



National Transportation Safety Board Aviation Accident Factual Report

Location:	Winterhaven, CA	Accident Number:	WPR14LA327
Date & Time:	08/05/2014, 1020 PDT	Registration:	N518DT
Aircraft:	DAVID L THOMPSON CHALLENGER II	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (total)	Injuries:	2 Serious
Flight Conducted Under:	Part 91: General Aviation - Personal		

On August 5, 2014, about 1020 Pacific daylight time, an experimental, David Thompson, Challenger II, N518DT, collided with terrain during a forced landing following a loss of engine power near Winterhaven, California. The private pilot and one passenger sustained serious injuries; the airplane sustained substantial damage to the fuselage. The owner/pilot was operating the airplane under the provisions of 14 Code of Federal Regulations (CFR) Part 91. The cross-country personal flight departed Yuma, Arizona, about 0940, with a planned destination of El Cajon, California. Visual meteorological conditions prevailed, and no flight plan had been filed.

The pilot reported that after refueling at Yuma International Airport (YUM) they departed and climbed to 6,500 feet when the engine suddenly quit. The pilot attempted to restart the engine but was unsuccessful. During the landing and while still 20 ft high, the airplane encountered a wind gust, impacted the ground hard, and nosed over.

Pilot Information

Certificate:	Private	Age:	71, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With Waivers/Limitations	Last FAA Medical Exam:	09/23/2012
Occupational Pilot:	No	Last Flight Review or Equivalent:	12/01/2013
Flight Time:	813 hours (Total, all aircraft), 135 hours (Total, this make and model), 748 hours (Pilot In Command, all aircraft), 32 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	DAVID L THOMPSON	Registration:	N518DT
Model/Series:	CHALLENGER II	Aircraft Category:	Airplane
Year of Manufacture:	2012	Amateur Built:	Yes
Airworthiness Certificate:	Experimental	Serial Number:	CH2-0711-2894
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	08/04/2014, Condition	Certified Max Gross Wt.:	1060 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	128 Hours as of last inspection	Engine Manufacturer:	HKS
ELT:	Not installed	Engine Model/Series:	E 700 T
Registered Owner:	THOMPSON DAVID L	Rated Power:	80 hp
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	KNYL, 216 ft msl	Distance from Accident Site:	5 Nautical Miles
Observation Time:	1857 UTC	Direction from Accident Site:	148°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	Light and Variable /	Turbulence Type Forecast/Actual:	/
Wind Direction:	Variable	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.91 inches Hg	Temperature/Dew Point:	38° C / 10° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	YUMA, AZ (NYL)	Type of Flight Plan Filed:	None
Destination:	SAN DIEGO/EL CAJON, CA (SEE)	Type of Clearance:	None
Departure Time:	0940 MST	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	1 Serious	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Serious	Latitude, Longitude:	32.737778, -114.653333 (est)

Tests And Research

The airplane structure was substantially damaged during the accident sequence, but the engine appeared to be undamaged. The airplane electrical system appeared to be intact, however during the prestart sequence, the number two electrical system would not activate properly. The number one system indicated an ignition fault, which investigators were unable to correct.

Several attempts to start the engine were unsuccessful; the engine would stumble, backfire, and stop. Investigators examined the sparkplugs and determined that only one set of the plugs were firing on each cylinder. The engine was flooding out and when the engine would start to run the exhaust was black in color. The Computer Engine Control (CEC) module did not contain nonvolatile memory, and it could not be determined if the CEC was functioning properly.

Administrative Information

Investigator In Charge (IIC):	Patrick H Jones
Additional Participating Persons:	Thomas C Marquez; Federal Aviation Administration; San Diego, CA
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=89801