



Aviation Investigation Final Report

Location:	Sturtevant, Wisconsin	Accident Number:	CEN16LA097
Date & Time:	February 1, 2016, 17:15 Local	Registration:	N1572J
Aircraft:	Piper PA 28-140	Aircraft Damage:	Substantial
Defining Event:	Collision during takeoff/land	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The commercial pilot was performing the fourth in a series of landings at dusk. While on final approach, the low-wing airplane's landing gear impacted a tractor-trailer traveling on the highway perpendicular to the runway. All three of the airplane's landing gear separated, and the pilot performed a go-around followed by a "belly" landing to the parallel grass runway.

Following a similar accident about 19 years earlier, the airport installed a precision approach path indicator (PAPI) to provide visual glidepath guidance for pilots. The PAPI was inoperative at the time of the accident, and the airport had not issued a Notice to Airmen (NOTAM) to alert pilots of this fact. It is likely that the pilot's visual references were reduced due to the dusk conditions, and it is probable that, had the PAPI been operative and providing corrective feedback to the pilot, he would have adjusted the airplane's excessively low glidepath accordingly.

Probable Cause and Findings

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

The pilot's failure to maintain a proper glidepath during a landing at dusk, which resulted in impact with a moving ground vehicle. Contributing to the accident was the inoperative precision approach path indicator.

Findings

Personnel issues	Aircraft control - Pilot
Aircraft	Descent/approach/glide path - Not attained/maintained
Environmental issues	Visual approach aid - Effect on operation
Environmental issues	Ground vehicle - Contributed to outcome
Environmental issues	Low light - Effect on operation

Factual Information

History of Flight

Landing

Collision during takeoff/land (Defining event)

On February 1, 2016, about 1715 central standard time, a Piper PA 28-140 airplane, N1572J, collided with a moving vehicle while on short final approach to runway 26L at the Sylvania Airport (C89), near Sturtevant, Wisconsin. The commercial pilot and his passenger were uninjured. The airplane sustained substantial fuselage damage when the landing gear separated from the airplane during the vehicle collision and during the subsequent landing on runway 26R without landing gear. The airplane was registered to Blue Moon Aviation LLC and was operated by the pilot as a 14 Code of Federal Regulations Part 91 personal flight. Visual meteorological conditions prevailed in the area of the accident site about the time of the accident and the flight was not operated on a flight plan. The local flight originated from the John H Batten Airport (RAC), near Racine, Wisconsin, about 1615.

According to the pilot's accident report, he departed from RAC and performed four landings at C89. He departed from C89 about 1635 to view some local sights and returned to C89 about 1710 where he performed two more landings on "runway 26." He stated, in part, that "during the final approach on a 3rd landing, the aircraft's landing gear clipped the top back of a tractor-trailer, resulting in the loss of all 3 landing gear." The pilot performed a go around and landed on the grass runway. He reported that the belly landing was "smooth." He stated that the visual approach slope indicator was inoperative at the time of the accident.

The separated landing gear came to rest on Interstate Highway 94. The highway's shoulder was about 350 feet east of the runway's displaced threshold. The highway did not have any caution signs warning drivers of low flying airplanes. A vehicle in the northbound lanes of the highway impacted a separated landing gear.

The impacted tractor-trailer was reported to have a red colored tractor and white trailer. The tractor-trailer did not stop following the impact with the airplane.

N1572J, a 1967 Piper PA 28-140, serial number 28-23978, was a single-engine, low wing, four-place airplane, with fixed tricycle landing gear. The airplane's last annual inspection was completed on June 2, 2015.

At 1653, the recorded weather at the Kenosha Municipal Airport, near Kenosha, Wisconsin, was: Wind 290 degrees at 3 knots; visibility 10 statute miles; sky condition clear; temperature 3 degrees C; dew point -2 degrees C; altimeter 30.05 inches of mercury. According to the U.S. Naval Observatory, sunset in the Sturtevant, Wisconsin, area was 1704.

The pilot reported dusk conditions were present at the time of the accident. The published end of civil twilight was 1734.

C89 was a non-towered airport, which was privately owned and was open to the public. It was located about three miles west of Sturtevant, Wisconsin. The airport had an estimated elevation of 788 feet above mean sea level. The airport was serviced by two runways, 8L/26R and 8R/26L. Runway 8R/26L was a 2,272 foot by 38 foot asphalt runway. Runway 8L/26R was a 2,343 foot by 120 foot turf runway. According to the airport's master record, the left side of runway 26L was equipped with a two-light precision approach path indicator (PAPI).

According to National Transportation Safety Board report CHI98LA061, on December 13, 1997, at 1545 central standard time (cst), a Piper PA-28-140, N5454S, piloted by a student pilot, was destroyed during a collision with a moving tractor-trailer truck and terrain while on short final approach to runway 26L (2,300' X 33' dry/asphalt) at the Sylvania Airport, Sturtevant, Wisconsin. Visual meteorological conditions prevailed at the time of the accident. The 14 CFR Part 91 instructional flight was not operating on a flight plan. The pilot was fatally injured. The flight departed Sturtevant, Wisconsin, at 1540 cst.

The investigator in charge of the 1997 accident discussed the potential airplane and highway vehicular traffic conflict and suggested the "State of Wisconsin and airport owner provide usable glide path guidance for pilots landing on runway 26L." The Wisconsin Bureau of Aeronautics responded through a letter that, in part, said: "We have begun preliminary discussions with the department's Office of Transportation Safety. This office should address the glideslope indicator and its installation due to the multimodal benefits. We have placed the Sylvania Airport into a list of candidates for our Airport Marking Program. Completion of runway marking will be after the installation of the glideslope indicator system."

A PAPI was subsequently installed on runway 26L.

C89's manager was asked about the status of the PAPI. He indicated that it was out of service because of frost heaves in the winter that affect the PAPI installation. The PAPI's tilt switch reportedly senses it is not level following the frost heaving and shuts itself off so that an erroneous path is not indicated to pilots.

A Notice to Airmen (NOTAM) is a notice filed with an aviation authority to alert aircraft pilots of potential hazards along a flight route or at a location that could affect the safety of the flight. According to Automated Flight Service Station records, a NOTAM was issued for runway 26L's PAPI being out of service on February 2, 2016.

The Wisconsin Bureau of Aeronautics was informed of the accident with N1572J and asked if it is possible to get the PAPI installed properly. The Chief of the Aeronautical and Technical Services at the Wisconsin Department of Transportation (WisDOT) replied, in part, "In our 1999 letter, we commit to opening a dialog with a different office within WisDOT to explore the applicability of their transportation safety program to the needs at C89. We also added C89 to the list for our runway marking program. However, neither of these initiatives resulted in WisDOT sponsoring PAPI work. Our records indicate that the airport installed them on their own and have been maintaining them since.

As a privately owned airport, C89 is not in our State Airport System Plan and thus, is not eligible for any state funding. Our Bureau of Aeronautic staff is more than willing to work with the airport and provide guidance to them so they may appropriately address the PAPI deficiency."

Representatives from the Bureau of Field Operations, Wisconsin State Patrol and from the Racine County Sheriff's Office were asked if the accident tractor-trailer was located. At the date of publication of this report, they have not indicated that the accident tractor-trailer has been located.

A representative from WisDOT reported that they intend to install caution signs that will alert drivers on the highway of low flying airplanes. The installation is planned for November or December 2016.

Pilot Information

Certificate:	Private	Age:	65, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Unknown
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	May 15, 2014
Occupational Pilot:	No	Last Flight Review or Equivalent:	June 9, 2014
Flight Time:	704.2 hours (Total, all aircraft), 613 hours (Total, this make and model), 508.7 hours (Pilot In Command, all aircraft), 1.7 hours (Last 90 days, all aircraft), 1.7 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N1572J
Model/Series:	PA 28-140 140	Aircraft Category:	Airplane
Year of Manufacture:	1967	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	28-23978
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	June 2, 2015 Annual	Certified Max Gross Wt.:	2150 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	4675 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	O-320
Registered Owner:	On file	Rated Power:	160 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Dusk
Observation Facility, Elevation:	KENW,743 ft msl	Distance from Accident Site:	7 Nautical Miles
Observation Time:	18:53 Local	Direction from Accident Site:	174°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	290°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.04 inches Hg	Temperature/Dew Point:	3°C / -2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	RACINE, WI (RAC)	Type of Flight Plan Filed:	None
Destination:	RACINE, WI (RAC)	Type of Clearance:	None
Departure Time:	16:15 Local	Type of Airspace:	

Airport Information

Airport:	SYLVANIA C89	Runway Surface Type:	Asphalt
Airport Elevation:	788 ft msl	Runway Surface Condition:	Unknown
Runway Used:	26L	IFR Approach:	None
Runway Length/Width:	2272 ft / 38 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	42.703609,-87.953887(est)

Administrative Information

Investigator In Charge (IIC):	Malinowski, Edward
Additional Participating Persons:	Tim H Anderson; Federal Aviation Administration; Milwaukee, WI
Original Publish Date:	December 12, 2016
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=92680

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).