



Aviation Investigation Final Report

Location:	LAS VEGAS, Nevada	Incident Number:	SEA87IA084
Date & Time:	April 17, 1987, 14:45 Local	Registration:	N90518
Aircraft:	Smith, Ted Aerostar AEROSTAR 601P	Aircraft Damage:	Minor
Defining Event:		Injuries:	5 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

APRX 422 FLT HRS BFR THE FLT, THE SMITH AEROSTAR 601P WAS MODIFIED IAW MACHEN STC SA980NW. DRG LEVEL OFF AT 16,500' MSL,BLISTERING & DISCOLORATION WERE NOTED ON THE #1 ENG NACELLE. THE PLT SHUT DOWN & FEATHERED THE #1 ENG, THEN RETURNED TO THE DEPARTURE ARPT & LANDED WITHOUT FURTHER INCIDENT. AFTER LNDG, AN EXAM REVEALED AN IN-FLT FIRE HAD OCCURRED, WHICH RESULTED IN MINOR DMG OF THE ENG ACCESSORY SECTION. TWO EXHAUST CLAMPS WERE FOUND LOOSE AT THE EXHAUST STACK WASTE GATE CONNECTION. HOT GASES FROM THE LOOSE CONNECTION HAD ESCAPED & IMPINGED ON THE TURBOCHARGER OIL SUPPLY HOSE (MACHEN PN CAA04S160). THE HOSE WAS WIRE REINFORCED & FIRE SLEEVED, BUT WAS LOCATED CLOSE TO THE EXHAUST STACK. THERE WAS EVIDENCE THAT IT HAD RUPTURED FROM PROLONGED EXPOSURE TO HEAT. ESCAPING OIL FROM THE HOSE CAME IN CONTACT WITH THE HOT EXHAUST STACK & TURBOCHARGER, WHICH RESULTED IN A FIRE.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be:

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: CLIMB - TO CRUISE

Findings

1. (C) EXHAUST SYSTEM,CLAMP - LOOSE
2. (C) EXHAUST SYSTEM - LEAK
3. (C) LUBRICATING SYSTEM,OIL LINE - OVERTEMPERATURE
4. (C) MAINTENANCE,MODIFICATION - INADEQUATE
5. (F) CONDITION(S)/STEP(S) INSUFFICIENTLY DEFINED - PRODUCTION/DESIGN PERSONNEL
6. (C) LUBRICATING SYSTEM,OIL LINE - FAILURE,PARTIAL
7. (C) FLUID,OIL - LEAK

Occurrence #2: FIRE

Phase of Operation: CLIMB - TO CRUISE

Findings

8. (C) ENGINE ASSEMBLY,OTHER - FIRE
9. EMERGENCY PROCEDURE - PERFORMED
10. PROPELLER FEATHERING - PERFORMED
11. PRECAUTIONARY LANDING - PERFORMED

Factual Information

Pilot Information

Certificate:	Commercial	Age:	59, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	April 10, 1987
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	1800 hours (Total, all aircraft), 900 hours (Total, this make and model), 17 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Smith, Ted Aerostar	Registration:	N90518
Model/Series:	AEROSTAR 601P AEROSTAR 6	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	61P0315085
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	October 2, 1986 Annual	Certified Max Gross Wt.:	6000 lbs
Time Since Last Inspection:	83 Hrs	Engines:	2 Reciprocating
Airframe Total Time:	1731 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	L/TIO-540
Registered Owner:	SIERRA TELEPHONE COMPANY INC	Rated Power:	350 Horsepower
Operator:	SIERRA TELEPHONE CO., INC.	Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	LAS ,2174 ft msl	Distance from Accident Site:	
Observation Time:	14:48 Local	Direction from Accident Site:	
Lowest Cloud Condition:	25000 ft AGL	Visibility	40 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	13 knots / 20 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	220°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	34°C / -1°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	LAS VEGAS , NV (LAS)	Type of Flight Plan Filed:	None
Destination:	FRESNO , CA	Type of Clearance:	None
Departure Time:	14:30 Local	Type of Airspace:	

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:	0 ft msl	Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:	0 ft / 0 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Minor
Passenger Injuries:	4 None	Aircraft Fire:	In-flight
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	5 None	Latitude, Longitude:	36.080112,-115.140853(est)

Administrative Information

Investigator In Charge (IIC):	Mccreary, S.
Additional Participating Persons:	D MORGAN; LAS VEGAS , NV
Original Publish Date:	
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=40543

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).