The latest LAA Engineering topics and investigations. By **Malcolm McBride**

Safety Spot

This month Malcolm McBride stresses the importance of thorough inspection – it's not just ticking a box!

Hello again, and welcome to this November edition of *Safety Spot*. As always, I do hope that you and those around you are well, and that you are coping OK with the inevitable Covid-related changes most of us are battling with at this present time. Let's hope this pandemic burns itself out in double-quick time. It's not looking as though things are going in that direction, as I write this though: "Keep the wings level Malcolm, and keep an eye on that airspeed, you'll be out of the cloud soon."

"It's an ill wind …" though, and the recent travel bans have meant that, seemingly like many others, we've been able to give a home to a new dog – 'Yer need to be there for a puppy laddie'. Long-standing readers of this column will know that my last canine housemate, Jed, got involved in quite a few adventures with me – he was a keen flyer, although I'd better not shout about that too much. My new partner in crime, Sam, has a predilection for pinching things, he's getting better and better at this, so good in fact that I question as to whether I actually put that box of screws down there… or at the bottom of the garden. Like most aircraft engineers, I'm a bit fastidious about 'working tidy', so Sam can be a touch 'trying' at times. But, he causes chaos with a sense of humour though, and they do say that laughter is a great medicine.

For me, November is the season in the UK that brings about winter. Of course, being an aviator and always having one eye on the weather I know that, officially, winter starts on 1 December… but for me it starts when I need the thermals on to safely ride my motorbike! I'm writing this in mid-October, and apart from getting rather wet a few times, I haven't needed the thermal underwear – yet. So, what's going on in the world of LAA Continuing Airworthiness?

Inspection: It's not just ticking a box

Well, as always, the tales I tell are driven by events suffered (sometimes, though rarely, enjoyed) by our fellow members. Before moving on, it would be worth reminding ourselves that we all belong to an association of like-minded individuals – at least as far as our love of aviation in all its many forms goes – so we're all playing for the same team, and team pursuits need 'rules of engagement.' Aviation is a frighteningly complex area for humans to engage themselves in, after all. This *Safety Spot* looks at some of these rules and, by looking at a few events reported by members, will try to explain why they're very necessary.

Safety Spot is a place where we look at some of the things that haven't gone that well for one reason or another; most aviators I know, when they read a tale where this and that went wrong, think 'there but the grace of God, go I', rather than 'that bloke was a bit of a twit'.

Aircraft safety engineers start with a couple of basic premises; firstly, 'no failure incident occurs in isolation' and secondly, 'every failure incident is, or was, preventable'. Often, much to the chagrin of some of my colleagues, I prefer to steer away from the, incorrectly labelled, 'primary cause' and look in a different direction – it's amazing sometimes, just how events look completely different when viewed from another angle. The event hasn't changed because you are shining your torch from the left rather than the right, but the safety response very often will.

One of my other little foibles, perhaps 'sub-premise', is that you can learn as much from an event that went right, as from one that didn't have a good outcome. So, let's start with a couple of great 'spots' by LAA Inspectors – albeit long after the initial mistakes were made.

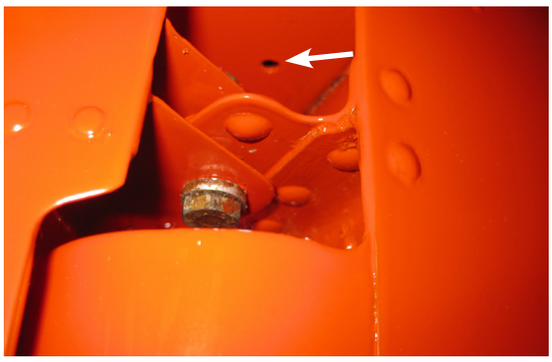
Spot 1: Bulldog: Missing elevator hinge rivet

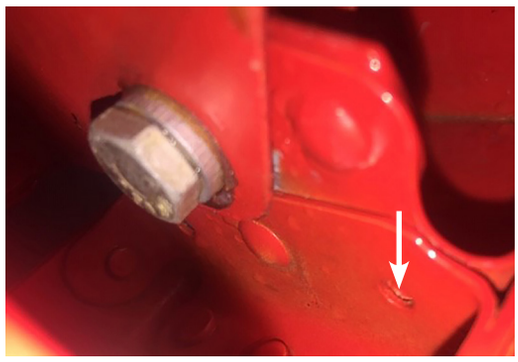
'Hats off' to LAA Inspector Nick Stone for spotting an only half-completed hinge replacement job, quite probably, many years and perhaps hundreds of 'inspections' after the job was first completed. Nick emailed: *Hello Malcolm, Good to speak the other day, it reminded me that I was going to send you a picture of the starboard elevator (both outer brackets) on an SAL Bulldog. It is an odd one but may affect other Bulldogs in service.*

On inspection, I found that rivets from the elevator support brackets were missing. Further investigation revealed that, at some time in the past, the split elevator on the starboard side had been changed (during RAF service). To remove the bearing assembly from elevator, this has to be taken apart.

Potentially, with the rivets missing, the structure may be compromised, more so with two of the three retaining brackets missing rivets. To resolve the issue, after consulting DH Support at Duxford, A113 bolts have now been fitted in the vacant holes and, naturally, checked to ensure no movement has been restricted, or there's any clash with structure. It was felt that replacing the rivets could potentially cause damage, so bolts were substituted.
Best wishes, Nick Stone.

We have two Bulldogs 'resident' at the LAA's home airfield of Turweston, and one in the paint shop being tidied up so, armed with a torch, a mirror and my camera, I set about checking these aircraft. All the aircraft I checked were *rivitus intactus*, so I felt that this was more than likely a one-off mistake by an RAF fitter (and his or her inspection team). It does go to show you just how easy it is to look for problems, perhaps during a pre-flight inspection, but not, even when they're fairly obvious, see them.





Left 'Now you see it – Now you don't (1)'. Inspecting an aircraft to ensure that it's fit for flight takes skill and experience; a quick glance will never be enough to establish whether something is OK or not OK. Would you have noticed the missing rivet in this Bulldog elevator hinge? **Photos: Malcolm McBride/Nick Stone**

In a way, this is the difference between looking at something to see if it's OK, a sort of 'pre-flight waggle' of an aileron, and a proper inspection of the aileron system. In the former, you aren't expecting there to be any real issues – in fact, an issue, just before you go flying, wouldn't be welcomed. In the latter, you need to be mindful that everything fails in the end, and the human that fitted this or that bolt, nut and split pin, probably fails quite regularly. So, if you are inspecting something, perhaps after having been asked to carry out a duplicate inspection of a disturbed flying control, keep this in mind.

Spot 2: Thorp T-18C smoking engine: Wrong carburettor

I've always admired the Thorp T-18, if you haven't seen one, and I wouldn't be surprised if you haven't, we've only one currently flying under LAA colours, look it up. The proud owner of the UK example, Peter Mair, has owned this imported example since 2007. In straightforward terms, the T-18 is an all metal, 200mph, side by side, two-seater taildragger, powered by a 140hp Lycoming O-290. Peter's aircraft was built in 1970 and has accrued, in her longish life, just over 1,100 hours.

Peter writes: *Good Morning Malcolm. Over the years I have flown my T-18, the mixture has always had to be pulled back by around 20mm and the plugs have regularly oiled up, I have had the carb overhauled and new magnetos fitted, and while this helped a little, it has never resolved the issue. Just over a year ago she started smoking badly to the point that one ATC said it looks like a B52.*

My LAA Inspector, Sandy Hutton, suggested we replace the oil rings, we did this and this helped in the short-term, but by the end of last year she was back to smoking; worse, the engine felt like it was lacking power… down to the point that I was searching for a replacement engine.

Sandy decided to take one last look and, after a while alone with my machine, returned to the clubhouse exclaiming that the wrong carburettor had been fitted. "It's an MA4 instead of an MA3". I managed to source a second-hand MA3, which Sandy and I fitted, while in the meantime I had sleepless nights worrying how a smaller carb could give the same power.

Initial and duplicate inspections completed, we started the engine. My first thought was, 'that feels smooth", I opened the throttle to give 1,500rpm and, worryingly, I found this was max power. Sandy said, 'worry not, it's the throttle fixing' and after adjusting the rigging of the new carburettor the engine delivered 2,250rpm static, just right.

Due to the weather, it was later in the week before I could carry out the test flight, and I admit to being nervous about it. Power check, mags check, full and free, better get on with it – with half full fuel tanks and me at 75kg we were off the runway in less than half of the 600m available with a healthy 1,600fpm climb. Everything else was fantastic so I landed, filled her full of fuel and added a bit of ballast and conducted the annual check flight – at max weight achieving in excess of 1,100fpm. Paperwork sent to LAA HQ, the Permit being turned around and sent the same day.

So, thank you Peter for letting us know that you've got your machine flying well again, and well done Sandy for looking at the 'not so obvious issue'.

The lesson here is, perhaps, just because a part has been fitted to an aircraft you're inspecting, don't assume that it has (a) been fitted correctly and (b) that it's the correct part for the job… always check. This next story perhaps re-emphasises this point once again.

Foxbat – Nose undercarriage failure after repairs

We all have bad days, and when Aeroprakt A-22 Foxbat flyer, David Howells, ran into some recently chopped down logs just after landing, he knew he was having one. Nose legs are definitely a vulnerable point on many aircraft in this class it's true, but I cannot imagine any strong enough to resist bashing into a pile of logs. Fortunately, David was fully insured and the major damage was limited to the nose leg attachment at the firewall, and the aircraft's floor. A 'repairer' was agreed upon and the fuselage was duly dispatched to the repair shop in a truck.

Changing the firewall on any aircraft is a complicated business and takes a lot of hours to complete. Because the firewall and floor were purchased from the manufacturer as items, the repairer considered the repair as being covered under the rules of 'repair by replacement' and on this basis, no reference about the repair to LAA HQ was considered necessary by the repairer.

The fuselage was returned to David and he, with the oversight of a local LAA Inspector, re-rigged the aircraft. He commented, "I noticed that the floor had changed from a corrugated floor to a flat sheet, and that the firewall was now made from stainless steel and not aluminium – I was also quite pleased to see that a strengthened nose undercarriage assembly had been fitted.

"I questioned the repairer about this and he assured me that all was OK and that these items were of the latest standard supplied by the manufacturer and had been approved by the LAA on recent examples of the Foxbat." David continued, "So, notwithstanding the issues of COVID-19, I got back into the air in my own machine – fantastic – I absolutely love my Foxbat, she's a wonderful machine."

One morning, David decided to go flying but his hopes were dashed when he noticed that the trailing edge of the propeller was just clipping

Above When Foxbat flyer, David Howell, carried out his pre-flight inspection, the first sign that all was not well with his aircraft was that the trailing edge of the propeller was clipping the engine cowling. Further investigation revealed the area of firewall and fuselage floor supporting the nose undercarriage attachment had buckled. David couldn't recall having suffered a heavier than normal landing – what on Earth could be going on? **Photos: David Howell**

the front of the engine cowling. Clearly something was up, and it didn't take long to spot the problem – the firewall and the cockpit floor had buckled and had allowed the front of the engine to drop.

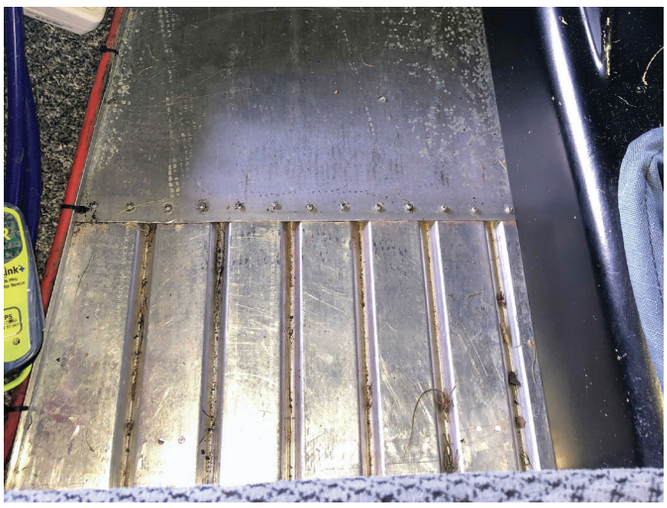
Our design team looked at the pictures to see what may have gone wrong here, initially, and quite naturally, the change in the design of the floor was centre-stage – surely a flat sheet is nothing like as strong as a corrugated one? But the flat sheet floor has been approved on other the Foxbats, and a close look at the drawings showed that the main load path for the attachment of the nose leg and bottom engine mount runs through a hefty bolted block and a bracket rivetted to doublers in the floor of the fuselage. We asked for more pictures showing the inside of the fuselage.

Looking at the pictures when they arrived, the failure sequence became clear; probably after some sort of unplanned overload, the nose undercarriage support bracket had broken free from its mounting.

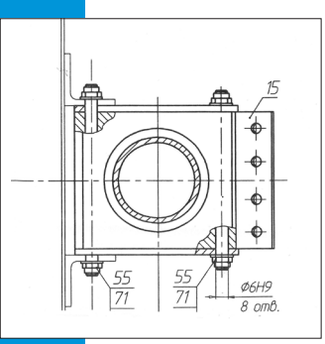
As you can see from the pictures, the two rivets holding the bracket in place had failed, allowing the bottom of the firewall to move back. Correspondence with the Foxbat's designer and the UK agent revealed that the block and bracket had been supplied as repair items from the manufacturers with two 'pilot' holes drilled, but the installer was expected to drill additional holes on assembly for the extra rivets, making up the group of four rivets shown on the drawings, which were required to carry the expected loads generated by the nose undercarriage. Some of the Foxbat variants use three bolts rather than four rivets, apparently, so these repair items were perhaps intended as 'universal' components that could be drilled to suit either configuration, depending on the aircraft they were being fitted to.

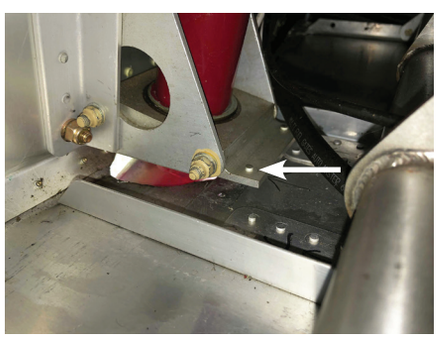
LAA Engineering is carrying out a review to establish exactly what's gone wrong with this aircraft's repair process. We're writing to all Foxbat owners to ensure that this error hasn't occurred on any other aircraft in our fleet, and, I have no doubt, further advice about what is and, importantly, what shouldn't be, considered a 'repair-by-replacement' will follow. We'll also be contacting aircraft kit and parts manufacturers to remind them that an LAA Permit to Fly aircraft is certified 'as initially cleared'. Any design change, however minor, or for whatever reason, must be first accepted by LAA Engineering before an aircraft can be cleared for flight with a new design fitted.

This is an example of a technical error that could very easily have gone unnoticed and the blame attributed solely to the pilot – as it was, as so often happens, there are multiple causes but I have to say that the repairer can see what's gone wrong and will be putting the aircraft right for the owner – naturally, Engineering will be right behind him during this process. Well done to him and his team.



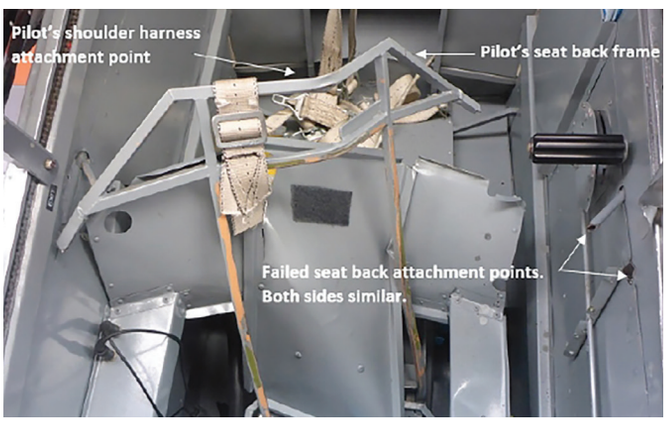
Above The aircraft suffered a minor accident and the fuselage was 'repaired-by-replacement' and returned to the owner, where final assembly was completed and rigging checks carried out. He noticed that the floor, which had previously been corrugated, had been replaced with a flat sheet. The LAA Inspector responsible for signing the aircraft out after reassembly insisted that the aircraft be checked by the UK manufacturer's representative and, after this had been carried out, he received assurances that this design alteration was 'factory approved' and as accepted on other later LAA examples. **Photo: David Howell**





Above Closer inspection revealed that a contributory factor to the structure having failed was that two rivets attaching the undercarriage bracket to the fuselage floor had broken. When we checked the drawings held in the LAA library, we saw that the design calls for four solid rivets in this attachment, not two. It turned out that the part had been received from the manufacturer with just the two end pilot holes CNC-drilled, leaving the other two rivet holes up to the installer to drill on assembly – a recipe for a 'human factors' failure. LAA Engineering is writing to all Foxbat owners to check their aircraft to ensure that this mistake hasn't been made on any other LAA machines. Though not always easy to do, it's important that manufacturer's drawings (or detailed instructions) are carefully adhered to when repairing an aircraft. **Photos: David Howell/Aeroprakt**

Incorrectly fitted shoulder harness



Above LAA Engineering has recently been made aware of an accident report published by the New Zealand Airworthiness Authority concerning a fatal accident involving a Titan T-51 Mustang. The pilot, the owner of the aircraft, suffered an engine failure shortly after take-off and conducted a 'straight ahead' forced landing. It is thought that he didn't react quickly enough to get the nose down and, because the speed was low, the aircraft had a high rate of descent on impact. The fitting of the shoulder harness was apparently non-standard and the accident report suggested that it would have been survivable had the harness been fitted correctly and its attachment not failed in the crash. We've promulgated the NZ CAA Continuing Airworthiness Notice (25-01) to all our Mustang owners and issued an Airworthiness Alert, with a link to the accident report, which is available from the LAA website.

Stolp Starduster Too: Partial engine failure after take-off.
One of our very experienced inspectors relayed a tale to me the other day which he felt would be worth passing on. It's a story of multiple errors involving novices and experts alike. The event also involves, like many close shaves affecting sports aircraft, both operational and technical points. I suppose I should default to the usual term for incidents where pilots and engineers sit at the centre of a problem – human factors!

Initially, when I was told the tale, I imagined that the events had occurred over the last few weeks, but once I had finally assimilated the many chapters in the story, I realised that this tale had its origins with a misbehaving engine some 12 years ago. I asked the LAA Inspector involved to write a brief report before my brain exploded – I've never been that good at 'whodunnits', I always feel like telling the author as I read, 'for goodness sake, get on with it'. Here's the Inspector's report: *Report on rough-running engine, Stolp Starduster in the summer 2018 (written September 2020).*

I made a Permit renewal recommendation for this aircraft in the early summer of 2018, and shortly afterwards it was sold and ferried to its new home. The new owner arranged for a familiarisation flight with an instructor, during which the engine suffered a partial loss of power after take-off, but it picked up again when the nose was lowered.

A tight circuit was carried out, and although the engine ran rough again on final, it was landed safely. I learned of this problem a year later in the summer of 2019, when I was asked to carry out another renewal inspection. Due to the lapse of time it was difficult to establish precisely what had happened, but it seemed clear that the problem was associated with fuel rather than ignition.

It should be borne in mind that a similar incident occurred in 2009, when the engine ran rough on a go-around at the end of a training session, when fuel quantity was low and the nose was high. The instructor lowered the nose, the engine picked up, and a safe landing was made. Investigation showed that the fuel pump had failed, but there was no way of knowing this in flight.

As a result of this incident the owner asked me to raise a Mod to fit a second fuel pump. This Mod was approved and embodied in 2010, it included two pumps with an either/or switch and a pressure gauge on the instrument panel. A check-valve was also fitted in the gravity supply line to prevent either pump back-feeding to the tank.

My initial investigation of the 2018 incident focused on fuel contamination as a primary suspect, but nothing was found. I widened the search to encompass the whole fuel system and eventually discovered that the check valve [NRV] was sticking – which reduced fuel flow under gravity alone to a significant degree.

I have established that the instructor joined the aircraft for the check flight sometime after the new owner had started the engine. He doesn't recall which cockpit he occupied, but it seems reasonable to assume that the new owner would be in the rear or solo cockpit, and the instructor in the front cockpit. The fuel pump switches and the fuel pressure gauge are in the rear cockpit only.

I am of the opinion that the occupant of the rear cockpit had not identified or switched on either of the fuel pumps, and this resulted in fuel starvation when demand from the engine was high. It is unlikely that the noise of a fuel pump – or the lack of same – would be noticed or remarked upon by any pilot who was not familiar with the individual aircraft.

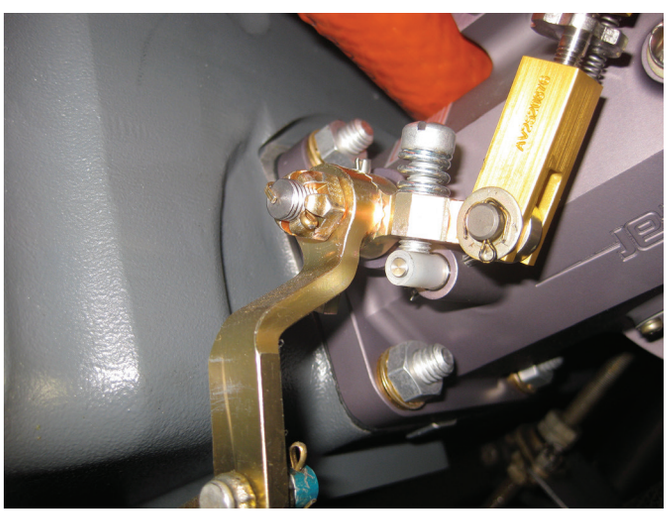
We became aware of this at HQ when two things occurred simultaneously. Firstly we received a Permit renewal application and then we received a report that this aircraft had, again, suffered an inflight incident whilst on its test flight. Our Chief Engineer, Francis Donaldson, asked me to see what had happened, and to look more closely at the early fuel pump modification – after all, problems with fuel supply seemingly sat at two previous in-flight emergencies.

I spoke to the inspector, who was also the renewal check-pilot during the most recent 'event'. He explained that the fuel system had been completely serviced, the sticking check valve had been replaced, and the carburettor – one of the culprits in the second inflight engine stoppage – removed, serviced and replaced… the other, of course, was that the trainee pilot didn't turn the electrical fuel pump on before flight – we'll come to that.

A third event was to follow, however – to check the aircraft out after all this work had been done, the inspector/check pilot took off after the usual ground runs and the engine performed well. He retarded the throttle to settle the engine into a more relaxed cruise-climb but, on doing this, there was no change in engine rpm. "Oh dear, what's happened now?" Well, some pushing and pulling on the throttle lever showed that, somehow, the throttle lever had become disconnected. Our pilot, a very experienced engineer and pilot, carried out a 'rather quicker than normal circuit and approach' and cut the power using the mag switches when he was sure he was in, with no further drama (or damage).

It turns out that, although the throttle linkage had been connected to the carburettor, and adjusted to ensure that both idle and full throttle settings were available via the throttle lever, and a local PPL (and LAA member) had carried out a full duplicate inspection, the fact that there was no split pin locking the nut to the bolt, was missed. Of course, vibration unwound the nut and the bolt fell out, disconnecting the link.

So, what to learn? Well, the aircraft had been sitting about for some time between events and, as we know, components that remain unused



AIRCRAFT DUPLICATE INSPECTION WORKSHEET LAA/IC-DUP Issue 3

Reference				Sheet No	of
A/C Type		Registration		Serial No	

Item No	Control/System	Detail of Work Carried Out	First Inspection by Inspector (Signature/Insp No/Date)	Second Inspection (Signature/Authority/Date)

Note: Duplicate Inspections are required whenever engine or flying controls are disturbed or at the completion of an aircraft build project. The control/system should be inspected for correct assembly and locking and for full range and freedom of movement in the correct sense. Some aircraft have 'Vital Points' (such as wing attachment bolts) and whilst not required to have a Duplicate Inspection it may be considered wise to carry out such inspections on Vital Points. Each part of such inspections should be signed by a suitably approved LAA inspector. Where a second LAA inspector is not available, an owner/pilot (who is also a member of the LAA) or a suitably licenced aircraft engineer may sign the second part of the duplicate inspection. When doing so, the owner/pilot must include his/her full pilot's licence number with their signature. Where two LAA inspectors are signatories, no seniority is implied by the first or second inspection, but convention is that the inspector overseeing the work as a whole will sign the first. The PMR statement must also be signed by the LAA inspector. Duplicate Inspections may be recorded in the aircraft's log books.

Note: All worksheets should be attached or referenced in the logbooks of the aircraft to which they refer and are considered to be part of the aircraft's legal maintenance record.

Above Starduster Too: In the main text, we discuss a number of examples where things haven't gone as well as they should have done, and the importance of getting a second opinion when it comes to releasing work done on an aircraft. In this case, various normal engineering safety processes were not followed correctly. When it comes to signing out work done on flight or engine control systems there's a formal process for this; the LAA provides a purpose-designed worksheet to record this inspection event, but second (duplicate) inspections carry huge responsibility – it's not just about 'ticking the box'. Photos: **Malcolm McBride/LAA Library**

for a time can suffer in all sorts of ways. The check-valve sits at the bottom of the fuel system, so it's likely that it had become 'sticky' through corrosion – remember that any water will sink to the lowest point in a fuel system over time. But really, in two of the three cases the reason for the power loss after take-off, was that the fuel pump wasn't switched on before take-off – and this has to be the fault of an overly rushed, possibly non-existent, pre-flight briefing from the instructor to the trainee.

There are three big lessons here. One, if you're going flying, take your time before the flight, to settle yourself down into pilot mode – sounds a bit wet I know, but you're not going to perform well in the air if you're carrying the weight of the working week on your shoulders, perhaps thinking 'thank goodness for that, freedom at last' as you taxi out.

Flying an aircraft can be stressful enough, you don't need to be thinking about meeting other deadlines. This is just as true, by the way, if you're a busy flying instructor or just starting out with a new aircraft. Two, before you fly any aircraft, yes before, understand the principle systems.

All aircraft have their foibles, and it's important to understand them – in this case, because the gravity feed from the tank is marginal with low fuel levels we've asked that a placard, instructing the pilot to ensure that the fuel pump is on before take-off or landing, and whenever the fuel tank is less than ¼ full, is fitted in clear view of the pilot before further flight.

Of course, the third lesson is to remember that, if you are asked to perform a duplicate inspection, make sure that you actually do it properly. This can be a bit daunting for an owner inspecting work his or her 'mentor' has just done, but an LAA Inspector won't thank you for missing something important if it's failure ends up leading to an accident – inspection is not just ticking a box. A duplicate inspection, regardless of what some might say, carries the same responsibility as the initial one and, as an important aside, the initial inspection is a separate job function from carrying out the work… different hats required!

Pioneer 300 tailpipe failure

In retrospect, Pioneer 300 flyer James Mullen, thought that it probably wasn't the best of ideas pushing on home after his exhaust system had failed in flight, he thought that he should have landed as soon as possible – I agreed. The sequence of pictures shows just how fortunate he was to get away with it!

Picture 1 is of the water bottle and **picture 2** the battery, bad enough, but it wouldn't have been long before serious structural damage could have occurred – the Pioneer 300 is a wooden aircraft after all.

To keep the underside of the fuselage clear of exhaust gasses and to help prevent exhaust gasses entering the cockpit, the Pioneer 300 exhaust tailpipe has been progressively lengthened.

Above Now you see it (left). Now you don't (right)'. There are tell-tale signs that all is not well with this Ikarus C-42 spinner back-plate, though you need to know what to look for. It's essential to remove all spinners at an annual check and, if there's any sign of 'smoke streaks' created by powdered aluminium oxide, fretting is likely to be the cause – and this needs investigating. **Photos: Philip Meech.**

This lengthening has led to a number of failures of the welded connection between the tailpipe and the silencer box and the manufacturer of the system, CKT Engineering recognised this issue and have modified the exhausts by fitting a strengthening bracket – **picture 3**.

If you have a Pioneer with the lengthened tailpipe, but haven't had the strengthening bracket fitted, we'd recommend getting this done, and CKT will modify your exhaust free of charge.

Glider tug exhaust failure

Above The picture shows another exhaust system failure, this one on a Rotax 914-powered Eurofox glider tug.
Whilst a complete failure of the welded joint connecting the pipe to the flange can lead to a dangerous inflight situation, which is why a thorough inspection of the exhaust is recommended at each pre-flight inspection, in this instance, the pilot wasn't just confronted with the danger posed by fire and fumes, the failure occurred suddenly whilst launching a glider. Fortunately, both the glider and tug landed safely.
Photo: Ros Sibbald

LAA engineering charges

LAA Project Registration	
Kit Built Aircraft	£300
Plans Built Aircraft	£50
Issue of a Permit to Test Fly	
Non-LAA approved design only	£40
Initial Permit issue	
Up to 450kg	£450
451-999kg	£550
1,000kg and above	£650
Permit Renewal (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
Note: if the last Renewal wasn't administered by the LAA an extra fee of £125 applies	
Modification application	
Prototype modification	minimum £60
Repeat modification	minimum £30

Transfer	
(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
Four-seat aircraft	
Manufacturer's/agent's type acceptance fee	£2,000
Project registration royalty	£50
Category change	
Group A to microlight	£135
Microlight to Group A	£135
Change of G-Registration fee	
Issue of Permit documents following G-Reg change	£45
Replacement Documents	
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.