

26th February 2019
LAA/AWA/19/06

CZAW SportCruiser Inspection for Cracks in Nosewheel Fork

For many reasons the detailed inspection of undercarriage assemblies on many sports aircraft is an often overlooked section of the aircraft's Tailored Maintenance Schedule, this can be especially true if spats are fitted.

Spats have the added disadvantage of making it difficult to monitor brake wear or check the physical structure of the various components that make up the undercarriage assembly. For a full inspection to take place a spat must be lifted clear of the wheel and the wheel removed.

Though there are many 'generic' maintenance schedules in use, most require a daily (pre-flight) visual inspection of the undercarriage and call up a strip inspection each 100 hrs. (or annually): for aircraft flying under an LAA administered Permit to Fly LAA Inspectors usually require a detailed visual inspection of the 'running' parts of the undercarriage at least every three years, though this naturally varies considerably as local environmental factors are taken into account by both owners and inspectors.

LAA Engineering has recently reissued an Airworthiness Information Leaflet (AIL) (LAA/MOD/338/016 Issue 2) requiring owners of CZAW SportCruiser aircraft to carry out a close inspection of the nosewheel fork (at the attachment to the spindle block) at more regular intervals. This inspection requires the spat to be removed and the assembly to be dismantled.

The reason for this increased inspection requirement is that LAA Engineering has received many reports of cracking in the nosewheel fork on this type. Because of this cracking, a strengthened fork has been designed and is now a standard option for the CZAW SportCruiser (see Standard Mod. 13680) though, until more extensive service experience is gained, an annual close inspection of the fork has been applied.

Naturally, a detailed check of the undercarriage and its supporting structure is always required after a heavy landing.

A copy of LAA/MOD/338/016 Issue 2 can be downloaded [HERE](#).

A copy of LAA SM 13680 is available in the Modifications section of the website or can be downloaded [HERE](#).



Fig 1. This close-up of the mating face of a two-leafed (original type) fork showing cracks radiating from an attachment bolt hole. These cracks cannot be seen until they reach the outside edge of the fork without the fork being dismantled from the assembly. This is particularly worrying with regard to the lower crack should it propagate unseen between the attaching bolt holes as it could lead to a sudden and unexpected failure of the fork.



Fig 2. The picture above shows a strengthened (three-leaf) fork. This component is now available to CZAW SportCruiser owners and can be fitted under an LAA Standard Modification (SM 13680).