Safety recommendation no. 583

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Number of the final report	2386
Safety deficit	In a motorglider Arcus T built in 2011, which was equipped with an auxiliary engine Solo Aircraft Engine 2350 D with serial number 239, the propeller axle broke during engine start and the propeller fell to the ground from a height of about 630 m. At that time, the engine had a total of 72 hours of operation and had been installed in the motorglider since its manufacture in 2011. During this time, the axle was never subjected to a maintenance measure such as a crack test, which was not required by the manufacturer. A life time limit for the axle was also not specified by the manufacturer.
Safety recommendation	The European Union Aviation Safety Agency (EASA), in cooperation with the aircraft manufacturer Schempp-Hirth and the manufacturer of the auxiliary engine Solo Vertriebs- und Entwicklungs-GmbH, should define appropriate specifications concerning the maintenance of the auxiliary power unit and in particular its propeller axle.
Addressees	EASA Europäische Agentur für Flugsicherheit
Stage of the implementation	Implemented. On 7 November 2022, the European Union Aviation Safety Agency (EASA) informed the STSB of the measures taken in relation to Safety Recommendation No. 583 as follows: The EASA, in cooperation with the manufacturer of the auxiliary engine Solo Vertriebs- und Entwicklungs GmbH, has issued on 15 March 2022 the Airworthiness Directive (AD) 2022-004, further revised on 29 April 2022 that adds to the applicability of the superseded previous AD 2015-005R1 all Solo Model 2350 D engines, all manufacturer serial numbers. Current AD 2022-004 mandates a new major change to Solo 2350D through which a life limit of 30 engine operating hours of the old axles and of 50 engine operating hours of the new axles were introduced. The engine manuals were updated to incorporate the introduction of the life limit.
Investigation report concerning the safety recommendation	Schlussbericht Vorbericht