

**Aviation Safety Investigation Report
198701462**

Ligeti Stratos

22 September 1987

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determine the likely effect on performance of the various modifications made to this aircraft. However, given that the prototype appeared to suffer no adverse flying characteristics, it is possible that the modifications incorporated in the new aircraft had an adverse effect on the stall characteristics. Analysis of the modifications indicates that the most significant effect on the stall characteristics would have resulted from use of full span elevators on the canard wing. The use of full span elevators results in a relatively uniform loading of the canard as the elevator is deflected approaching the stall. The result is that the canard would be developing more lift, compared to the same wing without full span elevators, before the wing stalled and the stall would be sharper. Because the main wing is still producing lift at this stage the nose down pitch following the stall of the canard would be aggravated. It is considered likely that the accident sequence was initiated by a full canard stall followed by a rapid nose down pitch. Also, the altitude at which the flight was conducted would not have allowed the pilot time to make the necessary corrective control inputs following the stall before the aircraft impacted the ground.

Significant Factors:

The following factors were considered to be relevant to the development of the accident.

1. The pilot encountered unforeseen circumstances beyond his capabilities.
2. The aircraft was operated at too low an altitude, on a test flight, to enable recovery from any unexpected divergences from normal flight. Because the investigation was not able to positively determine all the reasons for the accident, the following possible factors are also considered appropriate.
 1. The pre-test flight preparation was inadequate in that no apparent attempt had been made to check the performance of the aircraft following the significant design changes made to the prototype prior to this flight.
 2. The pilot may have been suffering some fatigue following a full day preparing the aircraft for flight.