



left: The 586th FLT's Beech C-12J (86-0080) is the sole example of this Beech 1900 derivative in US military test service. (Don Logan)

Located in the spine of the aircraft aft of the cockpit, a test equipment bay has been configured to allow installation of additional test support systems and GPS/navigation test articles. Externally, the aircraft has a single modified centerline pylon to enable the carriage of different types of test and operational stores.

The aircraft themselves are not involved in any new developments related to the aircraft type itself, but purely serve as host platforms. Besides their capability to carry the aforementioned pods, the Talons are used intensively to fly cruise missile profiles, photo chase and target missions.

The squadron also owns and operates a highly modified C-12J (the sole example of the type used for testing by the US military) with multiple antenna and receiver modifications for a variety of guidance/navigation, avionics and electronic countermeasures tests. Many of its missions are flown to support the 746th Test Squadron, the GPS and navigation test unit at Holloman.

A maximum of four test stations or equipment pallets can be installed in the C-12J's spacious cabin. Again, no development is done for the aircraft type itself,

below two: Pre- and post-impact photos showing an AGM-158 JASSM (Joint Air-to-Surface Stand-off Missile) on operational test and evaluation at the White Sands Missile Range. (Via Marnix Sap)



and it acts exclusively as a carrier for test articles. Projects involving the C-12J include LADAR, the laser equivalent of radar whereby the aircraft is targeted by the LADAR tracking system and the Joint Precision Approach and Landing System (JPALS). In the latter project, a next generation landing system is being developed and tested to facilitate approaches to aircraft carriers, fixed bases, tactical airfields and forward operating bases. This has to meet the performance requirements of a highly mobile force at all locations, including operations at austere forward operating areas. It will allow the aircraft to follow the terrain, evade threats and then land safely.

Until the end of August 2005, a single F-15D Eagle was directly assigned to the 586th FLT. This was previously an Edwards test ship and about to be de-commissioned when the 586th managed to convince the 46th TW to acquire it. The latter made a basic set of modifications, installing its own instrumentation equipment for data collection and real-time monitoring. The Eagle also received other test specific modifications for testing the Airborne Turret Infra-red Measurement System (ATIMS), a multi-sensor data collection pod used to determine the operational effectiveness of infra-red countermeasures.

At the end of August 2005, the aircraft was flown back to Eglin, as the entire fleet of Operational Test and Evaluation (OT&E) and Developmental Test and Evaluation (DT&E) F-15s is currently based there. Although the Eagle is no longer on the books of the 586th FLT, it continues to be used by the squadron under a sharing agreement with the 46th TW, as this aircraft offers essential support to a significant number of test programs. It is also an ideal jet for high-speed, high-altitude and long endurance chase, unlike the 586th's Talons.

The 586th FLT typically acts as a Participating Test Organization (PTO), providing weapons, photo chase and range recovery in support of Eglin's based Air-to-Ground Wing. It does a significant part of its OT&E work on the WSMR, testing weapons like the JDAM, JASSM, SDB, JSOW, SFW, WCMD and many others, while also supporting the AMRAAM live firings carried out at WSMR by the Air-to-Air Wing.

Since November 2005, the 586th has been involved in UAV flight-testing in a

test program called the UAV Systems Operations and Validation Program (USOVP). This is helping to put in place rules and regulations for flying UAVs in commercial airspace, for which a 'see-and-avoid' system is required to meet the Federal Aviation Administration (FAA)'s safety requirements. Being a commercial venture, the New Mexico State University Physical Science Laboratory (NMSU PSL) in Las Cruces is the prime contractor; it selected the Israeli-designed and built Aerostar UAV, produced by Aeronautics Defense Systems for use, and two are deployed at Las Cruces.

DESERT FALCON



In an exclusive agreement with the Department of Defense, Lockheed Martin's most advanced F-16 to date, the F-16E/F 'Desert Falcon' for the United Arab Emirates AF, is undergoing development testing at Holloman, making use of the adjacent WSMR.

Lockheed Martin Aeronautics Company signed a commercial contract worth \$6.4bn with the UAE government in March 2000, calling for the development of the Block 60 'Desert Falcon' (formal designation F-16E and F-16F) and production of 55 single-seat F-16Es and 25 two-seat F-16Fs. This deal includes training, support and flight-testing.

As the 'Desert Falcon' is such a substantial evolution of the 4,000-plus F-16s delivered thus far, with many new capabilities, a completely new test program had to be launched to validate the type. Among the new hardware features that have been integrated are Northrop Grumman's active electronically scanned array APG-80 agile-beam radar, an upgraded environmental control system, designed to provide cooled air to the cockpit and avionics in the UAE's harsh desert conditions, and Northrop Grumman's AN/AAQ-32 Integrated Forward-looking infra-red and Targeting System (IFTS), for which a wide-area FLIR navigation sensor is housed above the nose and the targeting pod mounted under the port side of the intake. Also new