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Savannah Tip No: 19

This tip will not apply to most Savannah owners but as I do not have a complete email list of Savannah owners then it would be helpful if those who receive this tip could pass it on to anyone to which it applies.

There have been many instances of owners of Savannah's fitted with leading edge slats (as per the supplied kits) removing these slats and support brackets to gain an increase in cruising speed. Some have fitted aftermarket Vortex Generators to the top of the leading edge of the wing in an effort to emulate the later model VG Savannah.

This modification, although well documented by a local supplier of Vortex Generators, is NOT APPROVED by ICP, the manufacturer of the Savannah Kit. Of the seven Savannah's that have been involved in serious incidents over the last 18months, ALL have had the slats removed, and NOT HAD the ICP supplied standard leading edge and VG kit installed. It is very fortunate that there have been no fatalities to date.

The full and true circumstances of these incidents may never be generally known, and one cannot say for sure that the incidents were caused in whole or in part by this modification to the wing. However, a common thread in these instances is operating at high gross weight, slow speed, and unfavourable weather. Although this unapproved modification seems to work Ok at light weights, it would appear that there are unexpected performance issues at higher weights.

I think that it should be noted that ICP (the Savannah kit manufacturer) Building and Flight Manual specifically states that no modifications to the design or construction of the kit are allowed without approval from ICP. Therefore, anyone who elects to modify the construction or design must bear the responsibility for the consequences of that modification unless the mod has been approved by ICP. Articles in the RAA magazine suggesting that the slats can be removed contradict the kit manufactures explicit instructions. ICP have not tested the Savannah with the slats removed because there is no published data for the modified wing section without slats. ICP have instead provided a wing modification (at a very reasonable cost) which includes all the parts necessary to bring the slat wing up to the standard NACA section for which data is available, and is supplied with Vortex Generators. ICP have tested this configuration and now supply kits, flight data, and Weight and Balance information for this different configuration.

I guess the point of this article is to remind our pilots that the Aircraft Flight Manual is a legal document, and as such has had a considerable amount of expert input from people who have spent many hours collecting the data included in the manual.

Whilst there may be room for improvement in any Flight Manual, it is not wise to vary from the information therein unless there is agreement from the manufacturer and/or professionally qualified persons who can appreciate the larger picture of the consequences of making changes.

It should also be noted that this type of modification requires that the owner provide a new weight and balance sheet to be inserted in the aircraft log book, as well as documenting the changes made in the log book.