

AS365N2, G-MLTY

AAIB Bulletin No: 12/2000 Ref: EW/G99/11/16 Category: 2.2

Aircraft Type and Registration: AS365N2, G-MLTY

No & Type of Engines: 2 Turbomeca Arriel 1C2 turboshaft engines

Year of Manufacture: 1991

Date & Time (UTC): 27 November 1999 at 1530 hrs

Location: En route, over Leeds/Liverpool canal

Type of Flight: Public Transport

Persons on Board: Crew - 1 - Passengers - None

Injuries: Crew - None - Passengers - N/A

Nature of Damage: Left mid cabin door lost in flight
(fell into Leeds/Liverpool canal)

Commander's Licence: Airline Transport Pilot's Licence (Helicopters) with Instrument Rating

Commander's Age: 34 years

Commander's Flying Experience: 5,335 hours (of which 130 were on type)
Last 90 days - 47 hours
Last 28 days - 34 hours

Information Source: Aircraft Accident Report Form submitted by the pilot, further correspondence with the pilot and personnel of the maintenance company

The helicopter was positioned to a private site near Burnley, from where two short flights took place, one with four children and two adults and the other with two children and three adults. The co-pilot's seat was occupied on both trips and the passengers were briefed on the use of the exits by the pilot before each flight. The two flights were carried out uneventfully and, after the second group of passengers had disembarked, the pilot completed a walk-around check. The helicopter then took off for the return flight to Leeds. On the final approach to Leeds Bradford Airport, at a range of about 1¹/₂ miles the left side middle door, the left front passenger door, jettisoned without warning. The pilot informed ATC of the occurrence and continued the approach at 70 kt with significant yaw applied to prevent items exiting from the cabin. The remainder of the approach and landing were completed without further incident. The door was retrieved from the Leeds/Liverpool canal by a member of the public.

The middle doors on both sides of the helicopter are hinged at their forward edge and latched at the rear. Jettison handles, one for each door, are positioned on the door posts forward of the middle doors. (Figure 1) The handles are 'locked' in the normal vertical position by 'snap wire' and covered by clear frangible plastic covers. With the VIP internal trim configuration, as in G-MLTY, the plastic covers are secured by three screw type fasteners on the inside face of the door post, forward of each handle. Above each jettison handle there should be two associated labels. The closest, immediately above the handle carrying the legend, 'PULL TO JETTISON' and above that a further label, 'DOOR JETTISON HANDLE'. These labels were missing on G-MLTY. It is concluded that these labels were omitted when the interior was last renewed but the maintenance organisation responsible has since changed hands. Consequently, records were not readily available and they may not have recorded such detail in any case.

To jettison a door, the frangible cover can be broken away from the associated jettison handle and the top of the handle moved rearwards breaking the 'snap wire'. Movement of the handle retracts two pins, which secure the door post elements of the two door hinge assemblies, and a top bolt, after which the forward edge of the door can be pushed outwards.

On inspection the 'snap wire' of the left middle door jettison handle was found broken but the plastic cover intact. The pilot contacted the passengers from the second flight and one confirmed that, as the pilot was exiting the helicopter to come and open the passenger doors, he operated the jettison lever in error.

With some standards of basic interior trim, a slightly different design of plastic cover is mounted over the jettison handle and secured on the rear face of the door-post. With this configuration the lever cannot be moved to the 'jettison' position without breaking the frangible cover.