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Out of the Blue

WARBIRD AIR-TO-AIR

RICHARD PAVER talks to Yakovlev Yak-3UA owner Chris Vogelgesang about how he came to own and fly the aircraft – and why he's now planning to sell it



ABOVE Chris Vogelgesang, owner of Yak-3UA D-FJAK. The type "deserves to be far better recognised", he says.

AN UNUSUAL AND rare new warbird joined Europe's airshow circuit in 2008, in the sleek form of D-FJAK, Chris Vogelgesang's Yakovlev Yak-3UA. Although Chris acquired the aircraft in 2006, it was not until July 2008 that it made its UK airshow debut, very aptly at Duxford's annual Flying Legends Show. Chris flew the Yak to the UK from the USA in June 2008, a couple of weeks before Flying Legends, to allow time for preparation for the show, during which it was superbly displayed by Mark Jefferies. During the run-

up to the show I met Chris for our photographic shoot, and also to find out how he came to own and operate such a rarity.

To be a warbird pilot...

Chris first flew taildraggers in 2000, when he was checked out in a DHC Chipmunk by Tim Orchard at the BA Flying Club at Booker. Since then he has built a lot of time in taildraggers and a Yak-52. After thorough conversion training for Russian types with Skytrace at Halfpenny Green, he underwent intense North American T-6 training at Warbird Adventures in Florida, USA.

Following what Chris describes as a "career change" he was able to realise his lifelong dream of

buying a high-performance warbird, acquiring the Yak-3. He was then converted on to it by prominent display pilot Charlie Brown, spending a lot of time flying with Charlie in the Chipmunk and T-6 and then going on to "hammer a lot of solo circuits!"

Chris told me that, in his preparation for his conversion, Charlie recommended that he spent some time flying a Yak-11 before contemplating going solo in the Yak-3. Chris acknowledges the generosity of Maxi Gainza in allowing him use of his Yak-11 at North Weald.

Chris soloed on the Yak-3 in June 2007, and was awarded his Display Authorisation (DA) in 2008. He also completed extensive formation flying training in

South Africa and at North Weald, and has now logged more than 50hr of close-formation work. During our air-to-air sortie it was evident that Chris was extremely capable in very-close-formation work, flying smoothly and cleanly in lovely formations for which we had briefed, which made my task much easier.

I asked Chris why he chose to buy the Yak. "My decision was based on the fact that this is a unique aircraft which is clearly not as well-known as many other warbirds," he said, "and it deserves to be far better recognised as it is one of a very few Soviet warbird types flying today.

"The Yak is a very exciting type to fly, in that it has a very power-



ful 1,625 h.p. engine but weighs only 2,600kg [5,730lb]. It therefore has an incredible power-to-weight ratio, and as a result is very agile. However, it has very small wings with a high wing-loading, and stalls are therefore more abrupt than those of other World War Two types. A lot of care is required here and, while it does give some warning, it can get out

ABOVE Chris Vogelgesang formats on Richard Paver's camera aircraft over the River Crouch estuary in Essex in June 2008, a couple of weeks before the aircraft's display debut at the Flying Legends Air Show at Duxford.

LEFT The Yak's instrument panel.

► All photographs by the author unless otherwise stated

of shape quickly when one pulls too hard. You need to overcome the reflex to stop a wing-drop with aileron. It quickly reminds you it's a warbird, but it also recovers very quickly when the pressure on the stick is released.

"I love the Yak also because its Allison engine is very reliable and, while less powerful than a Merlin, it is also less complex and less prone to trouble than a Merlin. In particular it has only one single-stage, single-speed supercharger, and it has roller rockers rather than fingers, which are far less prone to wear. In a Merlin the rocker fingers are always hitting the same spot on the camshaft; the Allison roller-rocker system is in my view better."



ABOVE This overhead shot of the Yak over the Burnham-on-Crouch area accentuates the type's stubby wings.

two hands on the ailerons! In a loop, with a minimum entry speed of 270 m.p.h., the aeroplane will gain 2,500–3,000ft, and barrel rolls are fun, fun, fun! But it is in its roll rate and its vertical performance that the Yak outshines most Second World War fighters. The only Second

World War aircraft to outperform it is probably the Grumman F8F Bearcat, as Mark Jefferies demonstrated at Flying Legends. In a very steep turn, when one pulls too hard, a stall can be provoked, but they are straightforward to get out of without any loss of height.

Text continues on page 51

On the subject of flying D-FJAK, Chris continues: "On the ground, taxiing requires a lot of care, as forward visibility is limited as in many warbirds, and the brakes are a classic Russian pneumatic differential design. This takes some getting used to. Previous time on a Yak-52 helps a lot here, and also the tailwheel when locked has only 5° of movement either side, which makes it easy to keep straight when taxiing.

Take-off technique

"Take-off requires a lot of attention. I feed in power in smooth, gradual stages to avoid the serious gyroscopic effect, and you also have to be alert to the fact that the aircraft has a 170 m.p.h. undercarriage operating speed limit. Once the gear is up you have to go with the gear lever in neutral to confirm that it is locked up properly, rather than held only by air pressure. If you forget to do that there can be a nasty surprise when you start aerobatics, as the increased airspeed tends to suck the undercarriage out. Positive g will also pull the gear out if it is not properly locked, so a proper check on clean-up immediately after take-off is crucial.

"The Yak is an exhilarating aircraft in aerobatics. It is fast and takes time to slow down, and high speeds require brutal forces on the stick and, in particular,

A migratory Yak . . .

YAK-3UA D-FJAK was built by OKB Yakovlev in 1994–95 as a result of a commission from Flight Magic/Santa Monica Museum of Flying in California, USA, to put the Yak-3U back into production. Original wartime drawings were used to build a batch of the all-metal fighters, powered by Allison engines in place of the original Klimovs; hence the UA designation.

Completed in 1995 as 0470107, the seventh new example to emerge from Yakovlev's Strela factory near Orenburg, 700 miles south-east of Moscow, the aircraft then went to the USA, where Reno racer Bob Hannah flew it in the 1990s. Hannah kept the Yak in a pseudo-Soviet fighter scheme.

In 2002 it was acquired by Achim and Elmar Meier and moved to Germany. The new owners painted the nose and cowlings bright red, and added a white "12" on either side of the fuselage. Chris Vogelgesang bought it from them in July 2006 and moved it to Max Alpha Aviation in Bremgarten, Germany, where it is now based.

In spring 2008 Chris had the Yak repainted as "White 100" of the 402nd IAP (Fighter Air Regiment), Soviet Air Force, with the considerable help of Steve Atkin of Warbird Colour Services and military historian Erik Pilawskii. Erik wrote



ERIK PILAWSKII

ABOVE The original Yak-3 "White 100" of 402 IAP. **LEFT** Erik Pilawskii and Steve Atkin (right) work on the stencil for D-FJAK's nose marking.



CHRIS VOGELGESANG

the definitive book *Soviet Air Force Fighter Colours 1941–1945* (2003; ISBN 190-322-330-X). The Yak first flew in its new colours on May 16, 2008.

One of the most successful regiments in the Soviet Air Force, the 402nd IAP was credited with 810 enemy aircraft destroyed in aerial combat. During the summer of 1944 the unit received brand-new Yak-3s; it went into action in the Vistula-Oder and East Pomerania regions that autumn. It was at the forefront of Soviet Air Force operations in the battle over Berlin, fighting with distinction in that campaign.

Text continues from page 46

“For cross-country work I have to plan very thoroughly, as the Yak has an economy cruising speed of 220kt and you are on your own in this fast single-seater. There is not a lot of space for maps; everything has to be pre-folded and every possible frequency noted for destination and en-route diversions. One always has to be two steps ahead of the aircraft. This is normal practice for military training, but less intuitive for the rest of us. I have a Garmin 496 for all my nav work, which I know like the back of my hand, and I always enter into the Nav kit a Plan B to allow diversion for weather or technical problems.

“In planning a landing the Yak takes a lot of time to slow down when clean, and approach can be straight-in as the split flaps give



“The trip home after Legends was idyllic; crystal blue sky, patchy ground fog . . .”

good visibility forward if you approach high enough; at least 1,000ft on final leg. When the aircraft is at 150 m.p.h. with wheels and flaps down it slows very quickly when you cut the power, so huge care is needed at this stage in the approach as the aircraft descends very steeply with power off. Therefore I tend to go for slightly too much power rather than too little on finals. I aim for 105 m.p.h. over the numbers, 89 m.p.h. being the dirty stall speed. But the Allison is very responsive and powerful, so the speed can be easily controlled. Crosswinds are not a problem with the Yak-3 as it touches down quite fast, and as it has very good rudder authority and only a small fuselage surface that the wind can exert its force on.

Touchdown sequence

“Among warbird pilots there are lots of opinions on the best way to land the Yak-3. I prefer a low-tail wheelie; kiss the runway, power off (not before!), stick slightly forward. Wait until the tail drops by itself; lower it too early and you’re airborne again. If the aircraft gets jumpy at this stage the best way to settle it down is to raise the flaps, when it will immediately sit firmly on the deck. And no braking before the tail is firmly on the ground; patience required! For a landing like this I need around 800yd, but I very much like 1,000yd of runway plus

a clean approach to give me a wide safety margin. More experienced pilots need far less space — Rob Davies, for example, flew it last August and landed in 600yd.

“Operating the Yak takes a lot of time and effort in keeping it clean and checking it properly. This is no different from any warbird, but many people overlook it. For example, extensive preflight checks are required to make sure that all the screws on the fillets and panels are tight, and that no leaks or cracks are developing.

“All the regular maintenance for D-FJAK is done by Meier Motors in Germany. They are working on six Yak-3s and three Yak-11s, and have a lot of experience and spares. However, I help them during the annual and regular checks. I take care of simpler tasks, like removing all panels for inspection, pulling spark plugs and oil filters, checking valve clearances etc. Working with them and studying the maintenance manuals has given me a very thorough under-

ABOVE “White 100” over sparkling sea off the East Coast of England. The aircraft is in immaculate condition, with only 120hr of total time on the airframe and a newly-rebuilt Allison engine, installed in May 2008. The camera aircraft for the photographic sortie was flown by Bill Giles.

BELOW Chris Vogelgesang (on wing) prepares to refuel D-FJAK at North Weald.



standing of the aircraft and its engine, an aspect that I find very rewarding and reassuring when operating it away from base.

“When I flew it to the UK in 2008 for Flying Legends I based it at North Weald, and the engineering team at The Squadron, as well as the team from The Fighter Collection, were extremely helpful.

“The most recent highlights for me in flying this wonderful aircraft have been participating in Flying Legends, working with Steve Atkin and Erik Pilawskii on its paint scheme and dogfighting in it over Kent with Rob Davies in hot pursuit in his North American P-51! In addition, the trip home after Legends was idyllic; crystal clear blue sky, slightly patchy fog on the ground, but, less than 2hr from North Weald, a wonderful cruise back to Bremgarten, close to the Swiss border.

But now it’s time . . .

“While I love flying the Yak-3, I believe it would be even more fun and certainly more practical if I could take somebody with me, so I’m now on the lookout for a two-seater, and reluctantly I’ve put ‘White 100’ up for sale. For airshows away from home it is particularly useful to be able to take an engineer or ground crew support with you.”

Tempted?

Prospective buyers of D-FJAK may contact Chris Vogelgesang via www.white-100.com