



Hooray – we're off to Afghanistan

They used to be a common sight in UK skies, but *perestroika* seemed to leave little useful work for an aircraft designed to fill the Fulga Gap with depleted uranium, tanks for the discouragement of. But with events in Iraq and Afghanistan calling for a heavy hand, the venerable Fairchild-Republic A-10 Thunderbolt II has made a comeback.

The A-10 is hugely popular with its pilots. You can have more fun doodling around among the bushes in a Hog than any pointy jet affords. Exceptionally stable, with carefree handling, it is designed to leave the pilot free to fight and could well be described as a Gatling gun with engines and wings, and a seat for the chap who pulls the trigger.

According to its pilots, flying the A-10 is 'always fun, even in combat'. In many ways it performs like the lowliest Cessna trainer – and fast jet pilots would have you believe this includes its top speed. The aircraft is generally easy to fly with no vices. There is little or no pre-stall buffet, so a warning tone sounds

increasingly urgently as critical angle of attack approaches. If this is ignored the stall is similar to that of the Cessna 152, with a gentle nod of the nose and increasing descent rate. A spin requires some serious abuse of the controls, and it recovers almost automatically once the controls are released. A-10 pilots all say it's a wonderful jet to fly and a true 'stick and rudder' aeroplane.

The flight controls have two hydraulic systems behind them, and if both are lost, the manual reversionary mode (wires and pulleys) can be used. This is a 'get you safe' mode, designed purely to get the pilot out of harm's way so he or she can eject. Landing is not recommended in manual mode – no hydraulics means no ground steering, air brakes or wheel brakes. The undercarriage can be manually dropped, and airflow assists it to lock. Just flying an approach is difficult in manual mode, and trying it has killed several pilots. It has been done, however – most famously by Captain Kim Campbell in 2003

when she landed her badly shot-up A-10 after it was raked by gunfire over Baghdad. Because of the difficulty in controlling the aircraft in manual mode, it is only practiced in the simulator. The only time it is used for real, excepting genuine emergencies, is when a jet has come back from deep servicing and requires flight-testing.

Single engine performance is excellent, with the aircraft more than able to make it home provided any weighty ordnance is jettisoned. Because of the offset positions of the turbofans it does need a lot of rudder to counter the yaw, and a go-around with one engine requires all the rudder you can give it. Don't give it enough and the yaw soon goes out of limits. This is an 'uncomfortable' position to be in during a go-around, and immediate ejection is required.

The A-10 is built around its awesome GAU-8 Gatling gun. No TV screens, no GPS – just a trigger and a stream of depleted uranium-tipped shells ripping into the target with the accompanying chainsaw buzz audible



*Turns on a sixpence, only one moving part – A-10 pilots love their Warthog wherever it may take them, as **Damien Burke** finds out*



The A10 - low, slow and difficult to spin

for miles around. The recoil is so powerful that the nosewheel is offset to keep the gun on the centreline. This makes for some quirks in taxiing – "the only thing the A-10 does fast" – but as it has a turn radius of only 50ft, it isn't a big problem. Straight lines mean constant taps on the brakes, because otherwise at idle power the speed will soon build up to 50 knots. The big twin stabilisers act as good sails in a crosswind, requiring care when taxiing, but with a crosswind limit of 35 knots, it takes some pretty impressive weather to turn an A-10 into a ground hog.

Operation Vanguard and Exercise Excalibur 2005 saw the return of the A-10 to England, albeit for just a few weeks. For Vanguard, a detachment of the 81st Tactical Fighter Wing deployed to an 'austere' operating facility at RAF Lakenheath. Thirteen A-10s from Spangdahlem in Germany arrived to take part in Close Air Support and Forward Air Controller training with both RAF and SAS personnel plus Combat Search And Rescue support with RAF

Merlins and USAF HH-60Gs. Excalibur was a bombing competition designed to enhance *esprit de corps* between US and UK tactical flying units and saw just four A-10s deploy to Lakenheath for a much briefer period than with Vanguard.

Vanguard's detachment commander, Lt. Col John Cherrey, explained that the exercise was mostly about information exchange and smoothing future co-operation between US and UK forces – it's useful if both sides know how the other does things. Lt. Col Cherrey has some serious experience of combat SAR, having received a Silver Star for his part in an operation to rescue a downed pilot in Serbia in

1999. Having located the pilot, Cherrey deceived Serb ground forces as to his position by deliberately flying his A-10 away and into range of an SA-6 battery, remaining in the area to guide in the rescuers even when critically low on fuel.

England proved to be a popular destination for the 81st – the natives are friendly, and the pilots get a chance to do the kind of flying often denied to them in Germany. As well as being able to use the MoD's low flying system down to the USAF minimum of 500 ft AGL (in Germany it's 1,000 ft), they had a larger selection of firing ranges to play with. While some were 'dry' and no weapons could be



fired, clearance for bombs and strafing were had for Holbeach, a firing range on the edge of The Wash.

With non-essential duties dropped, deployments are popular – even visits to Afghanistan go down well. The 81st now spend so much time there that they have pre-positioned some equipment there. Their visit to Lakenheath showed how smooth an operation this sort of deployment had become, and the only physical changes necessary to the station were the erection of concrete and sand revetments in front of the parking spots for each jet. With a gun that big, making sure there's something substantial in between it and the rest of the airfield is a good idea.

The A-10 was a design from the Vietnam era, a rough, tough juggernaut of an aeroplane designed for close air support – low, slow, and where fast jets dare not go. When the expected Soviet hordes failed to materialise, the hundreds of A-10s were looking like an embarrassment and they began to be delivered to the boneyards. Everything changed in 1991, when the A-10's performance in the Gulf War swept it back into favour. While numbers were still cut, those remaining were upgraded and life-extended. Current plans are for the type to continue in service for up to 25 more years, which means re-winging many of the surviving airframes. A 'new' model, the A-10C, is also being introduced, with upgraded avionics and support for more modern weaponry.

Pilots train on the T-37 and T-38 for around 12 months before moving onto the Introduction to Fighter Fundamentals course on the AT-38 – a T-38 designed to make A-10 pilots feel at home, with a nearly identical cockpit layout. Apart from higher speeds and very different turn performance, the AT-38 flies in a remarkably similar manner to the A-10. After four to five months on the AT-38 pilots get their hands on an A-10. The 81st's pilots are a surprisingly young bunch, but most already have combat experience in Afghanistan

Above left: An A10 lets rip with with its extraordinary GAU-8 Gatling gun, seen above in close-up

Below: The nosewheel is offset to keep the gun recoil on the centreline

or Iraq. Lt. Col Cherrey describes the A-10 as inspiring comfort in a pilot – they know they can depend upon it; they know it's tough and anything less than losing a wing doesn't mean instant disaster. And it's built around that awesome Gatling gun, which is viewed as an under-rated 'precision' weapon by Lt. Col Cherrey, because in his words, "If I point and shoot at it, it's gonna hit it."

Thirty years old this year, the A-10 exhibits another similarity to your local flying club's fleet – it's old, it's dirty, it's got dents in it and sometimes it breaks. A-10 maintainers Sgt Stoll and Airman Hughes explain that serviceability generally exceeds 80 percent, but is higher when really needed. A collection of scars and bruises mark the A-10 maintainer, with the various aeries under the fuselage lying in wait to pounce upon the unwary – one is nicknamed 'the crew chief killer' for its particularly potent attacks upon crew chief heads. The APU exhaust – "noisiest thing on the aeroplane, noisier than the engines!" – hides at head height under the port engine, dispensing instant suntans to those standing up after working underneath the jet.

Many problems yield to the engineer's favourite solution – violence – and 'a little love

tap here and there' often gets an aircraft back into action. However, with increasing age, the A-10s have become trickier to keep flying. Increasingly the maintainers have to delve into technical documentation to fault-find new problems. One jet will reach 10,000 hours of flying this year – most of them are just short of 9,000 hours. Not bad going for an aircraft considered obsolete in 1989.

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