

TSSAM details unveiled

BY RAMON LOPEZ/WASHINGTON DC

THE US Air Force has revealed additional details on the Northrop Grumman AGM-137 Tri-Service Stand-off Attack Missile (TSSAM) in an apparent effort to save the programme from being cancelled.

Re-touched photographs and drawings, as well as programme details of the stealthy, conventionally armed, cruise-missile development, have been distributed at the Pentagon, although USAF officials deny that the timing of the release is significant. The Pentagon is considering the termination of the project, to achieve a reduction in overall weapons-spending.

USAF has also released videos of TSSAM flight tests showing accuracy at ranges beyond 185km (100nm), while footage of a sled test shows the warhead's ability to

penetrate a 4m (12ft) thick concrete bunker. Released documents describe a missile 4m in length and 2.5m wide, with a maximum weight of around 450kg.

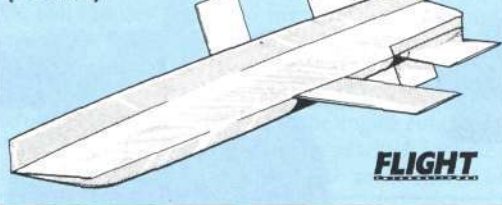
USAF officials say the USAF/US Navy TSSAM test programme has not been without problems, but they say that the flight-test programme's overall success rate is about 70%.

The TSSAM programme, which has undergone secret development for eight years, has an estimated total cost of \$13.3 billion. It is now in engineering and manufacturing development, and flight testing is due to continue through to 1997. First deliveries are

slated for 1999 and 2002 for the USAF and USN respectively.

As many as 4,156 TSSAM missiles would be built, with 3,631 going to the USAF and 525 to the USN, to attack high-value fixed land targets. The US Army dropped out of the project in 1993. Launch platforms will include the Boeing B-52, Rockwell B-1 and Northrop Grumman B-2 bombers; the Lockheed F-16 fighter and the McDonnell Douglas F/A-18 strike aircraft. □

Tri-service stand-off attack missile (TSSAM)



Gripen to be armed with AMRAAM

BY SIMON ELLIOTT/LINKÖPING

SWEDISH DEFENCE-procurement agency FMV signed a letter of offer and acceptance (LOA) with the USA on 1 September, to procure 100 Hughes AIM-120 advanced medium-range air-to-air missiles (AMRAAMs), to equip the Saab JAS39 Gripen multi-role combat aircraft.

The move follows the announcement earlier this year of the missile's selection to provide an interim medium-range air-to-air missile (MRAAM) for the Gripen. This leaves FMV's options open to collaborate either in the USA or

Europe on MRAAM development. Saab is working with British Aerospace, Thomson-CSF and GEC-Marconi on the S225X next-generation beyond-visual-range (BVR) missile.

Sweden has ordered, in two batches, a total of 140 production-standard Gripens and five development aircraft. The first, ordered in 1982, covers the five development aircraft and 30 single-seat JAS39As. The second batch, signed for in 1992, covers 96 JAS39As and 14 two-seat JAS39Bs.

The Swedish air force plans to procure a third batch of 140 Gripens, giving it a total of 280, to equip 16 squadrons. A go-ahead on the third batch is expected to be made in 1996, when the current five-year defence procurement plan comes to an end, although the aircraft may yet fall victim to

political pressure for defence cuts. If the third purchase goes ahead, the Gripens will probably be the JAS39C variant, which will feature improved electronics and avionics and a more powerful engine.

Three production aircraft (39.103 through to 39.105) have been delivered to FMV and, located at Linköping, are being used to train Swedish air force technicians from the first Gripen wing, Sätenäs-based F.7. Ten further JAS39s are in final assembly, with 13 more at the structural-assembly stage, some of which include aircraft for the second procurement batch. The first JAS39B has now also entered final assembly.

The first production aircraft, 39.101, is being used to test production-standard aircraft. Aircraft 39.102 was lost on 8 August, 1993, because of a software error in the Flight Control System, while performing an air display in Swedish capital Stockholm.

Flight-control software has been modified since the crash, with test aircraft JAS39-2 resuming flying on 29 December, 1993. □

Saab starts on 105 SK60 modification

SAAB HAS BEGUN modifying the airframe of the first Saab 105 SK60 twin-engine trainer to be fitted with the Williams Rolls-Royce FJ44 powerplant.

Work on modifying the first aircraft in the engine-replacement programme has reached the assembly phase, with a first flight expected by the end of June 1995.

The FJ44 engines were ordered at the end of 1993, to replace General Electric J-85s. Saab says that the new powerplant will offer longer life and improved performance in take-off and climb as well as in single-engine handling.

The first nine modified aircraft will be delivered in 1996, with a further 105 by 1998. The work is being carried out by Saab Military Aircraft and the Swedish air force Flight Training School. The air force will take a decision on an avionics upgrade for the SK60 later in the decade. □

Sri Lanka to take Russian aircraft

SRI LANKA IS TO take delivery of eight Mil Mi-17 Hip transport helicopters and three Antonov An-32 twin-turboprop aircraft as part of a \$72 million defence deal with Russia.

The deal, which consists mainly of secondhand equipment, also includes 200 armoured-personnel carriers and two patrol craft.

The new Sri Lankan prime minister, Chandrika Kumaratunga, says that all arms deals to take place with Russia are to be carried out on a Government-to-Government basis. □

NEWS IN BRIEF

■ F-16 CABLES

Fabrisys of Belgium, a subsidiary of Alcatel Cable, has won a BFr 600 million (\$16.7 million) deal to develop cable harnesses for the Lockheed F-16 as part of the European four-nation mid-life update programme. Fabrisys is sharing the update work with Fokker of the Netherlands.



Gripen's teeth will be provided by AMRAAMs