

INSPECTOR STATEMENT

AIRCRAFT # N1396X

PILOT NAME: Timothy Harmer

Narrative Statement:

On July 28, 2015 the undersigned Inspector was accompanied by Inspector Brian Lundquist to a cornfield 4.3 miles north of Gilbert, IA. Mr. Tim Harmer is the owner of Vista helicopter 1VHG. Mr. Harmer is also the pilot of N1396X. Mr. Harmer met the Inspectors in Gilbert and led them to the crash site. The purpose this visit was to conduct an aircraft accident investigation that Mr. Harmer reported.

The field is bordered by 530th Ave and County road E18. The actual impact point and location of the aircraft is about 100 yards off the road at a GPS location of 42.16957N 093.64122W. The field is planted with corn with stalks in excess of 7 feet. On approach to the accident site several of the corn stalks appeared cut with damage consistent with helicopter rotor blades. The direction of travel by the aircraft appears to have been west bound at around 270 degrees at the time of impact. The nose of the aircraft was pointing at approximately 290 degrees. The field in this area was flat. The aircraft was missing most of the tail boom and the tail rotor and tail rotor gear box was not located. Both main rotors were broken and damaged at multiple points. The skid type landing gear was collapsed into the ground. The windshield was broken out but the single passenger compartment appeared to have no intrusion and was intact. Due to the damage to the main rotor and the general absence of a tail boom no control checks were possible

At 0850 local Mr. Harmer attempted to start the engine. The aircraft started and ran normally for less than 60 seconds before Mr. Harmer shut it down. The site was photo imaged. The aircraft fuel tanks were drained and an estimated 11 to 12 gallons of fuel was recovered from both main fuel tanks. The amount was generally split evenly between the tanks. A review of the Rotor Craft Flight Manual for this aircraft yielded no limitation on minimum fuel or limitations of maneuvers due to limited fuel

The NTSB was contacted and Official Jennifer Rode released the aircraft to be moved only. Mr. Harmer was advised of this and the visit terminated at that point.

Inspector Name:
Jeffrey F. Rock

Work Address:
Dsm FSDO CE01

Work Phone: [REDACTED]

Signature: [REDACTED]

Date:

7/30/2015

INSPECTOR STATEMENT

Aircraft # N1396X

PILOT NAME: Timothy Harmer

Narrative Statement:

On Monday 27 July, 2015 the undersigned Inspector received a phone message that Mr. Tim Harmer contacted this office and left a voicemail reporting an accident.

The undersigned Inspector contacted Mr. Harmer by telephone on the same day. Mr. Harmer stated he was spraying a fungicide agent on a cornfield about 4 miles North of Gilbert, IA on 24 July, 2015 at 1800 local time. Mr. Harmer estimated he had very little chemical left in the storage tanks and approximately 9 gallons of fuel in the fuel tanks. Mr. Harmer stated he was nearly finished spraying and was waiting for his loader to arrive with the support truck in order to load more fuel and chemical. Mr. Harmer stated the driver was late because he had gotten lost.

Mr. Harmer stated he was flying over the field and heard what he thought and or described as a stuck valve noise. Inspectors Note: Mr. Harmer is a mechanic and does the Maintenance on the aircraft he operates. He has extensive experience with Bell 47 aircraft. Mr. Harmer stated that he climbed up above the field to around 150 feet AGL with the intent of flying to a spot to land and wait for his support vehicle. At that altitude Mr. Harmer nosed the aircraft over to accelerate and the engine "quit". Mr. Harmer stated that his airspeed was slow and that the rotor rpm had decayed as he entered the auto-rotative decent. Mr. Harmer stated he turned into the wind and the aircraft impacted the ground with a great amount of force. The tail boom was cut off and the rotor blades were broken. The skids also collapsed. Mr. Harmer described the aircraft as a total loss.

Mr. Harmer speculated that the engine quit due to the nose low attitude may have caused fuel to shift in the tanks and starved the engine of fuel. He further stated that this WASP conversion was certified without a sync elevator resulting in very nose low attitudes in forward flight. Mr. Harmer stated he did not fly the aircraft below $\frac{1}{4}$ of a tank due to the nose low attitude. Mr. Harmer was asked if there were any published warnings and or limitations that existed for this aircraft in reference to minimum fuel for operation. Mr. Harmer stated that he was not aware of any.

Mr. Harmer stated that he was not injured in the accident though he did not seek medical examination after the crash. Due to severe convective weather on this day a site inspection was not possible on this day. An alternate time was arranged for July 28 in the morning. Contact information was verified and the call terminated.

Inspector Name: Jeffrey F. Rock	Work Address: DSM FSDO CE-01
Work Phone: [REDACTED]	
Signature: [REDACTED]	Date: 7/30/2015

INSPECTOR'S STATEMENT

On July 28, 2015, Inspectors Jeff Rock and Brian Lundquist of the Des Moines Flight Standards District Office traveled to Gilbert, Iowa, to investigate an aircraft accident reported to be a Bell 47 that crashed while spraying crops. FAA inspectors had initially attempted to travel to the crash site on Monday July 27, 2015 however had to postpone due to weather.

The accident reportedly occurred on July 24, 2015 at approximately 1800 hours local time, when the helicopter crashed into a cornfield north of Gilbert, Iowa.

The Bell 47 WASP had one seat for the pilot and was configured for crop spraying. The pilot, Mr. Timothy Harmer who was spraying fungicide at the time of the accident, reported that he sustained no injuries as a result of the crash. After the aircraft came to rest, the pilot was able to exit the helicopter and walk out of the cornfield to the nearby road. Mr. Harmer was advised by FAA inspectors to have an evaluation by medical professionals after he admitted to some soreness in his shoulders.

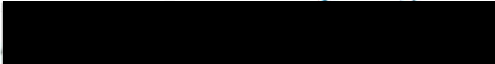
Mr. Harmer notified called the NTSB of the accident the evening of July 24, 2015. He was advised to contact the DSM FSDO which he did.

The crash site was approximately 4.36 miles north of Gilbert, IA, and 368 feet west of Gretten St. which is the gravel road adjacent to the cornfield. The pilot accompanied FAA inspectors at the crash site. Upon arrival, the pilot connected the battery and started the engine which appeared to run normal for about 5 seconds at which time he turned it off. After the engine run, approximately 11 gallons of fuel was drained from the two fuel tanks into a white bucket.

The Rotorcraft Flight Manual indicates the helicopter is capable of carrying a total of 61 gallons of fuel with 57.5 useable. No limitations were found in the RFM which indicate a minimum fuel level for operation.

The main rotors were damaged. The tail boom from the main frame aft was substantially damaged with several pieces unaccounted for including the tail rotor. Most of the canopy bubble was broken and laying on the ground in front of the helicopter. The landing gear had collapsed with the main frame laying on the ground.

A review of the records indicated the last annual inspection was completed July 01, 2015. A logbook entry with that same date indicates recent engine overhaul as well a 1200 hour inspection on both the transmission and main rotor mast.


Brian J. Lundquist
Aviation Safety Inspector
(Airworthiness)

July 28, 2015
DSM FSDO CE-01