

Aircraft: N408RV  
Type: Vans RV8  
Serial #: 81144  
Owner/PIC: Roger Pierce

Event Date: 29 June, 2020  
Event Time: 1356 EDT/1756 UTC

Departure: Trenton-Robbinsville NJ (N87)  
Time: 1329 EDT/1729 UTC

Arrival: Pennridge, PA (KCKZ)  
Time: 1356 EDT/1756 UTC

I was acting as PIC on the event flight with one pilot-rated passenger onboard. Weather for departure and destination airports was checked using ForeFlight prior to departure, with current and forecast conditions being reported as VMC. Fuel was topped off at the self-service fuel tanks at N87, and I completed a thorough preflight inspection of the aircraft. Weight and balance were confirmed to be within limits (see Attachment A). I briefed my passenger on emergency procedures, including how to unlock and open the canopy, harness operation, and the location of the canopy breaker tool and fire extinguisher.

We departed N87 on runway 29 and requested VFR flight following at 2,500' MSL with McGuire Approach. I was assigned a transponder code and flew south approximately 5 NM and circled a spot on the ground which was of interest to my passenger. We then proceeded northwest in VMC conditions towards KCKZ, with McGuire Approach eventually handing us off to Philadelphia Approach. At approximately 1750 UTC the KCKZ AWOS reported wind 350/6, with no clouds and clear visibility. When approximately 3 NM from airport I reported the airport in sight to Philadelphia Approach, who advised that radar services were terminated, and instructed me to squawk VFR.

We crossed over the airport midfield and made left traffic for Runway 08. I transmitted position and intentions on CTAF but there was no other traffic responded or observed either visually or on ADS-B in the area at the time. I made a visual approach to approximately 300' AGL and flew the length of runway 08 to observe conditions. The windsock is positioned on a hangar near the southeast end of the runway, and appeared consistent with the AWOS report of light winds from the north (see attachment B).

We climbed back to pattern altitude and flew another left pattern for runway 08, and I continued to broadcast position and intentions on CTAF. I completed the landing checklist and configured the aircraft for landing.

Approach was stable and on speed at approximately 70 knots; however, there was more turbulence on final than on the previous approach, and the turbulence increased in the flare. We touched down approximately 1,000' down the runway, shortly after passing the protruding treeline next to the VASI (see attachment B). Touchdown was on centerline and aligned with the runway, but produced a small bounce. I held the stick back and allowed the aircraft to settle back to the runway. As the aircraft settled, it seemed to decelerate more rapidly than usual. Upon touchdown the aircraft immediately swerved violently to the left. I applied full right rudder and held the stick back. As it became obvious we were about to exit the left side of the runway I applied right brake but was unable to correct the swerve. Upon exiting the runway the aircraft passed over a drainage ditch, at which point the left main landing gear leg separated from the aircraft and the propeller struck the far side of the ditch. The aircraft slid to a stop a short distance past the ditch in a grassy field at approximately a 90 degree angle to the left of the direction of travel.

I unlocked the canopy and slid it back, and commanded an immediate evacuation. I then turned off the magnetos and removed the key, turned off the battery and all other electric switches, and turned the fuel valve to the "OFF" position. Upon inspecting the cockpit several minutes after evacuation, it was determined that the fuel valve had not completely reached the "OFF" detent, which I accomplished at that time.

Neither my passenger or myself was injured either in the incident or the evacuation. There was no post-incident fire.

## Observations

1. Winds were very gusty, variable in direction, and much stronger than reported on AWOS prior to the flight and at the time I listened to it enroute (see attachment C). The next reported AWOS posted approximately at the time we were in the landing flare, so I was unaware of the increase of velocity, gusts, and directional changes. It was only as we accomplished the aircraft recovery over the next few hours that we observed large, rapid changes in direction and velocity. During that time, numerous aircraft approached and landed, switching between runway 08 and 26 several times. All appeared to approach with large crab angles, both left and right as the afternoon progressed. Another pilot who was waiting for us near the windsock subsequently stated "*as an observer I probably saw 15k at the sock. I'll call the airport but pretty sure it's a 15k sock and it was variable as well.*" (see Attachment D)
2. A large stand of trees extending nearly to the approach end of runway 08 appears to create unstable and turbulent winds at touchdown (see Attachment B).
3. There is only one windsock on the field, and it is on top of a hangar at the southeast end of airport, and partially obscured from view by trees and buildings when touching down on runway 08 (see Attachment B)

N87 — KCKZ (June 29, 2020) in N408RV (RV8) VFR

Created Jul 08 2020 1339Z

Basic Performance Profile @ 2500'

Text

<b>ETE</b> 0h15m	<b>Distance</b> 40nm	<b>Avg Wind</b> 6kt head (266°/008)	<b>ETD</b> 13:00 EDT / 1700Z	<b>ETA</b> 13:15 EDT / 1715Z	<b>TOW</b> 1768 lbs	<b>ELW</b> 1751 lbs
<b>Block Fuel</b> 42 g	<b>Taxi Fuel</b> 1 g	<b>Flight Fuel</b> 4 g	<b>Reserve Fuel</b> 10 g	<b>Alternate Fuel</b> 0 g	<b>Extra Fuel</b> 28 g	<b>Landing Fuel</b> 38 g

**Route**  
4007N07438W

**RAIM (5° Mask, With Baro-aid)**  
**✗ RAIM prediction unavailable for ETD**

WAYPOINT	AIRWAY	MAG		ALT	WIND			SPD KT		DIST NM		FUEL G		ACT	TIME			ACT
		HDG	CRS		CMP	DIR/SPD	ISA	TAS	GS	LEG	REM	USED	REM		LEG	REM	ETE	
N87		-	-	118	-	-	+9	0	0	-	40	1	41		-	0:15	-	
-TOC-	DCT	209	206	2500	H3	258/006	+9	130	127	3	37	1	41		0:01	0:14	0:01	
4007N07438W	DCT	209	206	2500	H2	266/008	+10	165	163	3	34	2	40		0:01	0:13	0:02	
-TOD-	DCT	310	311	2500	H6	266/008	+10	165	159	29	5	4	38		0:11	0:02	0:13	
KCKZ	DCT	308	310	568	H6	266/008	+10	140	134	5	-	4	38		0:02	-	0:15	

WINDS ALOFT	2000 FT (ISA: 11°C)		4000 FT (ISA: 7°C)		6000 FT (ISA: 3°C)		8000 FT (ISA: -1°C)	
	(COMP) WIND	ISA	(COMP) WIND	ISA	(COMP) WIND	ISA	(COMP) WIND	ISA
-TOC-	(H3) 262/007	+9	(H2) 273/009	+10	(H2) 275/011	+10	(H3) 274/013	+11
4007N07438W	(H3) 262/007	+9	(H2) 273/009	+10	(H2) 275/011	+10	(H3) 274/013	+11
-TOD-	(H5) 262/007	+9	(H8) 273/009	+10	(H10) 275/011	+10	(H12) 274/013	+11
	0h15m (0:00), 3 g Avg wind comp: H5		0h16m (+0:01), 3 g Avg wind comp: H7		0h17m (+0:01), 3 g Avg wind comp: H7		0h18m (+0:02), 3 g Avg wind comp: H8	

## SUMMARY &amp; TIMES

PIC	
Tail	<b>N408RV (RV8)</b>
Profile	<b>Basic Performance Profile</b>
Distance	<b>40nm</b>
ETD	<b>13:00 EDT / 1700Z</b>
ETE	<b>0h15m</b>
ETA	<b>13:15 EDT / 1715Z</b>
Route	<b>4007N07438W</b>
Altitude	<b>2500'</b>

## FUEL &amp; WEIGHTS

Block Fuel	<b>42 g</b>
Taxi Fuel	<b>1 g</b>
Flight Fuel	<b>4 g</b>
Reserve Fuel	<b>10 g</b>
Alternate Fuel	<b>0 g</b>
Extra Fuel	<b>28 g</b>
Payload	<b>430 lbs</b>
ZFW	<b>1522 lbs</b>
TOW	<b>1768 lbs</b>
ELW	<b>1751 lbs</b>

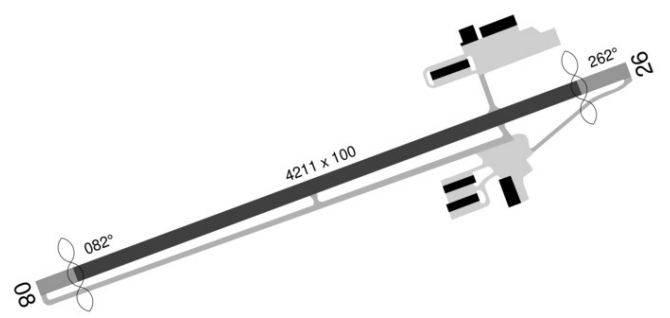
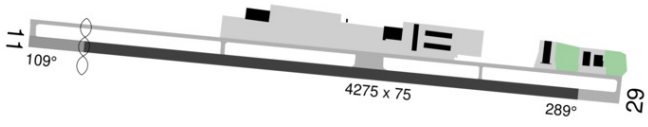
## NOTES

Out: In: **Block time:**Off: On: **Flight time:**Start: Stop: **Hobbs time:**Start: Rem: **Fuel used:****Signature:**

	AIRPORT	ETA	WX	TWR/CTAF	CLR	GND	ELEV	LONGEST RWY	
<b>DEP</b>	N87	-	N/A	123.0	N/A	N/A	118	11 / 29	4275 ft
<b>DEST</b>	KCKZ	13:15 EDT / 1715Z	126.325	123.0	118.55	N/A	568	26 / 08	4211 ft

N87  
TRENTON-ROBBINSVILLE

KCKZ  
PENNRIDGE



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Attachment B

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Hart Mechanical Corporation

Skydive Philadelphia

Windsock

Penridge Airport

Branch Valley Fish & Game Club

Aircraft

Three Mile Run Automotive

Treeline

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- 3D
- 🧭

Google

## Attachment C

**ARCHIVED METAR OF: 20200629 // FROM: 15 TO: 20 UTC  
AIRPORTS REQUESTED: KCKZ**

KCKZ 291515Z AUTO 35007KT 280V030 10SM BKN038 26/18 A2988 RMK AO2  
KCKZ 291535Z AUTO 33008G14KT 10SM SCT038 27/18 A2988 RMK AO2  
KCKZ 291555Z AUTO 33005KT 10SM FEW040 27/18 A2987 RMK AO2  
KCKZ 291615Z AUTO 33009G14KT 10SM SCT044 27/18 A2987 RMK AO2  
KCKZ 291655Z AUTO 34006KT 310V060 10SM BKN046 27/18 A2987 RMK AO2  
KCKZ 291715Z AUTO 35006KT 10SM BKN046 27/17 A2987 RMK AO2  
KCKZ 291735Z AUTO 32006KT 10SM BKN048 28/17 A2986 RMK AO2  
KCKZ 291755Z AUTO 33006KT 280V350 10SM SCT048 28/18 A2985 RMK AO2  
KCKZ 291835Z AUTO 33005KT 280V030 10SM CLR 29/16 A2986 RMK AO2  
KCKZ 291855Z AUTO 03010G15KT 10SM SCT060 29/17 A2986 RMK AO2  
KCKZ 291915Z AUTO 34005KT 10SM SCT060 29/17 A2986 RMK AO2  
KCKZ 291935Z AUTO 29005KT 240V360 10SM SCT060 30/17 A2985 RMK AO2  
KCKZ 291955Z AUTO 01008KT 290V030 10SM FEW060 30/17 A2985 RMK AO2  
KCKZ 292015Z AUTO 04008KT 10SM SCT060 29/17 A2985 RMK AO2  
KCKZ 292035Z AUTO 00000KT 10SM SCT060 28/16 A2985 RMK AO2  
KCKZ 292055Z AUTO 31008KT 280V350 10SM CLR 30/16 A2985 RMK AO2

Source: <http://www.aviationwxchartsarchive.com/product/metar>

Attachment D

I'm writing this memo for a request from Roger Pierce who flew into KCKZ on the afternoon of June 29, 2020. I was meeting Roger and Rich Ferm that afternoon and arrived at CKZ just before 1400. The aircraft was on a downwind for runway 08 and I was standing in front of the FBO on the south side of the field.

I noted that the wind was variable out of the north and the windsock was oscillating 30-40 degrees either side of a direct crosswind. The sock itself was straight out and there were wind gusts. The wind gave me a bit of pause as I fly conventional wheel aircraft and appreciate the challenges associated with landings. In fact, I sent a text message to Rich "Nice xwind....." not out of concern but more as a general fact.

I received a call from Rich a few minutes later advising me that they were off the runway. I notified the FBO personnel and we went to the aircraft. Over the next several minutes we noted that the wind continued to be variable from the north with gusts. I observed two aircraft land, one on 26 and the other on 08. Both aircraft had late adjustments in the landing flare.

Regards,

William Telfer





MEMORANDUM for RECORD

Millicent Hill  
Air Safety Investigator  
Eastern Region Aviation

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Date: July 9, 2020  
Person Contacted: Roger Pierce

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This investigator interviewed Mr. Pierce by telephone, and he stated he and a passenger departed from Trenton-Robbinsville Airport (N87), Robbinsville, New Jersey. They flew to Penridge Airport, (CKZ), Perkasio, Pennsylvania to visit a friend. He reported passing over midfield about 300 ft to check the windsock before landing. He encountered turbulence on final and a gust of wind just before touchdown, the airplane bounced and veered left, then exited the left side of the runway. The airplane impacted a ditch during the accident sequence and damaged the left aileron and left main landing gear. He stated there was no mechanical problem with the airplane.

He stated there were shifting and gusty wind conditions at the airport during landing. A witness told him the wind was gusting to 15 knots and variable by about 100°.