



# MINISTRY OF DEFENCE

## Military Aircraft Accident Summaries

MAAS 11/81  
17 August 1981

### AIRCRAFT ACCIDENT INVOLVING ROYAL AIR FORCE HAWK T1 XX 262

Date: 17 May 1980  
Parent Airfield: RAF Kemble  
Place of Accident: Brighton  
Crew: One (Pilot)  
Casualties: One slight (Pilot)

#### CIRCUMSTANCES

1. On the afternoon of 17 May 1980, the Royal Air Force Aerobatic Team - the Red Arrows - carried out a public display at Brighton. The weather was suitable for the full display to be flown; this starts with close formation aerobatics by all 9 aircraft and involves 2 aircraft - the 'Synchro Pair' - breaking away from the main formation to perform opposing passes at very low level, synchronised with the remainder of the main formation.
2. The display line chosen was over the sea, parallel to the coastline, and between the Palace and West Piers. The show proceeded normally until the fourth 'opposition' pass by the Synchro Pair, when No 2 of the pair struck the mast of a yacht which, unnoticed, had motored slowly onto the previously clear display line. The yacht carried no sail at the time.
3. The collision damaged the flying controls of the aircraft, which then rolled uncontrollably to the right. Just 3 seconds after the collision, with the aircraft almost inverted and at no more than 300 feet above the sea, the pilot ejected. Although at the very limits of the seat's parameters the escape was successful and the pilot, who suffered only slight injury, was quickly rescued by a motor boat. The aircraft crashed into the sea beyond the Palace Pier. There were no other casualties.

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#### CAUSE

4. The authorised minimum height for the Synchron Pair at the time of the accident was 35 feet. This height was safe given a clear range whilst still providing a spectacle for the public. The display area between the piers was clear during the first part of the Synchron Pair display, but at the crucial moment the yacht, with a 44 foot light grey mast and carrying no sail, moved into the display line. There was no embargo on boat movements during the display and therefore no reason for the skipper of the yacht to suspect that his passage would hazard the Synchron Pair. The movement of the yacht was not anticipated nor noticed in time to warn the pilots. The pilot of XX 262 did not see the thin, slow-moving obstruction against the vertical pier structure and the sea, and his aircraft struck the mast about 4 inches below its peak. In the circumstances, no blame was attached to the pilot.

#### REMEDIAL MEASURES

5. Immediately following the accident the minimum height for all Red Arrows displays was raised to 100 feet. The rules and procedures for the team were reviewed and the need for foresight and vigilance both in the planning and on the spot control was re-emphasised to avoid unexpected hazards.

#### CLAIMS

6. Claims totalling £2311 have been notified and accepted.

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