

ACCIDENT

Aircraft Type and Registration:	Europa XS Europa, G-CCUL	
No & Type of Engines:	1 Rotax 912 ULS piston engine	
Year of Manufacture:	2004	
Date & Time (UTC):	24 May 2009 at 1550 hrs	
Location:	Rayne Hall Farm, Essex	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - 1
Injuries:	Crew - None	Passengers - None
Nature of Damage:	Damage to propeller and spinner and to wiring harness	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	48 years	
Commander's Flying Experience:	1,247 hours (of which 177 were on type) Last 90 days - 18 hours Last 28 days - 9 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

On landing, the aircraft settled lower than usual and a smell of burning rubber was apparent in the cockpit. When the pilot exited the aircraft he realised the gear had semi-retracted and the tyre was rubbing against the wheel well structure. The pilot reported this was most likely due to the latch on the gear selection lever not being properly engaged when the gear was selected down, allowing a partial retraction under the weight of the aircraft.

History of the flight

After a routine flight, the pilot joined the circuit on a left base leg for Runway 09. About one mile from the threshold he completed his landing checks, including

selecting the landing gear lever to the DOWN position. The flare and hold-off for landing were normal, but as the aircraft settled onto the runway after touching down, the pilot considered it to be much closer to the ground than normal. During the rollout the pilot noticed a smell of burning rubber, before observing a detached propeller blade pass over the aircraft canopy. He taxied the aircraft off the side of the runway and exited normally.

Aircraft description

The Europa is a popular homebuilt 'Permit to fly' aircraft. It may be equipped with either a conventional, fixed tricycle landing gear, or a large retractable main wheel with a fixed tailwheel and retractable outriggers

on the wings. The accident aircraft was equipped with the latter of the two options. This system uses a single long-throw lever that lowers the single main wheel, flaps and outriggers at the same time. With the gear retracted, the lever is operated by moving it to the left, out of a gate, then firmly backwards to overcome the restraining bungee cords and the airloads acting on the deploying gear. To lock the gear and flaps down, the lever is moved to the right to engage another gate. The lever is biased to the right, such that it tends to drop into this gate. A spring-loaded latch then drops into the slot between the two gates to ensure the gear is locked in the DOWN position.

Operational aspects

When the gear is extended, the flaps are also deployed. This causes the aircraft to pitch nose-down and changes the 'approach picture' for the pilot. The pilot stated that he associated this change in 'picture' with the gear being successfully extended, since the two systems are linked mechanically. During his final approach he confirmed that the 'picture' was correct and his

passenger cross-checked that he had called out the landing gear check and moved the lever. Observers on the ground later confirmed that the gear was deployed as the aircraft passed over on final approach.

Engineering findings

A thorough inspection of the aircraft after the accident, by the pilot and his LAA inspector, confirmed that there were no failures in the gear mechanism that could have caused the gear to retract on the ground. Additionally, there were no witness marks to suggest that the gear lever had jumped or been forced out of position.

Conclusion

The pilot concluded that the evidence pointed towards him having selected the gear down but not ensured that the latch had engaged to lock the gear in place, thus allowing it to retract under the weight of the aircraft. He added that confirming the latch was secure would normally be part of his pre-landing routine, but on this occasion he had omitted to carry out the check.