F-18E/F sea trials ready to begin

INITIAL SEA TRIALS of the McDonnell Douglas (MDC) F-18E/F are scheduled to begin on 17 January.

The trials will take place on the Navy's latest aircraft carrier, the USS *Stennis*, and will involve a series of arrested landings and catapult take-offs with the first two-seat development aircraft, the F1.

By early January, aircraft F1 was still the only F-18E/F to have been returned to flight-testing following the precautionary grounding in November 1996, caused by compressor-blade cracking in the General Electric F414 engines.

A shortage of repaired engines is slowing the return of aircraft to flight status, but MDC says that all seven development F-18E/Fs should be in flight-testing by the end of this month. ❑

See feature, P29.

NEWS IN BRIEF

■ RAAF PICKS THOMSON

Thomson-CSF has won a contract to expand and improve the Royal Australian Air Force's (RAAF) radar sites in Queensland and New South Wales. Its Airsys subsidiary, Thomson Radar Australia, will supply three interim radar display systems to supplement the existing Thomson-supplied equipment, pending completion of the forthcoming Australian Air Defence System at the end of 1997.

■ M88-2 DELIVERED

French engine manufacturer Snecma has delivered the first series-production M88-2 engine destined to power the multi-role Dassault Rafale. The company says that it has orders for a further four engines during 1997, which will be supplied as part of the current 42-engine order-book. Testing of the M88 continues, with the 22 test engines clocking up a total of 12,666h of running time, 4,424 of which were in flight.

Antonov modifies An-70 controls

ALEXANDER VELOVICH/**MOSCOW**

ANTONOV HAS modified the flight-control system on its An-70 propfan military transport, as a result of the fatal crash of the first aircraft. The second prototype was rolled out at the end of December 1996

Piotr Balabuyev, Antonov general designer, says that some of the safety-critical elements of the flight-control system which were fin-mounted in the first prototype have been relocated. The chase aircraft, an An-72 Coaler, collided with the first prototype's vertical stabiliser in February 1995.

After the crash, Antonov used the second airframe —in manufacture for its originally intended use as the ground-test fatigue rig— for the second prototype. The aircraft could be flown in March.

The programme, which had its genesis in the former Soviet Union as a replacement for the Antonov An-12 Cub, has been hit by funding difficulties. Russia and Ukraine agreed to support the programme, with the former providing 80% of the financing and the latter 20%.

The Russian air force appears to remain interested in the programme, with Yuriy Klishin, the deputy commander-in-chief for acquisition, in attendance at the roll-out ceremony.

This interest, however, has not translated into adequate financing. Antonov has been investing its own money in the programme. This has been gained mostly by operating the An-124 Ruslan heavy cargo aircraft on the international commercial market. ❑

December dubutante: Antonov's hopes are riding on the An-70

DarkStar flight tests will be resumed in mid-year

FLIGHT TESTING of the stealthy Lockheed Martin/Boeing DarkStar long-endurance unmanned air vehicle (UAV) will resume in the second or third quarter of 1997, once the second prototype is completed.

Two further DarkStar systems, including two UAVs and associated payloads, are also being built. They will be delivered in the middle of 1998 for user demonstrations.

The revised Tier III Minus advanced-concept-technology-demonstration (ACTD) programme plan results from the review of the crash of the first DarkStar prototype in April 1996.

It was determined that the UAV loss was caused by changes made in flight-control software and take-off technique between the first and second flights.

The DarkStar prototype was extensively damaged after it pitched up, stalled and crashed moments after taking off from a runway at Edwards AFB, California, on its second test flight. The UAV was first flown on a successful 20min initial test flight on 29 March, 1996.

The accident was blamed on "deficiencies in the modelling and simulation of the flight vehicle", says the US Department of Defense (DoD). The contractors have since revised the simulations to model more accurately the expected flight characteristics in all the flight regimes.

Subsequently, the ACTD was extended from 24 months to 31 months. Fabrication of the third DarkStar has been accelerated. It will be used for ground tests and as the back-up flight-test airframe. The DarkStar air-vehicle 4 construction will remain on its current schedule. The DoD has yet to specify how many operational DarkStars would be deployed.

■ The first flight of the Alliant Techsystems Outrider tactical UAV might take place in the second half of this month, according to the Pentagon's UAV Joint Programme Office.

The initial test flight had been set for November 1996, but it was delayed because programme officials were not certain that a safe flight could be conducted. It was determined that additional risk-mitigation efforts were required to ensure a safe first flight.

The risk-reduction work included windtunnel tests on a scaled air-vehicle model, antenna testing, and additional tests to evaluate dynamic systems and flight parameters. The windtunnel data have shown that the wings are producing less lift than originally predicted. ❑

DarkStar should get back into the air in the second or third quarter of 1997