



Aviation Investigation Final Report

Location:	FREELAND, Michigan	Accident Number:	CHI92DEM02
Date & Time:	May 6, 1992, 13:45 Local	Registration:	N71309
Aircraft:	GILLESPIE/PITTS S1C	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE PILOT OF A TAIL WHEEL CONFIGURED AEROBATIC AIRPLANE HAD TOUCHED DOWN ON LANDING AND DISCOVERED THE AIRPLANE DID NOT HAVE RIGHT RUDDER PEDAL CONTROL. THE PILOT STATED HE TOOK OFF TO TROUBLE SHOOT THE PROBLEM. DURING THE INFLIGHT INVESTIGATION HE DISCOVERED THE RIGHT RUDDER CABLE HAD SEPARATED WHERE THE CABLE RUNS THROUGH THE COCKPIT NEAR THE RIGHT SIDEWALL. THE PILOT MADE A CABLE REPAIR SO IT WOULD ALLOW BRAKE SYSTEM OPERATION. DURING THE SUBSEQUENT LANDING THE AIRPLANE WAS NOT AS DIRECTIONALLY CONTROLLABLE AS IT SHOULD HAVE BEEN. AS THE AIRPLANE BEGAN TO DECELERATE IT BEGAN AN UNCONTROLLABLE SWERVE WHICH RESULTED IN A LANDING GEAR COLLAPSE.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A TOTAL FAILURE OF THE RUDDER CONTROL CABLE AND UNAVAILABILITY OF RUDDER TO CONTROL THE AIRPLANE DURING ITS LANDING PROCESS. FACTORS WHICH CONTRIBUTED TO THE ACCIDENT WERE DIRECTIONAL CONTROL AND REMEDIAL ACTION NOT BEING POSSIBLE ON BEHALF OF THE PILOT.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

1. (C) FLT CONTROL SYST, RUDDER CONTROL CABLE/ROD - FAILURE, TOTAL
2. (C) RUDDER - UNAVAILABLE - PILOT IN COMMAND

Occurrence #2: LOSS OF CONTROL - ON GROUND/WATER
Phase of Operation: LANDING - ROLL

Findings

3. (F) DIRECTIONAL CONTROL - NOT POSSIBLE - PILOT IN COMMAND
4. GROUND LOOP/SWERVE - UNCONTROLLED - PILOT IN COMMAND
5. (F) REMEDIAL ACTION - NOT POSSIBLE - PILOT IN COMMAND

Occurrence #3: GEAR COLLAPSED
Phase of Operation: LANDING - ROLL

Factual Information

Pilot Information

Certificate:	Private	Age:	40, Male
Airplane Rating(s):	Single-engine land; Single-engine sea	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	July 22, 1991
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	1844 hours (Total, all aircraft), 10 hours (Total, this make and model), 1780 hours (Pilot In Command, all aircraft), 30 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	GILLESPIE/PITTS	Registration:	N71309
Model/Series:	S1C S1C	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental (Special)	Serial Number:	RJ101
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	July 1, 1991 Annual	Certified Max Gross Wt.:	
Time Since Last Inspection:	12 Hrs	Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	O-320
Registered Owner:	BRIAN E. DAWSON	Rated Power:	160 Horsepower
Operator:	DEAN C. VANZWOLL	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:	MBS ,667 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	14:00 Local	Direction from Accident Site:	1°
Lowest Cloud Condition:	Clear	Visibility	20 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	13 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	30°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	15°C / -18°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	BAY CITY , MI (3CM)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	00:00 Local	Type of Airspace:	Class G

Airport Information

Airport:	TRI CITIES INT'L MBS	Runway Surface Type:	Concrete
Airport Elevation:	667 ft msl	Runway Surface Condition:	Dry
Runway Used:	5	IFR Approach:	None
Runway Length/Width:	8000 ft / 150 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	43.519168,-84.109237(est)

Administrative Information

Investigator In Charge (IIC): Roby, Teddy

Additional Participating Persons:

Original Publish Date: July 26, 1993

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.ntsb.gov/Docket?ProjectID=15238>

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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](#).