ACCIDENT

Aircraft Type and Registration:	Tiger Cub 440, G-MMIH
No & Type of Engines:	1 Fuji-Robin EC-44-PM piston engine
Year of Manufacture:	1984 (Serial no: SO130)
Date & Time (UTC):	5 June 2016 at 1300 hrs
Location:	Crosland Heath Golf Club, Huddersfield, West Yorkshire
Type of Flight:	Private
Persons on Board:	Crew - 1 Passengers - None
Injuries:	Crew - 1 (Serious) Passengers - N/A
Nature of Damage:	Substantial damage to the landing gear, forward fuselage and wings
Commander's Licence:	Private Pilot's Licence
Commander's Age:	55 years
Commander's Flying Experience:	326 hours (of which 4 were on type) Last 90 days - 1 hour Last 28 days - 1 hour
Information Source:	Aircraft Accident Report Form submitted by the pilot

Synopsis

After taking off with the intention of conducting a few circuits, the pilot had turned the aircraft onto the downwind leg when the engine began to lose power. Eventually it would run at no more than 2,500 rpm, compared with a normal maximum of 5,200. The pilot was forced to land on a golf course adjacent to the airfield, but the presence of golfers on the landing area caused him to alter course so that the aircraft landed heavily on rough ground. The pilot, who sustained a back injury, assessed the symptoms of the power loss to be indicative of carburettor icing.

History of the flight

The pilot arrived at the airfield at around noon with the intention of mending a puncture before taking the aircraft for what would be its first flight of the year. Having attended to the puncture he then spent another hour checking the aircraft, including the flying controls, engine and fuel system. The aircraft was then pulled out of its hangar, refuelled with fresh fuel and, after setting the parking brake and priming the carburettors, the pilot started the engine by hand-swinging the propeller. The engine was subsequently run up to its normal operating temperature and power checks carried out, with satisfactory results. The pilot then taxied the aircraft to the flying club caravan, shut down the engine and went for a cup of tea.

A short time later he returned to the aircraft, conducted another walk-around check and started the engine. He taxied towards the in-use runway, running the engine up to full throttle in short bursts, confirming that full power was available. The takeoff run was normal, with the aircraft becoming airborne at 35 kt, subsequently climbing at 500 ft/min with an indicated airspeed of 40 kt. The pilot intended to conduct a few circuits and, at 500 ft, he began to turn the aircraft through 180° onto the downwind leg. After the turn was completed the engine started to lose power, with the maximum achievable rpm down from 5,200 to around 2,500. The pilot considered that the engine fuel pump may have failed and gave a few squeezes on the 'rubber bulb' back-up pump located under the seat (this is mainly used for priming the carburettors prior to starting the engine). This had no effect and moving the throttle back and forth similarly achieved no result other than changing the rpm between tick-over and 2,500.

By now the aircraft was down to around 400 ft and the pilot was aware he needed to find a landing site. He considered that he had insufficient height to land back on the airfield; an influencing factor here was the presence of a quarry adjacent to the runway, in which the aircraft may have ended up in the event he failed to reach the airfield. Crosland Heath Golf Club was immediately below and the pilot lined up on one of the fairways. He was aware that this would entail a downwind landing but considered that this was acceptable as the aircraft was too low to turn into wind, which was light at only around 5 kt. At a height of about 200 ft the pilot became aware of golfers on his intended landing area and altered course to land on some rough ground to the side of the fairway. The aircraft landed heavily and rotated to the left before coming to rest. The pilot climbed out of the aircraft, by which time a number of golfers had arrived to provide assistance. The pilot then became aware of a sharp pain in his back and lay down on the grass to await the arrival of the ambulance.

The investigation

The pilot's subsequent examination of the wreckage included the engine and accessories such the fuel pump and the gascolator. No evidence of a failure or malfunction was found. It is the pilot's conviction that the nature of the power reduction was indicative of carburettor icing. The weather on the day was described as "approximately 12°C and humid". The engine on this aircraft type has no provision for carburettor heat.