Aviation Investigation Final Report

Location:	ARLINGTON, Washington	**Accident Number:**	SEA99FA104
Date & Time:	July 6, 1999, 09:30 Local	**Registration:**	N700HT
Aircraft:	Harry Tomlinson COOT A	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Shortly after departure, the aircraft collided with high-voltage transmission lines located approximately 750 feet north of the airport. The power lines are approximately 45 feet AGL. Witnesses stated that the aircraft departed the airport, but did not appear to be gaining sufficient altitude to clear the power lines. The aircraft came to rest in the backyard of a residence north of the airfield. There was no evidence found to indicate a mechanical malfunction or failure.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to attain adequate clearance from power transmission lines.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings
1. OBJECT - WIRE,TRANSMISSION
2. (C) CLEARANCE - NOT ATTAINED - PILOT IN COMMAND

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: DESCENT - UNCONTROLLED

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

HISTORY OF FLIGHT

On July, 6, 1999, approximately 0930 Pacific daylight time, a Tomlinson Coot-A, N700HT, registered to and operated by the private pilot, was destroyed after it collided with power lines near Arlington Municipal Airport, Arlington, Washington. The private pilot, the sole occupant, was fatally injured. The aircraft was being operated as a 14CFR91 personal/pleasure flight. Visual meteorological conditions prevailed and no flight plan was filed. The aircraft was destroyed by post-crash fire and impact forces. The accident aircraft departed from Arlington airport just prior to the accident.

Witnesses, located approximately 725 feet north of the runway, reported observing the accident aircraft depart runway 34 at Arlington Municipal Airport. The witnesses stated the aircraft was traveling northbound, but did not appear to be gaining altitude. Seconds later, the aircraft collided with power lines and burst into flames. The aircraft came to rest in the back yard of the residence located at 5433 Cemetery Road.

PERSONNEL INFORMATION

At the time of the accident, the pilot held a private pilot certificate and was rated in single-engine land aircraft. The certificate was issued on November 12, 1986. The pilot's flight logbooks indicate that he had accumulated a total flight time of 486 hours in single engine aircraft, with approximately 26 of the hours in the accident aircraft. However, the logbooks indicate that the pilot's last flight in the accident aircraft was June 29, 1998. The pilot did accumulated approximately 8 hours of flight time in a Piper PA-28 in the 90 days proceeding the accident.

Medical records obtained from the Federal Aviation Administration Airman Records, Oklahoma City, Oklahoma, indicated that the pilot held a third class medical certificate dated March 4, 1999. A limitation indicating that the pilot shall wear lenses that correct for distant vision and shall possess glasses that correct for near vision was noted.

WREAKAGE AND IMPACT INFORMATION

The aircraft's initial impact point was a series of pole-mounted, high-voltage transmission lines, located approximately 2,800 feet north of the departure end of runway 34. The power line's span was perpendicular (east to west) to the extended centerline of runway 34 and parallel to Cemetery Road. The length of the span was approximately 291 feet. The height of the power line varied from 47 feet above ground level (AGL) at the pole, to 42 feet AGL at the middle of the span. The diameter of the power line was 1.026 inches.

Numerous fragments of wood, fabric and clear plastic were scattered between the downed power line and the central burn area. An outboard section of the aircraft's left wing (approximately 36 inches in length) was located between the aircraft wreckage and the downed power line (refer to Diagram 1 and Photograph 2). The section of wing was approximately 38 feet north of the downed power line and 132 feet south of the wreckage.

The aircraft wreckage and burn area were located in an open pasture approximately 160 feet north of the downed power line. The terrain is relatively flat and covered with pasture grass. With the exception of an outboard section of the left wing, all major components of the aircraft were located in the wreckage burn area. The remains of the fuselage were found inverted and oriented on a magnetic bearing of approximately 270 degrees. The aircraft's instrument panel, cockpit controls and cabin area were destroyed by fire and impact forces. A section of the right aileron, torque tube and charred remains of the right wing were found lying perpendicular to the aircraft's fuselage (refer to Photograph 1). The aircraft's empennage was located with the main wreckage. All fixed and movable empennage control surfaces remained attached and in their normal positions. Rearward crushing was noted to the vertical stabilizer (refer to Photograph 2). Control continuity was established from the empennage control surfaces forward to the remains of the cockpit. The aircraft's main landing gear and nose gear were found attached to the airframe and in the down position. The outboard section of the aircraft's left wing (approximately 36 inches in length) was located between the aircraft wreckage and the downed power line (refer to Diagram 1 and Photograph 1). The section of wing was approximately 38 feet north of the downed power line and 132 feet south of the wreckage.

The aircraft's engine and accessory components were found with the main wreckage and sustained major fire and impact damage. The propeller and propeller hub were still attached to the engine's crankshaft. However, all but approximately 12 inches of each propeller blade were destroyed by fire and impact forces. Aft bending was noted to the remaining sections of both propeller blades.

TESTS AND RESEARCH

On September 1, 1999, the aircraft's engine was examined by representatives from Teledyne Continental Motors and National Transportation Safety Board. Extensive fire and impact damage was noted to the engine and engine accessories.

Both magnetos and their respective ignition harnesses were found attached to the engine and sustained considerable heat and fire damage. The left magneto developed spark by manually rotating the shaft. The right magneto would only partially rotate and no spark could be produced.

All spark plugs were in place and showed signs of fire and impact damage. The top spark plugs were removed. Black, sooty deposits consistent with an overly rich fuel/air mixture was noted on all six spark plugs.

The fuel flow divider and associated fuel injector lines were intact, but sustained considerable heat distress. The flow divider housing was disassembled. The spring, diaphragm and screen were intact and the screen was free of any foreign material. The fuel lines leading to and from the fuel flow divider were destroyed by fire.

The aircraft's engine rotated freely and developed compression in cylinders 1,2 and 5, however, compression was not established in the cylinders 3,4 and 6. Rocker arm, valve train and accessory gear continuity was established by manually rotating the crank. The oil sump, oil cooler, fuel pump and intake manifold sustained impact damage and were partially melted away.

The wreckage was released to the owner's representative on September 22, 1999.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot by the Snohomish County Medical Examiner's Office. The medical examiner determined that the cause of death is attributed to blunt impact injuries to the head, neck and trunk.

Pilot Information

Certificate:	Private	**Age:**	71,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	March 23, 1999
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	486 hours (Total, all aircraft), 26 hours (Total, this make and model), 5 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Harry Tomlinson	**Registration:**	N700HT
Model/Series:	COOT A COOT A	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	100
Landing Gear Type:	Retractable - Tricycle; Amphibian	**Seats:**	2
Date/Type of Last Inspection:	Annual	**Certified Max Gross Wt.:**	1900 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	90 Hrs	**Engine Manufacturer:**	Rolls-Royce
ELT:		**Engine Model/Series:**	IO-360-G
Registered Owner:	HARRY M. TOMLINSON	**Rated Power:**	225 Horsepower
Operator:		**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:	AWO ,137 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	09:55 Local	**Direction from Accident Site:**	160°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	300°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	19°C / 12°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	ARLINGTON , WA (AWO)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	09:30 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	ARLINGTON MUNICIPAL AWO	**Runway Surface Type:**	Asphalt
Airport Elevation:	137 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	34	**IFR Approach:**	None
Runway Length/Width:	5333 ft / 100 ft	**VFR Approach/Landing:**	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	On-ground
Total Injuries:	1 Fatal	**Latitude, Longitude:**	48.180446,-121.670173(est)

Administrative Information

Investigator In Charge (IIC):	Hogenson, Dennis
Additional Participating Persons:	SARAH J MOYE; SEATTLE , WA MIKE J GRIMES; MOBILE , AL
Original Publish Date:	May 9, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=46728