

LAA/AWA/21/02  
13<sup>th</sup> January 2021

## Rotax 912 and 914 (Series) Engines Service Bulletin SB-912-074/SB-914-056 Exchange of Floats

Recently, the manufacturer of the popular Rotax 912 and 914 (Series) engines, have issued a Service Bulletin suggesting that owners with engines fitted with earlier floats should replace their floats for floats of an updated design.

Specifically, the SB states that: *Due to a deviation in the manufacturing process some floats of part number 861185 and 861188 and could gain more weight. This leads to a loss of float buoyancy and wrong regulation of the fuel in the float chamber.*

*Possible effects may be a rough running engine, especially at low speeds and, under some circumstances, loss of performance and/or leakage in the area of the carburettor. The above mentioned floats must be replaced with floats part number 861189.*

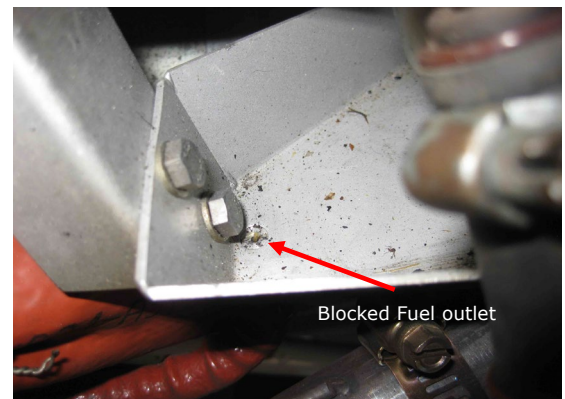
The issue of random float sinkage has bedogged some owners of carbureted Rotax engines for some years now. Because, the main symptom of a float sinking is rough-running at low RPM, which is difficult to ignore, and, as suggested, the issue occurs in a completely random way, LAA Engineering has never mandated the various routine weight checks required by Rotax in a series of Service Bulletins or the Maintenance Manual.

Discussions with the UK agent for Rotax engines, CFS Aero, suggest that this new float design is far more resilient to sinkage than previous designs, and Rotax, subject to engine serial number, are exchanging earlier floats for these new floats free of charge.

Though not mandating this requirement, LAA Engineering strongly suggest that it is worthwhile taking advantage of this float exchange offer. Full details of this can be found in the Service Bulletin, which can be downloaded [HERE](#).



This picture shows the a cutaway of the newly designed Rotax float. Note the embedded metal tube. Engineers suspect that earlier designs, where this tube covered the complete width of the float, lay at the heart of the leakage issues occasionally suffered by engine operators.



Though it may be true that a rough running engine at low RPM is not likely to have a major effect on flight safety, a carburettor with a partially sunk float will suffer a raised fuel level, and this, in turn, may lead to fuel leaks from the float bowl – potentially, a major fire hazard.

The picture above shows a drip tray, in place to steer leaked fuel away from a hot exhaust, with a drain outlet completely blocked by debris – fuel collected here for any reason, could easily lead to an engine fire.