

Jabiru Service Letter: Service Time Recording			JABIRU AIRCRAFT PTY LTD P.O. Box 5186 Bundaberg West Queensland, Australia. Phone:+61 7 4155 177 Fax:+61 7 4155 266 Email: info@jabiru.net.a		
JSL 010-1	Release Date: 21st November 2014	Effective Date: 21st November 2014	Affected Models: See JSL010 Sheet 1	S/No. Range: See JSL010 Sheet 1	Page 1 of 5

SERVICE LETTER: JSL 010-1

Issue: 1

Subject: Service Time Intervals

Release Date: 21st November 2014

Effective Date: 21st November 2014

Affected Models: All Jabiru Engines.

Affected S/No: N/A

Issue	Reason for Issue	Issue Status
1	Original Issue	CURRENT

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2 General

It has come to the attention of Jabiru Aircraft that there exists confusion regarding the method by which time is measured for the purpose of determining service, maintenance and overhaul intervals. There have been numerous instances of engines received by Jabiru for overhaul which have substantially exceeded the allowable time interval because the wrong measurement of time was used when using an EMS (Engine Management System) or air pressure switch system.

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3 Background – Four time measurements

HOBBS TIME - EMS – Hobbs time starts recording the instant that the engine oil pressure exceeds 15psi (or when the engine starts turning) and stops recording the instant the engine oil pressure falls below 15psi (or when the engine stops turning). Hobbs time **is not scaled** and will always record time at the same constant rate as a stopwatch or clock.

TACHO TIME - EMS – Tacho time similarly records time when the engine oil pressure exceeds 15psi. However Tacho time **is scaled**. Time is recorded faster when the engine operates at speeds exceeding cruise rpm and slower when the engine operates at speeds less than cruise rpm. Tacho time is usually always less than Hobbs time because an engine will spend more time at low speed settings (e.g. during Taxiing, Descent etc.) then it will at high speed settings (Take-off and Climb).

HOBBS TIME - ANALOGUE TACHO – Hobbs time starts recording the instant the engine starts turning and stops recording the instant the engine stops turning. Hobbs time **is not scaled** and will always record time at the same constant rate as a stopwatch or clock. (This is also known as direct tachometer hour meters.)

AIR SWITCH TIME – Some aircraft are fitted with an air switch time recorder. The air switch is not scaled, however it does not start recording time until the airspeed of the aircraft exceeds 35 knots (i.e. when the aircraft is in flight). Therefore an Air Switch time recorder does not record any taxiing time during which the engine is of course running. For this reason **Air Switch time is always less than Hobbs Time**.

4 Compliance - Service, Maintenance and Overhaul Time Intervals

All time intervals for service, maintenance and overhaul must be determined using **HOBBS TIME** only, either EMS or analogue tacho system as described above. Scaled TACHO TIME (EMS) and AIR SWITCH TIME must not be used. Use of Hobbs time is prescribed in the current engine maintenance manual (JEM0002-4 at the time of writing).

If a different time recording method has been used for determining service intervals, Hobbs Time recording must now be adopted and entered into the engine maintenance log book.

If any of the aircraft engine time calculation systems (revised or otherwise) indicate 1000 hours, the engine must be submitted for service immediately.

If you have used Tacho time or Air Switch time in any form that Tacho time or Air Switch time is not acceptable. You must revise all times using Hobbs time. If you have recorded Tacho time or Air Switch time in your maintenance log, **do not delete** those records. You must immediately commence using Hobbs time only and note the appropriate Hobbs time as it appears on your instrument at the time of the most recent Tacho time or Air Time entry. Hobbs time shall then apply.

Before the next flight, check the engine maintenance log to ensure that a maintenance or overhaul interval has not been exceeded as a result of using a different time measurement system.

5 Identifying Hobbs time on different instruments

The photographs below shows some common time recording instruments used in conjunction with Jabiru Engine installations. Hobbs Time is highlighted on each of them.

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This is HOBBS TIME

Figure 1 - VDO tachometer



Figure 2 - Dynon SkyView EFIS

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Figure 3 - Dynon D180 EFIS

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Recommendations:

- Operators within Light Sport Aircraft categories should comply with the recommendations of Jabiru Service Letter JSL 010-1.

Compliance:

- The compliance details (section 4) given in JSL 010-1 must be met.

Background:

- This Service Notification has been prepared to make applicable the recommendations of JSL 010-1 for engines and aircraft operating within Light Sport Aircraft Categories.