Aviation Investigation Final Report

Location:	HARTFORD, Wisconsin	**Accident Number:**	CHI99LA189
Date & Time:	June 19, 1999, 16:00 Local	**Registration:**	N8145
Aircraft:	Schempp-Hirth CIRRUS	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot said that he was practicing deployment of the drogue chute during a landing in the glider. He said that the chute did not release and a landing short of the runway occurred. During the landing roll the glider impacted a roadway embankment. This glider had a history of the drogue chute not releasing previously. Subsequent to the accident an examination of the drogue chute mechanism failed to reveal any anomalies. There was no maintenance manual available for the glider to check the rigging of the release cable.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the reason for the occurrence was undetermined. Factors were the pilot's deploying of the drogue chute, the drogue chute malfunctioning, a dirt embankment, and encountering unsuitable terrain during landing.

Findings

Occurrence #1: UNDERSHOOT
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings
1. (F) MISC EQPT/FURNISHINGS,PARACHUTE/DRAG CHUTE - NOT DISCONNECTED
2. (C) DISTANCE/ALTITUDE - MISJUDGED - PILOT IN COMMAND

Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: LANDING - ROLL

Findings
3. (F) TERRAIN CONDITION - DIRT BANK/RISING EMBANKMENT

Factual Information

On June 19, 1999, at 1600 central daylight time, a Schempp-Hirth Cirrus (glider), N8145, experienced an undershoot to runway 18 at the Hartford Municipal Airport, near Hartford, Wisconsin. The glider sustained substantial damage. The pilot reported no injuries. The personal 14 CFR Part 91 flight was operating in visual meteorological conditions. No flight plan was on file. The local flight departed about 1400.

The pilot said he was approached runway 18 with the wind was from the east. The pilot said that he initiated a high approach with the intention of practicing the deployment of a drogue chute. He said that subsequently, when he attempted to release the chute, it did not release and he was unable to reach the runway where he intended to land. He said that on landing the glider impacted a road embankment. In a second interview, the pilot revealed that the glider had a history of the drogue chute "hanging" up when deployed during a crosswind landing with a rudder deflection. The pilot produced a copy of the "Open Cirrus Newsletter" published in 1996, where the former owner of N8145 (the same glider) experienced a similar instance where the drogue chute failed to release.

A test of the release mechanism after the accident, failed to reveal any problem with releasing the chute; however, due to the unavailability of the maintenance manual for this German built glider, it was not possible to determine if the cable or rigging was correct. The test was conducted prior to receiving the newsletter article indicating a test conducted with one or more revolutions of the drogue chute shroud lines would replicate the failure to release. The drogue chute was not tested in this manner during the most recent examination.

There were 170 Schempp-Hirth Cirrus gliders manufactured circa 1969. Approximately 31 were imported into the United States and Canada, of which about 20 are currently in service. A group of owners and enthusiasts formed the Vintage Sailplane Association. A division within that organization is the "Classic Division." The current chairman of that division is an owner of a Cirrus glider and the writer/publisher of the "Open Cirrus Newsletter." He was interviewed and said that the drogue chute installed on the Cirrus glider is for emergency use and utilized primarily for landing in small fields. He said that to his knowledge all the Cirrus gliders were imported with the drogue chute; however, some of the glider owners had removed the chute. He said that he and other owners/operators of the glider do on occasion use the chute for practice, and for what he described as "photo ops." He said he was aware of the reported problems with the chute not releasing; however, said he had never experienced it himself. He indicated that he would cover the topic in his next issue of the "Open Cirrus Newsletter" to owners. He said that the owners of the Cirrus sailplane are a small group and that they are in contact with one another on a regular basis. He indicated that there are only a few glider manufacturers who employ the drogue chute at all. He noted there was one manufacturer to use it as the sole "high drag device."

Pilot Information

Certificate:	Private	**Age:**	42,Male
Airplane Rating(s):	None	**Seat Occupied:**	Center
Other Aircraft Rating(s):	Glider	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	None Unknown	**Last FAA Medical Exam:**	
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	145 hours (Total, all aircraft), 104 hours (Total, this make and model), 129 hours (Pilot In Command, all aircraft), 21 hours (Last 90 days, all aircraft), 11 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Schempp-Hirth	**Registration:**	N8145
Model/Series:	CIRRUS CIRRUS	**Aircraft Category:**	Glider
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	70
Landing Gear Type:	Retractable - Tailwheel	**Seats:**	1
Date/Type of Last Inspection:	May 17, 1999 Annual	**Certified Max Gross Wt.:**	882 lbs
Time Since Last Inspection:	600 Hrs	**Engines:**	Unknown
Airframe Total Time:	11 Hrs	**Engine Manufacturer:**	
ELT:	Not installed	**Engine Model/Series:**	
Registered Owner:	GARY R NELSON	**Rated Power:**	
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:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:	Scattered / 6500 ft AGL	**Visibility**	15 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	12 knots / 15 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	90°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	27°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(HXF)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	14:00 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	HARTFORD MUNICIPAL HXF	**Runway Surface Type:**	Grass/turf
Airport Elevation:	1070 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	18	**IFR Approach:**	None
Runway Length/Width:	2250 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:**	43.319725,-88.3805(est)

Administrative Information

Investigator In Charge (IIC):	Wilson, Stephen
Additional Participating Persons:	DARYL I GRUBBS; MILWAUKEE , WI
Original Publish Date:	March 2, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=46577