Aviation Investigation Final Report

Location:	Foley, Alabama	**Accident Number:**	ERA23LA183
Date & Time:	April 6, 2023, 12:10 Local	**Registration:**	N272AM
Aircraft:	PETERSON MARK G PETERSON A600	**Aircraft Damage:**	Destroyed
Defining Event:	Loss of engine power (total)	**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot of the experimental amateur-built helicopter reported that he had hovered around the airport for about 20 minutes without issue and then initiated a takeoff to remain in the traffic pattern. During the initial climb, about 20 to 30 ft above ground level, the engine suddenly lost power and the helicopter yawed to the right. The pilot entered an autorotation and performed a run-on landing on a grass surface. During the landing, the right skid dug into uneven terrain, the helicopter rolled over onto its right side, and a post-crash fire quickly ignited. The pilot was able to extract himself from the helicopter without injury, however, the helicopter was destroyed by the post-impact fire.

The pilot reported that after the accident, he discovered an undamaged turbocharger air intake hose clamp directly in his departure path in the grass. Photographs of the turbocharger revealed that the air intake clamp was not installed, and the intake hose had been consumed by fire. The pilot reported that about a week prior to the accident, while the helicopter was being transported on a trailer, he personally adjusted this clamp and intake hose, and he may have forgotten to tighten the clamp.

During the initial climb, it is likely that the turbocharger intake hose and clamp separated from its installation area, and as a result, engine power was lost.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The loss of engine power during the initial climb due to the disconnection of the turbocharger air intake hose and clamp, and the pilot's inadequate servicing and preflight inspection of the turbocharger air intake clamp.

Findings

Aircraft	Turbocharger - Inadequate inspection
Personnel issues	Preflight inspection - Pilot

Factual Information

History of Flight

Prior to flight	Aircraft maintenance event
Initial climb	Part(s) separation from AC
Initial climb	Loss of engine power (total) (Defining event)
Autorotation	Off-field or emergency landing
Autorotation	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	69,Male
Airplane Rating(s):	None	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	4-point
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	Helicopter	**Toxicology Performed:**	
Medical Certification:	BasicMed None	**Last FAA Medical Exam:**	August 27, 2021
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	February 23, 2022
Flight Time:	8000 hours (Total, all aircraft), 7900 hours (Total, this make and model), 7750 hours (Pilot In Command, all aircraft), 35 hours (Last 90 days, all aircraft), 25 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PETERSON MARK G	**Registration:**	N272AM
Model/Series:	PETERSON A600 NO SERIES	**Aircraft Category:**	Helicopter
Year of Manufacture:	2012	**Amateur Built:**	Yes
Airworthiness Certificate:	Experimental (Special)	**Serial Number:**	6600
Landing Gear Type:	None; Skid	**Seats:**	2
Date/Type of Last Inspection:	December 19, 2022 Condition	**Certified Max Gross Wt.:**	1500 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	1150 Hrs at time of accident	**Engine Manufacturer:**	RotroWay
ELT:	Not installed	**Engine Model/Series:**	A600T
Registered Owner:	On file	**Rated Power:**	150 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:	CQF,92 ft msl	**Distance from Accident Site:**	5 Nautical Miles
Observation Time:	12:15 Local	**Direction from Accident Site:**	292°
Lowest Cloud Condition:		**Visibility**	10 miles
Lowest Ceiling:	Broken / 5500 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	7 knots /	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:	120°	**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	30.19 inches Hg	**Temperature/Dew Point:**	27°C / 20°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Foley, AL	**Type of Flight Plan Filed:**	None
Destination:	Foley, AL	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	Class G

Airport Information

Airport:	COLLIER AIRPARK 2AL1	**Runway Surface Type:**	
Airport Elevation:	74 ft msl	**Runway Surface Condition:**	Dry;Rough
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	30.425255,-87.778801

Administrative Information

Investigator In Charge (IIC):	Gerhardt, Adam
Additional Participating Persons:	Nina Mcbride; FAA/FSDO; Birmingham, AL
Original Publish Date:	July 27, 2023
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=107020