

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 1

John D. Odegard School
of Aerospace Sciences
University of North Dakota
Box 9007 University Station
Grand Forks, ND 58202-9007

WKO#: 1023419
Mech: SJR
Shop Code: F
Equip Code: A
Opened: 10/23/2002 10:05

OBTAIN ALL
INITIALS BEFORE FILING

R/A
Parts (opt)

Date closed: 10/24/2002

Customer: UNDAF Acc#: 9503-9903-471

Preliminary Insp

In Progress Insp

N#: N777ND AofType: SR20



Model: SR20

Bill Meter: 22.5

A/F Tach: 22.5

Init: *sr*

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	22.5	22.5
IO-380-ES8B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	22.5	22.5
PHC-J3YF-1RF	FP1888B	PROPELLER	22.5	22.5

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	OT	Mech	Insp
1.	Acceptance Insp due	0520		Completed Insp checklist, oil & filter changed, ran back checked oil.	0520	N	10/23	3.0		sr	
2.	Flaps Insp	2750	1	replaced 2ea 50288-2750 W 10/24 1.0 cable flap relays opr 150 W 10/24 1.0 CKD OK.	2750	W	10/24	1.0		sr	mm
3.	FIRE EXtinguish Safety Seal Broken	2560	1	Installed New fire seal	2560	N	10/23	.1		sr	

Page 2 of 2

Work Order #: 23419

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
4	Prop Governor Leaking	6/20	T	Tightened all mount nuts Link ✓ good	6/20	N	10/23	.1		Em	
5	Fuel Surge Valve Left wing tank panel	2800	1	fuel strain/weep ok for flight IOW circum maintain normal change 28	2800	N	10/24	.3		SR	
					<p>I certify the aircraft airframe, airframe engine, propeller appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service Certified Repair Station O65R0924. Authorized Signature _____ Date 10/24/2002</p>						

Center for Aerospace Sciences
University of North Dakota
Grand Forks, North Dakota 58202

MATERIAL REQUISITION

10/23/02 ACFT NO. N777ND W/O NO. 1023419

[illegible]

Page 1 of 1

OBTAIN ALL
INITIALS BEFORE FILING

R/A SP

Parts (optl) SM Date cl

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>TSO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	31.8	31.8
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	31.8	31.8
PHC-J3YF-1RF	FP1868B	PROPELLER	31.8	31.8

[illegible]

Date closed: 11/19/02

In Progress Insp _____

Init DHT

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	CHT gage Flickers	77 20	1	Tightened loose wire on CHT probe. Ran A/C, CHT gage normal	77 20	N	11/19	1.0		DHT	
				Return A7972786066							

Page 1 of 1

Date closed: 11/25/02

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>TSO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	35.8	35.8
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	35.8	35.8
PHC-J3YF-1RF	FP1868B	PROPELLER	35.8	35.8

[illegible]

MATERIAL REQUISITION

[illegible]

Page 1 of 1

R/A 80 Parts (opt) 80 Date closed: 12/3

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>TSO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	35.8	35.8
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	35.8	35.8
PHC-J3YF-1RF	FP1888B	PROPELLER	35.8	35.8

[illegible]



Date closed: 12

In Progress Insp

A/F Tach: 35.8

Init mnf

[illegible]

Identify the aircraft/airframe, aircraft engine, propeller, or
appliance identified above was repaired and inspected in
accordance with current regulations of the Federal Aviation
Administration with respect to the work performed and
found to be airworthy and is approved for return to service.
Certified Repair Station OG5R092N.
Authorized Signature 
Date 2/11/2002 

NT7ND

S/N 1258

Airworthiness Directive 2002-24-08 Summary

Subject:	Prevent failure of the CAPS activation system in an emergency situation		
Manufacturer:	Cirrus	Category:	Airframe
Effective Date:	01/24/2003	Recurring:	No
Supersedes:	2002-05-05	Superseded By:	N/A

For complete information on this AD, please see:

AD 2002-24-08 (FAA Copy)

AD 2002-24-08 (From CFR)

AD 2002-24-08 Preamble

Model Applicability:

This AD affects the following airplane models and serial numbers that are certificated in any category:

Model	Serial numbers
SR20	1005 through 1195.
SR22	0002 through 0209.

N/A by S/N

Applicable Manufacturers Service Information:

Cirrus Service Bulletin SB 20-95-03, Issued: June 10, 2002

Cirrus Service Bulletin SB 20-95-04, Issued: July 10, 2002

Cirrus Service Bulletin SB 20-95-05, Issued: July 10, 2002

Cirrus Service Bulletin SB 20-95-05, Rev 1: dated August 14, 2002

Cirrus Service Bulletin SB 22-95-03, Issued: June 10, 2002

Cirrus Service Bulletin SB 22-95-04, Issued: July 10, 2002

Cirrus Service Bulletin SB 22-95-05, Issued: July 10, 2002

Cirrus Service Bulletin SB 22-95-05, Rev 1: dated August 14, 2002

Summary:

This amendment supersedes Airworthiness Directive (AD) 2002-05-05, which currently applies to certain Cirrus Design Corporation (Cirrus) Models SR20 and SR22 airplanes. AD 2002-05-05 currently requires you to incorporate temporary operating limitations into the Limitation Section of the airplane flight manual (AFM) for certain affected airplanes and install a cable clamp external to the cone adapter on the Cirrus Airplane Parachute System (CAPS) activation cable for all affected airplanes. AD 2002-05-05 resulted from a report from the manufacturer that certain CAPS may not activate in an emergency situation. This AD is the result of the manufacturer redesigning the CAPS activation system. This AD requires you to modify the CAPS activation system. The actions specified by this AD are intended to prevent failure of the CAPS activation system in an emergency situation. Failure of this system could result in occupant injury and/or loss of life and loss of aircraft.

es and Regulations

Federal Register

Vol. 67, No. 237

Tuesday, December 10, 2002

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2002-CE-31-AD; Amendment 39-12973; AD 2002-24-08]

RIN 2120-AA64

Airworthiness Directives; Cirrus Design Corporation Models SR20 and SR22 Airplanes

AGENCY: Federal Aviation Administration, DOT

ACTION: Final rule.

SUMMARY: This amendment supersedes Airworthiness Directive (AD) 2002-05-05, which currently applies to certain Cirrus Design Corporation (Cirrus) Models SR20 and SR22 airplanes. AD 2002-05-05 currently requires you to incorporate temporary operating limitations into the Limitation Section of the airplane flight manual (AFM) for certain affected airplanes and install a cable clamp external to the cone adapter on the Cirrus Airplane Parachute System (CAPS) activation cable for all affected airplanes. AD 2002-05-05 resulted from a report from the manufacturer that certain CAPS may not activate in an emergency situation. This AD is the result of the manufacturer redesigning the CAPS activation system. This AD requires you to modify the CAPS activation system. The actions specified by this AD are intended to prevent failure of the CAPS activation system in an emergency situation. Failure of this system could result in occupant injury and/or loss of life and loss of aircraft.

DATES: This AD becomes effective on January 24, 2003.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of January 24, 2003.

ADDRESSES: You may get the service information referenced in this AD from Cirrus Design Corporation, 4515 Taylor Circle, Duluth, MN 55811; telephone: (218) 727-2737. You may view this information at the Federal Aviation Administration (FAA), Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2002-CE-31-AD, 901 Locust, Room 506, Kansas City, Missouri 64106; or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT:

Gregory J. Michalik, Aerospace Engineer, FAA, Chicago ACO, 2300 East Devon Avenue, Des Plaines, IL 60018; telephone: (847) 294-7135; facsimile: (847) 294-7834.

SUPPLEMENTARY INFORMATION:

Discussion

Has FAA taken any action to this point? The FAA received a report from the type certificate holder that a condition exists that could cause the Cirrus Airplane Parachute System (CAPS) installed on certain Cirrus Design Corporation (Cirrus) Model SR20 and SR22 airplanes not to activate in the event of an emergency. Ballistic Recovery Systems (BRS), the supplier of the CAPS, discovered the condition during a supplemental type certificate (STC) certification test of the same unit on another airplane.

Investigation revealed that the rocket cone could allow for variance in the internal diameter at the threaded end of the rocket cone. This variance could result in the retaining nut internal to the cone adapter not being fully secured on the affected parachutes. When the igniter end of the cable housing is unsecured, the cable will not pull the igniter pin free to release the parachute.

Section 23.221 of the Federal Aviation Regulations (14 CFR 23.221) requires that single-engine, normal category airplanes demonstrate compliance with either the one-turn spin recovery or the spin-resistant requirements. The airplane, for spin recovery compliance, must recover from a one-turn spin or a three-second spin, whichever takes longer, in not more than one additional turn after the controls have been applied for recovery. The Cirrus SR20/SR22 are not certificated to meet the spin recovery requirements or spin resistant requirements of 14 CFR 23.221. Instead, Cirrus installed Cirrus Airplane

chute System (CAPS) that was FAA-approved as part of the SR20/SR22 type design.

Possible failure of the CAPS activation system in an emergency situation caused us to issue AD 2002-05-05, Amendment 39-12673 (67 FR 11220, March 13, 2002). AD 2002-05-05 requires the following:

- Incorporating temporary operating limitations into the Limitation Section of the airplane flight manual (AFM) for the airplanes with a CAPS that incorporates the process change; and
- Installing a cable clamp external to the cone adapter on the CAPS activation cable (as terminating action for the AFM requirements).

What has happened since AD 2002-05-05 to initiate this action? After further testing, Cirrus has made design changes to the whole CAPS activation system that now eliminate possible failure of the CAP activation system. Incorporation of the design changes eliminates the need for the actions of AD 2002-05-05.

Has FAA taken any action to this point? We issued a proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to certain Cirrus Models SR20 and SR22 airplanes. This proposal was published in the **Federal Register** as a notice of proposed rulemaking (NPRM) on August 29, 2002 (67 FR 55357). The NPRM proposed to supersede AD 2002-05-05 with a new AD that would require you to replace the CAPS handle access cover, replace the CAPS activation handle bracket, and replace the CAPS activation cable.

Was the public invited to comment? The FAA encouraged interested persons to participate in the making of this amendment. We did not receive any comments on the proposed rule or on our determination of the cost to the public.

FAA's Determination

What is FAA's final determination on this issue? After careful review of all available information related to the

subject presented above, we have determined that air safety and the public interest require the adoption of the rule as proposed except for minor editorial corrections. We have determined that these minor corrections:

- Provide the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Cost Impact

How many airplanes does this AD impact? We estimate that this AD affects 391 airplanes in the U.S. registry.

What is the cost impact of this AD on owners/operators of the affected airplanes? We estimate the following costs to accomplish the replacement of the CAPS handle access cover:

Labor cost	Parts cost	Total cost per airplane	Total cost on U.S. operators
1 workhour × \$60 per hour = \$60	\$19	\$79	\$79 × 391 = \$30,889.

We estimate the following costs to accomplish the replacement of the CAPS activation handle bracket:

Labor cost	Parts cost	Total cost per airplane	Total cost on U.S. operators
2 workhours × \$60 per hour = \$120	\$7	\$127	\$127 × 391 = \$49,657.

We estimate the following costs to accomplish the replacement of the CAPS activation cable:

Labor cost	Parts cost	Total cost per airplane	Total cost on U.S. operators
3 workhours × \$60 per hour = \$180	\$320	\$500	\$500 × 391 = \$195,500.

We summarize the following estimated costs to accomplish the modification to the CAPS activation system:

Total labor cost	Total parts cost	Total cost per airplane	Total cost on U.S. operators
6 workhours × \$60 per hour = \$360	\$346	\$706	\$706 × 391 = \$276,046.

The manufacturer will provide warranty credit for labor and parts to the extent noted under WARRANTY INFORMATION in each previously-referenced service bulletin.

Compliance Time of This AD

What is the compliance time of this AD? The compliance time of this AD is "within 90 days after the effective date of this AD, unless already accomplished."

Why is the compliance time presented in calendar time instead of hours time-in-service (TIS)? Failure of the CAPS is

only unsafe during airplane operation; this unsafe condition is not a result of the number of times the airplane is operated. The chance of this situation occurring is the same for an airplane with 10 hours time-in-service (TIS) as it is for an airplane with 500 hours TIS. For this reason, the FAA has determined that a compliance based on calendar time will be utilized in this AD in order to assure that the unsafe condition is addressed on all airplanes in a reasonable time period.

Regulatory Impact

Does this AD impact various entities? The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

Does this AD involve a significant rule or regulatory action? For the reasons discussed above, I certify that this

on (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the final evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. FAA amends § 39.13 by removing Airworthiness Directive (AD) 2002-05-05, Amendment 39-12673 (67 FR March 13, 2002), and by adding a new AD to read as follows:

2002-24-08 Cirrus Design Corporation:
Amendment 39-12973; Docket No. 2002-CE-31-AD.

(a) *What airplanes are affected by this AD?*
This AD affects the following airplane models and serial numbers that are certificated in any category:

Model	Serial numbers
SR20	1005 through 1195.
SR22	0002 through 0209.

(b) *Who must comply with this AD?*
Anyone who wishes to operate any of the airplanes identified in paragraph (a) of this AD must comply with this AD.

(c) *What problem does this AD address?*
The actions specified by this AD are intended to prevent failure of the Cirrus Airplane Parachute System (CAPS) activation system in an emergency situation. Failure of this system could result in occupant injury and/or loss of life and loss of aircraft.

(d) *What actions must I accomplish to address this problem?* To address this problem, you must accomplish the following:

Actions	Compliance	Procedures
Modify the Cirrus Airplane Parachute System (CAPS) by replacing the CAPS handle access cover, the CAPS activation handle bracket, and the CAPS activation cable with parts of improved design.	Within the next 90 days after January 24, 2003 (the effective date of this AD), unless already accomplished.	In accordance with the service information specified in paragraph (e) of this AD.

(e) *What service information should I use to accomplish the actions required in paragraph (d) of this AD?* Use the service bulletins specified below, as applicable:

(1) Cirrus Service Bulletin SB 20-95-03, Issued: June 10, 2002;

(2) Cirrus Service Bulletin SB 20-95-04, Issued: July 10, 2002;

(3) Cirrus Service Bulletin SB 20-95-05, Issued: July 10, 2002; or Cirrus Service Bulletin SB 20-95-05, Rev 1: dated August 14, 2002;

(4) Cirrus Service Bulletin SB 22-95-03, Issued: June 10, 2002;

(5) Cirrus Service Bulletin SB 22-95-04, Issued: July 10, 2002; and

(6) Cirrus Service Bulletin SB 22-95-05, Issued: July 10, 2002; or Cirrus Service Bulletin SB 22-95-05, Rev 1: dated August 14, 2002.

Note 1: Cirrus Service Bulletin SB 20-95-03, Issued: June 10, 2002, on page 2 of 2, includes an incorrect reference to SB 22-95-03 in step 4. The correct reference should be to SB 20-95-03.

Note 2: Cirrus Service Bulletin SB 20-95-05, Issued: July 10, 2002, on page 9 of 16, includes an incorrect reference to SB 22-95-05 in step 15. The correct reference should be to SB 20-95-05.

(f) *Can I comply with this AD in any other way?*

(1) You may use an alternative method of compliance or adjust the compliance time if:

(i) Your alternative method of compliance provides an equivalent level of safety; and

(ii) The Manager, Chicago Aircraft Certification Office (ACO), approves your alternative. Submit your request through an FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Chicago ACO.

(2) Alternative methods of compliance approved in accordance with AD 2002-05-05, which is superseded by this AD, are not approved as alternative methods of compliance with this AD.

Note 3: This AD applies to each airplane identified in paragraph (a) of this AD, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (f) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if you have not eliminated the unsafe condition, specific actions you propose to address it.

(g) *Where can I get information about any already-approved alternative methods of*

compliance? Contact Gregory J. Michalik, Aerospace Engineer, FAA, Chicago ACO, 2300 East Devon Avenue, Des Plaines, IL 60018; telephone: (847) 294-7135; facsimile: (847) 294-7834.

(h) *What if I need to fly the airplane to another location to comply with this AD?* The FAA can issue a special flight permit under sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate your airplane to a location where you can accomplish the requirements of this AD.

(i) *Are any service bulletins incorporated into this AD by reference?* Actions required by this AD must be done in accordance with Cirrus Service Bulletin SB 20-95-03, Issued: June 10, 2002; Cirrus Service Bulletin SB 20-95-04, Issued: July 10, 2002; Cirrus Service Bulletin SB 20-95-05, Issued: July 10, 2002; Cirrus Service Bulletin SB 20-95-05, Rev 1: dated August 14, 2002; Cirrus Service Bulletin SB 22-95-03, Issued: June 10, 2002; Cirrus Service Bulletin SB 22-95-04, Issued: July 10, 2002; Cirrus Service Bulletin SB 22-95-05, Rev 1: dated August 14, 2002. The Director of the Federal Register approved this incorporation by reference under 5 U.S.C. 552(a) and 1 CFR part 51. You may get copies from Cirrus Design

ation, 4515 Taylor Circle, Duluth, MN
11; telephone: (218) 727-2737. You may
new copies at the FAA, Central Region,
Office of the Regional Counsel, 901 Locust,
Room 506, Kansas City, Missouri, or at the
Office of the Federal Register, 800 North
Capitol Street, NW., Suite 700, Washington,
DC.

(j) *Does this AD action affect any existing
AD actions?* This amendment supersedes AD
2002-05-05, Amendment 39-12673.

(k) *When does this amendment become
effective?* This amendment becomes effective
on January 24, 2003.

Issued in Kansas City, Missouri, on
November 26, 2002.

Michael Gallagher,
*Manager, Small Airplane Directorate, Aircraft
Certification Service.*

[FR Doc. 02-30685 Filed 12-9-02; 8:45 am]

BILLING CODE 4910-13-P

Page 1 of 1

Date closed: 12/28/02

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	OT	Mech	Insp
1	Battery is dead	24 00	1	Removed battery & put on charger.	24 00	N	12/27	.3		HES	
						N	12/28	.3		JMA	
			2	Installed charged battery (SB)							
			2	Installed charged battery. Ops v good		N	12/28	.2		(SB)	
				Joan F. Balin A#P346561074							

Page 1 of 1

Date closed: 2-12-03

Preliminary Insp

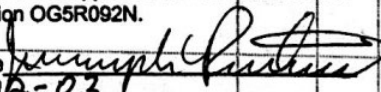
In Progress Ins

Bill Meter: 35.8

AVF Tach: 35.8

Init *md*

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>TSO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	35.8	35.8
IO-360-ES6B	357488	ENGINE (CIRRUS SR20) TELEDYNE C	35.8	35.8
PHC-J3YF-1RF	FP18888	PROPELLER	35.8	35.8

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	OT	Mech	Insp
1	CHT Probe needs be replaced as per Cirrus Tech Engineer	77-20	1	Removed and Replaced CHT probe IAW SR 20 Mx Manual chp. 77-20 page 2	77-20	W	2/12	.5		MRS	
<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N.</p> <p>Authorized Signature  Date <u>2-12-03</u></p>											

MATERIAL REQUISITION

[illegible]

Page 1 of 2

Date closed: 3/18/03

Preliminary Insp

In Progress Insp 10

Bill Meter: 37.7

A/F Tach: 37.7

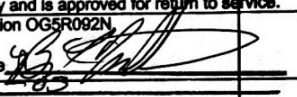
Init KHP

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>ISO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	37.7	37.7
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	37.7	37.7
PHC-J3YF-1RF	FP1868B	PROPELLER	37.7	37.7

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	LANDING LIGHT IS INOP	3340	1	LANDING LIGHT CHECKS GOOD	3340	N	3/4	0.3		KHP	
2	head conf. g error on EHSI	34/50	1	accessed maintenance pages and configured installation tests good.	34/50	N	3/18	2.0		BSS	KHP

Page 2 of 2

Work Order #: 1026311

Reg#: (N)		Work Order #									
PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
3	Autopilot oscillates ± 100' in alt hold	22-10	1	Unable to confirm tested xducer outputs at numerous altitudes no error found no drift exists. checked servo motor and it operates normally at this time.	22-10	N	3/18	2.0		KHP	
					22-10	N	3/18	1.5		BSS	
4	Airframe out of date	24/50	1	deferred per 91-213d no update available secured breaker	24/50	N	3/18	.5		KHP	
<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N Authorized Signature:  Date: 3-78-83</p>											

Page 1 of 1

Date closed: 3/31/03

Preliminary Insp KHP In Progress Insp KHP

Init KHP

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	UPDATE FIREMAX DATABASES	34/50	1	(updated) Detailed	34/50	N	3/27	0.8		KQ	KAP
<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station O65R092N.</p> <p>Authorized Signature: <i>[Signature]</i> Date: 3/31/03</p>											

Page 1 of

Date closed:

Preliminary Insp

In Progress Insp

A/F Tach: 46.6

init

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	UPGRADE #1 GPS FIRM WARE TO GPS VER 3.0 & MAIN VER 4.0 TO ELIMINATE PIN 011-00280-10 SN 97110738	34	50	1	UPGRADED #1 GPS FIRMWARE TO GPS VER 3.0 TO ELIMINATE ERRONEOUS RAIM ERROR MESSAGES	34	50	W	4/25	1.0	KR KH
2	UPGRADE #2 GPS FIRMWARE TO GPS VER 3.0 & MAIN TO VER 4.0 P/N 011-00280-10 S/N 97110592	34	50	2	UPGRADED #2 GPS FIRMWARE TO GPS VER 3.0 TO ELIMINATE ERRONEOUS RAIM ERROR MESSAGES TO MAIN VER 4.0. GPS CHECKS GOOD	34	50	N	4/25	0.1	KR K
2	UPGRADE #2 GPS FIRMWARE TO GPS VER 3.0 & MAIN TO VER 4.0 P/N 011-00280-10 S/N 97110592	34	50	1	UPGRADE #2 GPS FIRMWARE TO GPS VER 3.0 TO ELIMINATE ERRONEOUS RAIM ERROR MESSAGES	34	50	W	4/25	1.0	KR KH
		34	50	2	UPGRADED #2 GPS FIRMWARE TO MAIN VER 4.0	34	50	N	4/25	0.1	KR K
<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R082N.</p> <p>Authorized Signature: <u>[Signature]</u> Date: <u>4/25/03</u></p>											

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 2

John D. Odegard School
of Aerospace Sciences
University of North Dakota
Box 9007 University Station
Grand Forks, ND 58202-9007

WKO#: 1027454
Mech: KHP
Shop Code: A
Equip Code: A
Opened: 4/24/2003 6:34

OBTAIN ALL
INITIALS BEFORE FILING

R/A

Parts (opt)

Date closed:

5/06/03

Customer: UNDAF Acct#: 9503-9903-471

Preliminary Insp

In Progress Insp



N#: N777ND AcftType: SR20 Model: SR20

Bill Meter: 46.6

A/F Tach: 46.6



Init BSS

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	46.6	46.6
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	46.6	46.6
PHC-J3YF-1RF	FP1868B	PROPELLER	46.6	46.6

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	EHSI NAV select will not allow gps to be selected	34/50	1	Configured EHSI installation to accept GNS430 gps. system now works	34/50	N	4/24	1.5		KHP	
2	Gyro invalid message on EHSI	34/40	1	Could not duplicate invalid message. Ran EHSI + gyro for 1.5 hours. All ops checks good.	34/40	N	5/01	1.0		BSS	

Page 2 of 3

Work Order #: 1027454

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
3	Autopilot when in appr mode, fail light comes on and off during coupled appr.	22/10	1	Connected system break out box and checked GS inputs to computer, they check good. troubleshot to defective computer sh. pped for repair	22/10	N	4/24	2.0		KHP	
PN	01192-4-53-30P				22/10	N	5/01	2.0		BSS	
SN	4408		2	Received repaired computer Installed in A/C. Autopilot ops checks good on all functions							
					<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station CG5R082N</p> <p>Authorized Signature _____ Date <u>5/16/2003</u></p>						

MEGGITT

**RPO
30899**

Name: <u>University of North Dakota</u>	Date: <u>4/30/03</u>
Address: <u>Grand Forks International Airport</u>	Date Received: <u>4-25-03</u>
City: <u>Grand Forks</u> State: <u>ND</u>	Zip: <u>58202</u>
Phone: <u>701-777-7824</u>	Dealer Number: <u>54573</u>

System Type: <u>S-5X</u>	Model: <u>N/A</u>	Serial Number: <u>N/A</u>	Reg. Number: <u>N/A</u>	How Received: <u>Red</u>	Terms: <u>W</u>	Return: <u>Re</u>
Repair Order / Work Performed:				Hours: <u>1.5</u>	Qty: <u>1</u>	Part Number: <u>7200282-1</u>
<u>CONFIRMED FAILURE</u>				Description: <u>CENTER</u>		
<u>REPLACED CENTER BRD ASSY.</u>						
<u>PERFORMED ECOSTH 13151, 13153, 13168, 12519</u>						

MAINTENANCE RELEASE

WORK ORDER NO. 30899 DATE 04-30-03

ART/MODEL NO. 01192-4-53-30P

POBENT: SYS 55X SERIAL NO. 24008-AC

☐ Overhaul ☒ Repair ☐ Inspected ☐ New

The aircraft/appliance identified above was overhauled, repaired, functional tested or is new as per Regulations and is approved for return to service. Details of this component are on file at this agency under:

Authorized Signature: [Signature] PMS640

Remarks:	Total Parts:
	Total Labor:
	Tax:
	Total Amount:

The aircraft or appliance identified herein was overhauled, repaired or functional tested and inspected in accordance with current Federal Aviation Administration Regulations and is approved for return to service. Pertinent details are on file at this repair station under the above repair order number.

Rep: [Signature] Insp: [Signature] Date: 04-30-03

I hereby authorize the above repair work to be done along with necessary materials, and hereby grant you and/or your employees permission to operate above aircraft for purposes of testing, inspection, or delivery at my risk. An express mechanic's lien is acknowledged on above aircraft to secure the amount of repairs thereto. You will not be held responsible for loss or damage to aircraft, or articles left in aircraft in case of fire, theft, accident, or any other cause beyond it's control. Payable in Mineral Wells, Texas.

Authorized by:

SO Number: 210991 Terms: STRICTLY CASH without prior arrangements

Returned for: ails in approach mode

AIRCRAFT PRINT STATUS AS OF 10/20/2005

N#: **N777ND**

Make: **SR20**

Model: **SR20**

DO NOT OVERFLY--> DATE: **01/31/2006** TACH: **108.8** CYCLES:

NOTE: In accordance with the University of North Dakota Piper Progressive Inspection Program, Phase Inspections 1, 2, 3, or 4 may be flown 5.0 hours beyond the due tach time.

MAINTENANCE DESCRIPTION	DUE DATE	DUE TACH	DUE CYCLES	DATE LAST COMPLETE
50 Hour Insp		103.8		10/20/2005
100 Hour Insp		153.8		10/20/2005
Aux vac. pump replacement	10/31/2012	2042.3		
T/C Roll Computer Batteries replacement	01/31/2006			01/16/2005
Yearly ELT Insp (IAW 91.207d)	01/31/2006			01/16/2005
Annual Insp	04/30/2006			04/05/2005
Altimeter Check	09/30/2006			09/28/2004
Altitude Encoder Check	09/30/2006			09/28/2004
Static Check	09/30/2006			09/28/2004
Transponder Check	09/30/2006			09/28/2004
Aileron-Rudder Interconnect shock cord replaceme	10/31/2007			
CAPS Reefing Line Cutters replacement	03/31/2008			01/16/2005
ELT Battery	03/31/2008			08/30/2002
CAPS Parachute replacement	08/31/2012			
CAPS Rocket Motor replacement	08/31/2012			

* Phase, 100 HR, or AD Inspection

AUTHORIZED SIGNATURE

[Signature]

A&P/CRS

065R092N

DATE *10-20-05*

Print Name

Chad Carlson

AIRCRAFT PRINT STATUS AS OF 01/05/2006

N#: N777ND

Make: SR20

Model: SR20

DO NOT OVERFLY--> DATE: 01/31/2006 TACH: 108.8 CYCLES:

NOTE: In accordance with the University of North Dakota Piper Progressive Inspection Program, Phase Inspections 1, 2, 3, or 4 may be flown 5.0 hours beyond the due tach time.

MAINTENANCE DESCRIPTION	DUE DATE	DUE TACH	DUE CYCLES	DATE LAST COMPLETE
50 Hour Insp		103.8		10/20/2005
100 Hour Insp		153.8		10/20/2005
Aux vac. pump replacement	10/31/2012	2042.3		
T/C Roll Computer Batteries replacement	01/31/2006			01/16/2005
Yearly ELT Insp (IAW 91.207d)	01/31/2006			01/16/2005
Annual Insp	04/30/2006			04/05/2005
Altimeter Check	09/30/2006			09/28/2004
Altitude Encoder Check	09/30/2006			09/28/2004
Static Check	09/30/2006			09/28/2004
Transponder Check	09/30/2006			09/28/2004
Aileron-Rudder Interconnect shock cord replaceme	10/31/2007			
CAPS Reefing Line Cutters replacement	03/31/2008			01/16/2005
ELT Battery	03/31/2008			08/30/2002
CAPS Parachute replacement	08/31/2012			
CAPS Rocket Motor replacement	08/31/2012			

* Phase, 100 HR, or AD Inspection

AUTHORIZED SIGNATURE Morgan R. Streh A&P/CRS OG5R092W DATE 1/4/06

Print Name Morgan R. Streh

Component Times Report for N777ND
Make: SR20 Model: SR20

4/20/2004 08:09:15 Page 1 of 1

	<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>TBO</u>	<u>TSO</u>	<u>Time Remain</u>	<u>Total Time</u>
U / D	SR20	1258	AIRFRAME		106.0		106.0
U / D	12731-001	428012	ALTIMETER		106.0		106.0
U / D	01192-4-53-30P	4408	AP COMPUTER		59.4		59.4
U / D	15047-001	00594	CAPS ROCKET MOTOR		106.0		106.0
U / D	12616-001	304	EGT/CHT METER		6.4		6.4
U / D	A-30	80574	ENCODER		106.0		106.0
U / D	IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C		106.0		106.0
U / D	GNS430	97110592	GPS		94.2		94.2
U / D	GNS430	97110738	GPS		94.2		94.2
U / D	15046-001	00259	PARACHUTE		106.0		106.0
U / D	PHC-J3YF-1RF	FP1868B	PROPELLER		106.0		106.0
U / D	GTX327	83710986	TRANSPONDER		106.0		106.0

OVERHAUL AND REPLACEMENT SCHEDULE

1. DESCRIPTION

The following items must be overhauled or replaced at the following intervals unless otherwise noted. To ensure correct observation of these times, the date of removal, installation, or overhaul of such components as well as the airplanes flight hours must be entered into the Service Time Record filed in the Airplane Maintenance Log.

Item	Interval	Replc.	O'haul	Notes
1. Engine	Per Manufacturer. (Recommended 2000 Hours)		○	Refer to Teledyne Continental Motors Service Letter SIL 98-9.
2. Propeller Governor - <i>Serials 1005 thru 1336 w/ Woodward governor</i>	Per Manufacturer. (Recommended 2400 Hours)		○	Refer to Woodward Governor Company Service Bulletin 33580F.
3. Propeller Governor - <i>Serials 1337 & subs w/ McCauley governor</i>	Per Manufacturer. (Recommended 1800 Hours or 5 years - whichever comes first.)		○	Refer to McCauley Propeller Systems Service Bulletin 137.
4. Magnetos	Per Manufacturer. (Recommended at Engine Overhaul)	○		Refer to Teledyne Continental Motors IO-360 Overhaul Manual X30594A.
5. Propeller	Per Manufacturer. (Recommended 2400 Hours or 6 Years - whichever occurs first)		○	Refer to Hartzell Propeller Service Letter 61.
6. Alternator 1	Per Manufacturer. (Recommended 500 Hours)		○	Refer to Teledyne Continental Motors IO-360 Overhaul Manual X30594A.
7. Alternator 2	Per Manufacturer. (Recommended 1700 Hours)		○	Factory Overhaul.
8. Battery 2	2 Years or 500 Hours.	○		Refer to 24-30.
9. Induction Air Filter	At Annual Inspection or 200 Hours - whichever occurs first.	○		If at any time, the filter is found to be more than 50% covered by foreign material, replace filter.
10. Muffler and Heat Exchanger	1000 Hours.	○		Refer to 78-20.
11. Flexible Fuel Lines	5 Years.	○		Refer to 71-70.
12. Fuel System Boost Pump	10 Years.	○		Refer to 28-20.

Cirrus Design
Maintenance Manual

CIRRUS
SR20

Item (Continued)	Interval	Replc.	O'haul	Notes
13. Gascolator Seals	5 Years.	○		Refer to 28-20.
14. Fuel System Drain Valve Seals	5 Years.	○		Refer to 28-10.
15. Flexible Oil System Lines	5 Years.	○		Refer to 71-70.
16. Flexible Brake System Lines	5 Years.	○		Refer to 32-42.
17. Brake Assembly O-Rings	At Annual Inspection or 100 Hours - whichever occurs first.	○		Refer to 32-42.
18. Aileron-Rudder Interconnect Shock Cord	5 Years.	○		Refer to 27-20.
19. Emergency Locator Transmitter Batteries	Batteries at expiration date or after 1 hour use - whichever occurs first.	○		Refer to ACK Technologies Model E-01 Installation and Operation Manual.
20. Fire Extinguisher	20 Years.	○		Refer to 26-20.
21. Turn Coordinator Batteries	Batteries at Annual Inspection or after emergency use - whichever occurs first.	○		Refer to 24-30.
22. Engine-Driven Vacuum Pump	1200 Flight Hours.	○		Refer to 37-10.
23. Dry Air Pump Coupling (Engine-Driven Vacuum Pump)	6 Years from date of manufacture.	○		Refer to Airborne Service Letter # 17 B dated 16 August 1991 or later revision.
24. Electric Vacuum Pump	3000 Flight Hours or 10 Years - whichever occurs first.	○		Refer to 37-10.
25. Instrument Air Filter Element (paper)	500 Flight Hours, annually, or when either vacuum pump is replaced - whichever occurs first.	○		Refer to 37-10.
26. Vacuum Regulator Garter Filter Element (foam)	100 Flight Hours or annual - whichever occurs first.	○		Refer to 37-10.
27. Check Valve Manifold and Check Valves	10 Years from date of manufacture.	○		Refer to Airborne Product Reference Memo # 39 dated 31 January 1996 or later revision.

Cirrus Design
Maintenance Manual



Item (Continued)		Interval	Replc.	O'haul	Notes
28.	Cirrus Airframe Parachute System (CAPS) Rocket Motor	10 Years.	○		Replace with new or recharged unit. Refer to Chapter 95 Special Purpose Equipment for CAPS maintenance practices.
29.	Cirrus Airframe Parachute System (CAPS) Parachute	10 Years.	○		Replace with new or overhauled (inspected/ repaired/repacked) unit. Refer to Chapter 95, Special Purpose Equipment for CAPS maintenance practices.
30.	Cirrus Airframe Parachute System (CAPS) Reefing Line Cutters	<i>Serials 1005 thru 1026:</i> 3 years, 6 years thereafter. <i>Serials 1027 & subs:</i> 6 years.	○		Replace with new line cutters. Refer to Chapter 95, Special Purpose Equipment for CAPS maintenance practices.
31.	Inflatable Restraint System Electronic Module Assembly	7 Years 14 Years	○ ○	○	Factory Overhaul. Replace with new unit. Refer to Chapter 25, Equipment and Furnishings.
32.	Inflatable Restraint System Inflator Assembly	7 Years 14 Years	○ ○	○	Factory Overhaul. Replace with new unit. Refer to Chapter 25, Equipment and Furnishings.

CAUTION: Airplane control surface balance is critical to flight safety. Removal and/or addition of any paint or body filler to a control surface requires that the control surface be re-balanced.

VOR EQUIPMENT CHECK LOG

'AIRCRAFT MODEL SR20

- Type of Check**
- 1. VOT**
 - 2. VOR Designated Point-Ground**
 - 3. VOR Designated Point-Airborne**
 - 4. Self Select-Airborne**
 - 5. Dual VOR**

S/N 1258

Registration N777ND

[illegible]

PD# PD-GAMA Part# / Serial#

1 25-10- RT SUNVISOR BROKEN.

CA# CA-GAMA ACC Date Hrs Tech Insp

1 25-10- N 12/07/05 0.4 SFB SFB INSTALLED NEW BLADE PER CH 25-10, CIRRUS MAINT MANUAL.

Part#:12698-003 Serial#: Qty: 1 ACC:N SUN VISOR

Other

Transaction	WKO#	SiSt	Part#	Serial#	Qty	Date	ACC	Description
Requisition	1043656	U/D	84N1376		4	04/11/05	N	SPRING LATCH LOCK
Requisition	1043656	U/D	84N1376		-4	04/11/05	N	SPRING LATCH LOCK
Requisition	1043656	U/D	92N3440		10	04/11/05	N	INSERT/ EXTRACT TOO
Requisition	1043656	U/D	92N3440		-10	04/11/05	N	INSERT/ EXTRACT TOO
Requisition	1043656	U/D	92N3456		4	04/11/05	N	SCREWLOCK SET
Requisition	1043656	U/D	92N3456		-4	04/11/05	N	SCREWLOCK SET
Credit#	1003379	1027460	U/D			07/02/03	W	
Credit#	1003380	1027460	U/D			07/02/03	W	
Credit#	1003434	1027770	U/D	646220A2	1	07/11/03	W	STARTER ADAPTER
Credit#	1003435	1027770	U/D	11627-001	1	07/23/03	W	SELECTOR VALVE
Credit#	1003574	1030168	U/D	12648-001	1	09/11/03	W	VACUUM GAUGE
Credit#	1003577	1030168	U/D	12616-001	1	09/11/03	W	EGT/CHT METER
Credit#	1003592	1030168	U/D	12616-001	1	09/16/03	N	EGT/CHT METER
Credit#	1003788	1027454	U/D			08/10/04	W	
Credit#	1003789	1028501	U/D			08/11/04	W	
Credit#	1004229	1039570	U/D	12457-002	1	11/26/04	W	SWITCH
Credit#	1004281	1039183	U/D			11/10/04	N	
Credit#	1004355	1041810	U/D	70084-001	1	01/31/05	N	RECLINE LOCK KIT
Credit#	1004356	1041810	U/D	70097-001	1	01/31/05	N	SLEEVE
Repair#	1010530	1027454	U/D	01192-4-53-30P	4408	1 05/01/03	N	AP COMPUTER
Repair#	1010823	1027770	U/D	646220A2		1 05/20/03	N	STARTER ADAPTER
Repair#	1015084	1039183	U/D	4305-150	07222703	1 11/10/04	N	DIRECTIONAL GYRO
Repair#	1015110	1039272	U/D	GTX327	83710986	1 09/28/04	N	TRANSPONDER
Repair#	1015328	1039905	U/D	G243	G02044287	1 10/18/04	N	BATTERY
Repair#	1015655	1040620	U/D			11/12/04	N	
Repair#	1016266	1041812	U/D			01/12/05	N	
Repair#	1016279	1041810	U/D	6314R	02071389	1 01/14/05	N	MAGNETO (REPAIRED
Repair#	1016280	1041810	U/D	6314R	02071390	1 01/14/05	N	MAGNETO (REPAIRED
Repair#	1016842	1043575	U/D	14529-001		1 03/17/05	N	SEAL
Repair#	1017051	1043956	U/D	GTX327	83707422	1 04/13/05	N	TRANSPONDER
Repair#	1017576	1045099	U/D	164-244		1 05/23/05	N	BRAKE DISC
Repair#	1017577	1045099	U/D	164-244		1 05/23/05	N	BRAKE DISC
Repair#	1017609	1045099	U/D	10333-006		1 05/27/05	N	OUTBOARD HINGE AILE
Repair#	1017670	1045245	U/D	GTX327	83713868	1 06/17/05	N	TRANSPONDER
Repair#	1018437	1047074	U/D	14554-001		1 09/02/05	N	EGT PROBE
Repair#	1019241	1049195	U/D	12638-002		1 11/17/05	N	FUEL LEVEL SENDING
Repair#	1019449	1048485	U/D			12/12/05	N	

(End of Detail)



GRAND FORKS
INTERNATIONAL AIRPORT

May 10, 2004

Ease LLC.
4300 Dartmouth Dr., Suite 175
Grand Forks, ND 58203

Mr. O'keefe,

In regards to your request for the registration of 777ND, from the previous owner, I will be unable to return it to you. When you first contacted me to provide pilot service in your aircraft an initial preflight inspection of the aircraft was done. During that inspection it was found that both the old registration as well as the pink slip for the new registration were in the aircraft, the old one was removed. When your request for the registration was received the aircraft book, POH, maintenance records and the aircraft itself were all checked, unfortunately the registration could not be found. I am certain the old registration was discarded after it was removed from the aircraft.

If you have any further question you can contact me at GFK Flight Support.

Respectively,

Ronald A. Scheibe
Assistant Chief Pilot
GFK Flight Support



2467 AIR CARGO DRIVE • GRAND FORKS, ND 58203 • Phone: 701-772-5504 • Fax: 701-772-8917
"Airplanes are our Business"





CIRRUS SR20 and SR22 CUSTOMER SERVICE

SERIAL NO: 1258
REGISTRATION: N777ND
CUSTOMER: James Ray
REGISTERED TO: James C Ray
DELIVERY DATE: 10/3/02

Cirrus Design Customer Service
Daytime Phone: Mon-Fri 8:00am – 5:00pm CST 218-529-7202
After Hours Hotline: 1-877-4Cirrus (1-877-424-7787)

Rick Hagberg - Customer Service Representative
218-529-7202 rhagberg@cirrusdesign.com

Don Newman - Parts / Warranty Administrator
218-529-7232 dnewman@cirrusdesign.com

Russ Birkeland - Customer Service Representative
218-529-7284 rbirkeland@cirrusdesign.com

Dan Mettner - Customer Service Representative
218-529-7291 dmettner@cirrusdesign.com

Gene Lewis - Customer Service Representative
218-788-3167 glewis@cirrusdesign.com

Chris Dixon - Director of Maintenance
218-788-3101 cdixon@cirrusdesign.com

This document describes how to arrange service for your Cirrus SR20 or SR22 along with details of warranties on equipment in the aircraft not covered by the Cirrus Limited Warranty.

1. Who to call, where to go.
2. Warranty notes.
3. Aircraft Paint.
4. Warranty attachments (parts not included in the Cirrus Limited Warranty)

- Teledyne Continental (engine)
- Hartzell (propeller)
- GARMIN International (Avionics)
- ARNAV Systems (MFD)
- S-TEC Corporation (Autopilots)
- Sandel

5. Cirrus Authorized Service Centers.

Who to call, where to go.

Because the Cirrus SR20 and SR22 are new designs of aircraft many of the usual sources for information (flight instructors, your local technicians, etc.) about normal operation and service may not be familiar with some of the intricacies of these aircraft.

What's more – WE WANT TO HELP!

If you have any questions about the airworthiness, operation or safety of the SR20 or SR22, call us.

Cirrus has appointed a network of service centers for maintenance and service of the SR20 and SR22. Each of the centers have been inspected by Cirrus Customer Service and many have technicians at their facility who have visited the Cirrus factory and received training in maintenance practices for the SR20 and SR22. A complete list of these centers are in the appendices, and available to view on the company website at www.cirrusdesign.com.

These are the normal facilities used for SR20 and SR22 warranty service. If the aircraft is airworthy, these facilities are where Cirrus will ask you to take the aircraft.

Cirrus can coordinate the efforts of these service centers. Cirrus holds inventories of many parts required for service. Cirrus can arrange shipments from avionics and other suppliers regardless of who is offering the warranty.

Warranty Notes.

Cirrus Warranty is not a substitute for normal inspection and maintenance, but does provide the new owner with protection against defects in material and workmanship for the airframe and installed equipment for a period of twenty-four months after delivery. The engine, propeller and avionics suppliers provide warranties as defined in the supplier's separate warranties. Copies of these warranties are provided to each new owner and become effective at the delivery of the aircraft to the first owner. All warranties are transferable without penalty.

Cirrus Warranty pays the labor cost to remove and replace and/or repair a defective part if that labor is provided by a Cirrus Authorized Service Center, or other Cirrus approved facility. At Cirrus' option warranty replacement parts may be new, overhauled or repaired parts, which will continue under, warranty for the balance of the original warranty period.

After the warranty period, all new, or exchange, parts sold by Cirrus carry a six (6) month warranty.

Parts which have been subject to misuse, negligence or accident, or which have been repaired or altered outside of the Cirrus factory, or normal wear and tear items, are not covered by warranty.

Parts beyond normal service life (defined by the SR20 and SR22 Maintenance Manual) are also not covered by warranty. For example the vacuum pump on the SR20 has a normal service life of 1,000 hours, the SR22 500 hours, and is only warranted up to that life.

Warranty replacement parts may be ordered from Cirrus Customer Service, or from any Cirrus Authorized Service Center. It is the owner's responsibility to return a defective part along with claim form information to any Cirrus Authorized Service Center. Cirrus pays normal shipping costs both ways between any Cirrus Authorized Service Center and Cirrus Customer Service for the replacement part, and for the removed part, if that part is determined to be defective. Parts will be shipped overnight at the customer's request and cost. Shipping cost for warranty replacement parts from Cirrus directly to the owner, or from a Cirrus Authorized Service Center to the owner is the owner's responsibility.

Aircraft Paint

Cirrus uses high quality polyurethane paints. Polyurethane paints are used because of their high gloss characteristics and ability to withstand dramatic temperature and pressure changes. The paint on your new aircraft will maintain its high gloss for an extended period of time provided it is cared for properly.

The painted exterior surfaces require an initial curing period, which may be as long as 90 days after the finish is applied. During this curing period, some precautions should be taken to avoid damaging the finish or interfering with the curing process. The finish should be cleaned only by washing with clean water and mild soap, followed by a water rinse and drying with a cloth or chamois. Do not use polish or wax, which would exclude air from the surface during this 90 day curing period.

Once the finish has cured completely, it may be waxed with a good automotive wax, but power buffing should be avoided to prevent damage to the paint surface.

Normal paint maintenance will include touch-up of abrasion and wear of the paint on the wing leading edges, vertical and horizontal stabilizers, wheel pants, windshield perimeter, and other leading edge surfaces.

Paint warranty applies only to defects in material and workmanship. Paint deterioration due to normal wear, exposure, or improper care is not covered by the warranty. If proper paint maintenance procedures have been followed and paint peeling, blistering or cracking is evident in areas other than immediate leading edge surfaces, warranty consideration may be requested through a Cirrus Authorized Service Center.

Generally speaking, warranty repair of paint is confined to a limited surface area. Workmanship or material defects are usually localized areas that were improperly prepared prior to paint application, or to areas where the paint or subsurface primer has been improperly applied.

Complete repaint of an entire airplane will only be authorized if there is evidence of paint defects on several major surfaces of the aircraft.

Warranty attachments

Attached is a copy of the Cirrus Limited Express Warranty and other warranties that cover components and parts not included in that Cirrus Limited Express Warranty.

- Cirrus Limited Express Warranty
- Teledyne Continental (engine)
- Hartzell (propeller)
- GARMIN International (Avionics)
- ARNAV Systems (MFD)
- S-TEC Corporation (Autopilots)
- Sandel

Cirrus Authorized Service Centers.

(Listed by State)

The list of Cirrus Authorized Service Centers is growing continuously. For an updated list, or to ensure that service on your SR20 or SR22 is performed as expeditiously as possible, remember to first call Cirrus Customer Service. A current list of Cirrus Authorized Service Centers are available on our company website at www.cirrusdesign.com.

LIMITED EXPRESS WARRANTY

OBLIGATIONS OF CIRRUS

Cirrus Design Corporation, Duluth, Minnesota, U.S., ("Cirrus") expressly warrants to the original owner that each new model Cirrus SR20 or SR22 aircraft manufactured by it, and new aircraft equipment, except as noted below, will be free from defects in material and workmanship under normal use and service for a period of twenty-four (24) months after delivery. Engine and engine accessories supplied by Teledyne Continental Motors ("Continental"), propeller and avionics supplied by third-party suppliers are specifically excluded from this warranty and are covered by their respective manufacturer's separate warranty.

Cirrus' sole and exclusive obligation under this warranty is limited to repairing or replacing, at its option, any part or parts, which it deems defective within the applicable twenty-four (24) month period. A defective part or parts shall be returned by the owner to an authorized Cirrus service center or other location designated by Cirrus. Replacement parts are warranted for the remainder of the applicable warranty period. (The location of Cirrus service centers will be furnished by Cirrus upon request.

The repair or replacement of defective parts under this warranty will be made without charge to the owner for parts and labor for removal, installation and/or actual repair of such defective parts, provided the labor is performed by a Cirrus authorized service center. Import duties and sales or use taxes, if any, on replacements are the owner's responsibility.

EXCLUSIONS

The provisions of this warranty do not apply to any warranted aircraft, equipment, accessories or service parts manufactured or sold by Cirrus which have been subject to misuse, negligence or accident, or which have been repaired or altered outside of the Cirrus factory in any way which in the judgment of Cirrus affect adversely its performance, stability or reliability. The provisions of this warranty do not apply to normal maintenance services (such as cleaning, control rigging, brake and other mechanical adjustments and maintenance inspections) or to the replacement of service items (such as light bulbs, brake linings, filters, hoses, and tires) made in connection with such services, to normal wear and tear or required as maintenance, or to normal deterioration of soft trim and appearance items (such as paint, upholstery and rubber-like items) due to wear and tear and exposure, or to any aircraft equipment, accessories, or service parts sold separately which have been installed by the purchaser. Any commercial use of the aircraft voids this warranty unless prior written authorization for such use is obtained from Cirrus.

Spare aircraft equipment, accessories and service parts actually sold by Cirrus (exclusive of products supplied by third-party suppliers which are covered by their separate warranties) are warranted for a period of six (6) months after installation or first use under the same terms, conditions and limitations of liability as other items covered by this warranty.

LIMITATIONS

To the extent allowed by applicable law, THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED IN FACT OR BY LAW, INCLUDING ANY IMPLIED WARRANTY OF WORKMANSHIP, MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE. THE REMEDIES OF REPAIR OR REPLACEMENT AS ABOVE SET FORTH ARE THE SOLE AND EXCLUSIVE REMEDIES UNDER THIS WARRANTY. INCIDENTAL AND CONSEQUENTIAL DAMAGES ARE EXCLUDED. THIS WARRANTY IS IN LIEU OF ANY OTHER OBLIGATION OR LIABILITY OF CIRRUS OF ANY NATURE WHATSOEVER by reason of the manufacture, sale, lease, or use of such aircraft products, and Cirrus neither assumes nor authorizes anyone to assume it for other obligation or liability in connection with such aircraft.

SOLE WARRANTY

The Obligations, Exclusions, Limitations, and Conditions contained herein are the sole warranty provided by Cirrus and its dealers and service centers. Cirrus and owner agree that there are no other obligations whether oral or in writing beyond this Limited Express Warranty.

Customer Copy



Form No. QA-85

Teledyne Continental Motors, Inc.
A Teledyne Technologies Company

Engine Component Information Sheet

Printed: 08/24/2002

Serial: 357498 *A/C 1258*
Spec: I0360ES6B
New/Rebuilt: (NEW)

Assembled: 08/21/2002
Shipped:
Packed: 08/24/2002

Customer Name: CIRRUS DESIGN CORPORATION
Shipping Address:

Component	Serial Number
CAMSHAFT	Z02FA347
CRANKSHAFT	N02FA429
CRANKCASE	S02GA099
CONNROD	AE02GB358
CONNROD	AE02GB382
CONNROD	AE02GB394
CONNROD	AE02GB401
CONNROD	AE02GB415
CONNROD	AE02GB422
L MAGNETO	02071390
R MAGNETO	02071389
FUEL PUMP	B02HA056
MANIFOLD VALVE	C02HA053 M

Component	Serial Number
NOZZLE SIZE	10J
METERING UNIT	A02HA042
STARTER	021580021
ALTERNATOR	C081327
OIL COOLER	G02194627



Pack Inspection Stamp _____

All of the information provided herein is subject to verification by the user. Teledyne Continental Motors, Inc. makes no representation or warranty concerning the accuracy or completeness of the information and assumes no responsibility with respect thereto.



CONTINENTAL MOTORS TOP CARESM CYLINDER WARRANTY

This TopCare Cylinder Warranty provides special warranty coverage for cylinders and related parts shipped from Teledyne Continental Motors' plant on or after August 1, 1999 provided certain eligibility requirements are met. In the event that the eligibility requirements for this TopCare Cylinder Warranty are not met, the terms and conditions of the Teledyne Continental Motors (TCM) Aircraft Engine Part, Component & Accessory Warranty will apply.

1. **Engines Eligible for TopCare Cylinder Warranty Coverage:** Any TCM aircraft engine meeting the eligibility requirements of Paragraph 2 of this warranty is eligible for coverage.
2. **Eligibility Requirements:** This Top Care Cylinder Warranty applies only to cylinders and related parts shipped from TCM's plant on or after August 1, 1999. For purposes of this warranty, the cylinder and related parts are defined as the cylinder, cylinder intake and exhaust valves, valve inserts, valve guides, valve springs and their retaining parts, pistons, piston rings and related O-rings and gaskets. To be eligible for TopCare Cylinder Warranty coverage these parts must be installed together and used in combination with each other.

Required TopCare Health Check Inspections

To be eligible for coverage under this TopCare Cylinder Warranty and to maintain that coverage the aircraft must be inspected at a Fixed Base Operator (FBO) facility in accordance with the TopCare Health Check Inspection set forth in the latest revision of TCM Service Information Directive 97-2 (SID 97-2) as follows:

- (A) **For new aircraft:** Each new aircraft powered by a TCM engine shipped from TCM's plant on or after August 1, 1999 is covered by this TopCare Cylinder Warranty. To maintain coverage the aircraft must be inspected at least once per year in accordance with the TopCare Health Check inspection set forth in the latest revision of SID 97-2 and any discrepancies corrected at that time.
- (B) **For aircraft in service:** For an aircraft in service in which a new or rebuilt aftermarket TCM engine shipped from TCM's plant on or after August 1, 1999 or for an aircraft having an engine in which a new cylinder supplied by TCM on or after August 1, 1999 is installed, the TopCare Health Check Inspection must be performed at time of installation and at least once per year thereafter in accordance with the TopCare Health Check Inspection set forth in the latest revision of SID97-2 and any discrepancies corrected at that time.

Enrollment and Documentation Requirements

Each new aircraft powered by an engine that incorporates cylinders and related parts shipped from TCM's plant on or after August 1, 1999 is covered and no enrollment is required. For other than new aircraft, enrollment under the TopCare Cylinder Warranty must be accomplished by performing the initial TopCare Health Check Inspection at time of engine (or cylinder) installation and correcting any discrepancies at that time. The TopCare Health Checklist Form attached to the latest revision of SID97-2 must be completed, signed by the inspecting mechanic and a copy returned along with the TopCare Cylinder Warranty Enrollment Form attached to the latest revision of SID97-2 to:

Teledyne Continental Motors
Attn: Warranty Services
P.O. Box 90
Mobile, Alabama 36601-0090

To maintain coverage under the TopCare Cylinder Warranty, the TopCare Health Check Inspection must be performed at least once per year and any discrepancies corrected at that time. The TopCare Health Checklist Form must be completed for each inspection, signed by the inspecting mechanic and retained by the owner for submittal to TCM with any claim under the TopCare Cylinder Warranty. Each required

TopCare Health Check Inspection must have been properly performed and documented on the TopCare Health Checklist Form. The TopCare Health Checklist Form for each inspection must be submitted to TCM with any claim under this TopCare Cylinder Warranty. Copies of work orders documenting the performance of the required TopCare Health Inspection and correction of any discrepancies must also be submitted to TCM upon request.

3. TopCare Cylinder Warranty Coverage:

- (A) For a period of twelve (12) months or one thousand (1000) hours of operation, whichever occurs first, after the warranty activation date, TCM will at its option repair or replace on an exchange basis any cylinder component or related part manufactured or supplied by it which within the applicable twelve (12) month or one thousand (1000) hour period is returned to a representative of TCM authorized to handle the engine in which the cylinder component or related part covered by this warranty is installed and which upon examination by TCM is found to be defective in material or workmanship. For cylinders installed in new or rebuilt engines, the warranty activation date is the date the engine is first operated for any use or the 180th day after TCM's invoice date, whichever occurs first. For cylinder components purchased as aftermarket replacement components, the warranty activation date is the date the cylinder is first operated for any use. TCM will pay for reasonable labor costs associated with repairs or replacements under paragraph 3(A) of this warranty and for "troubleshooting" costs associated with identifying the need for such repairs or replacements when coordinated through an authorized TCM representative. The amount of repair or replacement labor costs allowed will be in accordance with the latest revision of the warranty labor allowance schedule, Form X30552, published by TCM. The amount of "troubleshooting" costs allowed will be the reasonable costs under the circumstance of identifying the need for such repairs or replacements, but in no event will the "troubleshooting" costs allowed exceed fifteen percent (15%) of the labor costs associated with such repairs or replacements allowed by TCM. No "troubleshooting" cost allowance will be made where the need for repairs or replacements is identified in the course of overhaul, routine maintenance or on the basis of an obvious defect.
- (B) After the expiration of the twelve (12) month period described in paragraph 3(A) and before the expiration of an additional twenty-four (24) month period or expiration of one thousand (1000) hours of operation, whichever occurs first, TCM will at its option repair or replace on an exchange basis any cylinder component or related part manufactured and supplied by it which is found to the satisfaction of TCM to be defective in material or workmanship.
- (C) In the event that TCM elects to repair in the field, rather than replace any cylinder component or related part under paragraph 3(B) of this warranty, TCM will pay labor costs for the repair of the cylinder component or related part only. The amount of repair labor costs allowed will be in accordance with the latest revision of the warranty labor allowance schedule, Form X30522, published by TCM. TCM will not assume any responsibility for labor costs for the removal and/or re-installation of the cylinder component or related part, costs for "troubleshooting" or any other labor costs associated with repairs or replacements under paragraph 3(B) of this warranty.
- (D) TCM reserves the right at its option to replace any defective cylinder component or related part with either a new or rebuilt cylinder component or related part.
- (E) Repair or replacement of any cylinder component or related part under this warranty will not extend the period of warranty coverage set forth above.
- (F) TCM will not assume any responsibility for transportation costs in connection with the repair or replacement of any cylinder component or related part under this warranty, except when such transportation has been expressly authorized by TCM. When authorized, transportation cost reimbursement for cylinder components will be the actual surface freight cost or the currently published UPS surface rate schedule, whichever is less.
- (G) This warranty applies only to cylinders in which parts manufactured or supplied by TCM or parts manufactured pursuant to an FAA Parts Manufacturer Approval have been used and nothing contained herein should be construed as a warranty by TCM of any cylinder or related part not manufactured or supplied by TCM. TCM accepts no responsibility for the failure of any cylinder or related part which it does not manufacture or supply or damage resulting from such failure.

- (H) This warranty also applies only to cylinders and related parts on which the installation, inspection, maintenance and operating instructions and recommendations contained in the appropriate operator's manual, overhaul manual and applicable service bulletins have been complied with. Performance of recommended inspections and maintenance must be documented by appropriate logbook entries and a copy of the logbook must accompany any cylinder and related part being returned for warranty consideration.
- (I) This warranty does not apply to any cylinder or related part manufactured or supplied by TCM which has been subject to misuse, neglect or accident or which has been installed, repaired, maintained or altered in any way that in the judgment of TCM has adversely affected the condition of the engine or which has been operated beyond factory recommendations (such as, but not limited to RPM, temperature, manifold pressure, fuel flow and proper system adjustment).
- (J) TCM will not be responsible for repair or replacement of cylinder components or parts damaged or worn as a result of corrosion, pre-ignition/detonation, operation with non-calibrated engine gauges, improper fuel system adjustment, non-TCM approved fuel and oil grades or additives and installation of parts, components or accessories that alter the engines' original type design.
- (K) The provisions of this warranty do not apply to normal maintenance service or to the replacement of normal service items. This warranty does not cover any costs related to the performance of the TopCare Health Check Inspection.
- (L) TCM reserves the right to change any part specifications or prices without incurring any responsibility with regard to engines or parts previously sold or replaced.
- (M) THIS WARRANTY IS A WARRANTY TO REPAIR OR REPLACE AND NOT A WARRANTY OF THE CONDITION OR FUTURE PERFORMANCE OF THE PRODUCTS WHICH IT COVERS. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, SPECIFICALLY, BUT WITHOUT LIMITATION, THERE ARE NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL TCM BE RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF ANY DEFECT IN ANY CYLINDER OR RELATED PART, ARISING OUT OF THE FAILURE OF ANY CYLINDER OR RELATED PART TO OPERATE PROPERLY, OR ARISING OUT OF ANY BREACH OF THE WARRANTY MADE HEREIN. No person is authorized to give any other warranty or to assume any additional obligation or liability on behalf of TCM.




CONTINENTAL MOTORS
A Teledyne Technologies Company

P.O. Box 90 • Mobile, Alabama 36601
(334) 438-3411

ENGINE WARRANTY REGISTRATION


This is your **ENGINE WARRANTY/RUST and CORROSION AWARENESS PROGRAM REGISTRATION** form. It is essential that it be properly completed and returned to TCM Warranty Department immediately. This will expedite processing of the claim should your engine require repair or replacement as provided in the appropriate warranty policy.

PLEASE COMPLETE AND RETAIN FOR OWNER'S RECORD

	
CONTINENTAL MOTORS A Teledyne Technologies Company	
OWNER'S NAME _____	
OWNER'S ADDRESS _____	
CITY, STATE, ZIP _____	
COUNTRY _____	TELEPHONE _____
SIGNATURE _____	

Engine Model _____	Serial # _____
Date of Installation _____	Tach Time _____
Aircraft Model _____	Serial # _____
Year Manufactured _____	Total Airframe Time _____
What Engine is being replaced? _____	
Serial # _____	Model _____
Hours _____	

PLEASE COMPLETE AND RETURN TO TCM IMMEDIATELY TO REGISTER WARRANTY

	
CONTINENTAL MOTORS A Teledyne Technologies Company	
OWNER'S NAME _____	
OWNER'S ADDRESS _____	
CITY, STATE, ZIP _____	
COUNTRY _____	TELEPHONE _____
SIGNATURE _____	

Engine Model _____	Serial # _____
Date of Installation _____	Tach Time _____
Aircraft Model _____	Serial # _____
Year Manufactured _____	Total Airframe Time _____
What Engine is being replaced? _____	
Serial # _____	Model _____
Hours _____	

Owners Validation Of Engine Preservation For Active And Stored Aircraft.

I certify that I have read and understand the information provided in SB M91-5 or current revision as applicable.

SIGNATURE _____

Cirrus Authorized Service Centers (by STATE)

Arizona

Corporate Jets, Inc.

Scottsdale Airport (SDL)

14600 North Airport Drive

Scottsdale, AZ 85260

Mike Moyers Maintenance Manager

800 995 5387 (995 - JETS)

(480) 443 7267 Maintenance Direct

(480) 951 0815 Maintenance FAX

California

Del Monte Aviation

Monterey Peninsula Airport (MRY)

Millionair

100 Skypark Drive

Monterey, CA 93940

Chuck Humphreys, Director of Piston Maintenance

(831) 373 4151 - Main #

(831) 373 1511 - Maintenance

(831) 373 6239 FAX

Kim Davidson Aviation, Inc.

Santa Monica Airport (SMO)

2701 Airport Avenue

Santa Monica, CA 90405

Kim Davidson

(310) 391 6293

Jay's Aircraft Maintenance

John Wayne Airport (SNA)

Orange County Flight Center

2980 Airway

Costa Mesa, CA 92626

Jay Ghanbarzadeh

(714) 433 2275

Top Gun Aviation

6100 S. Lindberg St.

Stockton, CA 95206

Mark Roush Service Manager

(209) 983 8082

(209) 983 8084 FAX

Tradewinds Aviation

Reid-Hillview Airport
2505 Cunningham Avenue
San Jose, CA. 95148
Tom Nicholson, Director Of Maintenance
(408) 729 5100
(408) 729 0142 FAX

Air West Aircraft Engines

San Carlos Airport
670 Airport Boulevard
San Carlos, CA. 94070
Terry Medeiros, President
(650) 593 8403
(650) 593 7992 (FAX)

Stratman Aero Service Inc.

101 Hartley Place
Santa Barbara Airport
Goleta, CA. 93117
Chris Jewell, Director Of Maintenance
(805) 967-8096
(805) 964 2162 FAX

Colorado

Arapahoe Aero

Centennial Airport, Douglas County (APA)
12760 East Control Tower Road
Englewood, CO 80112
Scott Utz
Adam Parts
(303) 799 8386
(303) 708 9300 FAX
(303) 790 4516 FAX

Colorado Aviation

1360 Aviation Way
Colorado Spring, CO. 80916
Craig Powell, President
(719) 591 2065
(719) 574 3284

Florida

Flightline Group, Inc.

Tallahassee Regional (TLH)
3256 Capital Circle SW
Tallahassee, FL 32310
Bill Morgan, Fred Davis, Maintenance
(850) 574 4444
(850) 576 3515 Direct Maintenance Line

Leading Edge Aviation Services, Inc.

Vandenberg Airport Tampa (VDF)
6582 Eureka Springs Road
Tampa, FL 33610
David Moberg, Director of Maintenance
(813) 626 1515
(813) 623 6483

Southeast Aero Services, Inc.

St. John's County (SGJ)
4900 U.S. 1 North
St. Augustine, FL 32095
John Strohl, Cirrus Service Manager
(904) 824 1899 x20
(800) 692 2091 x20
(904) 824 6334 (FAX)

Georgia

Gardner Aviation Specialists

Griffin Spalding Airport (6A2)
215 Barry Whatley Way
Griffin, GA 30224
Bill Durdan, VP Maintenance
(770) 412 7216

DLK Aviation, Inc.

McCollum Airport
2601 Cessna Lane
Kennesaw, GA 30144
Dan Kendall, President
(770) 427 4954
(770) 428 6180 FAX

Illinois

JA Air Center

DuPage Airport (DPA)
3N060 Powis Road
West Chicago, IL 60185
Bruce Rebechini - Piston Service Manager
(800) 323 5966
(630) 584 3200
(630) 513 1249 FAX (service)

Indiana

IEC Flight Center, Inc.

Elkhart Municipal Airport (EKM)
2060 Airport Road Hanger 39
Elkhart, IN 46514
Larry Crowder, Chief of Maintenance
(574) 264 5920
(574) 266 4040 (FBO)
(574) 266 4433 FAX FBO
(574) 262 4422 (Hangar #39 - Maintenance)

Tri-State Aero

Dress Regional Airport (EW)
6101 Flightline Drive
Evansville IN 47725
Jack Staples
800 473 2904
(812) 426 1225

Montgomery Aviation

11329 East State Road 32
Indianapolis Terry Airport (TYQ)
Zionsville, In. 46077
Dan Montgomery, Owner
(317) 769 4487
(317) 769 3207 (FAX)

Iowa

Connell Flying Service

Decorah Airport (DEH)
1705 State Highway 9
Mike Connell, Airport Manager
Decorah, IA 52101
(563) 382 8338
(563) 382 8338 FAX

Jet Air, Inc.

1801 S. Riverside Drive
Iowa City, IA. 52246
Ron Duffe, Manager
(319) 248 1200
(319) 338 3690

Jetson Aviation Centre

Sioux Gateway Airport (SUX)
5815 Mitchell Street
Sioux City, IA 51111
Tom Lelf, Director of Maintenance
(712) 258 6563
(712) 258 7584 FAX
(800) 747 3304

Kentucky

AviTech

7079 Airport Road (FGX)
Maysville, Ky. 41056
Brian Coleman, Owner
(606) 742 2084
(606) 742 2084 (FAX)

Massachusetts

East Coast Aviation

Hanscom AFB (KBED)
Hangar 1730
Bedford, MA 01731
Joe Frisolone - GM - Mail box 12
Joe Gardner - Chief Inspector
(781) 274 0105
(781) 274 0714 (FAX)

Michigan

Kalamazoo Aircraft

Battle Creek Kalamazoo International (AZO)
2729 East Millham Rd.
Kalamazoo, MI 49002
Ralph Michalka
(616) 381 0790
(616) 381 9762 FAX

Executive Air Transport

Muskegon County Airport
103 Sinclair Drive
Muskegon, MI 49441
Brad Ports, Director of Maintenance
(231) 798 2126
(231) 799 9953

Minnesota

Aircraft Maintenance Services, Inc.

Anoka County - Blaine Airport (ANE)
8891 Airport Road
A-2
Blaine, MN 55449
Bill Ahmann, Director of Maintenance
(763) 784 9165
(763) 780 4612 FAX

Cirrus Service Center, Duluth

Duluth International Airport (DLH)
4515 Taylor Circle
Duluth, MN 55811
Chris Dixon, Director of Maintenance
(218) 788 3101

Quality Aviation Incorporated

Faribault Municipal Airport
3401 W. Trunk, Hwy 21
Faribault, MN 55021
Gerald Serres, Owner
(507) 332 0140
(507) 332 0139 (FAX)

Missouri

Thunder Aviation

Spirit of St. Louis Airport (SUS)
18369 Edison Avenue
Chesterfield, MO 63005
Scott Ritchie, Director of Maintenance
(636) 532 5600
(636) 532 8494 (FAX)
(636) 836 1670 (PAGER)

Nebraska

Silverhawk Aviation Inc.

1751 West Kearney Ave.
Lincoln Municipal Airport
Lincoln, NE. 68524
Gene Luce DOM
(402) 475 8600
(402 475 1422 (FAX)

New Jersey

Lincoln Park Aviation

Lincoln Park Airport (N07)
425 Beaverbrook Road
Lincoln Park, NJ 07035
Frank Galella, Maintenance & Avionics
(973) 633 0450
(973) 872 6256 FAX

New Mexico

Santa Fe Jet

Santa Fe Municipal Airport
445 Airport Road
Santa Fe, New Mexico 87505
(505) 471 2525
1 800 263 7695
(505) 473 7707 (FAX)
Tony Padilla Director Of Maintenance

New York

Syracuse Executive Air Service

Syracuse Intl. Airport
211 Tuskegee Road
Syracuse, NY 13211
Kevin Kuc, Director Of Maintenance
(315) 455 5957
(315) 455 7068 (FAX)

North Carolina

Air Care Inc.

P. O. Box 7668
Rocky Mount, NC 27804
Darryl Shearer, Director of Maintenance
(252) 977 1717
(252) 977 0604 (FAX)

North Dakota

GFK Flight Support

2467 Air Cargo Drive
Grand Forks, ND 58203
Brent Selfert President
(701) 772 5504
(701) 772 8917 (FAX)

Ohio

GForce Aviation, Inc.

Akron - Canton Regional Airport (KCAK)
5430 Louby Road, Building 17
Akron - Canton Regional Airport
North Canton, OH 44720
Chip Majors - D o M
(330) 499 9790
(330) 499 1736
www.g-force-aviation.com
Gforce@raex.com

Oregon

Hillsboro Aviation, Inc.

Hillsboro Airport
3565 NE Cornell Road
Hillsboro, OR 97124
Bill McKibbin, Service Manager
(503) 648 2831

Pennsylvania

Air Ways

Lancaster Airport (LNS)
P.O. Box 5403
Lancaster PA 17606-5403
500 Airport Road
Lititz, PA 17543
Jim Mazzante Director of Maintenance (pres 3)
(717) 569 4996
(717) 569 9734 FAX
(800) 247 8294 "AIR TAXI"

South Carolina

Eagle Aviation

Columbia Metropolitan Airport (CMA)

2861 Aviation Way

West Columbia, SC 29170

Randy Kovalick Director of Technical Services

Mike Johnston Avionics Manager

(800) 849 0483 Maintenance Hot Line

(803) 822 5502 Randy

(803) 822 5552 Mike

South Dakota

Business Aviation Services

Joe Foss Field (FSD)

3501 Aviation Avenue

Sioux Falls, SD 57104-0197

Scott Barber, DoM

1-800 888 1646

(605) 336 8009 FAX

Quest Aviation

Aberdeen Regional Airport (ABR)

P.O. Box 2140

Aberdeen SD 57402

Shannon Yesbe, Manager

(800) 848 8868

(605) 225 0115 FAX

Tennessee

Corporate Flight Management Inc.

Smyrna Airport (MOY)

625 Fitzhugh Blvd.

Smyrna, TN. 37167

Dave Haffner

Allen Peralta

(615) 459 8883

(615) 459 7144 (FAX)

Texas

Monarch Air

Addison Airport (ADS)

4580 Claire Chennault

Addison, TX 75001

(972) 931 0345

(972) 931 0450 (FAX)

Houston Executive Air Service

William P. Hobby Airport (HOU)
8601 Travelair
Houston, TX 77061
Mike Botkin, Director of Maintenance
(832) 868 7259
(713) 640 2348 FAX
1 800 HOU EXEC

SouthWest Texas Aviation

1815 Airport Drive (HYI)
San Marcos, Texas 78666
Russell Stallings, President
(800) 749 7982
(512) 353 0088 (FAX)

Champions Aviation, Inc.

8319 Thora Lane Hanger D-1 (DWH)
David Wayne Hooks Airport
Spring, TX. 77379
Cliff Davis, President
(281) 376 5418
(281) 257 0797 (FAX)

Aurora Aviation, Inc.

355 McGregor Airport Road
McGregor Executive Airport
McGregor, TX. 76657
Michael Moore, Director Of Maintenance
(254) 848-2345
(254) 848-2555 FAX

Virginia**Dulles Aviation**

Manassas Regional Airport (HEF)
10501 Observation Road
Manassas, VA 20110
Charlie Schoenduby Director of Maintenance
(703) 361 2171
(703) 361 4478 FAX

Washington

Wings Aloft

King County Int'l A/P @ Boeing Field (BFI)

8467 Perimeter Road South

Seattle, WA 98108

Jim Musgrove - Director of Maintenance

(206) 763 2113

(206) 979 2520 (cell)

(206) 767 9464 (FAX)

Noland-Decoto Flying Service

2810 West Washington Avenue

Yakima, WA. 98903

Chris Castille, Director of Maintenance

(509) 249 1300

(509) 248 1375 (FAX)

Wisconsin

Magnus Aviation, Inc.

Sheboygan County Memorial Airport (SBM)

N6187 Resource Drive

Sheboygan Falls, WI 53085

Jeff Magnus, Owner

(800) 242 7643

(920) 467 6151

(920) 467 8611 FAX

Wisconsin Aviation, Inc.

Dane Co Airport

3603 Corben Court

Madison, WI 53704

(608) 268 5003

(608) 268 5006 Avionics

stuart@wisconsinaviation.com

Wisconsin Aviation, Inc.

Watertown Municipal Airport

1741 River Drive

Watertown, WI 53094

Pete Schroeder DoM

(920) 261 4567

(920) 261 9949 FAX

Overseas

Australia

Cirrus Aircraft Sales

Archerfield Airport (QFD)

P.O. Box 105

Archerfield, Queensland, 4108

Australia

Steve Maltby, Director

(07) 3272 9043

(07) 3272 9066 (FAX)

0412 373173 Mobile

maltair@tpgi.com.au E-Mail

Canada

Leggat Aviation Ltd

Toronto Buttonville Airport

2833 16th Avenue

Markham, Ontario L3R 0P8

John Leggat, DOM

(905) 477 7900

(905) 477 8937 (FAX)

England

AKK Aviation Services Ltd

Turweston Aerodrome

Briddlesden Road

Brackley

Northamptonshire

NN13 5YD UK

Joe Kuttappa - Director

001 (44) 1280 706616

001 (44) 1280 840033 FAX

001 (44) 1933 355127 Evenings

France

C.P. Aero

Bailment 30 Aerodrome de Coulmiers

77120 Mouroux

Pascal Crapart - Director Manager

Lucien Hebrard Technical Director

33 (0) 1 64750342

33 (0) 1 64750781

Germany

Beechcraft Sales & Service

Augsburg Airport
Flughafenstrasse 5
Augsburg Germany D-8616
Hans Obermeyer General Manager
49 821 7003 100
49 821 7003 153 FAX

Roder Präzision GmbH

Flugplatz
Egelsbach Germany 63329
Gerd Spiegl, General Manager
49 6103 4002175
49 6103 4002700 FAX

Greece

Global Air Services S.A.

Marathon Airport
5 Erythrou Stavrou, Marousi
Athens Greece 15123
Panos Belesiotis - Maintenance
(301) 6815 050
(301) 6814 450 FAX
www.globalaviation.gr

Netherlands

General Enterprises b.v.

Eelde Airport (EHGG)
Machlaan 20
9761 TK Eelde, The Netherlands
Rob G. Van Doorn, Director of Maintenance
011 31 5030 96060
011 31 5030 96090 FAX @ Sales
011 31 5030 98241 FAX @ Maintenance Shop

Switzerland

Aeromeccanica SA

Aeroporto Cantanale di Locarno
CH-6596 Gordola
Switzerland
Stefano Scossa, General Manager
41 91 74 56689
41 91 74 53388
41 91 7454444 (FAX)

WARRANTY**1****Limited Parts & Labor Warranty**

Sandel Avionics, LLC (hereinafter referred to as "Sandel") provides the following limited warranty. If you should have any questions, please contact the avionics shop that sold you the SN3308 or contact Sandel directly.

CONDITIONS OF LIMITED WARRANTY

If during the one (1) year period from the date of original purchase or installation, your SN3308 is found on authorized inspection to have a defect in material or workmanship, Sandel or an authorized representative will repair such defect or replace the defective unit without charge for parts or labor. Routine maintenance work and the results of normal wear are not covered by this warranty except as noted.

For the next one (1) year Sandel will replace any individual electronic part, sub-assembly, or finished product judged by Sandel to be defective, without charge for parts. Parts replaced under this portion of the warranty are warranted for the remainder of the original product warranty or for 90 days (whichever period is longer).

Sandel reserves the right to utilize reconditioned subassemblies as warranty replacements in the repair of the product. In the event Sandel determines that the unit cannot be repaired, Sandel will replace the defective unit with either the same model product or one that is reasonably equivalent. At Sandel's discretion, replacement units or repaired units may include software or hardware updates and revisions that alter some characteristics of the product.

Should warranty service be required, the warranty period will be extended by the number of days that elapse between the date a defect is reported and the date that the repaired unit is returned. Sandel assumes no responsibility for payment of any repair services performed by third parties including removal of the unit from the aircraft, inspection, packaging, handling, or installation unless such services are authorized in advance and in writing by Sandel.

Sandel reserves the right to make changes, upgrades, and improvements to its products without incurring any obligation to install such changes, upgrades, and improvements in previously manufactured products.

If during the warranty period, title to the aircraft in which the product is installed is transferred the remainder of the warranty may be transferred to the new owner by notifying Sandel in writing of the transaction. Such notification must include complete address information for the original owner and the new owner as well as the N number and serial number of the aircraft and the serial number of the Sandel product.

Please contact Sandel directly if you have any questions regarding this Sandel limited warranty. This limited warranty is applicable only in the fifty states of the USA and the District of Columbia. It is not applicable in the possessions or territories of the USA or in any other country. This limited warranty is the only warranty which Sandel makes with respect to your SN3308. Sandel disclaims all other warranties relating to the product including warranties of merchantability and fitness for a particular use.

In any event, Sandel shall not be liable for any incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages and some states do not allow limitations on how long an implied warranty may last; therefore, the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights. You may also have other rights that vary from state to state. In the event any of the provisions of this warranty are found by statute or by applicable administrative or judicial entity to be unenforceable, the remaining provisions shall remain in force.

OWNERS RESPONSIBILITIES

Please read the Pilot's Guide of your SN3308 and the equipment to which it is connected. The information provided in your Pilot's Guide covers operation, safety precautions and routine maintenance. This warranty does NOT cover expenses incurred due to a lack of understanding of the functioning of the product when it is operating as designed.

In order for Sandel to provide proper warranty service, you may be required to:



WARRANTY

1

Limited Parts & Labor Warranty

- Supply proof of purchase documents.
- Permit Sandel or an authorized representative to provide the applicable warranty service during normal business hours.
- Retain and provide to Sandel (upon request) any documentation of the installation of the product in your aircraft.
- Provide Sandel with all pertinent information regarding the symptoms, failure, or defect initiating the request for warranty service.

EXCLUSIONS

This warranty does not cover the following:

- Projection lamp.
- Failures that are the result of improper installation, maintenance, or repair.
- Failures that result from neglect, abnormal strain, modification, accidental damage, theft, vandalism, or exposure to extremes in temperature or relative humidity.
- Products whose trademark, name, or identification numbers have been altered or removed.
- Radio frequency interference generated by equipment operated in violation of applicable FCC rules.
- Equipment purchased "As New" from a dealer or distributor not authorized by Sandel.

All product or material returned to Sandel must be properly packed and labeled with a Returned Material Authorization (RMA) number. Should proper packing materials not be available, Sandel will provide an approved shipping container on request.

ONE YEAR WARRANTY

S-TEC Corporation agrees to repair or replace at its option, and without charge, any equipment, parts or accessories which under reasonable intended use are found to be defective as to design, workmanship, and material and which are returned to S-TEC or to an authorized S-TEC dealer, transportation prepaid, provided:

- A. Installation of the equipment was made by an S-TEC authorized facility.
- B. Notice of claim is given S-TEC or authorized dealer as soon as practical.
- C. A properly executed Warranty Certificate is presented to S-TEC or authorized dealer.

This warranty is void with respect to equipment which is altered, modified or repaired without consent of S-TEC.

No other warranties, expressed or implied, shall be applicable to any equipment sold hereunder and the foregoing constitutes the users sole right and remedy.

S-TEC Corporation shall, in no event, be liable for incidental or consequential damages.



S-TEC Corporation
TEC LINE AVIONICS AND
FLIGHT CONTROL SYSTEMS

One S-TEC Way
Municipal Airport, Mineral Wells, Texas 76057-9236
Phone: 817/325-9405; 1-800-USA-S-TEC; Fax: 817/325-3904
<http://www.s-tec.com>

ARNAV Systems, Inc. Limited Avionics Warranty

ARNAV Systems, Inc., ("ARNAV"), 16923 Meridian East, Puyallup, Washington 98376 warrants to the first retail purchaser only, that so long as said purchaser owns the product, ARNAV, at its option, will repair or replace the product in which a defect may occur in design, material or workmanship, subject to the following **CONDITIONS AND LIMITATIONS**:

(A) **USE:** The defect must occur under normal use and service for which the product was intended. ARNAV shall not be obligated or liable under this Warranty for defects which ARNAV's examination discloses are due to: (1) tampering, (2) misuse, (3) abuse, (4) neglect, (5) improper storage or maintenance, (6) use in a manner beyond which such equipment is normally intended to be used, (7) improper repair or poor workmanship by those who are not authorized by ARNAV to repair the products or use of defective material by such unauthorized persons, (8) and any other cause except for defects in design, material or workmanship caused by ARNAV.

(B) **WARRANTY REGISTRATION:** The warranty card supplied with the product must be completed and returned to ARNAV within fifteen (15) days from the date the installation of the ARNAV product is complete in the customer's aircraft, for this Warranty to become effective.

(C) **PURCHASE & INSTALLATION:** The ARNAV product must have been purchased from and installed by an authorized ARNAV dealer, Original Equipment Manufacturer or authorized completion center or fleet maintenance center. A list of all authorized ARNAV dealers can be obtained by calling ARNAV at (253) 848-6060.

(D) **EVIDENCE OF INSTALLATION:** ARNAV must receive a copy of the FAA Form 337 prepared by the installation facility, indicating the installation is in compliance with ARNAV approved installation procedures using avionics fan cooling in the purchaser's aircraft, or equivalent documentation showing installation of the ARNAV product by the authorized ARNAV dealer.

(E) **TRANSPORTATION & INSURANCE:** For all warranty work, the product shall be returned to ARNAV via the dealer with the transportation charges prepaid. After correction of the defects, the products will be returned to the purchaser, transportation charges prepaid, except for returns in foreign countries, which shall be responsible for payment of such charges from the American port of exit to purchaser's place of business. The risk or damage to all products in transit shall be assumed by the party initiating the transportation of such products.

(F) **LENGTH OF WARRANTY - TWENTY FOUR (24) MONTHS:** All avionics products manufactured by ARNAV, unless otherwise specified under exceptions herein, are warranted to be free of defects in materials and workmanship for a period of twenty-four (24) months from the date when the first installation is complete.

1. **WARRANTY EXCEPTIONS:**

- (a) **LIFETIME WARRANTY:** ARNAV 50, R501, R-5000, and FMS 5000 LORAN receivers are covered by a lifetime warranty to the first retail purchaser only, for normal private use in general aviation operations conducted under U.S. FAR Part 91, or the corresponding regulations of a foreign country. The lifetime warranty is not valid for commercial operations conducted under U.S. FAR Part(s) 121, 125, 135, or commercial operations conducted under the laws of a foreign nation governing commercial operation of an aircraft. The warranty for the aforementioned products used in commercial flight operations is contained in paragraph (A), and is valid, subject to the **CONDITIONS AND LIMITATIONS**, for a period of twenty-four (24) months from the date when the first installation is complete.
- (b) **ANTENNAS, PREAMPS, CABLES & HARDWARE:** All antennas, preamplifiers, cables and hardware are warranted for a period of twelve (12) months from the date of installation.
- (c) **HOME BUILT/EXPERIMENTAL AIRCRAFT INSTALLATIONS:** Installations of ARNAV products in homebuilt and/or experimental aircraft must have, for this warranty to be valid, the installation inspected by an ARNAV approved installation facility and certified to be in compliance with all ARNAV installation manuals and drawings.
- (d) **REMANUFACTURED PRODUCTS:** Remanufactured products are warranted for a period of one (1) year.
- (e) **SERVICE:** All products returned to the factory for service are warranted for a period of ninety (90) days.

This Warranty is limited to the original retail purchaser and is further limited by, and subject to, the availability to ARNAV of parts after seven (7) years from the date of purchase. Except where the product is used or purchased primarily for the purchaser's personal or family use, this Warranty is in lieu of all other warranties expressed or implied, including without limitation, any implied warranties of merchantability or fitness for a particular purpose, if any, and said implied warranties are hereby expressly excluded and disclaimed.

Where the product is used or purchased primarily for the purchaser's personal or family use, any implied warranties of merchantability or fitness for a particular purpose, if any, are hereby expressly limited to one (1) year from the date of purchase of the product.

ARNAV shall not be liable for consequential, incidental or other types of damages, including without limitation, loss of use, lost profits, and personal injury. ARNAV expressly excludes and disclaims such damages resulting from or caused by, the use, operation, failure, malfunction or defect of any ARNAV product covered by this warranty, whether or not liability for such damages is due to tort (including negligence), contract, warranty, or strict liability.

Except as expressly contained herein, ARNAV makes no other warranties, expressed or implied, with respect to its product and disclaims the same.



AIRCRAFT OEM-INSTALLED AVIONICS 2-YEAR LIMITED WARRANTY CERTIFICATE

This GARMIN Product is warranted to be free from defects in materials or workmanship for two years from the date of warranty activation. Within this period, GARMIN International, Inc. will at its sole option, repair or replace any components which fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labor, provided that the customer shall be responsible for any transportation cost. This warranty does not cover failures due to abuse, misuse, accident or unauthorized alteration or repairs.

THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED OR STATUTORY, INCLUDING ANY LIABILITY ARISING UNDER ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, WHICH MAY VARY FROM STATE TO STATE.

IN NO EVENT SHALL GARMIN BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM THE USE, MISUSE, OR INABILITY TO USE THIS PRODUCT OR FROM DEFECTS IN THE PRODUCT. SOME STATES DO NOT ALLOW THE EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

GARMIN retains the exclusive right to repair or replace the product or offer a full refund of the purchase price at its sole discretion. SUCH REMEDY SHALL BE YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY BREACH OF WARRANTY.

To obtain warranty service, contact your local GARMIN authorized Service Center. For assistance in locating a Service Center near you, call GARMIN Customer Service at one of the numbers shown below.

GARMIN International
1200 East 151st Street
Olathe, Kansas 66062, U.S.A.
Toll free: 1-800-800-1020

Phone: 1-913-397-8200 FAX: 1-913-397-0836

GARMIN (Europe) Ltd.
Unit 5, The Quadrangle
Abbey Park Industrial Estate
Romsey, SO51 9AQ, U.K.

Phone: 44-1794-519944 FAX: 44-1794-519222

Visit our web site at:
www.garmin.com



CONTINENTAL MOTORS NEW ENGINE WARRANTY

Each new aircraft engine shipped from Teledyne Continental Motors' plant on or after August 1, 1999 is warranted as follows:

1. (a) For a period of twelve (12) months or one thousand (1000) hours of operation, whichever occurs first, after the warranty activation date Teledyne Continental Motors (TCM) will at its option repair or replace on an exchange basis any engine, component or part manufactured or supplied by it which within the applicable twelve (12) month or one thousand (1000) hour period is returned to a TCM representative authorized to handle the engine covered by this warranty and which upon examination is found to the satisfaction of TCM to be defective in material or workmanship. The warranty activation date is the date the engine is first operated for any use or the 180th day after TCM's invoice date, whichever occurs first.

(b) TCM will pay for reasonable labor costs associated with repairs or replacements under paragraph 1(a) of this warranty and for "troubleshooting" costs associated with identifying the need for such repairs or replacements, when coordinated through an authorized TCM representative. The amount of repair and replacement labor costs allowed will be in accordance with the latest revision of the warranty labor allowance schedule, Form X30552, published by TCM. The amount of "troubleshooting" costs allowed will be the reasonable costs under the circumstances of identifying the need for such repairs or replacements, but in no event will the "troubleshooting" costs allowed exceed fifteen percent (15%) of the labor costs associated with such repairs or replacements allowed by TCM. No "troubleshooting" cost allowance will be made where the need for repairs or replacements is identified in the course of overhaul, routine maintenance or on the basis of an obvious defect.

(c) TCM will pay transportation costs in connection with the repair or replacement of any engine, component or part found to the satisfaction of TCM to be defective in material or workmanship under paragraph 1(a) of this warranty. The engine, component or part must be shipped prepaid to the repair facility designated by TCM. Transportation cost reimbursement for engines will be the actual surface freight charge or \$500.00, whichever is less. Engines must be described on the bill of lading as follows: "Internal combustion engine, other than Radial Cyl RVNX \$5.00". Transportation cost reimbursement for components or parts will be the actual surface freight charge for shipment of the component or part or the currently published UPS surface rate schedule, whichever is less.
2. (a) After the expiration of the applicable twelve (12) month period described above and before the expiration of an additional twenty-four (24) month period or expiration of one thousand (1000) hours of operation, whichever occurs first, TCM will, except as excluded below, at its option repair or replace on an exchange basis any component or part manufactured or supplied by it which is found to the satisfaction of TCM to be defective in material or workmanship. During this period TCM reserves the right at its option to replace the defective component or part with either a new or rebuilt component or part. During this period TCM will not assume any responsibility for the repair or replacement of engine accessories, i.e. parts which have been purchased by TCM from a manufacturer as a complete and finished unit and included in the assembly of an engine without altering the unit, including, but not limited to, Unison® magnetos and harnesses, Precision Air motive Corporation® carburetors and fuel controls, ElectroSystems® starters and alternators and AlliedSignal® and Consolidated Fuel Systems® turbochargers. During this period accessories will be subject to such warranty coverage as may be provided by their manufacturer.

(b) In the event that TCM elects to repair in the field, rather than replace, any component or part under paragraph 2(a) of this warranty, TCM will pay labor costs for the repair of the component or part only. The amount of repair labor costs allowed will be in accordance with the latest revision of the warranty labor allowance schedule, Form X30552, published by TCM. TCM will not assume any responsibility for labor costs for the removal and installation of the component or part.

(c) TCM will not assume any responsibility for transportation costs associated with repairs or replacements under paragraph 2(a) of this warranty.

3. The coverage under this warranty applicable to cylinder assemblies and related parts shall be subject to the terms, conditions and limitations set forth in the applicable TCM TopCareSM Cylinder Warranty.
4. Repair or replacement of any engine or part under this warranty will not extend the period of warranty coverage set forth above.
5. This warranty applies only to engines in which parts manufactured or supplied by TCM or parts manufactured pursuant to an FAA Parts Manufacturer-Approval have been used and nothing contained herein should be construed as a warranty by TCM of any engine or part not manufactured or supplied by TCM. TCM accepts no responsibility for the failure of any engine or part which it does not manufacture or supply or damage resulting from such failure.
6. This warranty applies only to engines which have been installed, inspected and maintained in accordance with the instructions for continued airworthiness, including compliance with all applicable service bulletins issued by TCM, the aircraft manufacturer or any accessory or component manufacturer. Performance of recommended inspections and maintenance must be documented by appropriate logbook entries and the logbook must accompany any engine being returned for warranty consideration.
7. This warranty does not apply to any engine, component or part manufactured or supplied by TCM which (1) has been subject to misuse, neglect or accident; (2) has been installed, repaired, maintained or altered in any way that in the judgment of TCM has adversely affected the condition of the engine; (3) has been operated inconsistent with TCM and aircraft manufacturer recommendations and limitations (such as, but not limited to engine RPM, temperature, manifold pressure, fuel flow and proper system adjustment) or (4) has been changed from its original FAA certificated configuration.
8. TCM will not be responsible for repair or replacement of any engine, component or part damaged or worn as a result of corrosion, pre-ignition/detonation, operation with non-calibrated engine gauges, improper fuel system adjustment, non-TCM approved fuel and oil grades or additives or installation of parts, components or accessories that alter the engine's original type design.
9. The provisions of this warranty do not apply to normal maintenance service (such as engine tune-ups, adjustments, inspections, engine or component overhaul resulting from time between overhaul (TBO) recommendations, etc.) or to the replacement of normal service items (such as spark plugs, filters, hoses, belts, etc.).
10. TCM reserves the right to change any engine or part specifications or prices without incurring any responsibility with regard to engines or parts previously sold or replaced.
11. THIS WARRANTY IS A WARRANTY TO REPAIR OR REPLACE AND NOT A WARRANTY OF THE CONDITION OR FUTURE PERFORMANCE OF THE PRODUCTS WHICH IT COVERS. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, SPECIFICALLY, BUT WITHOUT LIMITATION, THERE ARE NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL TCM BE RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF ANY DEFECT IN ANY ENGINE OR PART, ARISING OUT OF THE FAILURE OF ANY ENGINE OR PART TO OPERATE PROPERLY, OR ARISING OUT OF ANY BREACH OF THE WARRANTY MADE HEREIN. No person is authorized to give any other warranty or to assume any additional obligation or liability on behalf of TCM.



**Hartzell Propeller Inc.
Product Warranty**

As to each new and unused product manufactured by Seller and sold to Purchaser hereunder, Seller warrants such product to be free from defects in material and workmanship in normal use and service for the first ONE THOUSAND (1000) OPERATING HOURS OF USE OR PERIOD OF ONE (1) YEAR FROM THE DATE FIRST PLACED IN SERVICE, WHICHEVER FIRST OCCURS. As to products or components parts thereof manufactured or supplied by others, Seller extends to Purchaser the applicable product warranty, if any, extended by such manufacturer or supplier to customers of Seller. Used and reconditioned Products are sold AS IS and WITH ALL FAULTS and without any warranties express or implied of any kind or nature.

The provisions of the warranty set forth in the preceding paragraph will not apply to any product which is used for a purpose for which it is not designed, which is altered in any way, or which is subjected to misuse, negligence, accident, or neglect; so as, in the judgment of Seller, to affect adversely the condition or value of such product. Except as expressly provided in the preceding paragraph, all guarantees, warranties, conditions, and representations, either express or implied, whether arising under any statute, common law, commercial usage, or otherwise, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE, are hereby EXCLUDED.

Seller will have no obligation to Purchaser under this warranty unless and until Purchaser has returned the product to Seller within the time limits specified above, transportation and handling charges prepaid, and provided Seller with a written statement describing the alleged defect. Upon Purchaser's return of the product alleged to be defective, Seller will inspect the same and advise Purchaser whether or not Seller agrees that the product is defective. If Seller agrees, Seller will either repair and redeliver the original product, deliver a replacement product, or issue a credit to Purchaser. Seller's entire obligation under such warranty will be fully discharged by such repair, replacement, or issuance. If Seller does not agree that the product is defective or otherwise determines that the product is not covered by above warranty, then Seller will return the product to Purchaser, as is, transportation and handling charges collect.

THE WARRANTIES IN THIS CLAUSE ARE GIVEN AND ACCEPTED IN LIEU OF ANY OTHER WARRANTIES, REMEDIES, RIGHTS OR CLAIMS RESPECTING CONSEQUENTIAL, INCIDENTAL, SPECIAL, DIRECT, INDIRECT, TORT, CONTRACT OR ANY OTHER DAMAGES, WHETHER OR NOT ARISING FROM ANY CLAUSE OR ACTION OF ANY TYPE INCLUDING, WITHOUT LIMITATION, ANY DAMAGES ARISING FROM SELLER'S NEGLIGENCE, ACTUAL OR IMPLIED. Purchaser shall indemnify Seller for any claims which arise in the event of the failure of Purchaser or others down the contractual chain, to limit in accordance with this clause, Seller's liability and obligations.



CONTINENTAL MOTORS NEW ENGINE WARRANTY

Each new aircraft engine shipped from Teledyne Continental Motors' plant on or after August 1, 1999 is warranted as follows:

1. (a) For a period of twelve (12) months or one thousand (1000) hours of operation, whichever occurs first, after the warranty activation date Teledyne Continental Motors (TCM) will at its option repair or replace on an exchange basis any engine, component or part manufactured or supplied by it which within the applicable twelve (12) month or one thousand (1000) hour period is returned to a TCM representative authorized to handle the engine covered by this warranty and which upon examination is found to the satisfaction of TCM to be defective in material or workmanship. The warranty activation date is the date the engine is first operated for any use or the 180th day after TCM's invoice date, whichever occurs first.

(b) TCM will pay for reasonable labor costs associated with repairs or replacements under paragraph 1(a) of this warranty and for "troubleshooting" costs associated with identifying the need for such repairs or replacements, when coordinated through an authorized TCM representative. The amount of repair and replacement labor costs allowed will be in accordance with the latest revision of the warranty labor allowance schedule, Form X30552, published by TCM. The amount of "troubleshooting" costs allowed will be the reasonable costs under the circumstances of identifying the need for such repairs or replacements, but in no event will the "troubleshooting" costs allowed exceed fifteen percent (15%) of the labor costs associated with such repairs or replacements allowed by TCM. No "troubleshooting" cost allowance will be made where the need for repairs or replacements is identified in the course of overhaul, routine maintenance or on the basis of an obvious defect.

(c) TCM will pay transportation costs in connection with the repair or replacement of any engine, component or part found to the satisfaction of TCM to be defective in material or workmanship under paragraph 1(a) of this warranty. The engine, component or part must be shipped prepaid to the repair facility designated by TCM. Transportation cost reimbursement for engines will be the actual surface freight charge or \$500.00, whichever is less. Engines must be described on the bill of lading as follows: "Internal combustion engine, other than Radial Cyl RVNX \$5.00". Transportation cost reimbursement for components or parts will be the actual surface freight charge for shipment of the component or part or the currently published UPS surface rate schedule, whichever is less.

2. (a) After the expiration of the applicable twelve (12) month period described above and before the expiration of an additional twenty-four (24) month period or expiration of one thousand (1000) hours of operation, whichever occurs first, TCM will, except as excluded below, at its option repair or replace on an exchange basis any component or part manufactured or supplied by it which is found to the satisfaction of TCM to be defective in material or workmanship. During this period TCM reserves the right at its option to replace the defective component or part with either a new or rebuilt component or part. During this period TCM will not assume any responsibility for the repair or replacement of engine accessories, i.e. parts which have been purchased by TCM from a manufacturer as a complete and finished unit and included in the assembly of an engine without altering the unit, including, but not limited to, Unison® magnetos and harnesses, Precision Airmotive Corporation® carburetors and fuel controls, Electrosystems® starters and alternators and Alliedsignal® and Consolidated Fuel Systems® turbochargers. During this period accessories will be subject to such warranty coverage as may be provided by their manufacturer.

(b) In the event that TCM elects to repair in the field, rather than replace, any component or part under paragraph 2(a) of this warranty, TCM will pay labor costs for the repair of the component or part only. The amount of repair labor costs allowed will be in accordance with the latest revision of the warranty labor allowance schedule, Form X30552, published by TCM. TCM will not assume any responsibility for labor costs for the removal and / or re-installation of the component or part, costs associated with "troubleshooting" or any other labor costs associated with repairs or replacements under paragraph 2(a) of this warranty.

(c) TCM will not assume any responsibility for transportation costs associated with repairs or replacements under paragraph 2(a) of this warranty.

3. The coverage under this warranty applicable to cylinder assemblies and related parts shall be subject to the terms, conditions and limitations set forth in the applicable TCM TopCareSM Cylinder Warranty.
4. Repair or replacement of any engine or part under this warranty will not extend the period of warranty coverage set forth above.
5. This warranty applies only to engines in which parts manufactured or supplied by TCM or parts manufactured pursuant to an FAA Parts Manufacturer Approval have been used and nothing contained herein should be construed as a warranty by TCM of any engine or part not manufactured or supplied by TCM. TCM accepts no responsibility for the failure of any engine or part which it does not manufacture or supply or damage resulting from such failure.
6. This warranty applies only to engines which have been installed, inspected and maintained in accordance with the instructions for continued airworthiness, including compliance with all applicable service bulletins issued by TCM, the aircraft manufacturer or any accessory or component manufacturer. Performance of recommended inspections and maintenance must be documented by appropriate logbook entries and the logbook must accompany any engine being returned for warranty consideration.
7. This warranty does not apply to any engine, component or part manufactured or supplied by TCM which (1) has been subject to misuse, neglect or accident; (2) has been installed, repaired, maintained or altered in any way that in the judgment of TCM has adversely affected the condition of the engine; (3) has been operated inconsistent with TCM and aircraft manufacturer recommendations and limitations (such as, but not limited to engine RPM, temperature, manifold pressure, fuel flow and proper system adjustment) or (4) has been changed from its original FAA certificated configuration.
8. TCM will not be responsible for repair or replacement of any engine, component or part damaged or worn as a result of corrosion, pre-ignition/detonation, operation with non-calibrated engine gauges, improper fuel system adjustment, non-TCM approved fuel and oil grades or additives or installation of parts, components or accessories that alter the engine's original type design.
9. The provisions of this warranty do not apply to normal maintenance service (such as engine tune-ups, adjustments, inspections, engine or component overhaul resulting from time between overhaul (TBO) recommendations, etc.) or to the replacement of normal service items (such as spark plugs, filters, hoses, belts, etc.).
10. TCM reserves the right to change any engine or part specifications or prices without incurring any responsibility with regard to engines or parts previously sold or replaced.
11. THIS WARRANTY IS A WARRANTY TO REPAIR OR REPLACE AND NOT A WARRANTY OF THE CONDITION OR FUTURE PERFORMANCE OF THE PRODUCTS WHICH IT COVERS. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, SPECIFICALLY, BUT WITHOUT LIMITATION, THERE ARE NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL TCM BE RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF ANY DEFECT IN ANY ENGINE OR PART, ARISING OUT OF THE FAILURE OF ANY ENGINE OR PART TO OPERATE PROPERLY, OR ARISING OUT OF ANY BREACH OF THE WARRANTY MADE HEREIN. No person is authorized to give any other warranty or to assume any additional obligation or liability on behalf of TCM.



CONTINENTAL MOTORS

Mobile, Alabama 36601

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X30681 8/99

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TCM Engine Model	IO-360ES6B
TCM Serial#	357498
Test Document	TH-3209 Rev F
Software Release#	1.95, 08/08/02
Start Time	8/22/02, 14:41:20
Accepted Time	8/23/02, 07:39:56
Cell# & Operator	188, 29274
Sea Level Power	210 HP @ 2800RPM
Vapor Pressure	0.99 in HG
Temp, Wet Baro	80.60 F, 30.12 in HG

Teledyne Continental Motors Aircraft Engine Standard Acceptance Test Log



Test Club#	A395
Rqrd Pitch	17° ± .5°
Actual Pitch	17°
Mixture Check	PASS
Alternator Check	N/A

Mag Data	Required	Actual
Eng Speed Both	2100	2099
Eng Speed Right	N/A	2011
Right Mag Drop	150	88
Eng Speed Left	N/A	2002
Left Mag Drop	150	97
Mag Drop Spread	50	9
Fuel Flow (Ref.)	45	40

Note: Magneto check between Run 2 & 3

Run Information	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	Run 7	Run 8
Time Of Day	14:46:31	14:51:44	14:58:18	05:48:37	05:59:09	06:13:43	06:28:48	07:10:30
Run Time Rqd (MM:SS)	05:00	05:00	05:00	10:00	10:00	05:00	15:00	15:00
Run Time	05:00	05:00	05:00	10:00	10:00	05:00	15:00	15:00
Prop Speed Rqd (RPM)	1175-1225	1575-1625	2425-2475	2826-2876	2581-2606	575-625	2581-2606	2581-2606
Prop Speed	1196	1590	2444	2831	2597	580	2585	2597
Manifold Press Rqd (inHg)	N/A	N/A	N/A	26.1-29.1	N/A	21.0 MAX	N/A	N/A
Manifold Press	11.3	14.4	23.6	28.2	25.8	14.1	25.1	25.1
Turbo Dis Press Rqd (inHg)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Turbo Dis Press	29.1	29.2	29.2	29.1	29.0	28.9	29.1	29.1
Fuel Flow Rqd (lb/hr)	N/A	N/A	N/A	99.1-105.1	73.6-79.6	N/A	N/A	N/A
Fuel Flow	13.4	21.2	60.7	101.1	75.9	7.4	69.9	68.3
Nozzle Press Rqd (PSID)	N/A	N/A	N/A	14.3-15.3	9.7-10.7	N/A	N/A	N/A
Nozzle Press	3.4	3.7	7.3	15.3	9.9	3.1	9.6	9.0
Fuel Pump Press Rqd (PSIG)	N/A	N/A	N/A	21.4-24.4	N/A	7.0-9.0	N/A	N/A
Fuel Pump Press	10.7	13.2	18.9	24.0	21.7	7.2	21.0	19.6
Fuel Temp Rqd (°F)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fuel Temp	85	87	90	87	90	86	85	85
Ambient Temp Rqd (°F)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ambient Temp	85	86	87	81	81	81	81	81
Eng Inlet Oil Temp Rqd (°F)	240 MAX	120-240	165-240	180-240	165-240	140-240	165-240	165-240
Eng Inlet Oil Temp	105	156	184	194	216	194	173	173
Eng Oil Press Rqd (PSIG)	30.0 MIN	30.0 MIN	30.0 MIN	41.3-71.8	30.0 MIN	19.2 MIN	30.0 MIN	30.0 MIN
Eng Oil Press	65.2	62.3	56.6	55.5	46.7	23.0	58.9	60.5
Min Cylinder Temp Rqd (°F)	N/A	175 MIN	225 MIN	250 MIN	250 MIN	N/A	250 MIN	250 MIN
Max Cylinder Temp Rqd (°F)	460 MAX	460 MAX	460 MAX	460 MAX	460 MAX	460 MAX	460 MAX	460 MAX
Cylinder 1 Temp	207	287	356	360	373	276	346	346
Cylinder 2 Temp	195	282	348	378	390	245	343	351
Cylinder 3 Temp	232	261	326	340	363	285	317	319
Cylinder 4 Temp	176	280	342	359	386	239	340	343
Cylinder 5 Temp	190	232	302	323	338	236	305	308
Cylinder 6 Temp	172	242	313	326	346	211	307	310
Collar Press Differential Rqd (PSID)	N/A	N/A	N/A	29.9 MIN	N/A	N/A	N/A	N/A
Collar Press Differential	62.3	59.4	51.5	44.8	34.9	17.4	49.3	51.0

Page 1 of 2

Date closed: 5-15-03

In Progress Insp 33

Init OK

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	OT	Mech	Insp
1	Fuel selector Very hard to move	28	201	ordered fuel selector, left seat loose	28	W	5/6	.6		SK	SB
			2	disassemble console to remove selector valve	28	W	5-9	5.0		MSK	SB
			3	remove old and install new selector valve.	28	W	5-12	8.0		MSB	SB
	SB 28-28-02.B1										
2	Starter seems to slip initially when engaged	80	1	ordered Starter olive	80	W	5-12	.7		SK	SB
			2	Removed and replaced starter drive adapter Assy. I.D.W. ICM manual manual ops check good	80	W	5-15	4.0		REL	SB

I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N.

Authorized Signature: *[Signature]*
Date: 5/15/03

140000 100000
08-50588-00
MD 28305-80
noted by 28305-80
stocked thru
28305-80
100000

1. Approving National Aviation Authority/Country: FAA/United States		2. AUTHORIZED RELEASE CERTIFICATE FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG		3. Form Tracking Number.: SAME AS BLOCK 5	
4. Organization Name and Address: Teledyne Continental Motors P.O. Box 90 Mobile, Alabama 36601				5. Work Order/Contract/Invoice Number: P37795	
6. Item: 1		7. Description: ADAPTER AS		8. Part Number: 646220A37	
9. Eligibility:*		10. Quantity: 1		11. Serial/Batch Number: N/A	
12. Status/Work: REBUILT					
13. Remarks:					
14. <input checked="" type="checkbox"/> Certifies the items identified above were manufactured in conformity with <input checked="" type="checkbox"/> Approved design data and are in a condition for safe operation. <input checked="" type="checkbox"/> Non-approved design data specified in Block 13.					
19. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to Service <input type="checkbox"/> Other regulation specified in Block 13 Certifies that unless otherwise specified in Block 13, the work identified in Block 12 and described in Block 13 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.					
15. Authorized Signature: XXXXXXXXXXXXXXXXXXXX		16. Approval/Authorization No.: XXXXXXXXXX		20. Authorized Signature: Daniel L. Nicholas	
17. Name (Typed or Printed): XXXXXXXXXXXXXXXXXXXX		18. Date (m/d/y): XXXXXXXXXX		21. Approval/Certificate Number: PC #508	
22. Name (Typed or Printed): Daniel L. Nicholas		23. Date (m/d/y): 05/14/2003			
User/Installer Responsibilities					
It is important to understand that the existence of this document alone does not automatically constitute authority to install the part/component/assembly. Where the user/installer work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in block 1, it is essential that the user/installer ensures that his/her airworthiness authority accepts parts/components/assemblies from the airworthiness authority of the country specified in block 1. Statements in Blocks 14 and 19 do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification in accordance with the national regulations by the user/installer before the aircraft may be flown.					

TELEDYNE CONTINENTAL MOTORS
AFTERMARKET PARTS - PACKING LIST

05/14/2003 15:44:12

DO NOT CONSOLIDATE PAGE 1 OF 1

SHIP TO: UNIVERSITY OF NORTH DAKOTA
ADDRESS: MARK ANDREWS INT'L AIRPORT
GRAND FORKS, ND 58202
DOMESTIC AOG NEXT DAY

TRACKING No.: P37795

SALES ORDER : 385136
PO# : 224435
BOX NUMBER : 1

It is hereby certified that all materials or parts on this shipment are in conformance with the requirements, specifications, and/or drawings listed for the above purchase order number. If applicable, shelf life expiration dates are shown on the part package in an Alpha Code.

Daniel L. Nicholas
05/14/2003

Daniel L. Nicholas

Date

ITEM	PART NUMBER	C	DESCRIPTION	QTY SHIPPED	BACK ORDERED
1	646220A37	R	ADAPTER AS	1	0

PARTS \$

6/15/03 ACFT NO. N777ND W/O NO. ~~91910770~~ 1027770

[illegible]

Page 1 of 2

Date closed: 5/20/03

Preliminary Insp

In Progress Insp

Bill Meter: 50.6

A/V Tach: 50.6

Init 14913

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>TSO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	50.6	50.6
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	50.6	50.6
PHC-J3YF-1RF	FP1868B	PROPELLER	50.6	50.6

[illegible]

INSPECTION SUPPLEMENT AND WORK ORDER

Page 2 of 2Reg#: (N) 777 NDWork Order #: 1028035

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
3	SB 2X-32-06 due dated 23 Jan 2003	32 20	1	C/W per SB	32 20	W	5-20	1.0		MSB	
4	SB 20-52-02 due dated 09 Jan 2003	52 10	1	P/O/W by factory	52 10	W	5-20	0.3		MSB	
5	Inspector fine	05 60	1	<i>billing fine</i>	05 60	N	5-20	4			
					I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station O35R092N.						
					Authorized Signature Date <u>5-20-03</u>						

**Center for Aerospace Sciences
University of North Dakota
Grand Forks, North Dakota 58202**

MATERIAL REQUISITION

5-20-03

ACFT NO. N777ND

W/O NO. 1028035

[illegible]

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 1

John D. Odgaard School
of Aerospace Sciences
University of North Dakota
Box 9007 University Station
Grand Forks, ND 58202-9007

WKO#: 1028049
Mech: MRS
Shop Code: F
Equip Code: A
Opened: 5/20/2003 8:33

OBTAIN ALL
INITIALS BEFORE FILING

R/A 86
Parts (optl) AT Date closed: 5-20-03

Customer: UNDAF Acc#: 9503-9903-471 Preliminary Insp _____ In Progress Insp _____

N#: N777ND AcftType: SR20 Model: SR20 Bill Meter: 50.6 A/F Tach: ~~50.6~~ 48.6 Init MMS

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	48.6 50.6	50.6 48.6
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	48.6 50.6	50.6 48.6
PHC-J3YF-1RF	FP1868B	PROPELLER	48.6 50.6	50.6 48.6

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	LH Fuel Qty indicator operates iratically. Reads zero - Then indicates Qty when tapped	28-40	1	FOR BILLING PURPOSES ONLY Work Performed by: Cirrus Design Factory Service Center on w/o # 051603-03 and Log Entry dated 5-15-03 attached below	28-40	N	5/20	.2		MMS	



LOG BOOK ENTRY

DATE: 5/15/2003

MAKE: CIRRUS TOTAL TIME: 048.6 N#: N777ND
MODEL: SR20 HOBBS TIME: 048.6 S/N: 1258

Retorqued loose terminal stud on left side fuel quantity sensor
IAW Cirrus maintenance manual 28-40. Ground check of
fuel quantity indicator good at this time, no anomalies or variations noted.

The work identified above was performed in accordance with the current Federal Aviation
Regulation and was found to be airworthy for return to service. Pertinent details are on file at
this agency under,

W/O#: 051603-03 SIGNED [Signature]

Cirrus Design Factory Service Center, CRS# YD5R855Y, 4515 Taylor Circle, Duluth, MN 55811

WKO#: 1028482
Mech: BJS
Shop Code: F
Equip Code: A
Opened: 6/9/2003 18:26

OBTAIN ALL
INITIALS BEFORE FILING

R/A _____
Parts (opt) A

Date closed: 6/10/03

Customer: UNDAF Acc#: 9503-9903-471

Preliminary Insp

In Progress Insp

Bill Meter: 57.9

A/F Tach: 57.8

init

N# N777ND AcftType: SR20 Model: SR20

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>ISO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	57.8	57.8
10-380-ES8B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	57.8	57.8
PHC-J3YF-1RF	FP1888B	PROPELLER	57.8	57.8

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	Lt fuel gauge Falls to zero	28 40	1	Could not duplicate on ground ops check good at this time	28 40	N	6/9	.5			
2	CHT Gage intermittant throughout FLT	77 20	1	Insp. CHT wiring no defects noted. Ran AK, CHT was normal.	77 20	N	6/10	1.0		DHT	
3	POT revision needs to be installed (change 2)	25 10	1	Installed in POT	25 10	N	6/10	.5		DHT	

I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service.
Certified Repair Station OG5R082N.

Authorized Signature _____
Date 6/10/03

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 1

John D. Odegard School
of Aerospace Sciences
University of North Dakota
Box 9007 University Station
Grand Forks, ND 58202-9007

WKO#: 1028501
Mech: KHP
Shop Code: A
Equip Code: A
Opened: 6/10/2003 13:00

OBTAIN ALL
INITIALS BEFORE FILING

R/A JS
Parts (optl) JS

Date closed: 6/12/03

Customer: UNDAF Acc#: 9503-9903-471

Preliminary Insp JS

In Progress Insp JS

N#: N777ND AcftType: SR20 Model: SR20

Bill Meter: 57.8 A/F Tach: 57.8

Init KHP

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	57.8	57.8
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	57.8	57.8
PHC-J3YF-1RF	FP1888B	PROPELLER	57.8	57.8

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	During turns autopilot wont hold altitude losses or gains 200'	22/10	1	Connected breakout box to pitch servo and monitored computer commands to servo found commands correct when in a bank found connector badly tarnished cleaned and retensioned pins, reassembled tests good at this time.	22/10	N	6/12	2.5		KHP	JS

I certify the aircraft airframe, aircraft engine, propeller, or
appliance identified above was repaired and inspected in
accordance with current regulations of the Federal Aviation
Administration with respect to the work performed and
found to be airworthy and is approved for return to service.
Certified Repair Station 1035R0924

Authorized Signature
Date 6/12/03

[Signature]

Page 1 of 1

Date closed: 6/13/05

In Progress Insp

Init

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	AVIADYNE FLITMAX REQUIRES GPS UPDATES	3450	1	UPDATED FLIGHTMAX TO CURRENT GPS DATA	3450	N	6/13	0.3		KR	KH
<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N.</p> <p>Authorized Signature _____ Date <u>6/13/02</u></p>											

Page 1 of 7

R/A

Parts (optl)

Date closed:

Preliminary Insp

In Progress Insp

Bill Meter: 93.9

A/F Tach: 93.9

Init

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	Yearly ELT insp. Dec	25/60	1	<p>This ELT was inspected in accordance with applicable manufacturer's instruction of FAA notice A8150-3 and found to meet the requirements of FAR 91.207 (d).</p> <p>ELT Model <u>E-01</u> ELT S/N # <u>042628</u></p> <p>ELT Test Date <u>8-27-03</u> <u>9-1-03</u></p> <p>Authorized Signature <u>[Signature]</u></p> <p>Certified Repair Station OG5R092N</p>	25/60	N	9/1	1.0			
				<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service.</p> <p>Certified Repair Station OG5R092N.</p> <p>Authorized Signature <u>[Signature]</u></p> <p>Date <u>8-27-03</u> <u>9-1-03</u></p>							

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 5

Odegard School of Aerospace Sci.
University of North Dakota
9007 University Station
Grand Forks, ND 58202
USA
Repair Station# OG5R092N

WKO#: 1030168
Mech: MSB
Shop Code: F
Equip Code: A
Opened: 9/6/2003 8:06

OBTAIN ALL
INITIALS BEFORE FILING

R/A *[Signature]*
Parts (ord) *[Signature]*

Date closed: 9/9/03

Customer: UNDAF Acc#: 9503-9903-471

Preliminary Insp *KHP*

In Progress Insp *KHP*

N#: N777ND AofType: SR20 Model: SR20 Bill Meter: 93.9 A/F Tach: 93.9 Init *MSB*

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	96.5	96.5
IO-360-ES8B	357499	ENGINE (CIRRUS SR20) TELEDYNE C	96.5	96.5
PHC-J3YF-1RF	FP1888B	PROPELLER	96.5	96.5

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	100hr/Annual Insp due	05 20	1	Inspected per 100/hr/annual checklist	05 20	N	9-6	7.0		MSB	KHP
							9-6	3.0		SSS	KHP
							09/06	4.0		JM	KHP
			2	complete inspection, service A/C	05 20	N	09/7	5.0		MSB	KHP
				begin closing			09/07	5.0		JM	KHP
							9/7	4.0		MSB	KHP
			3	close A/C, lube nose swivel	05 20	N	9-8	4.0		MSB	KHP
			4	complete 100hr Insp.	05 20	N	9-9	2.0		MSB	KHP
2	50 hr. Insp due	05 20	1	completed 50 hr insp.	05 20	N	9-6	1.0		MSB	KHP

Page 2 of 5

Work Order #: 1030168

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
3	AD2003-13-17 prep due dated 7-18-03	04 00	1	N/A by prep S/W	04 00	N	9-7	0.1		MSB	KHP
4	Vacuum press. low both pumps	37 20	1	Trouble shot system, found vac gauge inaccurate	37 20	N	9-7	1.0		REL	KHP
			2	Install new gage, up & ck good	37 20	N	9-9	0.2		MSB	KHP
5	EGT, insp.	77 20	1	Troubleshoot, find gage insp. order parts.	77 20	N	9-7	0.5		MSB	KHP
		77 20	2	Installed new EGT/CHT gage	77 20	N	9-9	0.4		MSB	KHP
6	cracked baffle front of hd of oil cooler	72 30	1 MSB	stop drilled crack.	72 30	N	9-7	0.1		MSB	KHP

INSPECTION SUPPLEMENT AND WORK ORDER

Page 3 of 5Reg#: (N) 777NDWork Order #: 1030168

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
7	oil leak #6 intake Rocker cover	⁷² 30	1	tightened rocker cover screws	⁷² 30	N	9-7	.1		msB	KAP
8	tech generator wires chafing on alternator	⁷⁷ 10	1	secured wires with silicone	⁷⁷ 10	N	9-7	.2		msB	KAP
9	cabin ^{travel} heat short of hot	²¹ 40	1	adjusted cable to obtain full travel	²¹ 40	N	9-7	.3		msB	KAP
10	left + right aileron not reaching up stops.	²⁷ 10	1	found to be in accordance with Cirrus Maint. Manual.	²⁷ 10	N	9-7	.2		msB	KAP

INSPECTION SUPPLEMENT AND WORK ORDER

Page 4 of 5Reg#: (N) 777 NDWork Order #: 103 0168

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
11	Otbd aircon lines insp. due dated 4-3-03	04 00	1	Inspected per SB 2X-57-04 found to be in compliance	04 00	N	9-7	1.5		MSB	KHP
12	TC/Roll computer batteries due	24 00	1	Installed replacement batteries dated Mar 2007, next replacement due 9-2004	24 00	N	9-7	.5		MSB	KAP
13	Fuel pump o-ring assy. washer tern	28 00	1	Installed new o-ring assy leak check good	28 00	N	9-9	.1		MSB	KHP
14	garden inst. filter due.	37 10	1	Replaced garden filter Next due 9-30-04 - 000 193.9 Tech	37 10	N	9/7	.2		MSB	KHP

Page 5 of 5

Work Order #: 1036168

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
15	inspector time	05/60	1	inspected	05/60	N	9/9	1.5			KH P
<p> certify the aircraft, airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station CG5R092M Authorized Signature <u>[Signature]</u> Date <u>9/11/03</u> </p>											

PARTS \$

9/6/03

ACFT NO.

N777NH

W/O NO. 1030168

[illegible]

Page 1 of 1

R/A
Parts (opt) Date closed: 12/2/03

Preliminary Insp JEB In Progress Insp JEB

Init. JEB

[illegible]

Page 1 of 1

[illegible]

Page 1 of 1


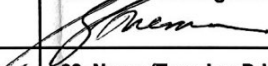
Date closed: 5-17-04

[illegible]

Page 1 of 1

Date closed: 5-17-04

[illegible]

1. Approving National Aviation Authority/Country: FAA/UNITED STATES		2. AUTHORIZED RELEASE CERTIFICATE FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG				3. Form Tracking Number: WRK0034822	
4. Organization Name and Address:  MID-CONTINENT INSTRUMENT CO., INC 9400 E 34th ST. NORTH WICHITA, KS 67226 FAA CRS OL2R061L						5. Work Order/Contract/Invoice Number: WRK0034822	
6. Item:	7. Description:	8. Part Number:	9. Eligibility:	10. Quantity:	11. Serial/Batch Number:	12. Status/Work:	
1	REMOTE GYRO	4305-150 4305	N/A	1	07211924	OVERHAULED	
13. Remarks: THE WORK ORDER REFERENCED DESCRIBES THE ACTUAL WORK PERFORMED. ALL WORK WAS PERFORMED I.A.W MANUAL # MCI SPEC. 4305, REV. G, 1/2/02. The work specified in block 12/13 except as otherwise specified was carried out in accordance with JAR 145 and in respect to that work the aircraft component is considered ready for release to service under JAA Acceptance Certificate Number JAA 4675							
14. Certifies the items identified above were manufactured in conformity to: <input type="checkbox"/> Approved design data and are in condition for safe operation. <input type="checkbox"/> Non-approved design data specified in Block 13.				19. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to Service <input checked="" type="checkbox"/> Other regulation specified in Block 13 Certifies that unless otherwise specified in block 13, the work identified in Block 12 and described in Block 13 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.			
15. Authorized Signature:		16. Approval/Authorization No.:		20. Authorized Signature 		21. Approval/Certificate No.: FAA CRS OL2R061L	
17. Name (Typed or Printed):		18. Date (m/d/y):		22. Name (Typed or Printed): ROBIN FREEMAN		23. Date (m/d/y): 5/3/2004	
User/Installer Responsibilities It is important to understand that the existence of this document alone does not automatically constitute authority to install the part/component/assembly. Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness accepts parts/components/assemblies from the airworthiness authority of the country specified in Block 1. Statements in Blocks 14 and 19 do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the installer/user before the aircraft may be flown.							



MID-CONTINENT INSTRUMENTS CO., INC.

9400 E 34TH ST. NORTH

WICHITA, KS 67226

FAA CRS OL2R061L

Final Work Order

WRK0034822

4/13/2004

Page: 1

Nomenclature REMOTE GYRO	Serial No 07211924	Location KS	RMA #	
Manufacturer's Part No. 4305-150	Model No. 4305	Quantity 1		
Manufacturer GENERAL DE		Service Period		

Reason For Removal

ERROR MESSAGE: GYRO INVALID, GYRO IS INTERMITTANT, UNKNOWN SERIAL NUMBER JS 1/22/04
CR TO BE ISSUED AFTER CORE EVAL & WTY IS VERIFIED PER LW 12/18/03
CUST CALLED 03/05/04 & SAID HE IS STILL WAITING ON HIS CUST. HE SAID AS SOON AS THE CUSTOMER CAN
COME OVER & EXCH OUT HIS UNIT HE WILL BE RETURNING THE WARRANTY UNIT. JS
3/5/04 EMAILED FOR CORE RETURN REMINDER

Work Instructions

Warranty Repair _____ Overhaul ☒ Return As Is _____

Functional Test _____ Repair _____ Modified _____

Special Instructions

Preliminary Inspection

Seals Broken No Cover Damaged No

Nameplate Damaged No

Hidden Damage Inspection Required No
Finding

Preliminary Inspector ROBIN FREEMAN

Date 4/13/2004

Failure Analysis

NEEDS MOD 3.

Previous Service Bulletins Installed: MOD 1

Work Accomplished

DISASSEMBLED, CLEANED, INSPECTED, REPAIRED AS
NECESSARY USING PARTS LISTED, REASSEMBLED AND
INSPECTED IN ACCORDANCE WITH MANUFACTURERS
SPECIFICATIONS. UNIT IS OVERHAULED.

INSTALLED MOD 3. CHECKED BRUSH TENSION - WAS OK BUT DID ADJUST SOME BRUSHES TO BRING BACK INTO SPEC.
CLEANED BRUSHES AND SLIP RINGS. LUBRICATED SLIP RINGS. CHECKED BASE FOR ANY PROBLEMS - NONE FOUND.
RAN A TEST DATA SHEET ON UNIT - ALL OF THE ELECTRICAL SETTINGS AND MECHANICAL CALIBRATION ARE GOOD.
RAN UNIT ON TEST BOX FOR 1 HOUR AND COULD FIND NO PROBLEMS WITH IT.

I.A.W Manual # MCI SPEC. 4305, REV. G, 1/2/02.

Outgoing Service Bulletins MOD 1 & 3

Technician TONY NEWPORT

Date 4/15/2004

In-Process Inspector DUONG NGUYEN

Date 4/15/2004

FINAL INSPECTOR ROBIN FREEMAN

Date 5/3/2004

Parts Used

Part Number
9011651-10

Part Description
LUG & CABLE

Quantity
1

PARTS :

warranty

MidContinent

TE 9/28/04 ACFT NO. N777ND W/O NO. ~~1039103~~ 39183

[illegible]

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 2

Odegard School of Aerospace Sci.
University of North Dakota
Grand Forks Intl. Airport
Mark Andrews Field
Grand Forks, ND 58202
Repair Station# OG5R092N

WKO#: 1039281
Mech: BSS
Shop Code: A
Equip Code: A
Opened: 9/28/2004 13:14

OBTAIN ALL
INITIALS BEFORE FILING

R/A BP Date closed: 9/28/04
Parts (opt) MSB

Customer: EASE Acct#: 9999-0000-471

Preliminary Insp MSB In Progress Insp MSB

N#: N777ND AcftType: SR20 Model: SR20 Bill Meter: 277.4 AF Tach: 277.4 Init BSS

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	280.0	280.0
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	280.0	280.0
PHC-J3YF-1RF	FP1888B	PROPELLER	280.0	280.0

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	Altimeter and Static leak biennial insp. due.	34/10	1	Found leak at autopilot transducer. Tightened fitting.	34/10	N	9/28	2.5		BSS	MSB
	I certify that Altimeter and Static Systems tests required by Part 91-411 have been performed.										
	Static System Test Date <u>9/28/04</u>										
	Altimeter Tested to <u>20,000</u> feet										
	Left Altimeter Test Date <u>9/28/04</u>										
	Right Altimeter Test Date <u>N/A</u>										
	Name <u>Brian Staud</u> Certified Repair Station OG5R092N										
2	Automatic altitude reporter biennial insp. due.	34/60	1	Testing of the Automatic Altitude Reporting Equipment has been complied with as required by FAR 91-217.	34/60	N	9/28	1.0		BSS	MSB
	Date Test Performed <u>9/28/04</u>										
	Name <u>Brian Staud</u> Certified Repair Station OG5R092N										

INSPECTION SUPPLEMENT AND WORK ORDER

Page 2 of 2

Reg#: (N) 777ND

Work Order #: 1039281

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
3	transponder biennial insp due.	34/50	1	I certify that ATC Transponder Test & Inspection Required By FAR Part 91-413 have been performed. S/N 83707422 Date 9/28/04 S/N N/A Date N/A Name Brian Stuck JRS OG5R082N	34/50	N	9/28	1.0		BSS	MSB
4	EHSI needs to be aligned with DG.	34/40	1	Ran a/c and aligned EHSI with DG on Compass rose. I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R082N Authorized Signature [Signature] Date 9-28-04	34/40	N	9/28	0.8		BSS	MSB

Page 1 of 1

by

Date closed: 10-06-04

Bill Meter: 324.7 A/F Tach: 324.7 Init D¹⁰¹

[illegible]

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 6

Odegard School of Aerospace Sci.
University of North Dakota
Grand Forks Intl. Airport
Mark Andrews Field
Grand Forks, ND 58202
Repair Station# OG5R092N

WKO#: 1039570
Mech: RMK
Shop Code: F
Equip Code: A
Opened: 10/7/2004 6:59

OBTAIN ALL
INITIALS BEFORE FILING

R/A

Parts (opt)

Date closed: 10.8.2004

Customer: EASE

Acct#: 9999-0000-471

Preliminary Insp

In Progress Insp

N#: N777ND A/cftType: SR20 Model: SR20

Bill Meter: 324.7

A/F Tach: 324.7

Init

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	327.3	327.3
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	327.3	327.3
PHC-J3YF-1RF	FP1868B	PROPELLER	327.3	327.3

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1.	ANNUAL 100 HOUR INSP DUE	0520	1	Started	0520	N	10.7	4.9		RMK	WJ
							10.7	4.7		CME	WJ
			2	Completed			10.8	4.7		RMK	WJ
							10.8	4.7		CME	WJ
<p>I certify that this aircraft has been inspected in accordance with ANNUAL inspection, including, as applicable a routine inspection of N/A and detailed inspection of N/A and was determined to be in airworthy condition, and is approved for return to service Certified Repair Station OG5R092N Authorized Signature <i>[Signature]</i> Date 10.8.2004</p>											
2	50 HOUR INSP DUE	0520	1	Completed	0520	N	10.8	4.1		RMK	MD

INSPECTION SUPPLEMENT AND WORK ORDER

Page 2 of 6Reg#: (N) 777NDWork Order #: 1039570

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
3	RT ML6 BRAKE PADS HORN	32 40	1	Replaced brake pads	32 40	N	10-8	.3		CME	MD
4	RT ML6 BRAKE PADS HORN	32 40	1	Replaced brake pads	32 40	N	10-8	.3		CME	MD
5	BAFFLE SEAL LOOSE FWD RT SIDE OF ENGINE	7230	1	Replaced broken rivets for baffle seal fwd LT side	7233	N	10-8	.3		CME	MD
6	INDUCTION AIR FILTER DIRTY	0520	1	REMOVED & REPLACED FILTER NEXT DUE @ 584.7	7160	N	10-8	.3		AL	MD

INSPECTION SUPPLEMENT AND WORK ORDER

Page 3 of 6

Reg#: (N) 777ND

Work Order #: 1039570

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
7	ALTERNATOR BELT TENSION LOOSE	7430	1	ADJUSTED TENSION	7430	N	10.8	.2		AK	mnf
8	CHT ELECT CONNECTION BROKEN ON RT SIDE OF ENGINE	7230	1	Replaced elec. connector for CHT prop	7230	N	10.8	.3		CME	mnf
9	BAFFLE CRACKED AT CR #6 CYLINDER	7230	1	Stop drilled crack on #6 baffle	7230	N	10.8	.2		CME	mnf
10	LT MAGNETO MISSING RUBBER BOOT ON "P" LEAD	7430	1	INSTALLED NEW BOOT	7430	N	10.8	.3		AK	mnf

INSPECTION SUPPLEMENT AND WORK ORDER

Page 4 of 6Reg#: (N) 777NDWork Order #: 1039570

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
11	PROP NICKED	6/10	1	DRESSED PROP	6/10	N	10.8	.3		RL	MND
12	RT MAGNETO MISSING RUBBER BOOT ON "P" LEAD	7/430	1	INSTALLED NEW RUBBER BOOT	7/430	N	10.8	.3		RL	MND
13	RT OVERHEAD DOME LIGHT SWITCH MISSING BUTTON	3310	1	Replaced RT Overhead dome light switch	3310	N	10.8	.4		CME	MND
14	AIR INLET HOSE ON LT SIDE OF ENGINE HAS HOLE WHERE BLACK HOSE RUBBED ON IT	7/330	1	SEALED ^{old} new HOSE	7/330	N	10.8	.2		RL	MND

INSPECTION SUPPLEMENT AND WORK ORDER

Page 5 of 6

Reg#: (N) 777ND

Work Order #: 1039670

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
15	CENTER CONSOLE AVIONICS DISPLAY MISSING RT LNR KNOB	3400	1	REPLACED KNOB	3400	N	10-7	.2		AL	WJD
16	LT AFT SEAT PAN SHEET METAL CRACKED	2510	1	Stop drilled crack	2510	N	10-8	.2		CME	MOA
17	RT M16 PANEL WORN ON TOP AFT EDGE	3210	1	DRESSED PANEL AND ORDERED NEW ONE	3210	N	10-8	.3		AL	MOA
18	Neg battery terminal bolt torn	2430	1	Installed ^{new} bolt	2430	N	10-8	.2		CME	MOA

Page 6 of 6

Work Order #: 1039570

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
20	FUEL CASALATOR SEAL WORN	2820	1	INSTALLED NEW SEAL	2820	N	10-8	.1		MA	MA
21	LT MLG MISSING LEADING EDGE NUTPLATE FOR UPPER BEAR AIRING	3810	1	REPLACED NUT PLATE	3810	N	10-8	.1		MA	MA
22	INSP TIME	0500	1	Time	0500	N	10-8	1.0		MA	
				<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OGG092N</p> <p>Authorized Signature _____ Date <u>10-8-08</u></p>							

Center for Aerospace Sciences
University of North Dakota
Grand Forks, North Dakota 58202

~~PARTS~~

MATERIAL REQUISITION

DATE 10/07/04 ACFT NO. N777ND W/O NO. 1039570

PD	MI	Part Number	Serial Number	Description	Quan.	MCC	Return Y/N	Batch #
1	RAK	CH4810		oil filter	1			3758
4		oil		oil	8			—
4		M\$35769-11		gask.	1			2557
4		M\$35769-21		gask.	1			2726
4		M-674		gask.	12			3504
4		CH48109		oil filter	1			2426
4		M\$29513-137		O ring	1			2298
18		B3-S-1		Filter	1			3706
18		M\$25171-3\$		boot	1			3151
10		M\$25171-1\$		boot	1			2247
12		BA24		airfilter	1			3769
4		66-141		pad	4			3769
4		105-2		riuet	12			3345
12		M\$25171-1\$		boot	1			2247
21		50802-001		wellout	1			2703
13		12457-002		Switch	1			3768

Page 1 of 1

Date closed,

In Progress Insp

Init

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	OT	Mech	Insp	
1	Rt Wing Inop panel bent IN flight had fixed in BWP.	55	00	1	Inspected wing panel - all appear to be installed and secured.	55	00	N	10/9	.3	Sec	<i>[Signature]</i>
2	Possible bird strike on departure in BWP front left corner of Cowling	71	10	1	Inspected A/c no damage noted paint chipped on front cowling noticed on last inspection	71	10	N	10/9	.3	Sec	<i>[Signature]</i>
				<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service.</p> <p>Certified Repair Station OG58052N</p> <p>Authorized Signature <i>[Signature]</i> Date 10-9-09</p>								

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 1

Odegard School of Aerospace Sci.
University of North Dakota
Grand Forks Intl. Airport
Mark Andrews Field
Grand Forks, ND 58202
Repair Station# OG5R092N

WKO#: 1039905

Mech: SJC

Shop Code: F

Equip Code: A

Opened: 10/18/2004 8:16

OBTAIN ALL

INITIALS BEFORE FILING

R/A

Parts (optl)

Date closed: 10/18/2004

Customer: EASE

Acct#: 9999-0000-471

Preliminary Insp

In Progress Insp

N#: N777ND AcftType: SR20 Model: SR20

Bill Meter: 361.3

AF Tach: 361.3

Init *e*

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	363.9	363.9
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	363.9	363.9
PHC-J3YF-1RF	FP1888B	PROPELLER	363.9	363.9

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	Starter won't engage	2810	1	found battery with 8 cells dry-boiled out, removed G243 SIN G02044287 installed new battery G243-SIN G02150250	2810	N	10/18	.9		SR	
2	needs runmap to check Bus voltage	2400	2	ran aircraft bus voltage checked within limits	2400	N	10/18	.1		a	
				Left Coy. A							
				AdR 502762229							

SERVICEABLE TAG

NO#: 1039816

☐ Overhauled ☐ Repaired
☐ Removed Serviceable

Date: 10-14-04

Part #: 6-243

Serial #: 603150250

Part Name:

Part TSOH: — Total Time: —

Aircraft N# _____ A/C Total Time: _____

Tech: —

Inspector 

UNDSAS-TAG-001

OBTAIN ALL
INITIALS BEFORE FILING

Page 1 of 1

(opt)

Date closed: 10-14-04

In Progress Insp

ber:

A/V Tach:

Init

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	OT	Mech	Insp
1	Battery Needs initial charge P/N 6-243	24/30	1	Serviced Battery with Acid, installed & charger	24/30	N	10/13	.3		CHE	POL
	S/PN 602150250		2	Charge completed. specific gravity checked ok	24/30	N	10/14	.2		CHE	POL
2	Battery Needs initial charge P/N 6-243	24/30	1	Serviced battery with acid, installed on charger	24/30	N	10/13	.3		CHE	POL
	S/PN 602150265		2	Charged complete. Specific gravity checked OK	24/30	N	10/14	.2		CHE	POL
I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N.											
								Authorized Signature _____ Date 10-14-04			

10

MATERIAL REQUISITION

10/18/04 ACFT NO. N777ND W/O NO. 1039905

[illegible]

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 1

Odegard School of Aerospace Sci.
University of North Dakota
Grand Forks Intl. Airport
Mark Andrews Field
Grand Forks, ND 58202
Repair Station# OG5R092N

WKO#: 1040050
Mech: KHP
Shop Code: A
Equip Code: A
Opened: 10/21/2004 10:44

OBTAIN ALL
INITIALS BEFORE FILING

R/A MSB
Parts (optl) MSB

Date closed: 10/22/04

Customer: EASE

Acc#: 9999-0000-471

Preliminary Insp MSBIn Progress Insp MSB

N#: N777ND AcftType: SR20 Model: SR20

Bill Meter: 370.8

AF Tach: 370.8

Init KHP

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	373.4	373.4
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	373.4	373.4
PHC-J3YF-1RF	FP1868B	PROPELLER	373.4	373.4

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	Autopilot does not follow nav or hdg commands	22/10	1	Accessed maint pages of EHSI. Configured unit for midcontinent gyro and correct valid and flux tx. Accessed FCS emulation pages configured for NSD360. System tests good	22/10	N	10/22	3.0		KHP	MSB

I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N.

Authorized Signature

Date

MSB
10/22/04

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 32

Odegard School of Aerospace Sci. WKO#: 1040057
 University of North Dakota Mech: SJR
 Grand Forks Intl. Airport Shop Code: F
 Mark Andrews Field Equip Code: A
 Grand Forks, ND 58202
 Repair Station# OG5R082N

OBTAIN ALL
 INITIALS BEFORE FILING

R/A

Parts (opt)

Date closed:

Customer: EASE Acct#: 9999-0000-471

Preliminary Insp

In Progress Insp

N#: N777ND AcftType: SR20 Model: SR20

Bill Meter: 370.8

A/F Tach: 370.8

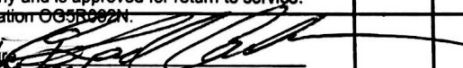
Init

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	373.4	373.4
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	373.4	373.4
PHC-J3YF-1RF	FP1868B	PROPELLER	373.4	373.4

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	50 Hr Insp due	05 20	1		05 20	N	10/20	3.0		RMM	ALL
						N	10/20	3.0		Em	ALL
I certify that this aircraft has been inspected in accordance with a routine inspection of <u>50 Hr</u> inspection, including, as applicable, and detailed inspection of _____ and was determined to be in airworthy condition, and is approved for return to service Certified Repair Station OG5R082N Authorized Signature <u>[Signature]</u> Date <u>10/20/04</u>											
2	New spring Needs to be Installed	32 00	1	New part, ordered New part	32 00	N	10/20	.1		Em	R
3	Oil quick drain Needs to be installed	79 00	1	Installed new oil quick drain Drain Plug P/N 636376 F removed as serviceable	79 00	N	10/20	.3		RMM	ALL

Page 2 of 2

Work Order #: 40057

Reg#: (N)	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
4.	Right Fuel muffler Clamp bolts loose	7800	1	Installed extra washers to get proper tension	7800	N	10/24	.3		RMM	PL
5.	Left Fuel muffler Clamp bolts loose	7800	1	Installed extra washers to get proper tension	7800	N	10/24	.3		RMM	PL
6.	Inspection Time	0560	1	Time	0560	N	11/21	.5		PL	PL
<p>I certify the aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station C035002N.</p> <p>Authorized Signature:  Date: 10/24/09</p>											

~~SECRET~~

W/O NO. 1040057

W/O NO. 1040057

[illegible]

Page 1 of 1

Date closed: 10/26/04

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>TSO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	388.0	388.0
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	388.0	388.0
PHC-J3YF-1RF	FP1868B	PROPELLER	388.0	388.0

[illegible]

Page 1 of 4

Date closed: 10-29-2007

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>TSQ</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	396.9	396.9
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	396.9	396.9
PHC-J3YF-1RF	FP1868B	PROPELLER	396.9	396.9

[illegible]

Page 1 of 7

Date closed: 11-4-2004

In Progress Insp

Init *Tom*

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	Oil pressure gauge fluctuates sporadically with no noticeable change in oil temp or RPM. Caused annunciator to illuminate sporadically.	79 30	1	Removed oil pressure sensor. Tested sensor with Barfield tester. Ran aircraft with oil pressure gauge installed. Engine oil pressure checks good. Reinstalled sensor. Operational check good at this time.	79 30	N	11/4	2.0		Jm	
				<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5B092N</p> <p>Authorized Signature: Date: 11-4-07</p>							

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 1

Odegard School of Aerospace Sci.
University of North Dakota
Grand Forks Intl. Airport
Mark Andrews Field
Grand Forks, ND 58202
Repair Station# OG5R082N

WKO#: 1040381
Mech: BSS
Shop Code: A
Equip Code: A
Opened: 11/3/2004 21:35

OBTAIN ALL
INITIALS BEFORE FILING

R/A

Parts (opt)

Date closed:

Customer: EASE

Acct#: 9999-0000-471

Preliminary Insp

In Progress Insp

N#: N777ND AcftType: SR20

Model: SR20

Bill Meter: 418.4

A/F Tach: 418.4

Init

KHP

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	418.0	418.0
IO-360-ES6B	357488	ENGINE (CIRRUS SR20) TELEDYNE C	418.0	418.0
PHC-J3YF-1RF	FP1868B	PROPELLER	418.0	418.0

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	Autopilot GPS/Nav "fail." HSI not Coupled w/ GPS 1	34/50	1	Went in to mx pages in Sandel EHSI. Config Nav1 for GWS 430. Autopilot and Nav1 ops check good.	34/50	N	11/03	0.7		BSS	
2	MFD on setup page says Nav Data and Heading invalid.	34/50	1	Reconfigured EHSI's 17 maintenance pages. All are set to factory specs MFD tests good with no error messages	34/50	N	11/4	2.5		KHP	

I certify the aircraft airframe, aircraft engine, propeller, or
appliance identified above was repaired and inspected in
accordance with current regulations of the Federal Aviation
Administration with respect to the work performed and
found to be airworthy and is approved for return to service.
Certified Repair Station OG5R082N

Authorized Signature
Date

11/4/04

Page 1 of 1

Date closed: 11/9/04

In Progress Insp _____

Init mjp

[illegible]

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 5

Odegard School of Aerospace Sci.
University of North Dakota
Grand Forks Intl. Airport
Mark Andrews Field
Grand Forks, ND 58202
Repair Station# OG5R092N

WKO#: 1040620
Mech: JDL
Shop Code: F
Equip Code: A
Opened: 11/10/2004 7:08

OBTAIN ALL
INITIALS BEFORE FILING

R/A

Parts (opt)

Date closed: 11-15-04

Customer: EASE

Acc#: 9999-0000-471

Preliminary Insp

In Progress Insp

N#: N777ND AofType: SR20 Model: SR20

Bill Meter: 423.2

A/F Taoh: 423.2

Init JD

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	425.8	425.8
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	425.8	425.8
PHC-J3YF-1RF	FP1868B	PROPELLER	425.8	425.8

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	Annual, 100 hr and 50 hr, insp. due	05 20	1	completed annual, 100 hr, and 50 hr. Insp.	05 20	N	11/10	7.0		<u>JD</u>	<u>JD</u>
	compression test results						11/11	6.0		<u>JD</u>	<u>JD</u>
	#1 $\frac{73}{80}$ #2 $\frac{73}{80}$						11/12	7.0		<u>JD</u>	<u>JD</u>
	#3 $\frac{72}{80}$ #4 $\frac{74}{80}$						11/15	7.0		<u>JD</u>	<u>JD</u>
	#5 $\frac{74}{80}$ #6 $\frac{72}{80}$										
	I certify that this aircraft has been inspected in accordance with <u>Annual, 100 hr, and 50 hr</u> inspection, including, as applicable a routine inspection of <u>N/A</u> and detailed inspection of <u>N/A</u> and was determined to be in airworthy condition, and is approved for return to service Certified Repair Station OG5R092N Authorized Signature <u>[Signature]</u> Date <u>11-15-04</u>										
2	SB 2x-25-06 R1 seat recline lock effective date 8-30-04	04 00	1	ordered kit for SB 2x-25-06	04 00	W	11/15	.2		<u>JD</u>	<u>JD</u>

Page 2 of 3

Work Order #: 1040620

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
3	SIS 2X-28-03 Fuel Selector Valve effective date 10-8-04	04/100	1	Inspected & Found Cirrus SIS 2X-28-03R1 & Found Purple Extension Rod Installed. Ordered Parts for SIS 2X-28-03 Kit No. 70097-001	04/100	N	11/11	.3		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	Turn Coordinator Batteries Due For Replacement	05/10	1	Replaced turn coordinator batteries	34/120	N	11/11	.2		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

INSPECTION SUPPLEMENT AND WORK ORDER

Page 3 of 3Reg#: (N) P77NDWork Order #: 1040620

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
5	#6 cyl bottom plug worn out	74 20	1	Replaced spark plug	74 20	N	11/14	.2		see	10
6	RM MLG Inboard Bearing: Race P.Hed	32 40	1	Replaced bearing and race	32 40	N	11/14	.2		see	10
7	DAT and clock battery replacement due	31 00	1	Removed: Replaced AA Battery Ops check good Next due 11-30-06	31 00	N	11/11	.5		see	10

INSPECTION SUPPLEMENT AND WORK ORDER

Page 4 of 5Reg#: (N) N777NPWork Order #: 1040620

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
8	Vacuum regulator Filter is due for replacement	37 10	1	Replaced vacuum regulator filter	37 10	N	11/11	.2		ME	DB
9	Rudder gap tolerances is below minimum limits on left and ^{all} right ^{all} deflections	55 40	1	Removed necessary amount of fiberglass to meet minimum deflection, painted off fiberglass I.A.W. a Cirrus tech. rep.	55 40	N	11/15	.5		ME	DB
10	Well nuts worn out on ^R main Gear Feeding	32 00	1	Installed well nuts	32 00	N	11/12	.2		ME	DB

Page 5 of 5

Work Order #: 1040620

[illegible]

Center for Aerospace Sciences
University of North Dakota
Grand Forks, North Dakota 58202

Pg. 4

PARTS

MATERIAL REQUISITION

11/10/04 ACFT NO. N777ND W/O NO. 1040620

PO	MI	Part Number	Serial Number	Description	Quan.	MCC	Return Y/N	Batch #
X	ADC	C648109		oil filter	1			3246
X		oil		oil	8			
X		M535769-11		gask.	1			2557
X		M535769-21		gask.	1			277A
X		M-674		gask	12			3763
X		M529513-137		O-ring	1			1856
X		NA51523-8B		gask	1			3767
4		DB0160		battery (9 volt)	3			
4	JDL	12976-002		fairing	1			3768
5	ADC	BHM385		Spark Plug	1			990252
6		13889		Bearing	1			3833
6		13836		Face	1			3865
3		70066-001		Fuel Selector Valve	1			3836
8		B3-5-1		Filter	1			3815
7		AA battery		battery	1			
2		70084-001	de-regal	Seat Lock	1			3877
10	JDL	50802-001		well nut	2			2703
11		70071-001		spacers	2			3885
1	BTM	PGDCX61		hardener	1			3895

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 1

Odegard School of Aerospace Sci.
University of North Dakota
Grand Forks Intl. Airport
Mark Andrews Field
Grand Forks, ND 58202
Repair Station# OG5R092N

WKO#: 1041026

Mech: SJC

Shop Code: F

Equip Code: A

Opened: 11/23/2004 8:50

OBTAIN ALL

INITIALS BEFORE FILING

R/A

Parts (opt)

Date closed: 11/24/04

Customer: EASE

Acct#: 9999-0000-471

Preliminary Insp

In Progress Insp

N#: N777ND AcftType: SR20 Model: SR20

Bill Meter: 459.6

AVF Tach: 459.6

Init DHT

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	462.2	462.2
IO-360-ES8B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	462.2	462.2
PHC-J3YF-1RF	FP1868B	PROPELLER	462.2	462.2

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	Right door handle & latch inop	5210	1	operation of door cleared ok	5210	N	11/23	.5		SA	
2	Left door handle won't recess	5210	1	inner door bushing rotated into correct position - ordered new handle (bent)	5210	N	11/23	.1		SA	
			2	Removed & replaced door handle		N	11/24	1.0		DHT	

the aircraft airframe, aircraft engine, propeller, or
ce identified above was repaired and inspected in
ance with current regulations of the Federal Aviation
stration with respect to the work performed and
o be airworthy and is approved for return to service
d Repair Station OG5R092N.

Authorized Signature

11-24-04

PARTS

DATE 11/25/04 ACFT NO. 10777N8 W/O NO. 1041026

[illegible]

Page 1 of 1

Date closed: 12/2/04

In Progress Insp _____

Init $m \rangle p$

[illegible]

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 2

Odegard School of Aerospace Sci. WKO#: 1041198
 University of North Dakota Meoh: CME
 Grand Forks Intl. Airport Shop Code: F
 Mark Andrews Field Equip Code: A
 Grand Forks, ND 58202
 Repair Station# OG5R092N Opened: 12/2/2004 16:00

OBTAIN ALL
 INITIALS BEFORE FILING

R/A

Parts (opt)

Date closed: 12-2-04

Customer: EASE

Acc#: 9999-0000-471

Preliminary Insp

In Progress Insp

N#: N777ND AofType: SR20 Model: SR20

Bill Meter: 472.2

A/F Taoh: 472.2

Init: CME

Part#	Serial#	Description	TSO	Total Time
SR20	1268	AIRFRAME	474.8	474.8
IO-360-ES8B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	474.8	474.8
PHC-J3YF-1RF	FP1868B	PROPELLER	474.8	474.8

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	50 hour Insp Due	05 20	1		05 20	N	12-2	3.4		CME	W
						N	12/1	2.0		RMM	W
I certify that this aircraft has been inspected in accordance with 50 hour inspection, including, as applicable a routine inspection of _____ and detailed inspection of _____ and was determined to be in airworthy condition, and is approved for return to service Certified Repair Station OG5R092N Authorized Signature <u>[Signature]</u> Date <u>12-2-04</u>											
2	Left brake stuck	32 40	1	Left wheel frozen Removed Ice ops check good	32 40	N	12/2	.2		CME	W

Page 2 of 2

Work Order #: 1041198

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
3	prop nicked	6'00	1	Dressed Prop	6'00	N	12/02	.3		Rmm	WJ
4	breather hose chaffing on Intake tube	7'30	1	Adjusted clamp	7'30	N	12/2	.5		ome	WJ
5	Inspector time	05'60	1	Time	05'60	N	12/2	1.0			WJ
				<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N.</p> <p>Authorized Signature _____ Date 12-2-02</p>							

**Center for Aerospace Sciences
University of North Dakota
Grand Forks, North Dakota 58202**

MATERIAL REQUISITION

DATE 12/2/04 ACFT NO. N777WD W/O NO. 104198 MATERIAL REQUEST

[illegible]

Page 1 of 4

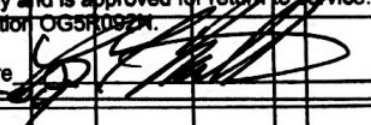
Date closed: 12-5-2004

In Progress Insp

Init Tr

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	OT	Mech	Insp
1	When starting primer failed and engine backfired twice loudly and fuel was dripping from cooling	8200	1	Started aircraft by manual cold start procedure. Primer system checks good. Operational check good at this time	8200	N	12/5	1.0		Tim	
2	could not open baggage door	5230	1	Opened baggage door. Checked and lubricated latch assembly.	5230	N	12/5	1.5		Tim	

I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service.
 Certified Repair Station: OG5R092M

Authorized Signature: 
 Date: 12-5-07

Page 1 of 1

Date closed: 12/14/04

In Progress Insp _____

Init_____

[illegible]

MATERIAL REQUISITION

[illegible]

Page 1 of 1

Date closed: 1/10/05

N# N777ND AcftType: SR20 Model: SR20 Bill Meter: 516.2 A/F Tach: 516.2 Init JK

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>TSO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	518.8	518.8
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	518.8	518.8
PHC-J3YF-1RF	FP1868B	PROPELLER	518.8	518.8

[illegible]

MATERIAL REQUISITION

[illegible]

Page 1 of 1

Date closed: 1/12/05

Preliminary Insp _____ In Progress Insp _____

Bill Meter: 516.4 A/F Tach: 516.4 Init _____

[illegible]



January 18, 2005

Federal Aviation Administration
Flight Standards District Office
1801 23rd Avenue North, Room 216
Fargo, North Dakota 58102

ATTN: Karmen Johnson

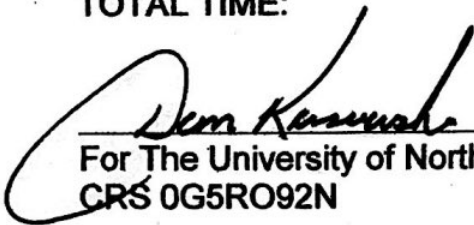
Dear Mr. Johnson;

The following aircraft has been placed on the cirrus Design Progressive Inspection Program, in accordance with FAR 91.409, paragraph(d). Effective 1/16/2005.

MAKE: Cirrus
MODEL: SR20
REG. #: N777ND
SERIAL #: 1258
REGISTERED OWNER: University of North Dakota
University Avenue & Tulane Drive
P.O. Box 9007
Grand Forks, ND 58202-9007

CERTIFICATION DATE: 1/16/2005

TOTAL TIME: 516.4


For The University of North Dakota
CRS 0G5RO92N

1/16/2005
Date

proginsp.wps

Flight Support Services

John D. Odegard School of Aerospace Sciences
Grand Forks International Airport
Mark Andrews Field
Grand Forks, ND 58202-9007
701/777-7900 • FAX 701/777-7929

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 8

Odegard School of Aerospace Sci.
University of North Dakota
Grand Forks Intl. Airport
Mark Andrews Field
Grand Forks, ND 58202
Repair Station# OG5R092N

WKO#: 1041810

Mech: CME

Shop Code: F

Equip Code: A

Opened: 1/12/2005 11:44



OBTAIN ALL

INITIALS BEFORE FILING

R/A

Parts (opt)

Date closed: 1/16/2005

Customer: EASE

Acc#: 9999-0000-471

Preliminary Insp: MSB

In Progress Insp: MSB

N#: N777ND AcftType: SR20 Model: SR20

Bill Meter: 518.4

AF Tach: 518.4

Init: MSB

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	519.0	519.0
IO-360-ES8B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	519.0	519.0
PHC-J3YF-1RF	FP1888B	PROPELLER	519.0	519.0

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1.	ANNUAL INSPECTION	05	20	1	05	20	N 1/12	2.3		MSB	MSB
	DUE					N 1/12	2.0			CME	MSB
						N 1/13	2.0			MSB	MSB
						N 1/13	4.9			MSB	MSB
						N 1/13	4.5			CME	MSB
	I certify that this aircraft has been inspected in accordance with					N 1/14	4.5			MSB	MSB
	ANNUAL inspection, including, as applicable					N 1/14	4.5			MSB	MSB
	a routine inspection of N/A					N 1/14	4.5			MSB	MSB
	and detailed inspection of N/A					N 1/14	4.5			MSB	MSB
	and was determined to					N 1/14	4.0			MSB	MSB
	be in airworthy condition, and is approved for return to service					N 1/15	6.0			MSB	MSB
	Certified Repair Station OG5R092N					N 1/16	1.0			MSB	MSB
	Authorized Signature: [Signature]										
	Date: 1/16/2005										
2	SB 2X-25-06 R2	0400	1	Installed Service Kit	0400	N 1/12	1.5			RWS	MSB
	SEAT RECLINE LOCK			PN 70084-001 TAW							
				SB 2X-25-06 R2							
				Date 12-6-04							

Page 2 of 2

Work Order #: 1041810

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
3	SB 2X-28-03 FUEL SELECTOR VALVE dated 10-8-04	04 00	1	C/W SB By installing Extension shaft sleeve	04 00	N	1/14	1.5		CME	MSB
4	50 HOUR INSPECTION DUE	05 20	1	C/W 50 HOUR INSPECTION	05 20	N	1/14	.1		AL	MSB
5	SB 2X-71-04 RA WINTERIZATION KIT DUE dated 2-12-2004	04 00	1	C/W SB by installation of winterization kit	04 00	N	1/12	.8		PDH	MSB

Page 2 of 8

Work Order #: 1041810

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
6	SB 2X-71-10 OIL BREATHED INSULATION Dated 10-8-04	04 00	1	CLW SB 2X-71-10 by installation of insulating sleeve on fuel breather hose. No further action necessary	04 00	N	1/12	.6		PDH	RC
7	INDUCTION AIR FILTERS DUE	05 20	1	REMOVED & REPLACED AIR FILTER NEXT DUE @ 716.47 716.47	71 60	N	1/16	.3	x	And	MSB
8	LOWER CONDUIT RUBBER SEAL BY NOSE STRUT TORN PART ON ORDER	71 10	1	REMOVED & REINSTALLED SEAL	71 10	N	1/14	.4		And	MSB

Page 4 of 9

Work Order #: 1041810

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
9	LANDING LIGHT LENS COVER CRACKED IN SEVERAL PLACES PART ON ORDER	33 40	1	Removed & Replaced lense	33 40	N	1/14	.5		MSB	MSB
10	MLB NUTRATE FELLING OFF OF INNER SIDE OF STENT	3240	1	REINSTALLER N/D	3240	N	1/16	.2	X	MSB	MSB
11	LT. MLB TIRE WEARING ON INBOARD SIDE	32 40	1	Rotated left Main tire, torqued to specs. and safetied	32 40	N	1/13	.5		MSB	MSB

Page 5 of 10

Work Order #: 1041810

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
12	RT M16 TIRE WORN ON INBOARD SIDE	32 40	1	Rotated right Main Tire, torqued to spec's and scuffed	32 40	N	1/3	.5		msb	msb
13	TURN & BANK INDICATOR BATTERIES DUE REPLACEMENT	34 20	1 X	REMOVED & REPLACED 3 EACH 9V BATTERIES Next due 1-31-06	34 20	N	1/13	.2		msb	msb
14	PRIMER LINE CHAFFING ON RAFFLE SPRING ON LY SIDE OF ENGINE	73 10	1	ADJUSTED PRIMER LINE	73 10	N	1/14	.2		msb	msb

Page 6 of 9

Work Order #: 1041810

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
15	NING TO BODY FAIRING ON LEFT DELIMINATING	5350	1	SECURED FAIRING TO BODY	5350	N	1/14	1.0		<i>Jan</i>	MSB
16	SB 28 95 08 RT UPDATING THE CAPS REEFING LINE CUTTERS DATED DEC 21, 2004	0400	1	UPDATED TO 03/31/08	0400	N	1/16	1.0	✓	<i>Jan</i>	MSB
17	ELT INSP	25 60	1	COMPLETED YEARLY ELT INSP NEXT DUE 01/31/06	25 60	N	1/16	.2	X	<i>Jan</i>	MSB
				This ELT was inspected in accordance with applicable manufacturer's instruction or FAA Notice A4131-3 and found to meet the requirements of FAR 91.207 (d).							
				ELT Model <u>E-01</u> ELT S/N # <u>042629</u>							
				ELT Test Date <u>01-16-2005</u>							
				Authorized Signature <u><i>John T. King</i></u> Certified Repair Station OG5R092N							

Page 7 of 8

Work Order #: 1041810

[illegible]

Page 7 of 8

Work Order #: 1041810

[illegible]

Center for Aerospace Sciences
University of North Dakota
Grand Forks, North Dakota 58202

MATERIAL REQUISITION

DATE 1/12/05 ACFT NO. N777ND W/O NO. 1041810

PD	MI	Part Number	Serial Number	Description	Quan.	MCC	Return Y/N	Batch #
✓	PNH	70097-001		Valve Exten. Kit	1			3890
✓	RWS	70084-001		seat Kit	2			3877
6	PNH	70092-001		sleeve Kit	1			4041
5	1	70087-101		winter Kit	1			8991
✓	RMK	CH48109		filter	1			3892
✓		M#35769-21		gask	1			2776
✓		M-674		Gask	12			3838
✓		NA#1523-8B		seal	1			3767
✓		DB0160		battery 9volt	3			
15	ADL	94 Primer 1/2	\$	Primer	1			4068
✓15		50641-025U		tape	1			402
✓9		14526-003		lens	1			4070
✓1	RMK	B3-5-1		Filter	1			3940
✓7	1	BA24		filter	1			4069
✓1	ASC	LW#2681		Gasket	#2			3833
✓		50803-001		wellnuts	2			3894
✓		50802-001		wellnuts	4			3937

UNIVERSITY OF NORTH

Grand Forks International Airport
Grand Forks, ND (701) 777-7900
FAA Repair Station #OG5R092N

SERVICEABLE TAG

I certify this aircraft
and inspected in ac
Aviation regulations
approved for return
the repair are on file a

2
1016280

as repaired
ent Federal
thy, and is
t details of

WO#:

1041842

☐ Overhauled

☒ Repaired

☐ Removed Serviceable

Date:

1/14/05 R

Part #:

6314R

Serial #:

02071390

Part Name:

magneto

Part TSOH:

na

Total Time:

na

Aircraft N#:

na

A/C Total Time:

na

Tech:

12H1

Inspector:

Kirk Peter

UNDSAS-TAG-001

DESCRIPTION

Rep
near

UNIVERSITY OF ND

Grand Forks International Airport
Grand Forks, ND (701) 777-7900
FAA Repair Station # 2N

SERVICE

1016279

I certify this aircraft is repaired and inspected in accordance with current Federal Aviation regulations, was found airworthy, and is approved for return to service. Pertinent details of the repair are on file at this agency under

WO#: 1041845

☐ Overhauled ☒ Repaired
☐ Removed Serviceable

Date: 1/14/05

Part #: 6314R

Serial #: 02071389

Part Name: mag

Part TSOH: na Total Time: na

Aircraft N#: na A/C Total Time: na

Tech: KHP

Inspector: *[Signature]*

UNDSAS-TAG-001

5
A
BMC
CH48109
70007-101

Page 1 of 1

Date closed: 1/28/05

[illegible]

Page 1 of 1

Date closed: 1/24/05

In Progress Insp _____

Init_____

[illegible]

Page 1 of 1

Date closed: 1/25/05

In Progress Insp _____

Init KHP

[illegible]

MATERIAL REQUISITION

[illegible]

Page 1 of 1

R/A

Parts (opt)

Date closed: 1/25/05

In Progress Insp MSYS

Init DHT

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	oil temp gauge was fluctuating.	79 30	1	Inspected transmitter + wiring. No defects noted. Ran A/C - no oil temp abnormalities noted.	79 30	N	1/25	1.0		DHT	MSYS
				<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N.</p> <p>Authorized Signature <u>[Signature]</u> Date <u>1-25-05</u></p>							

Page 1 of 1

Date closed: 2-4-05

[illegible]



Owner Service Advisory SA 04-09

Issued: 07 Dec 2004

Models SR20 and SR22

TO: Owners, Operators, and Service Centers

SUBJECT: Aileron Hinge Bearing Migration - Immediate Action

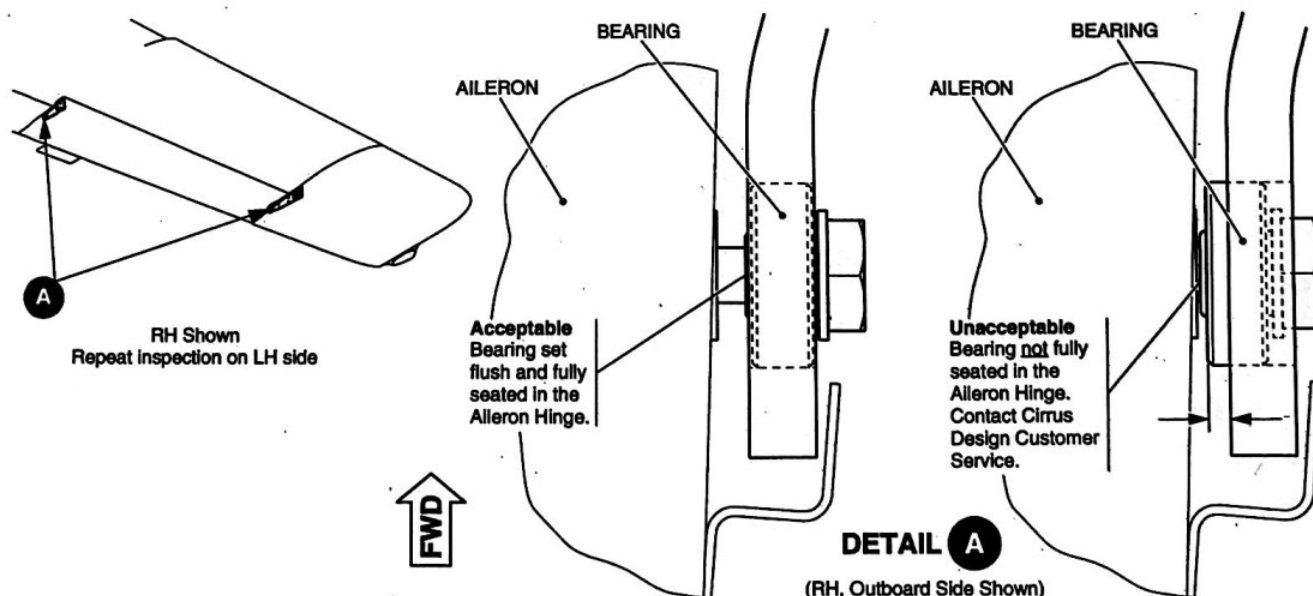
EFFECTIVITY: Cirrus Design SR20 serial numbers 20-1149 through 20-1473
Cirrus Design SR22 serial numbers 22-0002 through 22-1202

Cirrus Design recently found a condition where the LH and RH aileron hinge bearings on both the inboard and outboard sides may be excessively loaded. This condition may result in the aileron hinge bearing(s) migrating out of their staked position(s) which could cause the aileron control system to jam.

To our knowledge, an event of this type has not occurred on an airplane in over 486,000 fleet hours. However, since a condition where the bearing is not contained in the aileron hinge would alter the flying characteristics of the airplane, Cirrus Design requests that operators take **immediate action** to assure that aileron hinge bearings are properly retained.

Cirrus operators must visually inspect the aileron hinge bearings to assure that the bearings are fully seated in the aileron hinge. A properly seated bearing is indicated when the bearing face is flush with the aileron hinge surface. The illustration below depicts both acceptable and unacceptable installations. If a bearing is found to protrude from the aileron hinge surface, call Cirrus Design Customer Service (1-800-279-4322) for disposition. This visual inspection must be accomplished before every flight until the Service Bulletin is accomplished.

A Mandatory Service Bulletin is under development which will correct this condition. Additionally, Cirrus Design expects that the FAA will issue an Airworthiness Directive to require compliance with this Service Bulletin.



Cirrus Design Corporation
4515 Taylor Circle
Duluth, Minnesota 55811
PH (218) 727-2737

SA 04-09
1 of 1

Cirrus Design Corporation cannot be responsible for the quality of work performed by others while fulfilling the requirements of any service bulletin. Procedures specified in service bulletins must be accomplished using industry standard maintenance practices and applicable government regulations.

Page 1 of 1

Date closed: 2-8-05

In Progress Insp

Init DP_c

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>TSO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	553.0	553.0
IO-380-ES0B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	553.0	553.0
PHC-J3YF-1RF	FP1868B	PROPELLER	553.0	553.0

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	EHSI Error messages: 1. Fluxgate XYZ lost 2. No 429 input on Nav1.	34/40	1	Seated connector on EHSI. Calibrated lamp and setup software. EHSI ops checks good.	34/40	N	2/8	1.1		DPS	<i>[Signature]</i>
					34/40	N	2/8	0.5		BSS	<i>[Signature]</i>
				<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N.</p> <p>Authorized Signature <i>[Signature]</i> Date <u>2-8-05</u></p>							

DATE 2-

MATERIAL REQUISITION

DATE 2-6-04 ACFT NO. 77700 W/O NO. 1042368

[illegible]

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 1

Odegard School of Aerospace Sci.
University of North Dakota
Grand Forks Intl. Airport
Mark Andrews Field
Grand Forks, ND 58202
Repair Station# OG5R092N

WKO#: 1042808
Mech: JDR
Shop Code: F
Equip Code: A
Opened: 2/11/2005 7:03

OBTAIN ALL
INITIALS BEFORE FILING

R/A
Parts (opt)

Date closed: 2-11-2005

Customer: EASE

Acct#: 9999-0000-471

Preliminary Insp

In Progress Insp

N#: N777ND AofType: SR20

Model: SR20

Bill Meter: 558.0

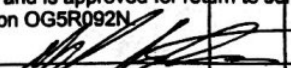
A/F Tach: 558.0

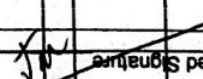
Init: JDR

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	560.6	560.6
IO-360-ES8B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	560.6	560.6
PHC-J3YF-1RF	FP1868B	PROPELLER	560.6	560.6

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	During climb out EGT & CHT both read zero	77 20	1	Tested EGT probe - checks good. Tested CHT probe - inop. Replaced CHT probe. Checked wiring and gauge. Operational check good.	77 20	N	2/11	2.0		JDR	AKA
2	O-I temp fluctuated primarily read zero and jumped around we got a reading after tapping the gauge but not continuously.	79 30	1	Removed O-I temp probe and tested. Checks good. Tested wiring checks good. O-I temp still inop. Disassembled cannon plugs and inspected. No problems found. Reassembled O-I temp indicating system. Operational check good.	79 30	N	2/11	4.0		JDR	AKA

I certify the aircraft airframe, aircraft engine, propeller, or
appliance identified above was repaired and inspected in
accordance with current regulations of the Federal Aviation
Administration with respect to the work performed and
found to be airworthy and is approved for return to service.
Certified Repair Station OG5R092N

Authorized Signature: 
Date: 2-11-11

Signature: 
Certified Repair Station OG5R092N

I certify the aircraft airframe, aircraft engine, propeller, or
appliance identified above was repaired and inspected in
accordance with current regulations of the Federal Aviation
Administration with respect to the work performed and
found to be airworthy and is approved for return to service.
Certified Repair Station OG5R092N

Authorized Signature
Date: 2-11-05

I certify the aircraft airframe, aircraft engine, propeller, or
appliance identified above was repaired and inspected in
accordance with current regulations of the Federal Aviation
Administration with respect to the work performed and
found to be airworthy and is approved for return to service.
Certified Repair Station OG5R092N
Authorized Signature
Date

MATERIAL REQUISITION

DATE 2/11/05 ACFT NO. N 777ND W/O NO. 1042608

[illegible]

Page 1 of 1

R/A

Parts (opt)

Date closed: 2/12/05

Preliminary Inst

In Progress Insp

Init BSS

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	Autopilot rolled 60+ degrees in Nav mode. GPSS also Inop.	22/10	1	Verified GPSS inop. Check configuration in #1 GPS Mx Pages. All setting are correct. Removed and re-seated autopilot computer in rack. GPSS ops checks good. Nav mode functions ops check good as well.	22/10	N	2/12	2.5		BSS	MM
<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station QG5R092N.</p> <p>Authorized Signature <u>Morgan R. Stroh</u> Date <u>2/12/08</u></p>											

Page 1 of 4

R/A

Parts (opt)

Date closed: 2-14-2005

Preliminary Insp

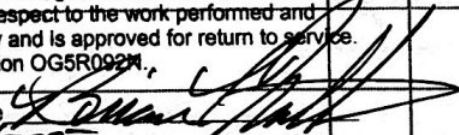
In Progress Insp

Bill Meter: 589.7

A/F Tach: 571.2

Init *the*

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>TSO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	573.8	573.8
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	573.8	573.8
PHC-J3YF-1RF	FP1868B	PROPELLER	573.8	573.8

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	50 hour inspection	05 20	1	Inspected 50-hr items on checklist. Changed oil and filter. Run-up and leak check good	05 20	N	2/14	2.5		Ther	AB
				<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R0924.</p> <p>Authorized Signature  Date 2-14-05</p>							

MATERIAL REQUISITION

[illegible]

Page 1 of 1

OBTAIN ALL
INITIALS BEFORE FILING

In Progress Ins

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>TSO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	608.9	608.9
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	608.9	608.9
PHC-J3YF-1RF	FP1868B	PROPELLER	608.9	608.9

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	Pilots shoulder harness locked up	25/20	1	Can't confirm harness retracts, extends and locks when it should at this time	25/20	N	2/21	.3		KHP	
<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R0524</p> <p>Authorized Signature _____ Date <u>2/21/05</u></p>											

Page 1 of 1

R/A [Signature] Date closed: 2/23/05
Parts (opt) [Signature]

N# N777ND AofType: SR20 Model: SR20 Bill Meter: 616.7 A/F Tach: 617.1 Init NRK

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>TSO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	619.7	619.7
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	619.7	619.7
PHC-J3YF-1RF	FP1060B	PROPELLER	619.7	619.7

[illegible]

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 2

Odegard School of Aerospace Sci.
University of North Dakota
Grand Forks Intl. Airport
Mark Andrews Field
Grand Forks, ND 58202
Repair Station# OG5R092N

WKO#: 1043027
Mech: JDR
Shop Code: F
Equip Code: A
Opened: 2/24/2005 7:10

OBTAIN ALL
INITIALS BEFORE FILING

R/A

Parts (opt)

Date closed: 2-25-2005

Customer: EASE

Acc#: 9999-0000-471

Preliminary Insp

In Progress Insp

N#: N777ND AofType: SR20 Model: SR20

Bill Meter: 617.1

A/F Tach: 617.1

Init: *Jun*

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	619.7	619.7
IO-360-ES8B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	619.7	619.7
PHC-J3VF-1RF	FP1868B	PROPELLER	619.7	619.7

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	100-hour inspection due	05 20	1		05 20	N	2/24	6.0		Jun	<i>[Signature]</i>
						N	2/24	5.5		CME	<i>[Signature]</i>
						N	2/25	6.5		Jun	<i>[Signature]</i>
						N	2/25	6.0		CME	<i>[Signature]</i>
I certify that this aircraft has been inspected in accordance with <u>100-hour</u> inspection, including, as applicable a routine inspection of <u>N/A</u> and detailed inspection of <u>aircraft</u> and was determined to be in airworthy condition, and is approved for return to service Certified Repair Station OG5R092N Authorized Signature <u><i>John D. Pahl</i></u> Date <u>2-25-2005</u>											
	50-hour due at 667.1			100-hour due 717.1							
2	#2 cyl. bottom cylinder buffle loose	71 10	1	reattached spring	71 10	N	2/25	.5		CME	<i>[Signature]</i>
3	nut plate for right gear fairing broken off.	32 10	1	Reattached nut plate	32 10	N	2/25	.2		Jun	<i>[Signature]</i>

Page 2 of 2

Work Order #: 1043027

Reg#: (N) 777ND		Work Order #:		GAMA	ACC	Date	Hrs	OT	Mech	Insp		
PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)		GAMA	ACC	Date	Hrs	OT	Mech	Insp
4	propeller cracked.	6 ⁰⁰	1	Dressed prop		6 ⁰⁰	N	2/25	.3		CME	
5	right brake linings worn	32 ⁴⁰	/	replaced right brake linings		32 ⁴⁰	N	2/28	.3		CME	
6	Left main tire worn	32 ⁴⁰	1	replaced left main tire		32 ⁴⁰	N	2/24	.4		CME	
7	Inspector's time	05 ⁶⁰	1	time		05 ⁶⁰	N	2/25	2.0			
<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station: CC5R002M</p> <p>Authorized Signature: Date: 2-25-05</p>												

University of North Dakota
Grand Forks, North Dakota 58202

ACFT NO.

N 777ND

MATERIAL REQUISITION

1043027

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Page 1 of 1

Date closed: 2/28/05

[illegible]

Page 1 of 1

Date closed: 3/8/05

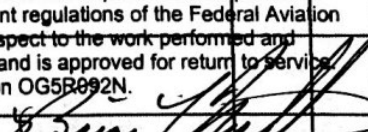
Preliminary Insp RH In Progress Insp RH

Init KA

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	OT	Mech	Insp
1	HSI has gyro invalid and all info red on display	34/40	1	Powered up HSI system flag goes away and information is valid ran for 30 minutes with ground power. Tilted remote DG and inspected connector on DG. Taxied around compass rose. Tests good	34/40	N	3/8	1.5		BSS	KHP
2	AP will not disconnect.	22/10	1	Engaged and disengaged autopilot many times from left and right side no problem found	22/10	N	3/8	.3		BSS	KHP
<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station 065R092N.</p> <p>Authorized Signature: <u>[Signature]</u> Date: <u>3/8/05</u></p>											

84

R/A [Signature] Date closed: 3-16-05
Parts (optl) [Signature]

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	50 hour inspection Due	05 20	1	Completed 50 hour inspection E.A. 47 Cirrus SR20 Maint. Manual	05 20	N	3/16	3.8		CME	<input checked="" type="checkbox"/>
2	Rubber cover on bottom of lower cowling	71-10	1	Replaced	71-10	N	3/16	.1		CME	<input checked="" type="checkbox"/>
				<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N.</p> <p>Authorized Signature:  Date: 3-16-05</p>							

MATERIAL REQUISITION

[illegible]

Page 1 of 1

Date closed: 3/17/05

N# N777ND AofType: SR20 Model: SR20 Bill Meter: 671.8 A/F Taoh: 671.8 Init

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>TSO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	674.5	674.5
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	674.5	674.5
PHC-J3YE-1RF	FP19689	PROPELLER	674.5	674.5

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Page 1 of 1

OBTAIN ALL
INITIALS BEFORE FILING

R/A _____
Parts (optl) _____
In Progress Insp _____

Date closed: 3/21/05

Preliminary Insp 77 In Progress Insp 0

Init KHP

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	GPS database not current	34/501		Removed and loaded current data	34/50	N	3/21	.6		KHP	
<p><i>Kirk Peterson</i> AOP 477782584</p>											

Page 1 of 1

Date closed: 3/29/05

In Progress Insp _____

Init 346

[illegible]

MATERIAL REQUISITION

DATE 3/29/05 ACFT NO. N777ND W/O NO. 1043871

[illegible]

Page 1 of 1

Date closed: 4/1/05

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	Approach lost transponder 2 times during flight out GTX4327 S/N 83707422	34/50	1	Found transponder w/ bad connector. Removed and replaced transponder All ops checks good.	34/50	N	4/01	1.0		BSS	KHP
	IN S/N 83713868										
				I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station G5R092M.							
				Authorized Signature Date 4/1/05							

University of North Dakota
Grand Forks, North Dakota 58202

DATE 4/01/05 ACFT NO. N 777 ND MATERIAL REQUISITION W/O NO. 1043954

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Page 1 of 1

Date closed: 4-2-05

Preliminary Insp 49


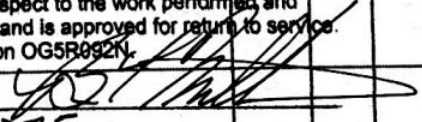
In Progress Insp 40

Bill Meter: 715.8

AVF Tach: 715.8

Init Case

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>TSO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	718.5	718.5
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	718.5	718.5
PHC-J3YF-1RF	FP1866B	PROPELLER	718.5	718.5

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	OT	Mech	Insp
1	Pad on Pilots door not attached	2510	1	Reattached pad	2510	N	4/18	4		CME	
<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N.</p> <p>Authorized Signature  Date <u>4-2-05</u></p>											

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 2

Odegard School of Aerospace Sci.
University of North Dakota
Grand Forks Intl. Airport
Mark Andrews Field
Grand Forks, ND 58202
Repair Station# OG5R092N

WKO#: 1044018
Mech: CME
Shop Code: F
Equip Code: A
Opened: 4/4/2005 8:59

OBTAIN ALL
INITIALS BEFORE FILING

R/A JP
Parts (optl) JP

Date closed: 4-5-05

Customer: EASE Acc#: 1245-0518-471

Preliminary Insp JPIn Progress Insp mmj

N#: N777ND ActType: SR20 Model: SR20

Bill Meter: 715.8

A/F Tach: 715.8

Init CME

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	718.5	718.5
IO-360-ES6B	367498	ENGINE (CIRRUS SR20) TELEDYNE C	718.5	718.5
PHC-J3YF-1RF	FP1889B	PROPELLER	718.5	718.5

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	100 Hour / Annual Inspection Due	05 20	1	Started 100 Hour / Annual Inspection	05 20	N	4/4	7.0		CME	mmj
						N	4/4	6.0		Rws	mmj
			2	Completed 100 Hour / Annual Inspection		N	4/5	5.6		CME	mmj
						N	4/5	4.5		Rws	mmj
I certify that this aircraft has been inspected in accordance with <u>100 hour / Annual</u> inspection, including, as applicable a routine inspection of <u>X</u> <u>X</u> and detailed inspection of <u>X</u> and was determined to be in airworthy condition, and is approved for return to service Certified Repair Station OG5R092N Authorized Signature <u>Charles</u> Date <u>4-5-05</u>											
2	Induction Air Filter Due	05 20	1	Replaced filter next Due: 915.8	71 60	N	4/5	.2		Rws	mmj

INSPECTION SUPPLEMENT AND WORK ORDER

Page 2 of 3Reg#: (N) N777NDWork Order #: 1044011

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
3	Instrument filter replacement due	05 20	1	Replaced instrument filters next time 121518	37 10	N	4/5	.3		RWS	ML
4	Heat shroud duct starting to chafe on engine mount	21 40	1	Secured duct to prevent chaffing	21 40	N	4/5	.3		CME	ML
5	Prop harness	61 00	1	Dressed prop	61 00	N	4/5	.3		CME	MMA
6	Nut plate on R/S MCG not attached	32 10	1	Attached Nut plate to R/S MCG	32 10	N	4/5	.1		CME	ML

Page 3 of 2

Work Order #: 1044018

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
7	Left brake linings worn	32 40	1	Replaced linings	32 40	N	4/5	.2		RWS	MM
8	mixture control rod end bad	76 10	1	Replaced Rod End	76 10	N	4/5	.2		RWS	MM
9	Well nuts on MLG need replacement	32 10	1	Replaced 3 bad wellnuts 2 short 1 long	32 10	N	4/5	.2		CME	MM
10	Inspector time	05 60	1	Insp. Time for Billing	05 60	N	4/5	1.0		MM	MM
				I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N.							
				Authorized Signature <u>Morgan A. Stroh</u> Date <u>4/5/05</u>							

Center for Aerospace Sciences
University of North Dakota
Grand Forks, North Dakota 58202

MATERIAL REQUISITION

DATE 4/4/05 ACFT NO. N777ND W/O NO. 1044018

PD	MI	Part Number	Serial Number	Description	Quan.	MCC	Return Y/N	Batch #
X	RMS	CH48709		oil filter	1			3246
X		15W50		oil	8			—
1		M829513-137		oring	1			2298
X		NA81523-8B		stat-o-seal	1			3767
1	RMS	M835769-21		gasket	1			2776
2		BA 24		Air Filter	1			869
X		M-674		gasket	12			4202
X		66-141		long.	2			376
7		105-2		Rivet	6			427
3		DA-18-1		filter	1			428
3		B3-5-1		filter	1			4192
8		452-606		Rod end	1			416
9	CME	50802-001		well nut	1			389
9		50803-001		well nut	2			2705

Page 1 of 1

84

Date closed: 4/13/05

Init DPS

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	Approach not picking up transponder very well.	34/50	1	Tested transponder on bench and checks good. Power output in A/C is low.	34/50	N	4/11	.8		DPS	KHP
2	Troubleshoot and found coax cable bad. Replaced old cable from A/C. Routed RG-142 from transponder to antenna. Transponder ops checks good. Power out is good. Re-assembled A/C all other systems ops check good.	34/50			34/50	N	4/12	8.5		BSS	KHP
					34/50	N	4/12	2.0		DPS	KHP

I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service.
 Certified Repair Station 06SR00021

Authorized Signature: [Signature]
 Date: 4/13/05

Page 1 of 1

Date closed: 4-15-05

Preliminary Insp MSB In Progress Insp MSB

Bill Meter: 747.4 VF Tach: 747.4 Init *DRS*

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	Pilot can't hear copilot or passengers.	23/10	1	Turned up volume on front of audio panel. Audio panel ops checks good.	23/10	N	4/15	.4		DPS	msr
				<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N.</p> <p>Authorized Signature: <u>M. J. [Signature]</u> Date: <u>4-15-05</u></p>							

Date closed: 4-21-05

In Progress Insp MSB

Init ABC

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	50 hour inspection Due	05 20	1	Completed 50 hour inspection I.A.W. Cirrus SR20 maint. Manual Inspection checklist.	05 20	N	4/21	3.2		CME	MSB
2	RT Inboard flap mount fairing cracked	53 20	1	stop drilled crack	53 20	N	4/21	.1		AMS	MSB
3	Inspector time	05 60	1	Inspected	05 60	N	4-21	.4		MSB	MSB
				I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N.							
				Authorized Signature <u>[Signature]</u> Date <u>4-21-05</u>							

MATERIAL REQUISITION

[illegible]

Center for Aerospace Sciences

University of North Dakota

Grand Forks, North Dakota 58202

MATERIAL REQUISITION

DATE 5/10/05 ACFT NO. N777NG W/O NO. 1044907

[illegible]

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of ~~1~~ 5

Odegaard School of Aerospace Sci.
University of North Dakota
Grand Forks Intl. Airport
Mark Andrews Field
Grand Forks, ND 58202
Repair Station# OG5R092N

WKO#: 1045089
Mech: CME
Shop Code: F
Equip Code: A
Opened: 5/20/2005 7:03

OBTAIN ALL
INITIALS BEFORE FILING

R/A SM
Parts (opt) SM

Date closed: 5/25/05

Customer: EASE Acc#: 1245-0518-471

Preliminary Insp

In Progress Insp SM

N#: N777ND AofType: SR20 Model: SR20

Bill Meter: 813.1

A/F Tach: 813.1

Init CME

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	815.8	815.8
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	815.8	815.8
PHC-J3YF-1RF	FP1868B	PROPELLER	815.8	815.8

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	100 hour inspection due	0520	1	Started 100 hour Insp	0520	N	5/20	3.0		Sub	
			2	Completed 100 hour Insp	0520	N	5/20	4.0		SM	
				T.A.W Cirrus SR20			5/20	5.0		CME	
				Manit Manual			5/23	3.8		Sub	
							5/23	4.0		CME	
certify that this aircraft has been inspected in accordance with a <u>100 hour</u> inspection, including, as applicable a routine inspection of _____, and detailed inspection of _____ _____ and was determined to be unairworthy and a list of discrepancies and unairworthy items follows by problem description number: <u>2, H</u> Certified Repair Station OG5R092N Authorized Signature <u>Chad M...</u> Date <u>5-23-05</u>											
2	SB 2X-57-05 Aircon hinge bearing insp Rev 1/15/05	0400	1	performed SB 2X-57-05 on L/H aileron, R/H still needs to be completed see PD 11	0400	N	5/23	1.5		AMB	
			2	performed SB 2X-57-05 on R/H aileron no defects found and installed SB 2X-57-05 R/H	0400	N	5/25	.6		AMB	

Page 2 of 4

Work Order #: 1045099

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
3	R/S MLG TIRE worn	3240	1	REMOVED TIRE (STILL NEED TO BE INSTALLED)	3240	N	5/20	.3		RL	B
			2	INSTALLED NEW TIRE		N	5/21	.5		RL	B
4	prop nicked	6/10	1	DRESSED PROP	6/10	N	5/20	.4		RL	B
5	Left Right brake disc worn	3240	1	REMOVED & REPLACED DISC	3240	N	5/23	.3		RL	B
6	R. MLG fairing missing plastic spacer	32/20	1	Located spacer & installed	32/20	N	5/23	.1		CME	B

Page 3 of 5

Work Order #: 1045099

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
7	All Plugs but #5 top Wb-n out	74 20	1	Installed new spark plugs $\frac{1}{4}$ ea	74 20	N	5/20	.2		CME	JD
8	Left brake disc worn	32 40	1	Replaced brake disc	32 40	N	5/23	.2		CME	JD
9	Igniter leads Chaffing on oil line behind #1 cyl	74 20	1	SEPERATED & SECURED LINE & LEADS	74 20	N	5/20	.2		Ant	JD
10	fwl Bottom #6 cyl bottle cracked	72 30	1	Stop drilled crack	72 30	N	5/20	.1		CME	JD

Page 4 of 5

Work Order #: 1045099

[illegible]

Page 5 of 9

Work Order #: 104502

[illegible]

Center for Aerospace Sciences
University of North Dakota
Grand Forks, North Dakota 58202

~~PARTS~~

MATERIAL REQUISITION

5/20/05

ACFT NO. N 777ND

W/O NO. 1045099

	MI	Part Number	Serial Number	Description	Quan.	MCC	Return Y/N	Batch #
✓	CME	CH481-09		oil filter	1			
✓		15W50		oil	8			
✓		M-674		gask.	12			4411
✓		M\$35769-21		gask.	1			2776
✓		301-249-420		fire	1			4069
✓	ADC	M\$35769-11		gask.	1			4257
✓		83-5-1		filter	1			3990
✓		RHM 388		spoke ply	11			4507
8		164-244	\$	disc	1			4507
✓		Nos 1523-88		slot-o-sam 1	1			4506
-5		164-244	\$ dereg	disc	1			4508
✓		50802-001		wellnut	1			3894
2		70105-001		SB kit	1			4506
5		11641-101		wheel assy.	1			4506
8		164-244						
✓5		164-244		disc	1			4508

**Center for Aerospace Sciences
University of North Dakota
Grand Forks, North Dakota 58202**

MATERIAL REQUISITION

DATE 5/25/05 ACFT NO. N77720 W/O NO. 1645099

[illegible]

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 1

Odegard School of Aerospace Sci.
University of North Dakota
Grand Forks Intl. Airport
Mark Andrews Field
Grand Forks, ND 58202
Repair Station# OG5R092N

WKO#: 1045245
Mech: KHP
Shop Code: A
Equip Code: A
Opened: 5/28/2005 8:04

OBTAIN ALL
INITIALS BEFORE FILING

R/A W
Parts (opt) W

Date closed: 6-2-05

Customer: EASE Acct#: 1245-0518-471

Preliminary Insp WIn Progress Insp W

N#: N777ND AcftType: SR20 Model: SR20

Bill Meter: 823.9

A/F Tach: 823.9

Init DPS

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	826.6	826.6
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	826.6	826.6
PHC-J3YF-1RF	FP1868B	PROPELLER	826.6	826.6

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	Txpr reported by ATC to work 1/2 of flight	34/50	1	Interrogated unit and found power dropping off after several minutes. R/R ID	34/50	N	5/28	3.0		KHP	W
OUT	GTx 327 83713868			txpr. Further research reveals txpr							
	GTx 327			and coax have been							
	S/N 83707422 in			replaced recently.							
				troubleshoot to txpr							
				antenna ordered							
2	Replaced	34/50	N	6/2	1.0					DPS	W
	transponder										
	antenna and										
	transponder ops										
	checks good.										

I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N.

Authorized Signature [Signature]
Date 6-2-05

Center for Aerospace Sciences
University of North Dakota
Grand Forks, North Dakota 58202

MATERIAL REQUISITION

DATE 5/27/05 ACFT NO. N777ND

W/O NO. 1045245

[illegible]

Page 1 of 1

Date closed: 6-23-2005

In Progress Insp

Init Tom

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	50 hour inspection	05	20	1	05	20	N	6/23	3.0	Ukr	
				Changed oil and filter							
				Inspected Items on 50-hr.							
				check list. Run-up							
				and leak check good.							
				<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N.</p> <p>Authorized Signature: Date: 6-23-25</p>							

MATERIAL REQUISITION

[illegible]

Page 1 of 1

Date closed: 7/19/05

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>TSO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	915.1	915.1
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	915.1	915.1
PHC-J3YF-1RF	FP1868B	PROPELLER	915.1	915.1

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 3

Odegard School of Aerospace Sci.
University of North Dakota
Grand Forks Intl. Airport
Mark Andrews Field
Grand Forks, ND 58202
Repair Station# OG5R092N

WKO#: 1046345

Mech: CME

Shop Code: F

Equip Code: A

Opened: 7/20/2005 7:04

OBTAIN ALL

INITIALS BEFORE FILING

R/A

Parts (opt)

Date closed: 7-22-05

Customer: EASE

Acc#: 1245-0518-471

Preliminary Insp MSBIn Progress Insp MSB

N#: N777ND AofType: SR20

Model: SR20

Bill Meter: 912.4

A/F Tach: 912.4

Init CME

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	915.1	915.1
IO-360-ES8B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	915.1	915.1
PHC-J3VF-1RF	FP1968B	PROPELLER	915.1	915.1

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	100 hour inspection due	05	1	Started 100 hour inspection	05	N	7-20	5.5		CME	MSB
				inspection	05	N	7-20	7.0		CME	MSB
			2	Completed	05	N	7-21	6.0		CME	MSB
certify that this aircraft has been inspected in accordance with a <u>100 hour</u> inspection, including, as applicable a routine inspection of _____ and detailed inspection of _____ and was determined to be unairworthy and a list of discrepancies and unairworthy items follows by problem description number: <u>9</u> Certified Repair Station OG5R092N Authorized Signature <u>Charles M. ...</u> Date <u>7-21-05</u>											
2	SIB2 X-24-04 Dual amp/voltmeter adapter Rev 3/31/2005	04	1	N/A 60A meter installed	04	N	7-20	.3		CME	MSB

INSPECTION SUPPLEMENT AND WORK ORDER

Page 3 of 3Reg#: (N) 222Work Order #: 1046345

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
3	Induction air filters due time change	05/20	1	Removed & Replaced Induction air filters next due @ 1112.4	01/20	N	7/20	.2		OK	MSB
4	propellers	61/00	1	Filed Prop	61/00	N	7/20	.2		OK	MSB
5	Brake linings worn	32/40	1	Removed & Replaced brake linings	32/40	N	7/20	.2		OK	MSB
6	Alt air housing needs to be secured	01/00	1	Secured housing	01/60	N	7/21	-1		OK	MSB

INSPECTION SUPPLEMENT AND WORK ORDER

Page 2 of 3Reg#: (N) 787NDWork Order #: 1046345

PD	Problem Description (PD)	GAMA	CA	Corrective Action (CA)	GAMA	ACC	Date	Hrs	OT	Mech	Insp
7	both ^{one} baffle springs on both sides of engine Need to be adjusted	32 30	1	adjusted springs	32 30	N	7-21	.3		CME	MSB
8	cap missing on nose gear fairing	32 30	1	Installed new cap	32 30	N	7-21	.2		CME	MSB
9	Nose strut has excessive play	32 20	1	ordered bolt + bushings	32 20	N	7-21	.2		CME	MSB
			2	Installed new bolt + bushings on both sides of nose gear strut ^{off} strut engine mount.	32 20	N	7-22	1.0		CME	MSB
10	Inspection time	05 60	1	Inspected	05 60	N	7-21	1.5		MSB	MSB
I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R992N.											

Authorized Signature

Date

7-22-05

Center for Aerospace Sciences
University of North Dakota
Grand Forks, North Dakota 58202

MATERIAL REQUISITION

7/20/05

ACFT NO.

777ND

W/O NO.

1046345

	MI	Part Number	Serial Number	Description	Quan.	MCC	Return Y/N	Batch #
✓1	cme	CH48109		oil filter	1			4604
✓1		15w50		oil	8			-
✓1		m-674		gasket	12			4632
✓1		m\$35769-21		gasket	1			
✓1		m\$35769-11		gasket	1			32116
✓1		m\$1523-8B		skate seal	1			4636
✓3		BA24		Air filter	1			4069
✓5	ADC	66-141		pad	2			4111
✓5	1	105-2		river	6			4382
✓1	cme	B3-5-1		inst. filter	1			4697
✓1		50802-001		well nut	5			4636
✓1		50803-001		well nut	5			4636
✓8	cme	50498-200		cap	1			4687
✓9	1	12935-001		spacer	2			4692
✓9		NA\$77-8-013		bushing	2			4692
✓9	1	NA\$6206-260		bolt	8			4692

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 1

Odegard School of Aerospace Sci.
University of North Dakota
Grand Forks Intl. Airport
Mark Andrews Field
Grand Forks, ND 58202

WKO#: 1046736
Mech: KHP
Shop Code: A
Equip Code: A
Opened: 8/9/2005 8:10

OBTAIN ALL
INITIALS BEFORE FILING

R/A 8/9
Parts (optl) 8/9

Date closed: 8/10/05

Customer: EASE Acc#: 1245-0518-471

Preliminary Insp MSBIn Progress Insp MSB

N# N777ND AcftType: SR20 Model: SR20

Bill Meter: 957.7

A/F Tach: 957.7

Init KHP

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	960.4	960.4
IO-360-ES8B	357498	ENGINE (CIRRUS SR20) TELEDYNE C	960.4	960.4
PHC-J3YF-1RF	FP1868B	PROPELLER	960.4	960.4

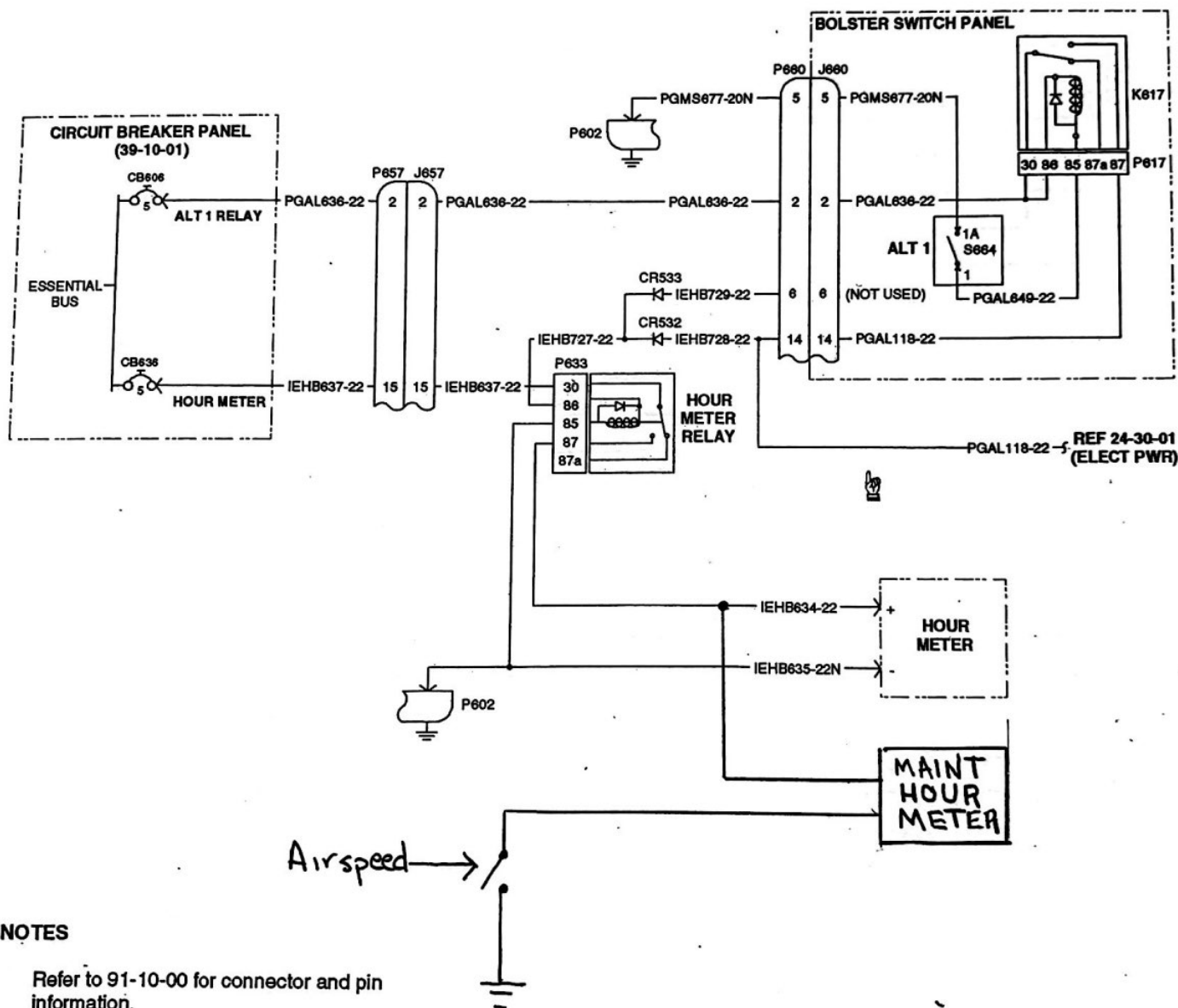
PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	Install flight hour hobbs for maintenance hobbs	31/30	1	Performed minor alteration. Maint hobbs is mounted in glove box near existing billing hobbs. Receives power thru hour meter relay & gnd thru air speed switch. Tested operation. Installed placards. Corrected time in AIMS system. Rense weight & Balance and equipment list. Schematic placed in permanent records and attached to work order.	31/30	N	8/9	2.5		DPS	MSK
					31/30	N	8/10	3.0		KHP	MSB
					31/30	N	8/10	2.5		DPS	MSB

I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service.
Certified Repair Station OG58092N

Authorized Signature

Date

8/10/05
MSB



1005 THRU 1267

WM12986_1A

HOURMETER

12129-001
30 Sep 2003

31-30-01

Page 1

WEIGHT AND BALANCE, AND EQUIPMENT LIST REVISION

DATE 8/10/05

E.W.	C.G	MOMENT
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
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100	100	100

Name Kirk Peterson

c:\wt&bal.doc 12/11/98

Grand Forks, North Dakota 58202

MATERIAL REQUISITION

~~10411488~~ 1046736

[illegible]

**JOHN D. ODEGARD
SCHOOL OF AEROSPACE SCIENCES
UNIVERSITY OF NORTH DAKOTA**

WEIGHT AND BALANCE, AND EQUIPMENT LIST REVISION

AIRCRAFT MODEL SR20
 N NUMBER 777ND
 SERIAL NO 1258
 DATE 8/10/05

AMOUNT	DESCRIPTION	WEIGHT (LB)	ARM (IN)	MOMENT
1	Air speed switch	0.3	110.0	33.0
1	Hobbs	0.2	145.0	29.0

	E.W.	C.G.	MOMENT
PREVIOUS EMPTY AIRPLANE	2135	141.34	301,758
TOTAL ADDED OR SUBTRACTED	0.5		62.0
REVISED EMPTY AIRPLANE	2135.5	141.33	301,820
USEFUL LOAD $3000 - 2135.5 = 864.5$			

Name Kirk Peterson

Cert No OG5R092N



Refer to 91-10-00 for connector and pin information.

WM12986 1A

HOURLY METER

31-30-01

Page 1 of 2

Date closed: 8.17.05

In Progress Insp MSR

Init End

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	OT	Mech	Insp
1.	FIRE EXTINGUISHER FOUND ON FLOOR	2620	1	REINSTALLER FIRE EXTINGUISHER AND BRACKET UNDER PILOTS SEAT	2620	N	8/12	5		Paul	MSIS
<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N</p> <p>Authorized Signature <u>Paul B. Smith</u> Date <u>8-12-05</u></p>											

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 1

Odegard School of Aerospace Sci.
University of North Dakota
Grand Forks Intl. Airport
Mark Andrews Field
Grand Forks, ND 58202

WKO#: 1046828
Mech: CME
Shop Code: F
Equip Code: A
Opened: 8/19/2005 9:39

OBTAIN ALL
INITIALS BEFORE FILING

R/A 80
Parts (opt) 5m Date closed: 8-19-05

Customer: EASE Acct#: 1245-0518-471 Preliminary Insp 2m In Progress Insp MSB

N#: N777ND AcftType: SR20 Model: SR20 Bill Meter: 962.3 A/F Tach: 3.1 Init CME

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	963.5	963.5
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE	963.5	963.5
PHC-J3YF-1RF	FP1868B	PROPELLER	963.5	963.5

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Mech	Insp
1	50 hour inspection Due	05 20	1		05 20	N	8/19	3.5		CME	MSB

I certify that this aircraft has been inspected in accordance with
50 hour @ inspection, including, as applicable
a routine inspection of _____
and detailed inspection of _____
and was determined to
be in airworthy condition, and is approved for return to service

Certified Repair Station OG5R092N

Authorized Signature Chad M. Sauer
Date 8-19-05

2	Inspection	05 60	1	Inspected	05 60	N	8-19	.2		MSB	MSB
---	------------	----------	---	-----------	----------	---	------	----	--	-----	-----

I certify the aircraft airframe, aircraft engine, propeller, or
appliance identified above was repaired and inspected in
accordance with current regulations of the Federal Aviation
Administration with respect to the work performed and
found to be airworthy and is approved for return to service.
Certified Repair Station OG5R092N.

Authorized Signature Mike S. Sauer
Date 8-19-05

SECRET

NO. ~~11181~~ 1046828

DATE 8-18-05 ACFT NO. 777ND W/O NO. ~~14484~~ 1046828

[illegible]

Page 1 of 1

Date closed: 9/2/2005

In Progress Insp

Init SB

[illegible]

**Center for Aerospace Sciences
University of North Dakota
Grand Forks, North Dakota 58202**

MATERIAL REQUISITION

DATE 9-2-05 ACFT NO. 777-10 W/O NO. 1047074

[illegible]

R/A

Parts (optl

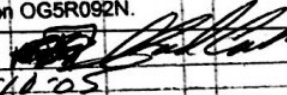
Date closed. 10-10-05

Preliminary Insp ad

In Progress Insp *[Signature]*

Bill Meter: 1,024.9 A/F Tach: 50.7

Init msb

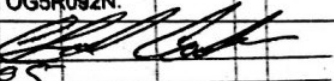
PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Tech	Insp
1	Left fuel gauge fluctuates from current fuel level to empty erratically during flight	28 40	1	Cleaned ground connection at fuel quantity sender. Could not duplicate discrepancy	28 40	N	10-10	.5		msb	all
<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N.</p> <p>Authorized Signature  Date 10-11-05</p>											

Page 1 of 1

Date closed: 10-11-05

In Progress Insp

Init msb

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Tech	Insp
1	Left fuel gauge reads empty intermittently	28 40	1	Removed and tested fuel gauge, reinstalled gauge, checked gauge cannon plug, ops. ck good, could not duplicate discrepancy	28 40	N	10-11	1.5		msb	
<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N.</p> <p>Authorized Signature:  Date: 10-1-05</p>											

Page 1 of 1

Date closed: 10-17-05

In Progress Insp _____

Init JWG

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>ISO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	1,014.2	1,014.2
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE	1,014.2	1,014.2
PHC-3YF-1RF	FP1868B	PROPELLER	1,014.2	1,014.2

[illegible]

Page 1 of 1

OBTAIN ALL
INITIALS BEFORE FILING

Tech: MRS

Shop Code: F

Equip Code: A

R/A

Opened: 10/18/2005 8:29

Parts (optl)

Date closed: 10-20-05

Customer: EASE

Acct#: 1245-0518-471

Preliminary Insp

In Progress Insp

N#: N777ND AcftType: SR20 Model: SR20

Bill Meter: 1,029.1 A/F Tach: 53.8

Init *All*

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>ISO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	1,014.2	1,014.2
IO-380-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE	1,014.2	1,014.2
PHC-J3YF-1RF	FP1868B	PROPELLER	1,014.2	1,014.2

[illegible]

**GFK Flight Support, Inc.**

2467 Air Cargo Dr.
Grand Forks, ND 58203
Phone 701-772-5504
Fax 701-772-8917
www.flygfk.com

Shop Order: 05-4267
Acct Number: PO 413695

Opened: 10/19/2005
Closed:

Sold To: Odegard School For Aerospace
UNIVERSITY OF NORTH DAKOTA
BOX 9007
GRAND FORKS, ND 58202

Aircraft Number: 777ND Type: CIRRUS DESIGN S/N: 1258

Total Time:	0.0	Hobbs Time:	275.9	Tach Time:	275.9	LG Cycles:	
Eng#	Type	S/N	Time	Cycles	Prop Type	Prop S/N	Prop Time
1			275.9				275.9

Discrepancy: 1**Problem:**

100 hour inspection due

Action Taken:

compressions: #1 70/80, #2 70/80, #3 74/80, #4 70/80, #5 68/80, #6 65/80. c/w 100 hour inspection iaw a cirrus and tcm checklist.

Total For This Discrepancy: \$ N/C

Discrepancy: 2**Problem:**

a.d. 05-17-19 due/seat mod. Date 10/13/05

Action Taken:

c/w a.d. by inspection of seats.

Total For This Discrepancy: \$ N/C

Discrepancy: 3**Problem:**

l/h brake pads worn to limits

Action Taken:

replaced brake pads

Total For This Discrepancy: \$ N/C

Discrepancy: 4**Problem:**

r/h landing gear strut fairing stand off tube missing

Action Taken:

installed new stand off tube

Total For This Discrepancy: \$ N/C

Discrepancy: 5**Problem:**

L/H landing gear fairing has nut plate broken.

Action Taken:

Replaced nut plate.

Part Number	Description	Credit	Quantity	Units	Unit Price	Extended
50803-001	Wellnut, 10-32, Short Cirrus		1.00	Each	1.500 \$	1.50
Total For This Discrepancy: \$						1.50

GFK Flight Support, Inc.

2467 Air Cargo Dr.
Grand Forks, ND 58203
Phone 701-772-5504
Fax 701-772-8917
www.flygfk.com

Discrepancy: 6**Problem:**

paint lower cowl, strut fairing and nose wheel pant

Action Taken:

painted areas.

Total For This Discrepancy: \$ N/C

Miscellaneous Charges:

Misc Supplies: \$ 0.11

Summary:

Total Parts: \$ 1.50 Misc Supplies: \$ 0.11

Totals:

SubTotal:	\$	1.61
Total Charges:	\$	1.61
Amount Remaining:	\$	1.61

Thank you for stopping at GFK Flight Support. Every effort has been made to make your visit an enjoyable experience. If for any reason we have not met your expectations of quality of service, please let us know by contacting Bob Martin at 701-772-5504. We appreciate your business and look forward to serving you in the future.

Celebrating 12 years of Service November 2005!

I certify that this Airframe
has been inspected in accordance
with a 100 Hr.
inspection and is in an airworthy
condition.

MD Shul
2659389AP

I certify that this Powerplant
has been inspected in accordance
with a 100 Hr.
inspection and is in an airworthy
condition.

MD Shul
2659389AP

I certify that this Propeller
has been inspected in accordance
with a 100 Hr.
inspection and is in an airworthy
condition.

MD Shul
2659389AP

**Center for Aerospace Sciences
University of North Dakota
Grand Forks, North Dakota 58202**

MATERIAL REQUISITION

10/18/2005 ACFT NO. N 777 ND

W/O NO. 10 48485

[illegible]

505882 DM, zko
modif. 1111
to the D. 1111
to the D. 1111

DATE 10-25-05 ACFT NO. 72720 W/O NO. 104 8596

[illegible]

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 2

Odegard School of Aerospace Sci.
University of North Dakota
Grand Forks Intl. Airport
Mark Andrews Field
Grand Forks, ND 58202

WKO#: 1049195

Tech: CSG

Shop Code: F

Equip Code: A

Opened: 11/14/2005 14:56

OBTAIN ALL

INITIALS BEFORE FILING

R/A

Parts (optl)

Date closed: 11-16-05

Customer: EASE

Acct#: 1245-0518-471

Preliminary Insp MSBIn Progress Insp MSB

N#: N777ND AcftType: SR20 Model: SR20

Bill Meter: 1,065.9 AF Tach: 83.5

Init CSG

Part#	Serial#	Description	TSO	Total Time
SR20	1258	AIRFRAME	1,043.9	1,043.9
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE	1,043.9	1,043.9
PHC-J3YF-1RF	FP1868B	PROPELLER	1,043.9	1,043.9

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Tech	Insp
1	Left Fuel gauge does not work	28 40	1	Defueled Fuel tanks L/H & R/H Removed & replaced fuel gauge, Fueled & adjusted L/H & R/H Fuel tanks & adjusted Fuel quantity indicator L/H & R/H IAW Cirrus Maintenance Manual chapt 28-40 page 2, L/H ops checked good, R/H fuel quantity indication was high & not able to be adjusted to full indication, bench tested Fuel quantity Indicator IAW Monata gauge manufacturer Installation Instructions ops checked good, tested See WOPage #2 Cont	28 40	N	11/14	7.0		CSG	MSB



ROCHESTER GAUGES, INC.

11616 HARRY HINES BLVD. • PO BOX 29242 • DALLAS, TX 75229

(972) 241-2161 • FAX (972) 620-1403

ISO 9001 AND QS-9000 REGISTERED

CERTIFICATE OF COMPLIANCE

CIRRUS DESIGN CO.

OCTOBER 25, 2005

Customer Purchase Order No: */57816/REWORK

Rochester Register/Packing Slip NO: 59504.001

DESCRIPTION: DUAL FUEL REC'R

Quantity

1

ROCHESTER P/N

4030-12034 FQ

S/N: 532

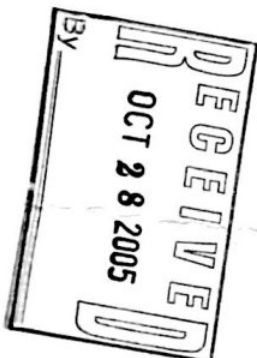
CUST. PN

12615-002S

REV: (D) 10/11/00

This is to certify the products referenced herein meet all applicable Rochester Specifications and/or Prints. The listed product is traceable by their listed serial numbers. This shipment has been inspected and passed by our Quality Assurance Department Satisfactorily.

Peggy Bryant
Peggy Bryant, Quality Department



Dallas, Texas • Brussels, Belgium • Mexico City, Mexico

Center for Aerospace Sciences
University of North Dakota
Grand Forks, North Dakota 58202

MATERIAL REQUISITION

DATE 11/14/05 ACFT NO. N777 ND W/O NO. 1049195 MATERIAL REQUEST

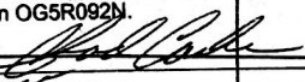
[illegible]

Page 1 of 1

Date closed: 11-30-05

In Progress Insp

Init DFS

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	OT	Tech	Insp
1	Autopilot turns in opposite direction when in HDG mode.	22/10	1	Configured software for EHSI. Autopilot ops checks good.	22/10	N	11/30	.8		EPS	all
				<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R092N.</p> <p>Authorized Signature:  Date: 11-30-05</p>							

INSPECTION SUPPLEMENT AND WORK ORDER

Page 1 of 2

Odegard School of Aerospace Sci.
University of North Dakota
Grand Forks Intl. Airport
Mark Andrews Field
Grand Forks, ND 58202

WKO#: 1049273

Tech: MES

Shop Code: F

Equip Code: A

Opened: 11/20/2005 11:31

OBTAIN ALL

INITIALS BEFORE FILING

R/A

Parts (optl)

Date closed: 11-23-05

Customer: EASE

Acct#: 2059-4223-0

Preliminary Insp

In Progress Insp

N#: N777ND AcftType: SR20 Model: SR20

Bill Meter: 1,065.9 A/F Tach: 83.5

Init MES

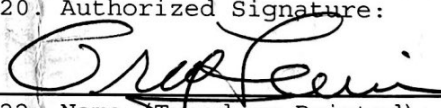
Part#	Serial#	Description	ISO	Total Time
SR20	1258	AIRFRAME	1,043.9	1,043.9
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE	1,043.9	1,043.9
PHC-JBYF-1RF	FP1868B	PROPELLER	1,043.9	1,043.9

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Tech	Insp
1	Pilot and Co Pilot 1 of belts installed Incorrectly	2510	1	Adjusted Belts	2510	N	11/20	.5		MES	OK
2	Primer Quit Priming after Approx. 1 Sec. when you Recycle the Master, it will Prime again for 1 Sec. Sometimes after recycle it just doesn't work. P/N 5217-00-R old S/N 0656 new S/N 2043	2810	1	troubleshoot system, found Boost Pump to be stop.	2810	N	11/20	2.5		MES	OK
		2820	2	Replaced Boost Pump, ops checks o.k.	2820	N	11/23	1.0		MES	OK

Page 2 of 2

Work Order #: 1049273

[illegible]

1. Approving National Aviation Authority/Country: FAA/United States		2. AUTHORIZED RELEASE CERTIFICATE FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG				3. Form Tracking Number: R59967	
4. Organization Name and Address: DUKES INC. 9060 WINNETKA AVENUE NORTHRIDGE, CA 91324 Phone: 818/998-9811						5. Work Order/Contract/Invoice Number: 55026	
6. Item	7. Description	8. Part No.	9. Eligibility*	10. Qty.	11. Serial/Batch No.	12. Status/Work	
1	FUEL BOOST PUMP	5217-00-3	N/A	1	2043	REPAIRED	
13. REMARKS: UNIT FUNCTIONS PER ATP 5217-04-3 REV.A THE TEARDOWN REPORT # R59967 DESCRIBING THE ACTUAL WORK PERFORMED IS ATTACHED. THE PRESCRIBED WORK WAS PERFORMED IN ACCORDANCE WITH FAA APPROVED DATA. DUKES INC. CERTIFIES THAT THE WORK SPECIFIED IN BLOCK 12 & 13 WAS PERFORMED IN ACCORDANCE WITH EASA IMPLEMENTATION RULE PART 145 APPROVAL, AND WITH RESPECT TO THAT WORK, THE AIRCRAFT COMPONENT IS CONSIDERED READY FOR RELEASE TO SERVICE UNDER EASA APPROVAL NUMBER EASA.145.4391							
14. Certifies the items identified above were manufactured in conformity to: <input type="checkbox"/> Approved design data and are in condition for safe operation. <input type="checkbox"/> Non-approved design data specified in Block 13.				19. <input checked="" type="checkbox"/> 14 CFR 43.9 Return to service. <input checked="" type="checkbox"/> Other regulation specified in Block 13. Certifies that unless otherwise specified in Block 13, the work identified in Block 12 and described in Block 13 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.			
15. Authorized Signature:		16. Approval/Authorization No.:		20. Authorized Signature: 		21. Approval / Certificate No.: WU2R279L	
17. Name (Typed or Printed):		18. Date: (m/d/y)		22. Name (Typed or Printed): LEWIN, GREG MGR, PRODUCT SUPPORT		23. Date: (m/d/y) OCT/06/2005	
User/Installer Responsibilities							
<p>It is important to understand that the existence of this document does not automatically constitute authority to install the part/component/assembly.</p> <p>Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different than the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness accepts parts/components/assemblies from the airworthiness authority of the country specified in Block 1.</p> <p>Statements in Block 14 and 19 do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.</p>							

STATION

TEARDOWN REPORT:

WORK ORDER: R59967

Page: 1

Date: 06/30/05

Rec. by: 0REL

9L
TKA AVE.

E, CA 91324-3293

218/998-9811

ity....: R REGULAR
house....: 01 DUKES REPAIR STATION
tomer....: 125 CIRRUS DESIGN CORPORATION
tomer PO.: 55026
Contact....: CARRIE PANK
Telephone...: 218-727-2737
WO Type.....: REP REPAIRED
Manufacturer: DUKES

Warranty months.: 12
Warranty hours...: 0
Warranty Expires: 05/31/06
Date Installed...: 05/31/05

Price Advise: N

A/C type....:

Item number.: 5217-00-3

FUEL BOOST PUMP

Ext Item Num: 5217-00-3

Quantity....: 1

Cond: R

Prev R/O Agt:

Serial number(s)

2043

Item Received as:

S/N Received as:

Part Date Of Manufac.: 03/16/05

Aircraft Tail Numb.:

Cycles Since Overhaul:

Time Since Overhaul:

Cycles Since New.....:

Time Since New.....:

Date of Last R/O.....:

Last R/O number.....:

Damaged Container....: N

Warranty Requested.: Y

Visual Damage.....: N

Disassembled: N

Modified: N

Parts Missing.....: N

ND Test.....: N

Test.....: Y

CUSTOMER REPORTED DISCREPANCIES

ENGINE DIES ON LANDING ROLL WITH POWER LEVER AT IDLE OF
MIXTURE LEVER IS NOT FULL FORWARD.

CUSTOMER INSTRUCTIONS

REQUEST WARRANTY CONSIDERATION REPAIR AS NECESSARY

INITIAL INSPECTION

Technician: 00PV VATCHER

Repairable.....: Y

Major Damage...: N

Pass Initial Test.: F

Warranty Approved.: Y

Excessive wear.: N

Internal Failure...: Y

Approved/Denied by: 00GL

INITIAL INSPECTION ANALYSIS AND TEST RESULTS

DISCREPANCY CONFIRMED, UNIT FAILS TO MEET REQUIRMENTS
OF ATP. BOTH HIGH AND LOW BOOST WERE
BELOW MIN. SPEC'S. RESET TO ATP.

FAILURE REASON CODES

67 FLOW FOUND TO BE BELOW SPEC.

FINAL ANALYSIS

HIDDEN DAMAGE INSPECTION

NONE

CORRECTIVE ACTION CODE

REPAIRED IN ACCORDANCE WITH MANUFACTURES CMM

OR APPROVED DRAWINGS. REPLACED ALL PARTS AS LISTED.

FINAL TEST RESULTS

UNIT FUNCTIONS PER ATP 5217-04-3, REV.A

FINAL INSP. BY: 00GM MANDEL

INSP. DATE: 10/06/05

Form number: DI-105

DUKES, INC.
ACCEPTANCE TEST PROCEDURE

ATP 5217-04-3
DATA SHEET

REV. A

6-17-04

DUKES, INC. P/N 5217-00-3

S/N: 2043

REQUIREMENT				
3.1 EXAMINATION OF PRODUCT			<input checked="" type="radio"/> PASS	<input type="radio"/> FAIL
Pump meets all requirements of outline drawing 5217-00-3, including dimensions, identification, workmanship, and weight.				
3.2 PROOF PRESSURE & EXTERNAL LEAKAGE TEST			<input checked="" type="radio"/> PASS	<input type="radio"/> FAIL
Inlet pressure at 50 psig at 70°F and outlet capped. No leakage as evidenced by no bubbles.			<input checked="" type="radio"/> PASS	<input type="radio"/> FAIL
Inlet pressure at 50 psig at 70°F and outlet capped. No evidence of damage or deformation.			<input checked="" type="radio"/> PASS	<input type="radio"/> FAIL
3.3 CURRENT DRAW				
4.0 amperes maximum at 28 VDC.	ACTUAL	2.0	<input checked="" type="radio"/> PASS	<input type="radio"/> FAIL
3.4 RELIEF VALVE SETTING (HIGH BOOST NO FLOW)				
24 VDC and no flow, the pump pressure shall be 23.0 psig maximum.	ACTUAL	23	<input checked="" type="radio"/> PASS	<input type="radio"/> FAIL
3.5 HIGH BOOST FUNCTIONAL TEST				
28 VDC and pressure at 16 psig, the pump flow shall be 42 GPH minimum.	ACTUAL	48	<input checked="" type="radio"/> PASS	<input type="radio"/> FAIL
3.6 LOW BOOST FUNCTIONAL TEST				
28 VDC and 19 GPH flow, the pump pressure shall be 4.0 to 6.0 psig.	ACTUAL	5.5	<input checked="" type="radio"/> PASS	<input type="radio"/> FAIL
28 VDC and 3 GPH flow, the pump pressure shall be 9 psig maximum.	ACTUAL	7.5	<input checked="" type="radio"/> PASS	<input type="radio"/> FAIL

TEST TECHNICIAN:

DATE: 6 Oct 05

QA INSPECTOR:

☒ ACC ☐ REJ DATE: 10-6-2005



ARTS

W/O NO. 1049273

ACFT NO. N777NL

W/O NO. 1049273

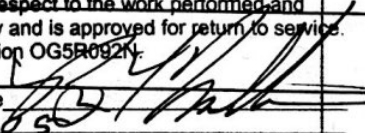
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Page 1 of 1

Date closed: 12-4-2005

In Progress Insp

Init 藥

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Tech	Insp
1	while getting out copilot's visor hooked on jacket and snapped in half.	25 10	1	removed sun visor ordered new part and deferred per FAA 91.217 (d). right side sun visor imp.	25 10	N	12/4	8		Th	
				<p>I certify the aircraft airframe, aircraft engine, propeller, or appliance identified above was repaired and inspected in accordance with current regulations of the Federal Aviation Administration with respect to the work performed and found to be airworthy and is approved for return to service. Certified Repair Station OG5R0924.</p> <p>Authorized Signature  Date 12.4.85</p>							

Page 1 of 1

R/A: 00
Parts (optl): Int Date closed: 12/07/05

Preliminary Insp _____ In Progress Insp _____

Init 63

<u>Part#</u>	<u>Serial#</u>	<u>Description</u>	<u>TSO</u>	<u>Total Time</u>
SR20	1258	AIRFRAME	1,051.2	1,051.2
IO-360-ES6B	357498	ENGINE (CIRRUS SR20) TELEDYNE	1,051.2	1,051.2
PHC-J3YF-1RF	FP1868B	PROPELLER	1,051.2	1,051.2

PD	Problem / Discrepancy (PD)	ATA	CA	Corrective Action (CA)	ATA	ACC	Date	Hrs	DT	Tech	Insp
1	rt sunvisor broken	2510	1	Installed new blade per Ch 25-10, Cirrus Maint Manual	2510	N	12/07	.4		SB	
				Scott F Baker							
				ADP 2856702							

**Center for Aerospace Sciences
University of North Dakota
Grand Forks, North Dakota 58202**

MATERIAL REQUISITION

DATE 12/7/05 ACFT NO. 177700 W/O NO. 1049669

[illegible]