

Jabiru Service Bulletin: Pattern Parts			JABIRU AIRCRAFT PTY LTD P.O. Box 5792 Bundaberg West Queensland, Australia. Phone:+61 7 4155 1778 Fax:+61 7 4155 2669 Web: www.jabiru.net.au Email: info@jabiru.net.au		
JSL017	Release Date: 26th June 2015	Effective Date: 29th June 2015	Affected Models: See Applicability	S/No. Range: See Applicability	Page 1 of 3

SERVICE LETTER: JSL017

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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.

2 Background:

2.1 General

- “OEM Parts” are “Original Equipment Manufacturer” parts. In the context of this letter, an OEM part is sourced from Jabiru Aircraft or our local agent. All things being equal, an OEM part purchased as a spare part years after the machine was built will be identical in form, fit and function to the original or, if different, will come with instructions for fitting.
- “Pattern Parts” are parts which are made by a different manufacturer to do the same job and are sometimes given the same part number.
- OEM parts can usually be obtained only direct from the manufacturer while pattern parts may be widely available from suppliers as a “generic” item.
- OEM parts typically cost more than pattern parts.
- Many Jabiru Aircraft operate in categories where it is acceptable for owners to source and fit spare parts from any retailer. Pattern parts are therefore an accepted part of many Jabiru operations. However, care must be taken that the pattern part is acceptable for use.

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- This document has been released to highlight this situation and provides general information to assist operators in making decisions about pattern parts.

2.2 Examples

Recently 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.

- 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 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.

2.3 Fake 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.

2.4 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. In many cases this quality monitoring includes testing of every part received.
- Jabiru OEM parts are typically sourced directly from the manufacturer, reducing the possibility of a fake part.

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3 Recommendations

3.1 OEM Parts

- Use of Jabiru OEM parts is recommended.

3.2 Pattern Parts

- Where operators choose to use a pattern part care should be taken on installation to ensure that the pattern part passes the classic “form, fit and function” test when compared to the OEM part.
- 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 new type 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 as the old type, 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 safety.

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

OPERATORS USE PATTERN PARTS AT THEIR OWN RISK

