

Summary of Van's RV Series Accident Causes

The accident database covers 1998-2013, inclusive. The database generates automated summary based on the aircraft type. It may take a bit of study to understand since it was not designed for routine public use. It's designed for a weird size only to allow the entire summary to show on one "page" rather than force the reader to contend with page wrap.

The following pages cover the RV-3, -4, -6, -7, -8, -9, and -10 series aircraft. The trigear versions ("A" models) are lumped in together with the taildragger ones as the NTSB listings are a bit inconsistent with the nomenclature. Similarly, the RV-12s are not included, as there is uncertainty as to which are Experimental Amateur-Built and which are Experimental or Special Light Sport.


The "Baseline" or "Overall Homebuilt" columns refer to all Experimental Amateur-Built aircraft accidents in the period covered by the database.

The "Primary" column refers to the cases where the particular cause was the initial event that caused accident. The "Both" column includes both these cases, and ones where the cause was a secondary one. The accident causes were based on the author's own reading of the accident narrative, not on the NTSB's Probable Cause.

Ron Wanttaja


9 June 2015


Enter Aircraft Name:		Vans RV-3		Year		First Flights		Reworked airframe time and time in type matrix		1/24/15		6/9/15		
						First Flights <=40 Hours				First Flights <=40 Hours		Use new Purchase Flag - 7/18		
Total Vans RV-3 accidents		15		0	1	Total Accidents		3348		160	486	12/29/2013 - Changed roll-up for power loss to look for over 2, instead of just 3		
Fatal Accidents		5	33.3%	0.0%	9.1%	Fatal Accidents		842	25.1%	6.5%	19.7%			
				11	0					2452	16			
Average Pilot Hours		1780	In Type 83	Av. Acc/Yr	0.9	Average Pilot Hours		3270	In Type 167	Av. Acc/Yr	209.3			
Median Pilot Hours		1568	In Type 26			Median Pilot Hours		1000	In Type 58					
Median Fatal		1700	In Type 22			Median Fatal		1100	In Type 48					
Average Aircraft Hours/year		41.1				Average Aircraft Hours/year		51.4						
Less Time in Type		9	90.0%	10	Threshold	2	Less Time in Type	1217	59.28%	2053				
First Flight Purchased		0	0.00%		Threshold	1	First Flight Purchased	105	3.14%					
Median Time in Type if Purchased		30					Total Purchased	1563	49.5%	3158				
Max Time in Type		565												
Total Purchased		12	80.0%	15										
Change in names of Phases, this section is not as reliable														
Phase of Flight (percent of cases where phase is given)														
Each Accident Is 6.67% of the Total														
Baseline Homebuilt														
3 3 fatal All All Fatal														
Primary Only		Both		Primary Only		Both								
Pilot Miscontrol	7	46.7%	7	46.7%	1292	38.6%	1310	39.1%	Approach	18.2%	0.0%	9.7%	13.0%	
Builder Error	0	0.0%	0	0.0%	178	5.3%	211	6.3%	Climb	0.0%	0.0%	2.0%	2.9%	
Maintenance Error	0	0.0%	1	6.7%	145	4.3%	199	5.9%	Cruise	0.0%	0.0%	8.0%	7.6%	
Undetermined Loss of Power	1	6.7%	1	6.7%	306	9.1%	306	9.1%	Descent	0.0%	0.0%	2.3%	4.9%	
Engine Mechanical	0	0.0%	2	13.3%	205	6.1%	583	17.4%	Emergency descent/landing	0.0%	0.0%	1.8%	1.4%	
Engine Controller/Electronic Ignition	0	0.0%	0	0.0%	18	0.5%	26	0.8%	Emergency landing	9.1%	0.0%	2.9%	2.4%	
Fuel System	0	0.0%	0	0.0%	117	3.5%	236	7.0%	Go-around (VFR)	0.0%	0.0%	0.8%	0.6%	
Landing Gear/Brakes	0	0.0%	0	0.0%	77	2.3%	102	3.0%	Hover	0.0%	0.0%	0.5%	0.0%	
Other Mechanical	2	13.3%	2	13.3%	159	4.7%	289	8.6%	Landing	36.4%	25.0%	24.7%	5.8%	
Fuel Exhaustion	1	6.7%	1	6.7%	114	3.4%	117	3.5%	Landing - flare/touchdown	9.1%	0.0%	2.8%	0.2%	
Fuel Starvation	0	0.0%	0	0.0%	47	1.4%	55	1.6%	Landing - roll	9.1%	0.0%	4.3%	0.9%	
Carb Ice	1	6.7%	1	6.7%	62	1.9%	72	2.2%	Maneuvering	18.2%	50.0%	12.3%	29.9%	
VFR to IFR	1	6.7%	1	6.7%	40	1.2%	40	1.2%	Maneuvering - turn to landing	0.0%	0.0%	0.2%	0.3%	
Maneuvering at low alt	0	0.0%	0	0.0%	154	4.6%	166	5.0%	Other	0.0%	0.0%	0.1%	0.0%	
Inadequate Preflight	1	6.7%	1	6.7%	65	1.9%	91	2.7%	Standing	0.0%	0.0%	0.2%	0.2%	
Fuel Contamination	0	0.0%	0	0.0%	35	1.0%	51	1.5%	Takeoff	9.1%	0.0%	19.3%	15.4%	
Midair Collision	1	6.7%	1	6.7%	41	1.2%	41	1.2%	Takeoff - roll/run	0.0%	0.0%	0.8%	0.2%	
Turbulence/Winds	0	0.0%	0	0.0%	19	0.6%	21	0.6%	Taxi	0.0%	0.0%	1.9%	0.6%	
Loss of Control (Unknown)	0	0.0%	0	0.0%	55	1.6%	69	2.1%	Unknown	0.0%	0.0%	1.6%	5.3%	
Taxi Accident	0	0.0%	0	0.0%	17	0.5%	19	0.6%						
Undetermined	0	0.0%	0	0.0%	48	1.4%	48	1.4%						
Other	0	0.0%	7	46.7%	154	4.6%	1033	30.9%						
	15	100.0%			3348	100.0%								
By year														
Year Vans RV-3 Overall Year Vans RV-3 Overall														
Power Loss (Any Cause) By Flag	4	26.7%			1085	32.4%			1998	2	226	2008	1	213
All Mechanical	2	13.3%							1999	2	218	2009	1	240
Compare Primary									2000	0	221	2010	1	188
	Vans RV-3	Overall							2001	2	211	2011	0	235
Landing Gear/Brakes	0.0%	2.3%							2002	0	217	2012	1	213
Other Mechanical	13.3%	4.7%							2003	1	199	2013	0	151
Undetermined Loss of Power	6.7%	9.1%							2004	1	186			
Fuel System	0.0%	3.5%							2005	1	208			
Engine Mechanical	0.0%	6.1%							2006	1	201			
Builder/Manufacturer Error	0.0%	5.3%							2007	1	221			
Maintenance Error	0.0%	4.3%												
Inadequate Preflight	6.7%	1.9%												
Carb Ice	6.7%	1.9%												
Maneuvering at low alt	0.0%	4.6%												
VFR to IFR	6.7%	1.2%												
Fuel Exhaustion/Starvation	6.7%	4.8%												
Pilot Miscontrol	46.7%	38.6%												
Total Pilot Error	73.3%	53.0%												
Total All Error	73.3%	62.6%												
Mechanical	20.0%	35.5%												
	Vans RV-3	Overall												
Other Mechanical	13.3%	4.7%												
Undetermined Loss of Power	6.7%	9.1%												
Fuel System	0.0%	3.5%												
Engine Mechanical	0.0%	6.1%												
Builder/Manufacturer Error	0.0%	5.3%												
Maintenance Error	0.0%	4.3%												
Pilot Error	73.3%	53.0%												

Enter Aircraft Name:		Vans RV-4		Year		* 		Reworked airframe time and time in type matrix				1/24/15		6/9/15				
						First Flights <=40 Hours						First Flights <=40 Hours		Use new Purchase Flag - 7/18				
Total Vans RV-4 accidents		74		1	3			Total Accidents	3348			160	486	12/29/2013 - Changed roll-up for power loss to look for over 2, instead of just 3				
Fatal Accidents		19	25.7%	2.1%	6.3%			Fatal Accidents	842	25.1%		6.5%	19.7%					
				48	0							2452	16					
Average Pilot Hours		4377	In Type 282	Av. Acc/Yr	4.6			Average Pilot Hours	3270	In Type 167	Av. Acc/Yr	209.3						
Median Pilot Hours		1690	In Type 159					Median Pilot Hours	1000	In Type 58								
Median Fatal		922	In Type 156					Median Fatal	1100	In Type 48								
Average Aircraft Hours/year		56.8					Average Aircraft Hours/year	51.4										
Less Time in Type		26	56.5%	46	Threshold	2	Less Time in Type		1217	59.28%	2053							
First Flight Purchased		2	4.35%	Threshold		1	First Flight Purchased		105	3.14%								
Median Time in Type if Purchased		121					Total Purchased		1563	49.5%	3158							
Max Time in Type		1548																
Total Purchased		38	55.1%	69														
Change in names of Phases, this section is not as reliable																		
Phase of Flight (percent of cases where phase is given)																		
Each Accident Is		1.35%	of the Total				Baseline Homebuilt				Vans RV-4		Vans RV-4					
							Primary Only	Both			4 fatal		All	All Fatal				
Pilot Miscontrol		21	28.4%	21	28.4%	1292		38.6%	1310	39.1%	Approach		8.2%	16.7%	9.7%	13.0%		
Builder Error		2	2.7%	3	4.1%	178		5.3%	211	6.3%	Climb		1.6%	5.6%	2.0%	2.9%		
Maintenance Error		2	2.7%	2	2.7%	145		4.3%	199	5.9%	Cruise		6.6%	0.0%	8.0%	7.6%		
Undetermined Loss of Power		7	9.5%	7	9.5%	306		9.1%	306	9.1%	Descent		3.3%	5.6%	2.3%	4.9%		
Engine Mechanical		3	4.1%	11	14.9%	205		6.1%	583	17.4%	Emergency descent/landing		1.6%	0.0%	1.8%	1.4%		
Engine Controller/Electronic Ignition		0	0.0%	0	0.0%	18		0.5%	26	0.8%	Emergency landing		4.9%	11.1%	2.9%	2.4%		
Fuel System		0	0.0%	3	4.1%	117		3.5%	236	7.0%	Go-around (VFR)		4.9%	0.0%	0.8%	0.6%		
Landing Gear/Brakes		1	1.4%	2	2.7%	77		2.3%	102	3.0%	Hover		0.0%	0.0%	0.5%	0.0%		
Other Mechanical		3	4.1%	5	6.8%	159		4.7%	289	8.6%	Landing		23.0%	5.6%	24.7%	5.8%		
Fuel Exhaustion		6	8.1%	6	8.1%	114		3.4%	117	3.5%	Landing - flare/touchdown		0.0%	0.0%	2.8%	0.2%		
Fuel Starvation		3	4.1%	3	4.1%	47		1.4%	55	1.6%	Landing - roll		3.3%	5.6%	4.3%	0.9%		
Carb Ice		5	6.8%	5	6.8%	62		1.9%	72	2.2%	Maneuvering		9.8%	22.2%	12.3%	29.9%		
VFR to IFR		3	4.1%	3	4.1%	40		1.2%	40	1.2%	Maneuvering - turn to landing		0.0%	0.0%	0.2%	0.3%		
Maneuvering at low alt		7	9.5%	8	10.8%	154		4.6%	166	5.0%	Other		0.0%	0.0%	0.1%	0.0%		
Inadequate Preflight		3	4.1%	4	5.4%	65		1.9%	91	2.7%	Standing		0.0%	0.0%	0.2%	0.2%		
Fuel Contamination		2	2.7%	2	2.7%	35		1.0%	51	1.5%	Takeoff		19.7%	11.1%	19.3%	15.4%		
Midair Collision		1	1.4%	1	1.4%	41		1.2%	41	1.2%	Takeoff - roll/run		1.6%	0.0%	0.8%	0.2%		
Turbulence/Winds		1	1.4%	1	1.4%	19		0.6%	21	0.6%	Taxi		0.0%	0.0%	1.9%	0.6%		
Loss of Control (Unknown)		1	1.4%	1	1.4%	55		1.6%	69	2.1%	Unknown		3.3%	5.6%	1.6%	5.3%		
Taxi Accident		0	0.0%	0	0.0%	17		0.5%	19	0.6%								
Undetermined		1	1.4%	1	1.4%	48		1.4%	48	1.4%								
Other		2	2.7%	17	23.0%	154		4.6%	1033	30.9%								
		74	100.0%			3348		100.0%										
												By year						
Power Loss (Any Cause) By Flag		30	40.5%			1085		32.4%			Year		Vans RV-4	Overall	Year	Vans RV-4	Overall	
All Mechanical		11	14.9%									1998		4	226	2008	2	213
Compare Primary												1999		7	218	2009	2	240
												2000		5	221	2010	6	188
												2001		1	211	2011	5	235
Landing Gear/Brakes		1.4%	2.3%									2002		7	217	2012	4	213
Other Mechanical		4.1%	4.7%									2003		4	199	2013	5	151
Undetermined Loss of Power		9.5%	9.1%									2004		8	186			
Fuel System		0.0%	3.5%									2005		6	208			
Engine Mechanical		4.1%	6.1%									2006		5	201			
Builder/Manufacturer Error		2.7%	5.3%									2007		3	221			
Maintenance Error		2.7%	4.3%															
Inadequate Preflight		4.1%	1.9%															
Carb Ice		6.8%	1.9%															
Maneuvering at low alt		9.5%	4.6%															
VFR to IFR		4.1%	1.2%															
Fuel Exhaustion/Starvation		12.2%	4.8%															
Pilot Miscontrol		28.4%	38.6%															
Total Pilot Error		64.9%	53.0%															
Total All Error		70.3%	62.6%															
Mechanical		24.3%	35.5%			14												
				</														

Enter Aircraft Name:		Vans RV-6		First Flights <=40 Hours		Reworked airframe time and time in type matrix		1/24/15		6/9/15	
Total Vans RV-6 accidents		193		Total Accidents		3348		First Flights <=40 Hours		Use new Purchase Flag - 7/18	
Fatal Accidents		54		Fatal Accidents		842		160		12/29/2013 - Changed roll-up for power loss to look for over 2, instead of just 3	
Average Pilot Hours		2912		Average Pilot Hours		3270		160			
Median Pilot Hours		1071		Median Pilot Hours		1000		486			
Median Fatal		1154		Median Fatal		1100		2452			
Average Aircraft Hours/year		83.2		Average Aircraft Hours/year		51.4		16			
Less Time in Type		83		Less Time in Type		1217		2053			
First Flight Purchased		1		First Flight Purchased		105		3158			
Median Time in Type if Purchased		80		Total Purchased		1563					
Max Time in Type		6500									
Total Purchased		92									
Change in names of Phases, this section is not as reliable											
Phase of Flight (percent of cases where phase is given)											
Each Accident Is 0.52% of the Total											
Baseline Homebuilt											
Vans RV-6 Vans RV-6											
6 6 fatal All All Fatal											
Primary Only Both Primary Only Both											
Approach 9.1% 11.1% 9.7% 13.0%											
Climb 0.6% 0.0% 2.0% 2.9%											
Cruise 7.8% 8.9% 8.0% 7.6%											
Descent 1.3% 4.4% 2.3% 4.9%											
Emergency descent/landing 0.6% 0.0% 1.8% 1.4%											
Emergency landing 1.9% 2.2% 2.9% 2.4%											
Go-around (VFR) 0.6% 0.0% 0.8% 0.6%											
Hover 0.0% 0.0% 0.5% 0.0%											
Landing 39.6% 11.1% 24.7% 5.8%											
Landing - flare/touchdown 9.1% 0.0% 2.8% 0.2%											
Landing - roll 7.1% 2.2% 4.3% 0.9%											
Maneuvering 11.0% 31.1% 12.3% 29.9%											
Maneuvering - turn to landing 1.3% 2.2% 0.2% 0.3%											
Other 0.0% 0.0% 0.1% 0.0%											
Standing 0.0% 0.0% 0.2% 0.2%											
Takeoff 14.9% 13.3% 19.3% 15.4%											
Takeoff - roll/run 0.0% 0.0% 0.8% 0.2%											
Taxi 2.6% 0.0% 1.9% 0.6%											
Unknown 1.3% 4.4% 1.6% 5.3%											
By year											
Year Vans RV-6 Overall Year Vans RV-6 Overall											
1998 5 226 2008 13 213											
1999 12 218 2009 13 240											
2000 10 221 2010 14 188											
2001 13 211 2011 14 235											
2002 11 217 2012 12 213											
2003 16 199 2013 5 151											
2004 10 186											
2005 14 208											
2006 17 201											
2007 14 221											
Percentage of ALL accidents											
(Percent of time Subevent was involved in Miscontrol)											
Miscontrol Subevents Vans RV-6 Baseline Vans RV-6 Baseline											
Winds 22.2% 22.3% 9.3% 8.6%											
Failure to maintain airspeed 19.8% 22.1% 8.3% 8.5%											
Other loss of control 1.2% 2.9% 0.5% 1.1%											
Engine Types in Accident Vans RV-6 Baseline FF 4 2.7%											
Traditional 88.6% 48.5% <=10 Not FF 3 5%											
Aftermarket Traditional 4.7% 2.6%											
Foreign 0.0% 0.6%											
Non-Cert 4 Stroke 0.0% 13.6%											
Auto Conversion 5.2% 13.6%											
Two Stroke 0.0% 12.5%											
Turbine 0.0% 1.8%											
Other 1.6% 6.7%											
Accidents referencing Airspeed Control 17.1% 16.0%											
Hours											
First Flight 4 2.7% 4 2.7%											
<=10 7 4.8% 3 2.1%											
<=20 7 4.8% 0 0.0%											
<=30 8 5.5% 1 0.7%											
<=40 12 8.2% 4 2.7%											
<=50 13 8.9% 1 0.7%											
<=60 15 10.3% 2 1.4%											
<=70 17 11.6% 2 1.4%											
<=80 19 13.0% 2 1.4%											
<=90 21 14.4% 2 1.4%											
<=100 26 17.8% 5 3.4%											
<=200 52 35.6% 26 17.8%											
<=300 71 48.6% 19 13.0%											
<=400 83 56.8% 12 8.2%											
<=500 89 61.0% 6 4.1%											
<=600 103 70.5% 14 9.6%											
<=700 116 79.5% 13 8.9%											
<=800 123 84.2% 7 4.8%											
<=900 129 88.4% 6 4.1%											
<=1000 132 90.4% 3 2.1%											
<=1500 142 97.3% 10 6.8%											
<=2000 145 99.3% 3 2.1%											
Aircraft Total Time - Filtered for Vans RV-6 Aircraft Total Time - Overall Fleet Time in Type											
Cumulative Individual Contribution Cumulative Individual Contribution Filtered for Vans RV-6											
Vans RV-6 Vans RV-6 Perc Vans RV-6 Vans RV-6 Perc Number Overall % Number Bin % Vans RV-6 Vans RV-6 Perc											
0 2.7% 4 2.7% 160 6.5% 160 6.5% 3 1.9%											
10 4.8% 3 2.1% 282 11.4% 122 4.9% 16 10.4%											
20 4.8% 0 0.0% 362 14.7% 80 3.2% 25 16.2%											
30 5.5% 1 0.7% 429 17.4% 67 2.7% 35 22.7%											
40 8.2% 4 2.7% 486 19.7% 57 2.3% 44 28.6%											
50 8.9% 1 0.7% 585 23.7% 99 4.0% 50 32.5%											
60 10.3% 2 1.4% 680 27.6% 95 3.8% 54 35.1%											
70 11.6% 2 1.4% 744 30.1% 64 2.6% 59 38.3%											
80 13.0% 2 1.4% 797 32.3% 53 2.1% 66 42.9%											
90 14.4% 2 1.4% 857 34.7% 60 2.4% 68 44.2%											
100 17.8% 5 3.4% 917 37.2% 60 2.4% 73 47.4%											
200 35.6% 26 17.8% 1347 54.6% 430 17.4% 104 67.5%											
300 48.6% 19 13.0% 1615 65.4% 268 10.9% 117 76.0%											
400 56.8% 12 8.2% 1808 73.3% 193 7.8% 130 84.4%											
500 61.0% 6 4.1% 1942 78.7% 134 5.4% 132 85.7%											
600 70.5% 14 9.6% 2053 83.2% 111 4.5% 141 91.6%											
700 79.5% 13 8.9% 2161 87.6% 108 4.4% 145 94.2%											
800 84.2% 7 4.8% 2230 90.4% 69 2.8% 147 95.5%											
900 88.4% 6 4.1% 2271 92.0% 41 1.7% 149 96.8%											
1000 90.4% 3 2.1% 2315 93.8% 44 1.8% 149 96.8%											
1500 97.3% 10 6.8% 2406 97.5% 91 3.7% 152 98.7%											
2000 99.3% 3 2.1% 2446 99.1% 40 1.6% 153 99.4%											
Overall Causes Vans RV-6 Percent Overall Percent											
Loss of Power (Undetermined) 17 8.5% 306 9.0%											
Stick and Rudder 81 40.7% 1292 38.0%											
Pilot Decisionmaking 41 20.6% 602 17.7%											
Mechanical Issues 37 18.6% 899 26.5%											
Undetermined 6 3.0% 48 1.4%											
Other (Primary Only) 17 8.5% 249 7.3%											
Total 199 100.0% 3396 100.0%											
Rating Vans RV-6 All Vans RV-6 All											
None 1 76 0.5% 2.4%											
Student 1 98 0.5% 3.1%											
Sport 1 82 0.5% 2.6%											
Private 132 1896 72.1% 59.1%											
CFI 8 141 4.4% 4.4%											
Commercial 28 675 15.3% 21.0%											
ATP 12 240 6.6% 7.5%											
183 3208											
Loss of Power Issues Vans RV-6 Overall											
Any Loss of Power 56 1085											
Loss of Power (Primary) 29 598											
Mechanical 23 511											
Mech and Undetermined Combined 193 3348											
Human Factors 21 379											
Human Factors Primary 14 258											
Percent of Total Accidents with Power Failure 28.1% 31.9%											
Percent of Total Accidents with Power Failure as Primary 14.6% 17.6%											

Enter Aircraft Name:		Vans RV-7		Year		First Flights		Reworked airframe time and time in type matrix		1/24/15		6/9/15		
						First Flights <=40 Hours				First Flights <=40 Hours		Use new Purchase Flag - 7/18		
Total Vans RV-7 accidents		46		3	7	Total Accidents 3348				160	486	12/29/2013 - Changed roll-up for power loss to look for over 2, instead of just 3		
Fatal Accidents		17	37.0%	9.4%	21.9%	Fatal Accidents 842		25.1%		6.5%	19.7%			
				32	0					2452	16			
Average Pilot Hours		2756	In Type 149	Av. Acc/Yr	2.9	Average Pilot Hours 3270		In Type 167		Av. Acc/Yr	209.3			
Median Pilot Hours		1203	In Type 115			Median Pilot Hours 1000		In Type 58						
Median Fatal		872	In Type 110			Median Fatal 1100		In Type 48						
Average Aircraft Hours/year		89.2				Average Aircraft Hours/year 51.4								
Less Time in Type		8	28.6%	28	Threshold	2	Less Time in Type 1217	59.28%	2053					
First Flight Purchased		0	0.00%		Threshold	1	First Flight Purchased 105	3.14%						
Median Time in Type if Purchased		134					Total Purchased 1563	49.5%	3158					
Max Time in Type		630												
Total Purchased		8	18.2%	44										
Change in names of Phases, this section is not as reliable														
Phase of Flight (percent of cases where phase is given)														
Each Accident Is 2.17% of the Total														
Baseline Homebuilt														
Vans RV- Vans RV-														
7 7 fatal All All Fatal														
Primary Only Both Primary Only Both														
Pilot Miscontrol	20	43.5%	20	43.5%	1292	38.6%	1310	39.1%	Approach	9.1%	10.0%	9.7%	13.0%	
Builder Error	2	4.3%	2	4.3%	178	5.3%	211	6.3%	Climb	0.0%	0.0%	2.0%	2.9%	
Maintenance Error	2	4.3%	2	4.3%	145	4.3%	199	5.9%	Cruise	6.1%	0.0%	8.0%	7.6%	
Undetermined Loss of Power	7	15.2%	7	15.2%	306	9.1%	306	9.1%	Descent	0.0%	0.0%	2.3%	4.9%	
Engine Mechanical	1	2.2%	9	19.6%	205	6.1%	583	17.4%	Emergency descent/landing	0.0%	0.0%	1.8%	1.4%	
Engine Controller/Electronic Ignition	1	2.2%	1	2.2%	18	0.5%	26	0.8%	Emergency landing	6.1%	10.0%	2.9%	2.4%	
Fuel System	0	0.0%	3	6.5%	117	3.5%	236	7.0%	Go-around (VFR)	3.0%	10.0%	0.8%	0.6%	
Landing Gear/Brakes	3	6.5%	3	6.5%	77	2.3%	102	3.0%	Hover	0.0%	0.0%	0.5%	0.0%	
Other Mechanical	0	0.0%	1	2.2%	159	4.7%	289	8.6%	Landing	33.3%	0.0%	24.7%	5.8%	
Fuel Exhaustion	0	0.0%	0	0.0%	114	3.4%	117	3.5%	Landing - flare/touchdown	6.1%	0.0%	2.8%	0.2%	
Fuel Starvation	1	2.2%	1	2.2%	47	1.4%	55	1.6%	Landing - roll	0.0%	0.0%	4.3%	0.9%	
Carb Ice	0	0.0%	0	0.0%	62	1.9%	72	2.2%	Maneuvering	15.2%	40.0%	12.3%	29.9%	
VFR to IFR	3	6.5%	3	6.5%	40	1.2%	40	1.2%	Maneuvering - turn to landing	0.0%	0.0%	0.2%	0.3%	
Maneuvering at low alt	1	2.2%	1	2.2%	154	4.6%	166	5.0%	Other	0.0%	0.0%	0.1%	0.0%	
Inadequate Preflight	0	0.0%	0	0.0%	65	1.9%	91	2.7%	Standing	0.0%	0.0%	0.2%	0.2%	
Fuel Contamination	0	0.0%	0	0.0%	35	1.0%	51	1.5%	Takeoff	18.2%	20.0%	19.3%	15.4%	
Midair Collision	0	0.0%	0	0.0%	41	1.2%	41	1.2%	Takeoff - roll/run	3.0%	0.0%	0.8%	0.2%	
Turbulence/Winds	0	0.0%	0	0.0%	19	0.6%	21	0.6%	Taxi	0.0%	0.0%	1.9%	0.6%	
Loss of Control (Unknown)	1	2.2%	1	2.2%	55	1.6%	69	2.1%	Unknown	0.0%	0.0%	1.6%	5.3%	
Taxi Accident	0	0.0%	0	0.0%	17	0.5%	19	0.6%						
Undetermined	2	4.3%	2	4.3%	48	1.4%	48	1.4%						
Other	2	4.3%	15	32.6%	154	4.6%	1033	30.9%						
	46	100.0%			3348	100.0%								
By year														
Year Vans RV-7 Overall Year Vans RV-7 Overall														
Power Loss (Any Cause) By Flag	13	28.3%			1085	32.4%			1998	0	226	2008	7	213
All Mechanical	9	19.6%							1999	0	218	2009	4	240
Compare Primary									2000	0	221	2010	2	188
									2001	0	211	2011	6	235
									2002	0	217	2012	5	213
									2003	2	199	2013	7	151
									2004	1	186			
									2005	2	208			
									2006	4	201			
									2007	6	221			
Percentage of ALL accidents														
(Percent of time Subevent was involved in Miscontrol)														
Miscontrol Subevents Vans RV-7 Baseline Vans RV-7 Baseline														
Landing Gear/Brakes	6.5%	2.3%			Winds	25.0%	22.3%	10.9%	8.6%					
Other Mechanical	0.0%	4.7%				25.0%	22.1%	10.9%	8.5%					
Undetermined Loss of Power	15.2%	9.1%			Failure to maintain airspeed	0.0%	2.9%	0.0%	1.1%					
Fuel System	0.0%	3.5%			Other loss of control									
Engine Mechanical	2.2%	6.1%												
Builder/Manufacturer Error	4.3%	5.3%			Engine Types in Accident Vans RV-7 Baseline FF 3 9.4%									
Maintenance Error	4.3%	4.3%			Traditional 30.4% 48.5% <=10 Not FF 2 16%									
Inadequate Preflight	0.0%	1.9%			Aftermarket Traditional 45.7% 2.6%									
Carb Ice	0.0%	1.9%			Foreign 0.0% 0.6%									
Maneuvering at low alt	2.2%	4.6%			Non-Cert 4 Stroke 0.0% 13.6%									
VFR to IFR	6.5%	1.2%			Auto Conversion 13.0% 13.6%									
Fuel Exhaustion/Starvation	2.2%	4.8%			Two Stroke 0.0% 12.5%									
Pilot Miscontrol	43.5%	38.6%			Turbine 0.0% 1.8%									
					Other 10.9% 6.7%									
Total Pilot Error	54.3%	53.0%			Accidents referencing Airspeed Control 17.4% 16.0%									
Total All Error	63.0%	62.6%												
Mechanical	32.6%	35.5%			8									
Vans RV-7 Overall														
Other Mechanical	0.0%	4.7%												
Undetermined Loss of Power	15.2%	9.1%												
Fuel System	0.0%	3.5%												
Engine Mechanical	2.2%	6.1%			Vans RV-7 Number									
Builder/Manufacturer Error	4.3%	5.3%			# with AF Hours 32 2452									
Maintenance Error	4.3%	4.3%			# with AF Hours and FF 32 2468									
Pilot Error	54.3%	53.0%			# with TiT Hours 33									
Overall Causes														
Loss of Power (Undetermined)	7	14.6%	306	9.0%										
Stick and Rudder	20	41.7%	1292	38.0%										
Pilot Decisionmaking	5	10.4%	602	17.7%										
Mechanical Issues	9	18.8%	899	26.5%										
Undetermined	2	4.2%	48	1.4%										
Other (Primary Only)	5	10.4%	249	7.3%										
Total	48	100.0%	3396	100.0%										
Rating														
None	0	76	0.0%	2.4%										
Student	0	98	0.0%	3.1%										
Sport	0	82	0.0%	2.6%										
Private	27	1896	67.5%	59.1%										
CFI	1	141	2.5%	4.4%										
Commercial	9	675	22.5%	21.0%										
ATP	3	240	7.5%	7.5%										
	40	3208												
Loss of Power Issues Vans RV-7 Overall														
Any Loss of Power										13	1085			
Loss of Power (Primary)										3	598			
Mechanical										5	511			
Mech and Undetermined Combined										46	3348			
Human Factors										4	379			
Human Factors Primary										1	258			
Percent of Total Accidents with Power Failure										27.1%	31.9%			
Percent of Total Accidents with Power Failure as Primary										6.3%	17.6%			

Enter Aircraft Name:		Vans RV-8		* 		Reworked airframe time and time in type matrix				1/24/15				6/9/15																													
						First Flights <=40 Hours								First Flights <=40 Hours				Use new Purchase Flag - 7/18																									
Total Vans RV-8 accidents						67				1		8		Total Accidents		3348				160		486		12/29/2013 - Changed roll-up for power loss to look for over 2, instead of just 3																			
Fatal Accidents						20		29.9%		2.1%		17.0%		Fatal Accidents		842		25.1%		6.5%		19.7%																					
						47		0												2452		16																					
Average Pilot Hours						5834		In Type 136		Av. Acc/Yr		4.2		Average Pilot Hours		3270		In Type 167		Av. Acc/Yr		209.3																					
Median Pilot Hours						1285		In Type 90						Median Pilot Hours		1000		In Type 58																									
Median Fatal						769		In Type 98						Median Fatal		1100		In Type 48																									
Average Aircraft Hours/year						96.0								Average Aircraft Hours/year		51.4																											
Less Time in Type						16		38.1%		42		Threshold		2		Less Time in Type		1217		59.28%		2053																					
First Flight Purchased						0		0.00%				Threshold		1		First Flight Purchased		105		3.14%																							
Median Time in Type if Purchased						43								Total Purchased		1563		49.5%		3158																							
Max Time in Type						600																																					
Total Purchased						25		39.1%		64														Change in names of Phases, this section is not as reliable Phase of Flight (percent of cases where phase is given)																			
Each Accident Is						1.49%		of the Total																																			
						Primary Only		Both						Baseline Homebuilt Primary Only		Both										Vans RV- Vans RV-																	
																												8 fatal All All Fatal															
Pilot Miscontrol						24		35.8%		25		37.3%		1292		38.6%		1310		39.1%				Approach		3.5%		11.8%		9.7%		13.0%											
Builder Error						2		3.0%		2		3.0%		178		5.3%		211		6.3%				Climb		0.0%		0.0%		2.0%		2.9%											
Maintenance Error						1		1.5%		1		1.5%		145		4.3%		199		5.9%				Cruise		5.3%		11.8%		8.0%		7.6%											
Undetermined Loss of Power						6		9.0%		6		9.0%		306		9.1%		306		9.1%				Descent		3.5%		0.0%		2.3%		4.9%											
Engine Mechanical						4		6.0%		11		16.4%		205		6.1%		583		17.4%				Emergency descent/landing		3.5%		0.0%		1.8%		1.4%											
Engine Controller/Electronic Ignition						1		1.5%		1		1.5%		18		0.5%		26		0.8%				Emergency landing		3.5%		0.0%		2.9%		2.4%											
Fuel System						1		1.5%		3		4.5%		117		3.5%		236		7.0%				Go-around (VFR)		0.0%		0.0%		0.8%		0.6%											
Landing Gear/Brakes						5		7.5%		5		7.5%		77		2.3%		102		3.0%				Hover		0.0%		0.0%		0.5%		0.0%											
Other Mechanical						1		1.5%		3		4.5%		159		4.7%		289		8.6%				Landing		40.4%		0.0%		24.7%		5.8%											
Fuel Exhaustion						3		4.5%		3		4.5%		114		3.4%		117		3.5%				Landing - flare/touchdown		0.0%		0.0%		2.8%		0.2%											
Fuel Starvation						0		0.0%		0		0.0%		47		1.4%		55		1.6%				Landing - roll		3.5%		0.0%		4.3%		0.9%											
Carb Ice						0		0.0%		0		0.0%		62		1.9%		72		2.2%				Maneuvering		15.8%		47.1%		12.3%		29.9%											
VFR to IFR						3		4.5%		3		4.5%		40		1.2%		40		1.2%				Maneuvering - turn to landing		0.0%		0.0%		0.2%		0.3%											
Manuevering at low alt						3		4.5%		3		4.5%		154		4.6%		166		5.0%				Other		0.0%		0.0%		0.1%		0.0%											
Inadequate Preflight						1		1.5%		2		3.0%		65		1.9%		91		2.7%				Standing		0.0%		0.0%		0.2%		0.2%											
Fuel Contamination						0		0.0%		0		0.0%		35		1.0%		51		1.5%				Takeoff		14.0%		17.6%		19.3%		15.4%											
Midair Collision						6		9.0%		6		9.0%		41		1.2%		41		1.2%				Takeoff - roll/run		1.8%		0.0%		0.8%		0.2%											
Turbulence/Winds						1		1.5%		1		1.5%		19		0.6%		21		0.6%				Taxi		1.8%		5.9%		1.9%		0.6%											
Loss of Control (Unknown)						1		1.5%		1		1.5%		55		1.6%		69		2.1%				Unknown		1.8%		0.0%		1.6%		5.3%											
Taxi Accident						1		1.5%		2		3.0%		17		0.5%		19		0.6%																							
Undetermined						0		0.0%		0		0.0%		48		1.4%		48		1.4%																							
Other						3		4.5%		17		25.4%		154		4.6%		1033		30.9%																							
						67		100.0%						3348		100.0%																											
Power Loss (Any Cause) By Flag						17		25.4%						1085		32.4%								By year		Year		Vans RV-8		Overall		Year		Vans RV-8		Overall							
All Mechanical						15		22.4%																1998		1		226		2008		7		213									
Compare Primary																								1999		1		218		2009		6		240									
																								2000		2		221		2010		7		188									
																								2001		1		211		2011		10		235									
Landing Gear/Brakes						7.5%		2.3%						Miscontrol Subevents		Vans RV-8		Baseline		Vans RV-8		Baseline		2002		3		217		2012		2		213									
Other Mechanical						1.5%		4.7%						Winds		29.2%		22.3%		10.4%		8.6%		2003		3		199		2013		3		151									
Undetermined Loss of Power						9.0%		9.1%						Failure to maintain airspeed		12.5%		22.1%		4.5%		8.5%		2004		5		186															
Fuel System						1.5%		3.5%						Other loss of control		4.2%		2.9%		1.5%		1.1%		2005		9		208															
Engine Mechanical						6.0%		6.1%																2006		1		201															
Builder/Manufacturer Error						3.0%		5.3%						Engine Types in Accident		Vans RV-8		Baseline		FF		1		2.1%		2007		6		221													
Maintenance Error						1.5%		4.3%						Traditional		76.1%		48.5%		<=10 Not FF		3		9%																			
Inadequate Preflight						1.5%		1.9%						Aftermarket Traditional		17.9%		0.6%																									
Carb Ice						0.0%		1.9%						Foreign		0.0%		0.6%																									
Manuevering at low alt						4.5%		4.6%						Non-Cert 4 Stroke		0.0%		13.6%																									
VFR to IFR						4.5%		1.2%						Auto Conversion		4.5%		13.6%																									
Fuel Exhaustion/Starvation						4.5%		4.8%						Two Stroke		0.0%		12.5%		0		First Flight		1		2.1%		160		6.5%		160		6.5%									
Pilot Miscontrol						35.8%		38.6%						Turbine		0.0%		1.8%		10		<=10		4		8.5%		3		6.4%		282		11.4%		122		4.9%		8		14.8%	
														Other		1.5%		6.7%		20		<=20		6		12.8%		2		4.3%		362		14.7%		80		3.2%		10		18.5%	
Total Pilot Error						50.7%		53.0%						Accidents referencing Airspeed Control		10.4%		16.0%		30		<=30		8		17.0%		2		4.3%		429		17.4%		67		2.7%		16		29.6%	
Total All Error						55.2%		62.6%												40		<=40		8		17.0%		0		0.0%		486		19.7%		57		2.3%		20		37.0%	
Mechanical						29.9%		35.5%						7						50		<=50		8		17.0%		0		0.0%		585		23.7%		99		4.0%		21		38.9%	
																				60		<=60		8		17.0%		0		0.0%		680		27.6%		95		3.8%		23		42.6%	
																				70		<=70		9		19.1%		1		2.1%		744		30.1%		64		2.6%		24		44.4%	
																				80		<=80		11		23.4%		2		4.3%		797		32.3%		53		2.1%		26		48.1%	
																				90		<=90		13		27.7%		2		4.3%		857		34.7%		60		2.4%		27		50.0%	
																				100		<=100		16		34.0%		3		6.4%		917		37.2%		60		2.4%		29		53.7%	
																				200		<=200		26		55.3%		10		21.3%		1347		54.6%		430		17.4%		42		77.8%	
																				300		<=300		34		72.3%		8		17.0%		1615		65.4%		268		10.9%		48		88.9%	
																				400		<=400		38		80.9%		4		8.5%		1808		73.3%		193		7.8%		50		92.6%	
																				500		<=500		40		85.1%		2		4.3%		1942		78.7%		134		5.4%		50		92.6%	
																				600		<=600		44		93.6%		4		8.5%		2053		83.2%		111		4.5%		54		100.0%	
																				700		<=700		46		97.9%		2		4.3%		2161		87.6%		108		4.4%		54		100.0%	
																				800		<=800		47		100.0%		1		2.1%		2230		90.4%		69		2.8%		54		100.0%	
																				900		<=900		47		100.0%		0		0.0%		2271		92.0%		41		1.7%		54		100.0%	
																				1000		<=1000		47		100.0%		0		0.0%		2315		93.8%		44		1.8%		54		100.0%	
																				1500		<=1500		47		100.0%		0		0.0%		2406		97.5%		91		3.7%		54		100.0%	
																				2000		<=2000		47		100.0%		0		0.0%		2446		99.1%		40		1.6%		54		100.0%	
Overall Causes						Vans RV-8		Percent		Overall		Percent								Loss of Power Issues		Vans RV-8		Overall						</													

Enter Aircraft Name:		Vans RV-9		* 		Reworked airframe time and time in type matrix				1/24/15				6/9/15			
				First Flights <=40 Hours						First Flights <=40 Hours				Use new Purchase Flag - 7/18			
Total Vans RV-9 accidents		24		0	3	Total Accidents		3348		160	486	12/29/2013 - Changed roll-up for power loss to look for over 2, instead of just 3					
Fatal Accidents		2	8.3%	0.0%	17.6%	Fatal Accidents		842	25.1%	6.5%	19.7%						
				17	0					2452	16						
Average Pilot Hours		1617	In Type 91	Av. Acc/Yr	1.5	Average Pilot Hours		3270	In Type 167	Av. Acc/Yr	209.3						
Median Pilot Hours		350	In Type 72			Median Pilot Hours		1000	In Type 58								
Median Fatal		3105	In Type 170			Median Fatal		1100	In Type 48								
Average Aircraft Hours/year		45.1			Average Aircraft Hours/year		51.4										
Less Time in Type		4	26.7%	15	Threshold	2	Less Time in Type		1217	59.28%	2053						
First Flight Purchased		0	0.00%	Threshold	1	First Flight Purchased		105	3.14%								
Median Time in Type if Purchased		51			Total Purchased		1563	49.5%	3158								
Max Time in Type		478															
Total Purchased		6	26.1%	23													
Change in names of Phases, this section is not as reliable																	
Phase of Flight (percent of cases where phase is given)																	
Each Accident Is		4.17%	of the Total		Baseline Homebuilt				Vans RV- Vans RV-								
					Primary Only		Both		9		9 fatal		All				
Primary Only		Both			Primary Only		Both		Approach		11.1%		13.0%				
Pilot Miscontrol	10	41.7%	10	41.7%	1292	38.6%	1310	39.1%	Climb	0.0%	0.0%	2.0%	2.9%				
Builder Error	0	0.0%	0	0.0%	178	5.3%	211	6.3%	Cruise	5.6%	0.0%	8.0%	7.6%				
Maintenance Error	2	8.3%	2	8.3%	145	4.3%	199	5.9%	Descent	0.0%	0.0%	2.3%	4.9%				
Undetermined Loss of Power	2	8.3%	2	8.3%	306	9.1%	306	9.1%	Emergency descent/landing	0.0%	0.0%	1.8%	1.4%				
Engine Mechanical	1	4.2%	4	16.7%	205	6.1%	583	17.4%	Emergency landing	0.0%	0.0%	2.9%	2.4%				
Engine Controller/Electronic Ignition	1	4.2%	2	8.3%	18	0.5%	26	0.8%	Go-around (VFR)	0.0%	0.0%	0.8%	0.6%				
Fuel System	1	4.2%	1	4.2%	117	3.5%	236	7.0%	Hover	0.0%	0.0%	0.5%	0.0%				
Landing Gear/Brakes	0	0.0%	1	4.2%	77	2.3%	102	3.0%	Landing	38.9%	0.0%	24.7%	5.8%				
Other Mechanical	0	0.0%	0	0.0%	159	4.7%	289	8.6%	Landing - flare/touchdown	5.6%	0.0%	2.8%	0.2%				
Fuel Exhaustion	1	4.2%	1	4.2%	114	3.4%	117	3.5%	Landing - roll	5.6%	0.0%	4.3%	0.9%				
Fuel Starvation	2	8.3%	2	8.3%	47	1.4%	55	1.6%	Maneuvering	5.6%	50.0%	12.3%	29.9%				
Carb Ice	2	8.3%	3	12.5%	62	1.9%	72	2.2%	Maneuvering - turn to landing	0.0%	0.0%	0.2%	0.3%				
VFR to IFR	0	0.0%	0	0.0%	40	1.2%	40	1.2%	Other	0.0%	0.0%	0.1%	0.0%				
Maneuvering at low alt	0	0.0%	0	0.0%	154	4.6%	166	5.0%	Standing	0.0%	0.0%	0.2%	0.2%				
Inadequate Preflight	0	0.0%	0	0.0%	65	1.9%	91	2.7%	Takeoff	22.2%	0.0%	19.3%	15.4%				
Fuel Contamination	0	0.0%	0	0.0%	35	1.0%	51	1.5%	Takeoff - roll/run	0.0%	0.0%	0.8%	0.2%				
Midair Collision	0	0.0%	0	0.0%	41	1.2%	41	1.2%	Taxi	0.0%	0.0%	1.9%	0.6%				
Turbulence/Winds	0	0.0%	0	0.0%	19	0.6%	21	0.6%	Unknown	0.0%	0.0%	1.6%	5.3%				
Loss of Control (Unknown)	0	0.0%	0	0.0%	55	1.6%	69	2.1%									
Taxi Accident	0	0.0%	0	0.0%	17	0.5%	19	0.6%									
Undetermined	0	0.0%	0	0.0%	48	1.4%	48	1.4%									
Other	2	8.3%	8	33.3%	154	4.6%	1033	30.9%									
	24	100.0%			3348	100.0%											
										By year							
Power Loss (Any Cause) By Flag		12	50.0%			1085	32.4%			Year	Vans RV-9	Overall	Year	Vans RV-9	Overall		
All Mechanical	5	20.8%	<=10		<=10		<=10		1998	0	226	2008	2	213			
Compare Primary									1999	0	218	2009	1	240			
									2000	0	221	2010	5	188			
									2001	0	211	2011	2	235			
									2002	1	217	2012	2	213			
									2003	1	199	2013	1	151			
									2004	3	186						
									2005	1	208						
									2006	1	201						
									2007	4	221						
										Aircraft Total Time - Filtered for Vans RV-9		Aircraft Total Time - Overall Fleet		Time in Type			
										Cumulative		Individual Contribution		Filtered for Vans RV-9			
										Vans RV-9		Vans RV-9		Vans RV-9			
Landing Gear/Brakes	0.0%	2.3%	Miscontrol Subevents		Vans RV-9	Baseline	Vans RV-9	Baseline	0	0.0%	160	6.5%	160	6.5%	0.0%		
Other Mechanical	0.0%	4.7%	Winds		30.0%	22.3%	12.5%	8.6%	0	0.0%	0	0.0%	0	0.0%	0.0%		
Undetermined Loss of Power	8.3%	9.1%	Failure to maintain airspeed		10.0%	22.1%	4.2%	8.5%	0	0.0%	0	0.0%	0	0.0%	0.0%		
Fuel System	4.2%	3.5%	Other loss of control		10.0%	2.9%	4.2%	1.1%	0	0.0%	0	0.0%	0	0.0%	0.0%		
Engine Mechanical	4.2%	6.1%	Engine Types in Accident		Vans RV-9	Baseline	FF	0	0.0%	0	0.0%	0	0.0%	0	0.0%		
Builder/Manufacturer Error	0.0%	5.3%	Traditional		45.8%	48.5%	<=10 Not FF	1	6%	0	0.0%	0	0.0%	0	0.0%		
Maintenance Error	8.3%	4.3%	Aftermarket Traditional		16.7%	2.6%											
Inadequate Preflight	0.0%	1.9%	Foreign		0.0%	0.6%											
Carb Ice	8.3%	1.9%	Non-Cert 4 Stroke		0.0%	13.6%											
Maneuvering at low alt	0.0%	4.6%	Auto Conversion		29.2%	13.6%											
VFR to IFR	0.0%	1.2%	Two Stroke		0.0%	12.5%	Hours	0	First Flight	0	0.0%	160	6.5%	160	6.5%	0.0%	
Fuel Exhaustion/Starvation	12.5%	4.8%	Turbine		0.0%	1.8%	10	<=10	1	5.9%	1	5.9%	282	11.4%	122	4.9%	3
Pilot Miscontrol	41.7%	38.6%	Other		8.3%	6.7%	20	<=20	1	5.9%	0	0.0%	362	14.7%	80	3.2%	3
Total Pilot Error	62.5%	53.0%	Accidents referencing Airspeed Control		8.3%	16.0%	30	<=30	2	11.8%	1	5.9%	429	17.4%	67	2.7%	4
Total All Error	70.8%	62.6%					40	<=40	3	17.6%	1	5.9%	486	19.7%	57	2.3%	5
Mechanical	25.0%	35.5%					50	<=50	4	23.5%	1	5.9%	585	23.7%	99	4.0%	6
							60	<=60	6	35.3%	2	11.8%	680	27.6%	95	3.8%	8
							70	<=70	8	47.1%	2	11.8%	744	30.1%	64	2.6%	9
							80	<=80	8	47.1%	0	0.0%	797	32.3%	53	2.1%	11
							90	<=90	10	58.8%	2	11.8%	857	34.7%	60	2.4%	14
							100	<=100	10	58.8%	0	0.0%	917	37.2%	60	2.4%	15
							200	<=200	14	82.4%	4	23.5%	1347	54.6%	430	17.4%	18
							300	<=300	14	82.4%	0	0.0%	1615	65.4%	268	10.9%	18
							400	<=400	14	82.4%	0	0.0%	1808	73.3%	193	7.8%	18
							500	<=500	16	94.1%	2	11.8%	1942	78.7%	134	5.4%	19
							600	<=600	17	100.0%	1	5.9%	2053	83.2%	111	4.5%	19
							700	<=700	17	100.0%	0	0.0%	2161	87.6%	108	4.4%	19
							800	<=800	17	100.0%	0	0.0%	2230	90.4%	69	2.8%	19
							900	<=900	17	100.0%	0	0.0%	2271	92.0%	41	1.7%	19
							1000	<=1000	17	100.0%	0	0.0%	2315	93.8%	44	1.8%	19
							1500	<=1500	17	100.0%	0	0.0%	2406	97.5%	91	3.7%	19
							2000	<=2000	17	100.0%	0	0.0%	2446	99.1%	40	1.6%	19
Overall Causes		Vans RV-9	Percent	Overall	Percent					Loss of Power Issues		Vans RV-9	Overall				
Loss of Power (Undetermined)	2	8.3%	306	9.0%							Any Loss of Power	12	1085				
Stick and Rudder	10	41.7%	1292	38.0%							Loss of Power (Primary)	8	598				
Pilot Decisionmaking	5	20.8%	602	17.7%							Mechanical	5	511				
Mechanical Issues	5	20.8%	899	26.5%							Mech and Undetermined Combined	24	3348				
Undetermined	0	0.0%	48	1.4%							Human Factors	5	379				
Other (Primary Only)	2	8.3%	249	7.3%							Human Factors Primary	5	258				
Total	24	100.0%	3396	100.0%													
Rating		Vans RV-9	All	Vans RV-9	All												
None	1	76	4.3%	2.4%													
Student	0	98	0.0%	3.1%													
Sport	0	82	0.0%	2.6%													
Private	15	1896	65.2%	59.1%													
CFI	2	141	8.7%	4.4%													
Commercial	4	675	17.4%	21.0%													
ATP	1	240	4.3%	7.5%													
	23	3208															
										Percent of Total Accidents with Power Failure		50.0%	31.9%				
										Percent of Total Accidents with Power Failure as Primary		33.3%	17.6%				

Enter Aircraft Name:		Vans RV-10		Year		First Flights		Reworked airframe time and time in type matrix		1/24/15		6/9/15	
						First Flights <=40 Hours				First Flights <=40 Hours		Use new Purchase Flag - 7/18	
Total Vans RV-10 accidents		11		0	3	Total Accidents 3348				160	486	12/29/2013 - Changed roll-up for power loss to look for over 2, instead of just 3	
Fatal Accidents		3	27.3%	0.0%	33.3%	Fatal Accidents 842		25.1%		6.5%	19.7%		
				9	0					2452	16		
Average Pilot Hours		1297	In Type 108	Av. Acc/Yr	0.7	Average Pilot Hours 3270		In Type 167		Av. Acc/Yr	209.3		
Median Pilot Hours		1243	In Type 69			Median Pilot Hours 1000		In Type 58					
Median Fatal		1150	In Type #NUM!			Median Fatal 1100		In Type 48					
Average Aircraft Hours/year		104.1				Average Aircraft Hours/year 51.4							
Less Time in Type		3	42.9%	7	Threshold	2	Less Time in Type 1217	59.28%	2053				
First Flight Purchased		1	14.29%		Threshold	1	First Flight Purchased 105	3.14%					
Median Time in Type if Purchased		135					Total Purchased 1563	49.5%	3158				
Max Time in Type		274											
Total Purchased		3	27.3%	11									
Change in names of Phases, this section is not as reliable													
Phase of Flight (percent of cases where phase is given)													
Each Accident Is 9.09% of the Total													
Baseline Homebuilt													
Vans RV- Vans RV-													
10 10 fatal All All Fatal													
Primary Only Both Primary Only Both													
Approach 12.5% 0.0% 9.7% 13.0%													
Climb 0.0% 0.0% 2.0% 2.9%													
Cruise 25.0% 33.3% 8.0% 7.6%													
Descent 0.0% 0.0% 2.3% 4.9%													
Emergency descent/landing 0.0% 0.0% 1.8% 1.4%													
Emergency landing 0.0% 0.0% 2.9% 2.4%													
Go-around (VFR) 0.0% 0.0% 0.8% 0.6%													
Hover 0.0% 0.0% 0.5% 0.0%													
Landing 0.0% 0.0% 24.7% 5.8%													
Landing - flare/touchdown 0.0% 0.0% 2.8% 0.2%													
Landing - roll 0.0% 0.0% 4.3% 0.9%													
Maneuvering 12.5% 0.0% 12.3% 29.9%													
Maneuvering - turn to landing 0.0% 0.0% 0.2% 0.3%													
Other 0.0% 0.0% 0.1% 0.0%													
Standing 0.0% 0.0% 0.2% 0.2%													
Takeoff 0.0% 0.0% 19.3% 15.4%													
Takeoff - roll/run 0.0% 0.0% 0.8% 0.2%													
Taxi 0.0% 0.0% 1.9% 0.6%													
Unknown 12.5% 33.3% 1.6% 5.3%													
By year													
Year Vans RV-1 Overall Year Vans RV-10 Overall													
1998 0 226 2008 2 213													
1999 0 218 2009 0 240													
2000 0 221 2010 1 188													
2001 0 221 2011 3 235													
2002 0 217 2012 1 213													
2003 0 199 2013 2 151													
2004 0 186													
2005 0 208													
2006 0 201													
2007 2 221													
Percentage of ALL accidents													
Vans RV-10 Baseline Vans RV-1 Baseline													
Miscontrol Subevents Vans RV-10 Baseline Vans RV-1 Baseline													
#DIV/0! 22.3% #DIV/0! 8.6%													
Winds #DIV/0! 22.1% #DIV/0! 8.5%													
Failure to maintain airspeed #DIV/0! 2.9% #DIV/0! 1.1%													
Other loss of control #DIV/0! 1.1%													
Engine Types in Accident Vans RV-10 Baseline FF 0 0.0%													
Traditional 63.6% 48.5% <=10 Not FF 2 22%													
Aftermarket Traditional 9.1% 2.6%													
Foreign 0.0% 0.6%													
Non-Cert 4 Stroke 0.0% 13.6%													
Auto Conversion 18.2% 13.6%													
Two Stroke 0.0% 12.5%													
Turbine 0.0% 1.8%													
Other 9.1% 6.7%													
Accidents referencing Airspeed Control 0.0% 16.0%													
0 First Fligh 0 0.0%													
10 <=10 2 22.2%													
20 <=20 2 22.2%													
30 <=30 3 33.3%													
40 <=40 3 33.3%													
50 <=50 3 33.3%													
60 <=60 3 33.3%													
70 <=70 4 44.4%													
80 <=80 5 55.6%													
90 <=90 5 55.6%													
100 <=100 5 55.6%													
200 <=200 7 77.8%													
300 <=300 9 100.0%													
400 <=400 9 100.0%													
500 <=500 9 100.0%													
600 <=600 9 100.0%													
700 <=700 9 100.0%													
800 <=800 9 100.0%													
900 <=900 9 100.0%													
1000 <=1000 9 100.0%													
1500 <=1500 9 100.0%													
2000 <=2000 9 100.0%													
Aircraft Total Time - Filtered for Vans RV-10 Aircraft Total Time - Overall Fleet Time in Type													
Cumulative Individual Contribution Cumulative Individual Contribution Filtered for Vans RV-10													
Vans RV-1hs RV-10 Per Vans RV-10 RV-10 Pe Number Overall % Number Bin % Vans RV-10s RV-10 Perc													
0 0.0% 0 0.0% 160 6.5% 160 6.5% 1 14.3%													
2 22.2% 2 22.2% 282 11.4% 122 4.9% 3 42.9%													
0 0.0% 362 14.7% 80 3.2% 3 42.9%													
1 11.1% 429 17.4% 67 2.7% 3 42.9%													
0 0.0% 486 19.7% 57 2.3% 3 42.9%													
0 0.0% 585 23.7% 99 4.0% 3 42.9%													
0 0.0% 680 27.6% 95 3.8% 3 42.9%													
1 11.1% 744 30.1% 64 2.6% 4 57.1%													
1 11.1% 797 32.3% 53 2.1% 4 57.1%													
0 0.0% 85													