

Rotax 9 Series Engines (All Models)

Checking Engine Mounting Bolts

A recent 'Safety Spot' report (February 2017) describing failures of the bolts securing the engine to the engine mounting frame on a Europa and an EV-97 aircraft has generated a number of further reports of engine attachment bolt failure on other types of aircraft fitted with Rotax 9 Series engines in the LAA fleet.

Because the problem of engine mounting bolt failure appears to be more prevalent than first thought, LAA Engineering has created this Airworthiness Alert to remind owners that thorough checks to engine mounting bolts on Rotax 9 Series engine installations is a vital part of a daily inspection routine. Owners and LAA Inspectors are also advised that very close attention to these attachments must be made during routine and annual inspections.

You can download a copy of the February 2017 Safety Spot article that discussed this issue [HERE](#).



Fig.1 This picture shows the seized remains of a Europa/Rotax 912 engine mounting bolt: clearly this bolt had been broken for some considerable time and its failure led directly to a further bolt failure and extensive cracking of the engine mounting frame.

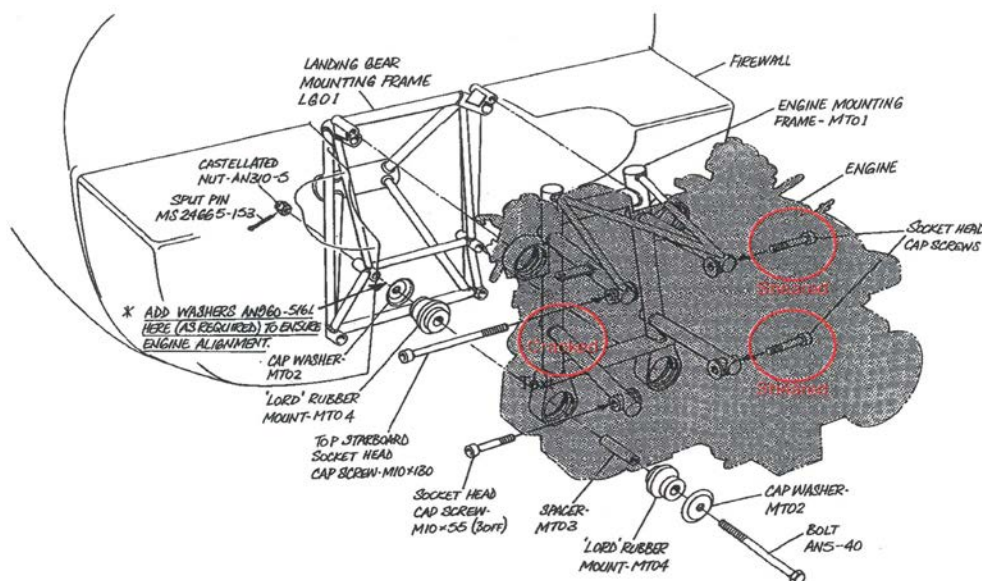


Fig. 2 This sketch shows the engine installation in the Europa aircraft, though is fairly typical of a Rotax 9 Series engine fit: notice that the engine mount frame is directly attached to the engine, the frame itself being rubber mounted, in this case to the landing gear frame, though more usually to the firewall. It is essential that these engine mounting bolts are checked very regularly for security, if they should become loose the bolt will fail due to bending fatigue. Should an engine mount bolt be found loose it must be removed, the mating faces between the engine mounting frame and the engine thoroughly cleaned, inspected and reprotected and the bolt replaced with a new item in accordance with manufacturer's assembly instructions.