Aviation Investigation Final Report

Location:	Glendale, Arizona	**Accident Number:**	WPR09LA024
Date & Time:	October 24, 2008, 14:10 Local	**Registration:**	N427ET
Aircraft:	HOLM MICHAEL J KITFOX IV 1200	**Aircraft Damage:**	Minor
Defining Event:	Ground collision	**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The Kitfox's pilot notified the local controller that he experienced a malfunction with his airspeed indicator and desired to make a full stop landing on runway 19. Meanwhile, the Taylorcraft pilot requested clearance to taxi for takeoff. The local and ground controllers issued the pilots their respective clearances, and the pilots proceeded as cleared. The Kitfox landed without further mishap and chose to egress the runway in a southwesterly direction using high speed taxiway A6, which terminates at taxiway A. The pilot of the Kitfox remained on the local control frequency during the time the airplane was exiting the runway and approaching taxiway A. The Taylorcraft pilot was monitoring the ground control frequency as he proceeded as cleared in a northerly direction on taxiway A, located west and parallel to runway 19. The Kitfox initially decelerated on runway 19, and further slowed on taxiways A6 and A. The collision occurred as the Kitfox began occupying the intersection of taxiways A6 and A. The visibility from both cockpits was reduced due to the fact that both airplanes were equipped with tail wheels. The converging taxi routes and the airplanes were in clear view of the controllers; however, the controllers failed to issue the pilots advisories or instructions to preclude the collision. The airport was designed such that the midfield egress point from runway 19 was located near the ingress point for airplanes that are taxiing out of the midfield parking ramp.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The Kitfox's pilot's failure to ascertain if the intersection he approached was clear of conflicting traffic and the controller's failure to provide pertinent traffic advisories to both pilots. Contributing to the accident was the reduced visibility from the cockpits of the conventional gear airplanes.

Findings

Environmental issues	(general) - Contributed to outcome
Personnel issues	Lack of communication - ATC personnel
Personnel issues	Monitoring other aircraft - Pilot
Environmental issues	Visibility - Not specified

Factual Information

History of Flight

Taxi-from runway	Ground collision (Defining event)

HISTORY OF FLIGHT

On October 24, 2008, about 1410 mountain standard time, an experimental Kitfox IV 1200, N427ET, and a Taylorcraft BL-65, N27639, collided while taxiing at the Glendale Municipal Airport, Glendale, Arizona. Both airplanes were owned and operated by their respective pilots. The Kitfox sustained minor damage, and the Taylorcraft was substantially damaged. Neither the airline transport certificated pilot in the Kitfox nor the private pilot in the Taylorcraft was injured. Visual meteorological conditions prevailed, and no flights plans were filed. Both airplanes were being operated under the provisions of 14 Code of Federal Regulations Part 91.

The Kitfox pilot reported to the National Transportation Safety Board investigator that he was located in the right seat of his conventional gear airplane. The pilot reported that, while in the traffic pattern, he initially informed the local controller he desired to make a touch-and-go landing. Subsequently, he experienced a malfunction with his airspeed indicator. The pilot advised the controller of his airspeed problem, and he was immediately cleared to make a full stop landing. The accident occurred upon completing one circuit of the traffic pattern. According to the pilot and the local controller (as reported to the Safety Board investigator through the Federal Aviation Administration (FAA) coordinator), the pilot touched down on runway 19 pursuant to the air traffic clearance he had received. The airplane exited the runway in a southwesterly direction onto high speed taxiway A6, which terminates at the intersection of taxiway A.

During the pilot's approach, landing, and rollout onto the taxiways, the pilot was monitoring the local control tower frequency. The pilot additionally reported that during the accident flight he did not receive any air traffic communication regarding issuance of a hold short instruction. Accordingly, the Kitfox initially decelerated on runway 19, and the airplane further decelerated on high speed taxiway A6. As the airplane rolled clear of taxiway A6 and entered the intersection of A6 and taxiway A, the Kitfox and Taylorcraft collided. (See the airport diagram for the runway and taxiway orientation, and the ingress/egress points between the taxiways.)

The Taylorcraft pilot reported to the Safety Board investigator that he was located in the left seat of his conventional gear airplane. He was following the ground control clearance that he had received to taxi from his parked location (west of taxiway A, near midfield) and to proceed toward runway 19, via taxiway A. Accordingly, he was taxiing in a northerly direction toward the approach end of runway 19, where he planned to takeoff. The pilot stated that the ground controller neither directed him to hold his position, nor issued any communication to him

regarding the approaching airplane that had been cleared to land on runway 19. In particular, the pilot indicated to the Safety Board investigator that the ground controller did not warn him that an airplane was taxiing toward him from his 1 to 2 o'clock position.

The northbound Taylorcraft's right wing and lift struts were bent during the impact sequence with the propeller and engine cowl of the southwestbound Kitfox, which had just landed on runway 19 and was proceeding via taxiway A6 onto taxiway A. The collision occurred on taxiway A.

Both pilots reported they did not observe the convergence between their conventional gear airplanes because of a combination of their respective seat positions and taxi paths.

ADDITIONAL INFORMATION

Airport Design

The public-use municipal airport's ownership and operations personnel have the authority to design placement of the taxiways and intersections. The airport is designed in such a manner that airplanes landing on runway 19 may egress (near midfield) utilizing taxiway A6, which terminates at the intersection of taxiway A.

Aircraft parked west of the runway, near midfield, whose pilots desire to taxi to runway 19, are directed by air traffic personnel to taxi to runway 19 via taxiway A. Using this route, northbound taxiing aircraft proceed nearly head-on to southwest bound aircraft, which are egressing from runway 19 via A6.

Controller Visibility

The FAA coordinator reported to the Safety Board investigator that he examined the visibility from the non-federal airport control tower's cab. According to the FAA coordinator, the local and ground controllers had the capability of viewing the landing and taxi paths taken by both airplanes. The accident airplanes were in visible movement areas during their operations and during their daytime collision near the intersection of taxiways A and A6.

Air Traffic Controller Duties and Responsibilities

Notwithstanding other higher priority duties, the air traffic controllers were responsible for monitoring the taxi paths taken by airplanes under their control, and for issuance of safety instructions to promote avoidance of ground collisions.

The FAA coordinator reported to the Safety Board investigator that, after the local controller issued the Kitfox an appropriate landing clearance, the controller's attention was diverted to traffic duties associated with other airplanes near/in the downwind leg.

After the ground controller issued the Taylorcraft an appropriate taxi clearance, the controller's attention was directed to issuing an instrument clearance to a waiting airplane.

One or both of the controllers observed the converging airplanes seconds prior to the collision. Neither controller issued a safety alert to the airplanes.

Pilot Responsibility and Procedures

Neither pilot reported experiencing any mechanical malfunction or anomaly that affected the operation of their respective airplanes during ground operation.

Pursuant to guidance provided in the FAA's "Aeronautical Information Manual" and the local controller's clearance, the Kitfox was authorized to taxi clear of the landing runway and proceed onto taxiway A, at which time the pilot was to contact the ground controller for any additional clearance.

Pursuant to guidance provided in the FAA's "Aeronautical Information Manual" and the local controller's clearance, the Kitfox was authorized to taxi clear of the landing runway. This action was accomplished when his entire airplane proceeded beyond the hold line adjacent to taxiway A. Upon passing this hold line, the Kitfox was on taxiway A and was required to contact the (ground) controller for additional clearance.

The Taylorcraft pilot was authorized to taxi to runway 19 pursuant to the clearance he had been issued.

The FAA coordinator reported that, notwithstanding the pilots' respective clearances, each pilot still had a responsibility to operate their airplanes safely.

Taxi Route and Procedure Changes

Following the accident, air traffic control management personnel reported that they modified the taxi route in the vicinity of the accident area. The revision increased separation between taxiing and landing aircraft. Also, controllers received enhanced training on the issuance of taxi instructions to aircraft proceeding northbound on taxiway A, when other aircraft have been cleared to land on runway 19.

Pilot Information

Certificate:	Airline transport; Military	**Age:**	59,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 Without waivers/limitations	**Last FAA Medical Exam:**	September 23, 2008
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	June 8, 2008
Flight Time:	4775 hours (Total, all aircraft), 487 hours (Total, this make and model), 3926 hours (Pilot In Command, all aircraft), 21 hours (Last 90 days, all aircraft), 6 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	HOLM MICHAEL J	**Registration:**	N427ET
Model/Series:	KITFOX IV 1200	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	C9420007
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	October 24, 2008 Condition	**Certified Max Gross Wt.:**	1200 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	529 Hrs at time of accident	**Engine Manufacturer:**	Rotax
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	912UL
Registered Owner:	On file	**Rated Power:**	80 Horsepower
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:	GEU,1071 ft msl	**Distance from Accident Site:**	0 Nautical Miles
Observation Time:	13:48 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Few / 20000 ft AGL	**Visibility**	20 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	190°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.96 inches Hg	**Temperature/Dew Point:**	29°C / -10°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Glendale, AZ (GEU)	**Type of Flight Plan Filed:**	None
Destination:	Glendale, AZ (GEU)	**Type of Clearance:**	VFR
Departure Time:	14:02 Local	**Type of Airspace:**	Air traffic control;Class D

Airport Information

Airport:	Glendale Municipal GEU	**Runway Surface Type:**	Asphalt
Airport Elevation:	1071 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	19	**IFR Approach:**	None
Runway Length/Width:	7150 ft / 100 ft	**VFR Approach/Landing:**	Full stop;Traffic pattern

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:**	33.526943,-112.29528(est)

Administrative Information

Investigator In Charge (IIC):	Pollack, Wayne
Additional Participating Persons:	Kenneth J Werling; Federal Aviation Administration; Scottsdale, AZ
Original Publish Date:	November 9, 2009
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=69355

Aviation Investigation Final Report

Location:	Glendale, Arizona	**Accident Number:**	WPR09LA024
Date & Time:	October 24, 2008, 14:10 Local	**Registration:**	N27639
Aircraft:	Taylorcraft BL-65	**Aircraft Damage:**	Substantial
Defining Event:	Ground collision	**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The Kitfox's pilot notified the local controller that he experienced a malfunction with his airspeed indicator and desired to make a full stop landing on runway 19. Meanwhile, the Taylorcraft pilot requested clearance to taxi for takeoff. The local and ground controllers issued the pilots their respective clearances, and the pilots proceeded as cleared. The Kitfox landed without further mishap and chose to egress the runway in a southwesterly direction using high speed taxiway A6, which terminates at taxiway A. The pilot of the Kitfox remained on the local control frequency during the time the airplane was exiting the runway and approaching taxiway A. The Taylorcraft pilot was monitoring the ground control frequency as he proceeded as cleared in a northerly direction on taxiway A, located west and parallel to runway 19. The Kitfox initially decelerated on runway 19, and further slowed on taxiways A6 and A. The collision occurred as the Kitfox began occupying the intersection of taxiways A6 and A. The visibility from both cockpits was reduced due to the fact that both airplanes were equipped with tail wheels. The converging taxi routes and the airplanes were in clear view of the controllers; however, the controllers failed to issue the pilots advisories or instructions to preclude the collision. The airport was designed such that the midfield egress point from runway 19 was located near the ingress point for airplanes that are taxiing out of the midfield parking ramp.

Probable Cause and Findings

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Findings

Environmental issues	(general) - Contributed to outcome
Personnel issues	Lack of communication - ATC personnel
Personnel issues	Monitoring other aircraft - Pilot of other aircraft
Environmental issues	Visibility - Not specified

Factual Information

History of Flight

Taxi-to runway	Ground collision

HISTORY OF FLIGHT

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During the pilot's approach, landing, and rollout onto the taxiways, the pilot was monitoring the local control tower frequency. The pilot additionally reported that during the accident flight he did not receive any air traffic communication regarding issuance of a hold short instruction. Accordingly, the Kitfox initially decelerated on runway 19, and the airplane further decelerated on high speed taxiway A6. As the airplane rolled clear of taxiway A6 and entered the intersection of A6 and taxiway A, the Kitfox and Taylorcraft collided. (See the airport diagram for the runway and taxiway orientation, and the ingress/egress points between the taxiways.)

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ADDITIONAL INFORMATION

Airport Design

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The Taylorcraft pilot was authorized to taxi to runway 19 pursuant to the clearance he had been issued.

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Taxi Route and Procedure Changes

Following the accident, air traffic control management personnel reported that they modified the taxi route in the vicinity of the accident area. The revision increased separation between taxiing and landing aircraft. Also, controllers received enhanced training on the issuance of taxi instructions to aircraft proceeding northbound on taxiway A, when other aircraft have been cleared to land on runway 19.

Pilot Information

Certificate:	Private	**Age:**	54,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	None None	**Last FAA Medical Exam:**	
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	970 hours (Total, all aircraft), 240 hours (Total, this make and model), 900 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Taylorcraft	**Registration:**	N27639
Model/Series:	BL-65	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	2281
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	October 19, 2008 Annual	**Certified Max Gross Wt.:**	1150 lbs
Time Since Last Inspection:	0 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1500 Hrs at time of accident	**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	C65
Registered Owner:	On file	**Rated Power:**	65 Horsepower
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:	GEU,1071 ft msl	**Distance from Accident Site:**	0 Nautical Miles
Observation Time:	13:48 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Few / 20000 ft AGL	**Visibility**	20 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	190°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.96 inches Hg	**Temperature/Dew Point:**	29°C / -10°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Glendale, AZ (GEU)	**Type of Flight Plan Filed:**	None
Destination:	Glendale, AZ (GEU)	**Type of Clearance:**	VFR
Departure Time:		**Type of Airspace:**	Air traffic control;Class D

Airport Information

Airport:	Glendale Municipal GEU	**Runway Surface Type:**	Asphalt
Airport Elevation:	1071 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	19	**IFR Approach:**	None
Runway Length/Width:	7150 ft / 100 ft	**VFR Approach/Landing:**	Full stop;Traffic pattern

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:**	33.526943,-112.29528(est)

Administrative Information

Investigator In Charge (IIC):	Pollack, Wayne
Additional Participating Persons:	Kenneth J Werling; Federal Aviation Administration; Scottsdale, AZ
Original Publish Date:	November 9, 2009
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=69355