

JMC - N8474J On-Scene investigation results 08/24/2023

Aircraft was observed at the west end of the private grass airstrip on the property of [REDACTED] Pink Hill, NC [REDACTED] (approximate coordinates; 35°04'32.7"N 77°41'45.7"W). The aircraft was inverted, laying on the upper side of the wings and top of vertical stabilizer. The vertical stabilizer and rudder were crushed at the top with significant bending below. Marks in the ground leading from a ditch at the end of the airstrip to where the aircraft was resting indicated that the nose wheel departed the nose landing gear when it struck the ditch and then the nose gear dragged in the ground before the aircraft flipped tail over nose.

The nose landing gear strut was broken and pushed back into the lower airframe. One propeller blade was bent toward the airframe and the other had little to no damage indicating low or no power from the engine at the time of contact with the ground. The propeller dome was crushed and broken. The lower engine cowl was crushed and bent. The engine and mount were bent and twisted. Evidence of substantial damage to the airframe was observed including wrinkling of the skin in the firewall, wing root and empennage areas. No logbook entry was observed in the maintenance records for installation of the carburetor. The PIC/Owner and the passenger/IA stated at the scene that the owner had replaced the carburetor and the IA had completed the adjustment and inspection of the installation. Both the pilot and mechanic were counseled on the regulator requirements of parts 43, 65 and 91 for their roles in the apparent non-compliance of failing to properly document the carburetor installation prior to operation of the aircraft.

The PIC and PAX stated that there was approximately 15 gallons per wing at the time. This could not be verified at the time due to the aircraft being upside down. There wasn't any fuel smell at that time. After the aircraft was righted fuel was drained from the wing sumps giving evidence to fuel in the wings. The quantity could not be confirmed. Power was not applied to the aircraft due to possible fire hazard from damage to the aircraft's electrical system.

The PIC and PAX claim that a controllability problem occurred when the aircraft was below the tree line due to a wind down draft. The weather at the time of the incident was clear and no wind. The ditch that the nose gear struck separates the runway from a soybean field. Tracks in the soybeans appear to indicate the aircraft touched down in the soybean field before striking the ditch where the nose wheel departed and the nose gear plowed in the runway for about 50 feet before it stuck and caused the aircraft to flip tail over nose.

There was no evidence to indicate fuel starvation or carburetor malfunction factored into the cause of the crash. The fuel selector was found in the off position at the time of the investigation. The PAX explained that he had shut it off before departing the aircraft. Both the PIC and PAX departed the inverted aircraft through the left door. The right door could not be opened at the accident scene.

After the aircraft was righted and towed to a covered concrete pad on the property the engine fuel filter sump was actuated with no fuel observed. It could not be determined if this was due to the aircraft being inverted for so long that all the fuel had drained back toward the wings. An overhauled carburetor had been installed prior to the incident flight as verbally reported by the owner and his mechanic. It could be seen attached to the damaged and broken intake manifold duct.

An 8130-3 and sales receipt were presented by the PAX/IA as evidence of the overhauled carburetor that was reportedly replaced sometime prior to the flight. The records indicated that an annual inspection had just been completed after the aircraft being out of annual since November of 2020. The owner and mechanic reported that the incident flight was conducted after the annual and a satisfactory high power maintenance engine run and that the engine performance was good throughout the entire flight around the owner's property. It was noted that no radios or navigation equipment was installed at the time of the investigation. The maintenance records were not inspected to see if the equipment removals had been properly documented along with deactivation of the applicable systems.

The damage to the aircraft was considered substantial making this an accident. The owner considers the damage to be beyond economical repair and plans to deregister and scrap the aircraft.

**JOHN M COMBRINCK-
GRAHAM**

Digitally signed by JOHN M
COMBRINCK-GRAHAM
Date: 2023.09.06 09:18:08 -04'00'

RECORD OF ☒ VISIT ☐ CONFERENCE OR ☐ TELEPHONE CALL		TIME 5:30 PM	DATE 08/24/2023												
NAME(S) OF PERSON(S) CONTACTED OR IN CONFERENCE AND LOCATION Steven Howard - PIC/Owner N8474J		ROUTING <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">SYMBOL</th> <th style="width: 50%;">INITIALS</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>		SYMBOL	INITIALS										
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Lynwood Goff - Passenger															
SUBJECT Accident involving N8474J @ a private airfield located behind [REDACTED]															
[REDACTED] Pink Hill, NC															
DIGEST On August 24 2023 at approximately 1100 I meet ASI John Combrinck-Graham to investigate an occurrence of a Cessna 150 N8474J that took place at a private airfield located behind [REDACTED]															
[REDACTED] on August 23 at approximately 1700. The aircraft was inverted at the west end of the runway about 90 feet from an irrigation ditch adjacent to a soybean field. Mr. Howard (pilot) and Mr. Goff arrived about five minutes later. Talking with the Mr. Howard, he said the aircraft had not been flown for several years, but he and Mr. Goff had just completed its annual inspection and wanted to do a flight check. Mr. Howard stated that the aircraft flew great with no problems. He stated that as he set up for a landing with a short final, he had flaps set to 20 degrees, as they approached the west end of the field at about tree top level, he encountered a downdraft that pushed them lower that he was anticipating, landed short of the airfield and hit the lip of the irrigation ditch and flipped the aircraft. They both sustained some scratches and bruises but were otherwise uninjured. The aircraft was inverted, facing west, there was a furrow in the ground extending from the edge of the ditch to aircraft created from the propeller and nose gear dragging the ground. Mr. Howard stated that there was 15-20 gallons of fuel in the tanks															
Cont.															
CONCLUSION, ACTION TAKEN, OR REQUIRED															
DATE 08/25/2023	TITLE Aviation Safety Inspector	SIGNATURE KEVIN JON CECIL	Digitally signed by KEVIN JON CECIL Date: 2023.08.30 10:10:27 -04'00'												

when they took off.

Aircraft Damage:

The propeller nose cone was flattened and one of the two propeller blade was bent back from impacting the ground. The front engine cowl was flattened and pushed up from the bottom from ground impact. the lower engine cowl was damaged from impact the both engine exhaust pipes with pushed back and damaged from impact the both engine exhaust pipes with pushed back and damaged. The nose landing gear strut was bent aft at the trunnion and the nose gear wheel had been sheered off. There was buckling of lower wing skin at the left and right wing roots. the left outer leading edge and right wingtip were damaged. The top of the vertical stabilizer and rudder were damage from hitting the ground.

ASI Combrinck-Graham reviewed the maintenance and engine log books. Both Mr. Howard and Mr. Goff again stated that they had just completed the annual inspection and replaced the carburetor with a re-manufactured unit from Marvel Schebler and the engine ran the best it has run in a long time. ASI Combrinck-Graham did not see an entry in the log book for the replacement of the carburetor. Mr. Howard said he performed the maintenance a few days prior, but had just not made the log book entry yet. ASI Combrinck-Graham counseled them on the regulation and how important it is to make any maintenance log entries at the time the work is done so there is a record of all work accomplished. At approximately 1230 we were joined by ASI David Laycock, ASI Patricia Chriscoe and ASI Eden King. They questioned Mr. Howard and Mr. Goff and took additional pictures of the scene and left about 1320. ASI Combrinck-Graham and I stayed until the aircraft was righted and we ensured that there was plenty of fuel in the tanks to eliminate fuel starvation as a cause of the accident. Mr. Howard towed the aircraft into a covered pad and removed the upper and lower engine cowls. There did not appear to be any damage to the firewall. One of the lower engine mounts were broken and the engine mount cage was bent towards the right side of the aircraft. There was also buckling at the upper right wing root skin.

After advising Mr. Howard that we would remain in contact, ASI Combrinck-Graham and I departed the aircraft at approximately 1500.