

Inspector Statement 10/19/2023

On 10/17/2023 I, Inspector James Cooper, joined Inspector Greg Gobble and Inspector Kevin Jackson in the investigation of an accident at Red Oak, IA KRDK involving a Cirrus SR22T N6JA piloted by James Avery, 4551591 with 1 pax on board that occurred on 10/15/2023 at approximately 1450 UTC. Upon arrival at the airport we were greeted by Kevin the airport manager of KRDK. Kevin pulled up security camera footage of the accident.

The main video showed that at approx. 0951 and 30 seconds a SR22T hit a bobcat severing the wing and spraying fuel. About 1 second later another cloud of fuel was seen. A couple seconds after that a final cloud of fuel was seen. The second video showed the approach and touchdown of the Cirrus but it was hard to see what was actually happening.

All three inspectors then traveled out a little past mid field of runway 5 where we were shown where the bobcat was sitting. During this time we noticed multiple 1-2' orange barricades with construction lights on top. The airport manager did say the lights function during night time. There were approximately 8-10' gaps on the sides of the runway where the barricades were not present. We then drove down to the approach end of runway 5 where we found a thick tarp like yellow material made into a large yellow x. The width of each line was approximately 8' and the length of each line approximately 50'. The tarp like material was held down with yellow sandbags and though it was wrinkled it still held a good X shape that covered the "5" marking on the runway. Past this was the displaced area from a displaced threshold. The displacement did not have any markings on it.

We then proceeded to the airplane where I entered the cockpit and retrieved the airworthiness certificate, registration, and the pilot's medical was also there. I photographed the interior and then removed 3 SD cards from the avionics system. 1 from the PFD and 2 from the MFD noting their positions. After discussion with the NTSB representative and the Cirrus rep it was determined to leave the 2 lower SD cards in their positions but to return the upper SD card from the MFD to NTSB for data retrieval.

The exterior of the plane showed an obviously sheered left wing, as well as cracking and deformation around the left wing root fairing. The left horizontal stabilizer had 2 small dings in the TKS metal leading edge. I was unable to determine if these were existing or new. The left main wheel pant was severely damage, the nose wheel pant had some cracking and impact marks, the right main wheel pant did not show any damage. The wings had drops of liquid which were remaining on the wings as well as pooling underneath the airplane indicative of the TKS system weeping.

Inspectors Gobble and Jackson opened the engine cowling and noticed the induction hose on the left side was not properly clamped and secured from the NACA inlet to the air filter box. Going further into the engine they noted an oily #4 bottom engine plug and all plugs were fairly dirty. Inspector Gobbles removed the airboxes and noticed both turbos were spinning freely. Inspector Gobble checked compression on all cylinders and found #4 and #6 to have very little compression with #2 showing reduced compression. The odd bank of cylinders appeared to have proper compression. There were no abnormal noises or pressures when rotating the prop and all wires were checked and producing spark.

NTSB rep was contacted and it was determined that the inspection was thorough enough until further data was gained by the SD card. Spark plugs were returned but not torqued, plug wires were left off of all cylinders. Airplane was recowled.

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INSPECTOR STATEMENT

EIR #

VIOLATOR NAME:

Narrative Statement:

On October 17,2023 I conducted a visual inspection of the TSIO 550 engine installed in N6JA after an accident that occurred October 15, 2023 at (KRDK) Red Oak, Iowa. The aircraft landed on closed runway 5 and struck a bobcat skid loader located adjacent to the closed runway. Aircraft damage was substantial. The left wing sheared off outboard of the flap upon impact, left fuel bay exposed, wrinkled left flap and wing root fairings damage to the nose and left wheel fairings. Engine was running after the impact allowing the pilot to taxi to the ramp after the accident. Fuel was observed in the right wing, and remainder of the left-wing fuel bay. Samples of fuel taken from the right wing and main fuel sump at the firewall were clear and bright consistent with 100LL, a sample was taken from the damaged left tank and a light haze was detected otherwise sample was clear. (It should be noted the fuel bay was open to the elements with dew present and the wing leading edge anti ice system (TKS) had been in use prior to the accident) No apparent impact damage to the propeller was noted. There were some scratches on the spinner consistent with routine cowl removal and replacement. Upon removal of the cowl, it was noted that the hose clamps on the right air inlet to air filter housing were loose, however the inlet hose coupling was installed. On the left side the clamps were also loose and the inlet coupling hose was moved forward with approximately a 1/2-inch gap between the end of the coupler and the left air filter housing. One drain line was disconnected from the overboard vent fitting at the firewall. Some moisture was also noted in the cowl possibly TKS fluid.

Engine Findings were as follows:

*Engine was cold, ground run was not performed at this time as fuel vapors were present from the damaged left-wing tank. Notified airport manager of potential hazard with the exposed fuel, and subsequent vapors.

Engine oil was present and at a normal operating level according to the dipstick.

All spark plug leads were disconnected, and lower spark plugs were removed and visually inspected, plugs appeared to be in a normal to slightly carbon fouled state, except for the #4 bottom spark plug which had indications of oil fouling. Upper plugs were not removed at this time due to the need to disassemble and remove the inter-coolers to access the spark-plugs.

Engine turned freely, with no abnormal sounds. Removed air filter housings to inspect turbo charger inlets. Both turbos appeared clean and rotated freely.

With magneto switch in the both position a strong spark was observed at all spark plug leads. Prop was pulled through by hand.

While rotating engine by hand a check of valve and piston compression action was performed by blocking the lower spark plug hole with a thumb and checking for suction and compression air escaping. Cylinder numbers 1,3,5 had a strong indication of cylinder compression 2 and 6 were weaker with cylinder 4 being difficult to detect compression or suction noting that cylinder 4 also had an oil fouled plug. There were indications of previous compression readings on rocker covers however the context is unknown at this time as logbooks have not yet been reviewed.

Visual inspection of the engine accomplished Intake pipes, fuel injector lines, and deck pressure manifolds, shrouds showed no evidence of fuel stains and were intact, engine controls were attached. Exhaust and

accessories appeared to be intact and secure.

Fuel selector was noted to be in the left position.

The engine data card was removed at the direction of the NTSB IIC and sent for analysis.

Lower spark plugs were reinstalled by hand, air filter housings were reinstalled spark plug leads were left disconnected to prevent inadvertent operation until the removed components could be installed by a properly certificated part 65 individual. NTSB IIC notified and will decide if engine run is necessary at a later date.

Cowling was reinstalled.

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10/23/2023