

13. AIRCRAFT MAKE/MODEL

LOGAN MICHAEL S LOGAN KITFOX SER 5

33. NARRATIVE

ON JUNE 3, 2017, INSPECTORS FROM THIS OFFICE RECEIVED A CALL FROM THE FAA ROC AT AROUND 1700.

UPON ARRIVAL, PHOTOGRAPHIC EVIDENCE WAS COLLECTED. AIRCRAFT CONTROL CONTINUITY, AIRMAN BODY ORIENTATION, AND OTHER INITIAL EVIDENCE WAS ESTABLISHED. THE AIRMAN WAS TAKEN BY PALMER MORTUARY STAFF WITH AN FAA TOXICOLOGY BOX.

ON JUNE 4, 2017, THE ENGINE WAS SEPARATED FROM THE AIRFRAME WITH ASSISTANCE FROM THE NEW BERLIN VOLUNTEER FIRE DEPARTMENT'S EMERGENCY SHEAR TOOL. THE AIRCRAFT'S DATAPLATE WAS LOCATED FOR POSITIVE ID AND OTHER AIRCRAFT PARTS WERE LOCATED. PROPELLER HUB AND GEARBOX ROTATIONAL ABILITY WERE ESTABLISHED.

ON JUNE 7, 2017, THE ORIGINAL FAA INSPECTOR TEAM, ALONG WITH AN AIRWORTHINESS INSPECTOR, ESTABLISHED ENGINE ROTATIONAL ABILITY. A FINAL INSPECTION OF THE SITE WAS CONDUCTED BEFORE CONTACTING THE NTSB INVESTIGATOR FOR WRECKAGE RELEASE.

THE FOLLOWING ITEMS AND ACCIDENT SIGNATURES WERE DISCOVERED DURING THE INVESTIGATION:

- THE ENGINE WAS FOUND TO BE UPSIDE DOWN IN RELATION TO THE REST OF THE AIRCRAFT BUT STILL ATTACHED.

- TWO OF THE THREE PROPELLER BLADES WERE FOUND TOGETHER, WITH NO INDICATION OF ROTATION ON IMPACT. THE LEADING EDGES AND TIPS WERE UNDAMAGED. THE THIRD PROPELLER HAS NOT BEEN LOCATED.

- THE PROPELLER BLADES AND COWLING DEBRIS WERE LOCATED APPROXIMATELY TEN TO FIFTEEN FEET FROM THE AIRCRAFT'S FINAL POSITION.

- THE NOSE CONE SHOWED NO SIGNS OF ROTATION ON IMPACT.

- THE ENGINE WAS ANGLED TO THE RIGHT WHEN VIEWED FROM BEHIND THE AIRCRAFT.

-THE LEFT WING TRAILED THE RIGHT WING INSTEAD OF BEING ALIGNED.

-THE EMPENNAGE WAS ANGLED TO THE RIGHT WHEN VIEWED FROM BEHIND THE AIRCRAFT.

-THE AIRCRAFT CONTROLS APPEARED TO HAVE CONTINUITY.

-CONSIDERABLE FIRE DAMAGE OCCURRED AT THE AIRCRAFT SITE, EXTENDING UP TO APPROXIMATELY TWENTY FEET FROM THE CENTER OF THE FIRE ZONE.

-UPON INSPECTION, THE PROPELLER HUB, GEARBOX, AND ENGINE ARE STILL ABLE TO ROTATE WITH NO SIGNS OF UNUSUAL MECHANICAL FRICTION.

-THE AIRMAN WAS FOUND LEANING TOWARDS THE RIGHT SIDE OF THE COCKPIT AND SITTING UPRIGHT.

-ACCORDING TO A WITNESS STATEMENT, THE AIRCRAFT WAS LAST SEEN TAXING FOR TAKEOFF. THE WITNESS STATED HEARING A POP AND THEN SEEING SMOKE, ALTHOUGH IT IS UNCLEAR TO THE WITNESS IF THE POP WAS AN ENGINE BACKFIRE OR THE INITIAL CRASH IMPACT.

-ACCORDING TO THE NEW BERLIN VOLUNTEER FIRE DEPARTMENT, THEY ARRIVED APPROXIMATELY FIVE MINUTES AFTER THE INITIAL CALL. THE ENGINE AND AIRMAN WERE STILL SMOLDERING, AND THE LEFT MAIN TIRE AND WHEEL WERE ON FIRE, BUT THE AIRCRAFT FIRE HAD MOSTLY PUT ITSELF OUT.

AMENDMENT:

ON SEPTEMBER 13, 2017, THE INSPECTORS IN CHARGE FOR THE ORIGINAL INVESTIGATION VISITED THE SITE TO RETRIEVE THE AIRCRAFT AND PILOT LOGBOOKS FOUND BY MRS. LOGAN. THE LOGBOOKS WERE ORIGINALLY BELIEVED TO BE LOST IN THE ACCIDENT BUT WERE FOUND AS SHE WAS PACKING. MRS. LOGAN ALSO STATED THAT MR. LOGAN WAS HAVING IGNITION ISSUES THAT WERE SUPPOSEDLY FIXED. MRS. LOGAN STATED THE IGNITION PROBLEMS WERE CAUSING THE ENGINE TO MISS OR QUIT DURING HIGH-POWERED RUN-UPS.

MR. MARK WEBB WAS CONTACTED BY THE INSPECTORS FROM A SUGGESTION BY MRS. LOGAN THAT HE MAY HAVE ADDITIONAL INFORMATION. MR. MARK WEBB HAS THE SAME

TYPE OF AIRCRAFT AND ENGINE COMBINATION. MR. WEBB STATED THAT MR. LOGAN CONTACTED HIM LETTING HIM KNOW ABOUT THE IGNITION PROBLEMS, AND THAT HE FOUND A SOLUTION. HOWEVER, MR. WEBB WAS NEVER TOLD WHAT THE FIX WAS, OR IF IT WAS A DUAL IGNITION PROBLEM OR JUST ONE OF THE SOURCES. MR. WEBB STATED THAT MR. LOGAN CONVERTED THE ENGINE TO EFI AND DUAL IGNITION YEARS PRIOR DUE TO THE ORIGINAL ENGINE'S DESIGN AS AN AUTOMOTIVE ENGINE.

43. BRIEF EXPLANATION OF ISSUES INVOLVED

AIRMAN COMPETENCE:

-THE AREA SURROUNDING THE AIRPORT IS MOSTLY FARMLAND AND GRASSLAND THAT ARE THOUSANDS OF FEET IN LENGTH AND IN ALL DIRECTIONS. IT IS UNCLEAR WHY THE AIRMAN DID NOT PICK ONE OF THOSE FIELDS OR WHY THE AIRCRAFT CAME TO REST WHERE IT DID.

AIRWORTHINESS:

-THE AIRCRAFT WAS CERTIFICATED AS AN EXPERIMENTAL AIRCRAFT. IT IS ALLEGED THE MAINTENANCE BOOKS WERE IN THE AIRCRAFT AT THE TIME OF THE ACCIDENT.

AMENDMENT:

AIRWORTHINESS:

-AIRWORTHINESS INSPECTORS INSPECTED THE AIRCRAFT LOGBOOKS AND NOTED THAT EVIDENCE SUGGESTS THE LAST KNOWN CONDITION INSPECTION WAS DONE ON APRIL 23, 2005. IN ADDITION, THE ORIGINAL APPLICATION FOR AIRWORTHINESS CERTIFICATION STATES THE AIRCRAFT WAS BUILT WITH AN NSI SHO ENGINE, NOT A RAM SUBARU EA-81 ENGINE AS DISCOVERED IN THE ACCIDENT. IT IS UNKNOWN IF THE IGNITION PROBLEMS WERE TRULY FIXED AS THERE IS NO LOGBOOK ENTRY STATING ANY IGNITION RELATED REPAIRS.

FAR VIOLATION:

-OPERATING LIMITATIONS FOR EXPERIMENTAL AIRCRAFT STATES THAT NO PERSON MUST OPERATE AN AIRCRAFT UNLESS WITHIN THE PRECEDING 12 CALENDAR MONTHS IT HAS HAD A CONDITION INSPECTION. EVIDENCE FROM THE AIRCRAFT LOGBOOKS SUGGEST THE LAST ONE WAS DONE IN 2005. IN ADDITION, THE OPERATING LIMITATIONS ALSO STATE THAT ANY MAJOR CHANGE MUST BE REPORTED TO THE FSDO AND AIRCRAFT REGISTRATION BRANCH VIA FAA FORM 8130-6.

-FAR PART 61.56(C) STATES:

EXCEPT AS PROVIDED IN PARAGRAPHS (D), (E), AND (G) OF THIS SECTION, NO

PERSON MAY ACT AS PILOT IN COMMAND OF AN AIRCRAFT UNLESS, SINCE THE BEGINNING OF THE 24TH CALENDAR MONTH BEFORE THE MONTH IN WHICH THAT PILOT ACTS AS PILOT IN COMMAND, THAT PERSON HAS

(1) ACCOMPLISHED A FLIGHT REVIEW GIVEN IN AN AIRCRAFT FOR WHICH THAT PILOT IS RATED BY AN AUTHORIZED INSTRUCTOR AND

(2) A LOGBOOK ENDORSED FROM AN AUTHORIZED INSTRUCTOR WHO GAVE THE REVIEW CERTIFYING THAT THE PERSON HAS SATISFACTORILY COMPLETED THE REVIEW.

EVIDENCE FROM THE PILOT'S LOGBOOK SUGGESTS MR. LOGAN DID NOT COMPLETE THE FLIGHT PORTION OF THE FLIGHT REVIEW. THE GROUND PORTION WAS COMPLETED ON JANUARY 28, 2017. THE PREVIOUS FULL FLIGHT REVIEW WAS COMPLETED ON NOVEMBER 9, 2014.