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SWING-WING PLANE DELIVERED TO FRC FOR FLIGHT STUDY

An F-lllA aircraft to be used for research on variable sweep wing flight characteristics and performance was delivered today to the National Aeronautics and Space Administration's Flight Research Center, Edwards, Cal.

The airplane, the sixth built by the General Dynamics Corp., Fort Worth, Tex., is being loaned to NASA by the Air Force.

NASA will use the F-lll to obtain basic flight research data for the design and development of future advanced aircraft wings that move foreand aft along the fuselage. Aircraft of that type now under consideration include the Boeing 2707 supersonic transport (SST), Navy advanced fighter-attack (VFAX), and the advanced fighter (FX), advanced attack (AX), and advanced manned strategic aircraft (AMSA) for the Air Force.

The Air Force F-lllA and the Navy F-lllB, both variable sweep, are now in production, and a bomber version, FB-lllA, is under consideration by the Air Force.

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Research on variable sweep dates back to 1911. In 1960, NASA solved the basic instability problem by sweeping the wings simultaneously around separate pivot points located slightly outward from the wing roots, rather than from a single pivot inside the fuselage. Variation in the sweep serves to alleviate problems of stability, control and drag, and has important effects on the airplane's performance.

Factors to be studied by NASA include stability and control, handling qualities, flight loads and structural dynamic responses, inlet-engine integration, performance prediction, control systems, and operational characteristics. Data from the flight program will be used to validate theoretical and wind tunnel studies performed by the NASA Ames, Langley and Lewis research centers.

The flight operations are part of NASA's extensive effort in variable sweep research. Flight research with the operational F-111A will allow the disclosure and investigation of problems that cannot be predicted by other means.

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