**Accident**

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| **Aircraft Type and Registration:** | Piper PA-28-181 Cherokee Archer II, G-BPYO |
| **No & Type of Engines:** | 1 Lycoming O-360-A4M piston engine |
| **Year of Manufacture:** | 1989 |
| **Date & Time (UTC):** | 6 December 2008 at 1525 hrs |
| **Location:** | Crosland Moor, near Huddersfield, West Yorkshire |
| **Type of Flight:** | Private |
| **Persons on Board:** | Crew - 1 Passengers - 2 |
| **Injuries:** | Crew - None Passengers - 1 (Minor) |
| **Nature of Damage:** | Propeller, cowlings and wings damaged, landing gear detached |
| **Commander's Licence:** | Private Pilot's Licence |
| **Commander's Age:** | 65 years |
| **Commander's Flying Experience:** | 527 hours (of which 420 were on type)<br>Last 90 days - 11 hours<br>Last 28 days - 0.5 hours |
| **Information Source:** | Aircraft Accident Report Form submitted by the pilot and subsequent enquiries by the AAIB |

**Synopsis**

The aircraft failed to gain sufficient airspeed during the takeoff roll, causing the pilot to abort the takeoff. The aircraft overran the runway and was substantially damaged. Contributory factors to the accident were the carburettor heat control inadvertently being left in the ON position, a hurried departure due to the late hour and the takeoff being performed towards a low sun, which presented a significant distraction.

**History of the flight**

The pilot was attempting to take off from Runway 25, which has an asphalt surface for the first 550 m followed by 250 m of grass; the asphalt section has a 2.6% upslope over the first three quarters of its length. The pre-takeoff checks were completed satisfactorily. The pilot applied carburettor heat during the backtrack to the Runway 25 threshold as a precaution against carburettor icing, as the damp grass suggested that the relative humidity was high. According to the pilot's calculations, the aircraft's weight and CG were within limits.

The takeoff roll was towards the setting sun, which the pilot found to be a significant distraction and he found it difficult to see inside the cockpit after looking out. The passenger in the right seat, who was a qualified PPL

holder, assisted by calling out the airspeed. By the time the aircraft reached the end of the asphalt section, it had reached a speed of only 50 kt and the pilot elected to abandon the takeoff. He was unable to stop the aircraft within the remaining runway and it overran the end and was substantially damaged. The three occupants were able to evacuate the aircraft without assistance. The pilot later established that he had left the carburettor heat control in the ON position.

**Comments**

The pilot candidly noted that his previous 10 hours of flying had been in an aircraft which was not equipped with carburettor heat and that this, and his hurriedness to depart given the late hour, may have been contributory factors to the oversight. He has since been debriefed by his club's Chief Flying Instructor on takeoff performance, establishing an abort point, the effect of carburettor heat on engine power, the time of day and the dangers of doing additional adjustments and checks after all regular checks have been completed. He has also completed a successful check flight covering these points.