



Aviation Investigation Final Report

Location:	Tonopah, Nevada	Accident Number:	LAX02LA231
Date & Time:	July 16, 2002, 13:16 Local	Registration:	N127HC
Aircraft:	Schleicher ASW-27	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Serious, 1 None
Flight Conducted Under:	Part 91: General aviation - Air race/show		

Analysis

During the initiation phase of an air tow takeoff launch, the pilot lost directional control of his glider when a wing contacted the runway. The glider veered off the runway and collided with a spectator and an automobile. The spectator was located ahead of the glider, but within an area that was supposed to be devoid of personnel. The pilot's ground crew was supposed to support the glider's wing during the beginning of the takeoff until the pilot acquired sufficient aerodynamic control to prevent the wings from contacting the ground. However, when the glider was connected to the tow plane, the tow plane never came to a complete stop. During the takeoff, the glider was accelerated in a slingshot manner out of the ground crew's hand. The accident occurred during a sanctioned Soaring Society of America aviation event (air race) known as the United States 15-Meter National Soaring Championships. Event spokespersons acknowledged that the area in where the collision occurred, called the "clear zone," had not been identified with specific markers, "Do Not Cross" signs, or physical barriers. They indicated, however, that the injured spectator was familiar with the airport, and evidently was 3.5 feet closer to the runway than he should have been, for personal reasons. The lateral distance between the runway's edge and the spectator was 78 feet. The pilot subsequently reported that had he held his brakes until the towrope was tight and stable, he would not have lost control. Also, the pilot reported that as soon as he observed that his course was diverging from the runway centerline, he could have pulled the tow release thus aborting the takeoff. Several of the aviation event's management and organization officials witnessed the accident. The National Soaring Championships Chair reported that, henceforth, its procedures were being changed by keeping the area in front of the glider's takeoff paths clear of nonparticipant personnel and vehicles.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Air event management's failure to adequately separate spectators and vehicles from the takeoff path. Also causal was the glider pilot's failure to maintain directional control and failure to abort the takeoff attempt in a timely manner.

Findings

Occurrence #1: LOSS OF CONTROL - ON GROUND/WATER

Phase of Operation: TAKEOFF - ROLL/RUN

Findings

1. (C) DIRECTIONAL CONTROL - NOT MAINTAINED - PILOT IN COMMAND
2. GROUND LOOP/SWERVE - INADVERTENT - PILOT IN COMMAND
3. (C) ABORTED TAKEOFF - NOT PERFORMED - PILOT IN COMMAND

Occurrence #2: ON GROUND/WATER COLLISION WITH OBJECT

Phase of Operation: TAKEOFF - ROLL/RUN

Findings

4. OBJECT - OTHER PERSON
5. (C) PROCEDURE INADEQUATE - OTHER INSTITUTION

Factual Information

On July 16, 2002, about 1316 Pacific daylight time, a Schleicher ASW-27, N127HC, veered off the runway during the takeoff roll at the Tonopah (uncontrolled) Airport, Tonopah, Nevada. The glider collided with a spectator and an automobile. The glider pilot, who held a commercial pilot certificate, was not injured. The glider sustained substantial damage, and the spectator was seriously injured. The glider was owned and operated by the pilot. The accident occurred during a sanctioned Soaring Society of America aviation event (air race) known as the United States 15-Meter National Soaring Championships. The pilot was operating under the provisions of 14 CFR Part 91. Visual meteorological conditions prevailed. The flight was originating at the time of the accident.

The pilot indicated to the National Transportation Safety Board investigator that his wife was serving as his ground crew. During the initial portion of the takeoff roll from runway 15, she was responsible for holding the glider's right wing level until the pilot could acquire sufficient aerodynamic control to prevent the wings from contacting the ground.

Spokespersons for the soaring event indicated to the Safety Board investigator that there was no evidence of any irregularities with the initial portion of the aero tow. However, a few seconds after the glider commenced rolling down the runway the ground crew (wing runner) no longer maintained contact with the glider's wing, and it dropped to the ground. Thereafter, the glider yawed right and veered off the edge of the 80-foot-wide runway. The glider then collided with a county employee who was standing 3.5 feet beyond the edge of a theoretical "clear zone." The lateral distance between the runway's right side and the county employee (point of impact) was 78 feet (see diagram).

Event spokespersons acknowledged to the Safety Board investigator that the clear zone had not been identified with specific markers, "Do Not Cross" signs, or physical barriers. They indicated, however, that the county employee was familiar with the airport. He had performed previous maintenance on the airport's facilities. At the time of the accident the county employee was believed to have been positioned beyond the "clear zone" for personal reasons.

According to an event spokesperson, about the time of the accident the surface wind was from the southwest. Its speed was about 5 knots.

In the pilot's completed "Aircraft Accident Report," NTSB Form 6120.1/2, and in a supplemental statement, he reported the following (in pertinent part): On takeoff, he should have done what he did on the two practice days—that is, held his brakes until the tow rope was tight and stable and the tow plane had started running up. The pilot stated that he did not take that action on the accident day because he thought it might be considered an insult to the tow pilot and ground crew in a national contest not to let them do their thing (as was briefed by the contest

manager). What happened was the tow plane never came to a complete stop, but accelerated the glider in a sling shot manner out of the wing runner's hand, and then accelerated slowly. Meantime, during the slack, the pilot had insufficient airflow to control the sailplane during the initial part of the roll.

The pilot also reported that he did not pull the tow release the instant he observed his sailplane was heading off the runway's centerline because he thought he could salvage the situation. According to the pilot, he was heading back toward the runway when the wing hit the spectator, whom he never saw (amidst the clutter of vehicles and other spectators).

Moreover, the pilot stated that "...I, the pilot of the sailplane involved, was responsible for allowing the sailplane to run off the runway. I should not, however, be held responsible for hitting a spectator, because he should not have been there in the first place.... This contest was the only situation I have ever seen in 36 years of flying with obstacles so close to an operating runway...." The pilot further reported that earlier another sailplane had run off the runway and had stopped further from the centerline than he, but he was early in the sequence and no crew vehicles were out in front of him. If he had been further back in the launch sequence, he would have hit several vehicles and who knows how many spectators with his 15-meter wingspan. This should have turned on a red light in the minds of contest officials, but they made no effort to move vehicles...."

Several of the aviation event's officials, including its local organizer, operations director, contest manager, and competition director, were present at the airport when the accident occurred. In a July 18, 2002, letter the National Soaring Championships Chair reported that its procedures were being changed, in pertinent part as follows:

1. All crew vehicles are now required to be behind a line perpendicular to the axis of the sailplane being launched;
2. No persons may be ahead of the sailplane being launched except for the front flagman;
3. The flagman will be at the edge of the cleared area parallel to the runway. The flagman is an active participant in the launching process, and is facing the launching aircraft. The flagman is always an experienced sailplane person and understands that if a sailplane turns off of the axis of the runway to move rapidly away from the runway till well clear of the area; and
3. Only the pilot's own crew and our launch crew will be allowed in the area around the sailplane currently preparing to launch.

Pilot Information

Certificate:	Commercial	Age:	66, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Single
Other Aircraft Rating(s):	Glider	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Glider	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	December 20, 2001
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	August 24, 2001
Flight Time:	7000 hours (Total, all aircraft), 53 hours (Total, this make and model), 6500 hours (Pilot In Command, all aircraft), 40 hours (Last 90 days, all aircraft), 9 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Schleicher	Registration:	N127HC
Model/Series:	ASW-27	Aircraft Category:	Glider
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	27161
Landing Gear Type:	Tailwheel	Seats:	1
Date/Type of Last Inspection:	September 3, 2002 Annual	Certified Max Gross Wt.:	1102 lbs
Time Since Last Inspection:	52 Hrs	Engines:	0
Airframe Total Time:	53 Hrs at time of accident	Engine Manufacturer:	
ELT:	Not installed	Engine Model/Series:	
Registered Owner:	Paul N. Chase	Rated Power:	
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	TPH,5426 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	12:56 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	70°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.09 inches Hg	Temperature/Dew Point:	31°C / 6°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Tonopah, NV (TPH)	Type of Flight Plan Filed:	None
Destination:	Tonopah, NV (TPH)	Type of Clearance:	None
Departure Time:	13:16 Local	Type of Airspace:	Class G

Airport Information

Airport:	Tonopah TPH	Runway Surface Type:	Asphalt
Airport Elevation:	5426 ft msl	Runway Surface Condition:	Dry
Runway Used:	15	IFR Approach:	None
Runway Length/Width:	7057 ft / 80 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	1 Serious	Aircraft Explosion:	None
Total Injuries:	1 Serious, 1 None	Latitude, Longitude:	38.059165,-117.090278

Administrative Information

Investigator In Charge (IIC):	Pollack, Wayne
Additional Participating Persons:	Tom McWhirter; Federal Aviation Administration; Las Vegas, NV
Original Publish Date:	July 29, 2004
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=55276

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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](#).