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Jabiru Engine Oil Cooler				

**SERVICE BULLETIN: JSB 004-1**

**Issue: 1**

**Date: 13<sup>th</sup> Oct 2004**

**Subject: Jabiru Engine Oil Cooler**

**1. Applicability:**

All Jabiru engines fitted with K&J Thermal Products oil coolers with "RD NO. PDG. 365/2001" stamped on the mounting flanges.

**2. Background:**

The above mentioned cooler type (see figures below) has experienced abnormally high failure rates when used in Jabiru engine installations. While 6 cylinder engines are far more likely to experience problems, several 4 cylinder oil cooler installations have also failed. Typical failures involve a relatively slow leakage of oil from the cooler which is noticed by the pilot when the aircraft next lands. However, some failures have been more rapid and have caused a drop in oil pressure which forced the pilots to perform emergency landings. Most failures occur within approximately 30 hours of the cooler being installed.



**Figure 1. Oil Cooler – Front View**

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**Figure 2. Oil Cooler**

### 3. Recommendations:

At the time of issue for this bulletin, Jabiru Aircraft is in the process of evaluating several different coolers for use but is not yet able to recommend a suitable replacement. Owners continuing to operate with the cooler type mentioned above are encouraged to visually check their cooler installation after each flight (note that in tractor installations, this can be done by looking through the inlet in the front of the cowl and the air outlet at the bottom of the cowl – it is not necessary to remove the cowls.).

Note that not all coolers of this type will fail, with several examples running for 300 hours or more to date. Failures are more likely to happen within approximately 30 hours of being installed, so extra care is recommended while the cooler is less than 30 hours old; the cooler should be inspected regularly and care should be taken to avoid flying over terrain where an emergency landing would be difficult.

There are also some modifications that owners can perform to their aircraft which will extend the life of their coolers:

- i. Check the cooler installation:  
The cooler must be isolated from engine vibration as much as possible. Check that the oil cooler is “soft” mounted; when the cooler is installed it should be possible to easily wriggle the cooler on it’s mounts by hand when gripping with one finger and thumb. Ensure that the bolts through the rubber mounting grommets are tightening onto spacers inside the grommet and not onto the rubber itself; check that the grommet is not being clamped tightly to the cooler. Ensure that the cowls etc are not rubbing on the cooler.
- ii. A modification is available for the oil pump which has had limited success in extending the life of the cooler. The modification can be carried out to the existing pump (no parts are required), but should only be carried out by authorised Jabiru service technicians.