ACCIDENT

Aircraft Type and Registration:	Grob G115E Tutor, G-BYUU	
No & Type of Engines:	1 Lycoming AEIO-360-B1F piston engine	
Year of Manufacture:	1999 (Serial no: 82105/E)	
Date & Time (UTC):	2 October 2018 at 1115 hrs	
Location:	RAF Wittering, Cambridgeshire	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Engine failure	
Commander's Licence:	Commercial Pilot's Licence	
Commander's Age:	74 years	
Commander's Flying Experience:	8,100 hours (of which 100 were on type) Last 90 days - 37 hours Last 28 days - 3 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

The pilot noted an uncommanded reduction in engine speed when returning to Wittering after a successful air test following an engine change. The engine initially recovered but, when the speed reduced again, the pilot made a PAN call. A further loss of power meant that he was unable to maintain height and he transmitted a MAYDAY and prepared to land in a field. The engine stopped prior to the landing, which was accomplished without damaging the aircraft.

Examination found that the engine oil sump drain cap was missing (Figure 1). Loss of the cap resulted in an oil leak and engine seizure.

There is no requirement for the oil cap to be wire locked on the Grob 115E, which is equipped with a modified (inverted) engine oil system to cater for aerobatic manoeuvres. The maintenance organisation considered that the most likely scenario is that the drain cap was not correctly secured after the engine was installed.

The maintenance organisation is reviewing their procedures and, as part of their continuous airworthiness management, is liaising with the manufacturer about an alternative cap that can be wire locked. In the interim, they have introduced an independent check to ensure that the cap is correctly refitted.

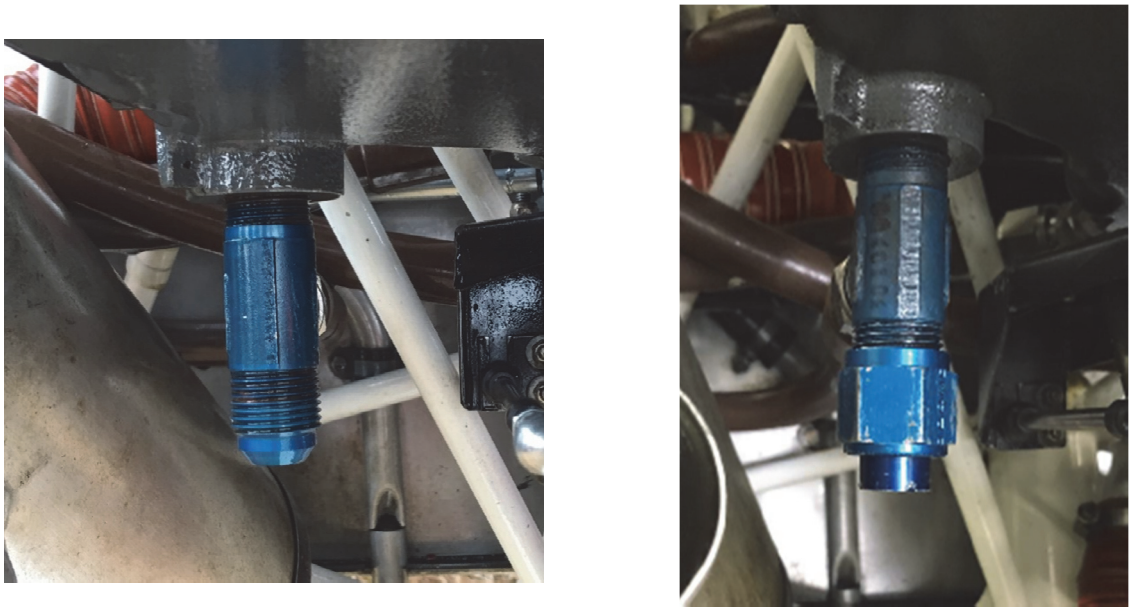

Figure 1

Grob 115E engine oil sump drain
(Left image shows cap missing; right image shows cap installed)