XFV-12A V/Stol in need of a lift

The 12 fighters, accompanied by 300 personnel aboard C-141 transports, are expected to stay in Saudi Arabia for around a week. Officially the visit is intended to give many Royal Saudi Air Force personnel some experience of the aircraft which, from 1982 onwards, will be the service's most important interceptor. It is also intended to demonstrate the US Government's determination to maintain stability in the area despite recent events in Iran. The initiative for the tour came from Saudi Arabia, and the US State Department hopes that the visit will be "a demonstration of the continuing and close relationship between Saudi Arabia and the US and of our interest in the security of the kingdom." Throughout the Saudi deployment, the Eagles are not expected to carry their normal armament of Sparrow missiles.

adds, but at present the problem still limits testing. Laboratory and wind-tunnel experiments have shown that the basic aerodynamic design is capable of supersonic speeds if the problems can be cured.

According to Naval Air Systems Command officials, test pilots were extremely happy with the built-in control system, which allows full thrust to be maintained during all manoeuvres. The engine exhaust is blocked at the powerplant outlet by a diverter valve, and then fed to the augmentor nozzles. Transition from vertical to horizontal flight will be achieved by changing the angle of the diffusers. During tethered trials on the gantry formerly used to train Apollo astronauts in lunar-landing techniques, pilots were able to fly the XFV-12 prototype backwards and forwards, operating in and out of ground effect, claims Lewis. Yaw pitch and roll control were also demonstrated.

Rockwell and the US Navy recognise the potential improvement in performance obtainable from Stol rather than Vtol operations. With flaps set at 60°, the XFV-12A should be able to carry 5,000lb more payload, given a 300ft roll. Since there is such a massive inflow into the augmentor, diluting the engine exhaust, the pressure "foot print" and temperature are much lower than with any other V/Stol design.

Apart from the usual set of technical problems encountered in any advanced development, the XFV-12 has suffered budget fluctuations. It received $4 million in each of the last two defence budgets, but it is not certain how much will be allocated for the next year of testing. Lewis describes the aircraft as being like a June bride: something old, something new, something borrowed and something blue. When the programme got under way in 1973, Rockwell designers decided to use the existing A-4 cockpit and landing gear and modified F-4 wing spars and intakes. New propulsion systems were designed, the engine was borrowed from the F-14 Tomcat programme, and the prototype was painted blue.

Rollout came on August 26, 1977, but since then shortage of funds has stretched out the programme. Any operational thrust-augmented-wing designs "are still many years down the line," says Lewis. "At present the project is at the same stage the Wright Brothers were at around 1902."