NORTHROP NEWS

YF-17, World's Newest Jet Fighter, Makes Its Debut

Suppliers, Divisions Participate

Major Suppliers From 14 States

YF-17 Cooperative Northrop Venture

All Northrop divisions are participating in the YF-17 technology demonstration aircraft program, manufacturing a variety of components and subsystems which comprise the world’s newest jet fighter prototype.

The Electronics Division is participating in the design and manufacture of the noseight head-up display, supplying the TOP/20 [Task Oriented Processor/20] general purpose, lightweight, low-power, airborne digital computer for the system. The TOP/20 weighs only 13 pounds and occupies less than a quarter of a cubic foot of space in the aircraft.

As in the F-5E program, Electronics also manufactures electronics equipment for the F-15 Eagle, F-16 Fighting Falcon, and F-111 Aardvark.

(See SUPPLIERS AND DIVISIONS, page 2)

The world’s newest jet fighter made its debut at the Aircraft Division’s Aviation Week & Space Technology Exhibit in Los Angeles today as Northrop unveiled the first of two YF-17 prototypes, an aircraft designed to demonstrate that technology can be used to increase the performance and decrease the cost of advanced fighter aircraft.

The YF-17, which will be able to outmaneuver any operational aircraft known, made its debut against a backdrop of four other high performance, low cost Northrop aircraft — T-38 Talon, F-5A tactical fighter, F-15 Eagle-trainer and F-111 Aardvark International Fighter.

"Together," said Northrop President Thomas V. Jones, "these aircraft demonstrate the successful 20-year evolution of Northrop's application of technology to design advanced fighters at a cost which has permitted procurement of the aircraft in necessary quantities."

Mr. Jones added that Northrop has produced more than 2,000 T-38 aircraft that are in service or on order with 23 nations around the world.

Reported at the unveiling ceremony was the Honorable John E. McLucas, Secretary of the Air Force.

Northrop developed the YF-17 under a cooperative U. S. Air Force contract that has continually encouraged the company to explore the latest available advanced technology. As a result, the YF-17 features technological breakthroughs in aerodynamics, propulsion and advanced graphite composite materials, as well as an improved pilot environment.

The U. S. Air Force has no commitment to produce the YF-17, however, in order to emphasize the low cost objectives of the program, the Air Force established a flyway cost goal of $3 million per unit in fiscal year 1972 dollars, if 500 aircraft are produced at a rate of 100 per year.

Northrop’s YF-17 design is the culmination of eight years of company research aimed at developing the technology needed for advanced, high performance fighters to be operational over the next 25 years. The company’s research program includes more than 1.6 million engineering man-hours and 10,000 hours of wind tunnel testing and flight simulation.

In order to fulfill the USAF objective of demonstrating advanced technology to the greatest possible extent, Northrop selected General Electric’s new YF101 15,000 pound thrust class engine. GE has designed and produced more fighter engines than any other manufacturer in the world. The YF-17 aerodynamics, coupled with the advanced engine, should result in an aircraft capable of flying supersonic without afterburners.

"The combination of advanced aerodynamics and engines," said Ray P. Jackson, vice president and YF-17 program manager, "is an..."
excellent example of the way in which creative technology can be applied to increase performance and reduce costs."

One feature of the new Northrop YF-17 is its extensive use of advanced materials, such as composites, which provide high strength-to-weight ratios and reduce maintenance costs. The YF-17 also features a unique design with a twin-tail configuration, allowing for better control and stability during flight.

Northrop's research in the development of high performance fighter aircraft has resulted in a number of technological advancements applicable to the YF-17, notably in propulsion, aerodynamics, advanced composite materials, avionics, and pilot effectiveness.

The YF-17's propulsion system is powered by twin General Electric YF101 engines, developed specifically to match the aircraft's mission of air superiority. Key features include:

- A thrust-to-weight ratio of approximately 1.8
- A maximum takeoff weight of 39,000 pounds
- A combat radius of 500 miles

Pilot Effectiveness:
The YF-17's flight test program will permit demonstration of the full array of advanced avionics features of the aircraft before the beginning of the pilot evaluation.

The pilot's role is critical to the success of the project - the "fighter" is a system that requires the pilot's full attention. The YF-17's design emphasizes pilot comfort and ease of operation, ensuring the pilot has complete control over the aircraft at all times.

FROM ENGINES TO MATERIALS:

**YF-17 Has Latest Technological Advancements**

The YF-17 is designed with the latest in avionics and propulsion systems, making it a true testament to Northrop's engineering capabilities. The aircraft's advanced avionics suite, coupled with its powerful engines, provides unparalleled performance and capabilities.

The YF-17's design features include:

- Advanced avionics systems
- Powerful GE YF101 engines
- Twin-tail configuration for improved control and stability

With its advanced technology, the YF-17 is poised to revolutionize the fighter aircraft market and set new standards for performance and effectiveness.