MINISTRY OF DEFENCE

Military Aircraft Accident Summaries

7/90

6 June 1990

AIRCRAFT ACCIDENT TO ROYAL AIR FORCE

TORNADO ZE833

Date:	21 July 1989
Parent Airfield:	RAF Leeming
Place of Accident:	35nm North East of Newcastle
Crew:	Two
Casualties:	1 Fatal and 1 Minor

CIRCUMSTANCES

1. On the morning of the 21 Jul 89 Tornado F3, ZE833 led a low level interception training sortie with evasion over the North Sea. There was no cloud in the operating area, but there was a haze layer from 4500 down to 1000 ft in which the horizon was indistinct. At 250 ft the visibility was around 10 km with a well defined horizon; the sea was calm, but not glassy. Overall, it was assessed as fit for the exercise.

2. ZE833 led the 'target' pair of aircraft for the first interception at 250 ft and 400 kts on a northerly heading. Following an uneventful intercept, with the fighters positioned behind the targets, ZE83 climbed to 4000 ft, resumed a northerly heading and started to run out of the engagement. The pilot of ZE833 rolled the wings level and dropped the nose to 20-25^0 nose down. As he approached 1000 ft he selected the wings of 67^0 sweep and began to pitch the nose up slowly. The navigator, who had been looking over his shoulder at the fighters, became aware of a lower than normal nose down attitude. He looked forward to check the altimeter, saw a reading of 3-400 ft decreasing and shouted a warning to the pilot as the radar altimeter low height warning, set at 200 ft, activated.

3. The aircraft struck the sea in a slightly nose up attitude and was immediately engulfed in a fireball. The navigator pulled his ejection seat handle just before the tail of the aircraft hit the water. He suffered minor burns as he passed through the fireball. The pilot's escape and survival equipment appeared to have functioned correctly, but during the impact and ejection he sustained multiple injuries, including a very severe head injury which would have caused instant loss of consciousness. Once in the water he made no attempt to carry out any survival procedures and drowned.

CAUSE

4. The pilot failed to initiate a recovery from the descent in time to prevent the aircraft hitting the sea. It was not possible to determine the precise reason for his failure to recover, but the most likely was that he had been initiating what he believed to be a smooth level off manoeuvre from 1000 ft but he did not appreciate that he was significantly undercompensating for the loss of lift due to the wings sweeping back to 67^0. The smooth sea may have given him insufficient visual cues and, until the navigator's warning, he may well have been totally unaware of the danger of the situation.

SUBSEQUENT ACTIONS

5. A trial is being conducted on a Ground Proximity Warning System using the radar altimeter and Inertial Navigation system velocities in conjunction with existing on-board computers. If the outcome is successful, RAF fast-jet aircraft may be modified with this equipment.

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