ACCIDENT

Aircraft Type and Registration:	Jabiru UL-D, G-EUAN
No & Type of Engines:	1 Jabiru 2200B piston engine
Year of Manufacture:	2007 (Serial no: 666)
Date & Time (UTC):	30 September 2018 at 1541 hrs
Location:	Rochester Airport, Kent
Type of Flight:	Private
Persons on Board:	Crew - 1 Passengers - 1
Injuries:	Crew - None Passengers - None
Nature of Damage:	Damage to propeller and nose gear collapsed
Commander's Licence:	National Private Pilot's Licence (Microlight)
Commander's Age:	42 years
Commander's Flying Experience:	105 hours (of which 7 were on type) Last 90 days - 14 hours Last 28 days - 5 hours
Information Source:	Aircraft Accident Report Form submitted by the pilot

Synopsis

After carrying out a go-around after being too high on final approach the pilot flew a second circuit. The second approach felt normal but after landing the nosewheel bounced up and down and then the nose gear collapsed. The pilot considered he might have rushed the landing because his passenger was feeling airsick. An unapproved solid nosewheel tyre had been fitted which may have contributed to the nose gear collapse.

History of the flight

The pilot had obtained his National Private Pilot's Licence (Microlight) on the X-Air microlight. He also had experience on the Eurostar, Ikarus C42 and Flight Design CTSW. He had undertaken 2 hours transition training with an instructor on the Jabiru and had logged 6 hours 40 minutes on type at the time of the accident.

After an uneventful cross-country flight from Clacton to Rochester the aircraft entered the circuit for a landing on Runway 34 grass. The wind was from 330° at 5 to 10 kt. The passenger was feeling airsick, so the pilot was keen to land. Once on final approach he realised that he was too high, which he later attributed to trying to rush the approach. He initiated a go-around and flew another circuit. The second approach felt normal and he made what he thought was a normal landing. However, he then felt a jolt which he stated was similar to "driving over a speed bump". The nosewheel came up and then touched down again. Before he could react, it bounced a few times and the nosewheel collapsed.

The propeller dug into the ground but the aircraft came to rest with the engine still running. The pilot stopped the engine and vacated the aircraft with his passenger.

The pilot could not recall his approach speed but he considered he might have been rushing the landing because of his airsick passenger.

Aircraft examination

The aircraft was examined and repaired by the UK distributor for Jabiru. They stated that an unapproved solid nosewheel tyre had been fitted. It had the appearance of a normal tyre with a pressure rating on the sidewall, but it had been filled with rubber. They stated that it weighed 1.2 kg more than a standard nosewheel tyre with an innertube, and that it had no suspension characteristic. They estimated that the tyre would normally contribute about 20% of the total suspension, but not with a solid tyre.

Aircraft owner's comments on the solid nosewheel tyre

The aircraft owner, who was not the pilot in the accident landing, stated that he had owned the aircraft for 10 to 12 years and had suffered 7 or 8 nosewheel tyre punctures during that time. It was never clear to him what had caused the punctures apart from finding pinprick holes in the inner tube. A flying instructor who owned a Jabiru in Spain told him that he had fitted a solid nosewheel tyre and had not had any problems, so he suggested to the owner that he fit one too. The owner asked the instructor if this was approved and was told that it was.

The owner fitted the solid tyre about 9 months before the accident and had logged about 20 hours without any issues.

Light Aircraft Association comments on the solid nosewheel tyre

The Light Aircraft Association (LAA) was consulted by the AAIB about the solid nosewheel tyre. They stated that such a tyre was not an approved modification to the Jabiru. They have decided to issue an LAA Airworthiness Alert directed at all Jabiru types to explain that the use of solid tyres was not acceptable on this type. They also plan to write to owners of the Jabiru UL-D to advise them that solid tyres are not acceptable and, if fitted, must be replaced before further flight.

Analysis

The nose gear collapse on landing was probably caused by a combination of a heavy nose gear touchdown and the fitment of a solid tyre. The LAA is planning to take appropriate action to address the fitment of solid tyres. The heavy nose gear touchdown was probably the result of the pilot's rushed landing due to his passenger feeling airsick.