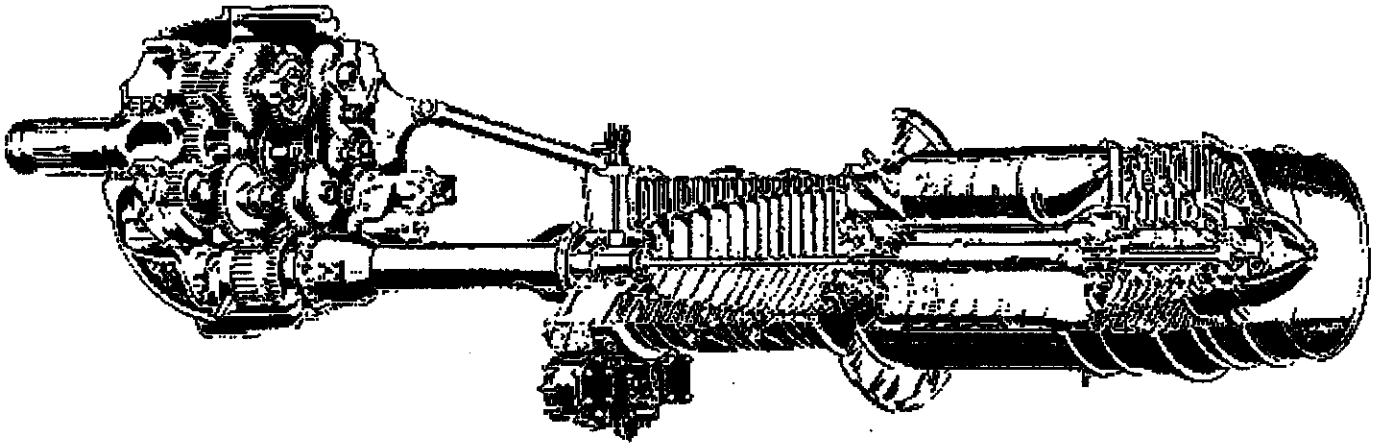
Rolls-Royce

Accident investigation

On-site engine Investigation report

Rolls-Royce Corporation
Model T56-A-9D
Engines AE100843, AE101504, AE101267, A100814



Hawkins & Powers
Walker, California

Michael A. Weber

Michael A. Weber
Senior Air Safety Investigator

Accident date: June 17, 2002
Investigation date: June 18-20, 2002
Report date: July 26, 2002

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1. SYNOPSIS

On June 17, 2002, about 15:00 hours local time, a Lockheed C130A aircraft, N130HP, operated by Hawkins & Powers, experienced an in flight structural break up and was destroyed in a post crash fire. The mishap occurred near Walker, California. The three crew members received fatal injuries. The NTSB-SWR office was charged with conducting the investigation. The NTSB IIC requested assistance from the airframe and engine manufacturers for the investigation. Rolls-Royce and Lockheed Martin complied with the request. This report presents the facts and findings of the aircraft and engine examinations conducted on-site at Walker, California on June 19-21, 2002.

2. FACTUAL INFORMATION

2.1 History of Flight

The C130A Aircraft had departed Minden, Nevada, at an undetermined time, to participate in fire fighting efforts near Walker, California. A Company flight plan had been filed and visual meteorological conditions prevailed. The U.S. Forestry Service was operating the aircraft for the public use fire fighting flight under 14 CFR Part 91. The aircraft had just made a pass over a fire and dropped a load of fire retardant when the incident occurred. The aircraft was registered to Hawkins and Powers Aviation, Inc., Greybull, Wyoming.

2.2 Personnel Information

The three crewmembers were Steve Wass, Greg Labaire, and Mike Davis. No additional information was provided

2.3 Injuries to Persons

Injuries to all three crewmembers were fatal.

2.4 Aircraft Information

Model	Lockheed C130A
Serial Number	3146
Registration Number	N130HP
Airframe Total Time	21863.0
Last "A" check Inspection	21863.0
Last "B" check Inspection	21695.5
Last "C" check inspection	21401.5

Engine Model	Allison T56-A-9D
Rating:	3750 Shaft Horsepower
Engine Position Number 1	AE100843
Engine Total Hours	10100.4
Last "A" check Inspection	10100.4
Last "B" check inspection	1580.2
Last "C" check inspection	1253.5

Engine Model	Allison T56-A-9D
Rating:	3750 Shaft Horsepower
Engine Position Number 2	AE101504
Engine Total Hours	9943.5
Last "A" check Inspection	9943.5
Last "B" check inspection	9893.1
Last "C" check inspection	9598.7

Engine Model	Allison T56-A-9D
Rating:	3750 Shaft Horsepower
Engine Position Number 3	AE101267
Engine Total Hours	10875.1
Last "A" check Inspection	10875.1
Last "B" check inspection	10679.9
Last "C" check inspection	10385.5

Engine Model	Allison T56-A-9D
Rating:	3750 Shaft Horsepower
Engine Position Number 4	A100814
Engine Total Hours	Unknown/TSO 2612.5
Last "A" check Inspection	2612.5
Last "B" check inspection	N/A
Last "C" check inspection	N/A

2.5 Meteorological Conditions

As reported by the NTSB IIC:
Visibility = 10 miles
Clouds = Few scattered
Altimeter = 30.21
Temperature = 23° C
Dew Point = 1° C
Winds = Southwest to Northwest at 6 knots gusting to 10 knots

2.6 Aids to Navigation

There were no known aids to navigation. The flight was operating under visual flight rules (VFR) conditions and the pilot was said to be familiar with the area.

2.7 Communications

None

2.8 Aerodrome Information

None

2.9 Flight Recorder

The aircraft was not equipped with either a Cockpit Voice Recorder or a Flight Data Recorder.

2.10 Wreckage and Impact Information

General Wreckage Site Observations:

The entire most southerly impact area exhibited fire/heat damage to all of the aircraft, engine, and propeller parts/components as well as scorched earth. No fire damage was observed in the most northerly impact area. The area and the aircraft parts around the initial aircraft impact area were covered with fire retardant. No large pieces of the fuselage or cockpit area were recovered except for a section of cargo flooring identified to have been located just aft of the cockpit. Several items were found either on highway 395 or in the brush located west of highway 395, which were not part of the main impact site. A piece of the top of the center wing measuring 276.5-inches long x 44-inches wide (maximum of six stringers) was found on highway 395.

From the seam lines this piece was comprised of 2½ panels with one complete panel. Four panels make up a complete configuration width. A single center wing stringer plus a piece of the upper center wing, measuring 93-inches long x 12.5 inches wide with a lap joint visual, was found in the brush on the west side of highway 395. A wreckage diagram is included as an appendix to this report.

Visual Observations of Individual Components were as noted:

Right wing outer flap and flap track:

The jackscrew was still attached to flap and the jackscrew nut was visible and appeared to be at the 50% position (mid length of the jackscrew). Another jackscrew was found separate from the flap structure but still in this area. The jackscrew nut on this jackscrew was also at the 50% position.

Left outer wing:

The left outer wing was found with a broken outboard rainbow fitting. The wing was found top facing up and the entire wing was consumed by fire.

Bottom of the center wing with the exception of the right outboard 10-inches:

The center wing within the fuselage measured about 110-inches radially (lengthwise) and the entire length should have been 122-inches long. The center wing was found with the bottom facing up and the left inboard engine (No. 2) engine pylon was still attached. The left center wing leading edge was still attached and exhibited heat damage, melting, blistering of the paint and fire consumption of some of the material. Fire damage and blistering of the paint was observed on the inside of the bottom on the center wing section. The most intense fire damage on the inside of the bottom of the center wing section was noted to be in the vicinity of the cross feed manifold. A section of the outer left wing measuring 39-inches long was still attached to the center wing.

From the seam lines this piece was comprised of 2½ panels with one complete panel. Four panels make up a complete configuration width. A single center wing stringer plus a piece of the upper center wing, measuring 93-inches long x 12.5 inches wide with a lap joint visual, was found in the brush on the west side of highway 395.

Note: A wreckage diagram is included as an appendix to this report.

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Two pieces of the top of the center wing were recovered. One piece measured 150-inches long x 79-inches wide (80 inches wide in the entire panel width) with a total of 11 stringers. On this piece a 30-inch section of the outer wing was still attached. The other piece of top of the center wing that was recovered measured 130-inches long x 38-inches wide with a total of 5 stringers.

Right outer wing with rainbow fitting and No. 4 engine nacelle area:

The wing bolts were still secure. The wing was found bottom facing up. The wing exhibited extensive fire damage witch included melting of the skin and the fire consumed some areas. The flap plus flap track was found in the area and was separated from the wing.

The empennage / tail section:

The empennage / tail section was found separated from the rest of the aircraft and was lying on its right side. The empennage / tail section was separated in line with the upper escape hatch attachment. The cargo door and the ramp were both found detached from the aircraft structure. The right horizontal stabilizer was fractured at the root of the vertical stabilizer. The left horizontal stabilizer was intact, with the counterweight still attached, and outer tip exhibited impact damage. The entire left horizontal stabilizer tip was bent downwards, the leading edge of the tip was bent aft, and the skin was compressed. The elevator and rudder boost packs were still attached to empennage. The vertical tail was intact but exhibited impact damage. A hole was observed on the right side middle manual of the rudder. This hole did not pass though to the left side. The lower rudder surface near the horizontal stabilizers was pushed forward and deformed.

2.11 Engine Examination

Engine No. 1

As numbered left to right aft looking forward, SN AE100843, PN 6846583. The last overhaul according to the data plate took place on June 12, 1984 at 8,342 hours on the engine. The torque meter was intact but separated from the inlet housing. A section of the reduction gearbox housing and the drive gears were still attached to the torque meter. The accessory and reduction gearbox housings were fractured and the gears were exposed. The compressor and turbine cases exhibited no breaches. All of the 1st stage compressor blades were intact and none exhibited any bending. The engine was still attached to the pylon and the pylon exhibited fire damage and blistering of the paint. The engine was covered in soot forward of the heat shield.

Engine No. 2

SN AE101504, PN 6897151 as identified by the data plate. The last overhaul according to the data plate took place on October 23, 1978 at 1,229 hours on the engine. The engine was still attached to the pylon. Examination of the 1st stage compressor blades and the 4th stage turbine blades revealed that all the blades were intact and that the blade tips were slightly bent in the direction opposite rotation. The accessory gearbox remained still attached to the engine however; the left side of the accessory gearbox was fractured exposing the accessory gears. The reduction gearbox was fractured exposing the reduction gears. Fire/heat distress was observed forward of the heat shield but none aft of the heat shield. The torquemeter assembly was not attached to the inlet housing.

Engine No. 3

SN AE101267, PN 6897151 as identified by the data plate. The last overhaul according to the data plate took place on May 5, 1984 at 8,454 hours on the engine. The torquemeter was intact but separated from the inlet housing. A portion of the reduction gearbox and drive gear was still attached to the torque meter. The reduction gearbox housing was fractured and the gears were separated from the pinion gear. The compressor and turbine cases exhibited no breaches and the engine remained attached to the pylon. All of the 1st stage compressor blades were intact and some were bent in the direction opposite rotation (the engine rotates counterclockwise from the rear). The remaining 1st stage blades were normal. No signs of fire damage were observed on the engine. Heavy sooting and fire damage was noted on the inlet housing assembly.

Engine No. 4

SN A101267, PN 6897151 as identified by the maintenance records. The 1st and 2nd stage compressor blades were heavily bent in the direction opposite rotation to the point that the blades were laying one on top of the other. The inlet housing, accessory gearbox, and reduction gearbox were all consumed in the post-crash fire. Examination of the 4th stage turbine blades revealed that they were bent over in the direction opposite rotation. The engine was still attached to the pylon and no fire damage was observed aft of the heat shield. The compressor and turbine cases exhibited no breaches.

PROPELLERS

All sixteen-propeller blades were accounted for with six of the blades still attached to the propeller hub and the remaining blades scattered in and around the general area where the wings, propeller assemblies, and engines were found. All of the propeller blades found separated from the propeller assembly exhibited varying degrees of damage which included tip fractures, multiple airfoil fractures, blade butt fractures, airfoil impact marks, airfoil scrape marks, bent airfoils, and twisted airfoils. All the blades were found imbedded into the soil and some exhibited fire damage to the de-icing boot and/or were covered with soot. Three of the propeller blades found separated from the propeller assemblies had numbers on the airfoil. Those numbers were N231, N239471, and N239471.

All four-propeller assemblies were accounted for and were found in and around the general area where the wings and engines were found but were all separated from their respective engine.

2.12 Engine Maintenance and Records.

Engine Position #1

Component	Serial Number	Part Number	Total Time	TSO
Engine	AE 100843	6846583	10100.4	1757.1
Gearbox	Unknown	Unknown	Unknown	Unknown
Power Section	Unknown	Unknown	Unknown	Unknown
Torquemeter	Unknown	Unknown	Unknown	Unknown
Fuel Control	Unknown	Unknown	Unknown	Unknown
Temp Datum Valve	Unknown	Unknown	Unknown	Unknown
Coordinator	Unknown	Unknown	Unknown	Unknown
Fuel Pump	Unknown	Unknown	Unknown	Unknown
Speed Control	Unknown	Unknown	Unknown	Unknown
Speed Valve	Unknown	Unknown	Unknown	Unknown
Torquemeter Pickup	Unknown	Unknown	Unknown	Unknown

Engine Position #2

Component	Serial Number	Part Number	Total Time	TSO
Engine	AE 101504	6897151	9943.5	3802.5
Gearbox	Unknown	Unknown	Unknown	Unknown
Power Section	Unknown	Unknown	Unknown	Unknown
Torquemeter	Unknown	Unknown	Unknown	Unknown
Fuel Control	Unknown	Unknown	Unknown	Unknown
Temp Datum Valve	Unknown	Unknown	Unknown	Unknown
Coordinator	Unknown	Unknown	Unknown	Unknown
Fuel Pump	Unknown	Unknown	Unknown	Unknown
Speed Control	Unknown	Unknown	Unknown	Unknown
Speed Valve	Unknown	Unknown	Unknown	Unknown
Torquemeter Pickup	Unknown	Unknown	Unknown	Unknown

Engine Position #3

Component	Serial Number	Part Number	Total Time	TSO
Engine	AE 101267	6897151	10875.0	2420.0
Gearbox	Unknown	Unknown	Unknown	Unknown
Power Section	Unknown	Unknown	Unknown	Unknown
Torquemeter	Unknown	Unknown	Unknown	Unknown
Fuel Control	Unknown	Unknown	Unknown	Unknown
Temp Datum Valve	Unknown	Unknown	Unknown	Unknown
Coordinator	Unknown	Unknown	Unknown	Unknown
Fuel Pump	Unknown	Unknown	Unknown	Unknown
Speed Control	Unknown	Unknown	Unknown	Unknown
Speed Valve	Unknown	Unknown	Unknown	Unknown
Torquemeter Pickup	Unknown	Unknown	Unknown	Unknown

Engine Position #4

Component	Serial Number	Part Number	Total Time	TSO
Engine	AE 100814	Unknown	Unknown	2612.9
Gearbox	Unknown	Unknown	Unknown	Unknown
Power Section	Unknown	Unknown	Unknown	Unknown
Torquemeter	Unknown	Unknown	Unknown	Unknown
Fuel Control	Unknown	Unknown	Unknown	Unknown
Temp Datum Valve	Unknown	Unknown	Unknown	Unknown
Coordinator	Unknown	Unknown	Unknown	Unknown
Fuel Pump	Unknown	Unknown	Unknown	Unknown
Speed Control	Unknown	Unknown	Unknown	Unknown
Speed Valve	Unknown	Unknown	Unknown	Unknown
Torquemeter Pickup	Unknown	Unknown	Unknown	Unknown

Note: Individual component times and history were not documented. The above times were provided to the author from the owner.

2.13 Additional Information

Focus of the investigation was pointed toward aircraft structural issues based on this aircraft models' previous history. It was the decision of the NTSB IIC and the investigation team that investigation of the engines would be limited to visual on-site observations only.

3. FINDINGS & CONCLUSIONS.

- Visual examination on-site of all four engines did not reveal any evidence of any pre-impact mechanical failures. All damages to the engines were the result of impact forces caused by the crash and the post crash fire.

- All four engines were operating at the time of impact with terrain. Evidence of engine operation at the time of impact was blade bending in the opposite direction of engine rotation noted on the compressor and turbine sections as well as missing gear teeth on accessory gears.

Appendix A.

On-Site

Photographs

At

Walker, California

Photo #1 – Engine wreckage field

Photo #2 – Engine wreckage field

Photo #3 – Aircraft wreckage field

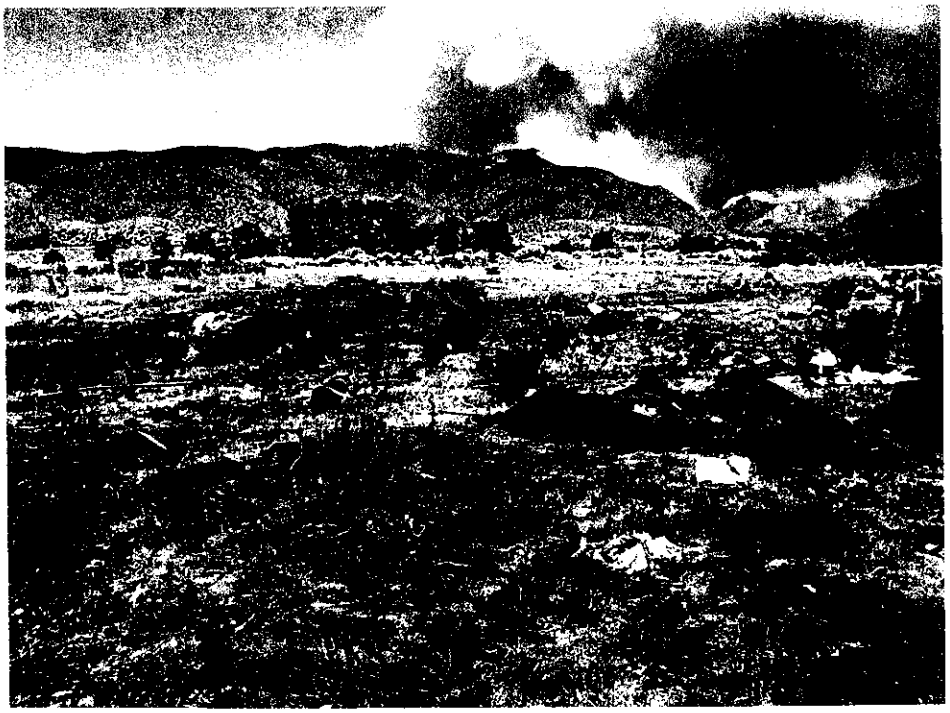


Photo #4 – Aircraft wreckage field

Photo #5 – Aircraft parts

Photo #6 – Aircraft debris

Photo #7 – Flight path

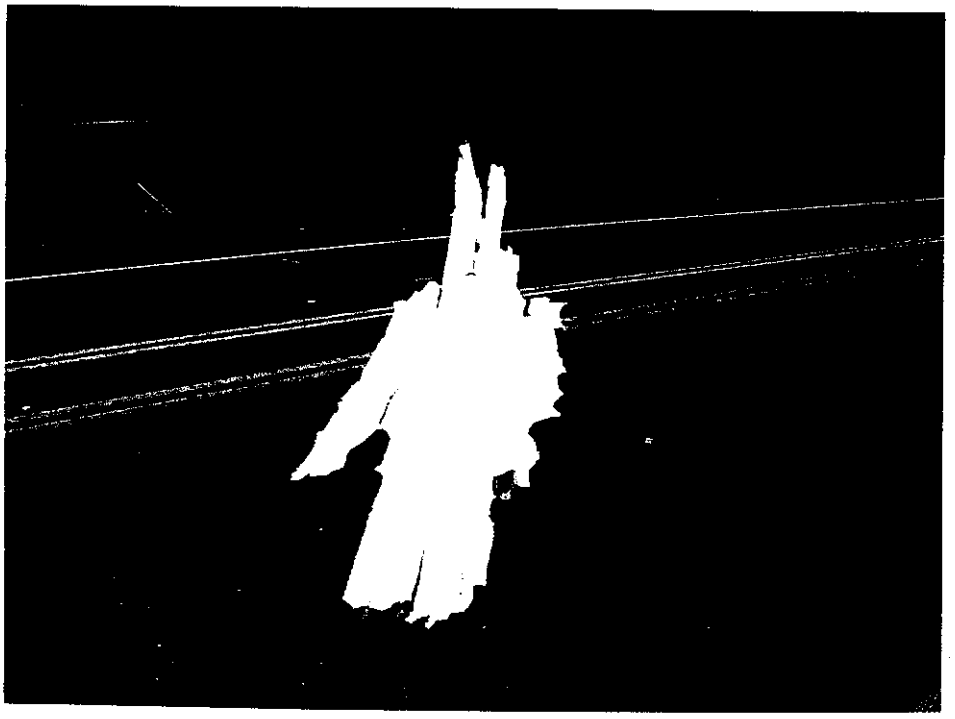


Photo #8 – Debris on road

Photo #9 – Aircraft wing

Photo #10 – Prop and gearbox assembly

Photo #11 – Engine inlet

Photo #12 – Engine inlet

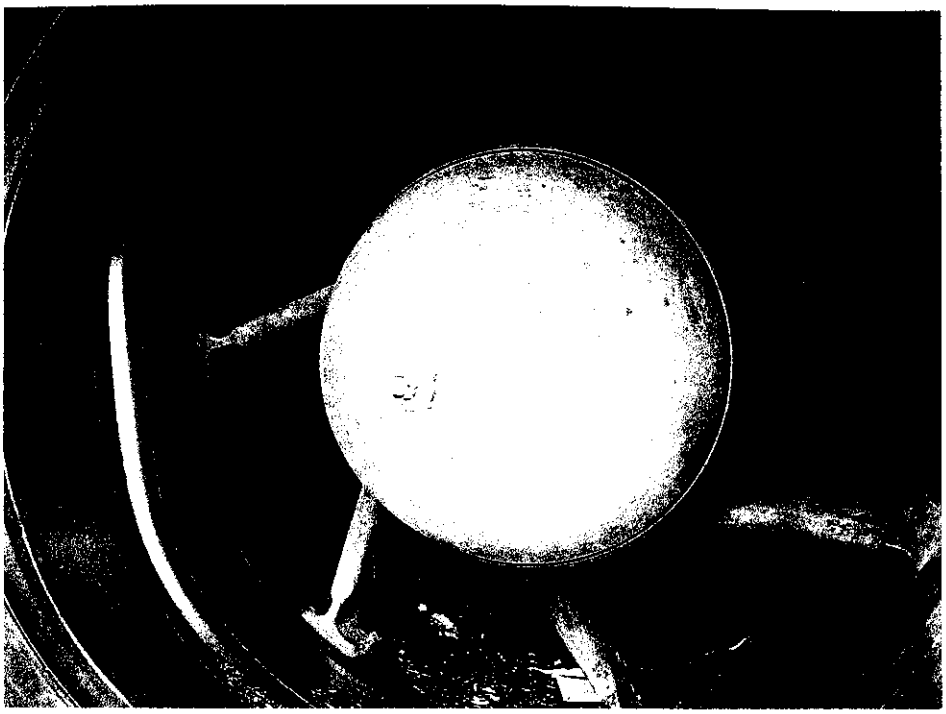


Photo #13 – Engine rear turbine area

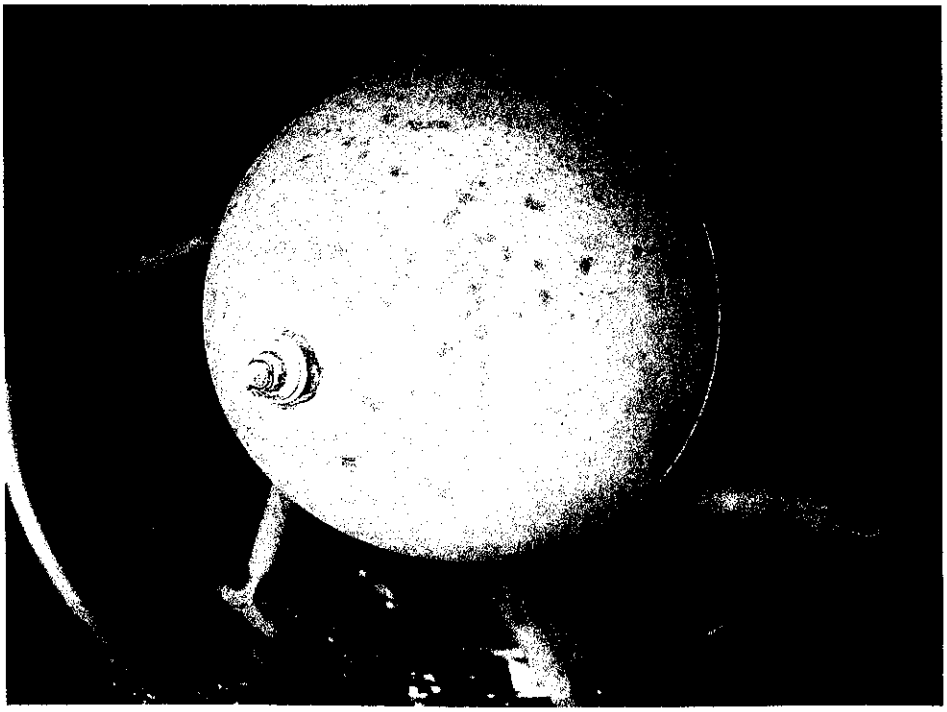


Photo #14 – Engine rear turbine area

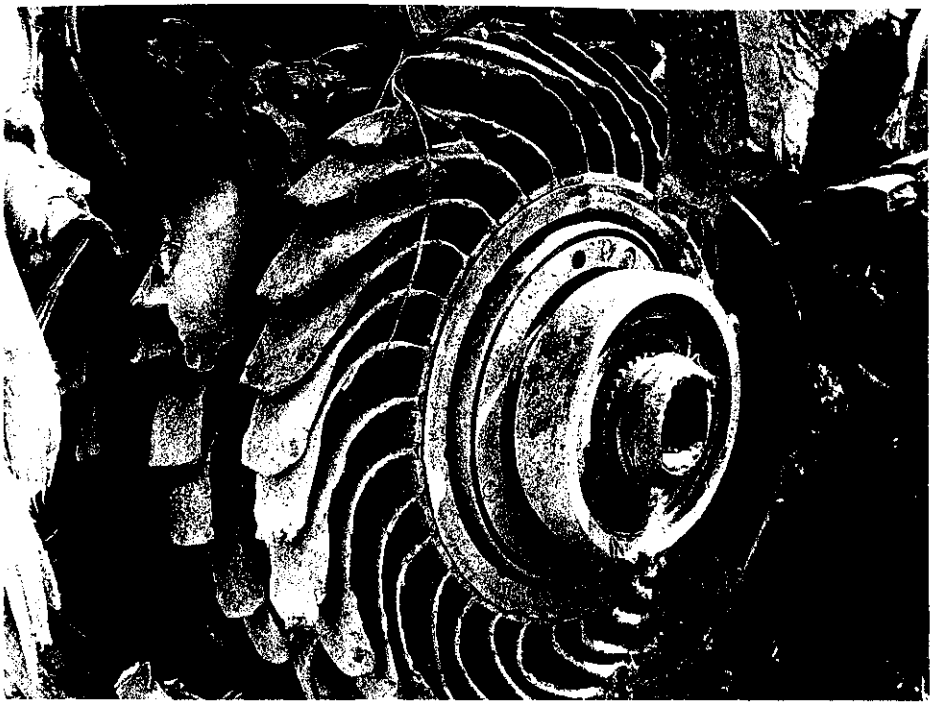


Photo #15 – Engine compressor

Photo #16 – Engine compressor

Photo #17 – Engine debris

Photo #18 – Engine debris

Photo #19 – Engine debris

Photo #20 – Engine debris

Photo #21 – Engine debris

Photo #22 – Engine debris

Photo #23 – Prop and gearbox assembly

Photo #24 – Prop and gearbox assembly

Appendix B.

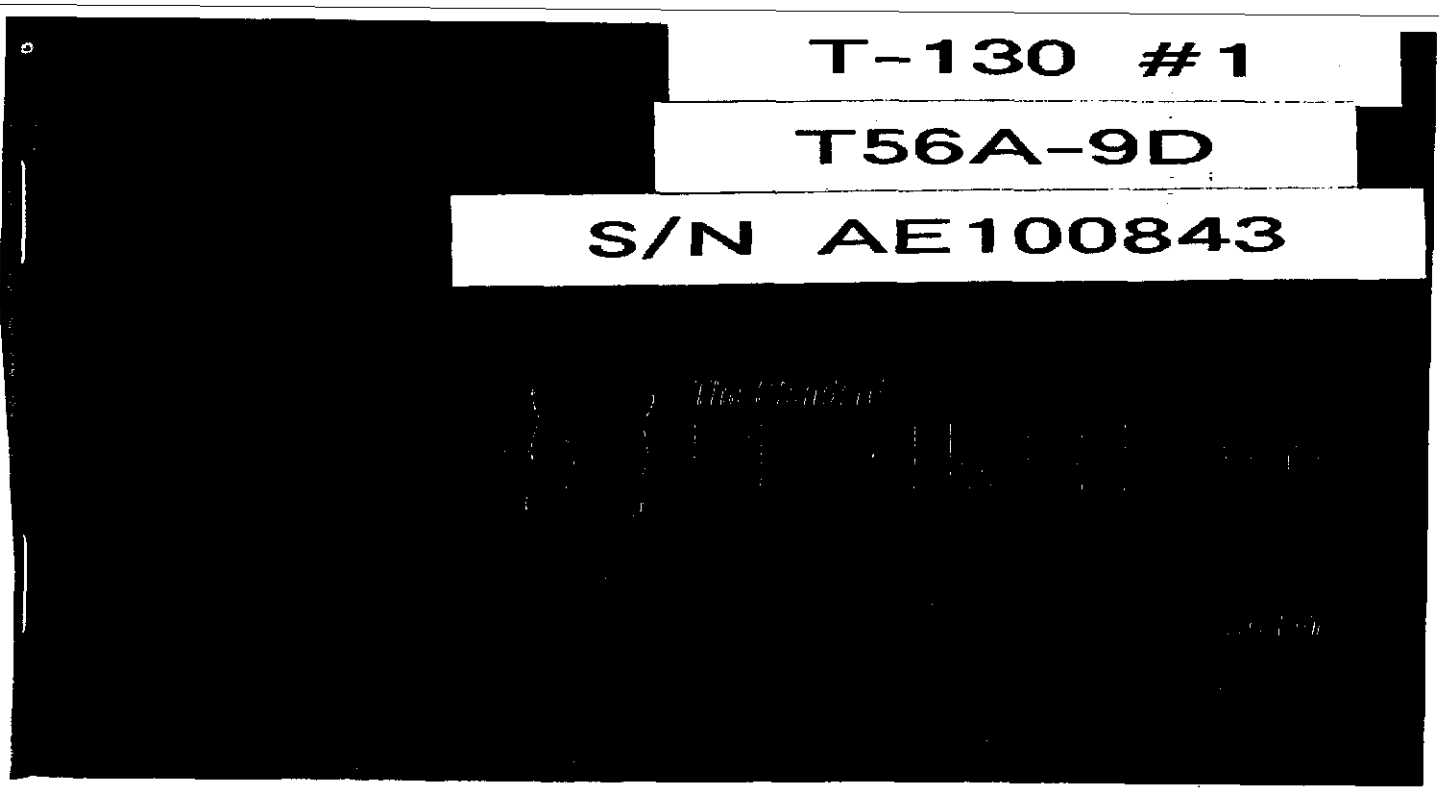
Engine #1

Logbook

T-130 #1

T56A-9D

S/N AE100843



The Standard

ENGINE LOG

ASA-SE-1

Engine Record General Information

Manufacturer Allison **Model** T-56A-9D

Serial AE 84000 100843 **Type Certificate** _____

This engine is currently installed in aircraft T-130 #1

Minimum Octane Fuel _____ **Oil Grade:** Summer _____ Winter _____

Magneto Time _____ **Point Setting** _____ **Firing Order** _____

Spark Plug Gap _____

Manufacturer recommended overhaul at _____ **hours**

The Standard Engine Log
SE-1

ISBN 1-56027-165-5
ASA-SE-1

Published by
Aviation Supplies & Academics, Inc.
7005 132nd Place SE
Renton, WA 98059-3153

Printed in Canada

DATE 1994	RECORDING TACH TIME	TODAY'S FLIGHT	TOTAL TIME IN SERVICE	Description of Inspections, Tests, Repairs and Alterations Entries must be endorsed with Name, Rating and Certificate Number of Technician or Repair Facility. (See back pages for other specific entries.)
4/20			545.4	I certify this ENG has been inspected in accordance with the procedures of an FAA Approved Inspection Program per FAR 91.409 (f) (4), and was determined to be in airworthy condition. Total Time 545.4 Signed [redacted] Date 4/20/94 HAWKINS & POWERS AVIATION, INC. FAA CRS BZBR701C GREYBULL, WYOMING
4/20/94		INSTALLED	ENG # 1 Position T-130 TAT 20082	[redacted]

DATE 1995	RECORDING TACH TIME	TODAY'S FLIGHT	TOTAL TIME IN SERVICE	Description of Inspections, Tests, Repairs and Alterations Entries must be endorsed with Name, Rating and Certificate Number of Technician or Repair Facility. (See back pages for other specific entries.)
11 5	APR 1995		788.09	I certify this ENG has been inspected in accordance with the procedures of an FAA Approved Inspection Program per FAR 91.409 (f) (4), and was determined to be in airworthy condition. Total Time 788.09 Signed [redacted] Date 11 5 APR 1995 HAWKINS & POWERS AVIATION, INC. FAA CRS [redacted] GREYBULL, WYOMING

DATE 19___	RECORDING TACH TIME	TODAY'S FLIGHT	TOTAL TIME IN SERVICE	**Description of Inspections, Tests, Repairs and Alterations** Entries must be endorsed with Name, Rating and Certificate Number of Technician or Repair Facility. (See back pages for other specific entries.)
12 JUN 1996				I certify this ENG has been inspected in ac TAT 20417.05 cordance with the procedures of an FAA Approved WO 96-0035 ~~Inspection Program per FAR 91.409 (f) (4),~~ and was determined to be in airworthy condition. Total Time: 879.5 Signed [redacted] Date 12 JUN 1996 HAWKINS & POWERS AVIATION, INC. FAA CRS BZBR701C GREYBULL, WYOMING
14JUN96			879.5	Removed + Replace turbin assy FAW TO 2J-T5C-16 Leak check Good, Perform seal Break-in TAT 20417.05 TSO ENG 879.5 S/W installed 0428 Ref wo # 96-053 [redacted]

DATE 19___	RECORDING TACH TIME	TODAY'S FLIGHT	TOTAL TIME IN SERVICE	**Description of Inspections, Tests, Repairs and Alterations** Entries must be endorsed with Name, Rating and Certificate Number of Technician or Repair Facility. (See back pages for other specific entries.)
MAR 24 1997			9446.5	Total time and time and date of last overhaul verified from military records on file at Hawkins and Powers Aviation, Inc. FAA CRS [redacted] TT: 9446.5 TSO: 1104.90 Signature [redacted]
MAR 24 1997			9446.5	I certify this ENG has been inspected in accordance with the procedures of an FAA Approved ~~Inspection Program per FAR 91.409 (f) (4),~~ and was determined to be in airworthy condition. Total Time: 9446.5 Signed [redacted] Date MAR 24 1997 HAWKINS & POWERS AVIATION, INC. FAA CRS [redacted] GREYBULL, WYOMING "B" CHECK TSO: 1104.96 TAT: 20642.5 WO# 96-2211

DATE 19___	RECORDING TACH TIME	TODAY'S FLIGHT	TOTAL TIME IN SERVICE	Description of Inspections, Tests, Repairs and Alterations Entries must be endorsed with Name, Rating and Certificate Number of Technician or Repair Facility. (See back pages for other specific entries.)
	TSO			
5/10/97	1126.9			This QEC has been modified for the installation of HP-C-130AChip Detector Circuit per 337 for the following aircraft: T-131-337 dated 6/6/97, T-130-337 dated 5/10/97, T-133-337 dated 5/21/97. [redacted]
				[redacted]

TSO

DATE 19___	RECORDING TACH TIME	TODAY'S FLIGHT	TOTAL TIME IN SERVICE	Description of Inspections, Tests, Repairs and Alterations Entries must be endorsed with Name, Rating and Certificate Number of Technician or Repair Facility. (See back pages for other specific entries.)
APR 15 1999			1253.31	I certify this Engine has been inspected in accordance with a C inspection and was determined to be in airworthy condition. Signature [redacted] Certificate No. [redacted] Date APR 15 1999 A/C/Eng. Total Time 20890.86 HAWKINS & POWERS AVIATION, INC. FAA CRS [redacted] Work Order No. 61017C Greybull, Wyoming
AUG 30 1999			1482.71	REMOVED ENG T-130 #1 POSITION METAL ON R.G.B MAG PLUG ENG TSO: 1482.71 ENG TT 9824.37 TAT 21021.92 [redacted] HAWKINS & POWERS [redacted]

DATE 19___	RECORDING TACH TIME	TODAY'S FLIGHT	TOTAL TIME IN SERVICE	Description of Inspections, Tests, Repairs and Alterations Entries must be endorsed with Name, Rating and Certificate Number of Technician or Repair Facility. (See back pages for other specific entries.)
SEP 17 1999		1482.77		REPLACED ROLLER BEARING ON MAIN DRIVE GEAR I.A.W 23-TS6-13 REF WO# 7534. HAWKINS & POWERS [redacted]
OCT 25 1999		1482.77		OP'S CHECKED ENGINE I.A.W IC-130A-2-4, IC-130B-2-11, C/W COMPRESSOR WASH, INSPECTED R.G.B & POWER SECTION MAG PLUGS & OIL SCREENS C/W PERFORMANCE RUN, OPS & LEAK CK GOOD ENG PERFORMANCE 100% REF WO# 7660 HAWKINS & POWERS [redacted]

DATE 19___	RECORDING TACH TIME	TODAY'S FLIGHT	TOTAL TIME IN SERVICE	Description of Inspections, Tests, Repairs and Alterations Entries must be endorsed with Name, Rating and Certificate Number of Technician or Repair Facility. (See back pages for other specific entries.)
AUG 12 2001		1482.77	INSTALLED #1 POSITION T-130 TAT 21598.3	ENGINE TT 9825.97 I.A.W IC-130A-2-4 REF WO# 12800 HAWKINS & POWER [redacted]
SEP 1 2001		1580.09		I certify this ENGINE has been inspected in accordance with a B check inspection and was determined to be in airworthy condition. Signature [redacted] Certificate No. [redacted] Date SEP 1 2001 A/C Eng. Total Time 21695.62 HAWKINS & POWERS AVIATION, INC. FAA CRS [redacted] Work Order No. 13311 Greybull, Wyoming

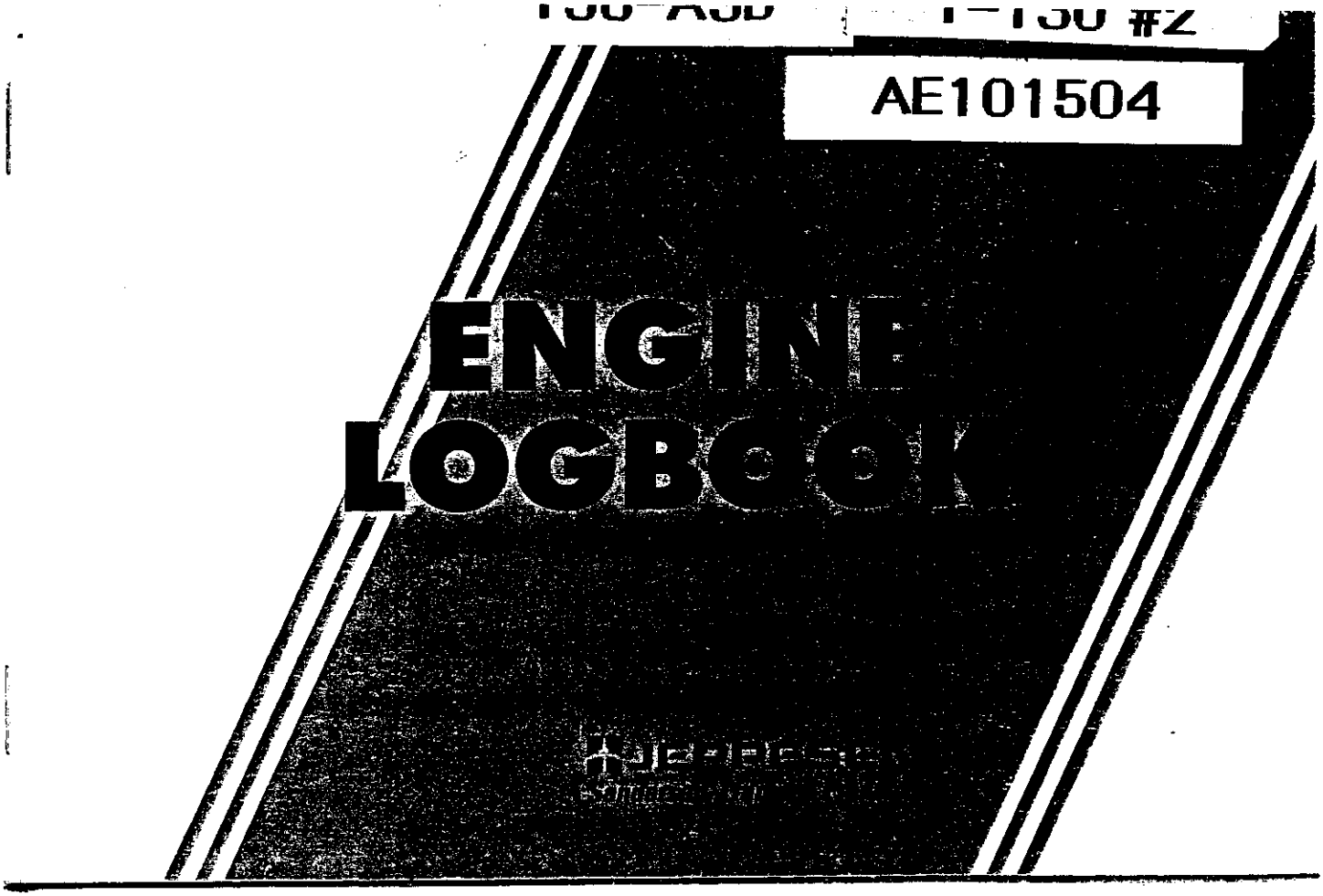
DATE 19___	RECORDING TACH TIME	TODAY'S FLIGHT	TOTAL TIME IN SERVICE	Description of Inspections, Tests, Repairs and Alterations Entries must be endorsed with Name, Rating and Certificate Number of Technician or Repair Facility. (See back pages for other specific entries.)
AUG 1	1 2001	2748.44		A Ck C/W TAT: 21598.03 WO# 12796 [redacted]
AUG 3	0 2001	1530.09		A Ck C/W TAT: 21645.52 WO# 13033 [redacted]
SEP 2	0 2001	1554.85		A Ck C/W TAT: 21670.75 WO# 13230 [redacted]
NOV	1 2 2001	1590.57		A CK C/W TAT: 21706.44 WO# 13376 [redacted]
MAR	2 9 2002	1632.35		A Ck C/W TAT: 21747.91 WO# 14439 [redacted]
APR	2 1 2002	1649.09		A Ck C/W TAT: 21763.34 WO# 14544 [redacted]
MAY	1 2 2002	1675.51		A Ck C/W TAT: 21791.10 WO# 14886 [redacted]
JUN	2 - 2002	1703.22		A Ck C/W TAT: 21818.77 WO# 15111 [redacted]

Appendix C.

Engine #2

Logbook

AE101504



EA-ELB

ENGINE LOGBOOK

Logbook No. 1
From FEB 1998
To

55 Inverness Drive East, Englewood, CO 80112-5498

JS506066B

ENGINE DESCRIPTION

MANUFACTURER ALLISON MODEL T56

SERIAL NUMBER AE101504 DATE OF MANUFACTURE 3 FEB, 1978

RATED BHP/SHP/THRUST _____ RPM 13820 MANIFOLD PRESSURE _____

FUEL REQUIRED OCTANE/PERFORMANCE _____ ALTERNATE FUEL _____

PROPELLER SER. NO. _____ DATE INSTALLED _____

REGISTERED OWNER HAWKINS & POWERS AVIATION

STREET & NO. 2441 HIGHWAY 14

CITY, STATE, ZIP GREYBULL WY 82426

DATE PURCHASED _____ DATE SOLD _____

REGISTERED OWNER _____

STREET & NO. _____

CITY, STATE, ZIP _____

DATE PURCHASED _____ DATE SOLD _____

TBO HOURS _____ LAST OVERHAUL DATE/HOURS 14 MAY 1979

INSTALLATION

INSTALLED					REMOVED		
DATE	AIRCRAFT TYPE	AIRCRAFT SERIAL NO.	LOCATION	TOTAL TIME	DATE	TOTAL TIME	AGENCY AND CERTIFICATE NO.
FEB 12 1998	C-130A	T-131	#2 Position	19235.02	8AUG98	19276.29	HAWKINS & POWERS [redacted]
SEP 15 1999	C-130A	N8230H	# 3	14822.1	4-14-99	14880.3	HAWKINS & POWERS [redacted]
[illegible] 8 A 1999	C-130A	T-130	#2 9184.3	2005.16	5-27-00	9289.96	Hawkins & Powers [redacted]
7/21/00	C-130A	T-130	#2	21,219.22			

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
FEB 12 1998	9115.1	This QEC has been modified for the installation of HP-C-130AChip Detector Circuit per 337 for the following aircraft: T-131-337 dated 6/6/97, T-130-337 dated 5/10/97, T-133-337 dated 5/21/97. [redacted]
		[redacted]
FEB 12 1998	9115.1	Engine TSO: 2974.1 Total time and time and date of last overhaul verified from military records on file at Hawkins and Powers Aviation, Inc. FAA CRS [redacted] Signature: [redacted]

16

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
FEB 12 1998	9115.1	C/W HAWKINS & POWERS FAA APPROVED HP-C-130A INSPECTION GUIDE "C CHECK" REPLACED ALL (6) FUEL NOZZLES, REAR BEARING SUPPORT, INE EXCITER & AC GEN INSTALLED ENGINE #2 POSITION T-131 TAT 19235.02 ENG TSO 2974.1 OP's & LEAK CHECK GOOD I.A.W IC-130A-2-4 & IC-13A-2-11 ENSING PERFORMANCE 102.2% FOR ADDITIONAL [redacted] INFORMATION REF WO# 3909 [redacted] HAWKINS & POWERS [redacted]
AUG 1 1998	9176.10 ~~9282.97~~	Replaced BOTH IGNITORS AND LEADS I.A.W 2J-T56-16 [redacted] TAT 19282.97 TSO 3021.98 HAWKINS & POWERS
AUG 8 1998	9176.10	Engine Removed T-131 #2 POSITION TAT 19296.29 FOR CHIPS ON R.G.B MAG PLUG ENG TSO 3035 REF WO# 5194. [redacted] HAWKINS & POWERS

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
SEP 11 1998	9176.10	INSTALLED R.G.B. S/N AG-021272 I.A.W 2J-T56-16. R.G.B. TSO 3549.3 ENG TSO: 3035.10 OP'S & LEAK CK Good I.A.W IC-130A-2-4 REF WO# 5207 OLD R.G.B S/N A20282A HAWKINS & POWERS [redacted]
SEP 15 1998	9176.10	INSTALLED ENGINE # 3 POSITION N8230H TAT 14872.1 ENG TSO 3035.10 I.A.W IC-130A-2-4 REF WO 5155 [redacted] HAWKINS & POWERS [redacted]
APR 14 1999	9184.3	REMOVED Engine F.O.M TAT 14880.3 # 3 POSITION N 8230H REF WO# 6573. Eng TSO 3043.3 [redacted] HAWKINS & POWERS [redacted]

18

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
AUG 26 1999	9184.3	INSTALLED Eng T-130 TAT 2005.14 #2 POSITION OP'S LK CHECKS Good I.A.W IC-130A-2-4 REF WO# 7473C. ENG T.SO. 3043.3 HAWKINS & POWERS [redacted]
OCT 4 1999	9238.83	REPLACED T.D AMP ENG TSO. 3097.83 TAT: 21059.67 REF WO# 7778C. HAWKINS & POWERS [redacted]
APR 18 2000	9323.59	A Ck C/W TAT: 2109.5 WO# 8005 [redacted] TSO: 3128.06
MAY 9 2000	9326.22	A Ck C/W TAT: 2101.53 WO# 8867C [redacted] ENG TSO 3130.69
MAY 27 2000	~~9341.49~~ P.D. 9289.96	ENGINE REMOVED T-130 #2 POSITION TAT 21112.98 ENG TSO: 3348.98 FOR CRACKED OUTER COMBUSTION LINER REF WO# 9000 HAWKINS & POWERS [redacted]

19

...TENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
...9 15 199...	2...	...ne has been inspected TSO: 1447.80 in accordance with a C inspection and was ...ned to be in airworthy condition. Signature ... Certificate No. [redacted] A/C/Eng. Total Time 20890.86 HAWKINS & POWERS AVIATION, INC. FAA CRS ...01C Work Order No. 6107C Greybull, Wyoming
... 15 199...	20902...	Re... ...c Fuel NOZZLES OP'S? ... TAT: 20890.86 Eng TSO: 1447.80 REF WO# 6107C [redacted]
1 ...	...940.85	... TEMP DATUM VALUE ... TAT 20929.51 Eng TSO: 1486.55 REF WO# 7009C ... HAWKINS & Powers [redacted]

...TENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
...R 18 200...	2010...	A C ... TAT ... WO#8005 [redacted]
...Y ...9 200...	2103.8...	A C CW TAT ... WO#8867C [redacted] ENG TSO ...9.81
...3 200...	2119...	I certify that this ...s has been inspected ENG TSO: 1742C in accordance with a B check inspection and was determined to be in airworthy condition. Signature ... Certificate No. [redacted] A/C/Eng. Total Time 21185.09 David ... HAWKINS & POWERS AVIATION, INC. FAA CRS ...1C Work Order No. 9405C Greybull, Wyoming

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
JUN 8 2000	9289.96	REPLACED OUTER COMBUSTION LINER ALL FUEL NOZZLES (6 EA) I.A.W 2J-T56-16 3'14 OPS CHECK GOOD I.A.W IC-130A-2-4 REF WO# 9014N ENG TSO 3148.96. HAWKINS 3' POWERS [redacted]
JUN 28 2000	9289.96	RAN ENGINE ENGINE PERFORMANCE 100.4 LEAK CHECK 3' OPS CK GOOD I.A.W IC-130B-2-11 3' IC-130A-2-4 CHG TSO 3148.96 REF WO# 9074N- HAWKINS 3' Power [redacted]

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INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
JUL 21 2000	9289.96	INSTALLED ENGINE #2 POSITION T-130 TAT 21219.22, ENG TSO 3148.96 IAW IC-130A-2-4 OP'S 3' LEAK CK Good I.A.W IC-130A-2-4 3' IC-130B-2-11 ENG PERFORMANCE 99.7% REF WO# 9544C HAWKINS 3' Powers [redacted]
JUL 28 2000	9382.52	I certify this ENGINE has been inspected ENG TSO: 2641.0 in accordance with a Block inspection and was determined to be in airworthy condition. Signature [redacted] Certificate No. [redacted] Date JUL 8 2000 A/C/Eng. Total Time 2405.69 HAWKINS & POWERS AVIATION, INC. FAA CRS [redacted] Work Order No. 9405C Greybull, Wyoming

21

INSPECTION & MAINTENANCE RECORD

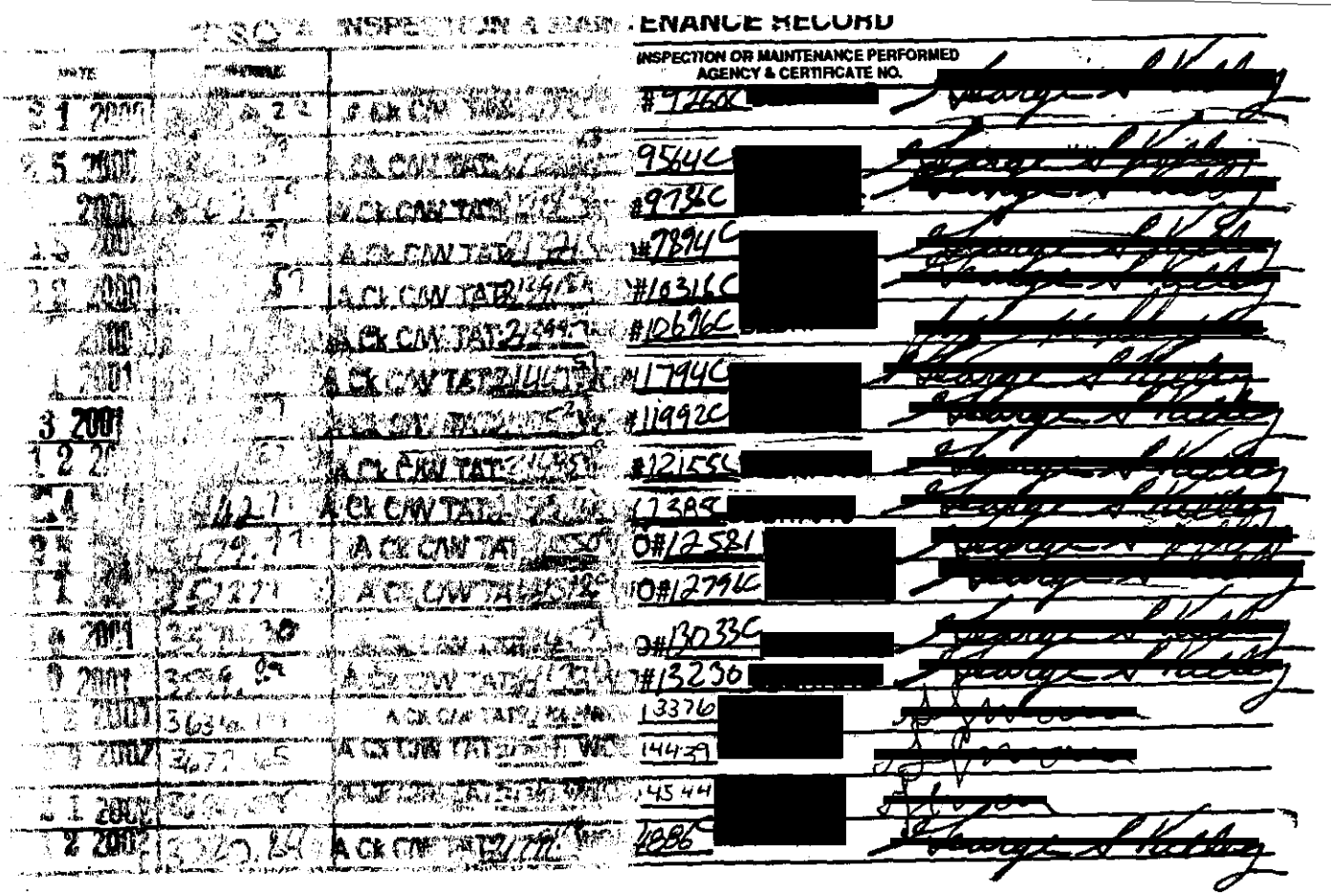
DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
MAR 8 2001	9598.77	I certify this ENGINE has been inspected TSO: 3331.08 in accordance with a C Check inspection and was determined to be in airworthy condition. Signature [redacted] Certificate No. [redacted] Date MAR 8 2001 A/C/Eng. Total Time 21440.34 HAWKINS & POWERS AVIATION, INC. FAA CRS BZDR701C Work Order No. 10407C Greybull, Wyoming
APR 28 2001	9637.95	REPLACED ALL FUEL NOZZEL'S (6) I.A.W IC-130A-2-4 TAT 21440.52 ENG TSO: 3370.26 REF WO # 11666C. HAWKINS & POWERS [redacted] [redacted]

22

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
SEP 1 2001	9893.05	I certify this Engine has been inspected TSO. 3625.36 in accordance with a B Check inspection and was determined to be in airworthy condition. Signature [redacted] Certificate No. [redacted] Date SEP 1 2001 A/C/Eng. Total Time 21695.62 HAWKINS & POWERS AVIATION, INC. FAA CRS [redacted] Work Order No. 13311C Greybull, Wyoming
MAR 29 2002	9930.8	Replaced All 6 Fuell Nozzels IAW TO IC-130A-2-4 TAT 21747.91 ENG TSO 3677.65 Ref WO # 13965C HAWKINS & POWERS [redacted] [redacted]

23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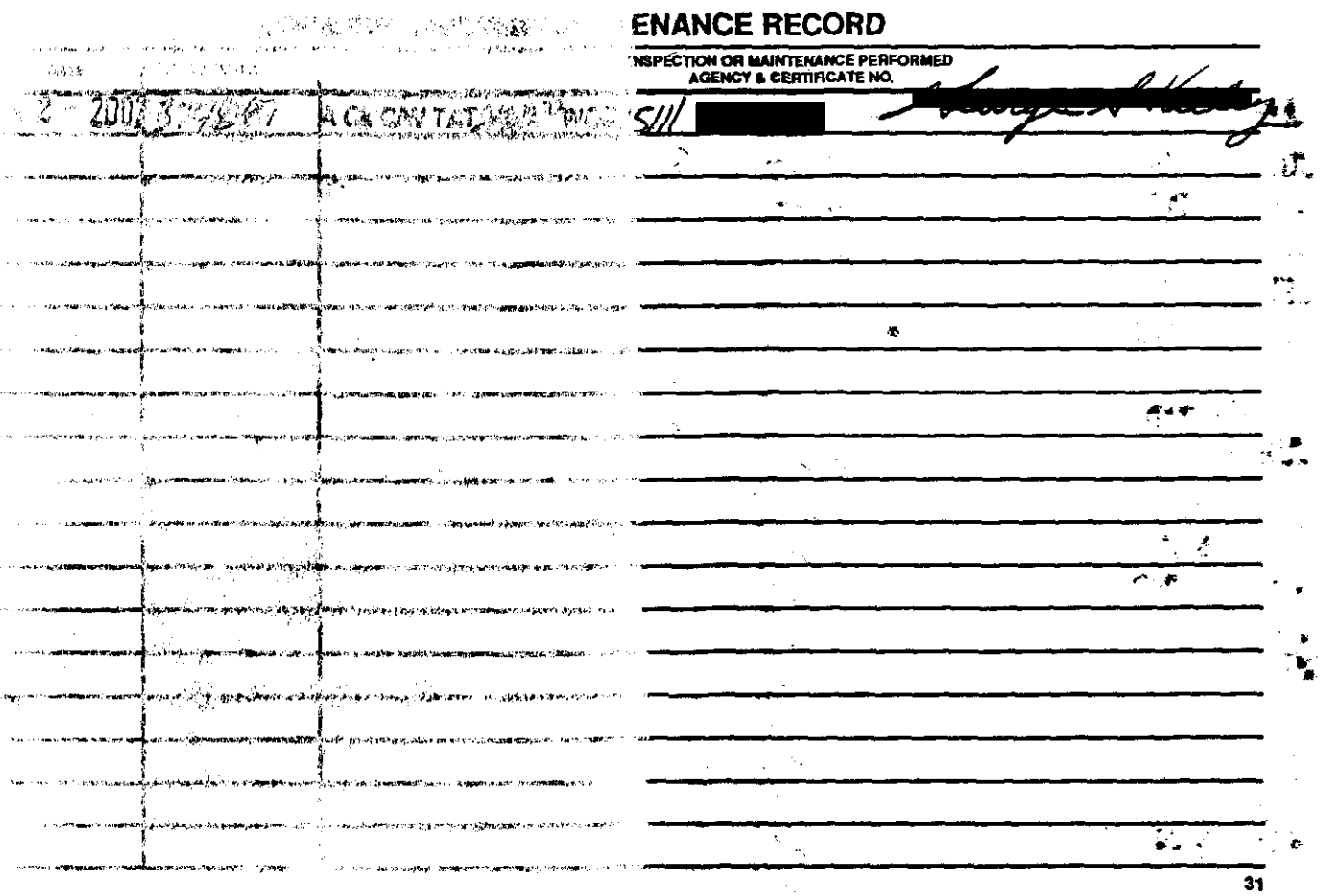
INSPECTION OR MAINTENANCE PERFORMED
AGENCY & CERTIFICATE NO.


ENANCE RECORD
INSPECTION OR MAINTENANCE PERFORMED
AGENCY & CERTIFICATE NO.

Appendix D.

Engine #3

Logbook

T56-A9D

AE-101267

#3

ENGINE LOGBOOK

n the USA

EA-ELB

ENGINE LOGBOOK

1

DEC 89

International Standard Book Number 0-89100-331-2
For sale by: IAP, Inc.
Mail to: P.O. Box 10000, Casper, WY 82604-1000
Ship to:7383 6WN Road, Casper, WY 82604-1835
(800)443-9250 · (307)266-3838 · FAX: 307-472-5106

ENGINE LOG
TABLE OF CONTENTS

ENGINE DESCRIPTION

MANUFACTURER ~~Lycoming~~ ALLISON MODEL T56-A9

SERIAL NUMBER AE 101267 DATE OF MANUFACTURE

RATED BHP/SHP/THRUST RPM MANIFOLD PRESSURE

FUEL REQUIRED OCTANE/PERFORMANCE ALTERNATE FUEL

PROPELLER SER. NO. DATE INSTALLED

REGISTERED OWNER HAWKINS & POWERS AVIATION

STREET & NO. 2441 HIGHWAY 14

CITY, STATE, ZIP Greybull WY 82426

DATE PURCHASED DATE SOLD

REGISTERED OWNER

STREET & NO.

CITY, STATE, ZIP

DATE PURCHASED DATE SOLD

TBO HOURS LAST OVERHAUL DATE/HOURS

REGISTRATION

DATE	TYPE	SERIAL NO.	INSTALLATION TIME/ENG. HOURS	REMOVED TIME	REMOVED DATE	REMOVED TOTAL TIME	REMOVED AGENCY AND CERTIFICATE NO.
[illegible]	[illegible]	[illegible]	[illegible]	5	16 AUG 94	1162.5	[redacted]
NOV 86	C-130	56-0536	[illegible]	25	16 AUG 94	2026.3	HAWKINS & POWERS [redacted]
Sept 86	C-130	[illegible]	[illegible]				

LIFE LIMITED PARTS/OVERHAUL REQUIREMENTS

NAME OF PART	P/N OR NUMBER	SERIAL NUMBER	INSTALLATION TIME/ENG. HOURS	TIME ON PART AT INSTAL.	LIFE LIMIT OR T.B.O.	SCHED. REMOVAL DATE/ENG. HOURS	REMOVAL DATE/ ENG. HOURS	AGENCY CERT. NO.
[illegible]		[illegible]	[illegible]	0.0				
[illegible]		[illegible]	[illegible]	[illegible]				
[illegible]		160-20624						
[illegible]		[illegible]	[illegible]	0.0				
[illegible]		[illegible]	[illegible]	0.0				
[illegible]		[illegible]	[illegible]	637.8				

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
22 Dec 89	4476.3	I certify this ENG has been inspected in accordance with the procedures of an FAA Approved Inspection Program per FAR 91.169 (f) (5), and was determined to be in airworthy condition. Total Time: 4476.3 Signed [redacted] Date 12-22-89 HAWKINS & POWERS AVIATION, INC FAA CRS [redacted] GREYBULL, WYOMING
		11-July-1990 Total Times 5622.3 hrs. I certify this engine has been inspected in accordance with an FAA approved inspection program and determined to be airworthy. [redacted] FAA CRS # [redacted] Hawkins & Powers Aviation Greybull Wy.

16

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
		I certify this Eng has been inspected in accordance with the procedures of an FAA Approved Inspection Program per FAR 91.169 (f) (5), and was determined to be in airworthy condition. Total Time: 1389:25 Signed [redacted] Date 3-16-91 HAWKINS & POWERS AVIATION, INC FAA CRS [redacted] GREYBULL, WYOMING
		I certify this ENGINE has been inspected in accordance with the procedures of an FAA Approved Inspection Program per FAR 91.409 (f) (4), and was determined to be in airworthy condition. Total Time: 9975.02 Signed [redacted] Date 3-20-92 HAWKINS & POWERS AVIATION, INC. FAA CRS [redacted] GREYBULL, WYOMING

17

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
22APR93	9841.89	I certify this ENG has been inspected in accordance with the procedures of an FAA Approved Inspection Program per FAR 91.409 (f) (4), and was determined to be in airworthy condition. Total Time: 9841.87 Signed [redacted] Date 22APR93 HAWKINS & POWERS AVIATION, INC. FAA CRS [redacted] GREYBULL, WYOMING
4-20-94	9877.91	I certify this Eng has been inspected in accordance with the procedures of an FAA Approved Inspection Program per FAR 91.409 (f) (4), and was determined to be in airworthy condition. Total Time: Signed [redacted] Date 4-20-94 HAWKINS & POWERS AVIATION, INC. FAA CRS [redacted] GREYBULL, WYOMING

18

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
16AUG94	10016.92	ENG Removed for Vibration, cracks in rear turbine support Horn ——— END ——— [redacted] CRS [redacted] TSO 1162.5
9 JUL 1996	10016.92	REPLACED TURBINE ASSEY I.A.W TO: 2J-T56-16 S/N AT-T901389. REPLACED ALL (6EA) FUEL NOZZLES, ENG STARTER, FUEL CONTROL, T.D AMP, TD VALVE & DC GEN SEE HAWKINS & POWERS WO# 96-1225 FOR DETAILS ——— [redacted] HAWKINS & POWERS [redacted] T.S.O 1163.8
2 AUG 1996	9618.8	[redacted] TT 9618.8 [redacted]

19

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
8 AUG 1996	9618.8	PERFORMED HAWKINS & POWERS HP-C-130A "C" CHECK INSPECTION TT 9618.8 T.S.O 1163.8 REF WO# 96-1225 [redacted] HAWKINS & POWERS [redacted]
13 SEP 1996	9618.8	Installed Engine #3 position T-130 TAT 20606.86 Engine TSO 1163.8 OPST leak check good. T.A.W. IC-130A-2-4 & IC-130A-2-11. Eng. Performance 103.0 See Hawkins & Powers W.O. # 96-1962 For details. [redacted] Hawkins & Powers [redacted]

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INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
MAR 24 1997	9654.39	"B" check TAT 20642.45 TSO 1199.39 WO# 96-2213 I certify this ~~ENGINE~~ has been inspected in accordance with the procedures of an FAA Approved Inspection Program per FAR 91.409 (f) (4), and was determined to be in airworthy condition. Total Time: 9654.39 Signed [redacted] Date MAR 24 1997 HAWKINS & POWERS AVIATION, INC. FAA/ERS [redacted] GREYBULL, WYOMING
5/10/97	TSO 1221.39	This QEC has been modified for the installation of HP-C-130AChip Detector Circuit per 337 for the following aircraft: T-131-337 dated 6/6/97, T-130-337 dated 5/10/97, T-133-337 dated 5/21/97. [redacted] [redacted]

21

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
MAR 8 2001	10385.68	I certify this ENGINE has been inspected TSO: 1958.28 in accordance with a C check inspection and was determined to be in airworthy condition. Signature [redacted] Certificate No. [redacted] Date MAR 8 2001 A/C/Eng. Total Time 21401.34 HAWKINS & POWERS AVIATION, INC. FAA CRS BZBR701C Work Order No. 10407 Greybull, Wyoming
AUG 11 2001	10582.37	REPLACED #3 ENGINE R.G.B TAT: 2159.03 ENG TSO: 2154.97 RGB TSO: 2138.7 R.G.B S/N ON AGO 20078 OP'S AND LEAK CK Good IAW IC-130A-2-4 Ref WO# 12789C. HAWKINS & POWERS [redacted]

24

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
SEP 1 2001	10679.96	I certify this ENGINE has been inspected TSO: 2252.56 in accordance with a BCHECK inspection and was determined to be in airworthy condition. Signature [redacted] Certificate No. [redacted] Date SEP 1 2001 A/C/Eng. Total Time 21695.62 HAWKINS & POWERS AVIATION, INC. FAA CRS BZBR701C Work Order No. 13314C Greybull, Wyoming
MAR 29 2002	10772.0	REPLACED All 6 FUEL NOZZELS IAW TO1C130A-2-4 TAT 2177.91 ENG TSO. 2304.85 HAWKINS & POWERS Ref WO # 13965C [redacted]

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
MAY 30 2000	1672.82	A Ck C/W TAT 21115.89 WO# 9027 [redacted]
JUN 21 2000	1709.6	A Ck C/W TAT 21152.4 WO# 9260C [redacted]
JUL 25 2000	1787.77	A Ck C/W TAT 21236.47 WO# 9564C [redacted]
AUG 3 2000	1835.19	A Ck C/W TAT 21278.23 WO# 9736C [redacted]
AUG 15 2000	1878.11	A Ck C/W TAT 21321.11 WO# 7894C [redacted]
SEP 22 2000	1948.77	A Ck C/W TAT: WO# 6314C [redacted]
DEC 1 2000	1956.48	A Ck C/W TAT: 21399.54 WO# 10696C [redacted]
MAY 1 2001	2004.57	A Ck C/W TAT 21447.5 WO# 11794C [redacted]
MAY 29 2001	2032.17	A Ck C/W TAT 21475.1 WO# 11992C [redacted]
JUN 12 2001	2052.02	A Ck C/W TAT 21495.06 WO# 12155 [redacted]
JUL 4 2001	2069.99	A Ck C/W TAT 21513.39 WO# 12385C [redacted]
JUL 25 2001	2106.97	A Ck C/W TAT 21552.87 WO# 12581 [redacted]
AUG 11 2001	2154.99	A Ck C/W TAT 21598.9 WO# 12796 [redacted]
AUG 30 2001	2202.52	A Ck C/W TAT 21645.34 WO# 13032 [redacted]
SEP 20 2001	2227.09	A Ck C/W TAT 21670.15 WO# 13230 [redacted]
NOV 12 2001	2263.34	A Ck C/W TAT: 21706.4 WO# 13376 [redacted]
MAR 29 2002	2304.85	A Ck C/W TAT: 21747.91 WO# 14439 [redacted]
APR 21 2002	2314.34	A Ck C/W TAT: 21761.34 WO# 14544 [redacted]

32

INSPECTION & MAINTENANCE RECORD

DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
MAY 12 2002	2348.04	A Ck C/W TAT 21791.10 WO# 14886 [redacted]
JUN 2 - 2002	2375.69	A Ck C/W TAT 21818.77 WO# 15114 [redacted]

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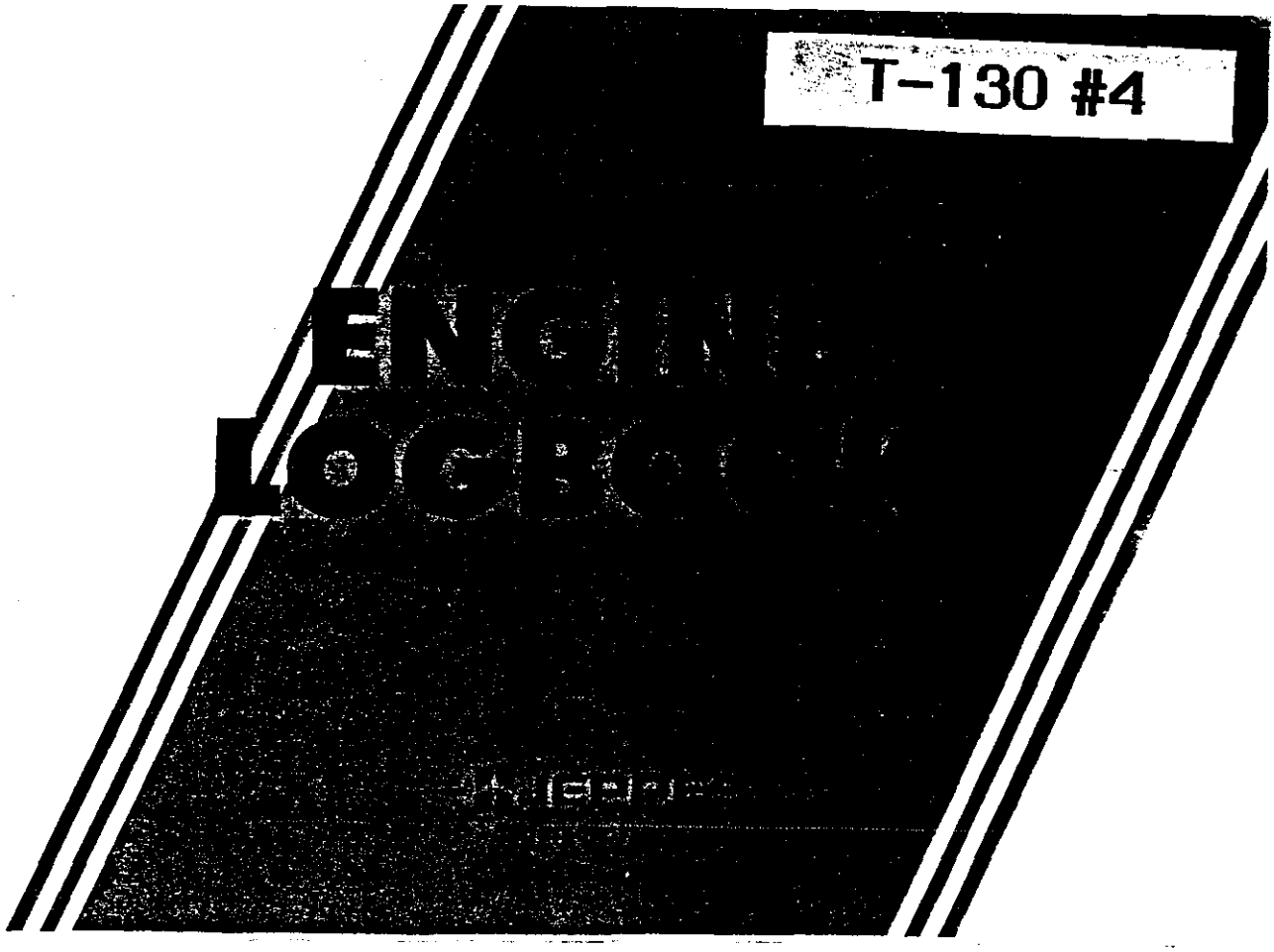
Appendix E.

Engine #4

Logbook



EA-ELB

ENGINE LOGBOOK

Logbook No. ONE
From 11/1998
To _____

JS5060668

ENGINE DESCRIPTION

MANUFACTURER ALLISION MODEL T56 A9D

SERIAL NUMBER AE100814 DATE OF MANUFACTURE

RATED BHP/SHP/THRUST RPM MANIFOLD PRESSURE

FUEL REQUIRED OCTANE/PERFORMANCE ALTERNATE FUEL

PROPELLER SER. NO. DATE INSTALLED

REGISTERED OWNER HAWKINS & POWERS AVIATION INC

STREET & NO. 2441 HIGHWAY 20 WEST

CITY, STATE, ZIP GREY BULL WY 82426

DATE PURCHASED DATE SOLD

REGISTERED OWNER

STREET & NO.

CITY, STATE, ZIP

DATE PURCHASED DATE SOLD

TBO HOURS LAST OVERHAUL DATE/HOURS 9-19-1983

3

INSTALLATION

INSTALLED					REMOVED		
DATE	AIRCRAFT TYPE	AIRCRAFT SERIAL NO.	LOCATION	TOTAL TIME	DATE	TOTAL TIME	AGENCY AND CERTIFICATE NO.
APR 8 2002	C-130A	T-130	#4	21760			

4

INSPECTION OR MAINTENANCE PERFORMED
AGENCY & CERTIFICATE NO.

INSTALLED ENGINE #4 POSITION T-130 TAT
IAW IC-130A-2-4, IC-130B-2-11
AND LEAK CK GOOD ENGINE PERFORMANCE
WITH FLT C/W. REF WO# 14499C
HAWKINS & POWER [redacted]

RGB THRUST SEAL IAW TO 2J-TS6-16
TO AMP IAW IC-130A-2-4 S/N ON
AND LEAK CHECKED GOOD ON BOTH
04 REF WO# 14509C & 14538C
HAWKINS & POWER'S [redacted]

17

& MAINTENANCE RECORD

INSPECTION OR MAINTENANCE PERFORMED
AGENCY & CERTIFICATE NO.

ALLED TURBINE (HOT SECTION)
PT 901149. DISSASSMBLED R.G.B REP-
AS REQUIRED, INSPECTED POWER
REPLACED ALL FUEL NOZZLES
UNITS. REPLACED EXCITER BOX,
FUEL FLOW TRANSMITTER, COORDINAT-
COOLER & AC GEN. C/W HAWKINS &
"C" SERVICE AND INSPECTION GUIDE.
AND LEAKED CHECKED GOOD MAINT
C/W I.A.W IC-130A-2-4, IC-130A-14
-16 & IC-130B-2-11 REF WO# 12942N.
HAWKINS & POWER [redacted]

TSO

INSPECTION & MAINTENANCE RECORD

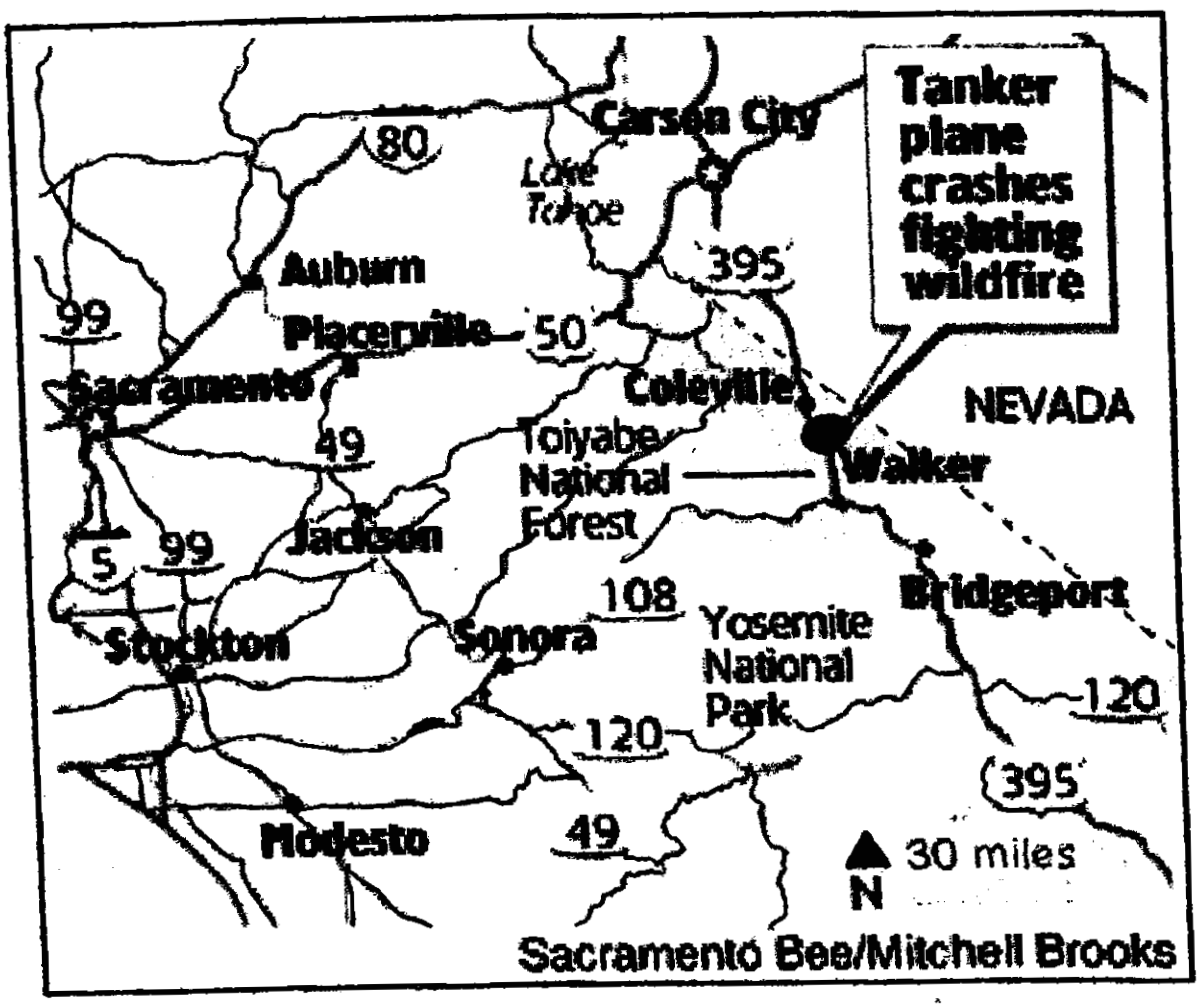
DATE	TOTAL TIME	INSPECTION OR MAINTENANCE PERFORMED AGENCY & CERTIFICATE NO.
APR 2 1 2002	2501.24	A Ck C/W TAT: 21743 WO# 14544 [redacted]
MAY 1 2 2002	2531.04	A Ck C/W TAT 21771 WO# 14886 C [redacted]
JUN 2 - 2002	2558.69	A Ck C/W TAT: 21818 TP WO# 15111 [redacted]

Appendix F.

Map

Of the

Area


Tanker plane crashes fighting wildfire
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Lake Tahoe
80
Auburn
Placerville
50
99
Sacramento
49
395
Coleville
NEVADA
Toiyabe National Forest
Walker
5
99
Jackson
Stockton
108
Sonora
Yosemite National Park
Bridgeport
120
120
395
Modesto
49
30 miles
N
Sacramento Bee/Mitchell Brooks

Appendix G.

Participants

Appendix G. – Participants

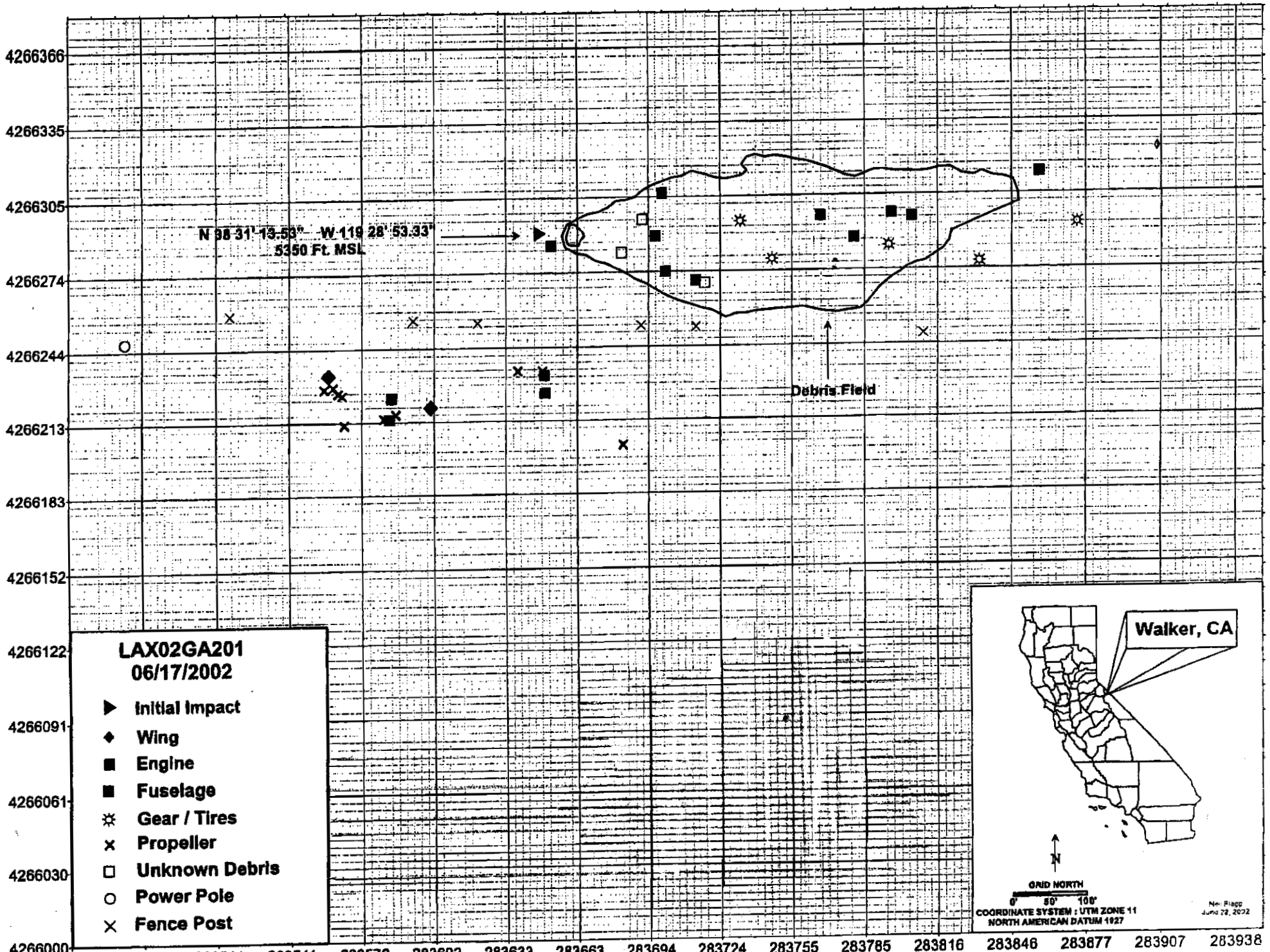
Walker, California, June 18-20, 2002

Mr. George Peterson	NTSB	IIC	[redacted]
Mr. Pierre Scarfo	NTSB	Party	[redacted]
Mr. Mike Weber	Rolls-Royce	Party	[redacted]
Mr. George James	Lockheed Martin	Party	[redacted]
Mr. Carl Meyer	Hawkins & Powers	Party	Unknown
Mr. Bill Bulger	Forest Service	Party	Unknown
Mr. William Kunger	FAA	Party	[redacted]

Appendix H.

Wreckage Diagram

LAX02GA201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283907
283938
N 38 31' 13.53" W 119 28' 53.33"
5350 Ft. MSL
Debris Field
LAX02GA201
06/17/2002
Initial Impact
Wing
Engine
Fuselage
Gear / Tires
Propeller
Unknown Debris
Power Pole
Fence Post
Walker, CA
N
GRID NORTH
0' 50' 100'
COORDINATE SYSTEM : UTM ZONE 11
NORTH AMERICAN DATUM 1927