



Aviation Investigation Final Report

Location:	Reno, Nevada	Accident Number:	WPR18LA267
Date & Time:	September 14, 2018, 10:04 Local	Registration:	N139UK
Aircraft:	Aero Vodochody L39	Aircraft Damage:	Minor
Defining Event:	Midair collision	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Air race/show		

Analysis

During the closed course air race, the pilot of the race 13 airplane announced that he was passing the race 37 airplane on his right. A video recording of the midair collision showed that, as the two airplanes approached one of the racecourse pylons, race 13 was in a slight left bank behind race 37, which was in a level attitude. Shortly after, race 37 initiated a left bank, while race 13 was rapidly approaching race 37 from behind. Just before the collision, race 13 rolled out of the turn to an almost level attitude. The two airplanes then collided, which resulted in damage to the right wing and aileron of race 37 and damage to two inspection panels and fairings on the forward left side of the fuselage of race 13. Both airplanes landed uneventfully after the collision. The pilot of race 13 failed to maintain adequate separation from race 37 while overtaking the other airplane.

Probable Cause and Findings

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

The pilot of the race 13 airplane's failure to maintain clearance from the race 37 airplane during the closed course air race.

Findings

Personnel issues	Monitoring other aircraft - Pilot
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Factual Information

History of Flight

Maneuvering-low-alt flying	Midair collision (Defining event)
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On September 14, 2018, about 1004 Pacific daylight time, a Aero Vodochody L39C, N139UK, operating as Race 13, and an Aero Vodochody L39, N139PJ, operating as Race 37 collided in midair about 3 miles north of the Reno Stead Airport (RTS), Reno, Nevada. The airline transport pilot of Race 13 and the airline transport pilot of Race 37 were not injured. Race 13 sustained minor damage to the left side of the fuselage and bottom of the left wing; race 37 sustained substantial damage to the right wing and empennage. Race 13 was registered to Black Rock Aero LLC and race 37 was registered to MPE Enterprises Corporation. Both airplanes were operated by the pilots as a Title 14 *Code of Federal Regulations* Part 91 air race flights. Visual meteorological conditions prevailed, and no flight plan was filed for either airplane, which originated from RTS at 0950.

During an in person interview, the pilot of race 13 reported that he was observing the pilot of race 37 flying a tight line on the course and he was observing his line throughout the race, and announced on the race frequency that he was passing race 37 on the right. The pilot said that he had sight of race 37 at all times and that during the 5th lap, in an area of pylon 4, he thought the pilot of race 37 may have rolled right prior to the collision. Following the collision, the pilot of race 13 declared an emergency and landed uneventfully.

During an in person interview, the pilot of race 37 reported that during the 4th lap, while passing pylon 7, he recalled hearing the pilot of race 13 state that he was on his right. The pilot said that during the 5th lap, as he was passing pylon 4, it felt like a car crash and that he never saw race 13. Shortly after, he heard the pilot of race 13 declare a mayday and he decided to declare mayday as well, while noting sluggish control responsiveness. The pilot of race 37 was able to land uneventfully.

Review of video that was captured by a witness revealed that race 37 appeared to be in a level attitude while nearing pylon 4, and race 13 appeared to be in a slight left bank, behind race 37. Shortly after, race 37 was observed initiating a left bank, while race 13 was rapidly approaching race 37 from behind. Just prior to the collision, race 13 was observed rolling out of the turn to an almost level attitude.

Examination of Race 37 revealed that the outboard 24 inches of the right wing and right aileron were separated from the airplane. Additional damage to the bottom portion of the vertical stabilizer and the leading edge of the left horizontal stabilizer was observed. Examination of Race 13 revealed damage to two inspection panels and fairings on the forward left side of the fuselage.

Pilot Information

Certificate:	Airline transport	Age:	61,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land; Multi-engine sea	Seat Occupied:	Front
Other Aircraft Rating(s):	Balloon; Glider; Helicopter	Restraint Used:	4-point
Instrument Rating(s):	Airplane; Helicopter	Second Pilot Present:	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Glider; Helicopter; Instrument airplane	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	June 20, 2018
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	4137 hours (Total, all aircraft), 50 hours (Total, this make and model), 3835 hours (Pilot In Command, all aircraft), 51 hours (Last 90 days, all aircraft), 14 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Aero Vodochody	Registration:	N139UK
Model/Series:	L39 C	Aircraft Category:	Airplane
Year of Manufacture:	1982	Amateur Built:	
Airworthiness Certificate:	Experimental (Special)	Serial Number:	031822
Landing Gear Type:	Retractable -	Seats:	2
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	10028 lbs
Time Since Last Inspection:		Engines:	Turbo fan
Airframe Total Time:		Engine Manufacturer:	Ivencheko
ELT:	Installed, not activated	Engine Model/Series:	AI-25-TL
Registered Owner:		Rated Power:	3792 Lbs thrust
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KRTS, 5053 ft msl	Distance from Accident Site:	3 Nautical Miles
Observation Time:	17:15 Local	Direction from Accident Site:	189°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	100°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.04 inches Hg	Temperature/Dew Point:	16°C / -6°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Reno, NV (RTS)	Type of Flight Plan Filed:	None
Destination:	Reno, NV (RTS)	Type of Clearance:	VFR
Departure Time:	09:50 Local	Type of Airspace:	Class G

Airport Information

Airport:	RENO/STEAD RTS	Runway Surface Type:	
Airport Elevation:	5050 ft msl	Runway Surface Condition:	
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Minor
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	39.71389,-119.866386(est)

Administrative Information

Investigator In Charge (IIC):	Cawthra, Joshua
Additional Participating Persons:	Donald Morgan; Federal Aviation Administration; Reno, NV
Original Publish Date:	June 8, 2020
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=98316

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).



Aviation Investigation Final Report

Location:	Reno, Nevada	Accident Number:	WPR18LA267
Date & Time:	September 14, 2018, 10:04 Local	Registration:	N139PJ
Aircraft:	Aero Vodochody L 39	Aircraft Damage:	Substantial
Defining Event:	Midair collision	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Air race/show		

Analysis

During the closed course air race, the pilot of the race 13 airplane announced that he was passing the race 37 airplane on his right. A video recording of the midair collision showed that, as the two airplanes approached one of the racecourse pylons, race 13 was in a slight left bank behind race 37, which was in a level attitude. Shortly after, race 37 initiated a left bank, while race 13 was rapidly approaching race 37 from behind. Just before the collision, race 13 rolled out of the turn to an almost level attitude. The two airplanes then collided, which resulted in damage to the right wing and aileron of race 37 and damage to two inspection panels and fairings on the forward left side of the fuselage of race 13. Both airplanes landed uneventfully after the collision. The pilot of race 13 failed to maintain adequate separation from race 37 while overtaking the other airplane.

Probable Cause and Findings

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

The pilot of the race 13 airplane's failure to maintain clearance from the race 37 airplane during the closed course air race.

Findings

Personnel issues	Monitoring other aircraft - Pilot of other aircraft
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Factual Information

History of Flight

Maneuvering-low-alt flying

Midair collision

On September 14, 2018, about 1004 Pacific daylight time, a Aero Vodochody L39C, N139UK, operating as Race 13, and an Aero Vodochody L39, N139PJ, operating as Race 37 collided in midair about 3 miles north of the Reno Stead Airport (RTS), Reno, Nevada. The airline transport pilot of Race 13 and the airline transport pilot of Race 37 were not injured. Race 13 sustained minor damage to the left side of the fuselage and bottom of the left wing; race 37 sustained substantial damage to the right wing and empennage. Race 13 was registered to Black Rock Aero LLC and race 37 was registered to MPE Enterprises Corporation. Both airplanes were operated by the pilots as a Title 14 *Code of Federal Regulations* Part 91 air race flights. Visual meteorological conditions prevailed, and no flight plan was filed for either airplane, which originated from RTS at 0950.

During an in person interview, the pilot of race 13 reported that he was observing the pilot of race 37 flying a tight line on the course and he was observing his line throughout the race, and announced on the race frequency that he was passing race 37 on the right. The pilot said that he had sight of race 37 at all times and that during the 5th lap, in an area of pylon 4, he thought the pilot of race 37 may have rolled right prior to the collision. Following the collision, the pilot of race 13 declared an emergency and landed uneventfully.

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Examination of Race 37 revealed that the outboard 24 inches of the right wing and right aileron were separated from the airplane. Additional damage to the bottom portion of the vertical stabilizer and the leading edge of the left horizontal stabilizer was observed. Examination of Race 13 revealed damage to two inspection panels and fairings on the forward left side of the fuselage.

Pilot Information

Certificate:	Airline transport	Age:	44,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	March 27, 2018
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	February 18, 2018
Flight Time:	6100 hours (Total, all aircraft), 70 hours (Total, this make and model), 4000 hours (Pilot In Command, all aircraft), 55 hours (Last 90 days, all aircraft), 24 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Aero Vodochody	Registration:	N139PJ
Model/Series:	L 39	Aircraft Category:	Airplane
Year of Manufacture:	1982	Amateur Built:	
Airworthiness Certificate:	Experimental (Special)	Serial Number:	232226
Landing Gear Type:	Retractable - Tricycle	Seats:	2
Date/Type of Last Inspection:	May 2, 2018 Annual	Certified Max Gross Wt.:	10500 lbs
Time Since Last Inspection:		Engines:	Turbo fan
Airframe Total Time:	2296.3 Hrs at time of accident	Engine Manufacturer:	Ivchenko
ELT:	Installed, not activated	Engine Model/Series:	AL25TL
Registered Owner:		Rated Power:	3800 Lbs thrust
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KRTS, 5053 ft msl	Distance from Accident Site:	3 Nautical Miles
Observation Time:	17:15 Local	Direction from Accident Site:	189°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	100°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.04 inches Hg	Temperature/Dew Point:	16°C / -6°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Reno, NV (RTS)	Type of Flight Plan Filed:	None
Destination:	Reno, NV (RTS)	Type of Clearance:	VFR
Departure Time:	09:50 Local	Type of Airspace:	Class G

Airport Information

Airport:	RENO/STEAD RTS	Runway Surface Type:	
Airport Elevation:	5050 ft msl	Runway Surface Condition:	
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

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:	39.71389,-119.866386(est)

Administrative Information

Investigator In Charge (IIC):	Cawthra, Joshua
Additional Participating Persons:	Donald Morgan; Federal Aviation Administration; Reno, NV
Original Publish Date:	June 8, 2020
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=98316

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