

Suffolk County Police Department (SCPD) arrived and cordoned off the scene while Bayport and Islip airport fire departments worked the rescue and extinguished the fire. Both the Pilot Mr. Scott Clifford DOB [REDACTED] certificate # [REDACTED] and his passenger Mr. Michael Rome DOB [REDACTED] were extricated from the aircraft both sustained serious injuries and were taken from the scene to Stony Brook medical center via SCPD helicopter. Notified AEA-11 Inspector on call (AXD) of accident and it was decided that she would proceed to Stony Brook Medical center to follow up with the pilot and passenger.

Islip Airport fire rescue squad had extinguished the fire with fire damage noted only to aircraft right wing and upper portions of the nacelle. Aircraft was found with right wing inverted, fuselage on its right side and left wing raised and bent at approximately 40 degree angle to the ground. Fuel was still in the left wing tank.

Contact with NTSB was made (20:07 EDT) through the FAA AEA ROC, Investigator Aaron McCarter with NTSB took aircraft, pilot and passenger information over phone, and indicated that once the accident was assigned the following morning he would either e-mail or call me to notify our office of the NTSB investigator in charge.

Witness Jennifer Kay residing at [REDACTED]. [REDACTED] stated she had been on the deck of her home which faces Second St. and had "heard two loud Pops looked up and saw the aircraft strike the top of a tree then go nose down into the ground at an angle on Third Ave." Ms. Kay stated that she could see both wings as the aircraft went into the ground but could not tell if it was the top or bottom of the aircraft due to the speed of the event. The tree Ms. Kay Pointed out she saw the aircraft strike was in front yard of [REDACTED].

Witness Michael Friscia residing at [REDACTED]. [REDACTED] stated, he was located outside the residence in the back yard heard two loud pops then saw the aircraft coming very low over neighboring homes to the southeast of his location. He indicated after the last pop that the engine must have "stalled because it was quite afterward". Witness stated he saw the aircraft was turning to North, he ran to the front of the home saw the aircraft striking wires 2 doors to the north [REDACTED] before it hit the ground at a nose down angle with one wing much lower than the other. Witness pointed out small branches and aircraft debris in the street in front of his home [REDACTED].

Initial impact with the ground appears to be east side of Third Ave. in front of [REDACTED]. White scarring appear in the blacktop road surface staring in front of [REDACTED] proceeding north about 300 Ft. to the intersection of Third Ave. and Second St.

Propeller found still attached to the crankshaft flange, with one blade smoothly bent aft about 12" from tip and other blade straight, neither blade leading edge had gouge marks indicating it had not struck an object while turning. The propeller was found in the street in front of [REDACTED]. Aircraft debris pointed out by witness in front of [REDACTED] near tree later identified as the remains of the Right wing tip cap from N95118.

Fuselage and wings remained attached, aircraft had come to rest on its right hand side with nose pointing to 140 degree compass heading.

Right wing is inverted flat on the blacktop street, with severe damage to outer half of wing leading edge, sheet metal tearing of lower wing skin panels, right main landing gear, tire and wheel fairing have been burnt in post impact fuel fire. damage to Right wing leading edge appears as flat crushing of leading edge. Right wing is missing the tip cap.

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RECORD OF	☒ VISIT	☐ CONFERENCE OR	☐ TELEPHONE CALL	TIME 8:00 AM	DATE 04/14/2016
NAME (S) OF PERSON (S) CONTACTED OR IN CONFERENCE AND LOCATION Mark F. Burnett AEA-FSDO-11, Damian Galbraith Piper Air Safety				ROUTING	
				SYMBOL	INITIALS
Investigator, Judd Rupert Lycoming Air safety Investigator					
SUBJECT Inspection of airframe and engine PA-28-140 s/n 28-25812 Lycoming 0-320-D2A					
serial # L-19133-39A to determine cause of engine shutdown in flight					
DIGEST Arrived at ISP Hanger 11 08:00 04/14/2016.					
Arranged the fuselage, tail section, and right wing in their respective positions as they would be on a complete aircraft, the Right wing was supported on saw horses. removed engine nacelle to gain access to the engine. Removed the engine from its remaining mounts and hoisted to work table.					
The Piper Representative pulled the instrument panel upright into position and noted the following conditions:					
1)Throttle lever is full forward in the position, 2)Carburetor heat is off					
3)magneto switch is in the left mag position with key still in the switch and key bent over. Possible that the magneto switch had been moved during aircraft impacting ground and subsequent damage. (pilot confirms he had the mag. switch to both on takeoff)					
4)Fuel boost pump switch is selected on,					
5)Fuel selector valve is positioned to Left tank, with red plastic bezel surround portion of the selector broken away. The selector rotates freely and has little to no feeling of a detente in the left or right positions when moved left to right. (pilot states right wing was selected, but that his leg was pinned in this area in wreck)					
CONCLUSION, ACTION TAKEN, OR REQUIRED					
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DATE 04/14/2016		TITLE AEA-11 ASI Mark F. Burnett		SIGNATURE	

Continued Piper Representative notes:

6) Continuity of all control cables from the cockpit back towards tail and out toward both wings was confirmed, with the exceptions of cables cut to remove the right wing and the tail section, no signs of defects or jams were noted all flight control hinges were intact.

NOTE:

7) A large black LED type work light was found inside the left wing next to the left aileron bell crank, but there were no indications on the work light or the bell crank or the cables that run in this wing bay that the work light had caused any flight control jam. Photos were taken of the work light prior to removal from the left wing to show location.

8) Left fuel tank upper panel was removed fuel still remained within the left wing, a clean bucket was used to drain approximately 5-8 gallons of fuel which appeared bright blue and appears to confirm that as stated to ASI MFB by pilots family on 04/13/2016 that the pilot only used aviation 100LL. Fuel slip from Mid Island FBO confirmed William Clifford did purchase 32 gallons of 100LL on 03/20/2016. William Clifford did state he uses Jerry cans to purchase fuel at ISP because Bayport Aerodrome (23N) does not have fuel available. William Clifford did state on 04/13/2016 that he helped Scott (pilot) pour 1 Jerry can of 100LL into the aircraft prior to his departure from Bayport (23N) the day of the accident. Fuel drained from left wing was inspected for water or other contaminants none were noted.

9) Right wing tank had been punctured during the accident and had been burnt by ensuing fire. Fuel was present in the street at the accident site.

10) Fuel filter bowl was disassembled and filter examined, there was no water or unusual contaminants in the filter or the fuel filter bowl.

11) Fuel supply line to engine was intact although it had been fire damaged.

Air was blown through from the engine supply line into the aircraft fuel system with the fuel selector valve in the left position air could be heard and felt escaping from within the left wing indicating there were no fuel line blockages from the left wing. The same process was performed with the selector valve in the right position air could be heard and felt exiting the fuel line where it had been cut during the removal of the right wing. Air was then blown from the wing root side of the right wing fuel line into the fuel tank and could be heard and felt exiting the right wing fuel system.

The selector valve was then placed into the off position and air was again blown through from the engine supply line, resistance could be felt and no air could be heard escaping into the left wing tank or the right side fuel line at the root area cut.

12) The fuel selector valve was removed from the aircraft for inspection, a washer was found under the fuel selector knob, that was larger than the valve stem and appeared to have no purpose in that location on the valve. The selector valve was disassembled, scoring on the valve body, stem and detente washer were noted. Staining indicates the fuel selector valve was leaking slightly for some time prior to the accident. The Fuel selector valve was sent to NTSB with extra washer wired in place for further examination. Possible that the extra washer may belong inside the valve assembly, this will be verified by the NTSB.

13) The engine air filter to air box skat tubing is not the correct Piper type duct material. However it does not appear to have been collapsed or kinked in a way that would have caused an intake air restriction. Air filter is not unusually dirty or clogged.

14) Fuel screen on carburetor was clean.

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- 15) Engine crank shaft broken external to the engine forward casing during impact with the ground. Crank shaft prop flange portion still remains attached to the propeller with propeller mount bolts sheared off the aft side of the Propeller flange.
- 16) The engine crank shaft appears slightly bent at the nose case of the engine, with engine case damaged around the seal and bearing area caused by ground impact.
- 17) Ignition harness insulation is worn and per maintenance records this ignition harness has been installed since engine overhaul conducted 12/13/2002, but remains connected to all spark plugs, portion of the harness has been damaged in post accident fire.
- 18) Spark plugs removed from the engine and do not exhibit any unusual wear or buildup of carbon or lead.
- 19) Oil fuel mixture drained out of #1 cylinder when lower spark plug was removed. The #1 cylinder would have been the low point after the aircraft came to rest at the accident site fuel / oil could be expected to have gathered at this low point.
- 20) Due to forward engine case damage and slightly bent crank shaft near the output portion of the shaft the engine will not rotate. The Lycoming Representative requested and was given permission to attempt to break away a portion of the forward engine crank case near the output shaft seal, believing that this may allow the engine to rotate. This effort was not successful only a portion of the casing near the seal was broken off by the Lycoming Representative. The engine still did not rotate.
- 21) Magneto timing could not be determined due inability to rotate the engine.
- 22) Both magnetos Slick P/n 4370 s/n 02101953 and p/n 4373 s/n 02101725 had been last overhauled on 04/07/2010 and records indicate current TSO of 353 hours on both magnetos. Both magnetos were removed from the engine, drive gears and impulse coupling appear normal ignition leads were cut and insulation stripped back upon rotation both magnetos fired off sparking the stripped wires in sequence.
- 23) Vacuum pump removed from engine, would not rotate at first but after loosening cover it did rotate freely.
- 24) Removed engine driven fuel pump, no obvious damage and did pump out some residual fuel when actuated.
- 25) Borescoped all cylinders normal wear and buildup on valves noted and expected for an engine with TSO of 2021.9 hours last overhauled 12/13/2002 by Lycoming.
- 26) Carburetor to engine intake attachment nuts were found loose but flange gasket was intact with no signs of prolonged air leakage. Lycoming noted, may have been caused by post accident fire and heat in this area of the engine. Two of the flange nuts were slightly backed off and two were finger tight, the carburetor body did not move when handled in this condition.

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27) Carburetor fuel bowl was removed and inspected no defects were noted in the bowl or on the carburetor float (plastic type). The float showed no signs of having fluid within it. As a test the float was submerged in a pan of fuel and weighted down for 2 hours. The float did not leak. The throttle stem and body appeared normal.

28) The carburetor throttle lever and mixture lever on the carburetor body were slightly bent by other engine equipment during the accident impact. However both the throttle and mixture did move once they were freed up from a jam on the throttle body.

29) Engine oil filter was removed and cut open, inspection revealed some sludge but no metal particles.

30) Engine last change sump screen was inspected and no metal particles were noted.

31) Engine exhaust stack and mufflers removed, to obvious obstructions or loose material noted. The exhaust stack was damaged and cracked near the cylinder head attachment points on two cylinder, this damage appears to be caused by accident impact. The exhaust system was installed at the time of engine overhaul on 12/13/2002 and are manufactured by Power Flow this system is STC'd (SA02168AT) for this aircraft installation.

32) All four cylinder were removed for closer inspection, valves show normal wear for an engine with 2021.9 TSO, some carbon build up on exhaust valves but no valves or seats appear cracked.

33) All four pistons removed, some have coked and stuck oil wiper rings, but no serious detonation indications on the piston heads and all rings are intact.

34) A visual inspection of the internal portions of the crankcase does not reveal and metal particles or other broken pieces internal to the engine crankshaft, camshaft, or visible portions of the gear train.

35) A visual inspection of the crankshaft bore shows even layered coking, which is most likely related to TSO hours.

Aircraft and engine were placed back into hanger 11 at ISP and secured with Piper and Lycoming representatives leaving the investigation site at 14:40 hrs. NTSB investigator was briefed via phone on the conditions noted in this written report.

All four witnesses confirm the engine gave two loud pops or backfires immediately after takeoff from runway 18 at Bayport (23N) then witnesses confirm the engine ceased to make any noise. The condition of the propeller would confirm the engine did shutdown in flight immediately after takeoff. The location of first ground impact is one and a half blocks approximately 300 yards south west of the end of runway 18.

At 17:10 Piper Representative did call me and request to meet back at the aircraft the next morning 04/15/2016 at 08:00 hrs. The aircraft had a ECI 700 engine condition monitor he was to remove and send to NTSB for further review on any available data.

END 04/14/2016 inspection of N95118 Visit