

RECORD OF ☐ VISIT ☒ CONFERENCE OR ☐ TELEPHONE CALL		TIME 1:00 PM	DATE 02/17/2022
NAME(S) OF PERSON(S) CONTACTED OR IN CONFERENCE AND LOCATION Mr. Abner Tisdale, Mechanic A&P/IA [REDACTED] and Ms. Angela Lowe, Office Manager, of Superior Aero Services, LLC		ROUTING SYMBOL INITIALS	
Mr. Timothy Monville, NTSB, and FAA ASI Sarah Allen Location: Superior Aero Services, LLC Maintenance Hangar at the KEXX Airport in Lexington, NC			
SUBJECT Interview to discuss the maintenance events that occurred on Aircraft N58LF prior to its accident flight on February 16, 2022			
DIGEST Mr. Tisdale was given a copy of the Compliance Program Brochure by ASI Allen and advised he could be interviewed by the NTSB investigator without the presence of the FAA, or that he could have both parties present for the interview. After reading the brochure and consulting with the shop owner, Mr. Tisdale agreed to be interviewed with both the NTSB and FAA present. He stated he has held an Inspection Authorization since 2011 or 2012 and has been employed by Superior Aero Services since 2013, currently serving as the Shop Manager. His primary duties include performing research to assist other mechanics, and scheduling aircraft into the facility for maintenance and inspections. He stated that he was the mechanic who approved the aircraft for return to service following an annual inspection. He recalled that N58LF arrived some time around November 2021 for a scheduled annual inspection with an incoming discrepancy of high oil and cylinder head temperature on the right engine, and the right engine propeller had been feathered during its arrival flight. A borescope inspection was performed on the number one cylinder of the right engine and signs of detonation were found (material missing from the number one piston). The oil filter was cut open and metal was found in the filter element. The oil pan was removed and metal was found along with residue in the bottom of the pan. -CONTINUED-			
CONCLUSION, ACTION TAKEN, OR REQUIRED			
DATE 02/18/2022	TITLE Aviation Safety Inspector	SIGNATURE [REDACTED]	

A portion of a shop rag about the size of a business card was found on the oil pickup screen blocking a portion of the screen. Upon removal of the number 1 cylinder on the right engine, significant scoring was found on the cylinder walls and the piston rings were seized. When asked what amount of further troubleshooting was performed, Mr. Tisdale stated the pilot said he might have leaned out the engine too much. Mr. Tisdale could not recall if the aircraft and engines were equipped with an engine monitoring system.

Mr. Tisdale stated that at the time the aircraft was in for its Annual Inspection, the right engine had about 100 hours remaining to its recommended overhaul of 1700 flight hours. He said that Superior Aero suggested to the aircraft owner, Mr. Ray Ackley, that he send the engine out for overhaul due to the detonation issue combined with the time remaining to its recommended overhaul. According to Mr. Tisdale, Mr. Ackley adamantly did not want to send the engine out for overhaul. There was discussion back and forth between Mr. Ackley and personnel at Superior Aero and ultimately, Mr. Tisdale researched the Continental Engine Maintenance Manual and determined the work scope to be performed to repair the engine: Clean the oil pan, replace the cylinder and piston, send out the connecting rod for inspection, send out the propeller governor and propeller for flushing out.

Mr. Tisdale stated he originally signed the log books for completion of the Annual Inspection of N58LF in January 2022 but the aircraft owner could not pick up the airplane until February 2022 and asked Mr. Tisdale if he could sign the Annual Inspection off with a date in February 2022. Mr. Tisdale stated he lined through the original date on the log book pages and entered a February date, initialing beside his amendment. When asked what type of checklist he used to perform the Annual Inspection, Mr. Tisdale stated he used the checklist from the Baron Maintenance Manual and Appendix D of Part 43. He did not recall if he retained the checklist but stated he could provide copies of the list of discrepancies and corrective actions taken from the work order system they use.

Mr. Tisdale stated the annual inspection was completed January 18, 2022. After running the engines and performing operational checks upon completion of the annual inspection, the aircraft was stored outside on the ramp where it remained until the owner flew the aircraft on February 16, 2022. Mr. Tisdale stated that Superior Aero Services did not perform a post-inspection flight of the aircraft, they do not normally perform post-inspection flights unless extensive work was performed on the aircraft. Mr. Tisdale stated that he recommended to the owner that the owner fly around the pattern for a bit. The owner stated he would return to Superior Aero if he had any issues.

Mr. Tisdale was asked what portions of the maintenance performed on N58LF he was directly involved in. Mr. Tisdale stated that he had very little hands-on involvement with the aircraft and engine maintenance, and that another IA, Rodrick Reck, had performed majority of the annual inspection. Mr. Tisdale inspected mainly under the floor and cabin area of the airplane. Mr. Tisdale stated he signed the maintenance logbook entries for the work performed because Mr. Reck was reluctant to sign the records due to the work performed on the right engine.

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When asked if there was any troubleshooting performed on the engine fuel system, Mr. Tisdale stated he could not recall any being performed. Mr. Tisdale stated his involvement in the maintenance performed on the right engine was primarily as an inspector of the work that was performed by other mechanics. Mr. Tisdale stated he felt comfortable signing the maintenance records for the work performed because he had performed research of the engine maintenance manual requirements and was confident the maintenance performed was adequate to return the aircraft to service. Mr. Tisdale also added that while the aircraft was in their maintenance shop for the annual inspection, mechanics installed new owner-supplied GAMIJECTORS in the right engine (the left engine had them installed already). Upon completion of all of the work on the engines and aircraft, post-maintenance engine runs were performed by IA Ron Reck. The right engine oil was changed again and the engines were run a second time.

According to Mr. Tisdale, the owner arrived on February 16, 2022 to pick up his airplane. The owner ran up the engines for quite a while and then departed the ramp for takeoff. The owner returned to Superior Aero and reported an issue with his door latch, which was corrected by Superior Aero and the owner departed again.

02/18/2022 - Follow-up interview with Mechanic / IA Abner Tisdale:

Mr. Tisdale was asked to provide more information related to the troubleshooting performed and decision making related to the maintenance on the right engine to address the apparent pre-ignition / detonation in the number one cylinder. When asked again what led him to the judgment to not send the engine out for overhaul, Mr. Tisdale stated he consulted the engine maintenance manual and followed the guidance in the manual. Mr. Tisdale was asked to show the FAA inspectors and NTSB investigator the portion of the Continental engine maintenance manual he was referring to. Mr. Tisdale accessed the Continental Standard Practice Maintenance Manual but could not readily identify the section he had used to make the determination of the work scope on the right engine of N58LF. Mr. Tisdale agreed to provide a copy of the manual section by email at a later time after he is able to locate the section used. <Note: Angela Lowe of Superior Aero Services emailed a copy of the manual section on February 24, 2022 to Inspector Sarah Allen. The email was titled "From Abner Tisdale". Refer to Inspector Allen's inspector statement for a description of the manual section contents.>

Mr. Tisdale asked Inspector Allen if she was familiar with the company SAVVY, an online subscription aircraft owners can use to discuss maintenance related issues on their aircraft. Mr. Tisdale handed Inspector Allen a printed copy of an email he received from [REDACTED] and explained that the email is an article of detailed conversations posted to SAVVY QA between the N58LF aircraft owner and mechanics on behalf of SAVVY, related to the pre-ignition / detonation event that occurred. He stated the registration number is changed in the article to be N588F and the owner's name is changed from Ray to Roy but that it pertains to N58LF and Mr. Ray Ackley. Inspector Allen gave the printed email to the NTSB Investigator and requested Mr. Tisdale forward the email to Inspector Allen. Mr. Tisdale forwarded the email to Inspector Allen on February 18, 2022, titled "Fwd: Melted Piston". <Refer to Inspector Allen's inspector statement for a description of the article>

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RECORD OF ☐ VISIT ☐ CONFERENCE OR ☒ TELEPHONE CALL		TIME 10:10 AM	DATE 03/04/2022
NAME (S) OF PERSON (S) CONTACTED OR IN CONFERENCE AND LOCATION Mr. Othman Rashed, President of Triad Aviation [REDACTED] returning a		ROUTING SYMBOL INITIALS	
call to FAA ASI Sarah E. Allen [REDACTED]			
SUBJECT Discussion about the source and traceability of the piston that was			
provided with the number one cylinder to Superior Aero for N58LF #2 engine			
DIGEST Mr. Rashed was asked by ASI Allen in an email on February 25, 2022 if Triad Aviation had records of any certification documentation for the piston that was supplied with the cylinder Triad Aviation provided to Superior Aero Services that was installed in the number one position on the right engine of aircraft N58LF. Mr. Rashed replied back by email that they do not have any documentation on the piston. On March 4th, 2022, ASI Allen contacted Triad Aviation by phone and left a message for Mr. Rashed to call her back. Mr. Rashed called back that same day. ASI Allen asked where the piston that was supplied with the cylinder to Superior Aero for N58LF came from. Mr. Rashed stated that he did not have any traceability for where that piston came from. He stated that they receive engine parts from various sources into their repair station, sometimes with documentation indicating where it came from, and sometimes with no documentation. He stated that the repair station inspects and performs maintenance on the parts and components they have in stock from these various sources, "cherry-picking" parts from cylinders to assemble a serviceable cylinder assembly and that is what they had done with this cylinder assembly.			
CONCLUSION, ACTION TAKEN, OR REQUIRED			
DATE 03/04/2022	TITLE Aviation Safety Inspector	SIGNATURE [REDACTED]	Sarah E. Allen EA-FSDO-39