



Aviation Investigation Final Report

Location:	Phoenix, Arizona	Accident Number:	LAX05LA210
Date & Time:	June 18, 2005, 10:30 Local	Registration:	N626Z
Aircraft:	Cirrus Design Corp. SR-22	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane impacted terrain about 50 yards from the runway during an attempted go-around from a practice power off forced landing. The airplane was in cruise at 5,500 feet when the pilot decided to do a practice emergency power off landing to an airport below him. He set up for left traffic to runway 21. The rpm was idling between 800-1,000 rpm and he was maintaining 85-88 knots air speed. He set the flaps to 50 percent about 800 feet above ground level (agl). The airplane was descending through 450 feet agl when he decided that he was too low to make the runway and he initiated a go-around. He added power, and did not bring the flaps up. He pulled the stick back and established a positive pitch up attitude. He thought that the engine responded, but the airplane was still descending and it impacted terrain about 50 yards from the airport. During a post accident examination, the engine ran successfully through the range of power settings from idle up to 2,600 rpm. The engine ran for approximately 3 minutes. Downloaded information from the Avidyne Engine Data Log indicated that during the last 6 seconds of recorded data, the rpm went from 1,200 to a maximum of 2,300, manifold pressure went from 8.8 to 21.4 inches, and fuel flow went from 1.9 to 19.2. The recorded data did not show any anomalies in power development for the flight.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's delay in executing a timely go-around and failure to raise the flaps, which resulted in a collision with terrain.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: GO-AROUND (VFR)

Findings

1. TERRAIN CONDITION - GROUND
2. PRECAUTIONARY LANDING - SIMULATED - PILOT IN COMMAND
3. (C) GO-AROUND - DELAYED - PILOT IN COMMAND
4. (C) RAISING OF FLAPS - NOT PERFORMED - PILOT IN COMMAND
5. CLIMB - NOT OBTAINED - PILOT IN COMMAND

Factual Information

On June 18, 2005, about 1030 mountain standard time, a Cirrus SR-22, N626Z, collided with terrain during an attempted go-around near the Phoenix Regional Airport, Phoenix, Arizona. The pilot/owner was operating the airplane under the provisions of 14 CFR Part 91. The private pilot and one passenger were not injured; the airplane sustained substantial damage. The personal local flight departed Stellar Airpark, Chandler, Arizona, about 1015, en route to Casa Grande, Arizona. Visual meteorological conditions prevailed, and no flight plan had been filed.

The pilot stated that he obtained a standard weather briefing. The airplane contained about 50 gallons of fuel. He departed Stellar Airpark for Casa Grande via the Stanfield VOR. They departed and cruised at 5,500 feet. They were over Phoenix Regional Airport, and he decided to do a practice emergency power out landing. He set up for left traffic to runway 21. The rpm was idling between 800-1,000. He was maintaining 85-88 knots air speed. He set the flaps to 50 percent. He was about 800 feet above ground level (agl). The airplane descended to about 500 feet (on both the altimeter and the terrain aware warning system (TAWS)).

The pilot indicated that the airplane was heading about 210 degrees and passing 450 feet agl when he decided that he was too low to make the runway. He initiated a go-around. He added power, and did not bring the flaps up. He pulled the stick back, and established a pitch attitude. He thought that the engine responded, but the airplane was still descending. He turned left because there was a road that ran perpendicular to his flight path. The road had trees next to it. He was still descending, and touched down about 60 knots. The airplane impacted terrain about 50 yards from the airport.

On a previous occasion, the pilot had done a go-around at Sedona. He raised the flaps on that go-around, and although he experienced a sink, it still zoomed up. He felt that even with full flaps the airplane would climb.

The airplane was a Cirrus SR22, serial number 1150. An annual inspection was completed on December 7, 2004, at a total time of 102.3 hours. The engine was a Teledyne Continental Motors IO-550-N27B, serial number 917344; its installation date was October 15, 2004. Total time on the engine at the annual inspection was 102.3 hours. The hour meter read 351.7 at the accident scene.

Investigators from the FAA, Cirrus, and Teledyne Continental Motors examined the wreckage at Air Transport, Phoenix, on June 21, 2005, under the supervision of the National Transportation Safety Board investigator-in-charge.

The airframe manufacturer's representative measured the flap actuator at 4 inches. He

reported that this corresponded to the full up or 0-percent position. The flap position switch in the cockpit was set at 50 percent. The roll trim setting corresponded to full right trim. The pitch trim setting corresponded to full up trim. The representative established rudder and elevator control continuity between the control yoke and the control surfaces. He established aileron continuity on all surfaces up to where the cables were disconnected at the fuselage.

All three propeller blades exhibited leading edge polishing and gouging, chordwise scratching, and were bent aft.

Investigators removed the cowling, and the top spark plugs. They manually rotated the engine. All valves moved in sequence, the accessory gears turned freely, and they obtained thumb compression on all cylinders. They removed the damaged propeller, installed another one, and connected a fuel source in order to run the engine. The engine ran successfully through the range of power settings from idle up to 2,600 rpm. The engine ran for approximately 3 minutes.

The airframe manufacturer's representative downloaded information from the Avidyne Engine Data Log.

Time	rpm	manifold pressure (inches)	fuel flow
1719:24	2,530	26.6	26.3
1721:36	2,480	25.9	21.5
1721:48	2,360	19.1	16.9
1725:48	2,380	18.1	17.0
1726:12	1,740	6.00	5.10
1726:36	1,130	7.60	1.90
1729:06	1,000	8.80	1.90
1729:18	2,020	21.4	19.2

From 1704:48 to 1729:18 (the first 13 minutes 16 seconds of flight), the rpm change was fairly constant rate, roughly 1,000 rpm corresponding with initial procedures before takeoff. From 1717:24 to 1725:48 (the next 8 minutes 24 seconds of flight), the rpm went from roughly 1,000 to between 2,400-2,600. For the next 2 minutes 22 seconds, the rpm dropped to an average of 1,400. During the next 1 minute 58 seconds, the rpm reduced to approximately 1,200. From 1729:12 to 1729:18 (the remaining 6 seconds of flight), the rpm accelerated to a maximum of 2,300 before the data stopped.

Pilot Information

Certificate:	Private	Age:	62,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
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	Last FAA Medical Exam:	June 1, 2005
Occupational Pilot:	No	Last Flight Review or Equivalent:	January 1, 2005
Flight Time:	664 hours (Total, all aircraft), 314 hours (Total, this make and model), 483 hours (Pilot In Command, all aircraft), 40 hours (Last 90 days, all aircraft), 21 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cirrus Design Corp.	Registration:	N626Z
Model/Series:	SR-22	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	1150
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	May 1, 2005 Annual	Certified Max Gross Wt.:	3400 lbs
Time Since Last Inspection:	30 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	351 Hrs as of last inspection	Engine Manufacturer:	Continental
ELT:		Engine Model/Series:	IO-550N
Registered Owner:	Jon C. Shawl	Rated Power:	310 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	CGZ,1464 ft msl	Distance from Accident Site:	
Observation Time:	09:55 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/ None	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.87 inches Hg	Temperature/Dew Point:	31°C / 3°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Chandler, AZ (P19)	Type of Flight Plan Filed:	None
Destination:	Casa Grande, AZ (CGZ)	Type of Clearance:	None
Departure Time:	10:15 Local	Type of Airspace:	

Airport Information

Airport:	Phoenix Regional A39	Runway Surface Type:	Asphalt
Airport Elevation:		Runway Surface Condition:	Dry
Runway Used:	21	IFR Approach:	None
Runway Length/Width:	5000 ft / 50 ft	VFR Approach/Landing:	Simulated forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	32.991664,-111.920555

Administrative Information

Investigator In Charge (IIC): Plagens, Howard

Additional Participating Persons: John Eller; Federal Aviation Administration ; Scottsdale, AZ
Jason D Lukasik; Teledyne Continental Motors, Inc.; Mobile, AL
Bradley T Miller; Cirrus Design; Duluth, MN

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Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=61750>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).