

Jabiru Service Letter: Pattern Parts		JABIRU AIRCRAFT PTY LTD			
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JSL017	Release Date: 16 th October 2020	Effective Date: 16 th October 2020	Affected Models: See Applicability	S/No. Range: See Applicability	Page 1 of 3

SERVICE LETTER: JSL017

Issue: 2

Release Date: 16th October 2020

Effective Date: 16th October 2020

Subject: Pattern Parts

Affected Models: All Jabiru Aircraft and Engines.

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1 Applicability:

- This document is an informational letter applicable to all models of Jabiru Aircraft and Engines. It replaces JSL017-1.

2 Background:

- This document has been released to highlight and clarify the situation with replacement parts for Jabiru Aircraft and engines and provides general information.
- “OEM Parts” are “Original Equipment Manufacturer” parts. In the context of this letter, an OEM part is sourced from Jabiru Aircraft or possibly via a Jabiru international dealer.
- “Pattern Parts” or “aftermarket parts” are parts which have not been supplied by Jabiru Aircraft.
- “Pattern Parts” appear identical to the OEM part and do not require any modifications to be fitted.
- “Aftermarket parts” are not identical to the OEM part, but are purported to perform the same function as the original part.
- “Counterfeit Parts” or “Fake” parts are parts that are marketed as OEM, aircraft grade or aftermarket parts but are not.

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3 Regulatory requirements

3.1 Australia

- **Experimental** aircraft (e.g. 19 or VH experimental registration). Owners can choose to obtain spare parts from sources other than Jabiru. **In the Experimental category, owners carry the airworthiness risk of Pattern Parts or Aftermarket Parts** when they are installed into their aircraft and engine.
- **Light Sport Aircraft** (LSA) (e.g. 24, 23 or VH LSA registration). Pattern parts and aftermarket parts are not permitted to be used without approval from Jabiru Aircraft.
- **Certified Aircraft** (e.g VH registration). Pattern Parts are not approved to be used unless from an appropriately approved manufacturer. Aftermarket parts need to be approved by an appropriately qualified person (i.e Part 21M engineer).
- **Counterfeit or Fake parts** should be reported to Jabiru or CASA.

3.2 Outside Australia

Many jurisdictions have different rules (check your local rules) but the general guidelines are:

- **Experimental aircraft.** Owners can choose to obtain spare parts from sources other than Jabiru. **In the Experimental category owners carry the airworthiness risk of Pattern Parts or Aftermarket Parts** when they are installed into their aircraft and engine.
- **Light Sport or Manufacturer Approved.** Pattern parts and aftermarket parts are not permitted to be used without approval from Jabiru Aircraft.
- **Certified Aircraft.** Pattern Parts are not approved to be used unless from an appropriately approved manufacturer. Aftermarket parts need to be approved by an appropriately qualified person (see your local civil aviation authority).
- **Counterfeit or Fake parts** should be reported to Jabiru or CASA.

3.3 Examples

In 2015, a situation was reported to Jabiru Aircraft (Australia) where the operator of an experimental category aircraft sourced a fuel filter for use in their aircraft. It's understood that this part was sourced from a local automotive spare parts specialist retailer. On installation it was found that the inlet and outlet pipes of the filter were smaller than the part being replaced and that the original hose clamps did not secure it, resulting in a fuel leak. The part in question matched the commercial part number of the filter that Jabiru Aircraft used up until 2011 and according to published specifications from the filter manufacturer, should have been suitable for the application but it was NOT suitable and had airworthiness implications.

- a) The oil filters used on the Jabiru engine are an automotive type and again it is possible to buy the same part or a generic equivalent from automotive spare parts retailers. However, the filter used by Jabiru includes an element bypass feature – where valving

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inside the filter will allow oil to pass through even if the filter element is blocked. This is a safety feature to minimise engine damage and the chance of engine stoppage in the event of severe oil contamination. Not all generic filters include this feature. In addition, in many cases the generic filter may be slightly larger than the original and will rub on cooling ducts or the cylinder head during operation. In some cases such issues have caused oil leaks, loss of oil pressure and engine damage.

3.4 More on Fake Parts or Counterfeit Parts

- While not strictly a “Pattern Part” issue, in recent years the issue of fake parts has been widely publicised both within aviation circles and in more general applications.
- Where a pattern part will be made by a manufacturer to do the same job as the OEM part a fake part will be made to *look like* it will do the same job. A fake part will usually have been made as cheaply as possible with no care as to the function of the part or the consequences of its failure. Documentation will often be deliberately falsified.

3.5 OEM Parts

- Jabiru OEM parts are sourced from approved suppliers and have been accepted as meeting the requirements of the application. They are subject to quality monitoring against Jabiru-specific procedures.
- Jabiru OEM parts are typically sourced directly from the manufacturer, reducing the possibility of a fake part or counterfeit part.

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4 Recommendations when choosing parts.

4.1 OEM Parts

- Use of Jabiru OEM parts is strongly recommended.

4.2 Pattern Parts

- Be aware that commercial standards in many cases allow a part to retain the same part number despite alterations that affect the form, fit or function. Such parts may also be labelled as a “generic equivalent” despite significant differences.
- Operators should consider how the part may affect the function of the system to which it is installed and the performance of the overall aircraft. For example, fitting a Pattern Part spark plug lead:
 - Direct performance of the lead could affect engine performance in any modes of operation including start-up.
 - The caps may not be as secure on the distributor or spark plugs allowing them to dislodge in flight.
 - Their different materials and size may cause them to rub on an edge or have other mechanical issues.
 - They could also significantly alter the RF emissions (or radio noise) from the engine. This will commonly reduce radio (including transponder and VHF NAV) performance and in some cases can interfere with electrical instruments such as EFIS. This interference will usually take the form of inaccurate data or but extreme cases, the instrument can “crash” altogether.
- Appropriate care and testing must be carried out to be sure of the part’s performance and airworthiness.

Jabiru Aircraft may choose to void any warranty for any Jabiru product which has been damaged due to the use of pattern parts.

OPERATORS USE PATTERN PARTS AT THEIR OWN RISK

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LSA Service Notification: **JSN017**

Issue: **2**

Release Date: **12th October 2020**

Effective Date: **12th October 2020**

Subject: **Pattern Parts**

Affected Models: **All Jabiru Aircraft and Engines.**

Applicability:

- This Notification is applicable to all LSA products which fall within the Applicability ranges given in Jabiru Service Letter JSL017 Issue 2.

Requirement:

- Operators of aircraft within Light Sport Aircraft categories should be aware of the information of Jabiru Service Letter JSL017 Issue 2

Compliance:

- The compliance details given in JSL017 Issue 2 must be met.

Background:

- This LSA Service Notification is an informational letter in line with of JSL017 Issue 2 for Jabiru aircraft, engines and propellers operating within Light Sport Aircraft Categories.