Dornier 328 fuselage sections close to final assembly stage

The first fuselage sections of the Dornier 328 regional airliner are to be delivered by subcontractor Daewoo Heavy Industries of South Korea to the fuselage assembly site at Aermacchi in Venegono, Italy, in the next few weeks.

The fuselage will be shipped to Dornier’s Oberpfaffenhofen factory near Munich for final assembly with the rest of the airframe. The engineering mock-up front fuselage, also built by Aermacchi, is being fitted out with internal equipment at Friedrichshafen where it will undergo system testing in the first quarter of 1991.

Dynamic pressure testing of the rear fuselage and pressure bulkhead has continued since April with more than 130,000 simulated cycles performed without damage.

The Dornier 328 will be the first passenger transport to have a rear pressure bulkhead made of Kevlar. Dynamic testing of this unit has exceeded 260,000 cycles, or 4.5 times the aircraft’s design life.

Full-scale structural-fatigue certification tests will start next year with a full-scale static test airframe and a fatigue test airframe. A 3.5m-long cylindrical fuselage test section will be more than halfway through a dynamic test programme of 195,000 cycles, which began last July at a Deutsche Airbus site in Hamburg. During each test, an operational cabin pressure of 0.45bar is applied. Static testing has been completed.

Acoustic testing of the fuselage test specimen will also begin later this month. Target internal noise levels for 75% of the passengers will be less than 78dB(A).

The first 30-seat Dornier 328 is due to receive its JAR 25 certification by a joint team of European authorities in December 1992, followed by US Federal Aviation Administration certification in the first quarter of 1993.

Satfone receives Inmarsat approval

Racal Avionics’ aeronautical satellite voice and data system, Satfone, has received certification with the signing of the first commissioning certificate for the system by Inmarsat in London.

The certification clears the system to enter commercial service.

The signing of the commercial certificate, for application on Gulfstream IV, is the second stage of Inmarsat approval to Racal to use its satellite system.

The first stage covered system access approval for the Gulfstream IV with the Racal system in three areas: the airframe, airborne avionics and the airborne antenna.

Using Satfone, Gulfstream will be the first customer for British Telecommunication’s Skyphone system.

Racal Avionics, in conjunction with co-producer Honeywell, has received more than 40 orders for Satfone, 21 of them with Gulfstream Aerospace.

The Gulfstream III and IV, Lockheed L-1011, Airbus A310-300, Boeing 707 and Boeing 747 are among aircraft types for which orders for installations have been received.

Satfone is a single full duplex, digital voice/data channel of 21,000 bit/s capacity. Signals are relayed between the aircraft and the ground telecommunications network via the Inmarsat geostationary satellite constellation.

MYASISHCHEV UNVEILS DOLPHIN

The Myasishchev experimental engineering works has unveiled plans to build a ten-seat regional transport, dubbed the Dolphin. The aircraft was originally designed as a utility transport but is being considered for short-range feeder routes as well as cargo services on routes up to 1,000km (540nm) long. The aircraft will be capable of using unpaved runways.

R-R Trent passes its first test

Rolls-Royce has completed the first test programme for the Trent turbofan at its Derby headquarters. The engine ran on August 27 and achieved 315kN (70,000lb) thrust during a performance curve and instrumentation survey.

Trent programme chief engineer, Mike Spencer says: “The engine has achieved all its objectives. It demonstrated good starting, acceleration to power and absence of vibration in the new low pressure design. Lessons learned from this test programme are now being incorporated into the next development engine which is planned to be tested early in 1991.”

The Trent will enter service at 292kN on the McDonnell Douglas MD-11 in 1993, and at 306kN for the Airbus A330 in 1994/5. A 382kN version is available for the Boeing 777 with growth potential in excess of 427kN. Since its launch in 1988, the Trent has won 182 orders and options.

Air France takes Bendix/King TCAS

The Air France Group, Carnival Airlines and Transwede Airways have selected Bendix/King Traffic Alert and Collision Avoidance System (TCAS) II.

The Air France Group, which includes Air Inter, Air France and Union de Transports Aériens, will use TCAS II on its fleet of Boeing 767s and Airbus A310-300s and A340s.

Carnival Airlines, based in Fort Lauderdale, Florida, will fit TCAS II to its fleet of Boeing 727s and will also fit the aircraft with the Bendix King RDR-4A weather radar, which incorporates turbulence detection.

Transwede Airways will use TCAS II for its McDonnell Douglas MD-83s and -87s.

Bendix/King has delivered more than 400 TCAS II ships to customers. TCAS is an airborne collision avoidance system, operating independently of ground-based radar stations.

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