Aviation Investigation Final Report

Location:	Elyria, Ohio	**Accident Number:**	CHI07CA217
Date & Time:	July 16, 2007, 19:30 Local	**Registration:**	N804DC
Aircraft:	Chrapczynski M1 Midget Mustang	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Flight test		

Analysis

The experimental airplane was substantially damaged during a hard landing following a loss of engine power after takeoff on runway 25 (5,002 feet by 100 feet, dry asphalt). The accident occurred during the first flight of the amateur-built airplane. The pilot stated that he had conducted over 4 hours of ground and taxi testing prior to the first flight. He noted that immediately prior to the accident takeoff he conducted a "high speed taxi run" and observed no problems with the engine. The pilot reported that during the takeoff roll the airplane accelerated to approximately 75 mph and lifted off "normally". He stated: "Within seconds after liftoff, the engine began "sputtering and slowing down." The "sputtering increased in intensity" and the pilot "realized that flight could no longer be maintained." He elected to execute an emergency landing in the grass area adjacent to the runway. He extended his glide in order to insure clearance to people located on the parallel taxiway positioned to assist in the event of an emergency. As result of the extended glide, the airspeed decayed and the airplane was "practically on a stall." He noted that the landing gear collapsed due to the resulting "rough landing" and the airplane subsequently "skidded to a halt" in the grass area near midfield. No anomalies consistent with a significant loss of engine power were found.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain proper glide speed during the forced landing after takeoff, which resulted in an inadvertent stall/mush condition and a hard landing. A contributing factor was the loss of engine power after takeoff for undetermined reasons.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: TAKEOFF

Findings
1. (F) REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

Occurrence #3: HARD LANDING
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

Findings
2. (C) AIRSPEED - NOT MAINTAINED - PILOT IN COMMAND
3. (C) STALL/MUSH - INADVERTENT - PILOT IN COMMAND
4. TERRAIN CONDITION - GRASS

Occurrence #4: GEAR COLLAPSED
Phase of Operation: EMERGENCY LANDING AFTER TAKEOFF

Findings
5. (F) LANDING GEAR - OVERLOAD

Factual Information

The experimental airplane was substantially damaged during a hard landing following a loss of engine power after takeoff on runway 25 (5,002 feet by 100 feet, dry asphalt). The accident occurred during the first flight of the amateur-built airplane. The pilot stated he had conducted over 4 hours of ground and taxi testing prior to the first flight. He noted that immediately prior to the accident takeoff he conducted a "high speed taxi run" and observed no problems with the engine. The pilot reported that during the takeoff roll the airplane accelerated to approximately 75 mph and lifted off "normally". He stated: "Within seconds of liftoff, the engine began "sputtering and slowing down." The "sputtering increased in intensity" and the pilot "realized that flight could no longer be maintained." He elected to execute an emergency landing in the grass area adjacent to the runway. He extended his glide in order to insure clearance to people located on the parallel taxiway positioned to assist in the event of an emergency. As result of the extended glide, the airspeed decayed and the airplane was "practically on a stall." He noted that the landing gear collapsed due to the resulting "rough landing" and the airplane subsequently "skidded to a halt" in the grass area near midfield. A post accident inspection did not reveal any anomalies associated with a significant loss of engine power. The engine had accumulated approximately 500 hours since overhaul.

Pilot Information

Certificate:	Private	**Age:**	55,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Single
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 3 With waivers/limitations	**Last FAA Medical Exam:**	April 1, 2007
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	April 1, 2007
Flight Time:	616 hours (Total, all aircraft), 0 hours (Total, this make and model), 470 hours (Pilot In Command, all aircraft), 6 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Chrapczynski	**Registration:**	N804DC
Model/Series:	M1 Midget Mustang	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	1054
Landing Gear Type:	Tailwheel	**Seats:**	1
Date/Type of Last Inspection:	January 1, 2007 Condition	**Certified Max Gross Wt.:**	1092 lbs
Time Since Last Inspection:	0 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	0 Hrs at time of accident	**Engine Manufacturer:**	Continental
ELT:	Not installed	**Engine Model/Series:**	O-200-A
Registered Owner:	On file	**Rated Power:**	100 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	LPR,793 ft msl	**Distance from Accident Site:**	0 Nautical Miles
Observation Time:	18:53 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	26°C / 14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Elyria, OH (LPR)	**Type of Flight Plan Filed:**	None
Destination:		**Type of Clearance:**	None
Departure Time:	19:15 Local	**Type of Airspace:**	

Airport Information

Airport:	Lorain County Regional Airport LPR	**Runway Surface Type:**	Asphalt
Airport Elevation:	793 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	25	**IFR Approach:**	None
Runway Length/Width:	5002 ft / 100 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	41.344165,-82.177497

Administrative Information

Investigator In Charge (IIC):	Sorensen, Timothy
Additional Participating Persons:	Dave Pesarchick; FAA-Cleveland FSDO; Cleveland, OH
Original Publish Date:	October 31, 2007
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=66492