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CIVIL AVIATION DEPARTMENT

CESSNA 207A V3-HFD

REPORT ON ACCIDENT AT

BELAMA PHASE II EXTENSION, BELIZE CITY,

ON 23RD JULY, 1997.

CONFIDENTIAL

PHILIP S.W. GOLDSON INTERNATIONAL AIRPORT

LADYVILLE, BELIZE, CENTRAL AMERICA

CIVIL AVIATION DEPARTMENT:

AIRCRAFT ACCIDENT REPORT	: # 1/97
OPERATOR	: TROPIC AIR LIMITED
AIRCRAFT	: CESSNA
	: MODEL 207A
	: SERIAL NUMBER 20700676
NATIONALITY AND REGISTRATION MARKS	: V3-HFD
PLACE AND DATE OF ACCIDENT	: BELAMA PHASE II EXTENSION, BELIZE CITY.
	23rd JULY, 1997.

ALL TIMES IN THIS REPORT ARE LOCAL.

SYNOPSIS:

The accident was notified to the Air Traffic Control Unit, Philip S.W. Goldson International Airport, by Miss [redacted] a resident of the Belama Phase II Extension, at approximately 7:24 a.m. on Wednesday, 23rd July, 1997. The Air Traffic Control Unit informed the Deputy Director of Civil Aviation who immediately proceeded to the accident site and commenced an investigation. He was later joined by other members of the Civil Aviation Department.

The aircraft was engaged on a regular flight (Tropic 10) from San Pedro Airport, Ambergris Caye, to the Belize City Municipal Airport with an intermediate stop at the Philip S.W. Goldson International Airport. There were no passengers on board when the aircraft departed from the International Airport.

The aircraft was extensively damaged after it crashed into a house and caught fire. One person inside the house was slightly injured. The pilot did not survive the accident.

The Civil Aviation Department requested the assistance of an independent Belize Aircraft Maintenance Engineer and from Air Safety Investigators from the Cessna Aircraft Company and Teledyne Continental Motors. The assistance from the Surveyor, United Kingdom Civil Aviation Authority, Safety Regulation Group, Airworthiness Division, Nassau, Bahamas, was also requested.

On the 24th July, 1997, officers of the Civil Aviation Department along with Mr. [redacted] Schmidt from Cessna Aircraft Company and Mr. [redacted] Carter from Teledyne Continental Motors, both Air Safety Investigators, visited the accident site to continue investigations.

Because the accident occurred in a residential area and there was little to salvage from the aircraft, the wreckage was transported by road and stored in a hangar at the Belize Defence Force Airwing facility at the Philip S.W. Goldson International Airport. Salvage was supervised by the Civil Aviation Department.

After a preliminary test run was carried out at the Belize Defence Force Airwing compound, arrangements were made to refer the engine to Teledyne Continental Motors facility at Mobile, Alabama, United States of America. The Civil Aviation Authority Airworthiness Surveyor in Nassau, Bahamas, was requested to oversee the engine test but he informed that a test report from the engine company would suffice their interest in the investigation.

A report from Mr. [redacted]arter, Teledyne Continental Motors, is attached to this report as Appendix A.

A report from Mr. [redacted] Schmidt, Cessna Aircraft Company, is attached to this report as Appendix B.

1. FACTUAL INFORMATION:

1.1 HISTORY OF THE FLIGHT:

V3-HFD was a Cessna 207A leased and operated by Tropic Air Limited , on local and international, scheduled and unscheduled flights.

On the day of the fatal accident, the aircraft landed at the Philip S.W. Goldson International Airport from San Pedro Airport, Ambergris Caye, with two passengers. The pilot remained in the aircraft on the apron while the two passengers disembarked. After receiving clearance from the Air Traffic Control Tower, V3-HFD, with no passengers, took off at 7:20 a.m. for the Belize City Municipal Airport. At 7:22 a.m. the pilot reported by the Haulover Bridge and was instructed by Air Traffic Control to change to frequency 122.8 MHz, which is the Common Broadcast Frequency where pilots transmit their positions and intentions to each other. No further radio transmissions or distress calls were made to Air Traffic Control after the pilot reported by Haulover Bridge.

At 7:24 a.m., the Air Traffic Control Tower received a telephone call from Miss [redacted] reporting that an aircraft had crashed into a house in the Belama Phase II Extension near Belize City.

The Air Traffic Control Unit immediately initiated alerting services. The Deputy Director of Civil Aviation arrived at the scene at 7:55 a.m. and was later joined by the two Operations Officers of the Civil Aviation Department. Crash and Rescue Services from the Belize City National Fire Service and the Belize Airports Authority were already on the scene. Security Officers from the Belize Airports Authority and the police were also there.

Before the aircraft crashed, eyewitness reports indicate that the aircraft approached from the West at a very low altitude. Prior to the mishap, the aircraft's left wing apparently made contact with high voltage power transmission lines. The aircraft was then seen to turn upside down and after bursting some other cables in its flight path, descended into two houses which were about 300 to 400 feet away from the initial point of contact. Before crashing into the house (Lot #312), the aircraft tore off part of the roof of another house. A post impact fire ensued which substanstially damaged the aircraft and the house. The pilot was fatally injured and died inside the aircraft.

1.2 INJURIES TO PERSONS:

Injuries	Crew	Passengers	Other
FATAL	1	0	0
NON-FATAL	0	0	1

1.3 DAMAGE TO AIRCRAFT:

After crashing into the house, the aircraft caught fire and was extensively damaged.

1.4 OTHER DAMAGE:

The zinc roof of one house was partially torn off and the house (Lot #312) into which the aircraft crashed was extensively damaged by the impact and the fire that ensued immediately after the crash.

1.5 PERSONNEL INFORMATION:

1.5.1	COMMANDER	: Male [redacted]
	AGE	: 25 years
	LICENCE	: Airman Certificate # 002[redacted] issued by the U.S.A. Department of Transport-Federal Aviation Administration on [redacted] Belize Validation Certificate F[redacted] issued by the Civil Aviation Department which was valid until 31st [redacted]
	LAST MEDICAL EXAMINATION	: [redacted]
	LAST CERTIFICATE OF TEST	: [redacted] 1996 - Company Base Check on Cessna 207A.
	TOTAL FLYING EXPERIENCE	: 1789.0 hours
	TOTAL EXPERIENCE ON CESSNA 207A	: 672.4 hours
	TOTAL FLYING IN LAST 28 DAYS	: 30.4 hours
	REST RECORD	: Within 24 hours

1.6 AIRCRAFT INFORMATION:

1.6.1 DETAILS OF AIRCRAFT:

TYPE	: Cessna 207A powered by one Teledyne Continental IO520 F26 Engine, Serial Number 810148-R rated at 300 Horse Power. A McCaully propeller with Serial Number 920846 was installed on aircraft.
SERIAL NUMBER	: 20700676
MANUFACTURER	: Cessna Aircraft Company Wichita, Kansas, U.S.A.
DATE OF CONSTRUCTION	: 1980

1.6.1 Cont'd

OPERATOR	:	Tropic Air Limited San Pedro Town Ambergris Caye, Belize.
CERTIFICATE OF REGISTRATION	:	The aircraft was registered in Belize on the 24th June, 1994, in the name SE Leasing Limited, P.O. Box 63, San Pedro Town, Ambergris Caye. A Certificate of Registration No. G/150 was issued.
CERTIFICATE OF AIRWORTHINESS	:	A Certificate of Airworthiness in the Public Transport Category was valid until 31st October, 1997.
TOTAL AIRFRAME HOURS	:	11656.4 (up to 22nd July, 1997)
TOTAL ENGINE HOURS	:	1424.4 (up to 22nd July, 1997)
RECOMMENDED TIME BETWEEN OVERHAUL (ENGINE)	:	1700 hours
TOTAL ENGINE HOURS SINCE LAST SCHEDULED INSPECTION	:	9 hours
TOTAL PROPELLER HOURS	:	575.8 (up to 22nd July, 1997)
RECOMMENDED TIME BETWEEN OVERHAUL (PROPELLER)	:	1700 hours
TOTAL PROPELLER TIME SINCE LAST SCHEDULED INSPECTION	:	9 hours
CERTIFICATE OF MAINTENANCE	:	Issued on 20th July, 1997 and was valid for 31 days or 75 flying hours. A scheduled maintenance inspection was done on this date in accordance with the Approved Maintenance Schedule.

1.6.2 HISTORY OF AIRCRAFT:

The aircraft was a used one brought into the country with an Export Certificate of Airworthiness No. E272011 issued by the Federal Aviation Administration on the 22nd June, 1992, The aircraft was initially registered under the name of Steven Schulte on the 18th June, 1992, and was re-registered on the 24th June, 1994, under the name SE Leasing Limited.

On the 27th July, 1994, the aircraft was due for a technical inspection by the Civil Aviation Authority and the Civil Aviation Department and it was noticed that the aircraft was in the process of an extensive rebuild. The wings had been removed and had been sent to a repair shop abroad for extensive maintenance. The Civil Aviation Authority Surveyor requested that on completion of this work, full certification details, together with a completed report and recommendation form for the renewal of the Certificate of Airworthiness, be sent to the Civil Aviation Authority in Nassau, Bahamas, for its perusal. A recommendation for the renewal would then be made if the certification details were acceptable.

On the 26th October, 1994, a survey was carried out by the Civil Aviation Authority and Civil Aviation Department and after the company satisfactorily addressed the comments raised on the survey report, the Certificate of Airworthiness was renewed.

On the 8th March, 1995, the aircraft was involved in an accident at San Pedro Airport, Ambergris Caye. After landing during inclement weather conditions, the aircraft collided with another company aircraft that was parked on the apron. The aircraft was extensively damaged. Repairs were done in May, 1995. On the 19th May, 1995, a logbook copy of the work performed was sent to the Civil Aviation Authority and a recommendation was made for Mr. John Wood, holder of a Belize Aircraft Maintenance Engineer's Licence, to be issued with an authorization to issue a Certificate of Compliance so that the aircraft be returned to service. Authorization BZ/CAD/A008/95 was issued by the Civil Aviation Department on the 23rd May, 1995. The authorization was valid for one time only.

The aircraft continued to be maintained in accordance with its Approved Maintenance Schedule MS/TA/CESSNA 207/B34. The Certificate of Airworthiness continued to be renewed and the validity of the last renewal was until 31st October, 1997. On the 22nd July, 1977, the aircraft had undergone a scheduled maintenance inspection (Operation 3) in accordance the maintenance schedule. A copy of Operation 3 is attached to this report as Appendix F.

1.7 METEOROLOGICAL INFORMATION:

The weather was in Visual Meteorological Conditions.

1.8 AIDS TO NAVIGATION:

Not relevant.

1.9 COMMUNICATIONS:

The only Aeronautical Telecommunications Facility in Belize is located at the Philip S.W. Goldson International Airport. A Common Broadcast Frequency (122.8 MHz) has been established in Belize so that pilots on local flights and operating at uncontrolled aerodromes may broadcast their position and intentions for the awareness of other pilots.

The pilot communicated with the Control Tower at the Philip S.W. Goldson International Airport prior to departure and received taxi and takeoff clearance. The aircraft took off at 7:20 a.m. At 7:22 a.m. the pilot reported its position by the Haulover Bridge and cleared by Air Traffic Control to change to frequency 122.8 MHz. No further communication was heard from him.

1.10 AERODROME INFORMATION:

Not applicable.

1.11 FLIGHT RECORDER:

No flight recorder was fitted nor is required to be fitted to aircraft with a Maximum Authorized Weight of 12,500 lbs. or less.

1.12 WRECKAGE AND IMPACT INFORMATION:

The aircraft crashed on an upside position into a concrete wall and zinc roof house which was located at approximately 300-400 feet from the first point of contact of the aircraft. The western side of the house was partially knocked down when the aircraft hit it. The interior of the house was damaged by fire which ensued immediately after the aircraft crashed and its's zinc roofing was partially damaged. The aircraft was damaged by fire except for sections of the engine's frame, tail, landing gears and instrument panel. Only the engine and propeller were not destroyed. The blades of the propeller were bent on impact but were found attached to the engine.

1.13 MEDICAL AND PATHOLOGICAL INFORMATION:

A Medical Practitioner report is attached as [redacted]

1.14 FIRE:

After impact the aircraft caught fire causing the interior of the house to catch fire.

1.15 SURVIVABILITY:

The accident was not survivable. Upon impact the aircraft caught fire and the pilot who remained trapped inside the aircraft suffered second and third degree burns (As per Medical Practitioner's report).

1.16 TESTS AND RESEARCH:

The engine was referred to Teledyne Continental Motors for analysis and inspection. (See Teledyne Continental Motors report in Appendix A)

1.17 ADDITIONAL INFORMATION:

None.

1.18 NEW INVESTIGATION TECHNIQUES:

None.

2. ANALYSIS:

2.1 THE PILOT:

The pilot had a valid Belize Commercial Pilot Validation Certificate and a United States Federal Aviation Administration Medical Certificate. Prior to the accident he had flown 30.4 hours in last 28 days and a rest period of 12 hours. The flight sector on the day of the accident was the first for the day.

2.2 THE AIRCRAFT:

A. The aircraft was maintained in accordance with an Approved Maintenance Schedule. It had a valid Certificate of Airworthiness which would expire on the 31st October, 1997.

2.2 Cont'd.

B. Neither the loadsheet nor the sector sheet were recovered due to the fire.

2.3 THE FLIGHT:

The flight was conducted in Visual Meteorological Conditions. The pilot maintained two way radio communications in accordance with established procedures up to the time he reported by Haulover Bridge. He did not make any other position reports. He did not request nor reported to Air Traffic Control that he was overflying the Belama Area, nor whether he was experiencing any difficulty. Just prior to the accident the aircraft was seen approaching the area at a low altitude and apparently made contact with the power lines, turned upside down and then crashed into the house.

3. CONCLUSIONS:

3.1 FINDINGS:

a. The aircraft had a valid Certificate of Airworthiness.

b. The aircraft was maintained in accordance with an Approved Maintenance Schedule.

c. The flight manifest did not show the weight or quantity of fuel prior to takeoff, however receipt from a refuelling company indicated that on the day before the accident, twenty six (26) gallons of aviation gas had been put into the tanks of the aircraft.

d. The engine was apparently under power when the aircraft struck the house.

e. The pilot had a valid Commercial Pilot's Validation Certificate.

f. The aircraft's radio was working up to the time of the accident.

g. From the time the pilot reported by Haulover Bridge and up to the time of the crash, the pilot did not report any further position or intention. He did not report any difficulty or emergency.

3.1 Cont'd.

h. The sole occupant, the pilot, died instantly.

i. The weather was in Visual Meteorological Conditions.

3.2 PROBABLE CAUSE:

There is no evidence which permits the investigation to determine with certainty the actual cause of the accident. It is considered a reasonable deduction that the probable cause of the accident was:

a. The aircraft became uncontrollable after hitting high voltage transmission lines due to the aircraft being flown at a low altitude.

4. SAFETY RECOMMENDATIONS:

It is recommended that:

a. All pilots inform the Air Traffic Control Unit of any deviation from normal routes.

b. Disciplinary action be taken against pilots who carry out low flying.

c. There be increased vigilance by the Civil Aviation Department Flight Standards section of flight crew performance and airline's compliance with established procedures as per company's Operations Manual and the Air Navigation Regulations for the time being in force.

E. O. Gomez
INSPECTOR OF ACCIDENTS
CIVIL AVIATION DEPARTMENT. BELIZE.

July, 1998.

LIST OF APPENDICES

A. Teledyne Continental Motors Air Safety Investigator's Report.

B. Cessna Aircraft Company Air Safety Investigator's Report.

C. Medical Practitioner's Autopsy Report.

D. Maya Airways Chief Pilot's Report

E. Air Traffic Control Officer's Report and Radiotelephony Recordings.

F. Operation No. 3 - Approved Maintenance Schedule.

G. Crash Site Photographs.

TELEDYNE CONTINENTAL MOTORS
ANALYTICAL INSPECTION REPORT

DATE: 2-19-98

DISTRIBUTION: J. Smith

SUBJECT: Accident Investigation
Ref: **V3-HFD**
IO-520-F, serial 810148-R

The above referenced engine was from a Cessna 206 aircraft, registration V3-HFD.

This engine was received at Teledyne Continental Motors (TCM), Mobile, AL and remained unopened until the date of this inspection. At that time, Aircraft Engine Receiver number A65698 was prepared.

Personnel participating in this inspection were:

Dave Lucas	Dave Lucas International Aviation Adjusters & Surveyors Brandon, FL
Fred Fihe	Teledyne Continental Motors Mobile, AL
John Little	Teledyne Continental Motors Mobile, AL
William Roebuck	Teledyne Continental Motors Mobile, AL

The engine crate was opened in the presence of Mr. Lucas.

TELEDYNE CONTINENTAL MOTORS
ANALYTICAL INSPECTION REPORT

The initial observations were as follows:

1. The right magneto was broken off its mounting flange to engine. Magneto ignition harness was damaged as a result of the accident.
2. Oil cooler was impact damaged and pushed aft.
3. Engine propeller flange was cracked from impact with the ground.
4. Alternator was broken off its mount at rear left side.
5. All engine mounts were broken off, except for the left front mount.
6. Oil sump was crushed upward from impact.
7. Throttle was broken off its mount at the rear of the engine.
8. Right side rocker box covers were broken exposing the rocker arms.
9. Right exhaust runner was bent up at rear.
10. Number 1 induction pipe was off the cylinder and missing.
11. Number 5 and 6 forward cylinder fins were impact damaged.
12. Induction balance tube was dented on the left side from impact.
13. Vacuum pump was broken off at the mount flange to engine.
14. Starter motor exhibited damage to the top rear cover plate.

The engine was mounted on an engine stand for disassembly.

Engine oil sump was crushed upward from impact. The inside color was normal. No metallic debris or oil sludge was present.

Engine oil pump gears and their respective cavities exhibited normal operational signatures. No signatures of hard particle passage were present. The oil pressure relief valve was removed and found clean.

All cylinder overhead components were intact and appeared operational.

All cylinders were steel barreled, part number 653446. All factory original spot putty was intact on all cylinder hold down nuts. The cylinders exhibited some rust in the barrels from unpreserved storage. The original factory hone pattern was visible but faint. Combustion deposits were normal for color and content. All valves appeared to be seating properly.

Piston rings were all free in their respective grooves. The crown deposits were normal for color and content. Piston skirts were dry and exhibited corrosion from the steel barrels. All piston pins exhibited normal operational signatures.

Crankcase main bearings exhibited normal operational signatures. The babbitt overlays were intact. No bearing movement was observed. Crankcase parting surfaces were free of any fretting signatures.

Crankshaft main journals exhibited normal polishing signatures. All connecting rods were removed and their bearing babbitt overlays were intact. Crankshaft main and connecting rod journals exhibited normal lubrication signatures.

Crankshaft counterweights' movements were free and unrestricted, indicating minimal counterweight pin and bushing wear.

Camshaft and lifters exhibited normal operational signatures. No lifter spalling or camshaft lobe wear was observed.

The fuel system components were taken to TCM fuel injection and flow tested. See charts below for flow data.

FUEL PUMP P/N 646212-1, SERIAL I309201BR

RPM	FLOW PPH	DISCHARGE PRESSURE PSI	OBSERVED DISCHARGE PRESSURE PSI
600	6.5 - 7.0	10.5 - 11.5	11.5
1600	37 - 38	19.0 - 22.0	20
2600	149 - 151	34	32.5
600	6.5 - 7.0	10.5 - 11.5	11.75
350	5.0 - 7.0	6.0 MIN	7.25

FUEL METERING /THROTTLE CONTROL P/N 629703-2, SERIAL D259616AR

THROTTLE ANGLE	INLET PRESSURE	FLOW LBS/HR	OBSERVED PRESSURE FLOW
0	7.8 - 8.2	6.6 - 7.1	7.9
8	13.4 - 14.0	30.6 - 34.6	31
16	14.8 - 15.6	57.3 - 61.3	57
21	15.5 - 16.5	72.3 - 77.8	78
28	15.1 - 16.2	94.0 - 99.0	95
36	12.9 - 14.1	106.2 - 111.2	105
FULL THROTTLE	9.8 - 11.0	130 - 134.5	134.5

MANIFOLD VALVE, LINES AND NOZZLES P/N 631351-15A32, SERIAL D259616CR

	10 PPH	50 PPH	100 PPH	150 PPH
INLET PRESSURE PSI	3.5 - 4.5	6.1 - 6.5	SET 10.7	17.5 - 18.1
OBSERVED INLET PRESSURE PSI	4.3	6.5	11.6	19.6

In conclusion, this engine exhibited normal operational signatures throughout. All internal components appeared well lubricated. The fuel system components flowed at or very near TCM specifications. This engine did not exhibit any condition that would have caused an operational problem.

The engine residuals were placed in storage pending disposition instructions.

Fred Fihe
Product Analysis Manager

Dr. Mario EstradaBran
Forensic Examiner
Belize City

18th August, 1997

Mario EstradaBran, Forensic Examiner. I performed a Post Mortem Examination on the body of [redacted] on the 24th July 1997 at the Old Morgue, Belize City Hospital. My findings were:

MEDICAL ACT:

I arrived at the scene of happening at 7:30 hrs. am on the 23rd July, 1997 at Belama Area, Phase II, House No. 312, where, I found, Police, Fire Department and Civil Aviation team, as well as, people of the neighbourhood area. I saw a small aeroplane, partially destroyed, which was identified by Civil Aviation, as V3 Foxtra Delta from "Tropic" Company, inside a bungalow house type, totally destroyed by fire; the house nearby appears partially damaged at the level of the roof on its front part.

A body was found in the wreckage, inside of the cabin to the left side, partially burnt due to fire incident to the wreck, with the following orientation and position; head towards the northwest, lower extremeties in opposite direction; decubitus ventral position, gladiator style. The skull appears with explosion secondary to dry hit (fire) pressure. Close to the corpse, I found an identification card - [redacted], as well as validation certificate flight crew, valid until 31.8.97.

Body pictures were taken by police photographer, before and after the body was removed. The body was then transferred to the old Belize City Mortuary at 8:50 hrs. am.

AUTOPSY TO FOLLOW:

On the 24th day of July, 1997 at 1:20 hrs. pm, I viewed and examined the body of [redacted] at OLD MORGUE, BELIZE CITY HOSPITAL in the Belize Judicial District.

The late is that of a male, adult, whom appears with data of real and recent death. The conjunctivas are absent; finger nails with different colourations, going to white, slight edymosis and pinkish. Total rigor mortis.

There is externally: craneum with multiple damage due to explosion pressure. Face unrecognizable. Total burns from head

to neck: 2nd to 3rd degree burns from chest to pelvis and extremeties. 1st degree burns on feet. Irregular injuries at level of neck. There is partial protrusion of lungs through cupular. Gladiator position.

2/...

CLOTHING: T-shirt partially burnt, khaki pants, pieces on hip and right leg: leather brown belt: white underwear. Shoes brown colour, (1) weinrrenner designed USA, (1) brown colour socks.

OPENING THE BIG CAVITIES, I found: Neck: C4, C5 appears dislocated. Trachea and Esophagus appear congested. Free passage. Chest: lungs are partially with diffused small contusions. Heart is congested, anatomo macroscopically normal, empty cavities. There is 1,2,4,5,6,8 broken ribs at the right anterior region, as well as 1,3,4,5,6, at the posterior archs of the same side. There is 1,2,4 broken ribs at the left anterior region, as well as, 2nd and 3rd at the posterior arch of the same side.

THE ABDOMEN AND CONTENTS: Liver appears with an irregular injury on right upper lobe (Cupula). Kidney and Spleen are normal. Stomach is dilated due to abundant quantity of brownish - yellowish food and fluid contents. Sample taken. Blood, urine sample taken to do forensic analysis. Extremeties as mentioned above.

This 25 year old, male, mestizo descent [redacted] died of Massive Neck and Chest trauma secondary to Plane Crash. Approximate time of death: About 7:30 hrs. AM on 23rd day of July 1997.

(DR. MARIO ESTRADABRAN)
FORENSIC EXAMINER
BELIZE CITY, BELIZE
24TH JULY 1997

ME/mc

NATIONAL FORENSIC SERVICES
MINISTRY OF NATIONAL SECURITY
5356 MANATEE DRIVE
BUTTONWOOD BAY, BELIZE CITY
FAXPHONE: 02-33131

LABORATORY REFERENCE: FL/97/B[redacted]
POLICE REFERENCE: CRIMES INVESTIGATION BRANCH
CASE OFFICER: SGT. 133 MARTINEZ

I, the undersigned Government Analytical Chemist do hereby certify that I witnessed on the 24th day of July, 1997 the post mortem examination on the body of [redacted]

Items received for analysis:

1) Blood
2) Urine
3) Stomach content.

RESULTS:

- [redacted]: Blood alcohol content: No alcohol detected.

- [redacted]: Urine drug content: No cocaine metabolites detected.
No cannabinoid detected.

- Stomach content: No alcohol detected.

ALCOHOL NOT DETECTED.

I further certify that the above analyses were done by me.

As witness my hand this 28th day of July, 1997.

Mr. R.

Government Analytical Chemist

BELIZE POLICE FORCE

FROM : O.C. CRIMES BRANCH

TO : COMMISSIONER OF POLICE

SUBJECT : SUDDEN DEATH OF [redacted]

DATE : 23 July, 1997

On Wednesday 23rd July, 1997, at about 7:30 a.m. a single engine cessna aircraft belonging to Tropic Air and piloted by [redacted] 25 years of San Pedro Town was enroute to the Municipal Airstrip from the Phillip Goldson International Airport when it crashed into a house No. 312 in the Belama Extension Phase II area, killing the pilot and setting the house on fire.

The fire was extinguished and the body removed from the wreckage. It now lies dead at the Belize City Mortuary awaiting Post Mortem Examination.

(O.C. CRIMES INVESTIGATION BRANCH)

TO: CORONER,
BELIZE JUDICIAL DISTRICT.

The above information is passed unto you for your information and directions.

(COMMISSIONER OF POLICE)

TO: CHIEF MEDICAL OFFICER,
BELIZE JUDICIAL DISTRICT.

By virtue of this order as Coroner in and for the country of Belize, you are hereby directed to make or cause to be made a Post Mortem Examination on the body of [redacted], which now lies dead at the Belize City Morgue, and report thereon to me your findings as required by law.

(CORONER)

July 23, 1997

Report from Chuck Woods

I heard a loud engine noise too loud to be where it should have been. I went outside and saw a Tropic Aircraft V3-HFD at approximately 300ft above ground at cruise speed over haulover creek headed east. The aircraft turned left in a 45° bank and continued north. It impacted into a electric line or ligh. pole and began to cart wheel it and impacted in a house and 10 seconds later burst into flames. I ran to see if I could help but it was too late. At the point of first impact the aircraft and engine appeared to be performing normally.

CIVIL AVIATION DEPARTMENT

REPORT FORM

(ACCIDENT/INCIDENT/AIRMISS/VIOLATION)

TYPE OF REPORT: Accident

DATE: 23rd July, 1997.

AIRCRAFT IDENTIFICATION: V3-HFD

TYPE OF AIRCRAFT: Cessna 207

METEOROLOGICAL CONDITIONS: 1300 UTC Meteorological Aviation Report

Wind Direction: 070 degrees
Wind Speed: 7 knots
Visibility: In excess of 10 kms.
Clouds: Scattered at 1800 feet.
Temperature: 28 degrees Celsius.
Dew Point: 25 degrees Celsius.
Barometric Pressure: 29.95 inches.
Remarks: Cumulonimbus Tops to the Northwest.
Significant Weather: None.

AIRCRAFT FLIGHT ATTITUDE: Level Flight

TIME OF OCCURRENCE: Approx. 1323 UTC

OPERATING COMPANY: Tropic Air Limited

NAME OF PILOT: Mr. [redacted]

NAME OF ATCOs ON DUTY: Mr. Hector Alpuche and Mr. Rigoberto Cocom

SHIFT SUPERVISOR: Mr. Rigoberto Cocom

SIGNATURE OF ATCO MAKING THE REPORT:

This report is submitted to the Director of Civil Aviation through the Chief Air Traffic Control Officer.

SIGNATURE OF CATCO:

DATE: 23rd July, 1997.

NARRATIVE: (Times are in Coordinated Universal Time (UTC). To get local time subtract six (6) hours.)

1320: V3-HFD, C207 (Tropic Air) departs Runway 07 from P.S.W.G. International Airport bound for Belize City Municipal Airport. Persons on Board: 01.

1322: V3-HFD reports by Haulover Bridge.

1324: Air Traffic Control (ATC) receives telephone call from one Miss [redacted] reporting that an aircraft has crash landed on a house at the Belama Extension near Belize City.

1325: The Aerodrome Air Traffic Control Officer initiates emergency response.

1327: Air Traffic Control requests from Orchid 3, BN2B (BDF aircraft) that was about to depart to Belmopan to overfly the area and confirm the report.

1329: Orchid 3 departed P.S.W.G. International Airport and confirmed that the aircraft is in a house and there is smoke and fire.

- Crash, Fire and Rescue Services (Rescue 1) proceeding to crash site.

- Mr. Manzanero, Deputy Director of Civil Aviation, and company informed of accident.

1334: Air Traffic Control informed Police in Belize City to secure the area. The police informed that personnel had been dispatched to the scene.

1339: Air Traffic Control requests from the pilot of aircraft V3-HDT to confirm if V3-HFD had landed at Municipal Airport (The pilot replied negative). Air Traffic Control also requested the pilot of aircraft V3-HDT to fly around Belama Extension to further investigate the accident. The pilot reported a crowd seen in the area, also smoke was still coming out of the site.

1355: Civil Aviation Department personnel proceed to site for accident investigation to assist the Deputy Director of Civil Aviation who was already on the scene.

(END)

THE FOLLOWING HAS BEEN EXTRACTED FROM RECORDINGS BETWEEN V3-HFD OPERATED BY TROPIC AIR AND AIR TRAFFIC CONTROL BELIZE:

1318

Pilot - Tower FD
ATC - Go ahead
Pilot - FD requeSt the active five hundred feet to the Municipal, negative pax
ATC - Roger, taxi holding point via the eaStern taxiway Runway 07 active QNH two niner niner Seven
Pilot - Roger
ATC - You Sound happy
Pilot - Say again
ATC - You Sound happy
Pilot - MuS e [redacted]
ATC - Don't Say that man
Clear take off Surface wind 060/10 knotS. Report abeam the bridge.
Pilot - FD clear take off. Will call you the bridge

1320

HFD IS AIRBORNE TO THE BELIZE MUNICIPAL AIRPORT.

1322

Pilot - FD by the bridge
ATC - FD Roger change to one two two eight
Pilot - FD one two two eight

* NO FURTHER TRANSMISSIONS HEARD FROM HFD.

TROPIC AIR
CESSNA 207
MAINTENANCE SCHEDULE
TA/C207/93
BCAD APPROVAL # _____

OPERATION NO. 3 SHEET 1 OF 7

AIRPLANE MODEL
AND SERIAL NUMBER _____ REGISTRATION
NUMBER _____

ENGINE
SERIAL NUMBER_____ PROPELLER
SERIAL NUMBER_____

	MECHANIC	INSPECTOR
CABIN		
1. Seat Tracks and Stops - Inspect seat tracks for condition and security of installation. Check seat track stops for damage and correct location.		
2. Cowl Flap Controls - Check freedom of movement through full travel.		
3. Engine, Propeller Controls, and Linkage - Check general condition and freedom of movement through full range. Check for proper travel, security of attachment, and for evidence of wear. Check friction locks for proper operation.		
ENGINE		
1. Cowling and Cowl Flaps - Inspect for cracks, dents, and other damage, security of cowl fasteners, and cowl flaps for condition, security, and operation.		
2. Engine - Inspect for evidence of oil and fuel leaks. Wash engine and check for security of accessories.		
3. Induction System - Check security of clamps, tubes, and ducting. Inspect for evidence of leakage.		
4. Alternate Induction Air System -Check for obstructions, operation, and security.		

	MECHANIC	INSPECTOR
5. Alternator and electrical connection - Check condition and security of alternator and support bracket. Check alternator belts for condition and proper adjustment.		
6. Oil Cooler - Check for obstructions, leaks and security of attachment.		
7. Exhaust System (normally aspirated engine) - Inspect for cracks and security.Air leak check exhaust system.		
8. Exhaust System (turbocharged engine) - Inspect couplings, seals, clamps, and expansion joints for cracks, condition, and security. Air leak check exhaust system.		
9. Engine Baffles and Seals - Check condition and security of attachment.		
10. Hoses, Metal Lines, and Fittings - Inspect for signs of oil and fuel leaks. Check for abrasion, chafing, security, proper routing and support and for evidence of deterioration.		
11. Turbocharger (if applicable - a. Inspect mounting brackets,ducting, linkage and attaching parts for general condition, leakage or damage,and security of attachment. b. Check waste gage, actuator, controller, oil and vent lines, overboost relief valve, and compressor		

TROPIC AIR
CESSNA 207
MAINTENANCE SCHEDULE
TA/C207/93

OPERATION NO. 3 SHEET 3 OF 7

	MECHANIC	INSPECTOR
housing for leakage, apparent damage, security of attachment, and evidence of wear. Check waste gate return spring for condition and security.		
12. Engine Oil Change - Normally Aspirated Engine Without Oil Filter a. Drain oil sump and oil cooler, clean and inspect screens, and refill with recommended grade aviation oil.		
13. Turbocharged and Normally Aspirated Engines With Oil Filters: a. Drain oil sump, remove and replace oil filter and refill with recommended grade aviation oil.		
14. Perform cylinder differential pressure check & record: #1 /80 #2 /80 #3 /80 #4 /80 #5 /80 #6 /80		
PROPELLER 1. Propeller Mounting - Check for security of installation.		
2. Propeller Governor and Control - Inspect for oil and grease leaks. If leak is present see McCauley Service Manual.		

TROPIC AIR
CESSNA 207
MAINTENANCE SCHEDULE
TA/C207/93

OPERATION NO. 3 SHEET 4 OF 7

	MECHANIC	INSPECTOR
3. Propeller Blades - Inspect for cracks dents, nicks, scratches, erosion, corrosion, or other damage.		
4. Spinner - Check general condition and attachment.		
5. Propeller Anti-Ice Slip Rings, Brushes and Boots - Inspect for condition and security. Perform operational check.		

WINGS

1. Fuel Tank or Bladder Drains - Drain water and sediment.		
2. Pitot Tube and Stall Warning Vane - check for condition and obstructions.		
3. Pitot Tube Heater Element - Perform operational check.		

SPECIAL INSPECTION ITEMS

1. Check and accomplish all Special Inspection items due.		

WORKSHEETS ASSIGNED:

TROPIC AIR
CESSNA 207
MAINTENANCE SCHEDULE
TA/C207/93

OPERATION NO. 3 SHEET 3 OF 7

	MECHANIC	INSPECTOR
housing for leakage, apparent damage, security of attachment, and evidence of wear. Check waste gate return spring for condition and security.		
12. Engine Oil Change - Normally Aspirated Engine Without Oil Filter a. Drain oil sump and oil cooler, clean and inspect screens, and refill with recommended grade aviation oil.		
13. Turbocharged and Normally Aspirated Engines With Oil Filters: a. Drain oil sump, remove and replace oil filter and refill with recommended grade aviation oil.		
14. Perform cylinder differential pressure check & record: #1 /80 #2 /80 #3 /80 #4 /80 #5 /80 #6 /80		
PROPELLER 1. Propeller Mounting - Check for security of installation.		
2. Propeller Governor and Control - Inspect for oil and grease leaks. If leak is present see McCauley Service Manual.		

	MECHANIC	INSPECTOR
3. Propeller Blades - Inspect for cracks dents, nicks, scratches, erosion, corrosion, or other damage.		
4. Spinner - Check general condition and attachment.		
5. Propeller Anti-Ice Slip Rings, Brushes and Boots - Inspect for condition and security. Perform operational check.		

WINGS

1. Fuel Tank or Bladder Drains - Drain water and sediment.		
2. Pitot Tube and Stall Warning Vane - check for condition and obstructions.		
3. Pitot Tube Heater Element - Perform operational check.		

SPECIAL INSPECTION ITEMS

1. Check and accomplish all Special Inspection items due.		

WORKSHEETS ASSIGNED:

		MECHANIC	INSPECTOR
2.	Clean battery compartment and check electrolyte level per paragraph 2-23		
3.	Service Shimmy Damper per Para 2-26		
4.	Remove & Inspect induction Air Filter for servicability.		
5.	Clean, Inspect & Lubricate Wing Flap jack screw. S/N prior to 20700208 per paragraph 2-45 a), S/N after 20700208 per paragraph 2-45c).		
6.	Remove flap, aileron control rods, Inspect rod end bearing for corrosion and freedom of movement. Lubricate and reinstall. (Dual insp required)		
7.	Magneto to Engine timing. Perform magneto to engine timing. Reference Section 12. LH RH		
8.	Elt check, Perform per paragraph 17-126		
9.	Lubricate all item indicated as 50 100 on lubrication figure		

2-5

OPERATION NO. 3

MECHANIC INSPECTOR

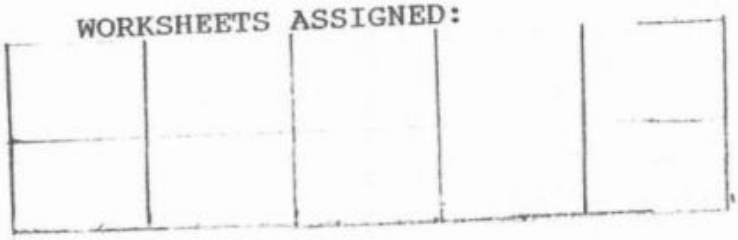
POST INSPECTION

1. Replace all fairings, doors, floorboard and wing access covers. ground check engine, alternator charging rate (28 volts minimu), oil pressure/ oil temperature, fuel flow indicator, fuel quantity indicator, rpm indicator, flight instruments, and general operating components. _____

SERVICE BULLETINS/AIRWORTHINESS DIRECTIVES

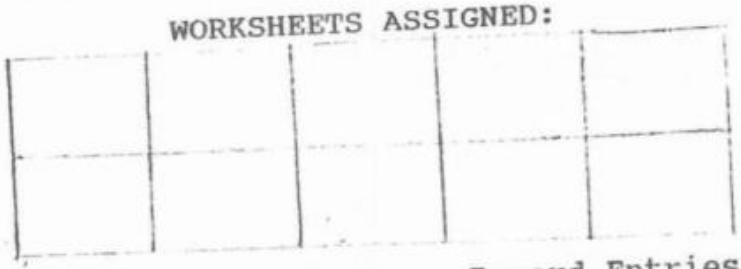
1. Check that the following Cessna Service Bulletins are complied with. _____

WORKSHEETS ASSIGNED:



2. Check that the following Airworthiness Directives and Civil Aviation Regulations are Complied with. _____

WORKSHEETS ASSIGNED:



3. Ensure all Maintenance Record Entries required by Civil Aviaton regulations are complied before returning the airplane to service. _____

TROPIC AIR
CESSNA 207
MAINTENANCE SCHEDULE
TA/C207/93

OPERATION NO. 3 SHEET 7 OF 7

OPERATION NO. 3 COMPLETED

AIRPLANE MODEL/SERIAL _____ REGISTRATION _____

AIRCRAFT TOTAL HOURS _____ DATE _____

AIRCRAFT TACH HOURS _____

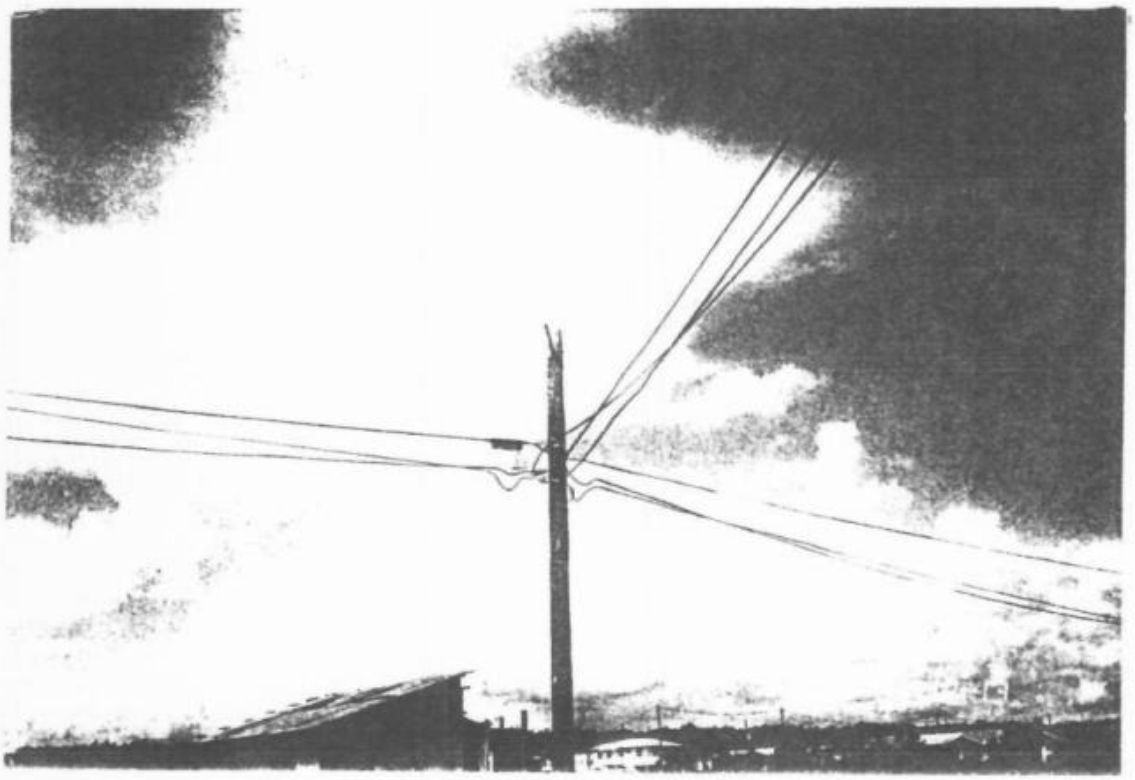
ENGINE TSO _____ NEXT INSPECTION DUE @

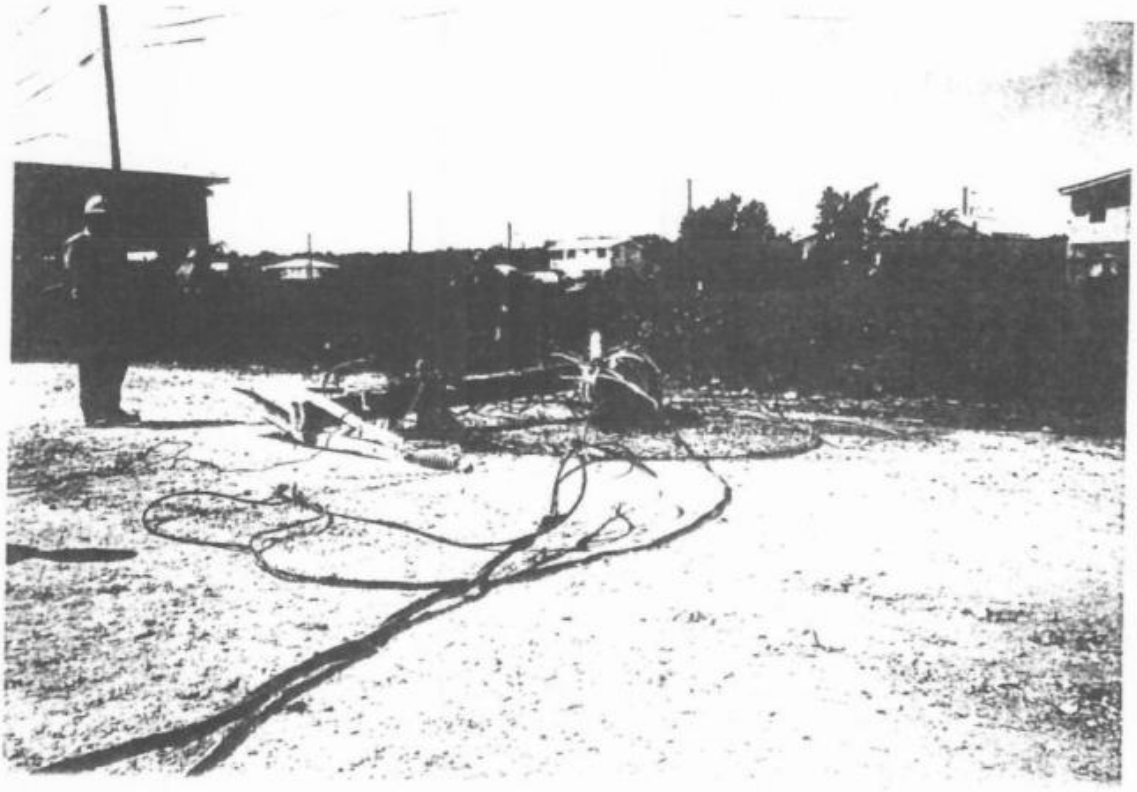
PROPELLER TSO _____ _____ TOTAL HRS

_____ TACH HRS

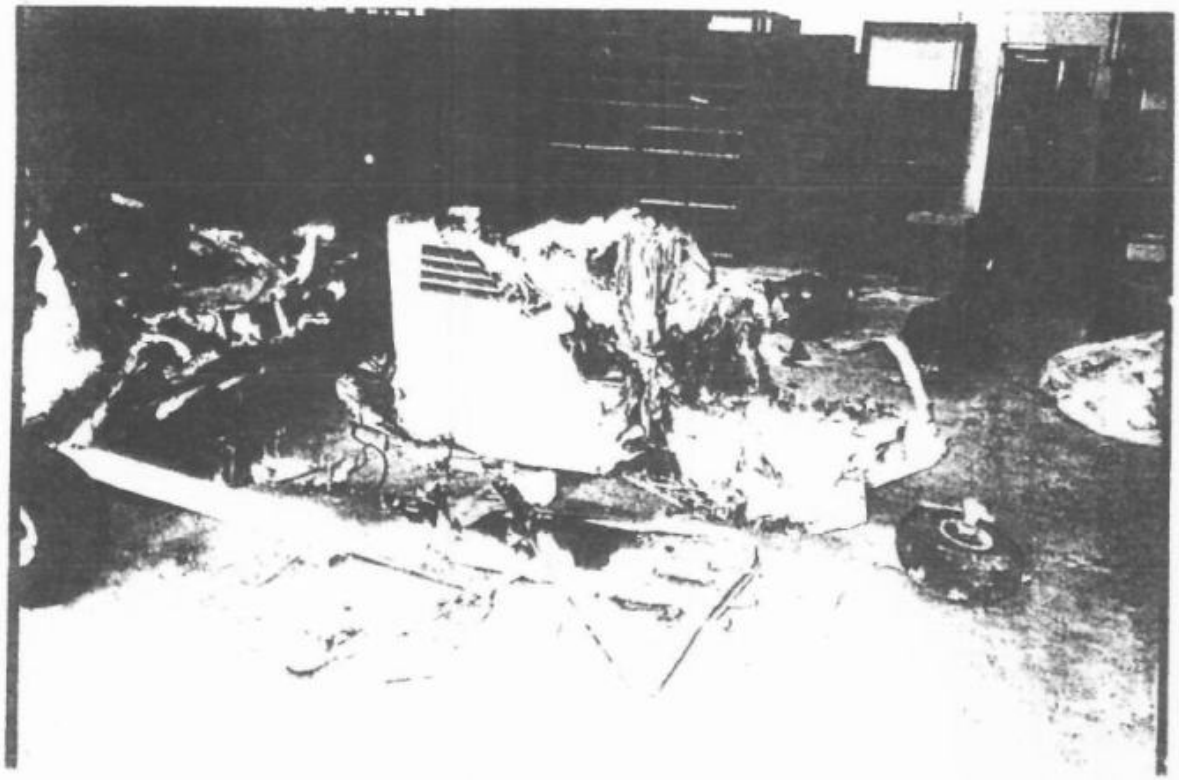
MECHANIC	NUMBER	INSPECTOR	NUMBER

Snapped lamp post and broken electrical cables
caused by aircraft

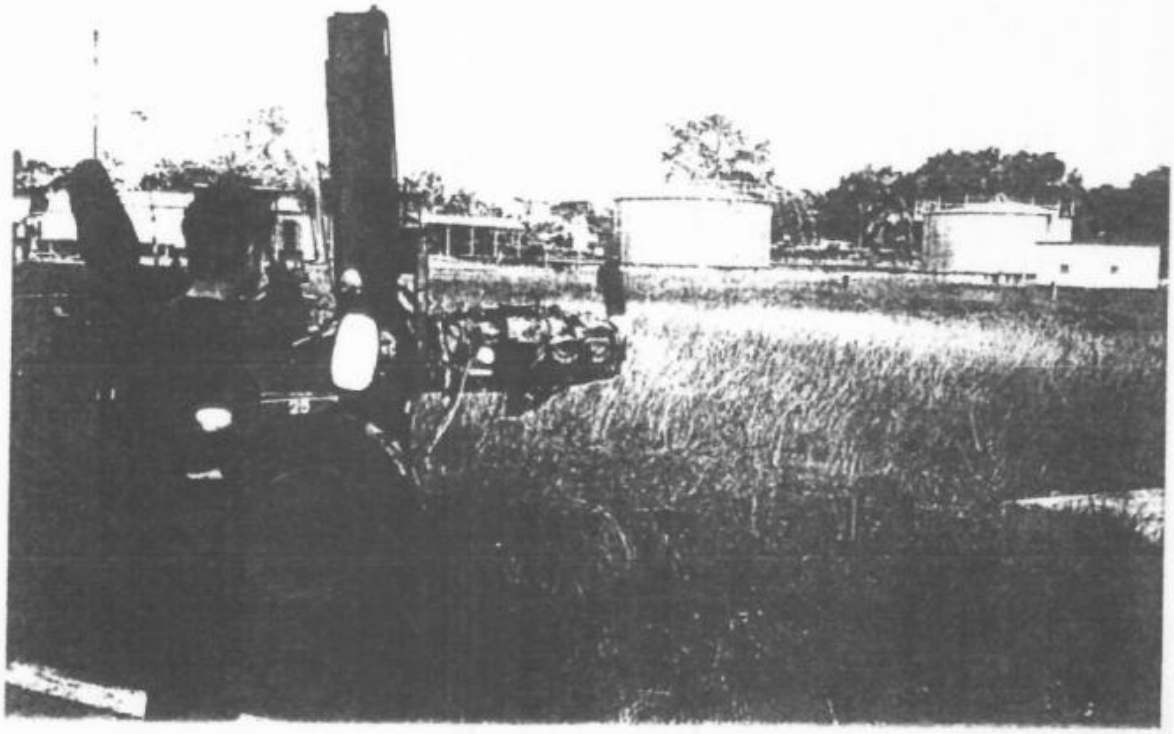




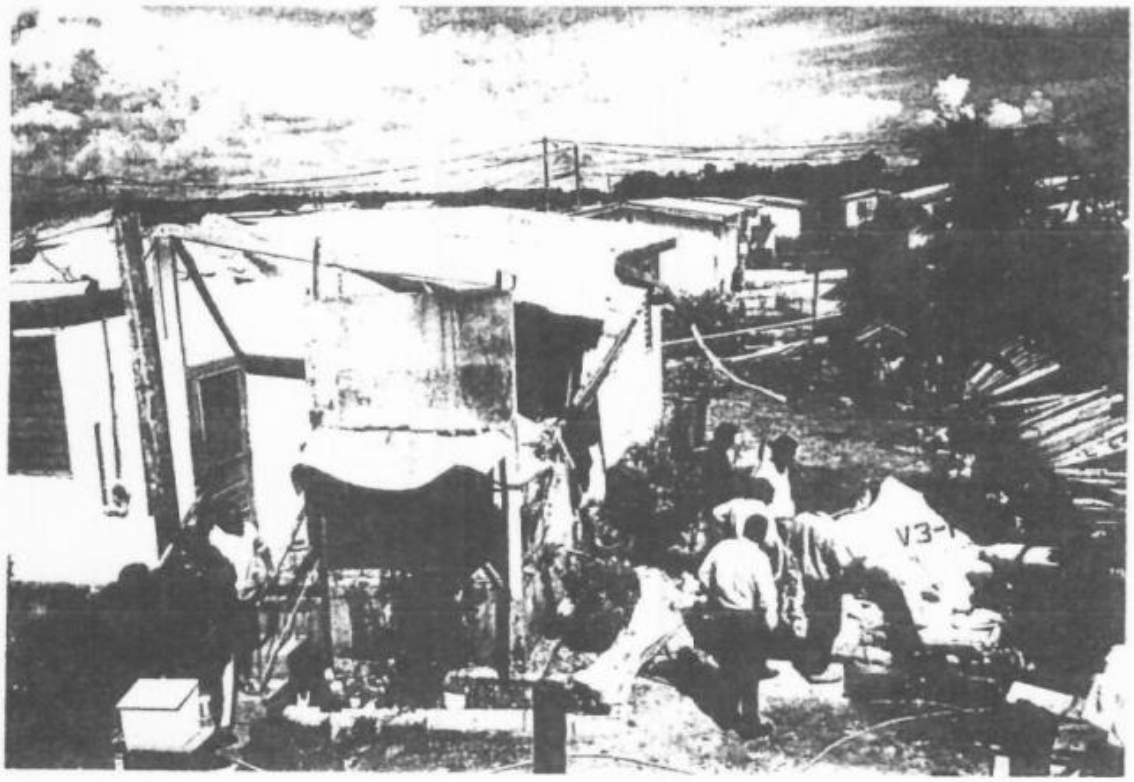
Sorting of Aircraft
Wreckage - BDF Hangar



Test running of aircraft engine witnessed by
designated Civil Aviation Department Engineer

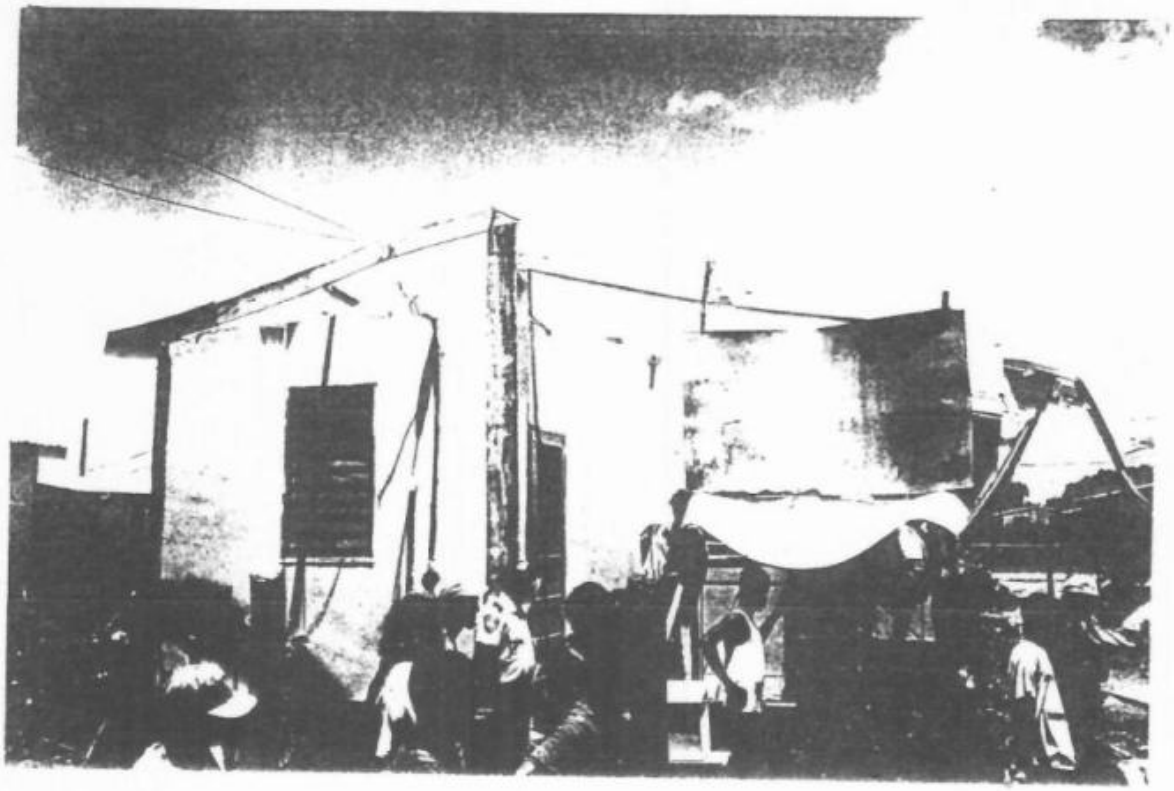


- CRASH SITE -



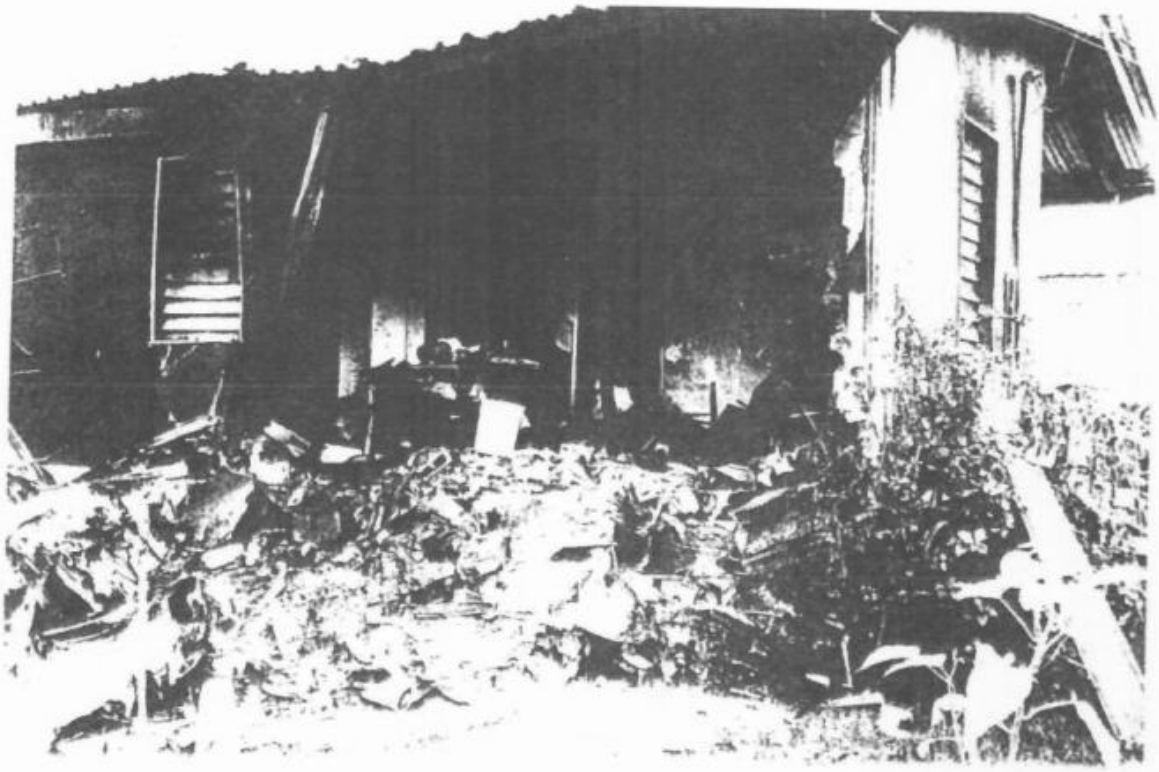
Arrows indicating Crash Site in Residential Area
(Belama Phase II)

House roofing destroyed by aircraft
vertical stabilizer (tail area)



Aircraft engine in living room

General view of aircraft wreckage at crash site



House wall destroyed by aircraft impact