

North Carolina
State Highway Patrol

MEMBER'S STATEMENT

Troop / District:	I/4	Registry #:	
Rank / Name (First, M.I., Last):	Trooper B. K. Jones		

Statement

On Sunday, November 8, 2020, at 11:00 AM, I contacted First Sergeant M. A. Tribula and received permission for Trooper J. B. Barbour and myself to conduct a training flight in N123NC (SN 610), a Bell 206B Jet Ranger helicopter. Per policy and FAA regulations, we filed an agency flight plan, which includes a Flight Risk Assessment. The risk assessment did not reveal any factors affecting the safety of flight. We then conducted a thorough preflight, finding the weather and aircraft safe for flight.

Due to the confined layout of our Ready Hangar and the limited capabilities of the aircraft, I made the decision to depart the Ready Hangar as a single pilot and pick up my Co-Pilot, Trooper J. B. Barbour, at the larger, more spacious Highway Patrol Driver's Training Facility. Trooper Barbour and I departed from that area and flew for approximately 1.5 hours before attempting to return to the Ready Hangar. We conducted a high and low reconnaissance of the ready hangar where we observed the windsock. We determined, given the easterly wind, that an approach from the southwest would be the best to keep the prevailing winds on the right side of the aircraft and to mitigate the risks of weathercock stability, vortex ring state and loss of tail rotor effectiveness.

On the first approach, we entered vortex ring state at approximately 400 feet AGL, but I was able to return to controlled flight by applying forward cyclic to increase airspeed while simultaneously reducing the collective. I performed a go-around and attempted the approach again. After beginning the second approach, the aircrew collectively determined that the best mitigation to the potential risk of re-entering vortex ring state inadvertently was to land at the NCSHP Driver's Training facility and have Trooper Barbour disembark the aircraft. The intent was to further reduce the gross weight of the aircraft to improve the power available margin. The helipad at the maintenance hangar was blocked with another aircraft due to an educational event occurring inside the hangar and around the driving track. To not interfere with the event, I landed in a grassy area of the west side of the driver's training facility.

As the single occupant of the aircraft, I attempted a third approach into the Ready Hangar. At approximately 300 feet AGL, I again entered vortex ring state, however there was not enough altitude to successfully complete the same recovery maneuver. I began losing altitude rapidly and impacted the top of several trees, just south of Tryon Rd. The tail boom of the aircraft impacted a branch of the tree and sheared the tail rotor drive shaft. The searing of the drive train immediately surged the engine, causing the main rotor to accelerate rapidly past 100% NR. The additional rotor speed arrested the descent rate and the helicopter leveled off momentarily before yawing to the right. I was able to conduct a forced landing into the middle of Tryon Rd. with the helicopter facing south. I immediately exited the helicopter and stopped traffic on Tryon Rd., while calling Trooper R. M. Collie by telephone, for assistance.

Initials:	BKJ
Signature:	
Date:	November 9, 2020
Reference:	N123NC Helicopter Crash