# WRECKAGE DOCUMENTATION

## COMPONENT CONDITION

D - DESTROYED	F - FIRE DAMAGE	U/K - UNKNOWN
B - BROKEN	I - IMPACT DAMAGE	N/A - NOT APPLICABLE
N - NO DAMAGE	S - SEPARATED	N/O - NOT OBTAINABLE
NOTE DIRECTION OF FAILURE		N/L - NOT LOCATED

LEFT WING		RIGHT WING	
ATTACHMENT FWD	S	_ ATTACHMENT FWD	S
MAIN	S	MAIN	S
AFT	S	AFT	S
LEFT STALL STRIP(S)	N/A	RIGHT STALL STRIP(S)	N/A
LEFT FUEL TANK(S)	I,D	RIGHT FUEL TANK(S)	I,D
LEFT FUEL FILLER NECK		RIGHT FUEL FILLER NECK	
RESTRICTOR(S)	N/D	_ RESTRICTOR(S)	S
LEFT AILERON	_ 1	RIGHT AILERON	
BALANCE WEIGHT	N/O	BALANCE WEIGHT	N/O
CONTROL CABLES	S	CONTROL CABLES	S
STOP ASSEMBLY	_ 1	STOP ASSEMBLY	1
LEFT FLAP		_ RIGHT FLAP	
POSITION	DOWN	_ POSITION	UP
MECHANISM	N	_ MECHANISM	N
LEFT MAIN GEAR COND.	_ 1	RIGHT MAIN GEAR COND.	1
POSITION	FIXED	POSITION	FIXED
TAIL SURFACES		<u>FUSELAGE</u>	
VERT. STABILIZER	N	FWD CABIN DOOR	D,I
RUDDER	N	AFT CABIN DOOR	N/A
BALANCE WEIGHT	N/A	FWD BAGGAGE DOOR	N/A
CONTROL CABLES	_S	AFT BAGGAGE DOOR	N/A
STOP ASSEMBLY	N	NOSE SECTION/COWL	D
HORIZ. STAB.	N	HYDRAULIC PUMP	N/A
BALANCE WEIGHT(S)	N/A	BATTERY	1
CONTROL CABLES	S	NOSE GEAR\TAIL WHEEL	N
STOP ASSEMBLY	1	POSITION	N/A
		EMERGENCY EXIT	N/A

TRIM TAB POSITIONS				
	SHAFT		LEADING EDGE	TAB LEFT/RIGHT
	EXTENSION	THREADS	TRAILING EDGE	UP/DOWN
RUDDER	N/A	N/A	N/A	N/A
HORIZONTAL STAB	N/O	8	NEUTRAL	N/A
AILERON	N/A	N/A	N/A	N/A

#### COCKPIT DOCUMENTATION THROTTLE POSITION **OPEN FUEL FLOW** N/A MIXTURE POSITION N/O **FUEL PRESS** N/A PROP CONTROL POS. N/A **OIL PRESS** N/O OFF N/O CARB HEAT/ALT AIR OIL TEMP COWL FLAP(S) N/A CYL. HD. TEMP N/O **EGT POSITION** N/O AMPMETER N/O MANIFOLD PRESSURE N/A I. "O' **VOLTMETER INSTRUMENTS CLOCK** N/O FUEL QUAN. LM: Ε RM: Ε I. 66 MPH N/A **AIRSPEED** LT TIP: RT TIP: N/A **OFF** RATE OF CLIMB N/L MASTER SWITCH ALTIMETER N/L ALTERNATOR N/O **KOLLSMAN** N/O LT ON RT ON ENG. MAG DG/HSI **FUEL PUMP** I,D N/A I.D I, ACTIVATED ARTIF. HORIZON/FD CIRCUIT BREAKERS TURN INDICATOR I,B INSTRUMENT LIGHTS Ι SUCTION/PRESSURE U/K NAV. LIGHTS **COMPASS** U/K ANTI-COLLIS, LIGHTS Ν RADAR ALTITUDE N/A LANDING LIGHTS **HOBBS METER** N/L **TACHOMETER** ı INDICATION: **RPM** "O" **HOURS** 1,223.1 LANDING GEAR INDICATOR N/A **ENGINE PRIMER** Ν GEAR HANDLE/SWITCH N/A CONDITION/POSITION EMER. GEAR CONTROL N/A **OXYGEN CONTROL** N/A REMOTE E.L.T. SWITCH N/A CONTROL WHEEL/STICK I,S ELEVATOR TRIM IND. I,U/K CONTROL COLUMN/CABLES N/A / AILERON TRIM IND. N/A RUDDER PEDAL ASSY I,B RUDDER TRIM IND N/A FLAP HANDLE/SWITCH I,U/K CONDITION/POSITION N/A FLAP INDICATOR FUEL SELECTOR POSITION BOTH **ICE PROTECTION ENVIRONMENTAL** CABIN HEAT **OFF** PITOT HEAT U/K N/A N/A **VENT BLOWER** STALL WRN HEAT AIR CONDITIONING N/A PROP HEAT N/A CABIN DEFROSTER **OFF** WINDSHIELD HEAT N/A

FRESH AIR INTAKE

MODEL/TYPE

N/A

EMERGENCY LOCATION TRANSMITTER INSTALLED?

DID IT HELP LOCATE AIRCRAFT?

U/K

DID E.L.T. FUNCTION?

N/A

**BATTERY DATE** 

U/K

U/K

NO

U/K

U/K

**DE-ICE BOOTS** 

Χ

NO

NO

YES

S/N U/K

YES

YES

# **AVIONICS**

AUTOPILOT MANUFACTURER N/A	MODEL	N/A	S/N _	N/A	
AUTOPILOT CONTROL BOX N/A HEADING BUG POSITION N/A ALTITUDE PRESELECT N/A COUPLER SWITCH POSITION N/A		CABLES/SERVOS	N/A N/A N/A N/A		
AVIONICS MASTER SWITCH CONDITION/POSI	ITION N/A				
AUDIO SELECTOR PANEL MODEL N/A TRANSMIT SELECT POSITION COM	11	CONDITION I			
AUDIO SWITCH POSITIONS  COM 1			NAV 2 AUTO	N/A N/A	
RADIO FREQUENCIES COM 1 U/K COM 2 N/A	NAV	1 <u>U/K</u>	NAV 2	N/A	
NAV 1 INFORMATION OBS POSITION I, N/O NEEDLE POSITION CENTERED FLAG NOT VISIBLE					
NAV 2 INFORMATION OBS POSITION N/A NEEDLE POSITION N/A N/A N/A					
GPS SYSTEM GARMIN MODEL GARMIN GNC-250 SWITCH POSITIONS OR DISPLAY INFORMATION I, N/O					
TRANSPONDER SWITCH POSITION I, N/O CODE N/O					
MISCELLANEOUS AVIONICS OR NON-STANDARD ELECTRICAL EQUIPMENT: EGT/CHT GAUGE, INTERCOM,GPS/COM					

SEAT ASSE	MBLY DOC	UMENTATION						
POSITION	DESCRIBE THE CONDITION OF EACH SEAT, SEAT FRAME, AND SEAT TRACK AS WELL POSITION AS THE CONDITION AND USAGE OF SEAT BELTS AND SHOULDER HARNESSES.				WELL			
FRONT		ROKEN, BENT, R HARNESS C					GE. PILOT'S BEL	T AND
AFT		DIFIED BY STC RESTRAINT S					RESCUE PERSON	INEL.
-								_
								_
BAGGAGE T		INSTALLED? USED?		YES YES		NO	U/K U/K	X
CONDITION	OF BAGGA	GE TIE DOWNS	S <u>U/</u>	K				
<u>FIRE</u>								
FIRE IN FLICE EXPLAIN:	GHT?	YES	_ NO	Χ	_ U/K _			
FIRE AFTER IMPACT? YES NO _X U/K								
INCLUDE A DETAILED DESCRIPTION OF THE AREAS BURNED, SOURCE OF IGNITION AND DAMAGE TO SURROUNDING AREA.								
AIRFRAME NOTES								
DAMAGE	DAMAGE TO THE AIRCRAFT							
The aircraft was destroyed.								
OTHER DA	AMAGE							

There was no other damage.

## **AIRCRAFT INFORMATION**

# Accident/Incident History

A search of both the FAA and NTSB found no other record of any incident or accident involving this registration.

#### AIRFRAME AND ENGINE LOGBOOKS

The aircraft had several modifications installed; including vortex generators on both wing's leading edges, A Lycoming 0-360C4P (180 HP) engine in lieu of the Factory original 0320-A2B (150HP) along with a new larger diameter Sensenich propeller. There were radio tracking antenna arrays attached to the left and right, aft main wing struts. The fuel system had been modified to allow a "both" position for fuel tank selection and the fore and aft header tanks were removed, plus various other STC'd installations recorded in the airframe and engine log books.

# WRECKAGE/IMPACT INFORMATION

On June 26, 2008, an off accident site wreckage review was performed in a T-Hangar that the aircraft was placed in when it was removed from the accident site.

In attendance were (2) Federal Aviation Administration officials from the Flight Standards District Office (FSDO-15), located in Tampa, FL. and a Piper Air safety Investigator. The wreckage was laid out in the T-hangar with the left and right wings lying on the floor against the hangar walls and the fuselage placed in the center of the hangar. All flight controls were accounted for and were attached to the wings, horizontal stabilizer and vertical fin. The engine was attached to its mount and the mount to the fuselage frame. The propeller was attached to the engine.

## Left Wing

The left wing was removed by Rescue Personnel, by cutting through the main spar and attach fittings. The leading edge from the wing root to the tip was crumpled aft by impact. The fuel tank was caved in. The tank was devoid of fuel. The fuel cap was present The forward and aft lift struts were attached to the wing and creased and bent at the jury strut attach area. There was an antenna array attached to the aft lift strut, apparently used for animal tracking. The flap was attached to its' hinges and the wing and exhibited some impact damage. Control cable continuity was traced and found that the cable was cut by rescue personnel at the wing root. The aileron was attached to the wing by it's' hinges and had some minor damage, control cable continuity was traced to the bottom of the lift strut and was found to have been severed by Rescue Personnel. The wing tip exhibited impact damage.

## **Right Wing**

The right wing was removed by Rescue Personnel, by cutting through the main spar and attach fittings. The leading edge from the wing root to the tip was crumpled aft by impact. The fuel tank was caved in and its fuel filler neck with cap attached was severed. The tank was devoid of fuel. The forward and aft lift struts were attached to the wing and creased and bent at the jury strut attach area. There was an antenna array attached to the aft lift strut, apparently used for animal tracking. The flap was attached to its' hinges and the wing and exhibited some impact damage. Control cable continuity was traced and found that the cable was cut by rescue personnel at the wing root. The aileron was attached to the wing by it's' hinges and had some minor damage, control cable continuity was traced to the bottom of the lift strut and was found to have been severed by Rescue Personnel. The wing tip exhibited impact damage.

#### **Empennage**

The tail surfaces were intact. The left elevator inboard trailing edge was bent upward. The rudder to vertical fin attachment was secure. All fuselage flight control cable continuity was verified to the point where they were cut by Rescue Personnel and found to be continuous for all flight controls, however the flap control cable was not connected to the flap lever. The attaching bolt was not present and could not be located in the fuselage. The engine drive train continuity could not be determined at this time due to fuselage frontal impact damage.

# <u>Fuselage</u>

The fuselage cabin area exhibited severe damage from ground impact and the requirement to cut the tube fuselage frame by Rescue Personnel. Several STC'd modifications were present including a fuel tank selector valve, passenger seating, cargo storage area, ski tube and strakes attached just forward of the left and right horizontal surfaces leading edges. Several tubes in the aft tail were bent. Flight control continuity was established to all flight controls, except for impact and recovery related separations. No airframe anomalies were found during the examination. The landing gear was attached to the fuselage frame and exhibited impact damage.

POWERPLANT				
MANUFACTURER SERIAL NUMBER OVERHAUL BY	LYCOMING L-35913-36A FACTORY NEW		MODEL <u>0-360</u> OVERHAUL DATE	
CARBURETOR/INJE	CTOR			
MODEL CONDITION	MA-4-5 INTACT	SERIAL I	NUMBER <u>7507</u>	2707
CONTROLS/ATTAC THROTTLE CABLE POSIT	E INTACT / WIDE OPEN	MIXTUR E	ARM BROKEN OFF,	CONNECTED TO CONTROL CABLE.
FUEL PRESENT - C ANY NOTICEABLE FUEL SCREEN CLE		BUTOR? YES YES YES	NO NO NO	X U/K
AIR INLET HOSE/F	ILTER CONDITION I			
ENGINE COMPONE	NTS			
VACUUM PUMP MO	ODEL RAPCO RA 2150	CC SE	RIAL NUMBER _	A17977
PROPELLER GOVE CONTROL ARM PO			CONDITIO	ON <u>N/A</u>
OIL COOLER AND FUEL PUMP AND L GASCOLATOR AND		DAMAGE N/A		RAL MOUNT TUBE. IMPACT
TURBOCHARGER				
MAKE N/A TURBO	MODEL _ D FREE ROTATION?	N/A YES N	SERIAL NUM /A NO N/A	-
SPARK PLUGS:				
	MPION RMAL	PART	NUMBER N/A	
MAGS				
	LICK LICK	MODEL 4371 MODEL 4370		S/N 97091253 S/N 97090299
LEFT MAG TESTEL RIGHT MAG TESTE		U/K	RESULTS RESULTS	SPARKED SPARKED

CRANKSHAFT PISTON MOVE CRANKSHAFT	MENT  CONDITION IN	YES X YES X YES X	NO NO	U/K U/K U/K					
ENGINE CASE	CONDITION IM	PACT DAMAGE	AT OIL SUM	P					
ANY BENCH-T BY WHOM?	ESTING OR TEAR I	DOWN EXAMINA	ATION PLAN	NED YES WHEN _		NO	X	U/K _	
ANY INDICATION EXPLAIN*	ON OF AN ENGINE	PROBLEM?		YES*		NO	Χ	U/K _	
PROPELLER									
MAKE MODEL HUB S/N BLADES S/N	SENSENICH 76EM8-0-56 32000K N/A								
ANY EVIDENC EXPLAIN	E OF PROPELLER	PROBLEMS?	YES	NO	X		U/K		
WERE ALL BLADES RECOVERED?         YES X         NO U/K           WERE ALL THE PARTS RECOVERED?         YES X         NO U/K									
DESCRIPTION OF BLADES: BOTH BENT AND TWISTED, ONE BLADE CURLED FORWARD AT TIP									

#### **POWERPLANT AND PROPELLER NOTES**

On July 09, 2008 the engine was examined at Quality Aircraft Salvage of Groveland, FL. by a Lycoming Air Safety Investigator and FAA Personnel, after the wreckage was repositioned to that facility.

The engine was removed from the wreckage, drive train continuity was established, and all accessories were inspected. Thumb compression was noted on all cylinders. Fuel was not noted in the carburetor bowl or the gascolator. The float level was set at 7-8 / 64th, should be 13/64 nominally. Floats not collapsed from fuel hydraulic force. Throttle valve free to move. The mixture control arm still attached to it's control cable was off the mixture shaft located on the carburetor. No engine anomalies were noted during the examination.

The propeller, a Sensenich Model 76EM8-0-56, was removed from the powerplant. The blades were twisted and bent. One tip was curled forward. Both blade's leading edge exhibited polishing.

AIRCRAFT DOCUMENTS	
	ES X NO NOT AVAILABLE S X NO*
	ES X NO NO* NO* NO*
AIRCRAFT TOTAL TIME AT OCCURANCE: 1,223.1 HC	DURS
ETC.) PERFORMED BY CARTER AIRCRAFT, INC. OF SEBR	E PERFORMED BY/WHEN: (REPAIR STATION,A&P, IA, RING, FL ON FEBUARY 25, 2008.SEE LOG BOOK PAGES.  TEX GENERATORS BOTH WINGS, HORIZONTAL TAIL
STRAKES, FUEL SELECTOR VALVE, ENGINE TO 180 EGT/CHT, 76EM8-0-56 PROP. REFER TO INCLUSIVE	
LAST STATIC SYSTEM CHECK LAST VOR RECEIVER CHECK LAST TRANSPONDER CHECK LAST ALTIMETER CALIBRATION ALT. WERE THE FOLLOWING DOCUMENTS ON BOARD T	DATE U/K X  DATE U/K X  DATE U/K X  THE AIRCRAFT?
AIRCRAFT FLIGHT MANUAL/PILOT OPERATING HAN AIRCRAFT REGISTRATION AIRWORTHINESS CERTIFICATE	
WITNESSES	
NAME RICHARD DeBRULER ADDRESS XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	NAME ADDRESS  PHONE STATEMENT INCLUDED? YES NO
NAME ADDRESS PHONE	NAME ADDRESS  PHONE STATEMENT INCLUDEDS VES
STATEMENT INCLUDED? YES NO	STATEMENT INCLUDED? YES NO