No: 8/84 Ref: EW/C880/01

Aircraft type and registration:	Schleicher K.6.C.R. (single seat sailplane) BGA No. 2503	
Year of manufacture:	1964	
Date and time (GMT):	29 July 1984 at 1415 hrs	
Location:	Saltby Airfield, Leicestershire	
Type of flight:	Pleasure	
Persons on board:	Crew — 1	Passengers — Nil
Injuries:	Crew — Fatal	Passengers — N/A
Nature of damage:	Gross damage to forward fuselage and right wing. Lesser damage to left wing	
Commander's Licence:	BGA Gliding Certificates, Silver 'C'	
Commander's Age:	52 years	
Commander's total flying experience:	Approximately 250 hours	
Information Source:	Field Investigation	

The glider was being launched by the reverse pulley auto-tow technique on R/W 25 at Saltby Airfield, the base for the gliding club to which it belonged. As is usual for this method of launching, a 4 ft 6" dia. parchute was incorporated into the end of the launch wire, in this case 17 ft from its end, such that tension in the wire is transmitted through the parachute to prevent its deployment during the launch.

On this occasion, the glider apparently climbed normally until at a height of approximately 300 ft and some 1000 ft along the 3500 ft launch run, the launch was abandoned by the pilot. Instead of climbing in a fairly steep attitude to, typically, a height of 1000—1200 ft, the glider was seen to fly in a level attitude for several seconds before entering a left turn, described by witnesses as a 30° banked balanced turn.

During this time the launch wire parachute was seen from the launch point to be deployed but not descending at the expected rate, and to be positioned below and to the left of the glider fuselage. It was also observed that the glider had apparently adopted a glide angle similar to the angle made by the launch wire from near the glider down to the far end of the runway.

After it had turned through approximately 180° and descended to a height estimated at between 150 and 200 ft, the left wing was seen to drop suddenly after which the glider descended rapidly to the ground in a steep nose down attitude whilst rotating quickly to the left.

It came to rest on a heading of 170° m, 140 ft to the south of the runway with its nose/cockpit structure shattered and right wing broken at two positions. The attitude at impact was assessed as nose down, 60°, and right wing low. Fifty feet behind the wreckage lay the intact launch wire, which from this region stretched across the ground in a westerly direction some 2000 ft to the reversing pulley, and in a northerly direction for 200 ft to its end laying on the runway. Some 340 ft back along the wire from this end was a section, 10 ft long, which had been formed into a six turn coil and on which were smears of paint similar in colour to that on the glider.

Examination of the wreckage revealed that all structural damage was consistent with the manner in which the glider struck the ground, with no evidence of any pre-impact defect or malfunction in the flying controls being discovered. Both nose and belly launch cable release mechanisms were serviceable in the forward and back-release modes and neither exhibited any signs of distress in or around their hooks.

The top surface of the left wing exhibited copious evidence of contact with the launch wire from a position 2 ft outboard from the fuselage out to the area of the inboard end of the aileron, a distance of some 15 ft. Marking was present along the whole of the trailing and leading edges over this distance, that on the leading edge commencing several inches back from the stagnation point. The character of these markings was consistent with the launch wire bearing both lightly and heavily over the wing whilst skating to and fro in a spanwise sense coincidentally with moving in a chordwise sense. One region in line with the inboard edge of the aileron, bore deep witness marks from the wire around the leading edge, across the wing top surface and between the fixed wing structure and lower edge of the aileron end rib. The inner 12" of the aileron had been broken off in an upward sense and was found on the ground between the left wing and launch wire.

From the investigation it seems probable that following abandonment of the launch, for an undetermined reason, the launch wire parachute deployed and was carried over the left wing of the glider. It is a known phenomenon that such a parachute may 'fly-up' on release particularly where the angle of the wire to the ground is shallow and the tow car is still moving. This effect and/or rapid pitch down and acceleration of the glider during recovery would be possible reasons for the wire, on this occasion, to have risen over the wing.

The British Gliding Association provides the following advice to gliding organisations in order to minimise the risk from this method of launching.

1) Winch/car drivers should stop immediately, or as soon as possible, if a launch is abandoned as without the towing force the parachute cannot 'fly'.

2) Releasing the cable at the car or cutting it at the winch probably gives the glider pilot a better chance if the cable hangs up.

3) Use the smallest cable parachute you can to further minimise the risk. This is also relevant in a low level launch failure when the parachute may envelope the nose and cockpit of the glider.

Pilots should be aware that:

4) The risks are probly greatest in a launch which is too slow — given the requirement on releasing to lower the nose immediately and gain speed.

5) Above all, if a foul up happens, then the best chance of survival is to go straight ahead.