

## UNMANNED SYSTEMS

# Saab ready to unveil demonstrator

Manufacturer developing series of vehicles as part of network-centric defence systems for the Swedish armed forces

Saab is expected to unveil later this week an unmanned air combat vehicle (UCAV), one of a series the company is developing as part of Sweden's network-centric defence programme.

Industry sources say Saab has developed a subscale UCAV weighing around 50kg (110lb) that will be operated on Sweden's large ranges in the north of the country. Saab declines to comment.

It is understood that Saab has built the vehicle to Swedish mili-

tary aircraft standards rather than as a model aircraft to develop experience in building operational UCAVs.

One of Saab's aims is to develop UAVs with the systems and levels of airworthiness that allow them to routinely operate autonomously in civilian controlled airspace.

An industry source says the demonstrator resembles the Sharc UCAV concept first unveiled at the last Farnborough air show – a tailless design with the engine on the

upper rear fuselage. Although the demonstrator will initially be manually controlled, it will be used to prove flight control systems (FCS) for unmanned aircraft including autonomous take-off and landings, and UAV sensors, adds the source.

Saab has experience developing the FCS and related sensors for the Gripen fighter and is developing network-centric defence systems with the Swedish armed forces, the FMV defence materiel administration and other companies.

As well as UCAVs, the company has developed proposals for a high-altitude long-endurance unmanned air vehicle equipped with Ericsson's Erieye radar, and unmanned reconnaissance air vehicles that could be launched from a Gripen to provide pre- and post-strike imagery. Saab is also working on command and control capabilities providing decision makers with an integrated picture of air, land and sea sensors (*Flight International*, 16-22 July).

## RE-ENGINEING

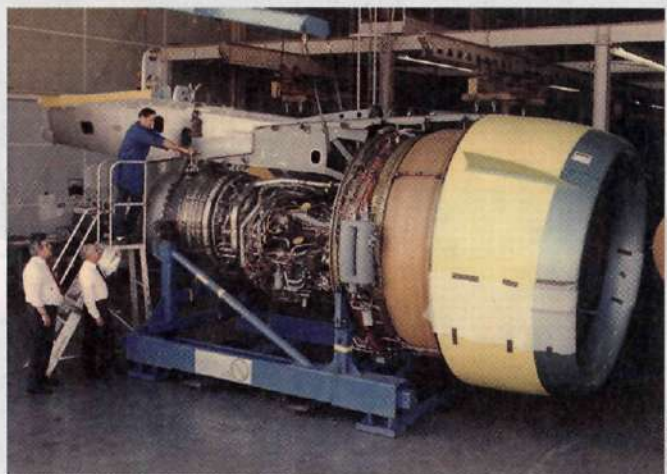
## GE chooses Goodrich to supply nacelles for re-engined C-5s

General Electric has selected Goodrich to supply nacelle systems for Lockheed C-5 Galaxy transports to be re-engined with CF6-80C2 turbofans. Including an earlier contract from Lockheed Martin to provide the engine pylons, the US Air Force's C-5 Reliability and Re-engineing Programme (RERP) is potentially worth more than \$800 million to Goodrich.

The initial contract for over \$15 million covers the supply of nacelle systems for four C-5Bs to be re-engined under the \$1.1 billion RERP system development and demonstration programme awarded to Lockheed Martin last year. The first Galaxy is scheduled to be re-engined in late 2004. The fleet retrofit is planned to begin in 2007, if the upgrade meets reliability goals, beginning with the USAF's 50 C-5Bs. No decision has yet been taken on whether to re-engine the 76 earlier C-5As.

Goodrich has also announced several other military contracts, including a long-term agreement worth up to \$250 million to supply replacement flight control surfaces for US Air Force Boeing F-15s. The machined "grid-lock" components replace aluminium honeycomb structures, reducing inspection, maintenance and repair requirements.

Goodrich will also supply its Integrated Mechanical Diagnostics – Health and Usage Monitoring System (IDS-HUMS) for a two-year field trial in US Army Sikorsky UH-60A Black Hawk helicopters. The US Navy and Marine Corps are



The USAF's RERP contract could earn Goodrich more than \$800 million already installing the IDS-HUMS in most of their helicopters.

The Japan Maritime Self-Defense Force has ordered additional DB-110 long-range electro-optical/infrared cameras for installation on Lockheed P-3C Orions. Embraer, meanwhile, has selected the Goodrich Stormscope lightning sensor and JET standby attitude indicator as standard on the Super Tucano, including 99 to be delivered to the Brazilian air force.

## AVIONICS

## Kollsman sees windows for EVS

Kollsman Avionics, which worked with Gulfstream to develop the first certificated enhanced vision system (EVS), has begun offering the system to other manufacturers. The system is being marketed as the All Weather Window. A simplified Night Window is being developed for smaller business jets.

The Kollsman EVS was certificated on the Gulfstream V last year and entered service earlier this year

on a GV delivered to the US Air Force. Work is under way to certificate the system on the GIV by year-end, says Kollsman. The agreement with Gulfstream prevents it offering the system to certain aircraft manufacturers, but talks are under way with others, Kollsman says. The EVS is compatible with any raster-capable head-up display.

The All Weather Window uses a broadband camera that operates in

near and mid-wave infrared (IR) and can detect runway lights and ground features, allowing lower approach minima, but the Night Window system uses a long-wave IR camera and is intended to provide awareness of surrounding terrain during clear night operations. The system does not provide lower approach minima, Kollsman says. The Night Window should be available next year.

## IN BRIEF

## ENGINE CONTRACT

Air Jamaica has awarded Pratt & Whitney a 10-year fleet-management deal to overhaul and maintain its CFM International CFM56-5B engines that are used to power the carrier's fleet of 17 Airbus A320/A321 aircraft. The agreement is worth up to \$80 million and the work will be performed by P&W's Norway Engine Centre.