



AALOSG Newsletter No. 11 February 08

## [AALO Supporters' Group Newsletter](#) [28/2/08](#)

*Nic Holman (Pres.)*

*Phil Kingsbury*

*Clive Richardson*

*Charles Scott*

*(Max Waldron - Founder Member)*



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I'm always very happy to receive photographic donations at SG HQ and I thought you'd all enjoy this stunning shot of Cape Town's Lightning F6 XP693 taken by Ian Black. Ian has kindly shared a number of his great Lightning photographs which I will include in future issues.

I'm conscious of the fact that it has been quite some time since we last shared news with you and for that I must apologise. It falls on me to pen these newsletters and the truth is it has been a busy few months on the restoration and, at the expense of helping the restoration team with logistics and assisting Charles Scott with his marketing duties, I have been unable to complete a newsletter until now. I actually began this in late August ...

The return to flight of XS422 is making excellent progress and since the last newsletter two more trips to Stennis have taken place, and the next one is in the planning stage for late March / early April. It is hoped this 'spring trip' will see team members on the ground for a month with engineers and electricians coming and going to perform their various tasks.

Before I go much further I'd like to share Chief Engineer, Phil Wallis', wrap up of 2007 and thank you to the AALO team as I think it summarises perfectly where the restoration is today.

"Dear fellow Lightning restoration team members, as 2007 draws to a close we conclude another year of effort in the USA and in the UK. As you are aware, we have carried out 3 visits to the USA this year all producing or overcoming some major restoration milestones. Here are just some of those achievements:

XS422's main wing tanks and leading edge tanks received fuel for the first time since 1987  
XS422's pitot-static system refurbishment, sense and leak checks completed.

Cockpit electrical system under-floor refurbishment - completed.

Cockpit electrical survey – completed.

Cockpit electrical refurbishment well under way.

Air Turbine Gearbox shipped to the USA - fitted and tested.

Main fuel leak repairs carried out.

No.2 Engine bay complete and ready for engine fit.

Airframe and propulsion check 4 inspection cards - all completed.

Spares container in the USA relocated and contents sorted by numerical order.

Several operators of ex-military jets in the USA have visited and working relationships established.

Last, but not least, the AALO Supporters' Group has significantly funded USA staffing - the backroom boys did good!

These are just some of the major achievements in the USA and at home - most achieved with a 4,000-mile-long screwdriver!

We have all played our part - no matter how small, and after our latest Executive Committee Meeting I can report we now have the mandate to move into 2008 with the ambition to make it our most challenging year. A spring trip is already being planned and by the end of 2008 we aim to have the two engines fitted.

The Executive Committee is now the strongest it has ever been. We have a first class team dedicated specifically towards securing funding to test flight and, more importantly, a career for XS422's post test flight. Early indications from potential operators are extremely promising.

I would like to thank you all for your continued support and dedication to this project.

*PW*

I'll bring you up to speed on how the individual trips went and how Phil Kingsbury, myself and the air show team fared across the mid to late summer last year, and how engineering activities are progressing in the UK a little later, but first to current activities.

It seems we caused a few ripples in November when the following advert appeared in the US publication, 'Trade-a-Plane'.

**BAC/EE Lightning**

**England**



BAC/EE LIGHTNING T5 Mach 2 British Cold War Interceptor. Desirable twin-seat trainer variant. Located and undergoing restoration in the USA. Close to flight. Valuable reserve of spares including 4 engines. For sale or part ownership. Serious offers considered.

Web forums lit up with tales of problems with the restoration; there was some speculation that the restoration had folded and ....

Well I'm pleased to report the simple truth ... we're still very much here and we are as dedicated as ever to getting XS422 back in the air.

The reason for the advertisement, and we may repeat the exercise in other aviation publications, was to try and broaden awareness of the project, particularly within the US aviation community and also to invite the financial support of any interested parties.

Andrew Brodie & Jon Roth have until now been the sole financial backers of the restoration and combined with their money the engineering team, who've brought not only their time and expertise to the project but a wealth of contacts, parts and services, have been able to successfully progress the restoration to the tantalisingly-close position we find ourselves in today.

As we head into the closing game it is natural that the costs will rise considerably when you consider for example, fuel costs for ground testing, safety equipment, and the servicing of ejector seats, just to name a few.

Subsequently, we are now looking at attracting some additional finance to the project so that the momentum of the restoration can continue and perhaps increase, despite the anticipated costs.

We are also starting to consider the operation of XS422, once it is airworthy.

Our main point of contact for all of this is now Charles Scott. As you may be aware Charles has been involved in AALO for a number of years and has also been the SG membership secretary and treasurer for the last three years. A successful businessman outside of AALO, as well as a qualified pilot, Charles is eminently qualified to deal with potential investors and extol the virtues of XS422.

On seeking potential operators of XS422, Charles made a number of successful trips to the USA last year to meet owner/operators of classic jets and we certainly have some interested parties. Many of the individuals that Charles met were also keen to offer their support in the meantime and this has resulted in some useful collaborations.

On seeking potential investors it's been decided at an exec. level that some of our remaining funds should be made available to put small AALO teams or individuals into environments where those investors might be.

As such Charles will be going to the CJAA (Classic Jets of America Assoc.) convention in March, in New Mexico, I will be going to the EAA (Experimental Aircraft Assoc.) Fly-in at Oshkosh in July, and then Charles will visit the Reno air show. All of these events will be carefully choreographed and entry secured to the owners' enclosures beforehand so as to meet as many potential investors as possible.

I'll keep you posted on how things go with all that.

But what of the restoration itself...?

[Electricians' Visit – July](#) Following pre-trip meetings and communications between the Chief Eng, John Sherry, Bo Brocklesby and Rod Barker, John & Bo headed out to Stennis on their now customary mid-year visit to progress XS422's' electrics.

Their primary goals were:

1. Examine corroded terminal blocks for centre windscreen panel heating elements.
2. Survey T55 cockpit instrumentation panel for compatibility.
3. Isolate and terminate all wiring associated with redundant weapons carriage and release systems.
4. Confirm suitability of 'robbed' T55 cockpit rapid take off switch panels (gang-barred lower centre console) to slave into XS422.
5. Identify forward bulkhead bungs & main loom connectors.



The progress made and the goals achieved mark the visit as a great success. In particular, the identification, inspection & cleaning of connectors for the main instrument panel achieved an 80% success rate on first pass. Later in the trip the remaining 20% were also wrapped up. All the connectors were then bagged up with their idents ready for John Watson & Dave Dunn to continue progress in November.

The windscreen heating elements were found to be partially serviceable; the centre-stbd screen proved troublesome and was successfully rectified in November.

An overall electrical survey of the cockpit was also completed.

A general inspection of both DC & AC power generation systems was carried out and found to be in very good repair, with little surface corrosion.

In addition to the nine days straight work undertaken, John & Bo were also able to host a number of visitors to the project, including a small contingent from the US Air Force. PR always has to go hand in hand with the engineering side of the project.

**Main Eng Team Visit – November** Towards the end of last year the main engineering team, under the guidance of Phil Wallis, made the trip to Mississippi to further progress the work undertaken in February and July.

As well as the regulars it was great to have Dave Yates and John Watson back on their second visits and we were particularly pleased to have new recruit Dave Dunn on board. The areas of expertise in the team covered a broad cross-section of disciplines and the potential for good progress was inevitable. *Team photo at right!*



In Phil's 2007 wrap up earlier he mentioned a number of milestones achieved and many of those came about during the November visit.

In particular, Dave Tylee & Max Waldron were tasked with eliminating the fuel leaks discovered in February 2007; it soon became apparent that during the curing time for the PRC (Fuel Tank Sealant) they would have spare time to go onto other things. It had been Phil Wallis' intention to check the recently-delivered Air Turbine Gearbox (ATGB) and, time allowing, fit it towards the end of the trip. As it happened, Dave had time to fully prepare the ATGB and, with the assistance of Max and Dave Yates, fit it to the airframe. This is located in the reheat pipe area of the rear fuselage on the port side (*see photo below*); its exhaust can be seen as a large hole on the aircraft skin in this area.



A further unexpected bonus was that with the donation of the use of an Air Start Trolley from Stennis Airport Authorities, the ATGB was run up inside the aircraft for the first time in 14 years and ran for 2 or 3 minutes no problems. An amazing achievement as the gearbox had travelled half-way around the world for its restoration.

While the ATGB and the fuel leaks were being attended to, Dave Yates was working on the Air System and finalising checks on the two engine bays. The number two engine bay is now complete and ready for engine fit.

Nick Woodhouse was able to complete the work that he and Rod Barker started earlier and the pitot-static system is now fully leak checked. This included laying in some new flexi pipe to replace questionable multi-junction sections.

John Watson and Dave Dunn proved to be a natural team and made great progress in the restoration of the cockpit. They were able to progress the cockpit from John & Bo's work in July to a trial fit of the instrument panel, as well as rectifying some small, but potentially troublesome, snags with the windscreen heating systems. They were also able to fit the instrument crate which sits forward and centre of the cockpit.



I've included a photograph (*see previous page*) of the cockpit as it clearly shows the great improvement. The instrument panel has now been returned to the UK where John Watson will complete its refurbishment and testing.

We did win one major battle over the aircraft this trip: attempts to remove the starboard wing leading edge tank DC pump resulted in only half of it coming out and leaving the part sheared off body in the leading edge. After much head scratching and various attempts to persuade it out it fell on Dave



Yates to remove the remains of the pump. Failure would have meant replacing the whole leading edge tank with the spare at Bruntingthorpe, a delay and costly step backwards.

A credit to Dave's tenacity that after nearly 3 days crouched on the wing picking, drilling, and knocking bits off the pump, some mere fragments, he was rewarded with the remains of the pump being free of its housing. After a thorough cleaning and inspection of the hole, a new pump was successfully fitted.

*The photograph, at left, shows what Dave recovered, with the new pump (at top) for comparison.*

As well as supervising and participating in the 'hands on' engineering work, Phil was able to sign the check 4 servicing as complete.

Geoff concentrated his efforts on our huge spares store and with the necessity to move it this trip, took the opportunity to reorganise what we keep at Stennis. It will mean that future trips will find it even easier to find what we have.

Roger Winkworth was able to join us again for a week and brought his enthusiasm for the project and his willingness to back up the engineering team with some of the less glamorous but important day to day tasks. He returned to the UK for a knee replacement operation so we're looking forward to 'Bionic Rog' on the spring trip ... we may not need the tug to move the aircraft.

All in all, Phil, Max, Geoff, Andrew, John, Roger, three Daves and two Nicks had a very enjoyable and, above all, productive trip.

**November Thank You** In between filming I was able to cultivate some new 'friends of XS422' and we are immensely grateful, in particular, to Wendy, Bill & the guys at Taylor Aviation for all that they were able to do for us while we were at Stennis. We look forward to continuing our new relationship.

We also continued to receive great support from Bill Cotter, Cheryl, Kevin and the team at Stennis Airport, who make our visits a pleasure and a breeze.

Huge thanks as well to Desoto, who donated the PRC used to effect the fuel leak repairs.

### ***A special mention ...***

For a number of years now, Bill Gibson, the owner of Thrifty Car rental in Gulfport, has been a great friend of the project and a great personal friend of an increasing number of the visiting teams. Together with Tanya and the rest of his team he continues to help and support us locally; in November he was again good enough to sponsor us to the tune of a vehicle *gratis* to get the engineering team from the hotel to Stennis each day. Many thanks, Bill, for your continued support and friendship.

## 2007 Air show Season

The way the summer of 2007 went is best summed up by the two photographs below, both courtesy of Milton Roach. On the left is the first Bruntingthorpe of the year and on the right is the last Bruntingthorpe of the year. Waddington was more like the picture on the left.



Phil Kingsbury and I did three shows last year, variously and ably-assisted by Clive Richardson, Charles, Jase & Becky Skinner, and with varying levels of success. The key driver to getting out to the shows is to spread the word to as many people as possible for as little cost as possible and to generate as much income for the project as possible.

With rumours rife that there might be a Vulcan under power the first Bruntingthorpe meet of the season was one of the busiest I've seen and one of the wettest. Despite limited success on the fund raising front we did have a relatively dry tent and so were able to welcome a great number of people in from out of the rain and tell them about the restoration.

Our second outing of the year is always one to look forward to and now a firm fixture on our calendar, Waddington Air Show. Again it seemed the whole world was hoping for a Vulcan and so despite appalling weather on the Saturday there was a good turn out. We had a reasonable day takings wise and joined a few new members (always welcome) but were looking forward to the predicted sunny skies on Sunday to boost morale, sales and to dry out the trench foot. Alas, it was not to be and after getting up in the wee hours and setting up early to catch the early birds it was announced that the show was to be cancelled. This was a huge disappointment. Apparently, many of the exhibitors and the main car park were flooded from the previous day's rain, although the previous day's terrorist attack at Glasgow Airport must have come into the organisers mind, I think.

Our final show of the year was a brilliantly sunny Bruntingthorpe and a great many old friends came out of the woodwork, including some of the engineers from trips past. Indeed, it was good to see many of you too.

[The Supporters' Group](#) We enjoyed a good 2007 and with our air shows and your memberships were able to play a significant part in funding the continuing restoration. For the November trip in particular we were able to contribute sufficient funds to fly three of the engineers out to Stennis.

As our numbers grow so do funds and in 2008 we look forward to playing a greater financial role in the project.

In 2007 we started to see some memberships from the United States which is fantastic and something I'm keen to encourage. In particular I'd like to belatedly welcome Ian Lodge, who's taken out a Lifetime membership and has just retired from the USAF. We now have a Las Vegas outpost...

Thank you all for your continued support.

[Website Update](#) It goes without saying that our 'main' AALO website ([www.lightningusa.org](http://www.lightningusa.org)), although comprehensive, has for a long time been in need of an update and I'm pleased to report that this is finally underway. I'll be working with our US project manager, Bob Simms, who generously funds the hosting, to get it ship-shape.

It was always my intention that the SG site ([www.lightning422supporters.co.uk](http://www.lightning422supporters.co.uk)) should be the place to go for news and photographs and a little background and now we are actively seeking investment it makes sense for the 'usa.org' site to be reborn as our corporate face.

In due course you'll be able to visit it for more detailed information on the set up of the project and how you can become a co-owner or investor in the restoration.

For the time being any visitors to the main site will find themselves redirected to the SG site... which I'm also updating.

**[Electronic Memberships and Donations](#)** Speaking of memberships we've now made it much easier to join the SG and renew memberships electronically.

Using the same paypal account as I use when we ebay items for the project, you can now make payments or donations by PayPal to [nholman@globalnet.co.uk](mailto:nholman@globalnet.co.uk)

If you are based in the United States and would like to join or make a donation then please make a PayPal payment to [contributions@lightningusa.org](mailto:contributions@lightningusa.org)

[In both cases please also follow up to me, Nic Holman, at the first email address with your name, address, email address & a tel number, and a short explanation of what your money is for]

In the UK annual membership is still just £20 per year and a Lifetime membership is £150. If you choose to pay by PayPal then please add £5 as they take a commission.

In the USA annual membership is \$40 and a Lifetime membership is currently \$300. Again, if joining by PayPal from the US please add \$5.

As a result of now accepting electronic memberships we've decided to drop the membership application form that usually finishes the Newsletters.

**[Donations](#)** Donations don't necessarily need to be in the form of money and we are happy to accept goods or services, where relevant, as well as items that we can auction to raise money for the project.

In this vein I'd like to publicly thank Jon Windover, who singled us out at Waddington and a few weeks later donated a number of pictures and squadron prints with which to raise funds. One of the items being an original pencil drawing (*pictured on the right*). In time these will be appearing on Ebay so feel free to bid. All monies raised go to the restoration! Many thanks again, Jon.



**[Instrument Testing](#)** With the instrument panel back in the UK for refurbishment the testing and calibration of our instruments becomes a more pressing engagement but our avionics supremo, Rod Barker, is on the case. He is currently setting up an instrument test bay in the UK so he can soon begin work on the instruments.

**[Google Earth](#)** In the quest for publicity and worldwide awareness I'm pleased to report that the boys and girls at Google Earth have played ball. I submitted a few photographs for inclusion a few months back and if you go to 'Stennis Airport, Kiln, Mississippi' on the site you will find a blue and white dot on the grass about half way down the runway. Click on it and you'll open a photograph I took during the Feb visit in 2007. The website normally only permits 'scenics' but I suspect they found it unusual. If you have GE then take a look.

**[Reheat Pipes](#)** Well barely has the dust settled on Geoff's Stennis suitcase and he's been busy at Binbrook on the reheat pipes. Since his return at the end of November he's built no less than 5 reheat storage and transit stands. This means the two reheat pipes at Bruntingthorpe now have proper stands and the two reserve pipes we have, one at Binbrook and the one pictured, are also now stored in Geoff's cradles.



In addition, with John Watson's assistance, the nozzle system of the pictured pipe has been stripped, cleaned, reassembled and recalibrated.

Geoff is now busy working on planning for the spring trip to Stennis.

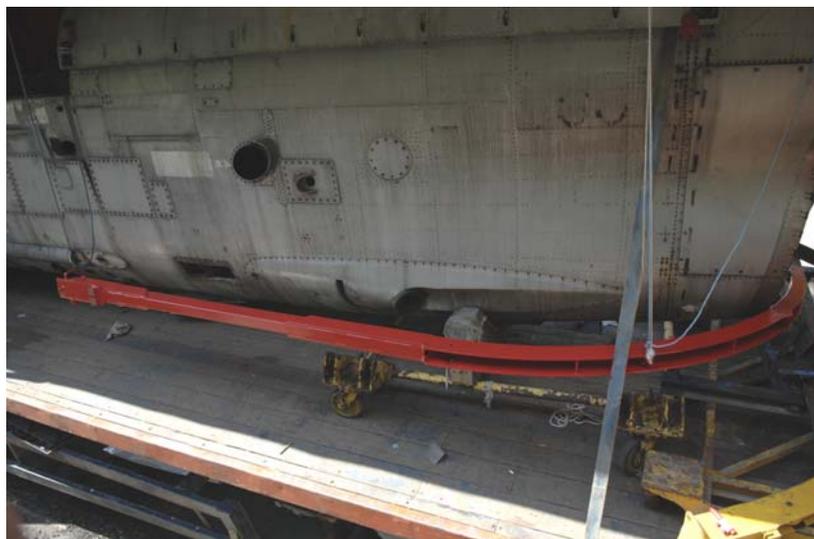
**The Seals are coming...** No, not the slippery fellas with the ball but much-needed and long-sought after aircraft seals, all courtesy of the top gents at DMR Seals in Sheffield. We now have nearly 50% of our seal requirement thanks to their generosity. A huge thanks to Mick Keay of DMR Seals and to Martin Peat and Andy Batty for their great help with this.

**Craig Penrice** Following some preliminary discussions and then a dinner meeting AALO are delighted to announce that Craig Penrice has joined the team.

Craig needs little introduction and is a widely respected aviation personality and brings his many years of Lightning experience to the project. Initially, Craig will be involved with putting together the operating manuals for XS422 but we hope he will take a greater involvement as we near the completion of the restoration. Welcome, Craig, and great to have you on board.

**From the Woodhouse Workshop** Nick Woodhouse has recently finished work on another accessory for our Didsbury and it will prove invaluable when we come to fit the seats and canopy.

I'll let Nick explain the rest..."*The curved part is a standard No.3 Didsbury Jib. With the aid of an original drawing supplied by Didsbury I have had an extra section welded on by Tony Hulls to increase the jib height to 24 feet (when fitted to Mark 2 servicer). From this height the special Jib has only two functions: lift & install ejector seats & lift & install canopy. All four pulleys have been stripped & had new sealed bearings fitted, (not shown in picture they are now fitted). New Cable & baby weight is on order from Didsbury.*"



And the icing on the cake ... a lick of AALO red paint.

**Flypast Article** In case it passed you by, Flypast featured a half page news item on the project in their February edition. Penned by Max it outlines our quest for additional finance and has some news on the Nov trip ... plus a nice picture of XS422 in the hanger.

### **In Memoriam**

Due to the gap in Newsletters this is belated but I wanted to mention it.

We learned last year of the passing of Gene Phillips, through Cancer. Gene was one of the wonderful friends we have in Mississippi and a true friend of the restoration too. When we first arrived at Stennis, Gene and his brother... both in their 70s... had a business on the airport, Phillips Aviation. Until their move north to Picayune Airport about 4 years ago they regularly helped us with tools and consumables as well as their local knowledge. I think for a former WW2 Black Widow pilot the Lightning must have held some fascination.

A character and a gentleman he will be very much missed.

## **AALOSG Newsletter No. 11**

Finally, I'd just like to wish you all a belated happy new year and a prosperous 2008!

*Nic Holman*

SG President

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### Photo credits:

'XP693' *Ian Black*

'Nov Team' *Max Waldron*

'ATGB' *Max Waldron*

'Instrument Panel Fit' and 'DC pump' *Nic Holman*

'Bruntingthorpe Lightnings' *Milton Roach*

'F4 pencil drawing' *Nic Holman* 'Reheat Cradle' *Geoff Commins* 'Didsbury Jib' *Nick Woodhouse*