



The latest LAA Engineering topics and investigations. By Malcolm McBride

# Safety Spot

## A hopefully final resolution for Rotax floats, RV-12 Airworthiness Information Leaflet, and filling out the Permit renewal form...

**W**ell, hello again. Have you shaken off the dust from your Christmas revelries, diminished as they probably were? And do you sit, fighting fit, ready for whatever 2021 throws at you? I do hope so. But first, a Happy New Year to you and those close to you. Let's work hard to make it a good one, last year was a bit of a pickle one way and another, but you're reading this, so you must have made it through!

No doubt it will take a while longer to clear Covid-19 from the decks but, if history tells us anything, it shouts that all events end up as memories, eventually to be washed into the sea of time. I quite like the American author, Michael Altschuler's, phrase that's just popped, goodness knows why, into my mind, though apposite here perhaps: *'The bad news is that time flies – the good news is that you're the pilot.'*

So, the New Year begins. A time of fresh starts, promises made and, without doubt, unexpected challenges. It is still December as I write this, so I'm still working on my personal plans for 2021 – I know that I'm going to be busy getting the boat back into shape, she's been out of the water for well over a year now, and no mechanical device likes being left unused for long. I hope its return to full serviceability won't be too expensive.

I'm guessing that many of you won't have done much flying through 2020, so, in your New Year planning list, take that into account before heading off into the sunrise. There's a fair bit been written about getting back into the saddle after a long lay up, so I won't go on about how important it is to take things steady for the first few flights... but you know it makes sense.

It's clear, as I've mentioned before, at least in terms of Operational incidents affecting our members, that the biggest single cause of our aircraft ending up being broken, is a loss of control during the landing phase. Take this into account, as you return to flying in the new year... don't try to squeeze the aircraft into a short farm strip until you can land 'on the numbers' every time; practice on a runway where, if you get it a little wrong, there won't be a disaster. Of course, from a technical perspective this time, another reason for a broken aircraft often starts with an engine failure and, generally, ends with the aircraft in a field.

If it's true, and I'm sure it is, that it's possible to reduce the chances of a loss of control during landing incident occurring by keeping your flying skills in tip top condition, then, surely, it's equally true that keeping your aircraft in excellent order will help to prevent an in-flight failure. And that's best done by checking everything regularly and, when (note, not if) you find something not quite right, dealing with the issue appropriately.

Remember, you're probably flying an aircraft operating under a Permit to

Fly – that means that the responsibility for maintaining the machine rests firmly on your shoulders.

I'm a very firm believer, as you've probably worked out if you're a regular reader of this column, in 'less is often more'... especially when it comes to rules and regulations. Overall safety starts with the individual taking charge of their own affairs in my view, and in an association setting, this means participating. Industry partners often comment about just how much feedback we receive in terms of continuing airworthiness matters – our platform, based upon the 'just-culture' ethic, certainly seems to pay dividends. So, thank you for your participation last year, please keep your tales, happy and, well, not so happy, coming.

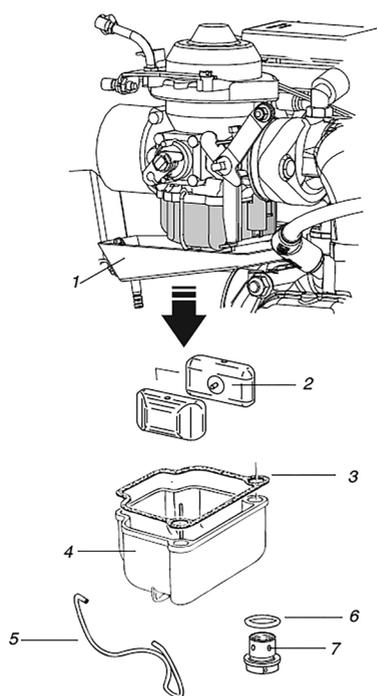
### Rotax Floats – The Finale... well, let's hope so

It really does seem that the quality issue bedogging the Rotax Nine series engine for the last few years has finally been solved. The problem, as I expect all of you will be aware, is that for reasons that have never been properly explained, occasionally a carburettor float will absorb fuel and sink. There never seems to be any specific reason, it doesn't seem to relate to the type of fuel used and 'time in service' seemed irrelevant.

The engine manufacturer themselves, naturally, had to be reactive, and, once they acknowledged the issue, set about inventing various inspection checks on the carburettors, latterly weighing the floats to see if they had absorbed fuel – or done whatever they did to make them



**Above** It's looking like the long-running stage show featuring Rotax nine series floats is closing its curtains for the last time, thank goodness. These pictures of the latest design (note the R) have been in-service for just over a year now and, fingers crossed, there have been no reported failures with the new type float. LAA Engineering has recently issued an Airworthiness Information Leaflet (AIL) requiring owners to change their floats to the new type at their next major engine overhaul or, naturally, if they suffer a float-sinkage related engine issue. Floats may be replaced free of charge and are available from the UK Rotax agent, CFS Aero. **Photos: CFS Aero**



**Above** The sketch, taken from the Rotax Service Bulletin, shows where the floats go in the carburettor. LAA advice has always been, if your engine is running smoothly, especially at relatively low rpm, you don't need to do anything – naturally, there's a risk introduced every time you dismantle a complex component and, if your engine is suffering a sinking float you'll immediately know there's something wrong.

The pictures above show two further recent 'spots' after deep inspections of carburettors following rough running. **Photos: Rotax Engines/Raymond Proost/Paul Hendry-Smith**

heavier. LAA Engineering never really supported this particular check as, from member experience, most float-sinkage events happened spontaneously, and the effect of a sinkage was a rough running engine, especially at lower rpm's, a problem that cannot be overlooked.

Back in February 2019, Rotax issued a Service Instruction (912-032) entitled *Running Modifications of the Bing Constant Depression Carburettor*. This listed one or two improvements to the design and introduced a new type of float, this iteration became known as the 189 float. Now, this Service Instruction passed below most owners' radar which, taking account that the previous float designs hadn't been 100% successful, was probably a good thing. Naturally, LAA Engineering, alongside the UK Rotax main agent, CFS Aero, have been keeping a close eye on things.

Well, the 189 floats have now been in service for nearly a year and, drum roll please, there's not been a single failure. I have to say, 'hats off' to CFS with regards to this issue, members who have suffered a float failure over the last few years have been given new floats FOC. This float exchange programme has now been officialised by the issuance of a Rotax Service Bulletin, SB-912-074. Naturally, there are caveats, but John Rowley, head of the Rotax side of CFS's UK operation, explained that they will be able to exchange floats free of charge for those that meet Rotax's terms – and that they've always honoured their warranty obligations when a customer suffers a float failure.

If you operate a 912 engine and feel like taking advantage of this float exchange programme, may I suggest that you download the Bulletin, there are links to both the earlier Service Instruction and this most recent Bulletin in an Airworthiness Alert posted in the Alerts page of the Engineering section of our website. Take care though, don't do what I

did and print out the whole document... my printer ran out of ink trying, the SB itself is only 12 pages, but the appendix listing applicable carburettors is huge!

### Fuel pipe inspection 'spot'

Another interesting fuel related issue came across my desk recently thanks to LAA Inspector Peter Bentley, who was carrying out an inspection on a Luscombe. Following the 'spot' that the fuel pipes were not only well past their safe service life, but also, parts of the system were made from inappropriate materials, Peter decided that it would be sensible to strip and inspect the carburettor. Judging by the amount of detritus in the fuel bowl, this hadn't been done for some time. It's essential, especially with aircraft that don't fly many hours between annual checks, that a maintenance programme is developed to include deep inspections regularly throughout the aircraft's operational life.

### The Annual Permit revalidation process

The LAA system requires the aircraft's CAA issued non-expiring Permit to Fly to be validated each year. To prove to anybody that needs proof that this has happened, the UK authority (CAA) issues a Certificate of Validity annually. They do this on our recommendation virtually automatically. Naturally, there are 'rules of engagement', and one of these rules is that the aircraft is inspected by an LAA Inspector to ensure that, in every way, the aircraft is airworthy.

Often, this revalidation inspection happens during a maintenance check, but, though this is an efficient way of doing things for the average owner, maintenance and inspection are actually two very separate things. I've discussed different ways of managing essential maintenance



**Above** These fuel pipes and the carburettor float bowl detritus illustrates the very poor condition of a Luscombe's fuel system discovered during an inspection. I hope at least, no further comment is required. **Photos: Peter Bentley**

tasks many times over the years, and our home-grown concepts of owner-created Tailored Maintenance Schedules (TMS) have been adopted, very successfully, by many owners.

I'll add a quick note here to thank LAA Inspector, Trevor Reed, for his help in promoting the TMS concept. Trevor writes an engineering column in the Devon Strut newsletter, and has been clearing up a local misunderstanding, where some owners have confused the word Tailored with Generic. In terms of thinking about tailoring a schedule, Trevor writes: "So, where do we start? Well, a good place to start is to download a copy of the Generic Maintenance Schedule (GMS) that's available on the LAA website, you can find it if you tap on the 'maintenance' button on the top bar of the Engineering home page.

*It is certainly 'generic', and, by definition, it covers all the options we are likely to need ....and this is where the problem starts. If you try to use an unedited version, there are just so many irrelevant actions in the list, that your maintenance plan will become little more than a box-ticking exercise."*

Trevor is right, the GMS we've published was never intended to be used 'off the shelf', essentially it is a collation of a number of schedules, principally designed for aircraft operating in the certified sector, placed in an LAA wrapper. These schedules, incidentally, were written as an alternative to a manufacturer's schedule and normally follow a 50, 100, 150 hour maintenance regime so, for the vast majority of LAA machines, are far from perfect.

Tailoring this generic schedule, both to cull the unnecessary items, and to craft it to suit your particular aircraft's maintenance requirements, makes a lot of sense. My advice to owners, when they ask about this, is that the aircraft, engine and propeller manufacturers' advice should sit at the heart of any TMS but, the biggest factor to be taken into account when laying out a forward maintenance plan, is just how many hours per year the aircraft is going to fly.

Anyway, I've gone off-track slightly, as I pointed out earlier, Maintenance and Inspection are different things. It can be argued, even if you only accept my 'less is more' as being a half-truth, that page two of the Permit renewal form is the best 'generic' maintenance plan of all. But I jump ahead somewhat, let's look a little more closely at the inspection side of the Permit revalidation using the form as a guide.

### LAA Form FWR-1 – Application for Renewal (Revalidation) of Permit to Fly

The requirements for Permit aircraft require that each aircraft is maintained to a maintenance plan, and this has to be checked annually as part of the aircraft's airworthiness review at permit renewal time. Apart from in a few specialist cases, the owner of an aircraft is able to determine for himself what maintenance plan to follow, over and above the standard series of checks set out in the Permit renewal form and inspected annually by an LAA Inspector.

A big part of the inspector's role, when signing an aircraft out as being fully airworthy, is to ensure that, and I'll quote directly from the FWR/1 form itself... *In my opinion I can confirm that the aircraft to be overhauled, repaired and maintained to my satisfaction...*

So, your inspector will want to be sure that the aircraft is being maintained according to some sort of plan. Like it or not, you'll be required to show evidence of appropriate routine maintenance if you want your FWR/1 form signed.

Let's look at the FWR/1 form in a little more detail. I have a couple of reasons for wanting to do this; one, because the Chief Inspector, Ken Craigie, is coordinating a big change to the required reference material to be used by inspectors at the annual revalidation point (SPARS to TADS – more about this change later). And two, to act as an encouragement to owners and inspectors, let's call these two groups applicants to make things simple, not to send in applications that are

**Light Aircraft Association** FORM LAA/FWR-1 May 2015  
(FIXED WING AIRCRAFT)

**APPLICATION FOR RENEWAL (REVALIDATION) OF PERMIT TO FLY**

OFFICE USE	DATE	BY	OFFICE USE	DATE	BY
MONEY RECEIVED £			OTHER		
OTHER					

**SECTION 1** REGISTRATION **G-** AIRCRAFT TYPE

Name of Registered Owner/Applicant ..... LAA Membership No.....  
*(Registered owner and all co-owners must be current members of the LAA)*  
Name, address and daytime telephone number of person to be contacted regarding this renewal should difficulties arise. (Please print) .....  
..... Postcode:.....  
Daytime telephone number:.....  
Name and address to whom Certificate of Validity (or Check Flight Authorisation) should be returned if different from above:  
..... Postcode:.....  
If you would prefer to receive the new Certificate of Validity by e-mail rather than post, please enter you e-mail address here: .....

Is radio equipment, other than hand held, permanently installed in this aircraft? State Yes / No.....  
Hours flown since Permit last renewed (or issued):..... Total aircraft hours:.....

**Owner's Declaration**  
I hereby declare that, to the best of my knowledge and belief, the flying times recorded in the aircraft log books and the details entered on this form are correct, complete and that no modifications have been carried out to this aircraft, except with the approval of the Light Aircraft Association. I also understand that any unauthorised modifications carried out will invalidate the Permit to Fly. I undertake to keep the aircraft in an airworthy condition and to operate it within the terms of the Permit to Fly. I understand that failure to do so will render the Permit to Fly invalid. It is also understood and accepted that this aircraft will be made available for inspection and audit by LAA Engineering following any reasonable request. The Light Aircraft Association are hereby empowered to act as my agent for the renewal of the Permit to Fly.  
Owner or their accredited representative: Signed ..... Date .....

OFFICE USE

The technical aspects of the airworthiness review for this aircraft have been completed in accordance with LAA procedures and are satisfactory for the revalidation of the Permit to Fly.

Signed: \_\_\_\_\_  
Date: \_\_\_\_\_

See Technical Leaflets on the LAA website (www.laa.uk.com) for guidance on completing this application

1

**SECTION 2 INSPECTION**

**THIS SECTION TO BE COMPLETED BY INSPECTOR**

System or assembly to be inspected	Work carried out by (and describe status e.g owner, employee)	Inspector (Initial)
<b>Engine, Engine installation and Propeller</b> Check/inspect: Air induction system, fuel system, ignition system including magnetos, exhaust system and lubrication system. Cylinder assemblies. Engine installation including bearers and accessories. Flexible hoses. Engine controls. Propeller and propeller installation.		
<b>Engine Inspection:</b> (Inspector) Signature .....	Inspector's No. ....	Date .....
<b>Structures</b> (with panels removed) Check/inspect: External coverings, internal structures, control surface attachments, structural attachment joint assemblies and protective treatments. Drain holes. Canopy.		
<b>Landing Gear</b> Check/inspect: Landing gear assemblies and attachment fittings. Brake systems, hoses and pipes, wheels and tyres, skids, bungee rubbers.		
<b>Flying Controls</b> Check/inspect: Attachments, hinges, brackets, push-pull rods, bellcranks, horns, balance weights, cables, pulleys, chains, fairleads, rollers, tracks and rails, screw jacks. Cable tensions and locking. Control neutrals and travel. Full and free movement in the correct sense.		
<b>Fuel/Oil Systems</b> Check/inspect: Tanks, caps, vents and drains. Hoses, pipes, valves, cocks, filters and water traps.		
<b>Instruments and Instrument Systems</b> Check/inspect: Vacuum system, venturis, filters, pitot static system including pitot head, vents and drains. Instruments and instrument installation including markings, hoses, pipes and wiring. Operation and readings.		
<b>Electrical System</b> Check/inspect: Battery, battery installation, vents and drains. Electrical circuits, terminals, fuses and circuit breakers, lights and other electrical equipment.		
<b>Radio</b> Check/inspect: Radio, radio installation and aerials.		
<b>General</b> Aircraft should be lubricated throughout. Seats and belts/harnesses checked for condition. Fire extinguisher checked (if fitted). All controls and switches labelled correctly. Carry out an operational check to all flight critical controls. For multi-tank systems, check fuel cocks are operable by the pilot in the strapped in position. Fuel cocks must be placarded as to their function and sense of operation.		
<b>Airframe Inspection:</b> (Inspector) Print Name .....	Signature.....	Inspector's No.....Date.....

2

Above Permit Renewal form (the FWR/1) starts the administrative part of the Permit revalidation process. This form is HQ Engineering's 'window' on the continuing airworthiness status of the aircraft – and errors in completing the form will cause delays in the renewal process so, as a New Year's resolution, please take the time to fill it out correctly. **Photos: LAA Library**

almost destined to fail during HQ checks here. Sadly, we're seeing an increasing number of 'rejections' and, apart from being time-consuming, they are a rather depressing thing to have to get involved with... from both sides of the fence.

I asked the other members of the engineering staff who are involved with the Permit revalidation process, to list the causes of these failed applications. It's a long list, but worryingly, many of the failures seemed to be caused because some applicants don't seem to realise that this FWR/1 form sits at the centre of a national legal process. If the form isn't submitted with the correct information, or contains information that doesn't meet a specific requirement, we're duty-bound to send it back. That's a function of our hitherto mentioned, 'rules of engagement' with the CAA.

It's a shame when an application fails, especially if it's rejected for lack of a signature or something equally straightforward. Over the years, we've developed a scrutiny system that's both rapid and, by all measures, effective. This fast turn round starts with a staff member picking up the mail from the Post Office so that, if all's well, a same-day service can be offered. Recent changes in Post Office regulations mean that, believe it or not, we actually have to pay them for this privilege!

It might be useful to explain what happens here at LAA HQ when we receive a revalidation application. First, the application passes through the engineering administration section. Most of you will have, at some point or another, chatted to either Fiona or Adele, who do an incredible job keeping the paperwork (and the engineers) in order. They open up a renewal section within the aircraft's records and, by entering the data on the form into the database, begin the renewal pathway.

We can only accept applications from current LAA members – a perhaps obvious statement, but too many applications stall at this first hurdle. Please make sure, before you send in an application, that your membership is current.

While I'm on these rather basic points, can I encourage you to fill the front page of the form in carefully – one applicant recently didn't put the aircraft type into the appropriate box, he was right, when asked as to why he hadn't done this (there were a number of other issues), we can look it up! But for us, the statement of the aircraft type and the registration provides a degree of verification that the registration has been correctly entered, otherwise a single transposed letter in the registration could easily result in us unwittingly revalidating the permit on the wrong aircraft! Remember, the FWR/1 form, in many respects, is also a window into your world; if an applicant can't be bothered to fill the basic information in, should the overseeing engineer at HQ worry about this particular operation... what else isn't being done?

Please make sure, before you send in the form, that all the sections are filled in legibly and, naturally, accurately, again, ensure that you are actually a current member and have paid any fees due. One further thing, if you have recently purchased the aircraft, please make sure that we know that you are now the new owner... unless we've been told, we may not know who you are!

Staying with the front page, you'll see that, about three-quarters of the way down, there's a space for your signature. This is the Owner's Declaration. When you make this declaration, by signing the form, you are telling us that you understand the conditions under which you operate the aircraft and, importantly, that you are authorising us to act as your agent for the application (remember, the CAA issue the Certificate of Validity on our recommendation). Believe it or not, many applications are rejected because applicants fail to sign this part of the form – it's an immediate showstopper, sometimes for a week or more, as the form must be returned to the applicant for signing, and then sent back to begin the process all over again.

Once the administration side of an application passes the winning post, it gets transferred to a 'signing' engineer. It's their job to ensure that the overall renewal process, in every regard, is solid enough for us to make a recommendation to revalidate the Permit. As it's an 'arm's length' task, both experience in aircraft maintenance and inspection is required, signing engineers know their stuff – and have, perhaps a requisite for all aircraft inspectors, a good eye for detail.

**AIRCRAFT DOCUMENT CHECK**  
NOTE TO OWNERS. LAA Inspectors are unable to complete this inspection unless given sight of the Permit to Fly documents. A fee is payable for replacement of lost documents. State Yes or No

- All placards required by the Permit to Fly documents are installed, correct and Legible. ....
- The aircraft's Noise Certificate correctly describes the aircraft's engine/prop intake/exhaust (microlight aircraft only). ....
- A current Aircraft Radio Licence covers all permanently installed radio equipment. ....
- The permit to Fly documents accurately describe the engine and propeller as fitted. ....

	Make	Model	Serial No.	Dia. and Pitch
ENGINE				
PROPELLER				

(If the details entered above are not as described in the Permit to Fly documents, then this should be further investigated. It may be that an unauthorised modification has taken place).

Check aircraft weight schedule and enter date of last weighing.....

I confirm that the information entered above is accurate. Inspector's sig. .... Date .....

**Use this space to record:**

- Any major renovation/rectification/repair work carried out since last renewal.
- Any additional work of **significance** carried out at this inspection.
- Any modifications carried out since last renewal (including approval reference if applicable)
- Any rectification or adjustment made after check flight for this renewal.
- Any other comments regarding this inspection, including advisories passed to owners.

*Enclose copies of significant worksheets and reports.*

**or inspector to enter and initial 'none'**

*To be signed by Inspector below*

**Above** Two areas in the form that seem to often cause trouble are the Aircraft Document Check and the list of significant work done in the preceding year. The LAA Inspector must check the aircraft's Permit to Fly documentation, especially the Operating Limitations Document, to ensure that what is on the aircraft is as supposed to be. There's clearly no point sending in a form with 'none' in the space where there's supposed to be a list of significant work, when the aircraft has had a major repair (or a mod fitted) earlier in the year. **Photo: LAA Library**

**SECTION 3 Declaration by Inspector**

**I hereby declare**

The registration is properly displayed on the aircraft's fuselage and wings and on a fireproof metal plate.

A cockpit placard is installed stating: **OCCUPANT WARNING: THIS AIRCRAFT HAS NOT BEEN CERTIFICATED TO AN INTERNATIONAL REQUIREMENT.**

An upper torso restraint system is fitted to all front seats (or a written CAA permission for non-fitment exists).

To my knowledge there are no modifications installed on or carried out to this aircraft other than those modifications not requiring approval or those already approved by the LAA.

A review of the aircraft log books show that, as far as I can ascertain, they are up to date and all work carried out since the last renewal including this inspection has been correctly described and certified therein.

I have signed a Permit Maintenance Release (PMR) in respect of this permit renewal inspection.

**I have inspected this aircraft in accordance with the required inspections, Mandatory Permit Directives and procedures promulgated up to this date in SPARS,**

**including the last amendment I received which was SPARS AMENDMENT No.....**

In my opinion I can confirm the aircraft to be overhauled, repaired and maintained to my satisfaction and it is in an airworthy condition. Subject to a satisfactory check flight, I recommend that the Permit to Fly should be re-validated

Place of Inspection .....

Signature..... Inspector's No..... Date.....

**Above** Here's the seriously legal part of the FWR/1 form; it's the declaration by the LAA Inspector that, in their opinion, the aircraft is in an airworthy condition. Note that, over the next month or two, signing against SPARS will be phased out and Inspectors will sign against the TADS – we're not recalling all the forms to make this change, so Inspectors and owners alike will need to keep their eyes on the ball here and amend the form themselves to reflect this change. **Photo: LAA Library**

Here's a snapshot of one day listing problems found by the engineering manager:

*"Thirteen in the post today: On three – the hours do not tally (in excess of two hours out) from the figures from last year. On one – no engine info from the inspector listed in the Aircraft Document Check section. And on one – a gyro: no check flight received."*

That's a rejection rate of over a third... and that's without adding any admin problems into this day's rejections. Here's a list of some of the

more common reasons why applications are delayed, to create the list we actually just looked at rejections over the last three weeks.

*"Incorrect engine/prop info from inspector; worksheets not rec'd for 'significant' work; open mods/repairs; no w/sheets or confirmation from inspector after a Long Lay Up (LLU); incorrect SPARS number; outstanding MOD 7/FT-AVIONICS from last year; and last but not least, no last weigh date."*

Before I move on, please also make sure that you put the correct value stamp on your envelope – sorry, I feel like a bit of a pedant, but rejections by the Post Office take ages to resolve – weeks sometimes. If you're waiting for your CV back so that you can attend a fly-in, it's a shame that you couldn't go for a few pence extra on a stamp. Note, a single first-class stamp is insufficient for an A4 sized envelope!

### RV-12 Airworthiness Information Leaflet

In terms of customer support, Van's Aircraft take some beating, in my view their proactive stance in continuing airworthiness support is second to none. Below is a recent Service Bulletin letting RV-12 owners know that there have been a few instances where cracks have been found in the engine stand-off. Because this cracking involves a class one primary structure, LAA Engineering has issued an Airworthiness Information Leaflet (AIL) mandating a visual check of this component until it has been changed with a strengthened part.



**Above** As per the Service Bulletin, left, RV-12 owner, Keith Boardman, discovered his stand-off had a crack in it. The aircraft has 500 flying hours and is grounded, hopefully only for a short while, until the new, strengthened, part arrives from Van's.

One local suggested that, "This part doesn't do much on the twelve," it would be "OK to ignore the crack." Well, if it doesn't do much, then why did the part fail?

**Photos: Van's Aircraft/Keith Boardman**

### Goodbye SPARS. Hello TADS

As I near the end of this first *Safety Spot* of 2021, I mustn't go without first giving you the heads-up that **SPARS** to **PfA Aircraft Inspectors**, SPARS for short, is to undergo a drastic change over the next few months. Unless you are an LAA Inspector, you may not have heard of this document even though, unbeknown to owners, it has underpinned the LAA inspection system for over a quarter of a century.

SPARS was first created to act as a sort of 'go to' manual for LAA Inspectors, it wasn't available to aircraft owners. A substantial ring-bound folder, all inspectors have been issued with SPARS as part of their inspector initiation procedure and have to refer to it at each Permit renewal they oversee. Some of the document acted as a procedure checklist, an aide mémoire if you like, but the biggest portion included sections detailing issues on specific aircraft types, propellers and, naturally, engines. It included LAA-specific advice on Airworthiness Directives, Service Bulletins, MPDs and the like, to help LAA inspectors through the maze of regulations and to pass on useful safety tips and advice. The document was created before the advent of the modern internet-based communication systems we've all grown accustomed to over the last decade or so and relied on send-outs of updates in paper form, issued from time to time by the Chief Inspector.

In its new form, the procedure sections of SPARS are being re-written to better reflect the current LAA fleet and expanded operations now available to some LAA aircraft. The aircraft, engine and propeller sections of SPARS are being deleted, and in future both inspectors and owners will be able to refer to this information online, we call this document the aircraft's Type Acceptance Data Sheet.

Type Acceptance Data Sheets, TADS, are now available for most aircraft types and offer an online info-package for owners and LAA Inspectors alike. The basic format of these documents is relatively easy to follow, for example there's a 'must do' section and a section with information that's more of an advisory flavour. These are live documents, and we'll endeavour to ensure that they are kept up-to-date with the latest safety information. Where possible, we'll put links directly to a library copy of the relevant AD/Bulletin/MPD, LAA ALERT or Airworthiness Information Leaflet. We hope that 'feeding' this document will be a two-way process, in other words, if you spot something that's missing (or incorrect), please let us know.

Just like your participation in *Safety Spot*, in the long term, TADS will be as good as you help us make it. Fair Winds. ■



**VAN'S AIRCRAFT**  
TOTAL PERFORMANCE

14401 Keil Road NE, Aurora, Oregon, USA 97002  
PHONE 503-678-6545 • FAX 503-678-6560  
www.vansaircraft.com • info@vansaircraft.com

## SERVICE BULLETIN 00023 - REV 1

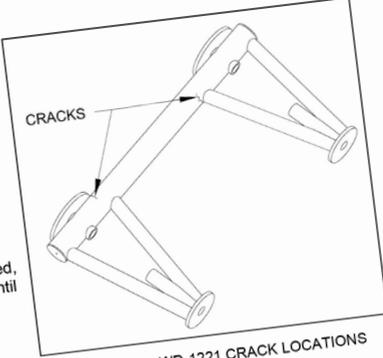
**Date Released:** December 1, 2020 (Rev 1, note to support tail during lift added)  
November 20, 2020 (Initial release)

**Date Effective:** November 20, 2020

**Subject:** WD-1221 Engine Mount Standoff inspection/replacement

**Affected Models:** RV-12/12S  
SLSA Aircraft Serial Numbers 120001-120094  
RV-12/12S Finish Kits shipped before 10/31/2020

**Required Action:**  
Remove the top cowl. Inspect the WD-1221 Engine Mount Standoff for cracks in the main cross tube (refer to Figure 1 for specific location).  
If cracks are discovered in the standoff, notify Van's Aircraft support at [support@vansaircraft.com](mailto:support@vansaircraft.com) and replace it with a WD-01221-1 Engine Mount Standoff as described in this document. If no cracks are discovered, 100-hour inspections are required until the standoff is replaced.



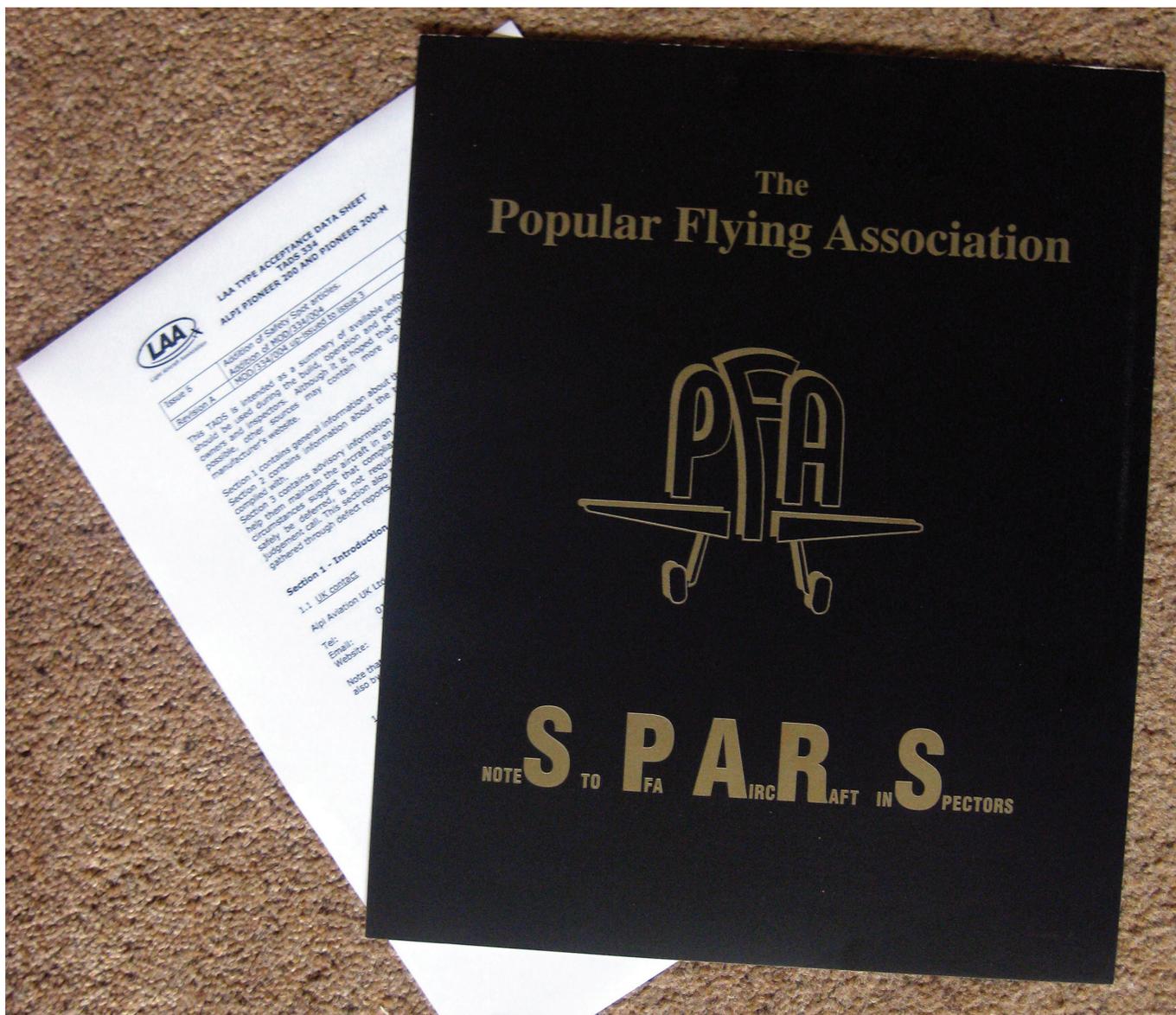
**FIGURE 1: WD-1221 CRACK LOCATIONS**

**Time of Compliance:** Inspect before further flight

**Labor Required / SLSA Warranty Allowance:** 2.0 Hours (if applicable)

**Level of Certification:** SLSA: LSA Repairman Maintenance or A&P  
ELSA: Owner (certification not required)  
Check the rules of the local controlling authority/agency and the operating limitations for your aircraft.

Page 1 of 3  
SD-SB-SL Template R6.3 05/06/20



**Above** SPARS is no longer going to contain type-related continuing airworthiness information – all this important reference material has been transferred to the aircraft type's Type Acceptance Data Sheet – the TADS. TADS are online and available to all. If you own an LAA type, then you should have an up-to-date copy of the appropriate TADS close to hand. **Photo: Malcolm McBride**

## LAA engineering charges

<b>LAA Project Registration</b>	
Kit Built Aircraft	£300
Plans Built Aircraft	£50
<b>Issue of a Permit to Test Fly</b>	
Non-LAA approved design only	£40
<b>Initial Permit issue</b>	
Up to 450kg	£450
451-999kg	£550
1,000kg and above	£650
<b>Permit Renewal</b> (can now be paid online via LAA Shop)	
Up to 450kg	£155
451-999kg	£200
1,000kg and above	£230
Factory-built gyroplanes (all weights)	£250
<b>Note:</b> if the last Renewal wasn't administered by the LAA an extra fee of £125 applies	
<b>Modification application</b>	
Prototype modification	minimum £60
Repeat modification	minimum £30

<b>Transfer</b>	
(from C of A to Permit or CAA Permit to LAA Permit)	
Up to 450kg	£150
451 to 999kg	£250
1,000kg and above	£350
<b>Four-seat aircraft</b>	
Manufacturer's/agent's type acceptance fee	£2,000
Project registration royalty	£50
<b>Category change</b>	
Group A to microlight	£135
Microlight to Group A	£135
<b>Change of G-Registration fee</b>	
Issue of Permit documents following G-Reg change	£45
<b>Replacement Documents</b>	
Lost, stolen etc (fee is per document)	£20
Latest SPARS – No 17 April 2018	

**PLEASE NOTE:** When you're submitting documents using an A4-sized envelope, a First Class stamp is insufficient postage.