

Statement and Narrative of Flight

On Sunday, June 14, 2020, around 1900 I started giving part 91 non-revenue helicopter rides from heliport 59TN in Bell 47 G3B1, S/N 3730, N473TT.

Prior to the flight a preflight inspection was performed. AD 74-08-02 per paragraph A was signed off in the aircraft maintenance records. All passengers were briefed on safety around the helicopter, use of the seatbelts, and operation of the right door in the event of an emergency where I could not help them. There were approximately 18 passengers who wanted a ride. I started the aircraft and performed necessary checks prior to my loader, Lou Duquette, bringing out the first two passengers. The weather was VFR; winds were calm. I lifted the helicopter to a hover and took off to the east doing rectangular right hand patterns. Each ride lasted approximately 7 to 8 minutes. At the end of the seventh flight I shut the helicopter down and added 10 gallons of fuel to each tank. Total of 20 gallons added. Total fuel on aircraft approximately 39 gallons.

I started the helicopter and again performed the necessary magneto check. Lou loaded two more passengers and we departed on another flight. We landed about 7 minutes later. Another 2 passengers were loaded onto the helicopter. This was around 2020 local time. Departed again to the east with right turn out, climbing to 1200 feet MSL. About 2 miles North of the heliport I started a slow descent from a southerly heading coming back to the hangar. Rotor and Engine RPM was in the green 300/3000. Manifold pressure was around 21 inches. At approximately 900 feet MSL, I experienced a total engine failure. There was no indication leading up to the power loss (no backfire, no sputter).

I immediately entered autorotation and selected an emergency landing spot off to the right of the nose about 150 degrees. There were trees that I had to slightly move to the left to avoid and then back to the right then cleared a 3 foot barbed wire fence. I flared the helicopter to build rotor rpm and stop forward motion and touchdown with no ground run. On touchdown main rotor made contact with extension tube and tail rotor.

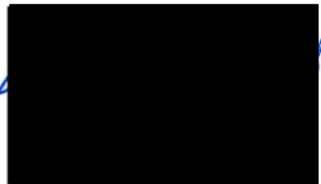
After touchdown I removed my seatbelt/shoulder harness and unlatched the passenger seatbelt next to me. I asked the right hand passenger if he was having any issues with getting the door open. There was no reply, but he and the other passenger were immediately exiting the aircraft going to the nose as they had been briefed.

As I exited the helicopter, the emergency fuel shutoff was pulled; battery and magnetos were turned off.

I made sure that everybody was at a safe distance away from the aircraft. There were no injuries. I called for ground transportation to get everybody back to the hangar.

FAA Inspector John Johnston at Memphis FSDO was notified by email.

This statement is true and correct to the best of my knowledge.

A black rectangular redaction box covers the signature area. A small blue handwritten mark is visible to the right of the box.

N473TT
WEIGHT AND BALANCE

BELL B47 G2A1 S/N 3730
N473TT

	POINT	WEIGHT	TARE	NET W.T.	ARM	MOMENT	ARM	MOMENT
	L.H. FWD.		0	0.0	0.00	0	0.00	0
	R.H. FWD.		0	0.0	0.00	0	0.00	0
	AFT.		0	0.0	0.00	0	0.00	0
Add Unusable Fuel		20.4	0	20.4	2.00	40.8		
	BALLAST	0.0	0	0.0	0.00	0.00	0	0
			0	0.0	0.00	0.00	0	0
Empty Weight No Fuel or Oil		1813	0	1813.0	4.10	7433.30		
			0	0.0	0.00	0.00		
			0	0.0	0.00	0.00		
			0	0.0	0.00	0.00		
			0	0.0	0.00	0.00		
			0	0.0	0.00	0.00		
			0	0.0	0.00	0.00		
						0.00		
						0.00		
AIRCRAFT AS WEIGHED								
				TOTAL	E.W.	TOTAL	LAT.	TOTAL
				WEIGHT	C.G.	MOMENT	C.G.	MOMENT
				1833.4	4.08	7474.1	0.00	0

	WEIGHT	LONGITUDINAL C.G. ARM	MOMENT	LATERAL C.G. ARM	MOMENT
Basic Operating Weight	1833.4	4.08	7474.1		
Installed Muffler STC	21.5	48	1032.00		
Removed King KT76A Transponder	-3.1	-60	186.00		
Installed Appareo ESG ADSB Transponder	3.29	-60.00	-197.40		
Installed Appareo WAAS GPS Antenna	0.4	-60	-24		
Installed Appareo Stratus Power Kit	0.05	-60	-3		
Oil 12 Qt Full	16	38	608		
Pilot	175	-30.00	-5250		
Passenger's	324	-30.00	-9720		

37					
Fuel Gal WT	251.60	2.00	503.20	0	0.00
	2622.1	-2.06	-5391.10	0.00	0.00
	TOTAL	HOZ	TOTAL	LAT	TOTAL
	WEIGHT	C.G.	MOMENT	C.G.	MOMENT

WEIGHT TO MAX GROSS from 2950 **328**

FORWARD C.G. LIMIT **-3.0**
AFT C.G. LIMIT **2.5**

Prepared by

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION		OPER. Control No.		8. Comments (Describe the malfunction or defect and the circumstances under which it occurred. State probable cause and recommendations to prevent recurrence.) Complete engine failure		DISTRICT OFFICE	OPERATION DESIGNATION
MALFUNCTION OR DEFECT REPORT		ATA Code					
1. A/C Reg. No.		N-473TT					
Enter pertinent data	MANUFACTURER	MODEL/SERIES	SERIAL NUMBER			OTHER	
2. AIRCRAFT	Bell Helicopter	47G3B1	3730			COMMUTER	
3. POWERPLANT	Lycoming	VO435-A1F	L-1630-52			FAA	
4. PROPELLER	N/A					MFG	
5. SPECIFIC PART (of component) CAUSING TROUBLE						AIR TAXI	
Part Name	MFG, Model or Part No.	Serial No.	Part/Defect Location.			MECH	
Engine	Lycoming	L-1630-52				OPER.	
6. APPLIANCE/COMPONENT (Assembly that includes part)						REP-STA	
Comp/Appl Name	Manufacturer	Model or Part No.	Serial Number			SUBMITTED BY:	
Part TT	Part TSO	Part Condition	7. Date Sub.	Optional Information:			
				Check a box below, if this report is related to an aircraft			
				☒ Accident; Date 6-14-2020 ☐ Incident; Date _____			

FAA FORM 8010-4 (10-92) SUPERSEDES PREVIOUS EDITIONS

Use this space for continuation of Block 8 (if required).

PAPERWORK REDUCTION ACT STATEMENT: The information collected on this form is used to evaluate certification standards, maintenance programs, and regulatory requirements. The information is required to ensure safety in air transportation. It is estimated that it will take approximately 9 minutes to complete the form. Providing this information is mandatory. No assurance of confidentiality is given. Please note that an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The control number for this collection of information is 2120-0003. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave SW, Washington, DC 20591, Attn: Information Collection Clearance Officer, ABA-20