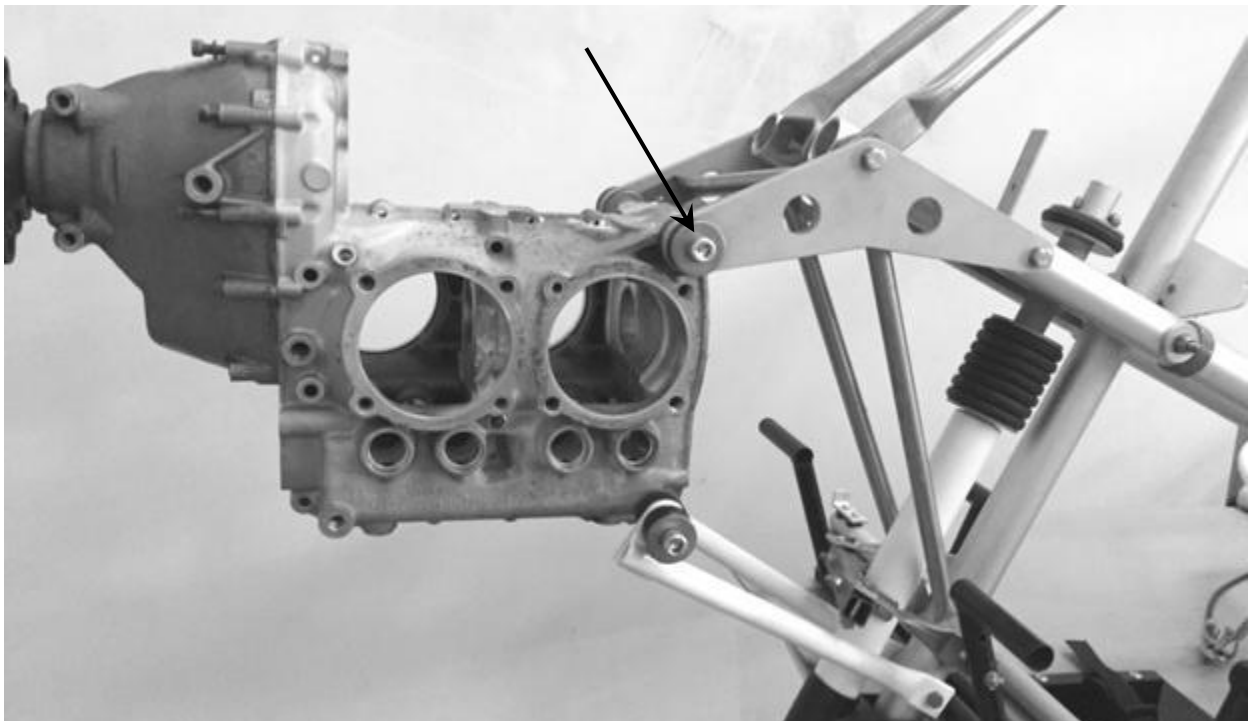


Reference: BMAA Service Bulletin 2759 issue 1
Title: Upper port engine mounting bolt failure
Applicability: All UK (BMAA) Sky Ranger aircraft with Rotax 912-series engine
Author: Ben Syson, BMAA
Effective date: 1 July 2019
Classification: Advisory Service Bulletin

1 Introduction

There have been three reported failures of the upper port (left) engine mounting bolt on UK Sky Rangers. (There have also been multiple occurrences abroad, although the foreign design standard is not necessarily identical). The bolt in question is highlighted in the photos below; the bottom photo shows a failed bolt. This bulletin is issued to advise owners and BMAA Inspectors of this potential problem, and how to minimise the risk of its occurrence.



- **Difficulty starting the engine.** If the sprag clutch is worn, the starter motor intermittently disengages during starting making starting difficult and putting nasty shock loads through the engine mounts. If these symptoms appear do not leave it but have the sprag clutch replaced as soon as possible. Replace the anti-vibration mounts and mounting bolts as well: their condition is likely to have been affected.

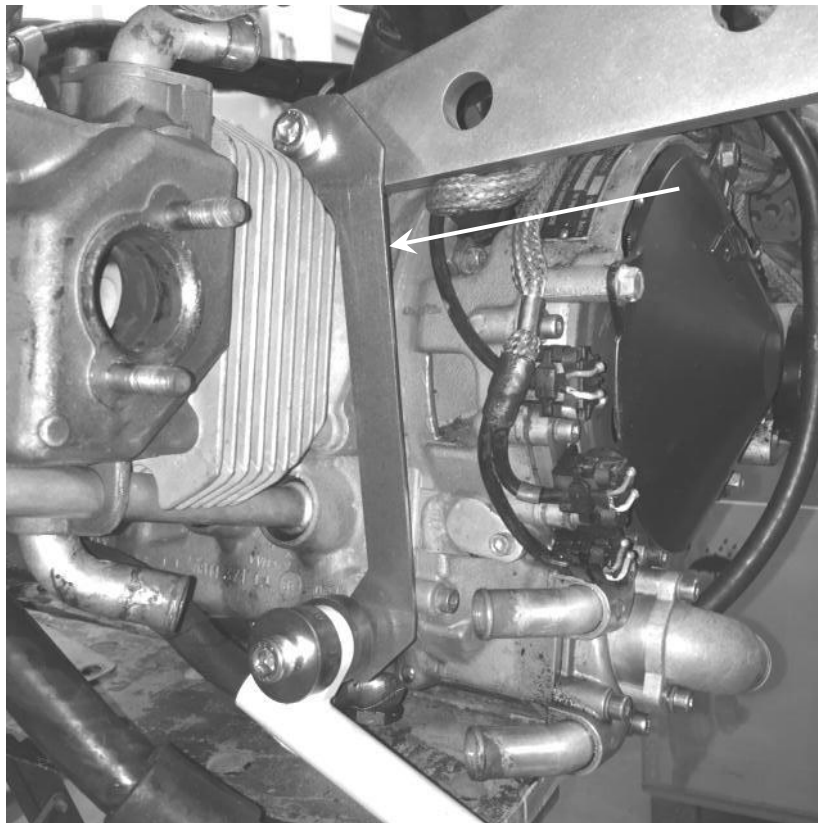
4 Bracing strap

A bracing strap is available as an option which is intended to support the outside of the upper port mounting bolt to eliminate, or at least reduce, the bending loads that this bolt is subjected to. At the time of writing no failures of the upper port mounting bolt have been reported, but this modification does not yet have sufficient service experience to prove that it eliminates the problem.

The latest Build Manuals incorporate the bracing strap on Rotax 912ULS engine installations, which give the bolt a harder time than the Rotax 912UL engine. For existing Rotax 912ULS engined Sky Rangers that were built before this option was devised, it is recommended to fit the bracing strap at a suitable juncture such as the next major engine service. Use new anti-vibration mounts and mounting bolts. Build Manuals are available on the Sky Ranger website (www.skyranger.co.uk).

It is also possible to incorporate this modification on Rotax 912UL engined Sky Rangers if desired.

As with any approved optional modification it must be inspected and signed-off in the airframe logbook by a suitably qualified BMAA Inspector.



5 Reporting

Report all cases of bolt failure to the BMAA Technical Office (technical.office@bmaa.org) so that we are aware of the extent of the problem. Please also report any related problem such as unexpected engine mounting bolt loosening or anti-vibration mount degradation.

All replacement parts must be original, or otherwise approved by the Technical Office.

Note: The technical content of this document is approved by the BMAA, UK CAA organisation approval ref. DAI/8909/84