



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Western Pacific Region

September 15, and 18, 2020

WRECKAGE EXAMINATION SUMMARY

WPR20LA257

This document contains 6 embedded photos.

A. ACCIDENT

Location: Lake Port, California
Date: August 7, 2020
Aircraft: N290MH, Sportine Aviacija Lak-17B

Preliminary Report:

On August 7, 2020 about 1400 Pacific daylight time, a Sportine Aviacija Lak-17B, a motorized glider, N290MH, was substantially damaged when it was involved in an accident near Lake Port, California. The private pilot was fatally injured. The motorized glider was operated as a Title 14 Code of Federal Regulations Part 91 personal flight.

The flight departed from runway 28 at Lampson Field Airport (1O2), Lakeport, California at about 1200 on a local flight. According to family members, the pilot was based out of 1O2 and had recently purchased the glider. They continued by stating he was still in the certification process and could only remain within 20 miles of 1O2 when flying the glider. After the pilot had not returned home from the flight, family members were able to check a SPOT device which indicated his last position which was then supplied to a search and rescue team.

The wreckage was located on steep and wooded terrain about 1 mile west from the departure end of runway 28 at 1O2. According to photos supplied by first responders, the glider was found in multiple sections scattered within about a 100 ft radius.

There were no witnesses to the accident.

The wreckage was recovered for further examination.

B. PARTICIPANTS

Andrew Swick-NTSB IIC
Cliff Hilty-CFIG Prescott Area Soaring

C. SUMMARY

Examination of the wreckage was conducted at the facilities of Air Transport, in Phoenix, Arizona, under the supervision of the National Transportation Safety Board investigator-in-charge. No anomalies were noted during the examination of the front electric sustainer (FES) or airframe that would have precluded normal operation.

DETAILS OF THE INVESTIGATION

1.0 Airframe Examination

The wreckage was displayed on the ground in an examination area. Both wing spars remained attached at their attach points and the spar pins were attached and secured. The right wing remained attached to the fuselage and about 8 ft of the outboard end separated. The left wing remained partially attached to the fuselage with impact damage to the spar and inboard wing surfaces. The left wing separated about midspan revealing the internal surfaces of the water ballast tank. The left wing spar splintered near the wing root. The left wing inboard flight control linkage was loose from its support and all control tube attachments were secure. All flight controls and control tubes were found for both wings. The flap bellcranks worked normally by hand. Flight control continuity was established from both wings to the cabin area. The left airbrake was found in several sections along the wing separation. Linkage connecting the left airbrake worked normally by hand. The right airbrake was intact and moved normally from the wing root area.



Figure 1-Wreckage displayed during the examination.



Figure 2-Forward fuselage and cabin area.

The forward fuselage had excessive impact damage and was found in multiple sections. The motor, forward support structure (canopy holder) and instrument panel was separated from the main wreckage during the recovery of the wreckage. The rudder pedal assembly was also separated from the main wreckage during the recovery of the wreckage.

The plexiglass canopy and the frame were found in several sections. The canopy side locking pins were found in the engaged [aft] positions. The forward canopy panel separated from the frame. (See figure 3) The emergency jettison handle and linkage was found in the activated [out] position. The pins at the ends were bent in the up position. The fixator latch was in the retracted [unhooked] position. The canopy release spring and handle [handle of the spring type mechanism] were not found with the wreckage. A locking pin was found in the wreckage attached with a remove before flight tag. The locking pin shaft was bent and had metal deformation. (See figure 4)

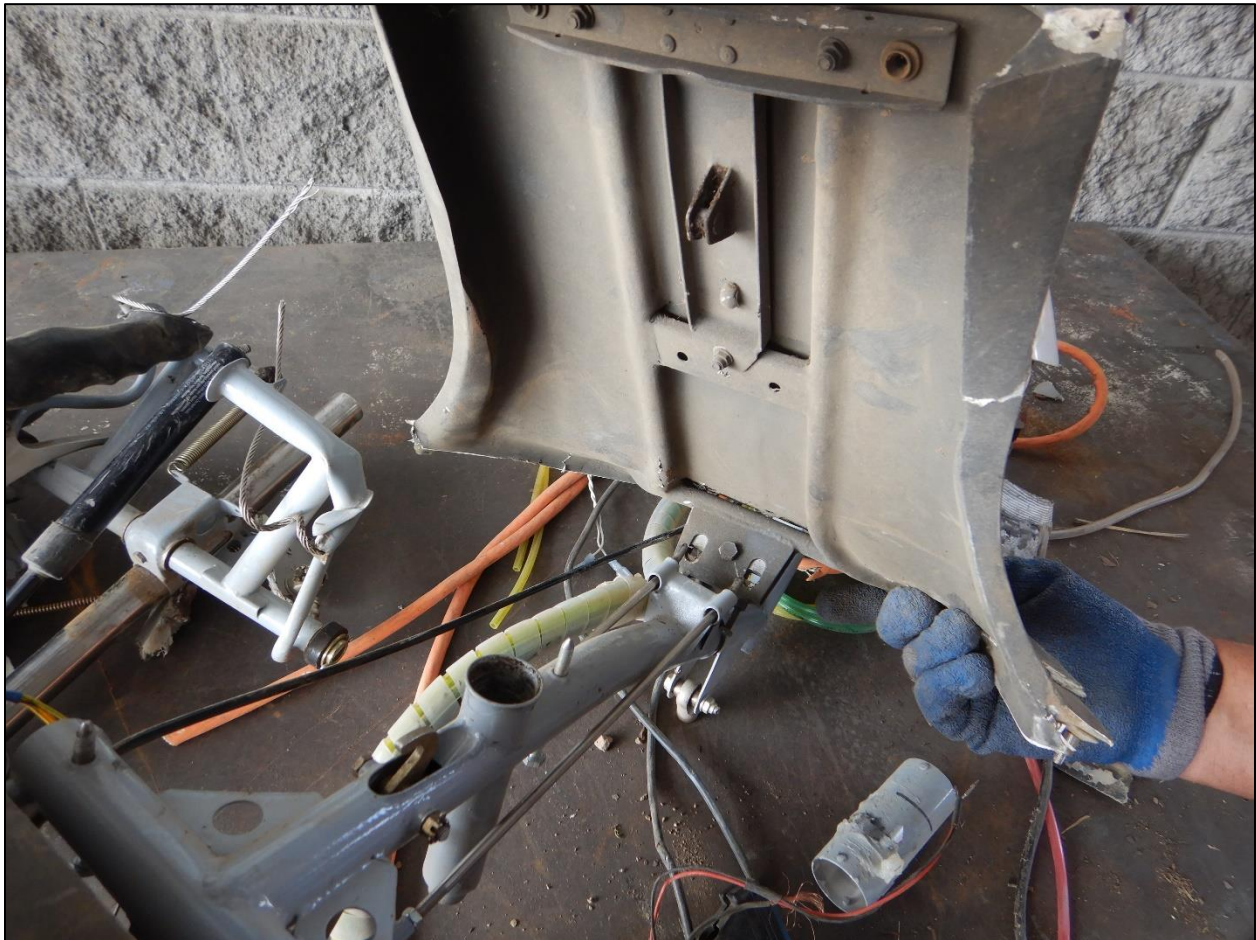


Figure 3-Canopy jettison assembly.



Figure 4-Locking pin and remove before flight tag.

The 4-point static harness restraint system was found in the unlatched position. The shoulder harness were attached to the airframe over-shoulder structure and the lap belts remained attached to impact damaged cabin structure.

The cabin controls had impact damage and remained attached to their cables. Due to impact damage positions of the airbrake, trimmer, flaps and aileron controls were not obtained.

The main landing gear was found in the retracted position. The landing gear was pulled from its retracted position and no anomalies were noted.

The aft fuselage had impact damage and was found in several sections aft of the battery compartment. The control tubes in the aft fuselage had impact damage and about 4 ft of the elevator and rudder control tubes remained intact to their rear bellcranks. The elevator bellcranks worked normally when the control tube in the aft fuselage was moved by hand. The elevator and horizontal stabilizer separated from the tail section. A small inboard section of the elevator remained attached to the elevator upper bellcrank. The lower portion of the rudder and its control attachment had impact damage.

2.0 Front Electric Sustainer (FES) System

The motor remained attached to the forward support structure (canopy holder) and instrument panel, which separated from the main wreckage. Battery cables and various wires near the motor were cut during the recovery of the wreckage.

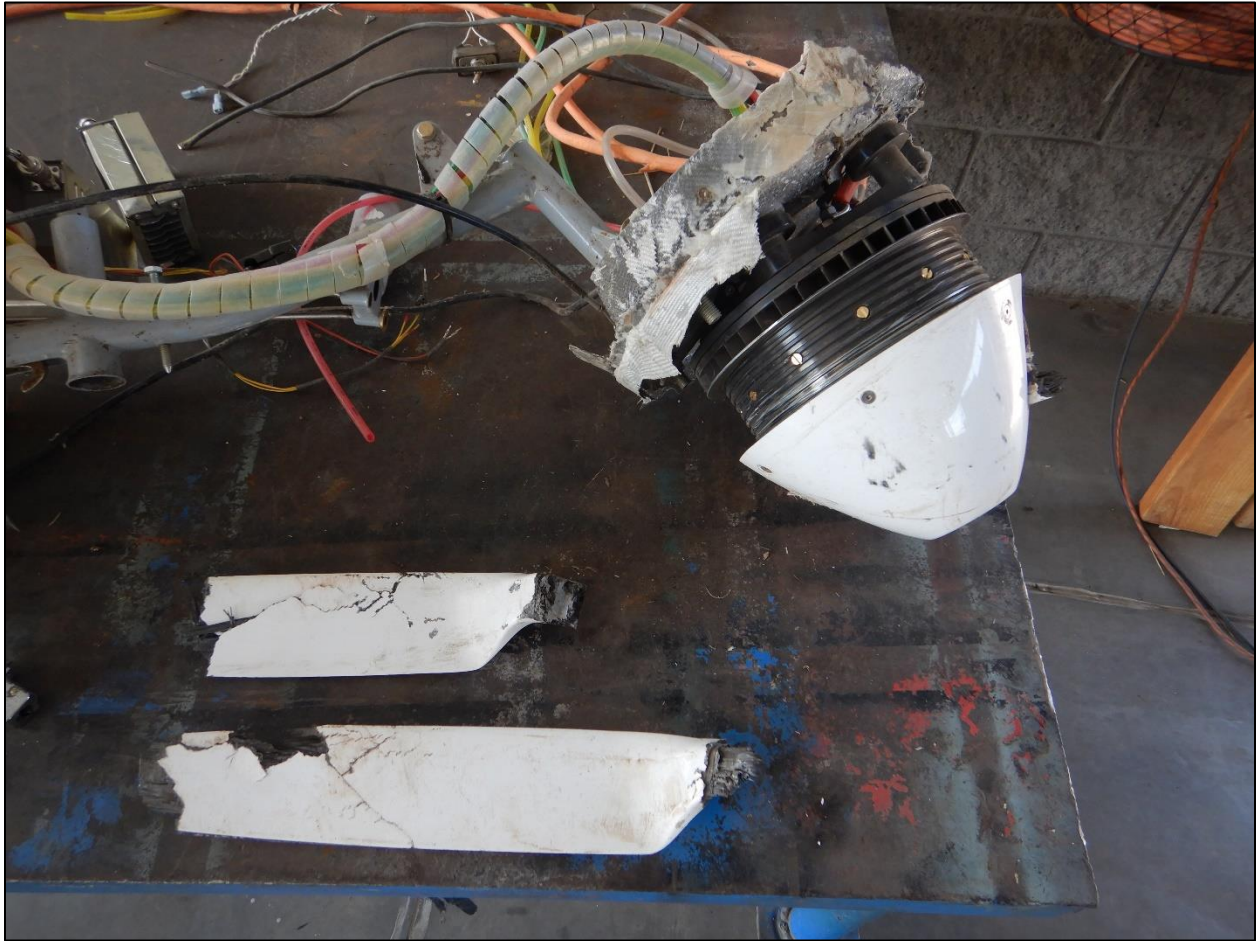


Figure 5-Propeller blades and motor assembly.

The propeller blades separated from the motor hub and were found with impact damage to the blades and to the mounting ends. The missing blade material was not found with the main wreckage. The cambered sides of the propeller blades had rotational scuff marks. Both propeller blades mounting-end-sections remained attached to the hub. The spinner had impact damage near the blade mounts that is consistent with the blades in the deployed [forward] position. The spinner had rotational scoring near the aft edge. (See Figure 5) The motor housing had rotational scoring. The propeller blades scuff marks, propeller blade positions, spinner and motor housing rotational scoring are consistent with the motor rotating at the time of impact with the ground.

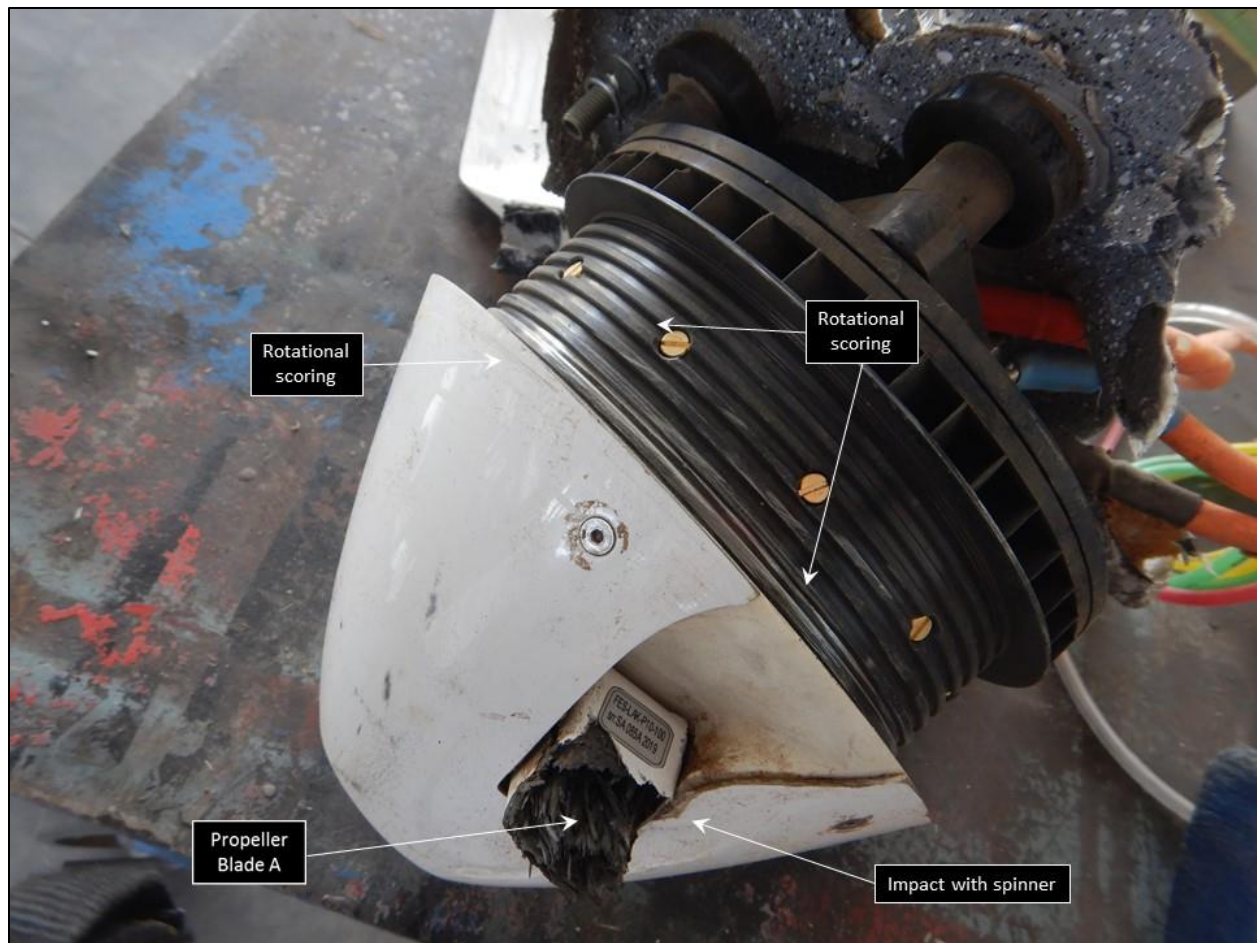


Figure 6-Motor assembly and impact marks.

The motor rotated normally by hand. The DB15 connector separated and the remaining terminal and hardware connectors remained attached and undamaged. The air vent linkage in the hub, operated normally by hand from the cable. The fuselage structure adjacent to the motor and spinner area separated into several large sections.

The FES battery packs [2] were found in the battery compartment and their retaining brackets had separated and were undamaged. The forward side of the battery compartment had impact damage. The battery cables and terminal ends were intact and the forward battery indicator light was illuminated. The rear battery serial connector separated from the battery. The rear battery indicator lights were not illuminated, and the battery would not activate. Both battery terminals were removed from the batteries and the batteries were undamaged. The batteries were removed from the battery compartment.

3.0 Non-volatile Memory

The LX9000 instrument was found separated from the main wreckage. The unit housing was distorted and internal components were visible. The unit housing was removed and the internal circuit board connecting power to the main circuit board was loose from its connector; the connector was reconnected. The SD card reader connection was separated; the connection was reconnected. The SD card was downloaded and only showed previous flights to the accident flight. A 'debug report file' was created and sent to the manufacturer for examination.

The LXNav-FCU was installed in the instrument panel and undamaged. The main switch was found in the 'ON' position. Flight data was downloaded from an external mini-SD card and sent to the manufacturer for further examination. The motor rpm control works off a restate off the face of the instrument.

An LXNave Power Mouse was found installed behind the instrument panel. The Power Mouse was removed and undamaged. The internal data was downloaded and revealed the accident flight at a rate of 4 sec.

The units were obtained by the NTSB-IIC for further examination.

Submitted by: Andrew Swick