



MINISTRY OF DEFENCE

Military Aircraft Accident Summary

Aircraft:	2 Viking T1 Gliders ZE654 & ZE677
Date of accident:	5 August 1995
Place of accident:	Near RAF Sealand, Clwyd
Casualties:	2 Fatal and 1 Major

Synopsis

1. Several gliders were launched from RAF Sealand on the afternoon of 5 August 1995. Whilst soaring in a nearby thermal, two of them collided. ZE654 entered a near vertical dive and crashed into the ground close to the airfield. Sadly, both occupants, a civilian instructor and an Air Training Corps (ATC) cadet, were killed. The other glider, ZE677, although damaged, landed at RAF Sealand; its passenger was unhurt, but the captain sustained major injuries. The Inquiry concluded that the accident was most probably caused by the captain of ZE654 who had failed to see the other glider in time to avoid a collision. There were no findings of human failings against the captain of ZE654, as the Board considered a number of contributory factors which could not be discounted. There was no evidence of human failings against the captain of ZE677.

Background

2. The Viking gliders, ZE654 and ZE677, were operated by No 631 Volunteer Gliding School (VGS), which is a unit staffed by civilians, some of whom are commissioned into the RAF Volunteer Reserves. The unit provides air experience flights for ATC and Combined Cadet Force cadets and trains them to solo standard.

Circumstances

3. Weather conditions in the area were ideal, with bright sunshine, good visibility and no cloud. Shortly after launch, the captain of ZE654 joined a thermal to the southwest of the airfield and was soon joined by three other Vikings, one level with and two, including ZE677, below him. Some 2 minutes later, after four to five climbing orbits to the right, the newly arrived gliders were level with ZE654, just below 2000 feet. The captain of ZE677 noticed ZE654 to her right, belly-up and parallel to her flight path. She reduced bank to increase separation but lost sight of ZE654, probably because it had crossed her flight path and was now slightly ahead, slightly higher and to the left of her. Shortly afterwards, the two aircraft collided.

4. Immediately after the collision, ZE654 rolled port to 90° of bank and entered a steep dive before rolling a further 540° to port. At about 1000 feet, the roll stopped and the glider dived into the ground. Although shaken, the crew of ZE677 attempted to abandon the damaged glider but were unable to jettison their canopies. The captain ordered the passenger to remain in the cockpit and completed a downwind landing, straight ahead, on the airfield.

Rescue/Salvage Operation

5. The civil emergency services attended the crash site of ZE654. The crew of ZE677 were assisted from the glider by VGS staff and the captain was taken to hospital.

Aircraft Damage

6. ZE654 was destroyed on impact, however, ZE677 suffered repairable damage.

Investigation

7. The Board was reliant on evidence of the surviving crew and others operating in the vicinity. The Inquiry concluded that the most likely cause of the accident was the failure of the captain of ZE654 to see the other glider in time to take avoiding action. The Board identified a number of factors which had a bearing on the accident. The principal factors were aircrew training, ability and lookout. The investigation also revealed that military instructors are given little formal guidance on how to determine the location of other gliders in the same thermal and that neither civilian nor military gliding communities have protocols to ensure adequate separation in thermal conditions.

Safety Recommendations

8. Measures have been put in hand to enhance situational awareness amongst the gliding community. The Air Cadet Central Gliding School will liaise with the British Gliding Association in the development of protocols for thermalling flight for use by all glider pilots in the UK. Measures have also been taken to brief all who fly in Viking gliders on the correct sequence of actions for canopy jettison.

3 April 1996