



AALOSG Newsletter No. 10 April 07

[AALO Supporters' Group Newsletter](#) [30/4/07](#)

Nic Holman (Pres.)

Phil Kingsbury

Clive Richardson

Charles Scott

Max Waldron (Founder Member)

Dear friends and supporters of XS422. Hoping this newsletter finds you all well. I must first apologise for the lull in information coming from AALOSG HQ as the start of November was the last time we furnished you with a progress report. My duties as documentary maker, together with organising the logistics for not one but two engineering trips to Stennis have rather sapped my time. I'm very pleased to report however that my inactivity on the newsletter front is not mirrored by the restoration of XS422 which continues to go well.

In the following pages I hope you'll enjoy the updates on both visits, as well as some associated news items... I've also snuck in a short call to arms as we head into the 2007 show season, more of that later.

[November 2006 Visit to Stennis](#)

The November trip proved to be one of the engineering team's most productive and successful trips to date. The combination of a quickly-bonded and proactive team and engineering goals that 'came good' with relatively few complications, all meant that Phil and his team returned to the UK having exceeded the goals set prior to the visit.

The 'rolling trip' worked really well in practice too, with Rod Barker & Nick Woodhouse working up the Pitot & Static systems and John Watson prepping the starboard looms ahead of the second team's arrival 5 days in. Geoff Commins filled the Chief Engineer's post for the first team and Andrew Brodie was on hand to give his support as project champion.

At the end of week one, Rod and Nick had almost finished making good and pressure testing the pitot system, the second contingent of engineers arrived, in the form of Phil Wallis, Max Waldron, Jason Skinner, Paul Oughton, Dave Yates (Lightning specialist on his first visit) and Gary Hurst (RAF VC10 Electrician on his first visit too).

As the hangar was already up and running the fresh troops were able to step straight into their overalls. A couple of hours were spent the first afternoon with handovers and briefings on work undertaken so far and then it was down to business.

I'll defer to the Chief Engineer for a summery of what was subsequently achieved on XS422 this trip ...

- On the whole, excellent progress was made in every respect, major goals were all completed and in most cases exceeded.
- The Pitot/Static system proved to be in better condition than expected resulting in the majority of work being completed on this system during this trip.
- Electrical re-splicing proved a big challenge as 100% integrity had to be established due to aircraft manuals being out of sync with the modification standard of the aircraft.
- The flying controls in the cockpit were completed well ahead of schedule, this enabled access for the whole of the second week to fit the throttle controls.
- No2 engine bay is in the main complete, No1 engine bay has moved forward significantly, both areas are very close to 'engine in' status.
- Immediate priorities remain cockpit electrical wiring, fuel system integrity and fuel gauging system serviceability.

As XS422 is rapidly progressing towards ground testing the level of interest and support in America, both locally and nationally, is increasing in proportion. We recently signed up our first US lifetime SG member (a big welcome and thanks to Ian Lodge), and we have also gained the support of a relatively-new Airframes & Propulsions (A&P) school at Stennis airport. Phil Wallis and I gave their 10 students an hour of 'Lightning time' one morning; this is not an aircraft a fledgling mechanic in Mississippi can normally expect to see at first hand. The 'Lightning Tour' was much appreciated and will be repeated for future intakes. In return, Paul Renot and his students have offered to polish the aircraft early next year, as well as refurbish all of XS422's removable panels including repainting them where applicable. Additionally the college will also be producing the new cable loom covers that run down both sides of the airframe.

We have John Cranmer at Votech to thank again this trip for his continued support. His welding skills ensured that the Fueldraulic rig now has a usable towing arm (previously bent in half). John also continues to liaise with the team re the fabrication of a reheat pipe fitting dolly.

Another supporter in the US who continues to look after the team in one way or another is Tony Herrington. A commercial pilot, Tony has helped us out in the past with the loan of a computer and during this trip he was more than generous in providing a short flight over the local area for 5 of the team members. This was very much enjoyed, particularly by the first time visitors who were able to get an idea of the miles of swamps (and Alligators) that surround our Stennis base. They were able to appreciate the beautiful Mississippi Gulf Coast which is slowly coming back to life after Hurricane Katrina. Thank you, Tony, for donating the fuel for the trips and many thanks to Tom Bordorlan for the loan of his plane.

Now, look overleaf for some good pictures from the latest trips!

November 2006 Photo Gallery

A small selection of the vast photo album shot by the team...





February 2007 Visit to Stennis.



Andrew Brodie, volunteer Roger Winkworth & myself on the civvie side.

Andrew and I arrived a day or so ahead of the main group and were able to get all the accommodation, transport and the hangar prepped for the main team and to make preparations for taking XS422 out of the hangar for the first time in 3 years. The photo above shows the team relaxing (just for a moment!) outside the hangar with XS422 'looking on'.

The goals for the visit were as follows:

- *Remove all 4 DC pumps, check amperage and functionality*
- *Fill one wing with fuel through gravity point*
- *If fuel capacitance units and DC pumps pass respective tests then the decision may be made to fill other wing*
- *Pump fuel, using fuelraulic rig into other wing via the engine fuel feed hose, thereby trapping any loose PRC etc in the heat exchanger. Return fuel to original wing using same method. Repeat 2 or 3 times each wing*
- *All above being well, pressure testing of centre section can now be undertaken*
- *If all okay, commence fitting heat shields in No. 1 Engine bay*
- *Progress electrical work*
- *Continue Pitot static system refurb*

With the arrival of the main team there was still some logistics to get in place before XS422 could be towed outside. Hangar manager, Joe McCardle, was greatly supportive in both organising that we had a means to tow XS422 and working on his hangar doors to ensure that we'd have the clearance to get the tail through the door. Hurricane Katrina had made sure that the door had a new shape so there were a few tense moments as the door creaked past it's normal high point. Despite currently being without her fin tip, XS422 is still mere inches from the raised door and the front gear is pressured higher than normal to give an inclined attitude to the aircraft.



It was also necessary to organise the purchase and delivery of fuel for the aircraft and some cover from the airport fire service for the initial fuelling.



While all this was going on Milton and Rod busied themselves with the removal and testing of the fuel capacitance units from both wings. A very visual process which involves wiring the units together to mirror their set up in the wing and then submerging them in fuel to simulate 'full' and then removal from the fuel to simulate 'empty' while measuring their capacitance on a test rig.

This was a time consuming process with little margin for error but the guys eventually declared the whole thing a success and re-fitted the units in the wings.

About three days into the trip XS422 was slowly lowered on her jacks under the close supervision of Mick Crawford, a little nitrogen was added to her main wheels and then Joe towed the aircraft out into the Mississippi sunshine for the first time in 3 years. Covered up in case of a change in the weather the aircraft spent the first of three nights outside, something that brought the attention of at least two curious officers from the local sheriff's office who were unaware of the presence of a bit of classic aviation heritage on their doorstep.



The arrival of the fuel truck and the cautious gravity filling of the port wing was a nervous time for the engineering team. A first chance to see just how good a restoration of the wings and fuel systems had been achieved. It was inevitable that after 14 years there were going to be some leaks and also the only real opportunity to see how good all the joints and seals were was by putting fuel in.

In the circumstances the results were very gratifying. Some leaks were observed and some of these were attended to over the following couple of days. This meant that it was not possible to pressure test the wings in the time available, although the fuel was pumped across to the starboard wing with similarly pleasing results.

With a heavy storm being forecast and team members approaching departure dates it was necessary to start thinking about getting XS422 back into the hangar. Geoff made the decision to postpone the pressure test until later in the year until all fuel leaks are resolved.



Additionally, Milton took the opportunity to inspect and test 3 out of the 4 DC pumps, which were discovered to be serviceable. Rod continued work testing the ventral fuel system, as far as was possible, both on the aircraft and the tank itself.

Further successes were that both wing-mounted, fuelhydraulic pumps were found to work satisfactorily.

During the trip Rod was also able to recover some major items from our spare cockpit which will be assessed for their serviceability.

Although a short trip with major time consuming tasks to undertake all those concerned have returned to the UK happy with what was achieved on the trip and this has created a good springboard for the next visits.

Huge Thanks ...

As a final word on the Feb trip it gives me great pleasure to share the view of the project and the entire team, in extending huge thanks to Bill Gibson and his Thrifty car franchise in Gulfport. Bill, Tanya and the rest of the team have always offered us exceptional service and cushioned our car hire costs for the US visits, and are very high on our list of US friends. On the occasion of this visit Bill has gone the extra mile and donated the team vehicle for the trip. With cost always an issue for us this gesture is fantastic. We owe you a beer Bill!

Looking ahead ...

It's fair to say, without being too vague, that a great many options lie open for the year ahead in terms of the on-aircraft work. The key determining factors, not unusually, are expected to be the availability of the team's engineers and electricians and the availability of funds.

At present, plans are on the table for an electrician's trip in June and the major annual trip in November. Prior to the November trip it is expected that with the assistance of Roger Winkworth, another container full of essentials will make it's way to Stennis, to coincide with the arrival of the engineering team.

Across the spring and summer months the team will variously be at Bruntingthorpe harvesting more spares and fine tuning what will go in the container.

Air Turbine Gear Box ... or "Indiana Jones & the ATGB"

News, at last, of the imminent arrival of our ATGB in the United States. It was hoped to have had this Stateside in time for the Feb trip. However, although the list of goals was already getting long red tape held up the freighting process and, as the transit was kindly being sponsored by one of our American supporters, we had to be a little patient. For various reasons the benefactor has asked to remain anonymous but you know who you are and we are truly grateful for your donation of service.

The gearbox should now arrive down to Stennis just after Easter so should be on site for either the June visit or November failing that. Another large piece of the jigsaw....

Sponsorships & Funding ...

There is still a great deal to do to get XS422 to the ground running stage but it is estimated that we are around 80% there on the mechanical side and around 60% on the electrical. The project has come a long way since inception and the engineering team are justifiably proud of where we are today.

While the project survives on the generosity of individuals and supporters and, of course, the engineering team who donate their time and expertise, as we progress towards ground runs the costs will escalate.

We continue to actively seek major sponsors from the business community, as well as entrepreneurs or philanthropists from the world of aviation. We also hugely appreciate the smaller donations of supporters group members and members of the public.

If you have any friends or family members, colleagues or business contacts who you might feel would be interested in returning a Lightning to the skies or being a part of this worthwhile and

exciting adventure then please drop me their details and I will send them some information.
nholman@globalnet.co.uk

In conjunction with our general quest for donations and sponsorships, we are currently embarking on a new sponsorship scheme to directly fund an engineer on their working trip to Stennis. We are looking for companies or individuals who would be willing to make a donation of £1000 to the project. That £1000 will fund the airfare, transport and accommodation for two weeks of work on the aircraft. The engineer will pay their own meals and will of course be donating their time and skills to the project.

We hope to send up to 4 team members in June and 10 in November. If you would like to contribute towards a team member then donations below £1000 will of course be warmly received.

All individuals or companies participating in the Sponsor an Engineer scheme will have their name added to a dedicated page on our website @ www.lightning422supporters.co.uk

The Show Season ...

It seems appropriate to come on to our planned air show diary for this year. A case of small beginnings but we fully intend to add to the diary as options come up.

At the moment we are signed, sealed and delivered to attend the Waddington air show on the 30th June/1st July so we hope to see many of you there.

We will also be supporting the LPG at Bruntingthorpe on Sunday 27th May.

Just a small reminder that it is hoped the Vulcan will be making an appearance at the Waddington Air Show. Definitely not one to be missed!.

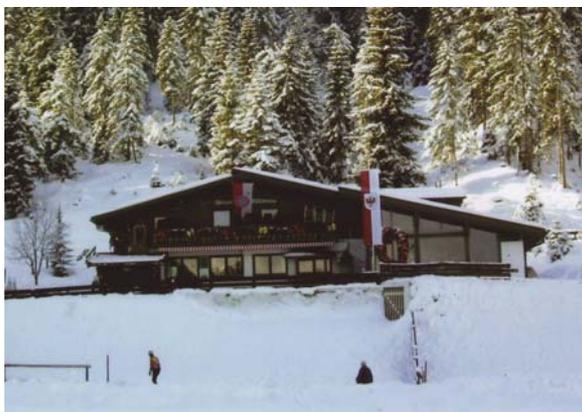
A bit of self congratulation ...

It's to the great credit of the support that you as SG members give with your annual subs, as well as the funds you contribute by purchasing merchandise at the shows we attend, that the SG funds were sufficiently healthy for us to finance the February visit to the tune of £1000. The money was used to cover the flights of 3 of the engineers. Once on site it's worth reiterating that the engineers give their time and expertise *gratis* so if we can get them there, XS422 is the beneficiary.

Thank you for your continued support and we hope to play a similarly large part in the funding of the November visit.

And finally ...

With special thanks to two of our most ardent supporters, Peter & Margaret Thompson comes a great little tale of spreading the word. While holidaying in Austria early this year they were able to place one of our AALO stickers on a visitors board, high in the Austrian-Tirol. Their photos show the location and the sticker in its new home.



We are not advocating bill posting but if anyone else wants to follow Peter and Margarets' lead and spread the word about the restoration of XS422 then it would be warmly welcome. Similarly if you think someone might be interested in learning more about the restoration and supporting us then let me know and we'll get in touch.

With thanks to the two Phils, Wallis & Kingsbury, for their eng edit and overall edit, respectively.

Nic Holman

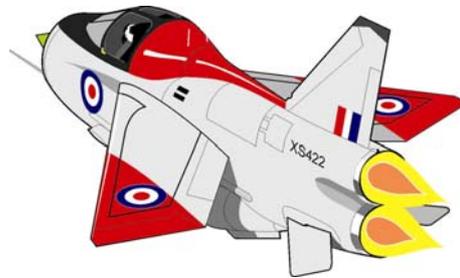
SG President

e-mail: nholman@globalnet.co.uk

!STOP PRESS!

AALO Merchandise News

Again, we will have something new for this season: XS422 fridge magnets. These PVC fridge magnets depict a rear, three-quarter view of XS422 with both reheats lit. A must-have for all serious supporters of XS422's restoration to flight. Nicely priced (we think) at £2 each – you can pay more if you want! Come and see us on the stand this summer and say hello.



Phil Kingsbury

AALOSG Merchandising

Please enrol me/renew my membership* as an AALO Supporters' Group member as follows:

1 year @ £20 ()

Lifetime @ £150 ()

Please complete the following information in block capitals:

Name: _____

Address: _____

E-mail address: _____

Tel. no.: _____

* To join the AALOSG or to renew your existing membership, send your application to:

AALOSG Secretary, Greenways, Vicarage Lane, Hordle, Lymington, Hants, S041 0HS.
