No: 11/84 **Ref: EW/G84/10/03**

Aircraft type and registration:	Beechcraft D55 Baron G-AWAD (Light twin engined, fixed wing aircraft)
Year of Manufacture:	1968
Date and time (GMT):	23 October 1984 at 0906 hrs
Location:	Hurn Airport
Type of flight:	Private
Persons on board:	Crew — 1 Passengers — Nil
Injuries:	Crew — Nil Passengers — N/A
Nature of damage:	Damage to both propellers, the landing gear and the under-surface of the fuselage
Commander's Licence:	Private Pilot's Licence
Commander's Age:	N/K
Commander's total flying experience:	383 hours (of which 127 hours were on type)
Information Source:	Aircraft Accident Report Form submitted by pilot with additional information from engineer's report and AIB examination.

The aircraft was making a flight from Hurn to Guernsey with the pilot as the sole occupant. When the speed had reached approximately 65 kt during the take-off run the landing gear started to retract and because the aircraft did not have flying speed it subsided on to the runway. As the aircraft slid along on its undersurfaces to come to rest just off the left hand side of the runway, the pilot completed the shut down checks.

An inspection which was made shortly after the accident revealed that the landing gear lever was in the 'UP' position. The pilot stated that he made no attempt to raise the landing gear himself. The gear is electrically operated and protection against inadvertent operation on the ground is afforded by a micro-switch positioned on one of the main gear legs. It would appear therefore that during the take-off run the aircraft's weight came off the undercarriage sufficiently to cause the micro-switch to operate and as a consequence of the gear lever being already in the 'UP' position, the retraction cycle commenced. Confirmation that premature retraction had occurred was supplied by the direction of scuff marks on the tyres, the tripping of the gear motor circuit breaker and the illumination of the low voltage warning light during the incident.

A subsequent examination of the accident aircraft revealed no defects in the gear operating system. However, it was discovered that the gear lever, which normally has to be pulled out of a detent against spring pressure before a selection can be made, could be moved both ways between the 'DOWN' and 'UP' positions without the necessity of pulling the handle out. An accidental knock could thus have easily repositioned the lever to the 'UP' position while the aircraft was on the ground. The pilot later recalled that during take-off he had reached across with his hand under the right hand side of the control column and had switched the transponder from STAND BY to ON. In doing so his hand would have passed close to the gear lever which as a result of modifications had been repositioned between the transponder and auto-pilot selector panels. It was later found that there was a possibility of accidentally making contact with the gear lever while carrying out a number of other cockpit drills. Therefore, although it seems possible that the gear lever was inadvertently knocked to the 'UP' position during the take-off, it could also have easily occurred at any other time the pilot was performing his checks.

The gear selector mechanism on the accident aircraft was compared with others which operated correctly in having the lever firmly detented. It would appear that the ability to move the lever without restraint was caused by a combination of wear on the surfaces of the lever and the profile of the locking detent together with a weakening of the spring strength which failed to hold the lever sufficiently into the detent.