

CESSNA AIRCRAFT COMPANY

WICHITA, KANSAS

Weight & Balance and Installed Equipment Data

CONTROL NUMBER	DATE	MODEL	REGISTRATION NUMBER	CESSNA SERIAL NUMBER
920011	06/29/78	SKYLANE RG 11	1407JK	K182J0010

ITEM	WEIGHT	ARM	MOMENT
WINDOWS, TINTED SKYLIGHTS	1.4	40.0	56
WINDSHIELD, HINGED RH	2.3	47.0	108
10 VOR/LOC IND. W/AUTOMATIC RADIAL CENTERING (CAI)	.2	15.0	3
FIRE EXTINGUISHER	3.0	29.0	102
BASIC EMPTY WEIGHT	1857.0	34.6	64249
USEFUL LOAD	1243.0		
MAXIMUM TAKE-OFF WEIGHT	3100.0		

Repair Station # IDDR252K

ALTIMETER SYSTEM TEST AND INSPECTION

Pitot-Static Work Order No. A- 2056 Date 7/18/02
 A/C Make & Model Cessna 182 Registration # N4873R
 Airport/Location FRG Shokls Serial # 1218260616
 Ordered By: Paul Phone # _____
 Tach/Hobbs: 23689

Owner's Name East beach Investment Corp
 Address 3710 Collins ave
Miami Beach FL 33140
 Operating under FAR Part 91

Test Requested:
 Airspeed
 Altimeter to 204 feet
 Transponder
 Mode C

Pilot reports _____
 Remarks None
 Scheduled Test Date 7/18/02 Time AM
 Person to see Paul
 Specialist Assigned Tony

Test Results: PASS

Special Instructions: Always perform Pitot and Static pre-tests and log results!

Static Pressure System	Status	Remarks
Part 43, App. E (a)		
1. Free of Moisture?	<input checked="" type="checkbox"/>	
2. Free of restrictions?	<input checked="" type="checkbox"/>	
3. static port heater(s)?	<u>NA</u>	
4. Alterations affecting?	<input checked="" type="checkbox"/>	
5. Pitot system leak?	<input checked="" type="checkbox"/>	
6. Static system leak?	<input checked="" type="checkbox"/>	
7. VSI Comparison	<input checked="" type="checkbox"/>	

Test	A.S.I.	Corr.
60	60	0
80	81	-1
100	100	0
120	121	-1
140	140	0
160	160	0

+ means ASI reads low

Data taken by [Signature], Repairman
 Report Issued: _____ Log Tag: _____ Sticker: _____
 Date: 7/18/02

Work Order No. A-2056 Time Am Temp. _____ Date 7/18/02
 Mode C Pre-tests (Part 43, App. F)

- a). Verify reply frequency between 1087 - 1093 MHz @ 25%
 - b). Suppression: Verify responses > 90% when SLS=9 db
 Verify responses < 1% when SLS=0 db
 - c). Verify receiver sensitivity between 69 - 77 dbm @ 90%
 Verify receiver sensitivity in Modes 3/A, C within 1 db
 - d). Check Pilot Codes: 3333, 4444, 0 - 7 (Mode A)
- Note F Pulses Ident. Pulse

1093
 ✓
 ✓
 ✓
 ✓

Transponder Model R+359A

Barometric Scale Error Test Part 43, App. E (b) (1) (vi)

Serial # 18132

Pressure Mb	(A) Setting Inches	(B) Altitude Reading	(C) Standard @ 29.92	(D) Altitude Diff.	(E) Standard Diff.	(F) Error (D-E)	Tolerance +/-
951.8	28.10"	<u>-1030</u>	↑ — — — — ↓	<u>-1730</u>	-1727'	<u>3</u>	25'
965.3	28.50"	<u>-1240</u>		<u>-1340</u>	-1340'	<u>0</u>	25'
982.0	29.00"	<u>-760</u>		<u>-860</u>	-863'	<u>3</u>	25'
999.0	29.50"	<u>-300</u>		<u>-400</u>	-392'	<u>8</u>	25'
1013.0	29.92"	<u>100</u>		<u>100</u>	<u>0</u>	0	<u>0</u>
1032.9	30.50"	<u>640</u>		<u>540</u>	531'	<u>9</u>	25'
1046.5	30.90"	<u>980</u>		<u>880</u>	893'	<u>13</u>	25'
1049.9	30.99"	<u>1060</u>		<u>960</u>	974'	<u>14</u>	25'

- 1). Record altitude @ 29.92" (in column B)
- 2). Enter at all lines (in column C)
- 3). Vibrate at each setting (in column A)
- 4). Record readings for column (B)
- 5). Determine difference for column (D) and Error for column (F)

Altimeter Model Annerod

After Effect Part 43, App. E (b) (1) (iii)

	T/S	(within 5 min. of above) A/C	Tolerance
Altimeter Reading @ 29.92" before Test Series	<u>120</u>	<u>100</u>	
Altimeter Reading @ 29.92" after Test Series	<u>100</u>	<u>110</u>	+/- 30'

ALTIMETER SYSTEM TEST AND INSPECTION (cont)

Work Order No. A- 2056

ALTIMETER TESTS

Maximum expected oper. altitude of aircraft 20000
(altimeters set at 29.92") Ref. FAR Part 43, App. E (b)

SCALE ERROR

Correct Altitude	Leak/Min.	Alt. Reads > One Min.	Diff. Feet	OK +/-	Friction Diff.	OK +/-	Mode C Reading	Note
Apt. Alt.								
-1000		-995	-5	(below) 20'			-1100	
0	0	5	+5	20'			-100	
500		500	0	20'			400	
1000		990	-10	20'	70	70'	900	
1500		1490	-10	25'				
2000		1990	-10	30'	50	70'	1900	
3000		2970	-30	30'	50	70'	2900	
4000		3970	-30	35'			3900	
5000					70	70'		
6000		5960	-40	40'			5900	
8000		7980	-20	60'				
10000		9990	-10	80'	70	80'	9900	
12000		12000	0	90'				
14000		13990	-10	100'			13900	
15000					90	90'		
16000		15980	-20	110'			15900	
18000*		18020	+20	120'				
20000	0	20000	0	130'	70	100'	19900	
22000				140'				
25000				155'		120'		
30000				180'		140'		
35000				205'		160'		
40000				230'		180'		
45000				255'				
50000				280'		250'		

Denote Hysteresis Points (50%, 40% of Maximum Alt.)
* Case leak at 16000' - maximum allowable leak = 100' in 1 min.

Hysteresis	Part 43, App. E (b)	(within 15 min. of prev. test)		
Maximum Altitude of Test Series	Reading > 5 minutes	Difference Scale Err.	Tolerance +/-	
20000	9980	10	75'	
First Test Point (50% of max.)	10000	10	75'	
Second Test Point (40% of max.)	8000	10	75'	

Test Eqpt. Ident. Buckley 1811A-411 Calib. Date 6/3/12

CESSNA AIRCRAFT COMPANY

WICHITA, KANSAS

Weight & Balance and Installed Equipment Data

CONTROL NUMBER	DATE	MODEL	REGISTRATION NUMBER	CESSNA SERIAL NUMBER
920011	06/29/78	SKYLANE NO 11	N4873K	110200610

ITEM	WEIGHT	ARM	MOMENT
STANDARD AIRPLANE (EMPTY, DRY) INCLUDING ALL REQUIRED AND STANDARD EQUIPMENT ITEMS	1696.2	34.3	58180
USABLE FUEL 40.0 GALLONS			
ALL OIL 9.0 QUARTS	24.0	40.0	1152
STANDARD EMPTY WEIGHT	10.9	15.7	200
EQUIPMENT REPLACING OR IN ADDITION TO ORIGINAL AND STANDARD EQUIPMENT ITEMS	1737.1	34.0	59067
-575C CAROLINA RED-MAJON			
-575B FLAG RED-ACCENT			
CPT-2 EDONY BLACK LEATHER			
SIC AVIONICS KIT	20.0	02.0	120
NAV AUTOMATIC INCL CREDIT FOR TURN CURNS	0.2	00.1	40
N/C RT300A 720 COM 200 NAV VOR/LOC	0.2	00.1	40
AUF W/UPJ R540C	0.3	12.0	107
TRANSPONDER RT300A LOW ALTITUDE	0.3	12.0	100
INDICATORS, NAVIGATION LIGHTS	10.2	11.0	72
IGNITION CONTROLS, SWAL			
SWAL SERVICE PLUG RECEPTACLE	0.1	00.1	0
WARNING SYSTEM, STALL WARNING & PITCH (EXCH.)	0.1	00.1	0
INDICATOR, IRUE AIRSPEED (EXCH)	0.3	20.0	20
LIGHT, BEACON, OMNI-FLASH	0.2	00.0	0
LIGHTS, COURTESY	1.0	20.0	370
INDICATOR BEACON	0.3	00.1	30
ATTIC SOURCE, ALTERNATE	3.0	134.0	412
ANTENNA AND COUPLER	0.3	14.4	7
N/C RT300A VOR/LOC (2ND UNIT)	1.1	37.1	41
MARKER BEACON R402A	0.3	20.0	100
GLIDESLOPE R4430 40 CH. INCL. VOR/LOC (EXCH)	2.7	10.8	131
TITUDE ENCODER, BLIND	4.0	08.4	439
LOC DIGITAL (EXCH)	1.3	10.0	20
CONTROL WHEEL, ALL PURPOSE, (EXCH.)			
PROACH PLATE HOLDER	0.2	17.0	3
INDICATOR, CARBURETOR AIR TEMPERATURE	0.1	27.0	3
HEADPHONE/HEADSET COMBINATION	1.2	20.0	10
ADDRESS, 2 EACH FRONT			
INDICATOR, ECONOMY MIXTURE	1.0	41.0	80
LIGHTS, INSTRUMENT POST	0.1	00.2	0
LIGHTING, ELECTROLUMINESCENT PANEL	0.5	17.0	5
LIGHTS, STROBE	2.1	10.0	30
ATTIC KIT, ANTI-PRECIPIATION	0.3	44.4	130
CLOCK, FLIGHT HOUR	0.4	130.0	32
KNESSES, INERTIA REEL, SHOULDER/SEAT BELT SYSTEM	0.0	7.0	0
PILOTS ARTICULATING RECLINE VERT. ADJ. (EXCH)	0.6	42.0	301
PASSENGER ARTICULATING RECLINE VERT. ADJ. EXC	11.0	30.0	424
VENTILATION SYSTEM, REAR SEAT	11.0	30	424
	0.6	00.0	224

CESSNA AIRCRAFT COMPANY

WICHITA, KANSAS

Weight & Balance and Installed Equipment Data

CONTROL NUMBER	DATE	MODEL	REGISTRATION NUMBER	CESSNA SERIAL NUMBER
920011	08/29/78	SKYLANE RG 11	1-07JK	K1820010

ITEM	WEIGHT	ARM	MOMENT
NDWS, TINTED SKYLIGHTS	1.4	40.0	56
NDWS, HINGED RH	2.0	77.0	154
10 VGR/LOC IND. W/AUTOMATIC RADIAL CENTERING (CA)	0.2	10.0	2
1 KE EXTINGUISHER	3.0	29.0	87
BASIC EMPTY WEIGHT	1857.0	34.6	64249
USEFUL LOAD	1243.0		
MAXIMUM TAKE-OFF WEIGHT	3100.0		

CESSNA AIRCRAFT COMPANY

WICHITA, KANSAS

Weight & Balance and Installed Equipment Data

CONTROL NUMBER	DATE	MODEL	REGISTRATION NUMBER	CESSNA SERIAL NUMBER
920011	08/29/78	SKYLANE R0 11	N4873K	K10200610

ITEM	WEIGHT	ARM	MOMENT
STANDARD AIRPLANE (EMPTY, DRY) INCLUDING ALL REQUIRED AND STANDARD EQUIPMENT ITEMS	1696.2	34.3	58180
UNUSABLE FUEL 4.0 GALLONS	24.0	48.0	1152
FULL OIL 9.0 QUARTS	16.9	15.7-	265-
STANDARD EMPTY WEIGHT	1737.1	34.0	59067
OPTIONAL EQUIPMENT REPLACING OR IN ADDITION TO REQUIRED AND STANDARD EQUIPMENT ITEMS			
-C-575C CARDINAL RED-MAJOR	NEGL.		
-C-575B FLAG RED-ACCENT	NEGL.		
FL CPT-2 EBONY BLACK LEATHER	2.0	62.3	125
BASIC AVIONICS KIT	6.2	65.1	404
200A NAVMATIC INCL CREDIT FOR TURN COORD	6.2	58.7	463
300 N/C RT385A 720 CDM 200 NAV VOR/LDC	6.3	12.9	107
300 ADF W/DFO K546E	6.3	22.1	188
300 TRANSPONDER RT359A LOW ALTITUDE	4.2	17.2	72
USE INSTRS, NAVIGATION LIGHTS	NEGL.		
FLIGHT CONTROLS, DUAL	6.7	28.1	17
GROUND SERVICE PLUG RECEPTACLE	3.1	2.5-	0-
HEATING SYSTEM, STALL WARNING & PITOT (EXCH.)	.5	20.5	10
INDICATOR, TRUE AIRSPEED (EXCH)	.2	10.5	3
LIGHT, BEACON, OMNI-FLASH	1.6	208.0	375
LIGHTS, COURTESY	.5	61.7	31
LOCATOR BEACON	3.5	137.0	471
STATIC SOURCE, ALTERNATE	.3	17.4	7
ANTENNA AND COUPLER	1.1	37.1	41
300 N/C RT385A VOR/LDC (2ND UNIT)	6.3	15.0	100
400 MARKER BEACON R402A	2.7	70.8	191
400 GLIDESLOPE R493B 40 CH. INCL. VOR/LDC (EXCH)	4.6	88.9	409
ALTITUDE ENCODER, BLIND	1.5	15.0	20
CLOCK DIGITAL (EXCH)	NEGL.		
CONTROL WHEEL, ALL PURPOSE, (EXCH.)	.2	17.0	3
APPROACH PLATE HOLDER	.1	27.5	3
INDICATOR, CARBURETOR AIR TEMPERATURE	1.2	15.5	18
MICROPHONE/HEADSET COMBINATION	NEGL.		
HEADREST, 2 EACH FRONT	1.6	47.0	85
INDICATOR, ECONOMY MIXTURE	.7	8.2	6
LIGHTS, INSTRUMENT POST	.5	17.5	9
LIGHTING, ELECTROLUMINESCENT PANEL	2.1	16.5	35
LIGHTS, STROBE	3.5	44.4	155
STATIC KIT, ANTI-PRECIPITATION	.4	130.5	52
RECORDER, FLIGHT HOUR	.6	7.0	5
WEARNESS, INERTIA REEL, SHOULDER/SEAT BELT SYSTEM	3.6	92.0	331
SEAT PILOTS ARTICULATING RECLINE VERT. ADJ. (EXCH)	11.0	38.5	424
SEAT, PASSENGER ARTICULATING RECLINE VERT. ADJ EXC	11.0	38.5	424
VENTILATION SYSTEM, REAR SEAT	3.6	62.5	224

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CONTROL NUMBER	DATE	MODEL	REGISTRATION NUMBER	CESSNA SERIAL NUMBER
920011	08/29/78	SKYLANE RG 11	N487JK	R18200610

ITEM	WEIGHT	ARM	MOMENT
WINDOWS, TINTED SKYLIGHTS	1.4	40.0	04
WINDOW, HINGED RH	2.3	47.0	108
300 VOR/LOC IND. W/AUTOMATIC RADIAL CENTERING (EX)	.2	15.0	3
FIRE EXTINGUISHER	3.5	29.0	102
BASIC EMPTY WEIGHT	1857.0	34.6	64249
USEFUL LOAD	1243.0		
MAXIMUM TAKE-OFF WEIGHT	3100.0		

AIRBORNE ELECTRONICS, INC.
 STROUDSBURG POCONO AIRPORT
 RD E, BOX 2121A
 EAST STROUDSBURG, PA. 18301

AVIONICS SALES AND REPAIR
 AIRCRAFT MAINTENANCE
 C.R.S. # B11R035K
 phone: 570-476-6228

REVISED WEIGHT AND BALANCE DATA

make model serial # reg. #
 CESSNA R182 R18200616 N4673R

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ITEM	WEIGHT	ARM	MOMENT
previous E.W. dated: 04-18-77	1888.19	33.53	67084.87

=====

EQUIPMENT REMOVED:

CESSNA AUDIO CONTROL	-2.00	13.00	-26.00
KING KN-72 VDR/LOC CONVERTER	-1.50	134.00	-201.00
CESSNA R-443B G/S RCVR	-4.60	88.90	-408.94
SPA-400 ICS	-0.50	16.00	-8.00
CESSNA RT-385A NAV/COM	-8.30	13.00	-107.90
CESSNA R-402A MKR RCVR	-2.70	70.80	-191.16
CESSNA R-546E ADF SYSTEM	-8.50	22.10	-187.85
GARMIN GPS-150 SYSTEM	-2.80	13.00	-36.40

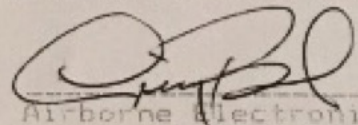
EQUIPMENT INSTALLED:

GARMIN GNS-530 SYSTEM	8.50	13.00	110.50
GARMIN GMA-340 AUDIO CONTROL	1.70	15.00	25.50

1867.49	35.37	66053.62
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LOAD AIRCRAFT IN ACCORDANCE WITH REVISED WEIGHT AND BALANCE DATA

GROSS WEIGHT: 3100.00 lbs.
 EMPTY WEIGHT: 1867.49 lbs.
 USEFUL LOAD: 1232.51 lbs.
 EMPTY WEIGHT C.G.: 35.37 ins.


 Airborne Electronics, Inc.
 C.R.S. # B1-1R035K
 Date: 11-04-00

COMPUTED WEIGHT AND BALANCE REPORT

Registration No. N4873R Make CESSNA Model R182 Serial R18200616

ACTT 2031.0 LNDGS N/A Date 4/18/97

EMPTY WEIGHT & C.G. DETERMINATION

ITEM	WEIGHT	C.G. IN.	CG % MAC	MOMENT
EMPTY WEIGHT (12/19/84)	1878.09	35.73	N/A	67094.97
INSTALLED:				
AERO SAFE, GUARDIAN I, STDBY VAC	+10.1	-1.0	N/A	-10.1
EMPTY WEIGHT	1888.19	33.53	N/A	67084.87

Computed By *JGS* Date 4/18/97
JEFFREY G SWEDE IA136604257

*SUPERSEDED
11/04/00*

AIRBORNE ELECTRONICS, INC.
 STROUDSBURG POCONO AIRPORT
 RD 2, BOX 2121A
 EAST STROUDSBURG, PA. 18301

AVIONICS SALES AND REPAIR
 AIRCRAFT MAINTENANCE
 C.R.S. # B11R035K
 phone: 570-476-6228

REVISED WEIGHT AND BALANCE DATA

make CESSNA model R182 serial # R18200616 reg. # N4873R

ITEM WEIGHT ARM MOMENT

 previous E.W. dated: 04-18-97 1888.19 33.53 67084.87

EQUIPMENT REMOVED:

CESSNA AUDIO CONTROL	-2.00	13.00	-26.00
KING KN-72 VOR/LOC CONVERTER	-1.50	134.00	-201.00
CESSNA R-443B G/S RCVR	-4.60	88.90	-408.94
SPA-400 ICS	-0.50	16.00	-8.00
CESSNA RT-885A NAV/COM	-8.30	13.00	-107.90
CESSNA R-402A MKR RCVR	-2.70	70.80	-191.16
CESSNA R-546E ADF SYSTEM	-8.50	22.10	-187.85
GARMIN GPS-150 SYSTEM	-2.80	13.00	-36.40

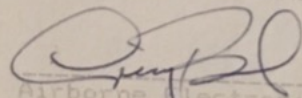
EQUIPMENT INSTALLED:

GARMIN GNS-530 SYSTEM	8.50	13.00	110.50
GARMIN GMA-340 AUDIO CONTROL	1.70	15.00	25.50

1867.49 35.37 66053.62

LOAD AIRCRAFT IN ACCORDANCE WITH REVISED WEIGHT AND BALANCE DATA

GROSS WEIGHT: 3100.00 lbs.
 EMPTY WEIGHT: 1867.49 lbs.
 USEFUL LOAD: 1232.51 lbs.
 EMPTY WEIGHT C.G.: 35.37 ins.


 Airborne Electronics, Inc.
 C.R.S. # B1-1R035K
 Date: 11-04-00

LIAG**LONG ISLAND AVIONICS CORPORATION**

1965 SMITHTOWN AVENUE • RONKONKOMA, N. Y. 11779

- FAA Certified Repair Station No. 111-129 -

LOCATED AT LONG ISLAND MACARTHUR AIRPORT

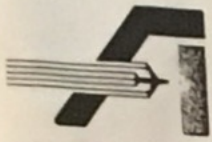
(516) 588-1144

12/19/84

N4873RREVISED WEIGHT AND BALANCE

		<u>WEIGHT</u>	<u>ARM</u>	<u>MOMENT</u>
PREVIOUS:	<u>8/24/78</u>	1857.0	34.6	64,249.0
REMOVED:	1) ARC VOR IND	-2.1	15.0	-31.5
	2) TURN COORDINATOR	-2.0	15.0	-30.0
	3) HEADING INDICATOR	-2.4	14.1	-33.84
	4) ARC 200A AUTO-PILOT	-8.2	54.8	-449.36
INSTALLED:	<u>S-TEC 60-2</u>			
	1) PROGRAMMER P/N 0104	1.8	15.8	28.44
	2) ROLL COMPUTER P/N 0109	3.0	137.5	412.50
	3) PITCH COMPUTER P/N 0110	3.3	135.0	445.50
	4) ROLL SERVO P/N 0106	2.9	70.5	204.45
	5) PITCH SERVO P/N 0108	2.9	189.0	548.10
	6) PRESSURE TRANSDUCER P/N0111.19		140.0	26.60
	7) TURN COORDINATOR P/N 6405	1.8	15.0	27.00
	8) CABLE ASSEMBLY P/N 3924	6.0	60.0	360.00
	9) TRIM SERVO P/N 0106	2.9	147.0	426.30
	<u>KING KCS-55</u>			
	1) KG-102A	4.3	139.0	597.70
	2) KI-525A	4.0	14.0	56.00
	3) KA-51A	.4	16.2	6.48
	4) KMT-112	.3	142.0	42.60
	<u>VOR LOC CONVERTER</u>			
	1) KN-72	1.5	134.0	201.0
	<u>SIGTRONICS TRANSCOM</u>			
	1) SPA-400	.5	16.0	8.0
		1878.09	(35.73)	67,094.97
MAX GROSS T/O		3100.00		
NEW EMPTY WEIGHT		1878.09		
NEW USEFUL LOAD		1221.91		
NEW C.G.		35.73		
NEW MOMENT		67,094.97		

*SUPPLEMENTED BY NEW W.B.
SEE LOGBOOK ENTRY
11/4/80*



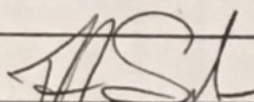
FIRST AVIATION
SERVICES

COMPUTED WEIGHT AND BALANCE REPORT

Registration No. N4873R Make CESSNA Model R182 Serial IR18200616

ACTT 2031.0 LNDGS N/A Date 4/18/97

EMPTY WEIGHT & C.G. DETERMINATION				
ITEM	WEIGHT	C.G. IN.	CG % MAC	MOMENT
EMPTY WEIGHT (12/19/84)	1878.09	35.73	N/A	67094.97
INSTALLED:				
AERO SAFE, GUARDIAN I, STDBY VAC	+10.1	-1.0	N/A	-10.1
EMPTY WEIGHT	1888.19	33.53	N/A	67084.87

Computed By  Date 4/18/97
JEFFREY G SWEDE IA136604257

*Superseded
11/04/00*

AUTHORIZED RELEASE CERTIFICATE

1. Approving National Aviation Authority/Country: **FAA/UNITED STATES**

2. Form Tracking Number: **SAME AS WORK ORDER**

3. FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG

4. Organization Name and Address: **Executive Accessories Inc. 1072 N.W. 53 Street Ft. Lauderdale, FL 33309**

5. Work Order Number: **31985**

6. Item:	7. Description	8. Part Number	9. Eligibility *	10. Quantity	11. Serial/ Batch Number:	12. Status/Work:
1	MAGNETO	10-682560-11	VARIOUS	1	L189624G	REPAIRED

13. Remarks: **Repaired & tested per TCM overhaul manual X42003-1. See reverse for A.D. Compliance. See work order for details.**

A general description of the work performed is attached as form 007, under the part description listed in blocks 6, 7, 8, 10 and 11 as applicable. A complete description of work performed is on file at the above referenced organization under the work order and system tracking reference number indicated in Blocks 3 and 5. **NOTICE: An Airworthiness Directive may apply to the article(s) described hereon. The installer is responsible for ensuring complete compliance with any applicable Airworthiness Directives.**


14. Certifies the items above were manufactured in conformity to:

Approved design data and are in a condition for safe operation.

Non-approved design data specified in Block 15

19. 14 CFR 43.9 Return to service 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.

20. Authorized Signature: 

21. Approval/Certificate No.: **RL4R496M**

22. Name (Typed or Printed): **Sidney Decker**

23. Date (m/d/y): **5/11/2007**

User/Installer Responsibilities

It is important to understand that the existence of this document does not constitute authority to install the part/component/assembly.

Where the user/installer performs work in accordance with the national regulations of an air worthiness 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 issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

SHOP WORK ORDER

Executive Accessories, Inc.
 1072 NW 53 St, Ft Laud, Florida 33309
 (954) 493-9282
 FAA Approved Repair Station
 No. RL4R496M

31985

QUANT	PART NUMBER / DESCRIPTION	040407
1	AB-382971 BEARING	040407
1	AB-391213 SCREW	030707
2	10-160844 BRUSH	021907
1	10-400042 SPRING	122806
2	AB-382585 CONTACT KIT	040707
2	AB-92815-37 SNAP RINGS	020707
4	10-35937-20 SCREWS	041307
2	AB-50752 WASHERS	030707
2	AB-33374 STRIP	031907
1	MS24665-302 PIN	032206

NAME: MILLER AVIATION
 ADDRESS/CLUB PO
 MPN: X
 TCM: MAGNETO
 PART NAME: 10-682-560-11
 PART NO: D61LN-3000
 MODEL NO: L189624G
 SERIAL NO: 5/11/07
 DATE: 5/11/07

WORK ACCOMPLISHED
 COMPLIED WITH 500 HR INSPECTION PER TCM MANUAL X42003-1,
 PARA 6.2.3. CLEANED & INSPECTED DIST BLOCK, LUBED & BAKED-
 TESTED COILS- REASSEMBLED WITH NEW POINTS- TIMED-
 CLEANED & INSPECTED IMPULSE COUPLING- REASSEMBLED WITH
 NEW SPRING- BENCH TESTED

INSPECTED BY: *[Signature]* DATE 5/11/07
 SEE REVERSE FOR ADS
 TECHNICIAN: *[Signature]*

Maintenance Release
 The appliance identified above was repaired, inspected and tested in accordance with current regulations of the Federal Aviation Administration and is approved for return to service.

	INSPECT	REPAIR	DNA	REPEAT
82-2				
82-1				
81-12.06R1				
80-17-14				
79-18-06				
79-12-07				
78-18-04				
82-2				

METHOD OF COMPLIANCE

-BENDIX/TCM-
 CHECKED OR COMPLIED WITH THE FOLLOWING
 AIRWORTHINESS DIRECTIVES AND THE REFERENCED
 SERVICE BULLETINS:
 - IMPULSE COUPLINGS
 - HOUSING, BEARING, ETC.
 - GREEN DIST BLOCK
 - HOUSING COIL SECURE
 - HOUSING COVER SEALING
 - DIST GEARS

FA, 500 HRS

S/N

1. Approving National Aviation Authority/Country:

USA

AUTHORIZED RELEASE CERTIFICATE

FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG

3. Form Tracking Number:

066335

4. Organization Name and Address:

Aviation Propellers, Inc.
12970 Port Said Rd.
Opa Locka, FL. 33054
Repair Station# ME4R359M

5. Work Order/Contract/Invoice Number:

38617A

6. Item	7. Description	8. Part Number	9. Eligibility *	10. Quantity	11. Serial/Batch Number	12. Status/Work
001	B2D34C214/90DB-8	P2144392-61	VARIOUS	1	792523	REPAIR

13. Remarks

Propeller assembly was repaired IAW McCauley manuals BOM100-1, SPM100-1 and MPC200. Propeller was disassembled, cleaned, visually inspected, blades dressed, painted and balanced, propeller resealed, reassembled and tested. Factory new seal kit installed

Propeller times are: TTSN:UNKNOWN TSO:UNKNOWN TSR:0.0

14.

Certifies the items identified above were manufactured in conformity to:

Approved design data and are in a condition for safe operation.

Non-Approved design data specified in block 13.

19.

14 CFR 43.9 Return to Service 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:

17. Name (Type or Printed):

18. Date(m/d/y).

22. Name (Typed or Printed):

23. Date (m/d/y):

ME4R359M

May 21-2007

George B. Gaubeca Chief Inspector

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.

Statement 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.

Van Bortel TT 20.16.8

RECORD OF ACCESSORIES AND MAJOR PARTS SHIPPED WITH ENGINE

Model 0-540-J3C5D Serial No. L-20534-40A ENPL No. _____
 Order No. A-5246 T. C. No. _____ Date 3/12/97

PART NAME	PART NUMBER	QUANTITY	MANUFACTURER OR MODEL	SERIAL NUMBER	SETTING OR CODE NO.	INSPECTOR
CARBURETOR	LW-15960-85	1	Precision	D64674	10-5235	
INJECTOR	NA					
GENERATOR	NA					
ALTERNATOR	NA					
MAG. - LEFT	NA					
MAG. - RIGHT	NA					
MAG. - DUAL	LW-785126-105	1	TCM	L1896246		
STARTER	LW-15572	1	ESI	6112614	MARSHALL	
FUEL PUMP	LW15472	1	AC	LP		
IGN. HARNESS L	67H21475	1	TCM			
R	NA					
SPARK PLUGS	1182-F7	12	CHAMPION	RF4H38E		
REB.C. GEAR	NA					
TURBOCHARGER	NA					
BY-PASS VALVE	NA					
DENSITY CONTR.	NA					
PRESS. CONTR.	NA					
ABSOLUTE PRESSURE RELIEF VALVE	NA					
OIL COOLER	NA					
INTERCOOLER	NA					
LUECO						

C of A Issued

Date _____

All Accessories Listed Are (Zero) 0 Time New Or (Zero) 0 Time Since Overhaul.

Cylinders: Plain Steel

LW-13870 Nitrided Barrels (Blue)

NOTE: Form to be used on all new, overhauled, remanufactured engine models.

Released: Inspector Richard C. Hoffman Date 3-12-97

POSITION # of 4

TEXTROL bycoming

A# 5246

N# 0-540-J305D
ENG. MOD. L-20534-40A
SERIAL #

CUSTOMER Van Boete

Q	PART #	DESCRIPTION	SERIAL #	C	UNIT P	EXT. P	DISC.	P/R
1	LW-19340	CAMSHAFT						
1	76151	TACKSHAFT						
1	STD-2231	CIRCLIP						
1	13519649	GEAR						
1	AN8-14A	Bolt						
12	72877	Body						
12	78290	LIFTER						
12	15B21319	SOCKET						
1	LW-10344	Body						
1	61297	GEAR						
1	61298	"						
1	LW-10318	SHAFT						
6	LW-13870	CYL ASSY						
6	73938	VALVE						
6	LW-19001	"						
12	LW-11795	SPRING						
12	LW-11800	"						
12	60009	KEY						
12	17C21191	"						
6	17C19386	CAP						
6	LW-13790	SHAFT						
6	LW-13396	PISTON						
6	LW-13445	PIN						
12	60828	PLUG						
12	74241	RING						
6	14H21950	"						
1	LW-10541	GEAR						
1	LW-10442	"						

AS 5246
 NT
 ENG. MOD. 0-540-J325D
 SERIAL # L-20534-40A

TEXTRON Lycoming

POSITION 742 of 4
 CUSTOMER Van Bortel

Q	PART #	DESCRIPTION	SERIAL #	C	UNIT P	EXT. P	DISC.	PIR
1	LW-14021	SHAFT						
2	LW-19210-85	C-WEIGHT		1/2				
2	76788	Roller						
2	LW-15558	"						
8	LW-14820	CIRCLIP						
1	STD-1211	Nose Plug						
1	LW-10290	GEAR						
1	61544	PLUNGER						
1	53E22144	VALVE						
1	LW-13904	ADAPTOR						
6	STD-1821	HOSE						
4	LW-15839	Baffle						
2	LW-13641	CUSHION						
2	66M1985	Lock						
6	69403	HOSE						
8	LW-15392-8	28 CLAMP						
1	LW-15472	FUEL Pump						
1	LW-15572	STARTER	6112614					
1	66E21576	MAG	1187684G					
1	LW-15960-85	CARB	284474	1/2				
1/2	LW-12892	BUTTON						
10	1182-F7	SPARK PLUG						
1	LW-13377	GASKET KIT						
1	07A21443	BRACKET						
1	61084	SPRING						
1	71907	WASHER						
1	LW-10332	LOCKPLATE						
1	72377	ELbow						

POSITION # 108 014

CUSTOMER Van Bontel

TEXTROL Wyoming

A# 5246
N# NA

ENG. MOD. Q-540-J3C5D
SERIAL # L-20534-40A

Q	PART #	DESCRIPTION	SERIAL #	C	UNIT P	EXT. P	DISC.	P/R
1	LW-13906	FILTER						
1	05S21021	SPRING						
1	55K21022	SPACER						
1	LW-10320	SLEEVE						
6	LW-10077	SEAT						
6	LW-16475	"						
6	LW-13323	"						
6	65441	"						
2	LW-11485	TUBE						
6	61247	COVER						
1	68759	TUBE						
1	71737	"						
2	68761	"						
1	LW-14931-85	PIPE		4/5				
1	LW-14936-85	"		4/5				
1	LW-14932-85	PIPE		4/5				
1	LW-14933-85	"		4/5				
1	LW-14935-85	"		4/5				
12	17F19357-85	ROCKER PGM		45				
1	LW-14675-70	CRANKCASE	1652	4/5				
2	LW13884	BEARING						
6	LW15278	BEARING						
12	LW13521	BEARINGS						
1	71596	Washer						
1	LW-13866	Crankshaft	94053	45				
1	72378	Cover						

TEXTRON Lycoming

WARRANTY

(LIMITED)
OVERHAULED
RECIPROCATING AIRCRAFT ENGINE

WHAT TEXTRON LYCOMING PROMISES YOU

Textron Lycoming warrants each overhauled reciprocating engine sold by it to be free from defects in material and workmanship appearing within one (1) year from the date of first operation, excluding necessary aircraft acceptance testing. The date of first operation must not exceed two (2) years from the date of shipment from Textron Lycoming.

Textron Lycoming's obligation under this warranty shall be limited to its choice of repair or replacement, on an exchange basis, of the engine or any part of the engine, when Textron Lycoming has determined that the engine is defective in material or workmanship. Such repair or replacement will be made by Textron Lycoming at no charge to you. Textron Lycoming will also bear the cost for labor in connection with the repair or replacement as provided in Textron Lycoming's then current Removal and Installation Labor Allowance Guidebook.

Any engine or part so repaired or replaced will be entitled to warranty for the remainder of the original warranty period.

YOUR OBLIGATIONS

The engine must have received normal use and service. You must apply for warranty with an authorized Textron Lycoming distributor within 30 days of the appearance of the defect in material or workmanship.

Textron Lycoming's warranty does not cover normal maintenance expenses or consumable items. The obligations on the part of Textron Lycoming set forth above are your exclusive remedy and the exclusive liability of Textron Lycoming. This warranty allocates the risk of product failure between you and Textron Lycoming, as permitted by applicable law.

Textron Lycoming reserves the right to deny any warranty claim if it reasonably determines that the engine or part has been subject to accident or used, adjusted, altered, handled, maintained or stored other than as directed in your operator's manual, or if non-genuine Textron Lycoming parts are installed in or on the engine and are determined to be a possible cause of the incident for which the warranty application is filed.

Textron Lycoming may change the construction of engines at any time without incurring any obligation to incorporate such alterations in engines or parts previously sold.

THIS LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES AND REPRESENTATIONS, EXPRESS OR IMPLIED OR STATUTORY, WHETHER WRITTEN OR ORAL, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE, AND ANY IMPLIED WARRANTY ARISING FROM ANY COURSE OF PERFORMANCE OR DEALING OR TRADE USAGE. THIS WARRANTY IS ALSO IN LIEU OF ANY OTHER OBLIGATION, LIABILITY, RIGHT OR CLAIM, WHETHER IN CONTRACT OR IN TORT, INCLUDING ANY RIGHT IN STRICT LIABILITY IN TORT OR ANY RIGHT ARISING FROM NEGLIGENCE ON THE PART OF TEXTRON LYCOMING, AND TEXTRON LYCOMING'S LIABILITY ON SUCH CLAIM SHALL IN NO CASE EXCEED THE PRICE ALLOCABLE TO THE ENGINE OR PART WHICH GIVES RISE TO THE CLAIM.



U.S. Department
of Transportation
Federal Aviation
Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification

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

1. Aircraft	Make Cessna	Model R182
	Serial No R18200616	Nationality and Registration Mark N4873R
2. Owner	Name (As shown on registration certificate) East Beach Investment Corp	Address (As shown on registration certificate) 300 East 85th Street #3405 New York, NY 10028

3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address Philip T. Benardello c/o D&K Aviation Inc Republic Airport Farmingdale, NY 11735	B. Kind of Agency <input checked="" type="checkbox"/> U.S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. A 10842163
--	---	---

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

Date July 13, 1999	Signature of Authorized Individual Philip T. Benardello
-----------------------	--

7. Approval for Return To Service

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

APPROVED REJECTED

BY	FAA Fit. Standards Inspector	Manufacturer	<input checked="" type="checkbox"/>	Inspection Authorization	Other (Specify)
	FAA Designee	Repair Station		Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection July 13, 1999		Certificate or Designation No. IA557926138	Signature of Authorized Individual 		

NOTICE

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

8. Description of Work Accomplished

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

N4873R, Cessna R-182, Serial Number R18200616

1. Removed and replaced left elevator lower skin with factory new skin.
2. Removed and replaced right elevator upper and lower skins with factory new skins.
3. Removed and replaced elevator trim tab upper and lower skins with factory new skins.
4. These repairs were accomplished in accordance with guidelines as detailed in Cessna Maintenance Manual, Section 18, Structural Repair, paragraph 18-2, 18-47 and 18-51 and applicable sections of AC43.13-1B.
5. It has been determined that the data contained in AC43.13-1B is appropriate to this repair, is directly applicable to this repair and is not contrary to the manufacturers data.
6. Following replacement of elevator skins and subsequent painting, elevator was balance checked in accordance with Cessna Maintenance Manual, Section 18 paragraph 18-52 and figure 18-2.
7. There is no change in weight and balance data.
8. The required maintenance record entry as per FAR43.9(a)(1 through 4) has been accomplished.
.....End.....



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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification

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

1. Aircraft	Make CESSNA	Model R182
	Serial No. R18200616	Nationality and Registration Mark N4873R
2. Owner	Name (As shown on registration certificate) EAST BEACH INVESTMENT CORP.	Address (As shown on registration certificate) 300 EAST 85th ST. 3405 NEW YORK, NY. 10028

3. For FAA Use Only

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

AEA-FSDO-05
District Office

5-18-2001
Date

[Signature]
Signature of FAA Inspector

4. Unit Identification

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

6. Conformity Statement

A. Agency's Name and Address MICHAEL OLENICK C/O AIRBORNE ELECTRONICS, INC. RD 2 BOX 2121A E. STROUDSBURG, PA. 18301	B. Kind of Agency <input checked="" type="checkbox"/> U.S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. 146469374
---	---	--

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

Date 11-04-00	Signature of Authorized Individual MICHAEL OLENICK <i>[Signature]</i>
------------------	--

7. Approval for Return To Service

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

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

Date of Approval or Rejection <u>5/21/01</u>	Certificate or Designation No. 146469374	Signature of Authorized Individual MICHAEL OLENICK <i>[Signature]</i>
---	---	--

NOTICE

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

8. Description of Work Accomplished

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

1. INTRODUCTION: The aircraft described in block 1 has been altered by the installation of a Garmin GMA-340 Audio Panel as follows:
2. DESCRIPTION: Removed original Cessna audio control panel. Removed Sigtronics SPA-400 intercom system. Installed Garmin GMA-340 audio control panel with marker receiver and intercom at the top of the center radio stack in accordance with Garmin GMA-340 Installation Manual P/N 190-00149-01 (Rev F) and recommended practices and procedures contained in AC 43.13-2A Chapter 2, and AC 43.13-1B Chapter 7, 11 and 12. Electrical connection accomplished through existing 5 amp circuit breaker labeled "AUDIO" installed in the circuit breaker panel and connected to the avionics bus. GMA-340 system ramp tested and performs its intended function with no adverse effect on other equipment installed in the aircraft. Aircraft records modified to reflect this change.
3. CONTROL AND OPERATION INFORMATION: Garmin GMA-340 Pilot's Operating Manual P/N 190-00149-00 (Rev C) provided to the pilot.
4. SERVICING INFORMATION: See appropriate manufacturer's Installation and Maintenance manual.
5. MAINTENANCE INSTRUCTIONS: Maintenance inspections shall be in accordance with 100 hour/annual inspection procedures and or Part 43, Appendix D.
6. TROUBLESHOOTING INFORMATION: See appropriate manufacturer's maintenance manual for troubleshooting information.
7. REMOVAL AND REPLACEMENT INFORMATION: See appropriate manufacturer's maintenance and installation instructions for removal and replacement information.
8. DIAGRAMS: N/A.
9. SPECIAL INSPECTIONS REQUIREMENTS: N/A.
10. APPLICATION OF PROTECTIVE TREATMENTS: N/A.
11. DATA: N/A.
12. LIST OF SPECIAL TOOLS: N/A.
13. FOR COMMUTER CATEGORY AIRCRAFT: N/A.
14. RECOMMENDED OVERHAUL PERIODS: No additional overhaul time limitations.
15. ADDITIONAL AIRWORTHINESS LIMITATIONS: No additional airworthiness limitations.
16. REVISION: Revision of ICA may be accomplished by submission of a letter to the local FSDO with a copy of the revised FAA form 337 and revised ICA for FAA acceptance.

END



U.S. Department
of Transportation
Federal Aviation
Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification

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

1. Aircraft	Make CESSNA	Model R182
	Serial No. R18200616	Nationality and Registration Mark N4873R
2. Owner	Name (As shown on registration certificate) EAST BEACH INVESTMENT CORP.	Address (As shown on registration certificate) 300 EAST 85th ST. 3405 NEW YORK, N.Y. 10028

3. For FAA Use Only

4. Unit Identification

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

6. Conformity Statement

A. Agency's Name and Address FIRST AVIATION SERVICES 111 INDUSTRIAL AVE. TETERBORO NJ. 07608	B. Kind of Agency <input type="checkbox"/> U.S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input checked="" type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. XFRR113L
---	---	--

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

Date 6-25-93	Signature of Authorized Individual <i>David Callie</i>
------------------------	---

7. Approval for Return To Service

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

BY	FAA Fit. Standards Inspector	Manufacturer	Inspection Authorization	Other (Specify)
	FAA Designee	<input checked="" type="checkbox"/> Repair Station	Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection 6-25-93		Certificate or Designation No. XFRR113L	Signature of Authorized Individual <i>Christopher J. Wells</i>	

NOTICE

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

8. Description of Work Accomplished

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

Installed BRACKETT Air Filter Assy P/N BA-2510, I.A.W.
STC-5A71GL List No. 1, FAA-PMA Supplement No. 1. All work
I.A.W. AC 43.13-2A. NO CHANGE TO WEIGHT AND BALANCE.

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

FOR FAA USE ONLY

OFFICE IDENTIFICATION

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE CESSNA	MODEL R 182
	SERIAL NO. R18200616	NATIONALITY AND REGISTRATION MARK USA N4873R
2. OWNER	NAME (As shown on registration certificate) WALVOR INC	ADDRESS (As shown on registration certificate) P O BOX 200 JERICHO N Y 11753

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION

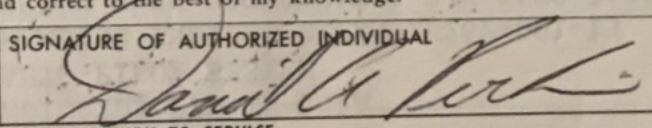
5. TYPE

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE	
				REPAIR	ALTERATION
AIRFRAME	***** (As described in item 1 above) *****				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

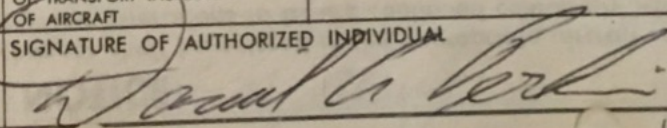
A. AGENCY'S NAME AND ADDRESS	B. KIND OF AGENCY	C. CERTIFICATE NO.
LONG ISLAND AVIONICS CORP 1965 SMITHTOWN AVENUE RONKONKOMA N Y 11779	<input type="checkbox"/> U.S. CERTIFICATED MECHANIC	111-129
	<input type="checkbox"/> FOREIGN CERTIFICATED MECHANIC	
	<input checked="" type="checkbox"/> CERTIFICATED REPAIR STATION	
	<input type="checkbox"/> MANUFACTURER	

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

DATE DECEMBER 19, 1984	SIGNATURE OF AUTHORIZED INDIVIDUAL 
----------------------------------	--

7. APPROVAL FOR RETURN TO SERVICE

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

FAA FLT. STANDARDS INSPECTOR	MANUFACTURER	INSPECTION AUTHORIZATION	OTHER (Specify)
FAA DESIGNEE	<input checked="" type="checkbox"/> REPAIR STATION	CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	
DATE OF APPROVAL OR REJECTION 12/19/84	CERTIFICATE OR DESIGNATION NO. 2139981	SIGNATURE OF AUTHORIZED INDIVIDUAL 	

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

NOTICE

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

- REMOVED:
- 1) ARC VOR INDICATOR P/N IN-386A
 - 2) ARC 200A AUTO-PILOT SYSTEM
 - 3) EDO-AIRE HEADING INDICATOR P/N IU262-001-13
 - 4) GENERAL DESIGN TURN COORDINATOR P/N 5400-7425-1

- INSTALLED:
- 1) S-TEC SYSTEM 60-2 TWO AXIS AUTOMATIC FLIGHT GUIDANCE SYSTEM WITH ELECTRIC TRIM IN ACCORDANCE WITH STC SA5153SW-D.
 - 2) KING KCS-55 H.S.I. SYSTEM (KA-51B S/N 3740, K6-102A S/N 22316, KI-525A S/N 23563, KMT-112 S/N 24538), IN ACCORDANCE WITH KING INSTALLATION MANUAL 006-0111-05.
 - 3) KING KN-72 S/N 7945 IN ACCORDANCE WITH KING INSTALLATION MANUAL 006-0142-01.
 - 4) SIGTRONICS SPA-400 S/N 67151 IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION MANUAL 1092-1.

ALL WORK WAS ACCOMPLISHED IN ACCORDANCE WITH AC43-13-1A, CHAPTERS 11, 12 AND 15 & AC43-13-2A AND ALL APPLICABLE SECTIONS REVISED WEIGHT AND BALANCE IN AIRCRAFT RECORDS. ELECTRICAL LOAD ANALYSIS INDICATES THAT THE TOTAL LOAD IS LESS THAN 80% OF THE ELECTRICAL SYSTEM.

* * * * * E N D * * * * *

AIRCRAFT WAS FLIGHT CHECKED FOR SYSTEMS COMPATIBILITY AND FOUND TO BE ACCEPTABLE.

DATE _____

NAME _____

PILOT CERT # _____

ADDITIONAL SHEETS ARE ATTACHED

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

FOR FAA USE ONLY

OFFICE IDENTIFICATION

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE Cessna	MODEL R-182
	SERIAL NO. R182-00616	NATIONALITY AND REGISTRATION MARK N4J73R
2. OWNER	NAME (As shown on registration certificate) DMR Assoc.	ADDRESS (As shown on registration certificate) 14 Seacrest Drive Huntington, NY 11743

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE	
				REPAIR	ALTERATION
AIRFRAME	♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦ (As described in item 1 above) ♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS Paul Immondorfer 52 Chateau Drive Melville, NY 11747	<input checked="" type="checkbox"/> U.S. CERTIFICATED MECHANIC	C. CERTIFICATE NO. AP57382398
	<input type="checkbox"/> FOREIGN CERTIFICATED MECHANIC	
	<input type="checkbox"/> CERTIFICATED REPAIR STATION	
	<input type="checkbox"/> MANUFACTURER	

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

DATE 11-25-85	SIGNATURE OF AUTHORIZED INDIVIDUAL <i>Paul Immondorfer</i>
-------------------------	---

7. APPROVAL FOR RETURN TO SERVICE

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

FAA FLT. STANDARDS INSPECTOR	MANUFACTURER	<input checked="" type="checkbox"/>	INSPECTION AUTHORIZATION	OTHER (Specify)
FAA DESIGNEE	REPAIR STATION		CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	

DATE OF APPROVAL OR REJECTION 11-26-85	CERTIFICATE OR DESIGNATION NO. A&P115485734IA	SIGNATURE OF AUTHORIZED INDIVIDUAL <i>Robert M. Sherry</i>
--	---	---

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

NOTICE

8. DESCRIPTION OF WORK ACCOMPLISHED (if more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Installed Precise Flight, Inc. standby vacuum system in accordance with Airframe SFC #SA2162NN and Lycoming SFC #SE1779.

-----END-----

ADDITIONAL SHEETS ARE ATTACHED



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

Form Approved
OMB No. 2120-0020
For FAA Use Only
Office Identification

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

1. Aircraft	Make <i>Cessna</i>	Model <i>R182</i>
	Serial No. <i>R18200616</i>	Nationality and Registration Mark <i>N4873R</i>
2. Owner	Name (As shown on registration certificate) <i>East Beech Investment Corp.</i>	Address (As shown on registration certificate) <i>300 East 85TH St. 3405 New York, N.Y. 10028</i>

3. For FAA Use Only

4. Unit Identification				5. Type		
Unit	Make	Model	Serial No.	Repair	Alteration	
AIRFRAME	~~~~~ (As described in Item 1 above) ~~~~~					
POWERPLANT						
PROPELLER	MCCAULEY PROPELLER	B2D34C214/90DHB-8	792523	XX		
APPLIANCE	Type					
	Manufacturer					

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
NEW ENGLAND PROPELLER SERVICE, INC. MATTHEWS DRIVE EAST HADDAM, CT 06423	<input type="checkbox"/> U.S. Certificated Mechanic	RC2R130L CLASS 1 & 2
	<input checked="" type="checkbox"/> Foreign Certificated Mechanic	
	<input checked="" type="checkbox"/> Certificated Repair Station	
	<input type="checkbox"/> Manufacturer	

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

Date <i>MARCH 31, 1997</i>	Signature of Authorized Individual <i>[Signature]</i> <i>president</i>
-------------------------------	--

7. Approval for Return To Service

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

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

Date of Approval or Rejection <i>MARCH 31, 1997</i>	Certificate or Designation No. <i>RC2R130L</i>	Signature of Authorized Individual <i>[Signature]</i> <i>president</i>
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NOTICE

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

B. Description of Work Accomplished

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

This propeller was overhauled in accordance with Overhaul Manual 780630.

Total Time: 2031.0 hrs. Time Since Overhaul: 00.00 hrs.

Details of work performed are on file at New England Propeller Service, Inc, under Repair Station

Work Order Number: CR-21327.

Major Parts Replaced

Nomenclature	Part #	Qty.	Reason.
HUB ASSY [†]	D4326	1	CRACK
BEARINGS	C39 11	2	WORN
ACT. PIN BASE	B3905	2	WORN

The following work was performed:

MAJOR OVERHAUL. BLADES REFINISHED. PARTS REPLACED
 ZYGLOED, MAGNAFLUXED, REPLATED. PARTS REPLACED
 WHERE REQUIRED. COMPLIED WITH AD'S AND SB'S LISTED
 ON 337 FORM. TRACKED, BALANCED, PAINTED, SET
 ANGLES.

The following Airworthiness Directives and Service Bulletins have been complied with as follows:

A.D.'s or S.B.'s	Revision Date	Applicable A.D., S.B. & Subject	Date & Hours @ compliance	Method of Compliance	one-time	recurr.	Next Compl. hrs./date
137J	12-16-96	T.B.O.	3-31-97	Propeller was Overhauled	—	X	1500 Hrs OR 60 MONTHS
172B	12-16-96	Repair Procedures for Hub & Blades	↓	Reworked Snap Ring Grooves.	X	—	—
192A	4-25-95	B4426 Retainer Rings	↓	Installed New B4426 Retainer	X	—	—

Notice to the Installer and the FAA

Upon installation of this propeller, the person performing the installation must complete blocks #1 & #2 of this Form #337. It is then given to the customer and a copy should be submitted to your local FAA district office, to comply with AC#43.9-1E Or latter revision.

Installer First Aviation Services CRS#XFR113

Date 4-18-97



U.S. Department of Transportation
Federal Aviation Administration

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

Form Approved
OMB No. 2120-0020

For FAA Use Only

Office Identification

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

1. Aircraft	Make CESSNA	Model R182
	Serial No. R18200616	Nationality and Registration Mark N4873R
2. Owner	Name (As shown on registration certificate) EAST BEACH INVESTMENT CORP	Address (As shown on registration certificate) 300 EAST 85TH ST 3405 NEW YORK, NY 10028

3. For FAA Use Only

4. Unit Identification

Unit	Make	Model	Serial No.	5. Type	
				Repair	Alteration
AIRFRAME	~~~~~ (As described in Item 1 above) ~~~~~				XX
POWERPLANT	TEXTRON LYCOMING	O-540-J3C5D	L-20534-40A		XX
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address JEFFREY G SWEDE 111 INDUSTRIAL AVE TETERBORO, NJ 07608	B. Kind of Agency <input checked="" type="checkbox"/> U.S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. 136604257
---	---	--

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

Date APRIL 18, 1997	Signature of Authorized Individual JEFFREY G SWEDE
------------------------	---

7. Approval for Return To Service

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

BY	FAA Fit. Standards Inspector	Manufacturer	<input checked="" type="checkbox"/>	Inspection Authorization	Other (Specify)
	FAA Designee	Repair Station		Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection APRIL 18, 1997		Certificate or Designation No. 136604257	Signature of Authorized Individual JEFFREY G SWEDE		

NOTICE

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

8. Description of Work Accomplished

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

N4873R CESSNA R182 S/N R18200616 4/18/97 AFTT: 2031.0 TACH: 2031.0

1. Removed Precise Flight Inc. Standby Vacuum System, previously installed
In accordance with airframe STC # SA2162NM and Lycoming STC # SE1779NM.
2. System was removed in its entirety. No repairs were required to return
airframe to its originally certificated condition. Engine was factory
overhauled, returning it to its originally certificated condition.
Overhaul was performed by Textron Lycoming, Repair Station ED1R109K under
w/o A-5246.
3. Weight and balance change is negligible, and was not updated after installation.
4. Removal of this system does not adversely affect or interfere with any other
aircraft system, nor will it compromise the structural integrity of the
airframe.
4. All work was performed I/A/W AC 43.13-2A, Chapter 1.

END

Additional Sheets Are Attached

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

Form Approved
OMB No. 2120-0020

For FAA Use Only
Office Identification

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

1. Aircraft	Make CESSNA	Model R182
	Serial No. R18200616	Nationality and Registration Mark N4873R
2. Owner	Name (As shown on registration certificate) EAST BEACH INVESTMENT CORP	Address (As shown on registration certificate) 300 EAST 85TH ST 3405 NEW YORK, NY 10028

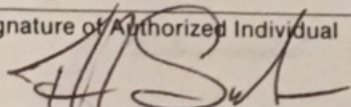
3. For FAA Use Only

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

6. Conformity Statement

A. Agency's Name and Address JEFFREY G SWEDE 111 INDUSTRIAL AVE TETERBORO, NJ 07608	B. Kind of Agency <input checked="" type="checkbox"/> U.S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. 136604257
---	---	--

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

Date APRIL 18, 1997	Signature of Authorized Individual  JEFFREY G SWEDE
------------------------	---

7. Approval for Return To Service

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

BY	FAA Fit. Standards Inspector	Manufacturer	<input checked="" type="checkbox"/>	Inspection Authorization	Other (Specify)
	FAA Designee	Repair Station		Person Approved by Transport Canada Airworthiness Group	
Date of Approval or Rejection APRIL 18, 1997		Certificate or Designation No. 136604257		Signature of Authorized Individual  JEFFREY G SWEDE	

NOTICE

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

8. Description of Work Accomplished

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

N4873R CESSNA R182 S/N R18200616 4/18/97 AFTT: 2031.0 TACH: 2031.0

1. Installed Aero Safe Corporation Guardian I Standby Vacuum System in accordance with STC # SA5573SW.
2. Weight and Balance change is within limits, and is changed as follows:
Addition of 10.1 pounds at Fuselage Station -1.0(inches).

New Empty Weight: 1888.19 pounds
CG: 33.53 inches
Moment: 67,084.87

3. Weight and Balance and Equipment List have been updated. This installation does not adversely affect or interfere with the operation of any other aircraft system.

----- END -----

Additional Sheets Are Attached

Department of Transportation — Federal Aviation Administration
Supplemental Type Certificate

Number SA5573SW

This certificate, issued to Aero Safe Corporation
 P. O. Box 10206
 Fort Worth, Texas 76114

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified herein meets the airworthiness requirements of Part 3 of the Civil Air Regulations.

Original Product — Type Certificate Number 3A13
Make Cessna
Model R182

Description of Type Design Change:

Installation of an electrically driven vacuum pump as a standby auxiliary pump to existing instrument air system in accordance with Drawing List 820420, Revision B dated 10/25/84, or later FAA approved revision.

Limitations and Conditions:

Compatibility of this modification with other previously approved modifications must be determined by the installer.

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

Date of application: August 23, 1983

Date issued:

Date of issuance: November 7, 1983

Date amended: 10/29/84

Revision 1

By direction of the Administrator



for Don P. Watson (Signature)
 Manager, Aircraft Certification Division
 Southwest Region

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.

Aero



Safe

1-800-433-5689 U.S.A. & CANADA
(817) 682-7742 • Fax (817) 682-7662

GUARDIAN I STANDBY VACUUM/PRESSURE SYSTEM

CESSNA R 182

INSTALLATION INSTRUCTIONS

- I. TO INSTALL UNIT ON FIREWALL:
 - A. REMOVE ENGINE COWLING TO GAIN ACCESS TO FIREWALL.
 - B. POSITION PUMP/MOTOR ASSEMBLY AS SHOWN (REFERENCE SHEET 4) AND MARK BASE PLATE MOUNT HOLES.
 - C. REMOVE UNIT AND MATCH DRILL MOUNTING HOLES IN FIREWALL. (#11 DRILL .191 DIAMETER HOLES) CAUTION: PRIOR TO DRILLING THRU FIREWALL DETERMINE THAT THE AREA IN CABIN IS CLEAR OF ELECTRICAL, PLUMBING, CABLE, ETC. IN AREA SELECTED.
 - D. POSITION SPACERS AS SHOWN REFERENCE SHEET 4 VIEW A-A.
 - F. SECURE PUMP/MOTOR ASSEMBLY AND SPACER TO FIREWALL USING FURNISHED BASE PLATE HARDWARE.
- II. TO INSTALL CHECK VALVES, FITTINGS AND PLUMBING:
 - A. REVIEW ALL NOTES ON INSTALLATION DRAWINGS.
 - B. INSTALL "T" FITTING, ITEM 25, IN EXISTING HOSE AS SHOWN REFERENCE SHEET 4.
 - C. VERIFY DIRECTION OF FLOW OF CHECK VALVES AND INSTALL AS SHOWN REFERENCE SHEET 4.
 - D. ROUTE VACUUM HOSE FROM UNIT TO BELOW CARBURETOR AIR BOX TO CHECK VALVE. REFERENCE SHEET 4 AND NOTE 21. ROUTE HOSE TO CLEAR OTHER COMPONENTS INSTALLING SUPPORT CLAMPS AND TY-RAPS WHERE REQUIRED.
 - E. INSTALL HOSE CLAMPS ON ALL VALVES AND FITTINGS AND TIGHTEN.

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PAGE 1 OF 3

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GUARDIAN I STANDBY VACUUM/PRESSURE SYSTEM

CESSNA R 182

INSTALLATION INSTRUCTIONS

III. TO INSTALL ELECTRICAL COMPONENTS:

- A. INSTALL POWER SOURCE TERMINAL AND INLINE FUSEHOLDER ON WIRE SO THE FUSEHOLDER IS WITHIN 6 INCHES OF THE POWER SOURCE.
- B. CONNECT POWER SOURCE TERMINAL PER NOTES 13, 14 AND 15.
- C. CONNECT POSITIVE WIRE TO POSITIVE MOTOR LEAD. (MOTOR LEAD WITH CONNECTOR ALREADY INSTALLED IS GROUND.
- D. ROUTE POWER SOURCE WIRE AND POSITIVE MOTOR WIRE THROUGH FIREWALL WITH EXISTING WIRE BUNDLES.
- E. SELECT ONE OF THE AREAS INDICATED ON SHEET 5 FOR SWITCH LOCATION.
- F. ROUTE WIRE BEHIND INSTRUMENT PANEL TO SWITCH LOCATION. ROUTE AS TO PREVENT CHAFING AND INTERFERENCE WITH CONTROLS, ETC.
- G. INSTALL WIRE TERMINALS AND CONNECT TO SWITCH.
- H. INSTALL SWITCH IN SELECTED LOCATION AND PLACARD AS SHOWN ON SHEET 6.
- I. CONNECT GROUND WIRE TO MOTOR GROUND LEAD, INSTALL TERMINAL AND GROUND TO THE FIREWALL.

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PAGE 2 OF 3

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GUARDIAN I STANDBY VACUUM/PRESSURE SYSTEM

CESSNA R 182

INSTALLATION INSTRUCTIONS

IV. TO TEST SYSTEM:

- A. REVIEW ALL NOTES TO ASSURE PROPER INSTALLATION.
- B. TURN MASTER SWITCH "ON."
- C. MOMENTARILY TURN AUX. VAC. SWITCH "ON" TO VERIFY PROPER PUMP ROTATION.
- D. TURN AUX. VAC. SWITCH "ON."
- E. CHECK VACUUM GAUGE FOR PROPER INDICATION (4.75 - 5.25 IN. HG.)
- F. TURN AUX. VAC. SWITCH "OFF."
- G. START ENGINE AND CHECK VACUUM INDICATOR FOR PROPER INDICATION (4.75 - 5.25 IN. HG.)
- H. WITH ENGINE RUNNING, TURN AUX. VAC. SWITCH "ON" AND CHECK VACUUM GAUGE FOR PROPER INDICATION (4.75 - 5.25 IN. HG.).
- I. TEST COMPLETE, TURN AUX. VAC. SWITCH "OFF." STOP ENGINE, MASTER SWITCH "OFF."

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PAGE 3 OF 3

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LIMITED WARRANTY CERTIFICATE

GUARDIAN I

AERO SAFE CORPORATION HEREBY LIMITS ITS WARRANTY ON THE GUARDIAN I TO COVER THE REPAIR OR REPLACEMENT OF ANY PART OR COMPONENT WHICH HAS BEEN RETURNED PREPAID AND IN THE OPINION OF AERO SAFE CORPORATION IS DEFECTIVE. THIS LIMITED WARRANTY SHALL BE VALID FOR A PERIOD OF TWO YEARS FROM DELIVERY OF THE GUARDIAN I. AERO SAFE CORPORATION ASSUMES NO OBLIGATION FOR WORK ACCOMPLISHED AT A FACILITY OTHER THAN AERO SAFE CORPORATION UNLESS PRIOR WRITTEN AUTHORITY HAS BEEN ISSUED BY THE COMPANY. AERO SAFE CORPORATION RESERVES THE RIGHT TO FURNISH ANY PARTS REQUIRED AND DEFECTIVE PARTS MUST BE RETURNED TO AERO SAFE CORPORATION FOR EXAMINATION IF REQUESTED.

ANY ACTION PERFORMED BY AERO SAFE CORPORATION WILL BE PRECEDED BY A WRITTEN NOTICE OF CLAIM AND DELIVERY OF THE DEFECTIVE PART OR PARTS TO AERO SAFE CORPORATION AT THE ABOVE ADDRESS. ALL WORK REQUIRED OF AERO SAFE CORPORATION WILL BE PERFORMED WITHIN A REASONABLE TIME AFTER RECEIPT OF THE DEFECTIVE COMPONENT.

THIS WARRANTY SHALL NOT APPLY IF THE GUARDIAN I HAS BEEN IMPROPERLY INSTALLED, ADJUSTED, STORED, HANDLED, REPAIRED, ALTERED OR OPERATED CONTRARY TO CURRENT MANUFACTURER'S RECOMMENDATIONS, SERVICE LETTERS AND BULLITENS, F.A.A AIRWORTHINESS DIRECTIVES AND AERO SAFE CORPORATION RECOMMENDATIONS OR SUBJECT TO MISUSE. NEGLIGENCE OR ACCIDENT.

EXCEPT AS IS SPECIFICALLY PROVIDED HEREIN, THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

AERO SAFE CORPORATION SHALL NOT BE LIABLE FOR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR SPECIAL DAMAGES DIRECTLY OR INDIRECTLY ARISING FROM THE BREACH OF ANY OF THE TERMS HEREOF OR FROM THE SALE, HANDLING, OR USE OF THE PRODUCTS SOLD. SELLER'S LIABILITY HEREUNDERS, EITHER FOR BREACH OF WARRANTY OR FOR NEGLIGENCE IS EXPRESSLY LIMITED AT THE OPTION OF AERO SAFE CORPORATION TO (1) THE REPAIR OF SUCH PRODUCTS, OR (2) THE REPLACEMENT, F.O.B. FACTORY, OF ANY PRODUCT FOUND TO BE DEFECTIVE.

Aero



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GUARDIAN I STANDBY VACUUM/PRESSURE SYSTEM

CESSNA R 182

PARTS LIST

I.	1	PUMP/MOTOR ASSEMBLY 14 VOLT	820903-1
		PUMP/MOTOR ASSEMBLY 28 VOLT	820903-2
✓ II.	2	CHECK VALVES	1H37-1
III.	N/A	BULK HEAD FITTING	1K22-10-10
✓ IV.	1	"T" FITTING	1K14-10-10-10
V.	N/A	AIR FILTER	1J4-6
✓ VI.	5	FEET 5/8 HOSE	MIL-H-5593-10
✓ VII.	10	HOSE CLAMPS	QS100-M10H
✓ VIII.	12	FEET 12 GAUGE WIRE	M22759
✓ IX.	1 ✓	INLINE FUSE HOLDER	150079
✓ X.	1	FUSE 20 AMP 14 VOLT SYSTEM	155009
		FUSE 10 AMP 28 VOLT SYSTEM	155020
✓ XI.	2	CRIMP TYPE CONNECTORS	2RB14-10
✓ XII.	2	WIRE TERMINALS - SWITCH	RB14-10
✓ XIII.	2	WIRE TERMINALS - POWER/GROUND	RBRB14-516
✓ XIV.	1	TOGGLE SWITCH	MS35058-22
✓ XV.	8	TY RAPS - CABLE TIE	TY524M
XVI.	1	MOUNTING HARDWARE:	
		✓ A. 4 BOLTS	AN3-10A
		✓ B. 8 WASHERS	AN960-10
		✓ C. 4 NUTS	MS21042-L3
		D. 2 SPACERS	AND10137/1002
✓ XVII.	1	PLACARD - AUX INST AIR	PL218

PUMP/MOTOR ASSEMBLY 7.49 LBS.

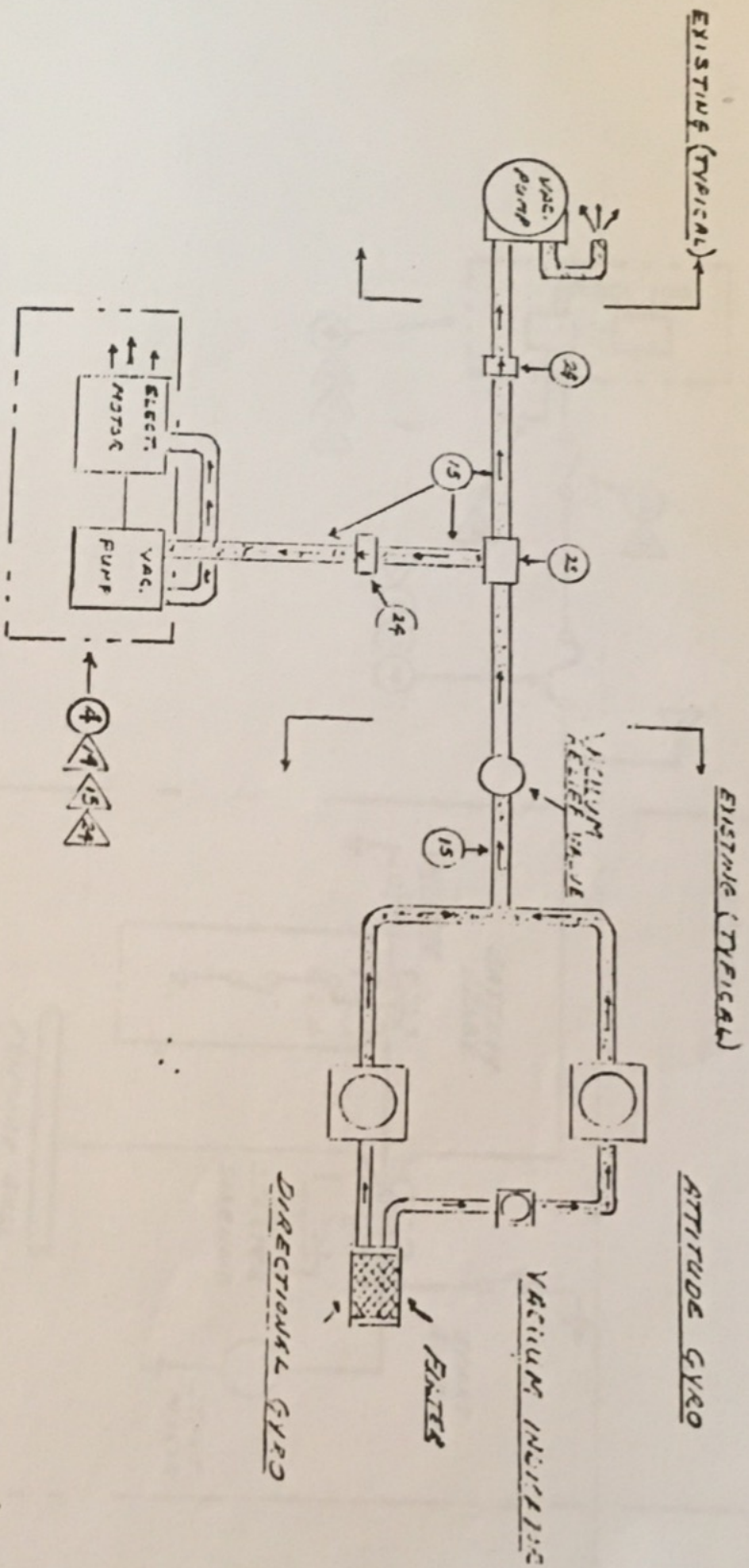
INSTALLATION HARDWARE 2.64 LBS.

ALL PARTS SUPPLIED BY AERO SAFE ARE FAA/PMA APPROVED

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	31			
	30			
	29	820218	PLACARD AUX. VAC. SYSTEM SWITCH	GRAVOPLY-HERMES PLASTIC
	--			
A/R	26	QS100-M10S	CLAMP, HOSE	
1	25	1K14-10-10-10	TEE	
2	24	1H37-1	CHECK VALVE	
1	23	MS35058-22	SWITCH, TOGGLE	
A/R	22	MS21104-14	CLAMP, SUPPORT	
1	21	MS21104-11	CLAMP, SUPPORT	
4	20	MS21042-L3	NUT	
	--			
A/R	18	AN960-10	WASHER	
A/R	17	AN737TW34	CLAMP, HOSE	
4	16	AN3-7A	BOLT	
A/R	15	MIL-H-5593-10	HOSE	MIL.SPEC. MIL-H-5593
1	14	307010	FUSE	LITTLE FUSE
1	13	155020	FUSEHOLDER	LITTLE FUSE
	--			
	7			
2	6	AND10137	SPACER	AND10137/1002 2024T3
	5			
1	4	820903-1	PUMP/MOTOR ASSY	
	3			
	2			
	1	-1	VAC SYST INSTAL	

REQ.#	ITEM#	PART NUMBER	PART NAME	MATERIAL SPEC.
DATE	CHANGE	VACUUM SYSTEM		DRAWING NUMBER
8-25-83	A	INSTALLATION		820404
BY	B	AERO SAFE CORPORATION		PAGE: 1 OF 9
D. SURSELY	10-25-84			



COIL
 INLET AIR
 VACUUM
 DISCHARGE AIR

Gauge
 A 930g

VACUUM SYSTEM SCHEMATIC

SCALE: NONE
 DATE: 8-25-83

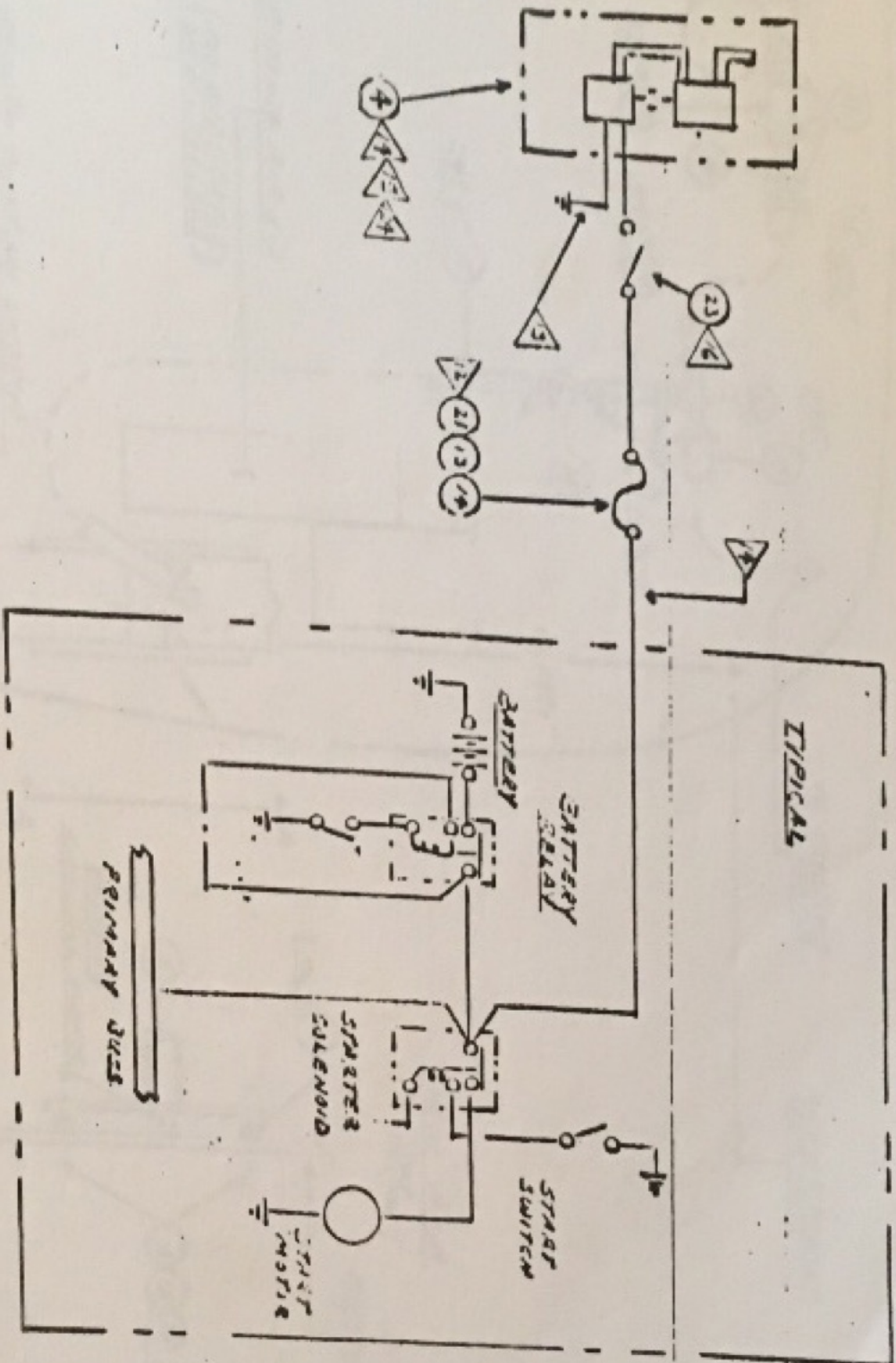
APPROVED BY:

DRAWN BY: D. SIRESELY
 REVISED

VACUUM SYSTEM INSTALLATION

AERO SAFE

SHEET 2 OF 9
 DRAWING NUMBER
 820904



ELECTRICAL SYSTEM SCHEMATIC

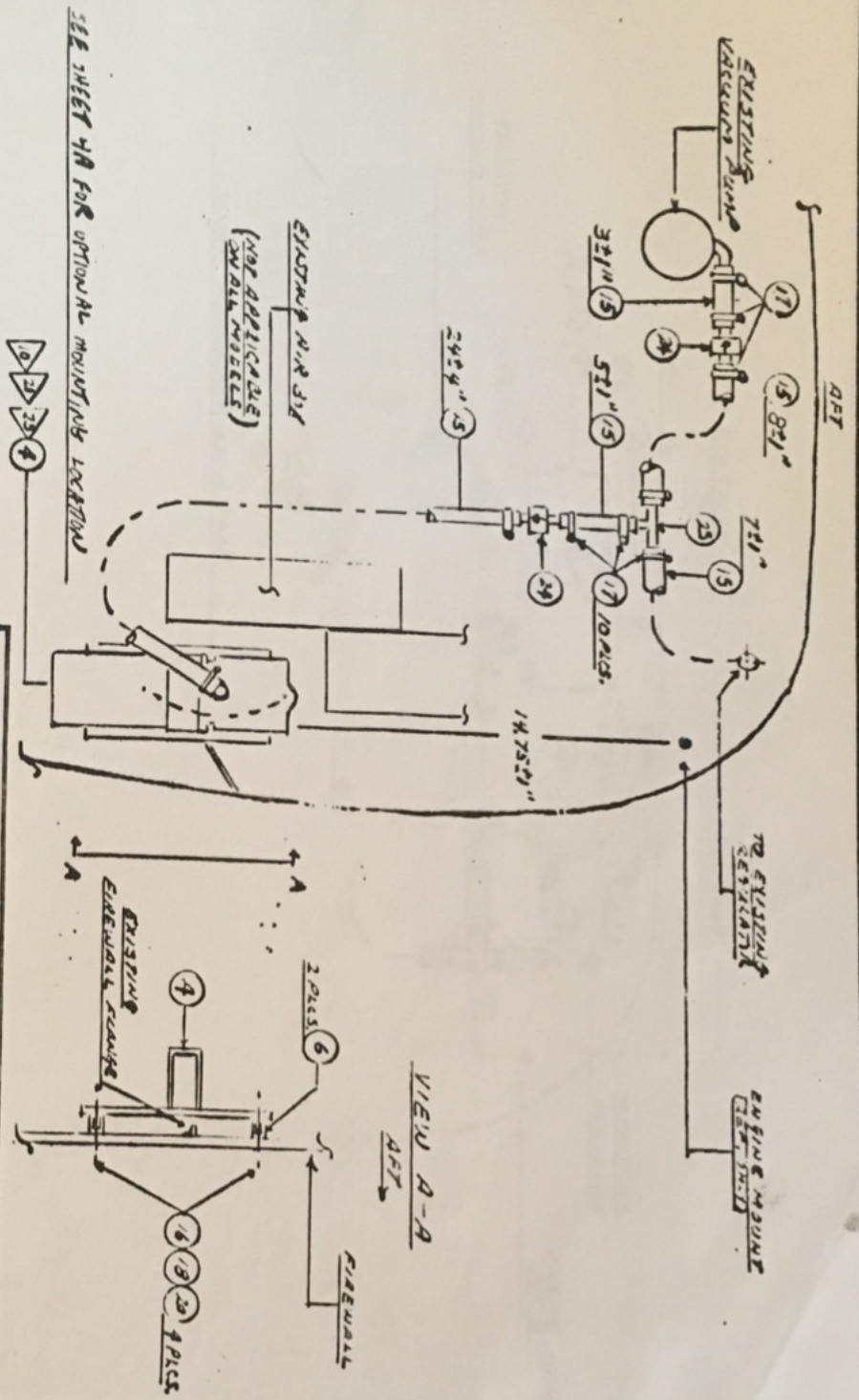
DESIGNED BY NRINE	APPROVED BY BTB	DRAWN BY D.J. SWASTEL
DATE 8-25-89		REVIEWED

VACUUM SYSTEM INSTALLATION **SHEET 3 of 9**

ARCO SAFE

CHANGE
A 9304

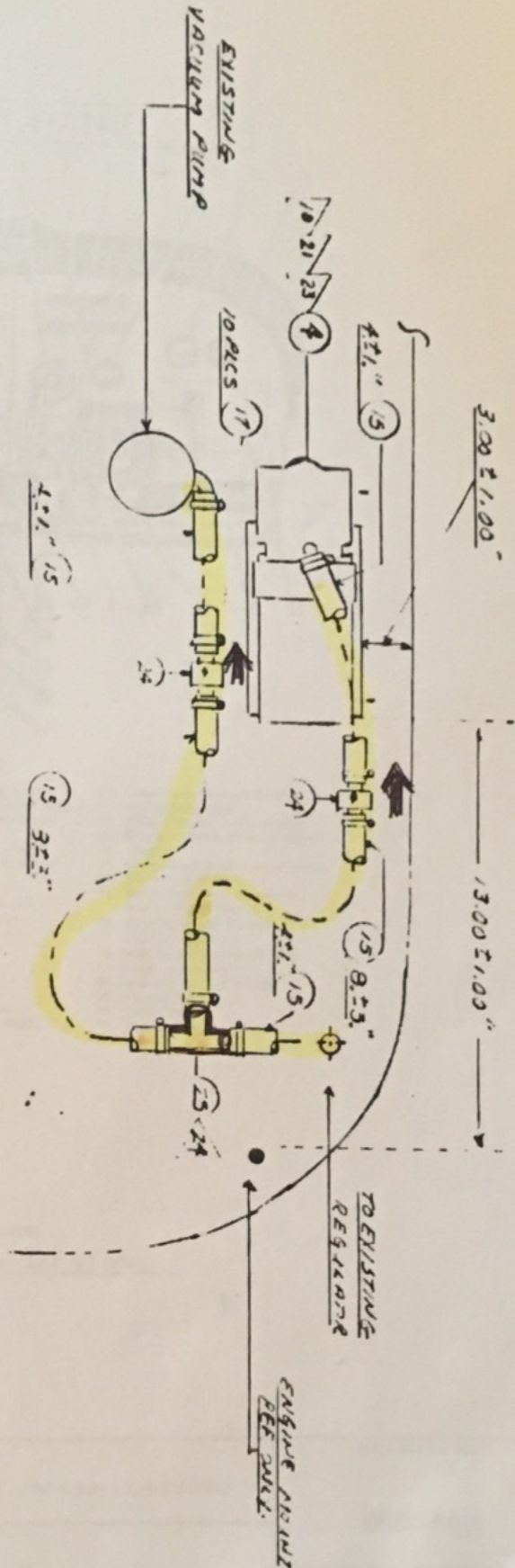
DRAWING NUMBER
020408



SEE SHEET 4A FOR OPTIONAL MOUNTING LOCATION

SCALE: NONE		APPROVED BY:	
DATED: 8-25-83		DRAWN BY: D. STAFFY	
VACUUM SYSTEM INSTALLATION		REVISED:	
AERO SAFE		SHEET # 29	
DRAWING NUMBER: 920 P-9			
CHANGE			
A			

AFT



OPTIMAL MIXING LOCATION

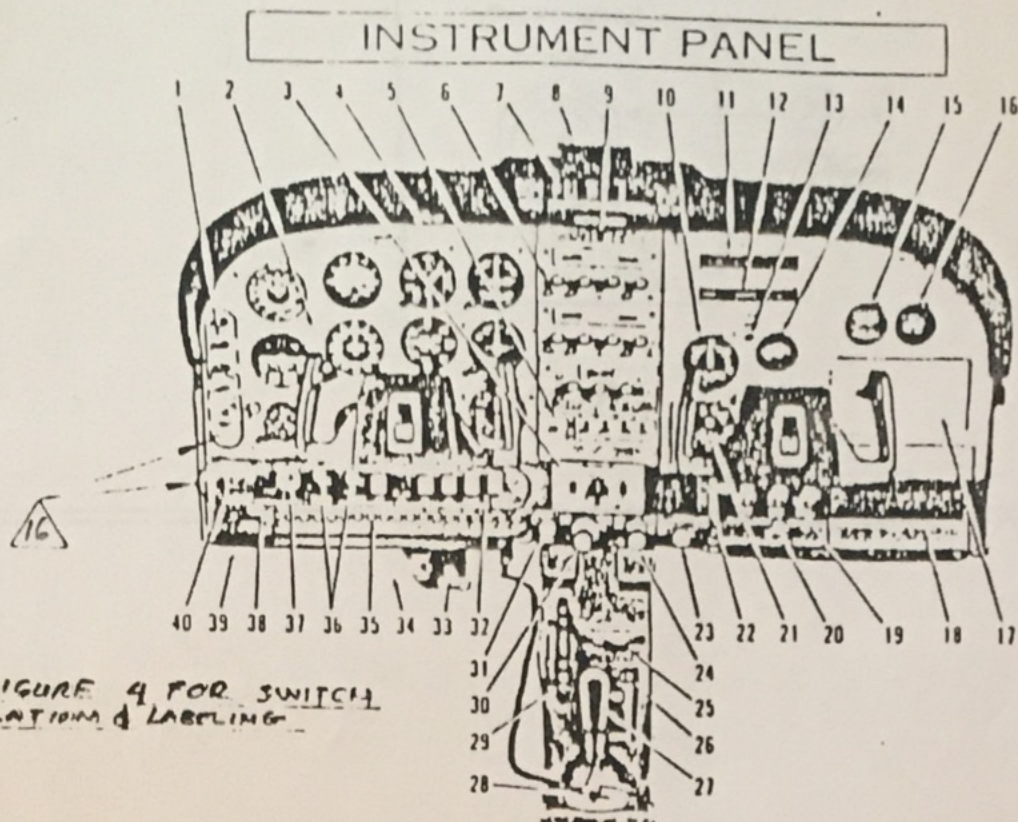
FIREWALL - LOOKING AFT	
SCALE: None	APPROVED BY:
DATE: 8-30-93	DRAWN BY: D. SUREFLY
	REVISED

VACUUM SYSTEM INSTALLATION
 SHEET 4A of 9

Change
 # 9/30/93

HEAD CASE

DRAWING NUMBER
 820004



NOTE:

SEE FIGURE 4 FOR SWITCH
INSTALLATION & LABELING

- | | | |
|---|---|--|
| 1 Marker Beacon Indicator Lights and Switches (Opt.) | 13 Over-Voltage Warning Light | 26 Cowl Flap Control Handle |
| 2 Flight Instrument Group | 14 Excessive Mixture Indicator (Opt.) | 27 Mixture (Opt.) |
| 3 Autopilot Control Unit (Opt.) | 15 Carburetor Air Temperature Gage (Opt.) | 28 Fuel Selector Valve Handle |
| 4 Map Light Switch and Light | 16 Flight Hour Recorder (Opt.) | 29 Elevator Trim Control Wheel |
| 5 Transponder (Opt.) | 17 Optional Radio and Instrument Space | 30 Throttle |
| 6 Radio (Opt.) | 18 Map Compartment | 31 Carburetor Heat Control Knob |
| 7 Radio Selector Switches (Opt.) | 19 Cabin Heat, Cold Air and Defroster Control Knobs | 32 Electrical Switches |
| 8 Rear View Mirror (Opt.) | 20 Cigar Lighter | 33 Static Pressure Alternate Source Valve (Opt.) |
| 9 Radio Selector Switch Light Dimming Rheostat (Opt.) | 21 Tachometer | 34 Parking Brake Handle |
| 10 Manifold Pressure Gage | 22 Wing Flap Switch and Position Indicator | 35 Circuit Breakers |
| 11 Fuel Quantity Indicator and Annular | 23 Mixture Control Knob | 36 Instrument and Radio that Light Rheostat |
| 12 Cylinder Head Temperature (Opt.) Temperature, and Oil Pressure Gages | 24 Propeller Control Knob | 37 Ignition/Starter Switch |
| | 25 Rudder Trim Control Wheel | 38 Engine Primer |
| | | 39 Phone Jack |
| | | 40 Master Switch |

FIGURE 3
INSTRUMENT PANEL SWITCH LOCATION

DATE

8-25-83

BY

D SURSELY

APP BY

CHANGE

9-30-83

OWG. TITLE

VACUUM SYSTEM INSTALLATION

AERO SAFE

DRAWING NO

820404

5 SHEET OF 9

NOTE:

UNLESS OTHER WISE INDICATED:

1. DO NOT SCALE THIS DRAWING FOR DIMENSIONS.
2. BREAK ALL SHARP EDGES .003-.015 AND REMOVE ALL BURRS AND SLIVERS.
3. DIMENSIONS ARE IN INCHES AND TOLERANCES AS SHOWN BELOW.

TOLERANCES:	DECIMALS	ANGLES
	.XXX +/- .005	+/- 1/2 IN.
	.XX +/- .03	
	.X +/- .1	

4. BOLT, SCREW, RIVET AND SPACER LENGTHS, AND CLAMP SIZES WITH () OR (XXX) ARE TO BE DETERMINED ON INSTALLATION. MAINTAIN 2D EDGE DISTANCE AND 3D SPACING.
5. MACHINED SURFACES TO BE 63 PER ANSI B46.1-1962.
6. APPLY TWO COATS OF ZINC CHROMATE PRIMER PER FAA ADVISORY CIRCULAR AC43.13-1A, CHAPTER 6, PARAGRAPHS 248 AND 250, ALL NEW AND REWORKED METAL SURFACES.
7. INSTALL ALL FASTENERS IN ACCORDANCE WITH STANDARD PRACTICES OF FAA ADVISORY CIRCULAR AC43.13-1A, CHAPTER 2, PARAGRAPH 99F OF SECTION 3 AND CHAPTER 5, PARAGRAPHS 227B, 227E, 230A(1), 230A(2) AND 231A OF SECTION 1.
8. BOLT, SCREW AND RIVET HOLE SIZES SHALL BE THE NEXT NUMBERED OR LETTERED DRILL SIZE LARGER THAN THE FASTENER DIAMETER.
9. DRILLED HOLE TOLERANCES ARE PER AND10387.
10. DRILL HOLES ON INSTALLATION TO MATCH HOLES IN MATING PARTS.
11. ALL WIRE TO BE 12AWG PER MIL-W-22759/16 OR MIL-W-81044/9. WHEN SHIELDED, IT MUST BE SHIELDED AND JACKETED PER MIL-C-27500. THE JACKET MATERIAL MUST MEET THE FLAMMABILITY REQUIREMENTS OF THE WIRE BEING SHIELDED AND JACKETED. ROUTE WIRE WITH EXISTING WIRE BUNDLES WHERE POSSIBLE. ALL WIRING FABRICATION AND INSTALLATION MUST BE ACCOMPLISHED IN ACCORDANCE WITH FAA ADVISORY CIRCULAR AC43.13-1A, CHAPTER 11, PARAGRAPHS 445 THRU 452 OF SECTION 2, PARAGRAPHS 482 & 483 OF SECTION 5 AND PARAGRAPHS 514 THRU 519 OF SECTION 7. USE MS35489 GROMMETS, MS21104 CLAMPS, AN743-13 BRACKETS, MS35207 SCREWS (#10), AN3 BOLTS, MS21042 NUTS, AN960 WASHERS, AND NAS43DD3 SPACERS AS REQUIRED TO SECURE THE WIRING. DO NOT ATTACH CLAMPS NOR BRACKETS TO "LIFE LIMITED" PARTS. (CONSULT THE DATA SHEET, MAINTENANCE MANUAL AND FLIGHT MANUAL.) WIRE TERMINALS, SPLICES AND CAPS MUST MEET THE REQUIREMENTS OF MS25036, MS25181 AND MS25274 RESPECTIVELY.

CHANGES: 09-30-83

DATE: 03-30-84

VACUUM SYSTEM INSTALLATION

PAOE: 7 OF 9

DRAWN BY

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DRAWING NUMBER

D. SURSELY

820404

12. SECURE ITEM 13, FUSEHOLDER TO THE FIREWALL USING ITEM 21 CLAMP. PICK-UP EXISTING AVAILABLE THREADED FASTENER OR USE ITEM 16 BOLT, ITEM 20 NUT AND ITEM 18 WASHER. CONNECT THE BODY TERMINAL OF THE FUSEHOLDER TO THE STARTER CONTACTOR WITH A 6.0 MAXIMUM WIRE LENGTH.
13. THE ELECTRIC MOTOR WIRE LEAD SELECTED FOR GROUNDING MUST CAUSE COUNTERCLOCKWISE ROTATION OF THE ELECTRIC MOTOR SHAFT WHEN LOOKING TOWARD THE SHAFT END OF THE MOTOR. THE WIRE SELECTED MUST BE ATTACHED DIRECTLY TO THE AIRFRAME OR A JUMPER WIRE USED TO ASSURE PROPER GROUNDING TO THE AIRFRAME.
14. ELECTRIC SCHEMATIC SHOWN: TYPICAL. FUSED ELECTRICAL TERMINAL SHOULD BE CONNECTED TO POWER SOURCE NEAREST CONTROL SWITCH. (PRIMARY BUS, STARTER SOLENOID, ETC.) SELECTION SHOULD ALLOW FOR CONTINUED ELECTRICAL POWER IN THE EVENT OF LOSS OF GENERATOR.
15. THIS INSTALLATION ADDS AN ELECTRICAL LOAD OF 7.5 AMPS (28 VOLT SYSTEM) 13.5 AMPS (14 VOLT SYSTEM) TO THE ELECTRICAL SYSTEM. THE TOTAL CONTINUOUS CONNECTED LOAD SHALL BE LIMITED TO APPROXIMATELY 80 PERCENT OF THE TOTAL RATED GENERATOR/ALTERNATOR OUTPUT CAPACITY. USE THE PROCEDURE OUTLINED BY AC43.13 SECTION 2 PARAGRAPH 424, 425 AND 426 TO ASSURE COMPLIANCE WITH THE 80 PERCENT LIMITATION.
16. INSTALL ITEM 23 SWITCH AND PLACARD ITEM 29 IN AVAILABLE LOCATION WITHIN AREA SHOWN. PROVIDE .06 CLEARANCE WITH OTHER COMPONENTS. (MANUFACTURER'S TYPE SWITCH MAY BE USED IN LIEU OF ITEM 23. LOCATE IN EXISTING SWITCH BANK.)
17. LOCALLY MANUFACTURED LABEL/PLACARD OPTIONAL IN LIEU OF ITEM 29. SIZE AND COLOR OF CHARACTERS TO BE .12 HIGH, BLACK ON WHITE (WHITE ON BLACK) OR SIMILAR TO ADJACENT COMPONENT LABELING. PLACARDS MAY BE MADE FROM GRAVOPLY (WITH PRESSURE SENSITIVE BACKING) BY HERMES PLASTIC COMPANY OR 3-M COMPANY SCOTHCAL PROCESS. FILL ENGRAVED CHARACTERS WITH LUSTERLESS ENAMEL OR LACQUER.
18. INSTALL ALL SWITCHES AND FUSEHOLDERS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS USING ATTACHING HARDWARE FURNISHED WITH EACH COMPONENT. APPLY ENAMEL AND LACQUER PAINTS AND FABRICATE AND APPLY ALL PLACARDS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
19. APPLY TWO COATS OF ZINC CHROMATE PER NOTE 6 ABOVE TO ALL EXPOSED STEEL AND ALUMINUM SURFACES OF FABRICATED PARTS NOT PREVIOUSLY CADMIUM PLATED NOR ANODIZED, RESPECTIVELY.
20. THE OPTIONAL WING AND TAIL DE-ICER BOOTS WHEN INSTALLED, GETS ITS VACUUM SOURCE WITHIN THE EXISTING PORTIONS OF THE SCHEMATIC BUT IS NOT SPECIFICALLY SHOWN IN THIS FIGURE.

DATE: 8-25-83

CHANGES: A:9-30-83 B:10-25-84

PAGE: 8 OF 9

DRAWN BY

VACUUM SYSTEM INSTALLATION

DRAWING NUMBER

D. SURSELY

AERO SAFE CORPORATION

820404

REVISIONS

LETTER	DATE	DESCRIPTION
A	09-30-83	ADDED PLACARD P/N #820218 - REVISED NOTES 16 AND 17 - ADDED NOTE 24.
B	10-25-84	ADDED SHEET 4A TO ALLOW ALTERNATE INSTALLATION

SHEET	1	2	3	4	5	6	7	8	9	4A												
LETTER	A	A	A	A	A	A	A	A	A													
LETTER								B		B												

DATE: 8-25-83	CHANGES: A:9-30-83 B:10-25-84	PAGE: 9 OF 9
DRAWN BY D. SURSELY	VACUUM SYSTEM INSTALLATION AERO SAFE CORPORATION	DRAWING NUMBER 820404

AERO SAFE CORPORATION
P.O. BOX 10206
FT. WORTH, TEXAS 76114

ENGINEERING CHANGE ORDER

DRAWING TITLE:
AUX. INST. AIR INSTALLATION

DRAWING NO: 820404

REASON: ALTERNATIVE CHECKVALVE

ADD NOTE [26] AND FLAG TO ITEM 24 IN PARTS LIST PAGE 1 OF 9.

[26] THE SWEENEY ENGINEERING CORPORATION CHECKVALVE P/N
34-1300-1 IS AN ACCEPTABLE ALTERNATE FOR THE AIRBORNE
1H37-1 CHECKVALVE.

DATE: 4-19-88

APPROVED BY: D. ALLISON 4-19-88

SHEET 1 OF 1

DRAWN BY

AERO SAFE CORPORATION

E.C.N. NUMBER

D. ALLISON

488-9



S-TEC CORPORATION
 RT. 3, BLDG. 946
 WOLTERS INDUSTRIAL COMPLEX
 MINERAL WELLS, TEXAS 76067

FAA APPROVED SUPPLEMENT
 TO
 PILOT'S OPERATING HANDBOOK AND/OR
 FAA APPROVED AIRPLANE FLIGHT MANUAL
 FOR

CESSNA MODELS R182 AND TR182

WITH
 S-TEC SYSTEM 60 TWO AXIS
 AUTOMATIC FLIGHT GUIDANCE SYSTEM
 (28 VOLT SYSTEM)

REG. NO. **N4873R**

SER. NO. _____

This Supplement must be attached to the applicable FAA Approved Airplane Flight Manual, Pilot's Operating Handbook, or Pilot's Operating Handbook and FAA Approved Airplane Flight Manual modified by the installation of S-TEC System 60 Autopilot Model ST-044 installed in accordance with STC SA 5153SW-D. The information contained herein supplements the information of the basic POH and/or AFM; for Limitations, Procedures and Performance information not contained in this Supplement, consult the basic POH and/or AFM.

SECTION I

GENERAL

This manual is to acquaint the pilot with the features and functions of the System 60 Two Axis and to provide operating instructions for the system when installed in the listed aircraft model(s). The aircraft must be operated within the limitations herein provided when the autopilot is in use.

The System 60 Two Axis Autopilot is comprised of the following elements:

<u>ELEMENT</u>	<u>LOCATION</u>
Electric Turn Coordinator Instrument	Instrument Panel
Air Driven Directional Gyro (3") (STD)	Instrument Panel
Mode Programmer/Annunciator	Instrument Panel
Roll Flight Guidance Computer	Aft Radio Rack
Pitch Flight Guidance Computer	Aft Radio Rack
Roll Servo Actuator	Left Outer Wing
Pitch Servo Actuator	Fuselage Aft
Master Switch and Control Wheel	Instrument Panel and
Disengage Switch	Control Wheel
Altitude Transducer	Near Altimeter, Forward of Instrument Panel

FAA/DAS APPROVED
 P/N 8963-1
 DATE: 3-25-83



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SECTION II

OPERATING LIMITATIONS

1. Autopilot operation not authorized above 160 KIAS.
2. Flap extension limited to 10⁰ and 95 KIAS or below, when optional autotrim system is not installed.
3. Flap extension limited to 20⁰ maximum and 10⁰ between 140 KIAS and 95 KIAS, when optional autotrim system is installed and operating.
4. Go-arounds or missed approach maneuvers not authorized.
5. Autopilot use prohibited during take-off and landing.
6. Category I operations only.

SECTION III

EMERGENCY OPERATING PROCEDURES

In the event of an autopilot malfunction, or any time the autopilot is not performing as expected or commanded, do not attempt to identify the system problem. Immediately regain control of the aircraft by overpowering the autopilot as necessary and then immediately disconnect the autopilot. Do not reengage the autopilot until the problem has been identified and corrected.

1. Autopilot

The autopilot may be disconnected by:

- a. Depressing the "AP Disconnect" Switch on the left horn of the pilot's control wheel.
- b. Placing the "AP Master Switch" in the "OFF" position.

2. Trim

- a. In the event of a trim failure, manually control aircraft and DEPRESS AND HOLD, "Trim Interrupt/AP Disconnect Switch" on control wheel.
- b. Place trim master switch in "OFF" position, pull circuit breaker, release interrupt switch.
- c. Retrim aircraft. Leave trim system OFF until corrected.

3. Altitude loss during a malfunction:

- a. An autopilot or autotrim malfunction during climb, cruise or descent with a three second delay in recovery initiation could result in as much as 55⁰ bank and a 550 ft. altitude loss. Maximum altitude loss recorded in descent
- b. An autopilot or autotrim malfunction during an approach with one second delay in recovery initiation could result in as much as a 20⁰ bank and a 80 ft. altitude loss. Maximum altitude loss measured with flaps down 10⁰, gear down and operating either coupled or uncoupled.



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4. System Failure and Caution Annunciations:

The System 60 Autopilot includes a number of automatic failure and caution annunciations to advise the pilot of operational problems. Following is a list of annunciations, their cause and recommended pilot actions:

	<u>ANNUNCIATION</u>	<u>CONDITIONS</u>	<u>ACTION</u>
a.	Flashing "RDY" for 5 seconds	Indicates autopilot disconnect. All annunciations except RDY are cleared.	N/A
b.	Flashing "RDY" then extinguished	Turn Coordinator gyro rotor RPM low. Autopilot disconnects, cannot be re-engaged.	Check instrument power, conduct other system checks as necessary.
c.	Flashing "NAV" or "REV"	Indicates Off Course by 50% needle displacement.	Use "HDG" mode until problem is identified. Cross check Raw NAV Data, Compass HDG, D.G. and radio operation.
d.	Flashing "NAV" or "REV" with steady "FAIL"	Indicates invalid radio navigation signal	Check navigation radio. Use "HDG" mode until problem is corrected. On ILS Approach, initiate go-around inform A.T.C.
e.	Flashing "GS"	Indicates off glide slope center line by 50%	Check attitude and power. Add or reduce power as appropriate.
f.	Flashing "GS" with steady "FAIL"	Indicates invalid glide slope radio navigation signal	Initiate go-around - Inform A.T.C.
g.	Flashing "VS"	Indicates excessive vertical speed error over selected VS (usually in climb).	Reduce command VS and/or adjust power
h.	Flashing "GS" Steady "DSBL"	Indicates manual glide slope disable	To re-enable glide slope, select "NAV" mode again.



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NOTE: If any of the above annunciations occur at low altitude or during an actual instrument approach disconnect the autopilot, execute a go-around and inform ATC of the problem (IFR). Do not attempt to trouble shoot or otherwise ascertain the nature of the failure until a safe altitude and maneuvering area is reached.

SECTION IV

NORMAL OPERATING PROCEDURES

4-1 SYSTEM DESCRIPTION

The System 60 is a pure rate autopilot using an inclined rate gyro in the turn coordinator instrument as the primary roll and turn rate sensor and an absolute pressure transducer as the primary pitch rate sensor. The turn coordinator includes an autopilot pick-off, a gyro RPM detector and an instrument power monitor. Low electrical power will cause the "flag" to appear while low RPM will cause the autopilot to disconnect, flashing the "RDY" annunciator for five seconds and then extinguishing all annunciations. The autopilot cannot be engaged unless the RDY annunciator is illuminated. The standard D.G. provided with the system is a 3" diameter vacuum or pressure air driven instrument. Directional information is provided to the autopilot by a heading bug in the D.G. instrument. The autopilot may also be used with an HSI type instrument providing both heading and course outputs.

Pitch axis control is provided by deriving vertical speed, altitude position, altitude error and rate of vertical speed (acceleration) from a solid state absolute pressure transducer. The basic pitch modes provided are vertical speed, for use in climbs and descents, and altitude hold for maintaining a selected altitude (pressure) level. Pitch attitude changes to accomplish commands are limited by acceleration in operation, providing a very slow, comfortable, maneuvering rate.

The programmer unit includes an ambient light sensor which automatically adjusts annunciator and knob light intensity for prevailing ambient conditions.

Other than the D.G. instrument, the system is entirely electrical and operates with very low power consumption.

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NOTE: VOR NAV mode includes three separate dynamic gain schedules which will be annunciated as follows during VOR-Navigation mode use:

CAP

Indicates navigation course capture with high rate gain schedule and providing 90% of standard rate turn capability.

CAP SOFT

Approximately fifteen seconds after capture of the VOR radial, the system will shift to an intermediate gain level indicated by annunciation of the "CAP" and "SOFT" annunciators. The rate gain is reduced and the system is now limited to bank angles to produce approximately 45% of a standard rate turn.

SOFT

Approximately ninety seconds after course capture the third gain level is initiated and the "CAP" annunciator will extinguish. The system is now in the cross country track condition with low VOR needle sensitivity and is capable of bank angles to produce 15% of a standard rate turn (usually approx. 2° - 3° of bank).

During NAV-APR and REV-APR (ILS Localizer) tracking the "SOFT" mode is inhibited providing only capture and Capture-Soft dynamic conditions. When tracking VOR or Localizer and the system develops a 50% course error, the in-use NAV mode will flash indicating an off course condition. During VOR tracking operations and when a 50% course error occurs, the system will automatically revert to CAP-SOFT after approximately one minute to allow more rapid recapture. This condition will normally occur only if a course change is made at the station and the appropriate NAV Mode is not manually reselected.

7. Ambient light sensor - will adjust annunciator lamp and knob recognition lamp intensity automatically for optimum brilliance level.
8. "VS" (Vertical Speed) Mode Switch - Momentary actuation engages vertical speed mode. If installation is equipped with an optional VS selector the autopilot will maneuver the aircraft to track the selected vertical speed. If not equipped with a vertical speed selector, engagement will synchronize the autopilot to the vertical speed existing at engagement.

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NOTE: The vertical speed limits of the autopilot are \pm 1500 FPM. If the autopilot is engaged above 1500 FPM, it will maneuver to produce 1500 FPM.

"ALT" (Altitude) Mode Switch - Momentary actuation engages the altitude hold mode at the altitude existing at engagement.

Down (DN) Pitch Modifier Switch - The down modifier switch is used to modify the commanded vertical speed in VS mode or the altitude in altitude mode.

VERTICAL SPEED

In VS mode the down modifier will increase a down vertical speed, or decrease a climb vertical speed, approximately 160 FPM per each second of actuation, i.e. a three second actuation will provide a VS change of approximately 500 FPM.

ALTITUDE CHANGE

In "ALT" mode the down modifier will lower the altitude reference 20' per each second of actuation.

11. UP Pitch Modifier Switch - The Up pitch modifier switch is used to increase climb vertical speed and decrease descent vertical speeds. In altitude hold mode it will cause an increase in the reference altitude. The rates of change are explained above for the down modifier (Item 10).
12. AP Master Switch - Master power switch for the system. A three position switch having "AP", "OFF", and "TEST" positions. When the master switch is on ("AP") the turn coordinator gyro is functioning properly, the "RDY" light will appear in the mode annunciator window. When the optional flight director instrument (A.D.I.) is installed the master switch activates both the A/P and Flight Director functions. The "APFD" position will cause the pitch steering bar to disappear until a pitch mode is selected.
13. Flight Director Switch (FD) - Optional - When the optional flight director instrument (Attitude Director Indicator - A.D.I.) is installed, selection of the FD Switch only (without the AP Switch) will allow use of the flight director for manual aircraft control. To engage the autopilot, simply place the AP Master Switch to "AP" which will engage the servoes in the existing modes.
14. AP Disconnect Switch - The AP Disconnect Switch is a momentary type mounted in the left horn of the pilot's control wheel. When depressed it will disconnect the autopilot and clear the annunciator windows of all previously existing modes and conditions. When the optional autotrim is installed, the disconnect switch will also interrupt all electric trim operation when depressed and held. When released it will automatically restore trim operation.



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4-3 PRE-FLIGHT PROCEDURES

NOTE: During system functional checks the system must be provided adequate D.C. voltage (12.0 VDC minimum).

1. AP Master Switch - Push to "TEST" position - observe all messages illuminate. Position switch to - "AP" observe "RDY" light on.
2. Rotate HDG knob on D.G. to position bug under lubber line.
3. Engage HDG Mode - Move bug left and right and observe control wheel moves in direction of bug displacement. Return HDG bug to center.
4. Overpower - Grasp control wheel and manually overpower roll servo left and right.
5. Radio Check -
 - A. Turn on NAV Radio, with valid NAV signal, engage NAV mode and move VOR O.B.S. so that VOR needle moves left and right - control wheel should follow the direction of needle movement.
 - B. Select REV Mode - the control wheel should rotate in opposite direction of the NAV needle.
 - C. Channel a VOR that has an invalid NAV signal - "NAV" annunciator should flash and the "FAIL" annunciator should be steady (If the radio signal has a NAV flag output).
6. Move control wheel to level flight position - Engage VS Mode - Depress UP Modifier Switch and hold - Observe control wheel moves slowly OUT. Depress DN Modifier Switch and hold - Observe control wheel moves slowly - IN.
7. Overpower Pitch By Pulling Control Wheel Out - Observe that "TRIM" Annunciator illuminates and "DN" modifier illuminates with audio - Overpower by pushing control wheel IN - Observe that "TRIM" annunciator illuminates and "UP" modifier illuminates with audio, (If optional Autotrim is installed, Trim Master Switch must be "OFF" for trim indicators to function)

NOTE: There will be approximately a 2-3 second delay between the overpower and the trim indication. If the trim lights do not function the pitch section of the autopilot should not be used until the problem is corrected.
8. Disconnect - Momentarily depress the control wheel mounted disconnect switch. Move control wheel to assure freedom of the controls and check the "RDY" lamp flashes for approximately five seconds indicating AP disconnect.



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Pitch Limiter Check (Once Per Flight Day):

- A. Select "TEST" position on Master Switch
- B. Engage HDG Mode
- C. Move Control Wheel To Center - Engage VS
- D. Hold Control Wheel - Depress "UP" Modifier-
Pitch should disconnect. Release UP modifier
Pitch should re-engage.
- E. Repeat Item D, using "DN" modifier.

If pitch servo does not disengage controls when the UP and DN modifier are momentarily selected, the limit accelerometer may have failed. The pitch section of the autopilot should not be used until the problem is corrected.

10. Electric Trim Check (If Optional Autotrim is installed)

Manual Electric Trim - Test Prior to Each Flight

- A. Trim Switch and A/P Master Switch -, ON
- B. Operate Manual Trim Switch (Both Knob Sections)
Nose DN - Check trim moves nose down and trim in motion indicator ("TRIM") in A/P Programmer flashes. Operate trim switch NOSE UP -
Check trim moves nose up and for "in motion" light.
- C. With trim operating nose up and down - grasp manual trim control and overpower electric trim.
- D. Operate each half of the trim switch separately - trim should not operate unless both switch knob segments are moved together.
- E. With Trim Operating - Depress trim interrupt switch -
Trim motion should stop while interrupt switch is depressed -
when released trim should operate normally.

Autotrim

- A. Engage HDG and VS modes of the autopilot.
- B. Grasp control wheel and apply forward pressure (nose down) -
After approximately three (3) seconds trim should run NOSE UP.
- C. Apply aft pressure (Nose UP) to control wheel - after approximately three (3) seconds trim should run NOSE DOWN.
- D. Move manual trim switch UP or DN - Autopilot should disconnect and trim operates in the commanded direction. (Trim Switch will disconnect autopilot only when pitch is engaged.)
- E. Re-engage autopilot HDG and VS modes and depress trim interrupt/AP Disconnect Switch - autopilot should disconnect.
- F. Retrim aircraft for take-off - Check all controls for freedom of motion and to determine that the autopilot and trim have disconnected.

If either the manual electric or autotrim fails any portion of the above check procedure, move the trim master switch "OFF" and do not attempt to use the trim system until the fault is corrected. With the trim master switch "OFF" the autopilot trim indicators and audio system will return to operation. If the electric trim system suffers a power failure in flight, the system will automatically revert to the indicator lights and audio horn. If this occurs turn the trim master switch "OFF" and trim manually, using the indicators, until the fault can be located and corrected.



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4 IN FLIGHT PROCEDURES

ROLL AXIS MODES

1. Master Switch - "AP" - Check "RDY" light on.
2. Trim aircraft for existing flight conditions.
3. Set HDG bug to desired heading.
4. Depress HDG Mode Switch.
5. Select headings, as desired.

VOR INTERCEPT AND TRACK (Standard Directional Gyro)

1. Tune Navigation Receiver and select VOR radial.
2. Move HDG bug to match the course of the radial selected, in direction of desired travel.
3. Engage NAV Mode. If the VOR needle is full scale, the autopilot will cause a turn to a 45° intercept HDG. As the aircraft approaches the selected radial, the autopilot will cause a turn to join the radial. The point at which this turn begins is variable and depends upon the aircraft position and closure rate to the radial, however, the turn will always start between a 100% (full scale) VOR needle off set and 50% of full scale.
4. During the intercept sequence the system will operate with maximum gain and sensitivity to VOR needle rate and position. When the selected course is intercepted, the "CAP" annunciator will illuminate indicating course capture and the initiation of the tracking gain program. (See Page 6).
5. Course changes - if a course of 10° or more is required at the enroute VOR, select the new course and re-select NAV mode to reinitiate the capture sequence.

VOR APPROACH

1. For the most rapid recapture of the VOR radial after station passage, during a VOR approach, it is recommended that the NAV Mode Switch be selected again just after TO-FROM reversal. This will return the system to capture dynamics and reinitiate the gain schedule.

LOCALIZER INTERCEPT AND TRACK - (STANDARD DIRECTIONAL GYRO)

1. When a localizer frequency is channeled and NAV mode selected, the autopilot will automatically change gains for additional localizer sensitivity and the "APR" annunciator will illuminate.
2. Set the HDG bug to the inbound localizer course and engage NAV mode to intercept and track the front localizer course inbound or back course outbound.
3. REV Mode - Reverse mode is used to track the front course outbound or the back course inbound to the airport. The HDG bug must be set to the direction of travel.

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VOR LOCALIZER INTERCEPT AND TRACK - HSI COMPASS (OPTIONAL)

An H.S.I. type integrated VOR-Compass display provides the autopilot with both VOR left-right information and course information when the O.B.S. is set to the desired VOR radial or localizer course. The HDG bug is not used during radio tracking. Simply set the desired radial or localizer course with the O.B.S. and select the appropriate NAV mode.

ILS/Localizer approaches with an H.S.I. require that the inbound front course be set on the OBS for all approach operations, either front or back course. Select NAV mode to track inbound on the front course or outbound on the back course. Select REV mode to track outbound on the front course and inbound on the back course.

DUAL MODE INTERCEPT

During operations with an HSI compass all angle intercept capability is provided by simultaneously selecting HDG and NAV modes. The autopilot will follow the HDG bug until the proper on course turn point and then switch from HDG to NAV automatically. Selected angle intercepts may be used during VOR, localizer front courses or localizer back course (REV) operations.

Localizer intercept angles higher than 45° will usually result in some course overshoot depending upon distance from the station and aircraft velocity. Generally, intercept angles higher than 45° should not be used.

PITCH AXIS MODES

VERTICAL SPEED

1. Engage HDG or NAV Mode.
2. Engage VS Mode. Vertical speed mode will synchronize to the vertical speed existing at engagement if it is less than 1500 FPM. If the VS at engagement is more than 1500 FPM, the system will hold 1500 FPM.
3. To modify (change) vertical speed - Depress the desired UP-DN modifier switch as necessary. The UP-DN modifier switch will change the reference vertical speed approximately 160 FPM per each second of actuation. Thus to increase VS 500 FPM it will be necessary to hold the UP Modifier for approximately three (3) seconds.

NOTE: The autopilot response to a command VS change is slow. When the modifier switch is depressed the aircraft will change attitude very slowly in the direction commanded. Do not hold the modifier switch depressed until the attitude change looks correct - remember the amount of modification is time related, 160 FPM per second of actuation.



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ALTITUDE HOLD

At the desired altitude, depress the "ALT" Mode Switch. The ALT Hold will engage at the precise pressure level existing at engagement, it is not necessary to "lead" the desired altitude. In the event that a difference exists between the altitude engage point and the altimeter the altitude may be modified.

To modify the selected altitude, depress the UP-DN modifier switch, in the direction of desired change, for the required time period. The UP-DN modifier will change the reference altitude 20 feet per second of switch activation, i.e. if a barometric change requires a 40' climb to return to the desired altitude, depress the "UP" modifier switch for approximately two seconds. The aircraft will slowly change altitude to the new reference.

NOTE: The total range of the modifier in "ALT" mode is 200 feet of change. If more than 200 feet of change is required after "ALT" mode engagement, it will be necessary to return to VS mode and reselect "ALT" mode when the desired altitude is reached.

GLIDE SLOPE COUPLING

AUTOMATIC ARM-ENGAGE

To arm the automatic glide slope capture feature, the following conditions must be met:

1. NAV Receiver tuned to a localizer frequency.
2. GS signal must be valid - no flag.
3. Autopilot must be in "NAV-APR" mode and in "ALT" mode.
4. Aircraft must be 60%, or more, under the GS centerline and be within 50% radio deviation of the localizer centerline. (If less than 60% under GS, system will not arm automatically and manual arm procedure must be used).

Glide Slope arming will occur when the above conditions have been met for approximately ten (10) seconds and will be indicated by lighting the "GS" annunciator while the "ALT" annunciator remains lighted.

Glide Slope capture is indicated by the extinguishing of the "ALT" annunciator.

MANUAL ARM-AUTOMATIC ENGAGE

If approach vectoring results in the aircraft being above the glide slope at the intercept point, the system may be manually armed by selecting the "ALT" mode switch to engage altitude and then selecting "ALT" a second time to command arming. If all other conditions have been met, "GS" will immediately engage, extinguishing "ALT".



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GLIDE SLOPE FLIGHT PROCEDURE

Approach the GS intercept point (usually the O.M.) with the flaps set to approach deflection of 10° - 20° (See Limitations Section) and with the aircraft stabilized in altitude hold mode. At the glide slope intercept, lower the landing gear and adjust power for the desired descent speed. For best tracking results make power adjustments in small, smooth increments to maintain desired airspeed. At the missed approach point or the decision height, disconnect the autopilot for landing or for the go-around maneuver. (See Limitations Section). If a missed approach is required, the autopilot may be re-engaged after the aircraft has been reconfigured for and established in a stabilized climb.

ELEVATOR TRIM INDICATOR

The autopilot pitch servo contains a sensor to detect the out of trim loads being imposed on the autopilot during maneuvers producing a trim change. When the out of trim force exceeds a preset amount, the "TRIM" annunciator in the condition window will illuminate along with the UP-DN modifier switch button to indicate the direction of required trim. The annunciations will be accompanied by a low level audio signal and will be steady for approximately five seconds and will flash thereafter, until the aircraft is retrimmed. For instance, if the "TRIM" and "UP" lights are illuminated, you must TRIM "UP" to extinguish the lights and restore trim.

NOTE: If the trim indicator is illuminated and the autopilot is disconnected there will be a residual out of trim force at the control wheel - be alert for this condition if you disconnect the system with the trim lights ON .

AUTOTRIM (IF OPTIONAL AUTOTRIM IS INSTALLED)

If the autopilot is equipped with the optional electric autotrim system, the aircraft elevator trim will be maintained automatically when the "TRIM" Master Switch is "ON" and a pitch mode is selected. When trim master switch is "ON", the trim indicator lights are disabled. Should the trim power fail or the switch be "OFF", the indicator lights will return to operation automatically. Refer to Section 4-3 Pre-Flight Procedures for check-out information. The S-TEC electric trim system is designed to accept any type of single failure (either electrical or mechanical) without uncontrolled operation resulting. To assure that no hidden failures have occurred, conduct the trim preflight check prior to each flight.

NOTE: With optional autotrim system installed, do not overpower autopilot pitch axis for more than three (3) seconds because autotrim will operate to oppose the pilot causing an increase in overpower loads. If necessary to overpower the pitch axis, immediately disconnect the autopilot using the control wheel disconnect switch.



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FLIGHT DIRECTOR (ATTITUDE DIRECTOR INDICATOR - ADI)(OPTIONAL)

optional A.D.I. is a two-cue type providing a vertical steering bar for roll commands and a horizontal steering bar for pitch commands. The instrument includes "FD" Flag which is in full view when the steering bars are not active. The horizontal pitch steering bar is biased out of view when the "FA/AP" Master Switch "ON" until a pitch mode is selected.

The FD includes a remote switch to allow use of the FD without the autopilot. When the autopilot is engaged the flight director is automatically provided.

The FD may be used in roll only or in roll and pitch and is programmed by use of the autopilot mode switches. A remote pitch parallax adjustment is provided to change the height of the pitch steering bar for different seat positions or heights.

Proper flight technique for a two cue steering presentation requires the pilot to roll and pitch the aircraft toward the steering bar until the bars return to the center which indicates the commands are satisfied. For instance, if the vertical (roll) bar is left and the pitch bar is up, the pilot would start a bank to the left and a pitch up attitude change. As the bank angle and vertical speed approach the required values, the bars will move to the center or "cross haired" position. At this point you have the command satisfied. Thereafter, it is only necessary to maneuver the aircraft to keep the steering bars "cross haired" in order to accurately fly modes programmed. It should be noted that accurate flight director flight demands that the pilot stay alert to the movement of the steering bars and maneuver the aircraft in a timely fashion to bar commands.

SECTION V

OPERATIONAL DATA

Text of this Section not affected by installation of this equipment.

SECTION VI

REQUIRED OPERATING EQUIPMENT

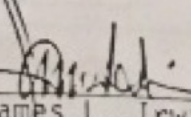
Text of this Section not affected by installation of this equipment.

SECTION VII

WEIGHT AND BALANCE

Text of this Section not affected by installation of this equipment.

APPROVED


James L. Irwin

S-TEC CORPORATION

DAS 5 SW

P/N 8963-1

**WARRANTY CLAIM?
WARRANTY QUESTIONS?
BATTERY SERVICING?**

Call the Warranty Helpline First !!!

(800) 456-0070

Ext. 7 or 8

Upon Initial Installation of your New "Gill" Aircraft Battery be sure to follow all of the appropriate servicing instructions!!!

Why should you follow our servicing instructions prior to the installation of your New "Gill" Battery in your aircraft?

By the time your battery leaves our manufacturing plant, you can be assured that it has been assembled and inspected by many skilled manufacturing and quality assurance technicians.

We take a lot of pride in our battery products, and it is important to all of us that you are completely satisfied with your new "Gill" Battery purchase and the performance of the product that you receive.

Not many of our batteries experience manufacturing problems, but any of those that do, we want to know about immediately! We're here to help solve any problems and to advise if a warranty claim is necessary.

If you are not experiencing problems, but you have questions or concerns, we're here to help you. Please use our toll free number (800) 456-0070 Monday through Friday during our normal business hours and talk to one of our product support technicians. Our product support team will be happy to advise and answer your questions on how to correctly care for your New "Gill" Battery.

We know that you want a quality battery (for your dollars) that you can depend on start after start, so please follow our servicing instructions and feel free to call us if you need assistance, and before processing a warranty claim. If you need to process a warranty claim we can help expedite the replacement process.

Thank you for helping us provide you with the most reliable product and customer service support program that you've ever experienced! After all we want you to always specify a "Gill" for your aircraft!

Battery Type / "Gill" Part Number _____ Serial Number _____



S/N G01720697

"Gill" Aircraft Battery Limited Warranty Adjustment Certificate

"Gill" Battery Part Number 6-243 Serial Number G01720697

"Gill" Helpline for warranty questions and expedition authorization number _____ (provided by Teledyne "Gill")
1(800) 456-0070 Ext 7 or 8

Description of defect: Dead Cell Won't Take Charge Shorting Won't Hold Charge

Cell Specific gravity readings 1. _____ 1. _____ 1. _____ 1. _____ 1. _____ 1. _____
1. _____ 1. _____ 1. _____ 1. _____ 1. _____ 1. _____

Installation Date 8-7-97 Date Removed from Service _____

Customer Name Lyon Credit Services Dealer Facility South Florida Aircraft

Your Aircraft Make Cessna & Model Number R182

Call the Warranty Helpline Prior to Submitting Your Battery for Warranty Consideration.

1 (800) 456-0070 Ext. 7 or 8 • 1 (909) 793-3131 Ext. 7 or 8

Customers located outside of the U.S., please contact your local Dealer/Distributor for Warranty Processing information or call us for help at (909) 793-3131 or FAX us with your questions at (909) 793-5818



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WARRANTY QUESTIONS?
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Upon Initial Installation of your New "Gill" Aircraft Battery be sure to follow all of the appropriate servicing instructions!!!

Why should you follow our servicing instructions prior to the installation of your New "Gill" Battery in your aircraft?

By the time your battery leaves our manufacturing plant, you can be assured that it has been assembled and inspected by many skilled manufacturing and quality assurance technicians.

We take a lot of pride in our battery products, and it is important to all of us that you are completely satisfied with your new "Gill" Battery purchase and the performance of the product that you receive.

Not many of our batteries experience manufacturing problems, but any of those that do, we want to know about immediately! We're here to help solve any problems and to advise if a warranty claim is necessary.

If you are not experiencing problems, but you have questions or concerns, we're here to help you. Please use our toll free number (800) 456-0070 Monday through Friday during our normal business hours and talk to one of our product support technicians. Our product support team will be happy to advise and answer your questions on how to correctly care for your New "Gill" Battery.

We know that you want a quality battery (for your dollars) that you can depend on start after start, so please follow our servicing instructions and feel free to call us if you need assistance, and before processing a warranty claim. If you need to process a warranty claim we can help expedite the replacement process.

Thank you for helping us provide you with the most reliable product and customer service support program that you've ever experienced! After all we want you to always specify a "Gill" for your aircraft!

Battery Type / "Gill" Part Number _____ Serial Number _____



**S/N G01583725
USE 1.285 S.G. ACID ONLY**

"Gill" Aircraft Battery Limited Warranty Adjustment Certificate

"Gill" Battery Part Number G243 Serial Number _____

"Gill" Helpline for warranty questions and expedition authorization number _____ (provided by Teledyne "Gill")
1(800) 456-0070 Ext 7 or 8

Description of defect: Dead Cell Won't Take Charge Shorting Won't Hold Charge

Cell Specific gravity readings 1. _____ 1. _____ 1. _____ 1. _____ 1. _____ 1. _____
1. _____ 1. _____ 1. _____ 1. _____ 1. _____ 1. _____

Installation Date 3-27-95 Date Removed from Service _____

Customer Name FIRST AVIATION Dealer Facility AVIALL

Your Aircraft Make CESSNA & Model Number R182 S/N 00616

Call the Warranty Helpline Prior to Submitting Your Battery for Warranty Consideration.

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