ANNUAL HISTORY
1 Jul 71 - 30 Jun 72
VOL I-II

training would tend to be directed toward the type of flight testing being done by the wing.

6. Study the possibility of substituting the Universal Aircraft Flight Simulator and Trainer for some of the school's future aircraft. The simulator was still years away from being available. Until then, its effect on the aircraft inventory could not be evaluated.[9/]

On 18 February 1972 Col. Joseph A. Guthrie became the school commandant, replacing Colonel Aldrin. He soon applied for a change in the name of the school--asking for one that would be simpler, easier to remember, and would more closely reflect the new curriculum. In May USAF Headquarters authorized the redesignation of the USAF Aerospace Research Pilot School as the USAF Test Pilot School with an effective date of 1 July 1972.[10/]

NF-104s Retired

The unique NF-104As of the school, equipped with a rocket in the tail, were retired during the last months of 1971, the last flight being made on 20 December. This too was a result of the change in the school's curriculum.[11/]

For the aircraft were used to give the sort of space training ordinarily provided by an X-15 but at lower cost. The stovepipe-like liquid-rocket engine gave 6000 pounds of thrust, which allowed the pilot to zoom above 100,000 feet of altitude. When descending, the pilot could extend the landing gear and flaps to creat such a low lift-to-drag ratio that the aircraft handled like an X-15 during re-entry. For such a flight, no special launching methods were required, of course, as was required for

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9. Ibid.
10. AFSC Special Order G-72, 30 May 72.
11. Historical Report, Oct-Dec 71, USAF Aerospace Research Pilot School.

other rocket aircraft, and the NF-104 could land and return to its parking position under its own power. The idea for an aircraft that would give space training at low cost was credited to Frank Borman when he was a member of the school's Class 60C.

Little hydrogen-peroxide jets in the nose and wingtips gave the students experience in reaction control; and at the top of their zoom they could learn what it was like to operate an aircraft when they were weightless. It was a true transition from conventional aircraft to spacecraft.

Lockheed was able to modify F-104s at low cost because the rockets were "off the shelf" units. They had originally been designed as belly boosters for the Navy FJ-4 Fury, which though tested by the Navy at Edwards in 1956 and 1957 were never produced.[12/]

The aircraft first flew in June 1963. From then until their retirement, the NF-104s had relatively few incidents. However, in June 1971 a student, Capt. Howard C. Thompson, was flying one at 35,000 feet at Mach 1.15 when he felt a large explosion. He shut off the rocket engine and landed the aircraft without further incident. Then he saw that the rocket and half the rudder were gone.

The school planned to make one of the two last NF-104s into a permanent display in front of the School.[13/]

Other Events

During the tenure of Colonel Aldrin as commandant, there was a protocol officer at the school, for the first time. The new position had become

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12. Interview, Mr. Alfred Christopher, Technical Representative for Lockheed California, with 1st Lt. Matthew Waldron, AFFTC/OI, Dec 71.

13. Ibid.