

AAIB Bulletin No: 11/95 **Ref:** EW/G95/07/22 **Category:** 1.3

Aircraft Type and Registration: i) Piper PA-22-108 Colt, G-ARKM
 ii) Pitts S-2B Special, G-SKYD

No & Type of Engines: i) 1 Lycoming O-235-C1B piston engine
 ii) 1 Lycoming AEIO-540-D4A5 piston engine

Year of Manufacture: i) 1961 ii) 1984

Date & Time (UTC): 29 July 1995 at 1325 hrs

Location: Clacton Airfield, Essex

Type of Flight: i) Private ii) Private

Persons on Board: i) Crew - 1 Passengers - 1 + infant
 ii) Crew - 1 Passengers - None

Injuries: i) Crew - None Passengers - None
 ii) Crew -None Passengers - N/A

Nature of Damage: i) Damage to right wing and fin post
 ii) Damage to left lower wing and left spat

Commander's Licence: i) Basic Commercial Pilot's Licence
 ii) Private Pilot's Licence with IMC and Night Ratings

Commander's Age: i) 51 years
 ii) 40 years

Commander's Flying Experience: i) 1,092 hours (of which 135 were on type)
 Last 90 days - 29 hours
 Last 28 days - 14 hours
 ii) 3,500 hours (of which 200 were on type)
 Last 90 days - 35 hours
 Last 28 days - 8 hours

Information Source: Aircraft Accident Report Forms submitted by the pilots

The pilot of 'YD' (Pitts Special) taxied to the holding point for grass Runway 18 at Clacton Airfield via the eastern taxiway. The weather was fine with good visibility and a light easterly wind of 5 to 10 kt. Having completed his pre-takeoff checks he transmitted to Clacton Radio that he was "lining up" behind a Super Cub aircraft (G-ARAM) that had just landed and ahead of another aircraft that was approximately 1.5 nm on finals for Runway 18.

The pilot of 'YD' reported that he manoeuvred his aircraft onto the runway so that he could not only see the vacating aircraft but also the aircraft on short finals. The landing Super Cub was slow to clear the runway so he transmitted for him to "expedite vacating". Once the runway was clear he commenced his take-off roll and departed the airfield. Ten minutes later he returned to land. Fifteen minutes after landing he took off again for a further short duration flight. After the second landing the aircraft was refuelled and it was at this time that he noticed damage to the left spar and underside of the lower left wing of his aircraft.

The pilot's initial assumption was that the aircraft had hit some debris on the runway during one of the previous takeoffs. He therefore informed a member of the airfield staff and together they carried out a runway inspection. Nothing unusual was found on the runway.

When he returned to the club house he was informed that the pilot of a Piper Colt aircraft (G-ARKM), who had been visiting Clacton earlier that day, had contacted the airfield claiming that his aircraft had been hit by the departing Pitts Special during its first takeoff.

The pilot of 'KM' (Piper Colt) reported that following his pre-flight checks he taxied for a departure from Runway 18. His taxi route was to take him along the edge of Runway 30 to cross the active runway at the 36 threshold. Before he crossed the runway he checked that there were no aircraft on approach or taking off. He transmitted to Clacton Radio that he was "crossing the active" and the reply was "hold position for departing aircraft". Although he was not infringing the active runway the pilot decided to turn to the left through 180° to increase his clearance from the runway edge. As the aircraft was 45° into the turn the pilot saw the top wing and fuselage of the departing Pitts Special as it flew low over a rise in the runway. As his aircraft continued to turn through 150° it was shaken violently by what was thought to be the slipstream of the departing aircraft. No external inspection was made and with no apparent damage to his aircraft the pilot departed for his destination and landed without incident. The damage to the aircraft, which was noticed during the subsequent refuelling, included red paint marks on the fin post and right wingtip. The Pitts Special was painted red.

Grass Runway 18 at Clacton has a published take-off run available of 596 metres (1,955 feet) and a width of 18 metres (59 feet). The estimated position of the Piper Colt at the time of the collision was 571 metres (1,873 feet) from the start of the available take-off run. The height of the top of the Piper Colt's tail fin from the ground is approximately 2.39 metres (7 feet 10 inches). The published takeoff distance to 15 metres (50 feet) agl of the lower powered Pitts Special S1, with a 180 hp engine compared to the 260 hp engine of the S-2B variant, is 331 metres (1,085 feet).

The pilot of the Pitts Special was seated in the rear seat of the aircraft for takeoff and reported that the view is severely restricted forward of the nose and approximately 20° either side of straight ahead during takeoff.