2008 Singapore Air Show issue

New trends in UAVs

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F-22 stands up in Alaska

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Pacific Raptors: F-22A based in Alaska

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The most recent flurry of press surrounding the F-22A Raptor has been largely focused on the Pentagon decision mid January to keep the F-22A production line open beyond former SecDef Rumsfeld’s arbitrarily imposed production limit of 183 aircraft. Deputy SecDef Gordon England, known to be a high profile advocate of the Joint Strike Fighter, opposed and continues to oppose this decision despite strong pressure from legislators and the US Air Force.

Much less visible than the political controversy in Washington surrounding production numbers has been the quiet preparation of Elmendorf AFB in Alaska for the permanent basing of the first Pacific Rim F-22s. Elmendorf AFB is the hub of US Air Force fighter operations in Alaska, and in a sense it plays a similar role to RAAF Tindal in the strategic air defence of the continent. While Tindal is the gatekeeper in northern Australia, Elmendorf is the gatekeeper for inbound eastern bomber routes to the United States via Siberia and the Far East. As a result, Elmendorf has hosted a wing of F-15C Eagle air superiority fighters since 1982, part of the 3rd Wing, and the headquarters for Alaskan Command (ALCOM), the Alaskan NORAD Region (ANR), the Eleventh Air Force (11 AF).

The 3rd Wing is a full Air Expeditionary Force lead wing, and comprises F-15C/D, E-3B, C-17 and C-12 aircraft, plus the 6,600 personnel to operate these types. The 19th Fighter Squadron equipped with F-15C/D and the 90th Fighter Squadron equipped with F-15E were the mainstay of Alaskan air capabilities until the arrival of the F-22 Raptor this year.

Current planning calls for the 90th FS to convert from the F-15E to the F-22 Raptor, which began in August last year. In addition, the 525th FS, a former USAFE F-15C unit deactivated in 1992, is being reactivated as an F-22 unit at Elmendorf.

These units will be supported by the newly formed 10th Air Force 447th Fighter Group comprising the 302nd Fighter Squadron, currently the only reserve unit to operate the F-22. The 302nd FS is historically best known for being one of the two ‘Tuskegee Airmen’ P-51 squadrons during World War II. The first F-22s for the 447th FG arrived in August last year.

As of mid January 2008 the first Alaskan F-22As were practising inert JDAM bomb drops in preparation for a formal declaration of unit Initial Operational Capability (IOC). This effort has run in parallel with extensive personnel training for the new fighters, including that of reservist ground crews at other Alaskan bases to allow them to launch and recover F-22As from diversion sites across Alaska. Alaskan winter weather conditions are such, that even the F-22s may be forced to seek alternates.
As the ongoing re-equipment of legacy aircraft equipped units with the F-22 shows, the aircraft is being used to replace the F-15C, F-15E and F-117A, the latter two types used almost exclusively in the bombing role. Indeed, the F-117A has no other capabilities. Suffice to say detractors of the F-22 who have repeatedly claimed it cannot bomb effectively have evidently not kept up with the latest. The USAF originally sought 700 F-22s but this was bureaucratically trimmed back to 600, then 560, then 433, then 322, and most recently by former SecDef Rumsfeld’s edict down to 183 aircraft. The USAF continues to maintain that it requires at least 381 aircraft to effect proper replacement of the 400 strong F-15A-D fleet and the sole wing of F-117As.

Most recently, plans to keep the F-15C fleet in operation were dealt a severe blow when an early-build Missouri Air National Guard aircraft broke in two behind the cockpit as a result of upper fuselage longeron structural failure. Subsequent investigations during the grounding of all F-15C and D aircraft found manufacturing defects in the longerons of 191 airframes built between 1978 to 1985, nine of which had developed cracking. The out of spec longerons were manufactured thinner than required, causing the 1980-built Missouri ANG aircraft to break at less than 6,000 hours flying time, despite a claimed 30,000 hr life for a longeron built to spec.

Unlike the US B-52 and KC-135 or Australia’s F-111, the F-15 has never been subjected to a systematic ageing aircraft program, which monitors problem components and permits pre-emptive action, in part since the intent was always to replace the whole fleet of 441 F-15A-D with F-22s. As a result, the USAF is now discovering that the fleet is in far worse condition than earlier believed. In January 2008, the head of Air Combat Command, General John Corley observed: “I have a fleet that is 100 per cent fatigued and 40 per cent of that has bad parts. The long-term future of the F-15 is in question.”

The reality is that the location of the defective parts in the airframe precludes economical repair, and presents even greater difficulty than the centre barrel replacement of classic F/A-18s, a program itself fraught with problems.

As a result, this has reopened the long running and heated US debate about how many F-22s should be built. The USAF has repeatedly argued that more aircraft are needed for strategic force structure planning and capability reasons, in addition to relieving the heavily flown F-15 fleet. At present, only 259 F-15A-D have been cleared to resume flying operations, these aircraft now being flown at a higher rate to cover the absence of the grounded aircraft. The long-term impact of this will be to burn out airframe hours even faster than previously planned.

The principal opponent to the drive for more F-22s of recent times has been the DepSecDef Gordon England, who replaced Rumsfeld in this role. In Australia, England is best known for providing advice to former Defence Minister Nelson on the export of the F-22. In the US, England, formerly a naval officer and later President of General Dynamics (later Lockheed-Martin) Fort Worth Aircraft Company, is widely regarded to be the strongest opponent of the Joint Strike Fighter in the Pentagon, and one US observer commented to this author last year that England was “determined to put JSFs on Navy carrier decks no matter what the cost elsewhere.”

US press reports this January indicated that during an early January high level DoD meeting, England was defeated and agreed to fund four more F-22s in the 2009 budget. Well known US analyst Loren Thompson at the Lexington Institute was recently quoted in the UK Financial Times: “The deputy secretary is fighting hard to prevent continuing production of the F-22 but he seems to be losing the battle both inside the Pentagon and on Capitol Hill.” In December 2007, no less than 28 US Senators signed a letter in which they called for the production of more F-22s, the letter citing three classified reports which concluded that more F-22s were required.

The US is now coming under strategic pressure to make up for USAF capability decline over the last decade, while the usable life of its legacy fighter fleet is being burned out by the Global War on Terror and now the discovery of the defective F-15 longerons. These three trends are now colliding, and further debate over F-22 numbers is expected in the US this year. Funding for more F-22s can only come, longer term, out of the budgets currently earmarked for production of the Joint Strike Fighter.