

HISTORY OF FLIGHT

On May 31, 2020 at 1759 Pacific daylight time, an experimental Cub Crafters CCK-1865, N303KP, was substantially damaged when it was involved in an accident near Valley Center, California. The pilot sustained fatal injuries and the passenger was seriously injured. The airplane was operated as a Title 14 Code of Federal Regulations Part 91 personal flight.

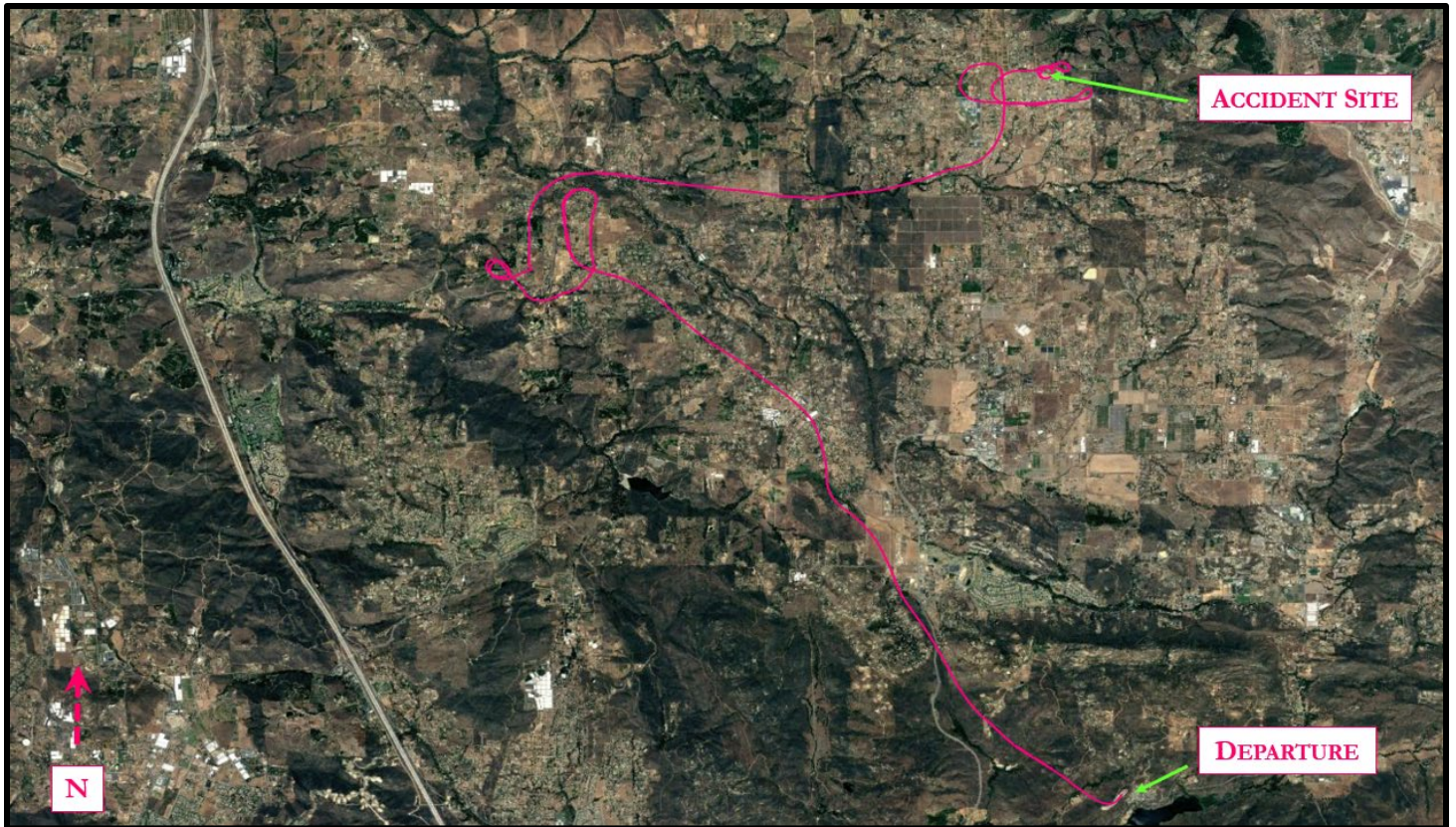


Figure 1: Flight Track

Track data indicated that N303KP departed a private air strip in Escondido, CA on the north side of Lake Wohlferd, Lake Wohlford 8CL1¹. The flight departed SW bound, then immediately turned to the NW and climbed to around 1,900 feet varying slightly higher and lower for about 6.5 nm then descended to around 1,300-1,400 ft msl maneuvering over a large business/building (unknown s) briefly before climbing again slowly to around 1,800-1,900 ft msl and flying E bound for about 3 miles, then executing a figure 8 type turn until entering a left hand spiral type descent until track data was lost at about 1757.

First Track Data: 1737:01 // On Deck // 0 kts // Private Strip - Escondido, CA

Last Track Data: 1757:13 // 1,750 ft msl // 35 kts // 182 ft SW of accident location

¹ <https://airnav.com/airport/8CL1>

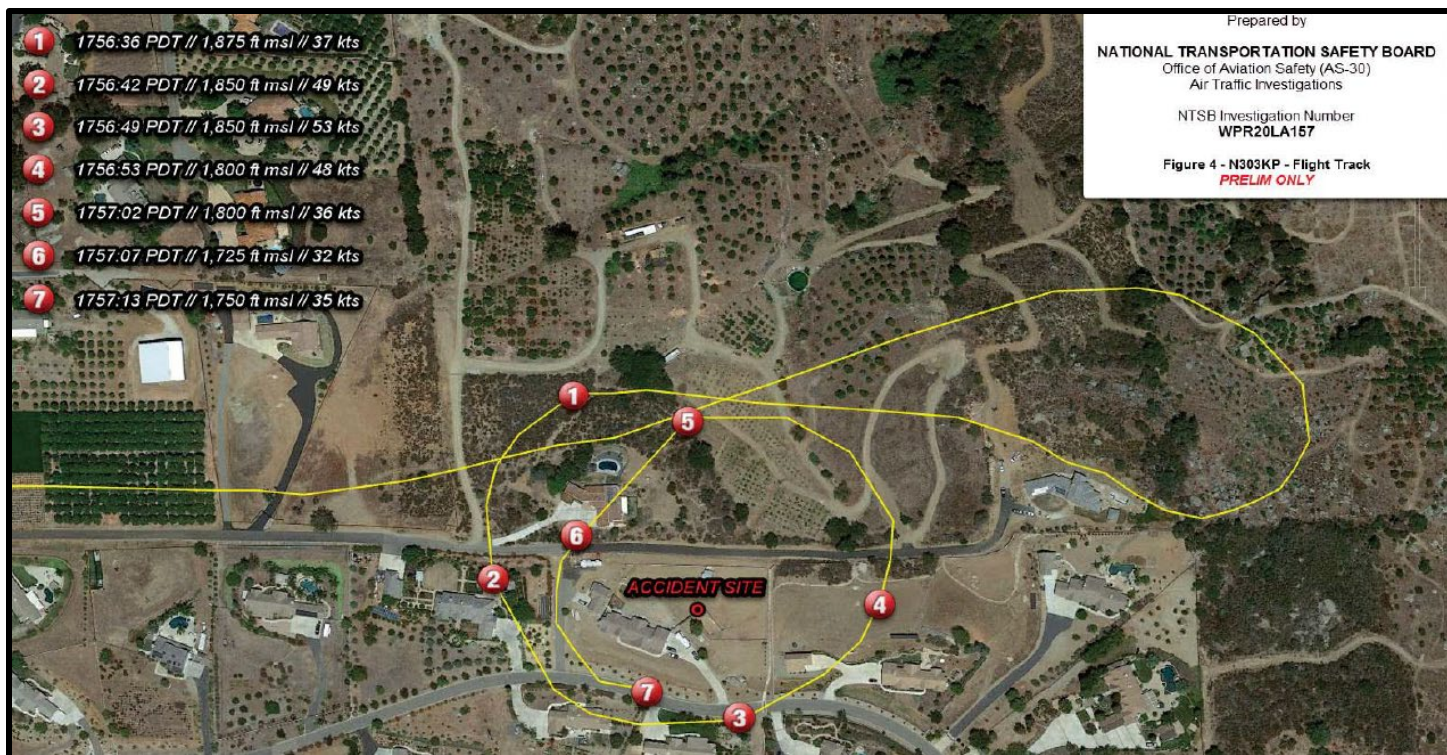


Figure 2: Last Radar Returns

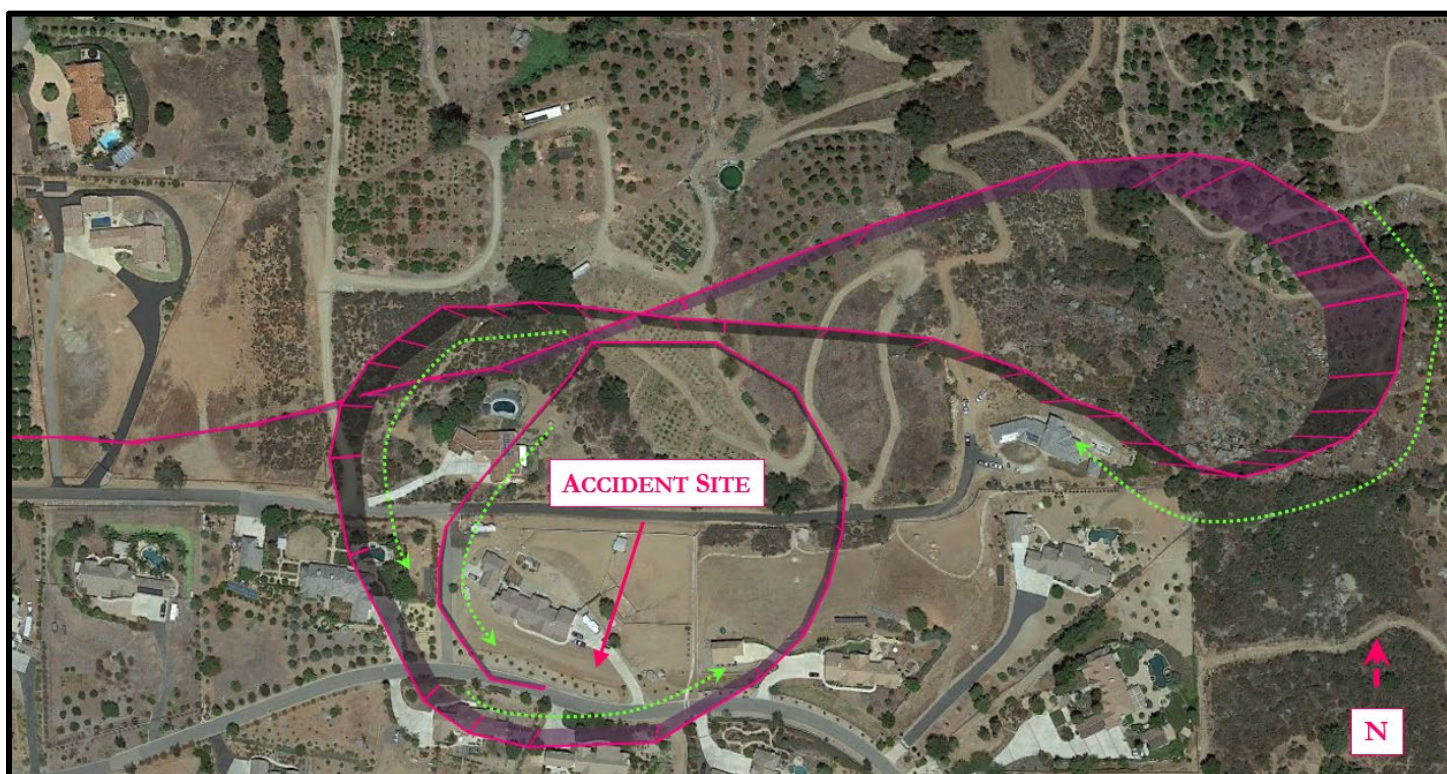


Figure 3: End of Flight Track

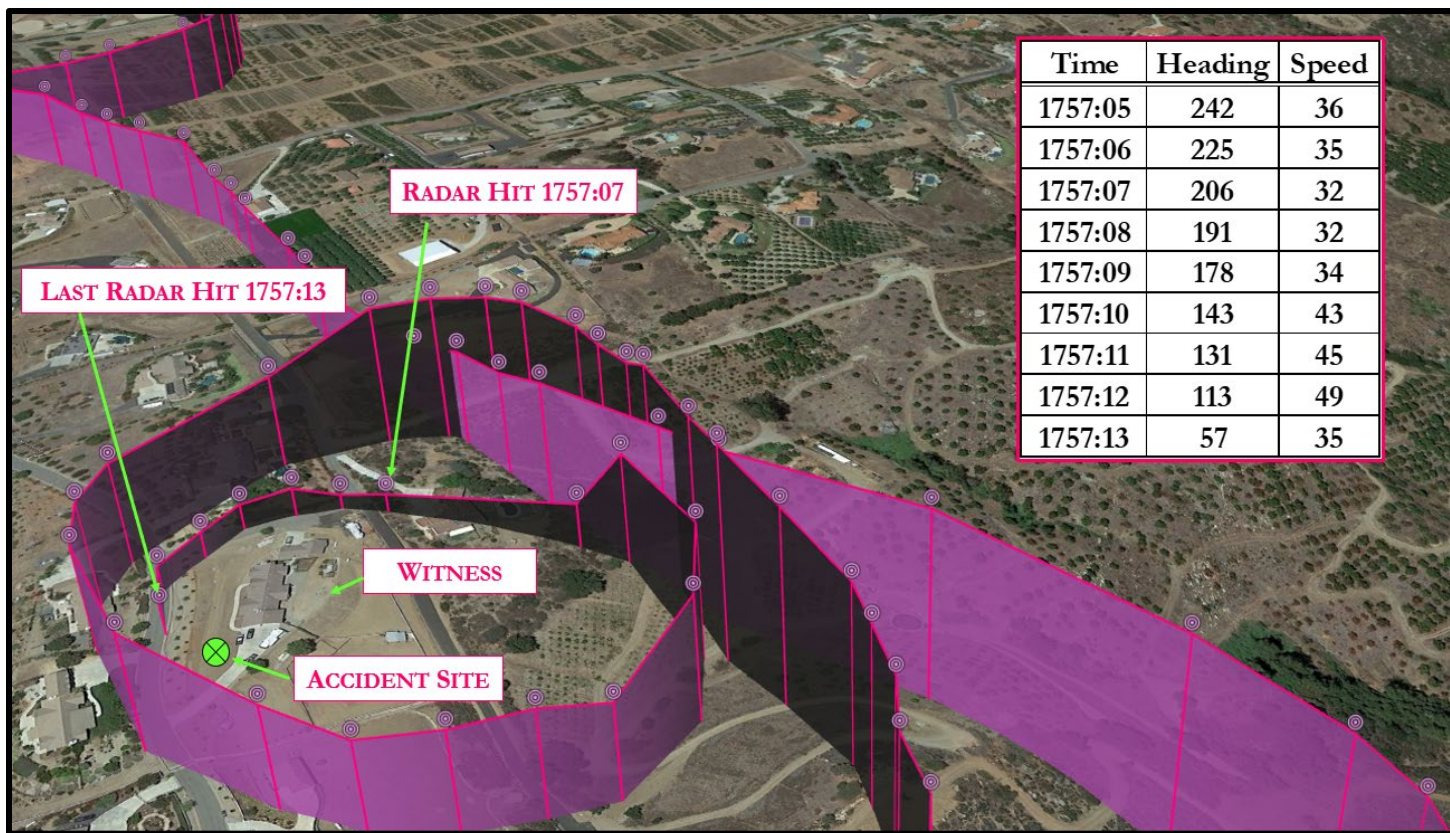


Figure 4: Radar Returns with Reference to Witness Location



Figure 5: Radar Returns with Reference to Witness Location

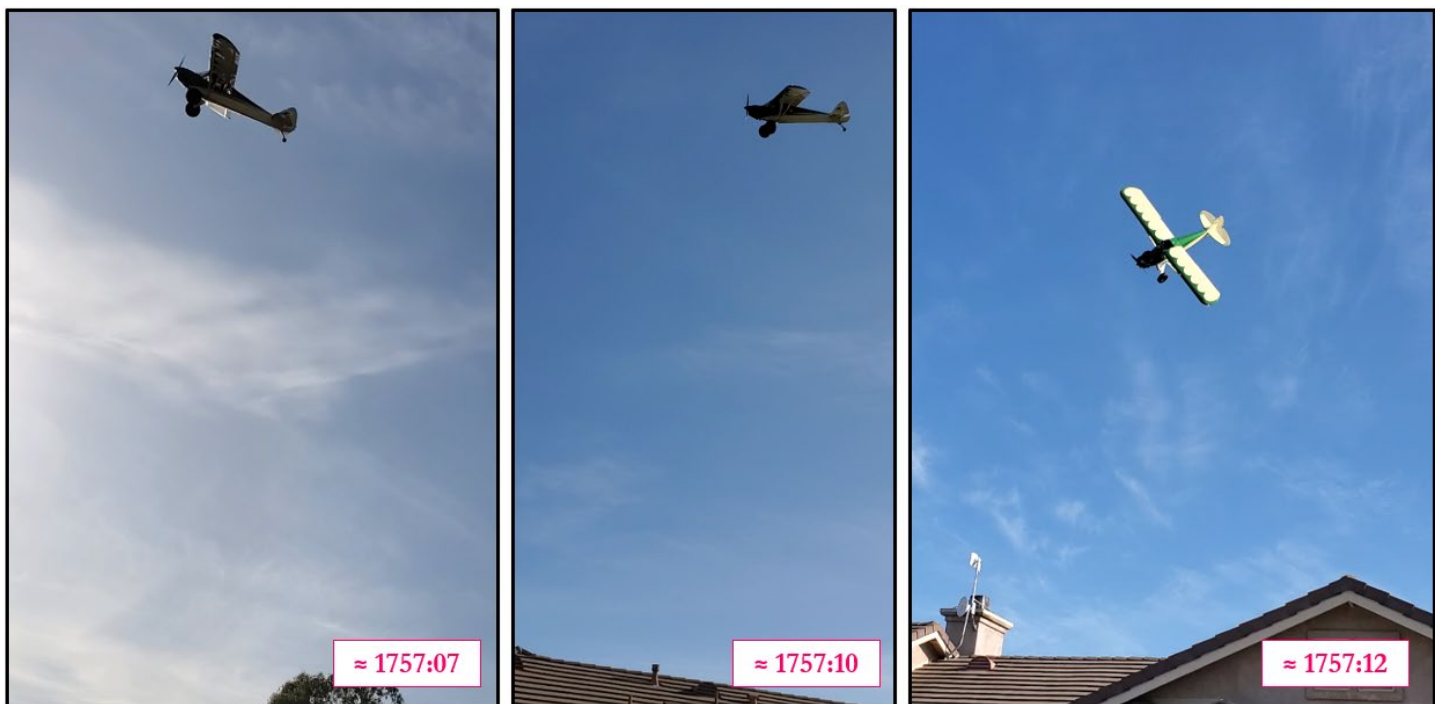


Figure 6: Video Capturing Airplane Prior to Impact

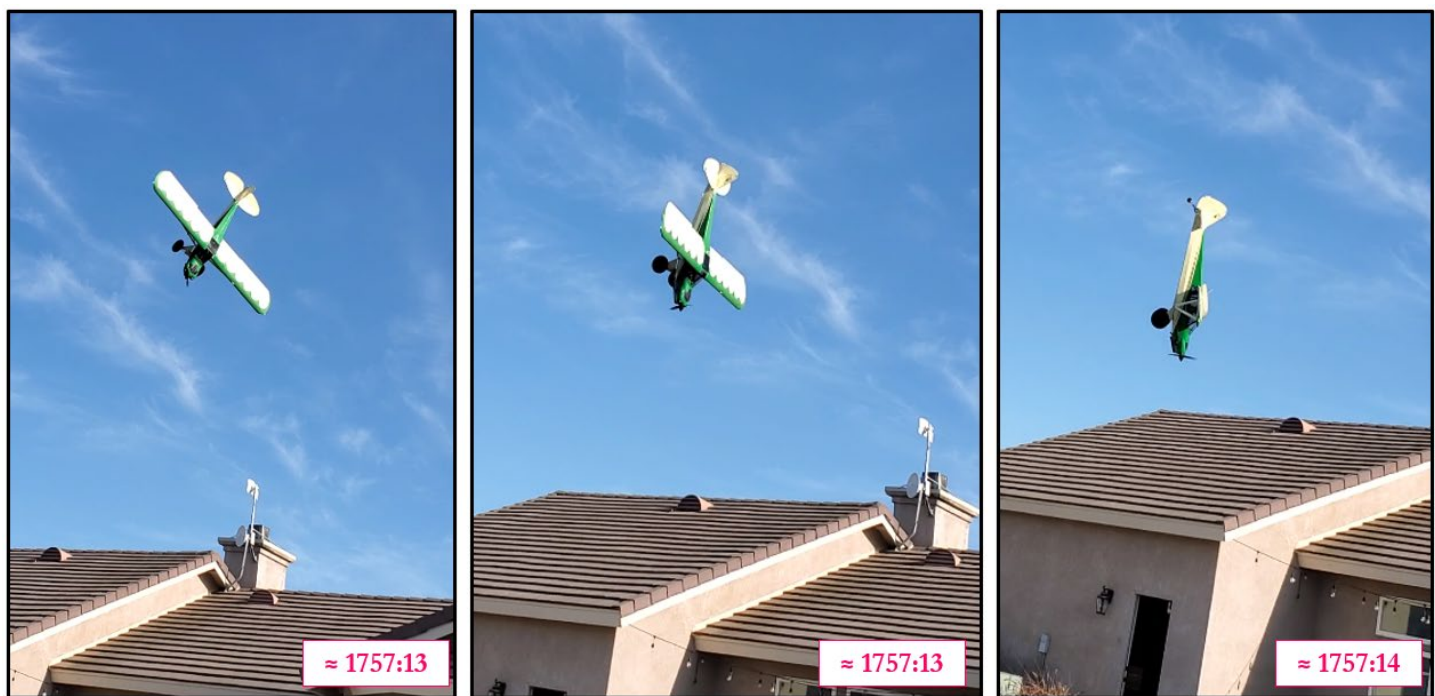


Figure 7: Video Capturing Airplane Prior to Impact



Figure 8: Alternate Video Capturing Airplane Prior to Impact

WRECKAGE AND IMPACT

The accident site was located in soft dirt about 100 feet from the residence on Palomar Vista Dr., Valley Center, CA². In character, the terrain was flat, and populated by scattered mature large bush. The main wreckage, consisting of the entire airplane, came to rest upright near tall brush and had burned the terrain in the surrounding 5 to 10 feet. The wreckage was subjected post-impact fire and burned. Control continuity was established onsite by the FAA inspectors.



Figure 9: Wreckage (picture proved by FAA inspector)

² <https://www.bing.com/maps?osid=3998761e-78ca-42cf-9f60-1cbcc5458e3b&cp=33.284773~-117.013684&lvl=22&dir=180&style=v&v=2&sV=2&form=S00027>

RECORDERS

A Dynon 180 was retrieved from the wreckage. In pertinent part, the last two minutes reveal that all engine parameters were consistent with normal operation.

Time	RPM	MP	Oil P	Oil T	FP	FF	Pitch	Roll	Heading	A/S	V/S	EGT 1	EGT 2	EGT 3	EGT 4	CHT 1	CHT 2	CHT 3	CHT 4
17:55:15	1542	24	66	173	104	2.6	3.6	14	275	43	-271	1206	1253	1181	1196	330	345	328	356
17:55:25	1505	24	66	172	104	2.7	3.6	19	331	36	-78	1204	1249	1171	1186	328	343	325	354
17:55:35	1508	24	66	172	104	2.8	4.4	3	27	35	-131	1200	1244	1165	1180	326	341	323	352
17:55:45	1632	24	66	172	104	3	9.8	8	74	34	15	1199	1244	1163	1180	324	339	321	350
17:55:55	1664	24	67	174	104	3.4	6.3	-7	57	32	-13	1200	1241	1175	1215	323	338	320	349
17:56:05	1678	24	67	174	104	3.4	9.5	11	58	34	48	1203	1245	1182	1233	323	338	320	349
17:56:15	2054	26	73	174	104	5.1	22.5	31	173	20	448	1236	1271	1213	1288	325	338	322	351
17:56:25	1741	25	69	173	104	4.8	7.4	-4	267	32	6	1245	1285	1219	1288	328	342	325	356
17:56:35	1683	24	67	173	104	3.6	7.8	-2	252	38	59	1230	1270	1206	1253	329	343	326	357
17:56:45	860	24	52	174	104	2.3	2.1	-26	151	33	-573	1033	1000	951	1065	326	340	324	353
17:56:55	1676	24	65	175	104	2.3	0.1	-29	327	34	-176	1069	1075	1052	1108	322	337	320	349
17:57:05	1675	25	67	174	104	3.3	8.1	-15	205	32	-339	1166	1197	1141	1210	322	337	320	350
17:57:15	2034	26	72	172	104	4.4	-42	-100	71	28	-315	1220	1258	1194	1268	322	340	321	354

Figure 10: Dynon Recorded Last Two Minutes

AIRPLANE INFORMATION

The airplane was built in 2011 by Richard Krause. The basic empty weight was recorded as 901 lbs and with a maximum gross weight of 1,320 lbs.

Position of datum 60 inches ahead of wing leading edge

Maximum gross weight..... 1320 lbs

Forward CG Limits (at all weights) 69.0 inches aft of datum

Aft CG Limit (at all weights) 81.0 inches aft of datum

Make: Carbon Cub

Model: CCK-1865

Aircraft serial number: CCK-1865-0013

Registration number: N 303KP

Date: 08/06/2011

Basic empty weight (lbs)	Arm (inches)	Moment (in-lbs)
<u>901</u>	<u>73.12</u>	<u>65,881.12</u>

Basic Empty Weight

Useful load = Maximum takeoff weight- Basic empty weight

= 1320 lbs - 901 lbs

Useful Load = 419 lbs

Figure 11: Gross Weights

The last annual was recorded as completed in June 2019.

Date; 06/01/2019	Tach Time; 437.9	Total Time; 437.9
Model; Cubcrafter, CC340	S/N; [REDACTED]	Reg. #; N303KP
• Complied with an <i>Annual Inspection</i> with reference to Carbon Cub EX Maintenance Manual Chapter 5 and Appendix A. • <i>Compression test; #1 79/80, #2 76/80, #3 79/80, #4 79/80.</i>		
I certify that this <i>Engine</i> has been inspected with reference to Carbon Cub EX Maintenance Manual Chapter 5 and Appendix A and was found to be in a condition for safe operation.		
James D. DeMassimo A&P [REDACTED]		

Figure 12: Last Annual Inspection

The stall speed in the landing configuration was listed as 35kts with flaps up and 27kts with the flaps down.

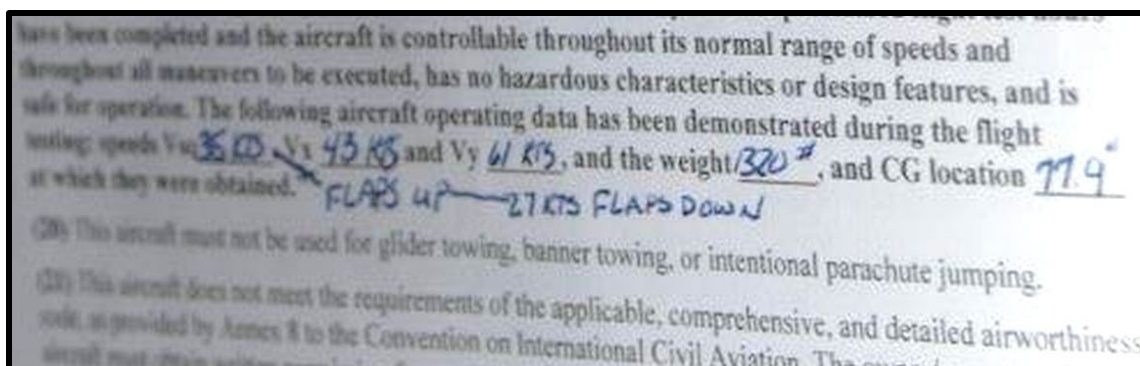


Figure 13: Speeds Listed in the Airplane's Documentations

OCCUPANT INFORMATION

PETER BIERLE (PILOT)³

Residence: Escondido, CA

The electronic copies of the pilot's flight records were made available to investigators. The last entry was from January 27, 2019 and his spouse indicated that he had not updated it from that time. Those logbooks indicated that the pilot's total flight time was 1544.9 hours, of which 268.6 were amassed in the accident airplane.

Sandro Nunez, Medical Examiner Investigator, stated: When I observed the pilot he was not wearing glasses. He did have a GPS device attached to a lanyard that was around his neck. He was not wearing a watch. It was not known if he was wearing a seat belt as people from the neighborhood where he crashed tried to get him out of the plane as it was on fire. I heard he was wearing one and it was cut off but could not confirm. According to his wife he did not take any medications and none was found at the scene.

He was a partner of the following company: <http://churchillgraphics.com/about-us-2/>

³ <https://www.facebook.com/peter.bierle>

WEATHER INFORMATION

33.12 °N, 117.32 °W

Carlsbad, CA Weather Historystar_ricon63 MCCLELLAN-PALOMAR AIRPORT STATION

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:53 AM	62 °F	55 °F	78 %	CALM	0 mph	0 mph	29.57 in	0.0 in	Fair
1:53 AM	61 °F	55 °F	81 %	CALM	0 mph	0 mph	29.56 in	0.0 in	Fair
2:53 AM	61 °F	55 °F	81 %	ESE	3 mph	0 mph	29.55 in	0.0 in	Fair
3:53 AM	61 °F	55 °F	81 %	CALM	0 mph	0 mph	29.55 in	0.0 in	Fair
4:53 AM	60 °F	54 °F	80 %	CALM	0 mph	0 mph	29.55 in	0.0 in	Fair
5:53 AM	59 °F	54 °F	83 %	CALM	0 mph	0 mph	29.56 in	0.0 in	Fair
6:53 AM	61 °F	54 °F	78 %	CALM	0 mph	0 mph	29.57 in	0.0 in	Fair
7:53 AM	63 °F	55 °F	75 %	VAR	3 mph	0 mph	29.58 in	0.0 in	Fair
8:53 AM	65 °F	54 °F	68 %	VAR	3 mph	0 mph	29.59 in	0.0 in	Fair
9:53 AM	66 °F	54 °F	65 %	W	9 mph	0 mph	29.58 in	0.0 in	Fair
10:53 AM	67 °F	54 °F	63 %	W	9 mph	0 mph	29.58 in	0.0 in	Fair
11:53 AM	68 °F	55 °F	63 %	W	10 mph	0 mph	29.58 in	0.0 in	Fair
12:53 PM	68 °F	54 °F	61 %	W	10 mph	16 mph	29.57 in	0.0 in	Fair
1:53 PM	68 °F	54 °F	61 %	WNW	9 mph	0 mph	29.56 in	0.0 in	Fair
2:53 PM	68 °F	55 °F	63 %	W	10 mph	0 mph	29.54 in	0.0 in	Fair
3:53 PM	69 °F	56 °F	63 %	W	8 mph	0 mph	29.53 in	0.0 in	Fair
4:53 PM	68 °F	57 °F	68 %	VAR	7 mph	0 mph	29.53 in	0.0 in	Fair
5:53 PM	66 °F	57 °F	73 %	W	7 mph	0 mph	29.54 in	0.0 in	Fair
6:35 PM	66 °F	58 °F	75 %	W	6 mph	0 mph	29.54 in	0.0 in	Partly Cloudy
6:43 PM	66 °F	58 °F	75 %	WNW	7 mph	0 mph	29.55 in	0.0 in	Mostly Cloudy
6:51 PM	64 °F	57 °F	77 %	VAR	7 mph	0 mph	29.55 in	0.0 in	Mostly Cloudy
6:53 PM	65 °F	58 °F	78 %	W	7 mph	0 mph	29.55 in	0.0 in	Mostly Cloudy

Elev 1808 ft, 33.27 °N, 116.99 °W

Citrus Crest - KCAVALLE1165

info

FORECAST FOR VALLEY CENTER, CA

May 31, 2020

Time	Temperature	Dew Point	Humidity	Wind	Speed	Gust	Pressure	Precip. Rate.	Precip. Accum.	UV	Solar
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5:49 PM	76.5 °F	57.0 °F	51 %	West	3.4 mph	4.5 mph	29.70 in	0.00 in	0.00 in	3	327.5 w/m ²
5:54 PM	76.6 °F	57.7 °F	52 %	WSW	3.9 mph	5.2 mph	29.70 in	0.00 in	0.00 in	3	308.8 w/m ²
5:59 PM	75.0 °F	57.2 °F	54 %	WSW	4.0 mph	5.3 mph	29.71 in	0.00 in	0.00 in	2	281.5 w/m ²
6:04 PM	75.0 °F	57.1 °F	54 %	West	3.2 mph	4.6 mph	29.70 in	0.00 in	0.00 in	2	262.8 w/m ²
6:09 PM	75.1 °F	57.4 °F	54 %	WSW	3.5 mph	4.8 mph	29.70 in	0.00 in	0.00 in	2	236.8 w/m ²
6:14 PM	74.8 °F	57.3 °F	54 %	WNW	3.1 mph	4.2 mph	29.71 in	0.00 in	0.00 in	2	210.8 w/m ²