ENGINE MODEL DESIGNATION JT15D-1A		52110
	8. NUMBER OF ENGINES -2-	9. PROPELLER BUILDER'S NAME (Make)	10. PROPELLER MODEL DESIGNATION		11. AIRCRAFT IS (Check if applicable) IMPORT

II. CERTIFICATION REQUESTED	APPLICATION IS HEREBY MADE FOR: (Check applicable items)													
	A	1	<input checked="" type="checkbox"/>	STANDARD AIRWORTHINESS CERTIFICATE (Indicate category)				NORMAL	UTILITY	ACROBATIC	<input checked="" type="checkbox"/> TRANSPORT	GLIDER	BALLOON	
	B			SPECIAL AIRWORTHINESS CERTIFICATE (Check appropriate items)										
		2		LIMITED										
		3		PROVISIONAL (Indicate class)										
		3		RESTRICTED (Indicate operations to be conducted)										
		4		EXPERIMENTAL (Indicate operations to be conducted)										
		5		SPECIAL FLIGHT PERMIT (Indicate operation to be conducted, then complete Section VI or VII as applicable on reverse side)										
		1		CLASS I										
		2		CLASS II										
	1		AGRICULTURE AND PEST CONTROL				2		AERIAL SURVEYING		3		AERIAL ADVERTISING	
	4		FOREST (Wildlife conservation)				5		PATROLLING		6		WEATHER CONTROL	
	7		CARRIAGE OF CARGO				8		OTHER (Specify)					
	1		RESEARCH AND DEVELOPMENT				2		AMATEUR BUILT		3		EXHIBITION	
	4		RACING				5		CREW TRAINING				MKT. SURVEY	
	0		TO SHOW COMPLIANCE WITH FAR											
	1		FERRY FLIGHT FOR REPAIRS, ALTERATIONS, MAINTENANCE OR STORAGE											
	2		EVACUATE FROM AREA OF IMPENDING DANGER											
	3		OPERATION IN EXCESS OF MAXIMUM CERTIFICATED TAKE-OFF WEIGHT											
	4		DELIVERING OR EXPORT				5		PRODUCTION FLIGHT TESTING					
	5		CUSTOMER DEMONSTRATION FLIGHTS											
C	6		MULTIPLE AIRWORTHINESS CERTIFICATE (Check ABOVE Restricted Operation and Standard or Limited, as applicable)											

III. OWNER'S CERTIFICATION	A. REGISTERED OWNER (As shown on certificate of aircraft registration)		IF DEALER, CHECK HERE	
	NAME North American Jet, Inc.		ADDRESS P O Box 1217, Georgetown TX 78628	
	B. AIRCRAFT CERTIFICATION BASIS (Check applicable blocks and complete items as indicated)			
	<input checked="" type="checkbox"/>	AIRCRAFT SPECIFICATION OR TYPE CERTIFICATE DATA SHEET (Give No and Revision No.) A27CE	<input checked="" type="checkbox"/>	AIRWORTHINESS DIRECTIVES (Check if all applicable ADs complied with and give latest AD No.) 97-09
		AIRCRAFT LISTING (Give page number(s)) N/A		SUPPLEMENTAL TYPE CERTIFICATE (List number of each STC incorporated) N/A
C. AIRCRAFT OPERATION AND MAINTENANCE RECORDS				
<input checked="" type="checkbox"/>	CHECK IF RECORDS IN COMPLIANCE WITH FAR 91.417	TOTAL AIRFRAME HOURS 5133.60	EXPERIMENTAL ONLY (Enter hours flown since last certificate issued or renewed) 3	
D. CERTIFICATION - I hereby certify that I am the registered owner (or his agent) of the aircraft described above, that the aircraft is registered with the Federal Aviation Administration in accordance with Section 501 of the Federal Aviation Act of 1958, and applicable Federal Aviation Regulations, and that the aircraft has been inspected and is airworthy and eligible for the airworthiness certificate requested				
DATE OF APPLICATION 5-27-97		NAME AND TITLE (Print or type) by Kirk Hays, Pres.		SIGNATURE

IV. INSPECTION AGENCY VERIFICATION	A. THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY (Complete this section only if FAR 21.183(a) applies)			
	2	FAR PART 121 OR 127 CERTIFICATE HOLDER (Give Certificate No.)	3	<input checked="" type="checkbox"/> CERTIFICATED MECHANIC (Give Certificate No.) 454319307
	4	CERTIFICATED REPAIR STATION (Give Certificate No.)		
5	AIRCRAFT MANUFACTURER (Give name of firm)			
6	DATE 5-28-97	TITLE Aircraft mechanic	SIGNATURE 	

V. FAA REPRESENTATIVE CERTIFICATION	(Check ALL applicable blocks in items A and B)		<input checked="" type="checkbox"/>	THE CERTIFICATE REQUESTED	
	A. I find that the aircraft described in Section I or VII meets requirements for		<input checked="" type="checkbox"/>	AMENDMENT OR MODIFICATION OF CURRENT AIRWORTHINESS CERTIFICATE	
	B. Inspection for a special flight permit under Section VII was conducted by		<input checked="" type="checkbox"/>	FAA INSPECTOR	
			<input checked="" type="checkbox"/>	FAA DESIGNEE	
			<input checked="" type="checkbox"/>	CERTIFICATE HOLDER UNDER	
DATE 5-28-97	DISTRICT OFFICE STFSDO	DESIGNEE'S SIGNATURE AND NO. Richard E. Dumler DAR-88-ES-SW	FAA INSPECTOR'S SIGNATURE		

WILL SPECIAL FLIGHT PERMIT PURPOSES OTHER THAN PRODUCTION FLIGHT TEST

A. MANUFACTURER		NAME		ADDRESS	
B. PRODUCTION BASIS (Check applicable item)					
PRODUCTION CERTIFICATE (Give production certificate number)		TYPE CERTIFICATE ONLY			
APPROVED PRODUCTION INSPECTION SYSTEM		C. GIVE QUANTITY OF CERTIFICATES REQUIRED FOR OPERATING NEEDS			
DATE OF APPLICATION		NAME AND TITLE (Print or type)		SIGNATURE	
A. DESCRIPTION OF AIRCRAFT					
REGISTERED OWNER		ADDRESS		MODEL	
BUILDER (Make)		REGISTRATION MARK		B. DESCRIPTION OF FLIGHT	
FROM		TO		CUSTOMER DEMONSTRATION FLIGHTS <input type="checkbox"/> (Check if applicable)	
VIA		DEPARTURE DATE		DURATION	
C. CREW REQUIRED TO OPERATE THE AIRCRAFT AND ITS EQUIPMENT					
PILOT		CO-PILOT		NAVIGATOR	
OTHER (Specify)		D. THE AIRCRAFT DOES NOT MEET THE APPLICABLE AIRWORTHINESS REQUIREMENTS AS FOLLOWS			
E. THE FOLLOWING RESTRICTIONS ARE CONSIDERED NECESSARY FOR SAFE OPERATION (Use attachment if necessary)					
F. CERTIFICATION - (I hereby certify that I am the registered owner (or his agent) of the aircraft described above, that the aircraft is registered in accordance with Section 501 of the Federal Aviation Act of 1958, and applicable Federal Aviation Regulations, and that the aircraft has been inspected and is airworthy for the flight described)					
DATE		NAME AND TITLE (Print or type)		SIGNATURE	
X		X		X	
A. Operating Limitations and Markings in Compliance with FAR 91.31 as Applicable		B. Current Operating Limitations Attached		C. Data, Drawings, Photographs, etc (Attach when required)	
D. Current Weight and Balance Information Available in Aircraft		E. Major Repair and Alteration, FAA Form 337 (Attach when required)		F. This Inspection Recorded in Aircraft Records	
G. Statement of Conformity FAA Form 8130-9 (Attach when required)		H. Foreign Airworthiness Certification for Import Aircraft (Attach when required)		I. Previous Airworthiness Certificate Issued in Accordance with FAR (Original Attached)	
J. Current Airworthiness Certificate Issued in Accordance with FAR 21-183(d)		(Copy attached)			

DEPARTMENT OF TRANSPORTATION--FEDERAL AVIATION ADMINISTRATION

STANDARD AIRWORTHINESS CERTIFICATE

1. NATIONALITY AND REGISTRATION MARKS	2. MANUFACTURER AND MODEL	3. AIRCRAFT SERIAL NUMBER	4. CATEGORY
N2158U	Cessna CE-501	501-0091	Transport

5. AUTHORITY AND BASIS FOR ISSUANCE

This airworthiness certificate is issued pursuant to the Federal Aviation Act of 1958 and certifies that, as of the date of issuance, the aircraft to which issued has been inspected and found to conform to the type certificate therefor, to be in condition for safe operation, and has been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation, except as noted herein.

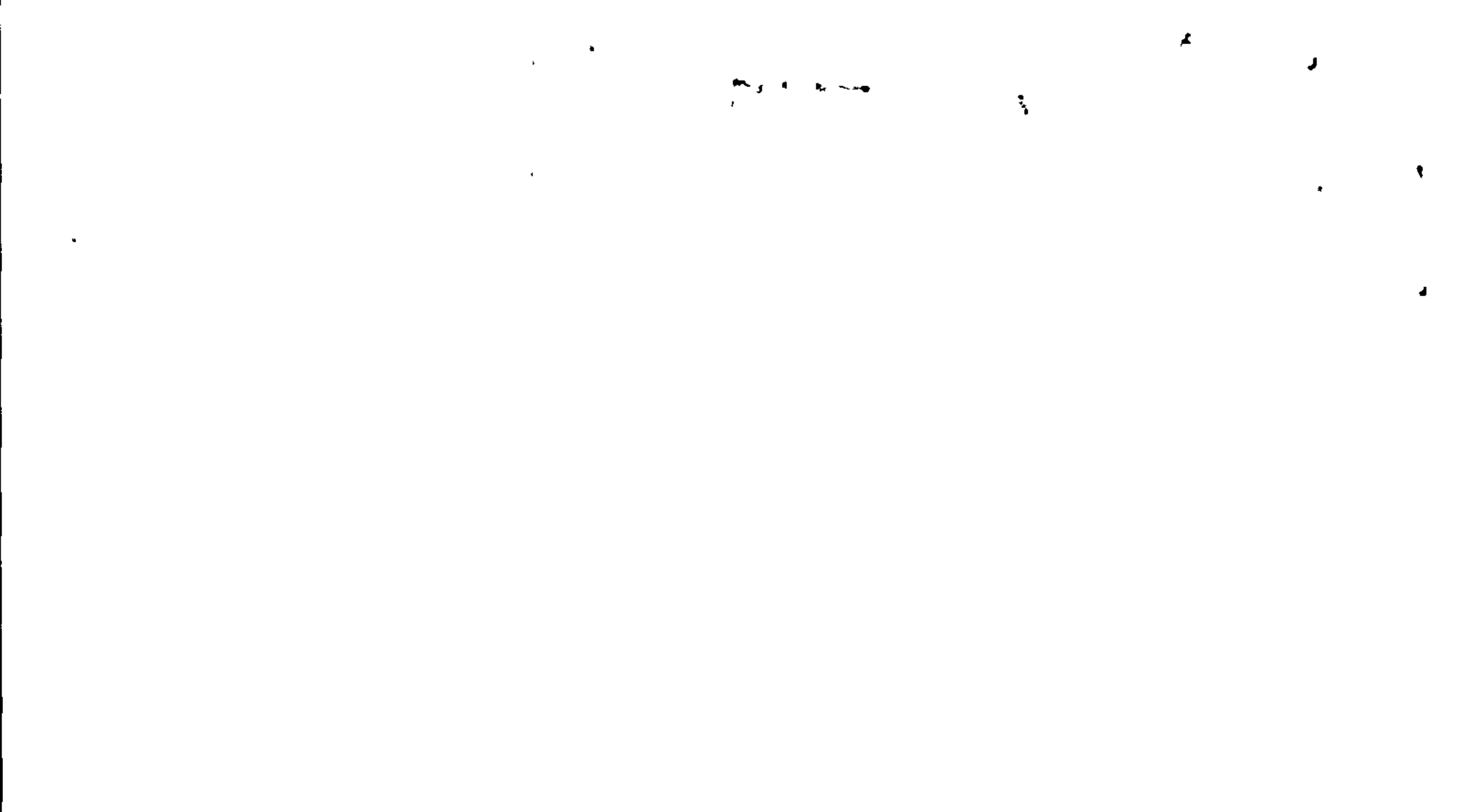
Exceptions: **None**

6. TERMS AND CONDITIONS

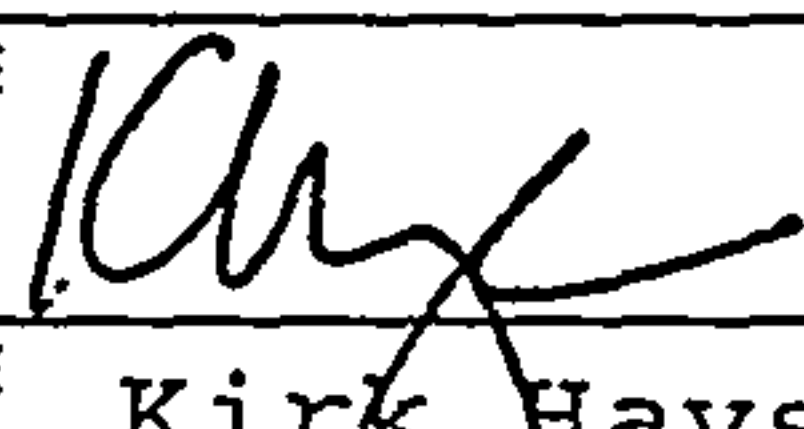
Unless sooner surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator, this airworthiness certificate is effective as long as the maintenance, preventative maintenance, and alterations are performed in accordance with Parts 21, 43, and 91 of the Federal Aviation Regulations, as appropriate, and the aircraft is registered in the United States.

DATE OF ISSUANCE	FAA REPRESENTATIVE	DESIGNATION NUMBER
5-28-97	 Richard E. Dumler	DAR-88-FS-SW

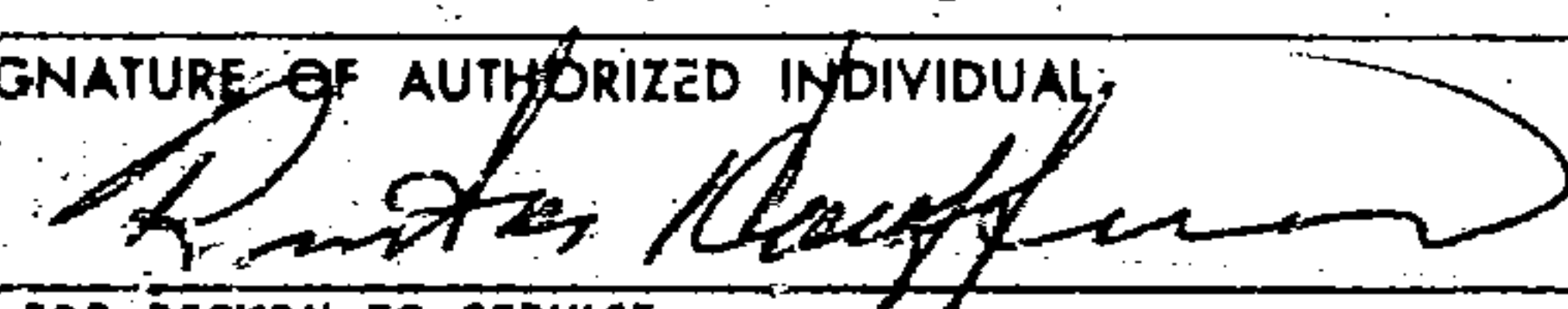
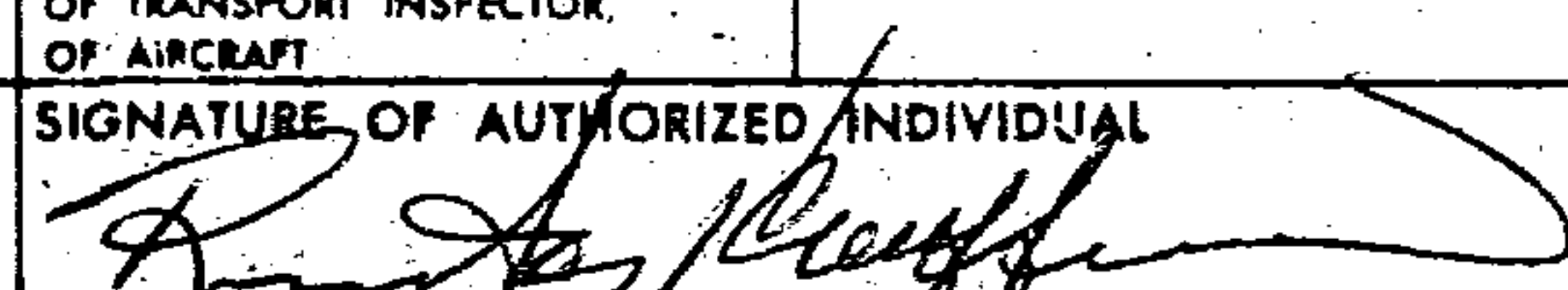
Any alteration, reproduction, or misuse of this certificate may be punishable by a fine not exceeding \$1,000, or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE FEDERAL AVIATION REGULATIONS.



FORM APPROVED
OMB No. 2120-0042

UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION-MIKE MONROEY AERONAUTICAL CENTER AIRCRAFT REGISTRATION APPLICATION			CERT. ISSUE DATE	
UNITED STATES REGISTRATION NUMBER N2158U				
AIRCRAFT MANUFACTURER & MODEL Cessna Citation501				
AIRCRAFT SERIAL No. 501-0091			FOR FAA USE ONLY	
TYPE OF REGISTRATION (Check one box)				
<input type="checkbox"/> 1. Individual <input type="checkbox"/> 2. Partnership <input checked="" type="checkbox"/> 3. Corporation <input type="checkbox"/> 4. Co-owner <input type="checkbox"/> 5. Gov't. <input type="checkbox"/> 8. Non-Citizen Corporation				
NAME OF APPLICANT (Person(s) shown on evidence of ownership. If individual, give last name, first name, and middle initial.)				
North American Jet, Inc.				
Mail: P O Box 1217 Georgetown TX 78628				
TELEPHONE NUMBER: ()				
ADDRESS (Permanent mailing address for first applicant listed.)				
Number and street: 7420 Airport Road				
Rural Route: P.O. Box:				
CITY		STATE	ZIP CODE	
Georgetown		TX	78628	
<input type="checkbox"/> CHECK HERE IF YOU ARE ONLY REPORTING A CHANGE OF ADDRESS ATTENTION! Read the following statement before signing this application. This portion MUST be completed. A false or dishonest answer to any question in this application may be grounds for punishment by fine and / or imprisonment (U.S. Code, Title 18, Sec. 1001).				
CERTIFICATION				
I/WE CERTIFY:				
(1) That the above aircraft is owned by the undersigned applicant, who is a citizen (including corporations) of the United States. (For voting trust, give name of trustee: _____), or:				
CHECK ONE AS APPROPRIATE:				
a. <input type="checkbox"/> A resident alien, with alien registration (Form 1-151 or Form 1-551) No. _____				
b. <input type="checkbox"/> A non-citizen corporation organized and doing business under the laws of (state) _____ and said aircraft is based and primarily used in the United States. Records or flight hours are available for inspection at _____				
(2) That the aircraft is not registered under the laws of any foreign country; and				
(3) That legal evidence of ownership is attached or has been filed with the Federal Aviation Administration.				
NOTE: If executed for co-ownership all applicants must sign. Use reverse side if necessary.				
TYPE OR PRINT NAME BELOW SIGNATURE				
EACH PART OF THIS APPLICATION MUST BE SIGNED IN INK.	SIGNATURE	TITLE	DATE	
		Pres.	4/4/97	
	Kirk Hays			
	SIGNATURE	TITLE	DATE	
	SIGNATURE	TITLE	DATE	
NOTE Pending receipt of the Certificate of Aircraft Registration, the aircraft may be operated for a period not in excess of 90 days, during which time the PINK copy of this application must be carried in the aircraft.				

Work Order #: 42181

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION				Form Approved Budget Bureau No. 04-R060.1	
MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)				FOR FAA USE ONLY	
				OFFICE IDENTIFICATION	
				GLO7 CMH OH	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.					
1. AIRCRAFT	MAKE	Cessna	MODEL	501	
	SERIAL NO.	501-0091	NATIONALITY AND REGISTRATION MARK	N39BE	
2. OWNER	NAME (As shown on registration certificate)	HPH Aviation	ADDRESS (As shown on registration certificate)	7395 South Peoria Street Englewood CO 80112	
	3. FOR FAA USE ONLY				
4. UNIT IDENTIFICATION					
UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE	
				REPAIR	ALTERATION
AIRFRAME	***** (As described in item 1 above) *****				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				
6. CONFORMITY STATEMENT					
A. AGENCY'S NAME AND ADDRESS		B. KIND OF AGENCY		C. CERTIFICATE NO.	
Electrosonics Division AirRadio Corporation Port Columbus International Airport Columbus, Ohio 43219		U.S. CERTIFICATED MECHANIC		Repair Station 1009 Radio Class 1, 2, & 3 Limited Instruments Limited Specialized Services	
		FOREIGN CERTIFICATED MECHANIC			
		X CERTIFICATED REPAIR STATION			
		MANUFACTURER			
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.					
DATE		SIGNATURE OF AUTHORIZED INDIVIDUAL			
7-14-90					
7. APPROVAL FOR RETURN TO SERVICE					
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED					
BY	FAA FLT. STANDARDS INSPECTOR	MANUFACTURER	INSPECTION AUTHORIZATION	OTHER (Specify)	
	FAA DESIGNER	X REPAIR STATION	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT		
DATE OF APPROVAL OR REJECTION		CERTIFICATE OR DESIGNATION NO.	SIGNATURE OF AUTHORIZED INDIVIDUAL		
7-14-90		1009			

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. DESCRIPTION OF WORK ACCOMPLISHED (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

1. The following equipment was removed from the aircraft:

NorthStar Loran C
Loran Antenna
Antenna Coupler

2. The following equipment was installed in the aircraft:

PART NO.	PART NAME	STATION	INSTALL MANUAL NO.
13824-02	Trimble TNL-2000 GPS Receiver	108.00	14716-00 Rev. A
12038-00	Trimble TNL-2000 GPS Antenna	150.00	"
	ElectroSonics Relay Switching Box	134.00	"
	Cooling Fan	105.00	---

3. The above work was accomplished I.A.W. A.C. 43.13-1A, Chapter 11 and A.C. 43.13-2A, Chapters 1, 2, and 3.

4. Electrical load check I.A.W. A.C. 43.13-2A, Chapter 2, Paragraph 27 and found to be within limits.

5. The Trimble TNL-2000 GPS is not approved for IFR. The instrument panel has been placarded:

"GPS NOT APPROVED FOR IFR"

6. Aircraft must be loaded I.A.W. the prescribed loading information from the manufacturer.

Moment 1796098.4
----- = ----- = New E.W. CG= 260.02 New useful load= 4944.3
Weight 6905.7

----- **END** -----

O-1	M-1	S-1	APS	C-1			A-1
O-2							A-2
O-3							A-3
O-4							A-4
O-5							A-5
O-6							
O-7	O-8	C-2	C-3	C-4			
O-8							

RECEIVED
JUL 17 1990
FSDO
COLUMBUS, OH

☐ ADDITIONAL SHEETS ARE ATTACHED

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION				RECEIVED JAN 04 1990		Form Approved Budget Bureau No. 04-R060.1	
MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance) LAS FSDO						FOR FAA USE ONLY	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.							
1. AIRCRAFT	MAKE CESSNA/CITATION I			MODEL 501			
	SERIAL NO. 501-0091			NATIONALITY AND REGISTRATION MARK N39BE			
2. OWNER	NAME (As shown on registration certificate) BANNEN ENTERPRISES			ADDRESS (As shown on registration certificate) 10 Wild Dunes Court Las Vegas, NV 89113			
	3. FOR FAA USE ONLY						
4. UNIT IDENTIFICATION							
UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE		REPAIR	ALTER- ATION
AIRFRAME	***** (As described in item 1 above) *****						X
POWERPLANT							
PROPELLER							
APPLIANCE	TYPE						
	MANUFACTURER						
6. CONFORMITY STATEMENT							
A. AGENCY'S NAME AND ADDRESS				B. KIND OF AGENCY		C. CERTIFICATE NO.	
HUGHES AVIATION SERVICES 6005 LAS VEGAS BLVD. SOUTH LAS VEGAS, NV 89119				U.S. CERTIFICATED MECHANIC		AIRFRAME 1, 3 & 4 LS3R669L	
				FOREIGN CERTIFICATED MECHANIC			
				X CERTIFICATED REPAIR STATION			
				MANUFACTURER			
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.							
DATE 12-28-89				SIGNATURE OF AUTHORIZED INDIVIDUAL <i>Tom Bosly</i>			
7. APPROVAL FOR RETURN TO SERVICE							
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED							
BY	FAA FLT. STANDARDS INSPECTOR	MANUFACTURER	INSPECTION AUTHORIZATION		OTHER (Specify)		
	FAA DESIGNEE	XX REPAIR STATION	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT				
DATE OF APPROVAL OR REJECTION 12-28-89		CERTIFICATE OR DESIGNATION NO. LS3R669L		SIGNATURE OF AUTHORIZED INDIVIDUAL <i>Bruce Stopp</i>			

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. DESCRIPTION OF WORK ACCOMPLISHED (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Installed B F Goodrich brakes, wheels and tires in accordance with Cessna's Service Bulletin 32-38 dated 2-10-89 and Cessna Citation Maintenance Manual Chapter 32. Aircraft weight and balance not effected by Aircraft Serial Number.

-----END-----

☐ ADDITIONAL SHEETS ARE ATTACHED

RECEIVED

JUL 13 1989 U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION MAJOR REPAIR AND ALTERATION LAS ESDO (Airframe, Powerplant, Propeller, or Appliance)		Form Approved Budget Bureau No. 04-R060.1 FOR FAA USE ONLY OFFICE IDENTIFICATION LAS ESDO	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.			
1. AIRCRAFT	MAKE CESSNA	MODEL 501	
	SERIAL NO. 501-0091	NATIONALITY AND REGISTRATION MARK N39BE	
2. OWNER	NAME (As shown on registration certificate) AVIONS ACFT SALES & CNSUL INC.		ADDRESS (As shown on registration certificate) 998 BLUESAIL DRIVE WESTERVILLE, OH 43081
	3. FOR FAA USE ONLY		
4. UNIT IDENTIFICATION			
UNIT	MAKE	MODEL	SERIAL NO.
AIRFRAME	(As described in item 1 above)		X
POWERPLANT			
PROPELLER			
APPLIANCE	TYPE		
	MANUFACTURER		
6. CONFORMITY STATEMENT			
A. AGENCY'S NAME AND ADDRESS		B. KIND OF AGENCY	C. CERTIFICATE NO.
HUGHES AVIATION SERVICES 6005 LAS VEGAS BLVD. SOUTH LAS VEGAS, NV 89119		U.S. CERTIFICATED MECHANIC	LS3R669L RADIO CLASS 1,2,3 LIMITED INSTRUMENT
		FOREIGN CERTIFICATED MECHANIC	
		<input checked="" type="checkbox"/> CERTIFICATED REPAIR STATION	
		MANUFACTURER	
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.			
DATE 7-11-89		SIGNATURE OF AUTHORIZED INDIVIDUAL Gary L. Rickett GARY L. RICKETT	
7. APPROVAL FOR RETURN TO SERVICE			
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED			
BY	FAA FLT. STANDARDS INSPECTOR	MANUFACTURER	INSPECTION AUTHORIZATION
	FAA DESIGNEE	<input checked="" type="checkbox"/> REPAIR STATION	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT
DATE OF APPROVAL OR REJECTION 7-11-89		CERTIFICATE OR DESIGNATION NO. LS3R669L	SIGNATURE OF AUTHORIZED INDIVIDUAL Gary P. Neurohr GARY P. NEUROHR

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. DESCRIPTION OF WORK ACCOMPLISHED (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

INSTALLED HEADS UP TECHNOLOGIES, INC. HEADS UP CHECKLIST IN ACCORDANCE WITH DRAWING NO. HUC/G-3-0-0-2a-0, REV. 02a, DATED 6-27-88 AND USING THE AC 43.13-1A, CHANGE 3, CHAPTER 2, SEC. 3, CHAPTER 5, SEC 1, CHAPTER 11, SEC 1, 2, 3, 4, 5, 7, CHAPTER 13 AS A GUIDE.

AIRCRAFT WEIGHT AND BALANCE AND EQUIPMENT LIST REVISED ACCORDINGLY.

MAGNETIC COMPASS CHECKED.

HEADS UP CHECKLIST INSTALLED AS OPTIONAL EQUIPMENT AND DOES NOT SUPERCEDE THE FAA APPROVED AIRPLANE FLIGHT MANUAL.

END

☐ ADDITIONAL SHEETS ARE ATTACHED

RECEIVED JUL 19 1989 MAJOR REPAIR AND ALTERATION LAS ESDQ (Airframe, Powerplant, Propeller, or Appliance)		U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION Form Approved Budget Bureau No. 04-R060.1 FOR FAA USE ONLY OFFICE IDENTIFICATION LAS ESDQ	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.			
1. AIRCRAFT	MAKE CESSNA	MODEL 501	
	SERIAL NO. 501-0091	NATIONALITY AND REGISTRATION MARK N39BE	
2. OWNER	NAME (As shown on registration certificate) AVIONS ACFT SALES AND CNSUL INC.		ADDRESS (As shown on registration certificate) 998 BLUESAIL DRIVE WESTERVILLE, OH 43081
	3. FOR FAA USE ONLY		
4. UNIT IDENTIFICATION			
UNIT	MAKE	MODEL	SERIAL NO.
AIRFRAME	(As described in item 1 above)		X
POWERPLANT			
PROPELLER			
APPLIANCE	TYPE		
	MANUFACTURER		
5. TYPE			
6. CONFORMITY STATEMENT			
A. AGENCY'S NAME AND ADDRESS		B. KIND OF AGENCY	
HUGHES AVIATION SERVICES 6005 LAS VEGAS BLVD. SOUTH LAS VEGAS, NV 89119		C. CERTIFICATE NO.	
		LS3R669L	
		AIRFRAME	
		CLASS 1, 3, 4	
		<input type="checkbox"/> U.S. CERTIFICATED MECHANIC <input type="checkbox"/> FOREIGN CERTIFICATED MECHANIC <input checked="" type="checkbox"/> CERTIFICATED REPAIR STATION <input type="checkbox"/> MANUFACTURER	
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.			
DATE 7-11-89		SIGNATURE OF AUTHORIZED INDIVIDUAL DAVID L. STOTTS	
7. APPROVAL FOR RETURN TO SERVICE			
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED			
BY	FAA FLT. STANDARDS INSPECTOR	MANUFACTURER	INSPECTION AUTHORIZATION
	FAA DESIGNEE	REPAIR STATION	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT
DATE OF APPROVAL OR REJECTION 7-11-89		CERTIFICATE OR DESIGNATION NO. LS3R669L	SIGNATURE OF AUTHORIZED INDIVIDUAL GARY P. NEUROHR

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. DESCRIPTION OF WORK ACCOMPLISHED (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

INSTALLED FT. WORTH AIRWORKS FREON AIR CONDITIONING SYSTEM IN ACCORDANCE WITH DRAWING LIST NO. DL 88-15, REV. C, DATED MARCH 31, 1989 PER STC #SA7580SW.

AIRCRAFT WEIGHT AND BALANCE AND EQUIPMENT LIST REVISED ACCORDINGLY.

MAGNETIC COMPASS CHECKED.

FLIGHT MANUAL SUPPLEMENT, PN C1004L, DATED APRIL 7, 1989, INSERTED IN FAA APPROVED AIRPLANE FLIGHT MANUAL.

END

☐ ADDITIONAL SHEETS ARE ATTACHED

RECEIVED

MAR 24 1989

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Form Approved
Budget Bureau No. 04-R060.1

LAS FSDO MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

FOR FAA USE ONLY

OFFICE IDENTIFICATION
LAS FSDO

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE CESSNA	MODEL 501
	SERIAL NO. 0091	NATIONALITY AND REGISTRATION MARK N39BE
2. OWNER	NAME (As shown on registration certificate) AVIONS AIRCRAFT SALES AND CONSULTING INC.	ADDRESS (As shown on registration certificate) 998 BLUESAIL DRIVE WESTERVILLE, OH 43081

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION				5. TYPE	
UNIT	MAKE	MODEL	SERIAL NO.	REPAIR	ALTERATION
AIRFRAME	***** (As described in item 1 above) *****				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS HUGHES AVIATION SERVICES 6005 LAS VEGAS BLVD SOUTH LAS VEGAS, NV 89119	B. KIND OF AGENCY	C. CERTIFICATE NO.
	<input type="checkbox"/> U.S. CERTIFICATED MECHANIC	LS3R339L RADIO CLASS 1,2,3 LIMITED INSTRUMENT
	<input type="checkbox"/> FOREIGN CERTIFICATED MECHANIC	
	<input checked="" type="checkbox"/> CERTIFICATED REPAIR STATION	
	MANUFACTURER	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

DATE 3-22-89	SIGNATURE OF AUTHORIZED INDIVIDUAL <i>Crist A. Ricotti</i> CRIST A. RICOTTI
-----------------	---

7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☒ APPROVED ☐ REJECTED

BY	FAA FLT STANDARDS INSPECTOR	MANUFACTURER	INSPECTION AUTHORIZATION	OTHER (Specify)
	FAA DESIGNEE	<input checked="" type="checkbox"/> REPAIR STATION	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION 3-22-89	CERTIFICATE OR DESIGNATION NO. LS3R669L	SIGNATURE OF AUTHORIZED INDIVIDUAL <i>Gary P. Neurohr</i> GARY P. NEUROHR
--	--	---

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. DESCRIPTION OF WORK ACCOMPLISHED (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

INSTALLED NORTHSTAR MIA S/N 19095 IN ACCORDANCE WITH MANUAL GM-295 AND USING A.C. 43.13-1A, CHAPTER 5, PARAGRAPHS 227, 228, 230-233, CHAPTER 11, PARAGRAPHS 406, 428-430, 442-452, 464-466, 478, 497, 498, 514-519, CHAPTER 13, PARAGRAPHS 656-659, 662, AND A.C. 43.13-2A, CHAPTER 2, PARAGRAPHS 21-27 AND CHAPTER 3, PARA. 36, 38 AND 44 AS A GUIDE.

AIRCRAFT WEIGHT AND BALANCE AND EQUIPMENT LIST REVISED ACCORDINGLY.

ELECTRICAL LOAD EVALUATION PERFORMED.

MAGNETIC COMPASS CHECKED.

LORAN C PLACARDED "LORAN C NOT APPROVED FOR IFR".

LORAN C SOFTWARE CODE: J19,198,8903

LORAN C SYSTEM APPROVED FOR VFR ENROUTE OPERATION PER A.C. 20-121A, APP. I, SEC. 3.

LORAN C JS STAND ALONE.

-----END-----

☐ ADDITIONAL SHEETS ARE ATTACHED

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION				RECEIVED FAA FEB 13 1985		Form Approved Budget Bureau No. 04-R060.1	
MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)				FOR FAA USE ONLY			
				OFFICE IDENTIFICATION AWP-FSDO-01			
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.							
1. AIRCRAFT	MAKE CESSNA			MODEL 501			
	SERIAL NO. 501-0091			NATIONALITY AND REGISTRATION MARK N 39RE			
2. OWNER	NAME (As shown on registration certificate) ELLIOTT, ROBERT A. TRUSTEE			ADDRESS (As shown on registration certificate) 11292 ORANGEVIEW ROAD SANTA ANA, CA. 92705			
3. FOR FAA USE ONLY							
4. UNIT IDENTIFICATION						5. TYPE	
UNIT	MAKE	MODEL	SERIAL NO.	REPAIR	ALTER- ATION		
AIRFRAME	***** (As described in item 1 above) *****				X		
POWERPLANT							
PROPELLER							
APPLIANCE	TYPE						
	MANUFACTURER						
6. CONFORMITY STATEMENT							
A. AGENCY'S NAME AND ADDRESS				B. KIND OF AGENCY		C. CERTIFICATE NO.	
TRACOR AVIATION INC. 495 SO. FAIRVIEW AVE. GOLETA, CA. 93117				U.S. CERTIFICATED MECHANIC		401-168 AIRFRAME CLASS 2&3	
				FOREIGN CERTIFICATED MECHANIC			
				X CERTIFICATED REPAIR STATION			
				MANUFACTURER			
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.							
DATE 9-5-85				SIGNATURE OF AUTHORIZED INDIVIDUAL A. SHEFFIELD <i>A. Sheffield</i>			
7. APPROVAL FOR RETURN TO SERVICE							
Pursuant to the authority given persons specified below, this unit was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED							
FAA RT. STANDARDS INSPECTOR	MANUFACTURER	INSPECTION AUTHORIZATION		OTHER (Specify)			
FAA EFSIGNEE	X REPAIR STATION	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT					
DATE OF APPROVAL OR REJECTION 9-5-85		CERTIFICATE OR DESIGNATION NO. 401-168		SIGNATURE OF AUTHORIZED INDIVIDUAL JACK VANCE <i>Jack Vance</i>			

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. DESCRIPTION OF WORK ACCOMPLISHED (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

1. REPLACED CABIN INTERIOR, MODIFIED SEATS, BULKHEADS AND SUPPORT STRUCTURE IN ACCORDANCE WITH TRACOR AVIATION'S DRAWING LIST DL-342-001 REV. N/C DATED 8/29/85. SUBSTANTIATED BY FAA FORM 8110-3 DER APPROVED. MATERIALS MEET THE REQUIREMENTS OF FAR 25.853 (b).
2. INSTALLED TAIL CONE SKI RACK IN ACCORDANCE WITH BRANSON AIRCRAFT CORPS. DRAWING 90310 AND STC SA51RM.
3. WEIGHT AND BALANCE DATA REVISED BY COMPUTATION.

-----NOTHING FOLLOWS-----

☐ ADDITIONAL SHEETS ARE ATTACHED

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION—FEDERAL AVIATION ADMINISTRATION
STANDARD AIRWORTHINESS CERTIFICATE

1. NATIONALITY AND REGISTRATION MARKS	2. MANUFACTURER AND MODEL	3. AIRCRAFT SERIAL NUMBER	4. CATEGORY
N33BE	Cessna	501 501-0091	Normal

5. AUTHORITY AND BASIS FOR ISSUANCE
This airworthiness certificate is issued pursuant to the Federal Aviation Act of 1958 and certifies that, as of the date of issuance, the aircraft to which issued has been inspected and found to conform to the type certificate therefor, to be in condition for safe operation, and has been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation, except as noted herein.

Exceptions: None

6. TERMS AND CONDITIONS
Unless sooner surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator, this airworthiness certificate is effective as long as the maintenance, preventative maintenance, and alterations are performed in accordance with Parts 21, 43, and 91 of the Federal Aviation Regulations, as appropriate, and the aircraft is registered in the United States.

DATE OF ISSUANCE	FAA REPRESENTATIVE	DESIGNATION NUMBER
2-27-79	R.M. Rendon	DMIR CE-52

Any alteration, reproduction, or misuse of this certificate may be punishable by a fine not exceeding \$1,000, or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE FEDERAL AVIATION REGULATIONS.

FAA AIRCRAFT REGISTRY
CAMERA NO. 5 DATE: 7-17-84

1. AIRCRAFT IDENTIFICATION

2. AIRCRAFT DESCRIPTION

3. AIRCRAFT HISTORY

4. AIRCRAFT STATUS

5. AIRCRAFT LOCATION

6. AIRCRAFT OPERATOR

7. AIRCRAFT OWNER

8. AIRCRAFT REGISTRATION

9. AIRCRAFT TYPE

10. AIRCRAFT MODEL

11. AIRCRAFT SERIAL

12. AIRCRAFT WEIGHT

13. AIRCRAFT LENGTH

14. AIRCRAFT HEIGHT

15. AIRCRAFT WINGSPAN

16. AIRCRAFT ENGINE

17. AIRCRAFT PROPELLER

18. AIRCRAFT LANDING GEAR

19. AIRCRAFT INTERIOR

20. AIRCRAFT EXTERIOR


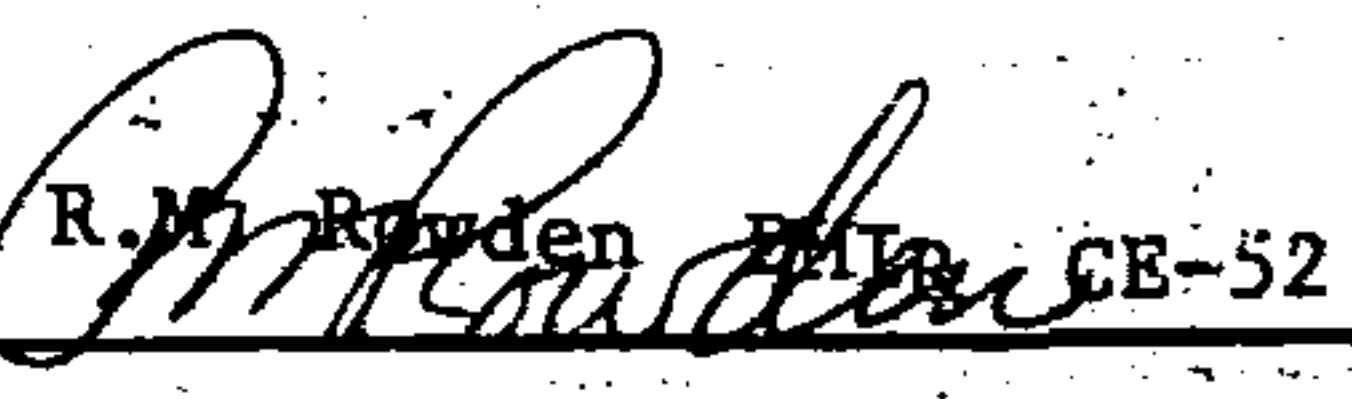
21. AIRCRAFT PHOTOGRAPH

22. AIRCRAFT VIDEO

23. AIRCRAFT DOCUMENTS

24. AIRCRAFT RECORDS

25. AIRCRAFT NOTES

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION APPLICATION FOR AIRWORTHINESS CERTIFICATE				INSTRUCTIONS—Print or type. Do not write in shaded areas; these are for FAA use only. Submit original only to an authorized FAA Representative. If additional space is required, use an attachment. For special flight permits complete Sections II and VI or VII as applicable.			
I. AIRCRAFT DESCRIPTION	1. REGISTRATION MARK N33BE 39BE	2. AIRCRAFT BUILDER'S NAME (make) Cessna	3. AIRCRAFT MODEL DESIGNATION 501	4. YR. MFG. 1979	FAA CODING 2-076603		
	5. AIRCRAFT SERIAL NO. 501-0091	6. ENGINE BUILDER'S NAME (make) UACL	7. ENGINE MODEL DESIGNATION JT15D-1		61509		
	8. NUMBER OF ENGINES Two	9. PROPELLER BUILDER'S NAME (make) N/A	10. PROPELLER MODEL DESIGNATION N/A		11. AIRCRAFT IS: <input type="checkbox"/> EXPORT <input checked="" type="checkbox"/> IMPORT		
II. CERTIFICATION REQUESTED	APPLICATION IS HEREBY MADE FOR: (Check applicable items)						
	A <input type="checkbox"/> I <input checked="" type="checkbox"/> STANDARD AIRWORTHINESS CERT. (Indicate category) <input checked="" type="checkbox"/> NORMAL <input type="checkbox"/> UTILITY <input type="checkbox"/> ACROBATIC <input type="checkbox"/> TRANSPORT <input type="checkbox"/> GLIDER <input type="checkbox"/> BALLOON						
	B <input type="checkbox"/> SPECIAL AIRWORTHINESS CERTIFICATE (Check appropriate items)						
	2 <input type="checkbox"/> LIMITED						
	5 <input type="checkbox"/> PROVISIONAL (Indicate class)						
	3 <input type="checkbox"/> RESTRICTED (Indicate operation(s) to be conducted)						
	4 <input type="checkbox"/> EXPERIMENTAL (Indicate operation(s) to be conducted)						
	8 <input type="checkbox"/> SPECIAL FLIGHT PERMIT (Indicate operation to be conducted then complete Section VI or VII as applicable on reverse side)						
	1 <input type="checkbox"/> CLASS I						
	2 <input type="checkbox"/> CLASS II						
III. OWNER'S CERTIFICATION	C <input type="checkbox"/> 6 MULTIPLE AIRWORTHINESS CERTIFICATE (Check appropriate Restricted Operation and Standard or Limited as applicable above)						
	A. REGISTERED OWNER (As shown on Certificate of Aircraft Registration) IF DEALER, CHECK HERE <input type="checkbox"/>						
	NAME Cessna Aircraft Company			ADDRESS West K-42 Highway, P.O. Box 7704 Wichita, Kansas 67277			
	B. AIRCRAFT CERTIFICATION BASIS (Check applicable blocks and complete items as indicated)						
	X <input type="checkbox"/> AIRCRAFT SPECIFICATION OR TYPE CERTIFICATION DATA SHEET (Give No. and Revision No.) A27CE			X <input type="checkbox"/> AIRWORTHINESS DIRECTIVES (Check if all applicable AD's complied with and give latest AD No.) Issue: 79-2-7			
	<input type="checkbox"/> AIRCRAFT LISTING (Give page No(s).) N/A			<input type="checkbox"/> SUPPLEMENTAL TYPE CERTIFICATE (List number of each STC incorporated) N/A			
	C. AIRCRAFT OPERATION AND MAINTENANCE RECORDS						
	X <input type="checkbox"/> CHECK IF RECORDS IN COMPLIANCE WITH FAR 91.173		TOTAL AIRFRAME HOURS— 7.6		3 <input type="checkbox"/> EXPERIMENTAL ONLY—Enter hours flown since last certificate issued or renewed N/A		
	D. CERTIFICATION—I hereby certify that I am the owner (or his agent) of the aircraft described above; that the aircraft is registered with the Federal Aviation Administration in accordance with Section 501 of the Federal Aviation Act of 1958, and applicable Federal Aviation Regulations; and that the aircraft has been inspected and is airworthy and eligible for the airworthiness certificate requested.						
	DATE OF APPLICATION 2-27-79		NAME AND TITLE (Print or type) A.D. Schmidt, Quality Control Mgr.			SIGNATURE 	
IV. INSPECTION AGENCY VERIFICATION	A. THE AIRCRAFT DESCRIBED ABOVE HAS BEEN INSPECTED AND FOUND AIRWORTHY BY: (Complete this section only if FAR 21.183 (d) applies)						
	2 <input type="checkbox"/> FAR PART 121 OR 127 CERTIFICATE HOLDER (Give Certificate No.)		3 <input type="checkbox"/> CERTIFICATED MECHANIC (Give Certificate No.)		6 <input type="checkbox"/> CERTIFICATED REPAIR STATION (Give Certificate No.)		
	5 <input type="checkbox"/> AIRCRAFT MANUFACTURER (Give Name of Firm)						
	DATE		TITLE		SIGNATURE		
V. FAA REPRESENTATIVE CERTIFICATION	(Check ALL applicable blocks) I find that the aircraft described in Section I or VII meets the requirements for: <input checked="" type="checkbox"/> The certification requested, or <input type="checkbox"/> Amendment or modification of its current airworthiness certificate. Inspection for a special flight permit under Section VII was conducted by: <input type="checkbox"/> FAA Inspector; certificate holder under <input type="checkbox"/> FAR 65, <input type="checkbox"/> FAR 121 or 127, or <input type="checkbox"/> FAR 145.						
	DATE 2-27-79	DISTRICT OFFICE CE-EMDO 3-0-43	DESIGNEE'S SIGNATURE AND NO.  CE-52			FAA INSPECTOR'S SIGNATURE	

VI. PRODUCTION FLIGHT TESTING	A. MANUFACTURER							
	NAME		ADDRESS					
	B. PRODUCTION BASIS (Check applicable item)							
	<input type="checkbox"/> PRODUCTION CERTIFICATE (Give production certificate number) <input type="checkbox"/> TYPE CERTIFICATE ONLY <input type="checkbox"/> APPROVED PRODUCTION INSPECTION SYSTEM							
C. GIVE QUANTITY OF CERTIFICATES REQUIRED FOR OPERATING NEEDS:								
DATE OF APPLICATION		NAME AND TITLE (Print or type)		SIGNATURE				
VII. SPECIAL FLIGHT PERMIT PURPOSES OTHER THAN PRODUCTION FLIGHT TEST	A. DESCRIPTION OF AIRCRAFT							
	REGISTERED OWNER		ADDRESS					
	BUILDER (Make)		MODEL					
	SERIAL NUMBER		REGISTRATION MARK					
	B. DESCRIPTION OF FLIGHT							
	FROM		TO					
	VIA		DEPARTURE DATE	DURATION				
	C. CREW REQUIRED TO OPERATE THE AIRCRAFT AND ITS EQUIPMENT							
	<input type="checkbox"/>	PILOT	<input type="checkbox"/>	CO-PILOT	<input type="checkbox"/>	NAVIGATOR	<input type="checkbox"/>	OTHER (Specify)
	D. THE AIRCRAFT DOES NOT MEET THE APPLICABLE AIRWORTHINESS REQUIREMENTS AS FOLLOWS:							
	E. THE FOLLOWING RESTRICTIONS ARE CONSIDERED NECESSARY FOR SAFE OPERATION (Use attachment if necessary)							
	F. CERTIFICATION —I hereby certify that I am the registered owner (or his agent) of the aircraft described above; that the aircraft is registered with the Federal Aviation Administration in accordance with Section 501 of the Federal Aviation Act of 1958, and applicable Federal Aviation Regulations; and that the aircraft has been inspected and is airworthy for the flight described.							
DATE		NAME AND TITLE (Print or type)		SIGNATURE				
VIII. AIRWORTHINESS DOCUMENTATION (FAA use only)	<input checked="" type="checkbox"/>	A. Operating Limitations and Markings in Compliance with FAR 91.31 as Applicable		G. Statement of Conformity, FAA Form 317 (Attach when required)				
	<input type="checkbox"/>	B. Current Operating Limitations Attached		H. Foreign Airworthiness Certification for Import Aircraft (Attach when required)				
	<input type="checkbox"/>	C. Data, Drawings, Photographs, etc. (Attach when required)		I. Previous Airworthiness Certificate Issued in Accordance with FAR _____ CAR _____ (Original attached)				
	<input checked="" type="checkbox"/>	D. Current Weight and Balance Information Available in Aircraft		J. Current Airworthiness Certificate Issued in Accordance with FAR 21.183a per 21.273 (Copy attached)				
	<input type="checkbox"/>	E. Major Repair and Alteration, FAA 337 (Attach when required)						
	<input checked="" type="checkbox"/>	F. This Inspection Recorded in Aircraft Records						

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)				Form Approved Budget Bureau No. 04-R060.1 FOR FAA USE ONLY OFFICE IDENTIFICATION GB FSDO 4-0-65	
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.					
1. AIRCRAFT	MAKE Cessna	MODEL 501			
	SERIAL NO. 501-0091	NATIONALITY AND REGISTRATION MARK N39BE			
2. OWNER	NAME (As shown on registration certificate) Elliott, Robert A. Trustee		ADDRESS (As shown on registration certificate) 11292 Orangeview Rd. Santa Ana, Ca. 92705		
	3. FOR FAA USE ONLY				
RECEIVED MAR 25 1980 LGB FSDO 65					
4. UNIT IDENTIFICATION					5. TYPE
UNIT	MAKE	MODEL	SERIAL NO.	REPAIR	ALTERATION
AIRFRAME	***** (As described in item 1 above) *****				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				
6. CONFORMITY STATEMENT					
A. AGENCY'S NAME AND ADDRESS			B. KIND OF AGENCY		C. CERTIFICATE NO.
Continental Avionics, Inc. 19711 S. Airport Way Santa Ana, Ca. 92707			U.S. CERTIFICATED MECHANIC		4708 Radio 1, 2, 3 Ltd. Inst.
			FOREIGN CERTIFICATED MECHANIC		
			X CERTIFICATED REPAIR STATION		
			MANUFACTURER		
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.					
DATE 3/21/80			SIGNATURE OF AUTHORIZED INDIVIDUAL <i>Dean T. Spillman</i>		
7. APPROVAL FOR RETURN TO SERVICE					
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED					
BY	FAA FLT. STANDARDS INSPECTOR	MANUFACTURER	INSPECTION AUTHORIZATION		OTHER (Specify)
	FAA DESIGNEE	X REPAIR STATION	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT		
DATE OF APPROVAL OR REJECTION 3/21/80		CERTIFICATE OR DESIGNATION NO. 4708		SIGNATURE OF AUTHORIZED INDIVIDUAL <i>Dean T. Spillman</i>	

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. DESCRIPTION OF WORK ACCOMPLISHED (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Installed the following:

J.E.T. AI-804 J/G attitude gyro

J.E.T. PS-823B emer. battery

Instrument installed in inst. panel above radio freq. selectors. Relocated ADF controller to R.H. side of Nav/Com controllers. PS-823B installed in nose equip. compartment. Power relay mounted adjacent to emer. battery.

Installation i/a/w mfrs. installation manual dated 6/1/72; AC 43.13-1, chap. 11, section 2, figs. 11.1, 11.2; section 3, fig. 11.7; and AC 43.13-2, chap. 2 fig. 2.5. Check list amended to ~~include~~ include operation of this equip.

This installation meets the requirements of FAR 135.149C .

*****NOTHING FOLLOWS*****

☐ ADDITIONAL SHEETS ARE ATTACHED

DEPARTMENT OF TRANSPORT
CERTIFICATE OF AIRWORTHINESS
FOR EXPORT



MINISTÈRE DES TRANSPORTS
CERTIFICAT DE NAVIGABILITÉ
POUR EXPORTATION

Number
Numéro ULX-8287

The Department of Transport, Canada, having regard to the Reports furnished to it, issues this Certificate of Airworthiness for Export in respect of the Aircraft/Engine identified below and more particularly described in the type appraisal* and specifications in accordance with the Aeronautics Act, Canada, and the Orders in Council in force thereunder.

Le Ministère des Transports du Canada, prenant connaissance des rapports qui lui ont été soumis, délivre le présent certificat de navigabilité pour exportation pour l'aéronef/moteur mentionné ci-dessous et plus particulièrement décrit dans l'homologation de type* et les spécifications conformément à la Loi sur l'aéronautique du Canada, et les ordonnances du conseil en vigueur de son fait.

For export to:
Pour exportation à: UNITED STATES OF AMERICA

Product is: ☒ New ☐ Used
Appareil: ☒ Neuf ☐ Usagé

Aircraft Manufacturer:
Constructeur de l'aéronef: N/A
Aircraft Model:
Modèle de l'aéronef: N/A
Aircraft Serial No.
No de série de l'aéronef: N/A
Type Appraisal No.*
No d'homologation de type*: E-11
Engine Manufacturer:
Constructeur du moteur: PRATT & WHITNEY AIRCRAFT OF CANADA LTD
Engine Model:
Modèle du moteur: JT15D-1A
Engine Serial No.(s):
No(s) de série du(de)s moteur(s): PCE-77022

Exceptions:

Remarks: Observations:

The engine covered by this Certificate has been examined and found to comply with U.S. Federal Aviation Regulations, Part 33, Amendment 1 effective February 1st, 1965; Amendment 2 effective July 6, 1966; and Amendment 3 effective April 3, 1967; and Advisory Circulars AC 33-1A and 33-3.



Dated at
Daté à Montreal, Quebec

This
Le 17th Day of November 1978
Jour de

for... Minister of Transport - Ministre des Transports

*Copies of the applicable Type Appraisal are available on request from the Department of Transport, Ottawa, K1A 0N8, Canada.
26-0037 (7-74)

*Copies d'homologation de type sont disponibles sur demande au Ministère des Transports, Ottawa, K1A 0N8, Canada.

FAA AIRCRAFT REGISTRY
CAMERA NO. 5 DATE: 7-17-84

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DEPARTMENT OF TRANSPORT
CERTIFICATE OF AIRWORTHINESS
FOR EXPORT



MINISTÈRE DES TRANSPORTS
CERTIFICAT DE NAVIGABILITÉ
POUR EXPORTATION

Number
Numéro ULX-8290

The Department of Transport, Canada, having regard to the Reports furnished to it, issues this Certificate of Airworthiness for Export in respect of the Aircraft/Engine identified below and more particularly described in the type appraisal* and specifications in accordance with the Aeronautics Act, Canada, and the Orders in Council in force thereunder.

Le Ministère des Transports du Canada, prenant connaissance des rapports qui lui ont été soumis, délivre le présent certificat de navigabilité pour exportation pour l'aéronef/moteur mentionné ci-dessous et plus particulièrement décrit dans l'homologation de type* et les spécifications conformément à la Loi sur l'aéronautique du Canada, et les ordonnances du conseil en vigueur de son fait.

For export to:
Pour exportation à:

UNITED STATES OF AMERICA

Product is: ☒ New ☐ Used
Appareil: ☒ Neuf ☐ Usagé

Aircraft Manufacturer:
Constructeur de l'aéronef: N/A

Aircraft Model:
Modèle de l'aéronef: N/A

Aircraft Serial No.
No de série de l'aéronef: N/A

Type Approval No.*
No d'homologation de type*: E-11

Engine Manufacturer:
Constructeur du moteur: PRATT & WHITNEY AIRCRAFT OF CANADA LTD

Engine Model:
Modèle du moteur: JT15D-1A

Engine Serial No.(s):
No(s) de série du(des) moteur(s): PCE-77028

Exceptions:

Remarks: Observations:

The engine covered by this Certificate has been examined and found to comply with U.S. Federal Aviation Regulations, Part 33, Amendment 1 effective February 1st, 1965; Amendment 2 effective July 6, 1966; and Amendment 3 effective April 3, 1967; and Advisory Circulars AC 33-1A and 33-3.



Dated at
Daté à Montreal, Quebec

This
Le 17th
Day of
Jour de November 19 78

*Copies of the applicable Type Approval are available on request from the Department of Transport, Ottawa, K1A 0N8, Canada.
26-0037 (7-74)

for... Minister of Transport - Ministre des Transports

*Copies d'homologation de type sont disponibles sur demande au Ministère des Transports, Ottawa, K1A 0N8 Canada.

Typed by # 7