

The Air Force/General Dynamics

F-111 Fighter-Bomber Today



FB-111A



F-111C



F-111A



F-111D



F-111E



F-111F

GENERAL DYNAMICS

November 1978

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SUMMARY

The swing-wing F-111 continues to prove itself in service throughout the world as an effective weapon system capable of fulfilling a broad range of missions with unmatched precision.

Today, hundreds of F-111s are on duty with the U.S. Strategic and Tactical Air Commands and with the Royal Australian Air Force. Over 150 F-111Es and F-111Fs, newest version of the Mach 2.5 jet, are based in England for NATO duty.

The F-111 is particularly well suited for its NATO role, according to a report in *The Washington Post*:

"The swing-wing F-111 is widely viewed as the best warplane now in any Western arsenal capable of attacking targets with heavy bomb loads in the bad weather and flying conditions that are typical in central Europe much of the year."

In more than 750,000 hours of flight since the aircraft's initial takeoff in December 1964, the F-111 has compiled a safety record comparable to or better than any other U.S. high performance fighter aircraft produced over the last two decades.

Although the last of 562 F-111s rolled off the assembly line at General Dynamics' Fort Worth, Texas, plant in September 1976, the manufacturer expects to support active deployment of the aircraft with spares and modification programs for decades to come.

An advanced, long range version of the FB-111A — known as the FB-111H — has been proposed by General Dynamics for future strategic roles.

PRODUCTION

Contracts awarded to the Fort Worth Division of General Dynamics provided for a total of 562 F-111s, including 23 research and development aircraft (18 for the Air Force and five for the Navy).

Five models of the F-111 are in the Air Force inventory. They are:

- F-111A The basic configuration, designed to give Tactical Air Command an all-weather strike capability. Equipped with analog computer hardware and TF30-P-3 engines. Total of 141 built.
- FB-111A Basic design for Strategic Air Command, provides both nuclear and conventional bombing capability. TF30-P-7 engines. Total of 76 built.
- F-111E Basic F-111A design with improved penetration aids and weapons management system. Inlet sized to accept later growth versions of TF30 engine. Total of 94 built.
- F-111D Digital computer fire control/bombing systems provide extraordinary air-to-ground, moving-target capability, plus improved navigation and weapons-delivery accuracy. Improved TF30-P-9 engines. Total of 96 built.
- F-111F Growth engine TF30-P-100 gives dramatic improvement in performance; increased payload and maneuverability. Aircraft equipped with digital computer fire control/bombing systems. Total of 106 built.

In addition to these models for the U.S. Air Force, General Dynamics built 24 F-111Cs for the Royal Australian Air Force. These were delivered to the RAAF in 1973. Two production model F-111Bs also were delivered to the U.S. Navy.

FLIGHT RECORD

F-111s have flown more than 815,000 hours, on over 305,000 sorties. Please see following pages for flight safety comparisons.

ASSIGNMENTS

Fighter bomber versions of the F-111 have been assigned to the following units:

Tactical Air Command

366th Tactical Fighter Wing, Mountain Home Air Force Base, Idaho:	F-111As
27th Tactical Fighter Wing, Cannon Air Force Base, New Mexico:	F-111Ds

U.S. Air Force in Europe

20th Tactical Fighter Wing, Upper Heyford, England:	F-111Es
48th Tactical Fighter Wing, Lakenheath, England:	F-111Fs

Strategic Air Command

509th Bomb Wing, Pease Air Force Base, New Hampshire:	FB-111As
380th Strategic Aerospace Wing, Plattsburgh Air Force Base, N.Y.:	FB-111As

TESTING OF STRUCTURE

Static and fatigue tests on the F-111 airframe not only met all requirements, but far exceeded several of them. For example, the wing employed on tactical fighter-bomber versions withstood fatigue tests equivalent to more than 25 years of operational service. The F-111's required service life is over 10 years. Since a four-to-one safety factor was required in this testing, to reach the equivalent of 25 years of operational service, the F-111 wing had to withstand all of the maneuver loadings that would be incurred in 100 years of service operation.

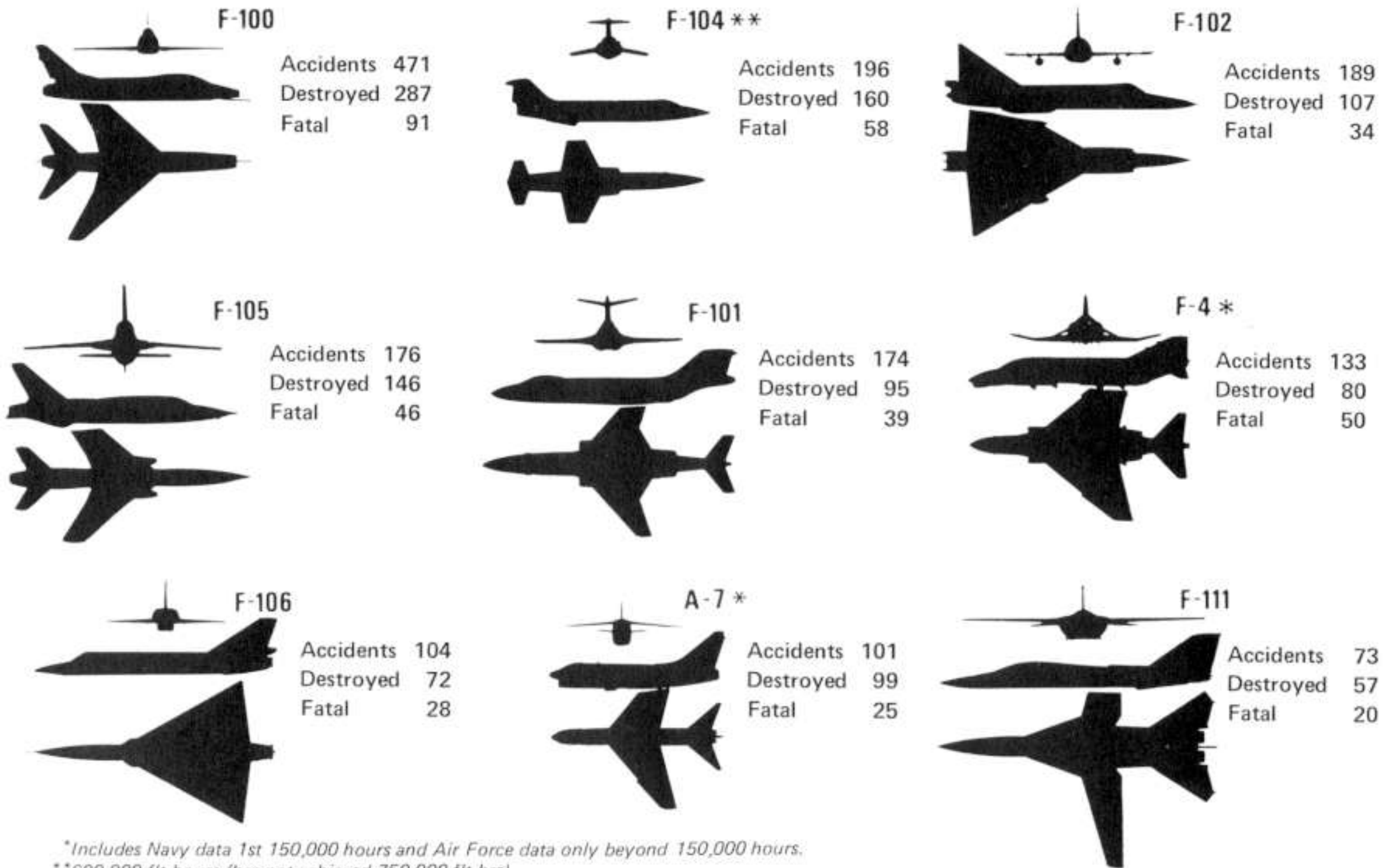
In addition, F-111s were routinely subjected to special low-temperature proof-testing, as they came off the assembly line. In this test, the aircraft entered a special "cold chamber" to simulate flying conditions at high altitude. Liquid nitrogen was used to cool the aircraft structure to minus 40 degrees and hydraulic rams applied forces equivalent to those experienced in the most violent maneuvers for which the airplane is designed. This unprecedented testing program verified the extraordinary structural integrity of the F-111.

PROOF WHERE IT COUNTS

F-111s continue to prove that they are second to none when it comes to getting the job done. U.S. Air Force units flying FB-111As took top honors for an unprecedented fourth straight year in 1978, during the service's annual Giant Voice precision navigation and bombing competition.

Accident Comparison

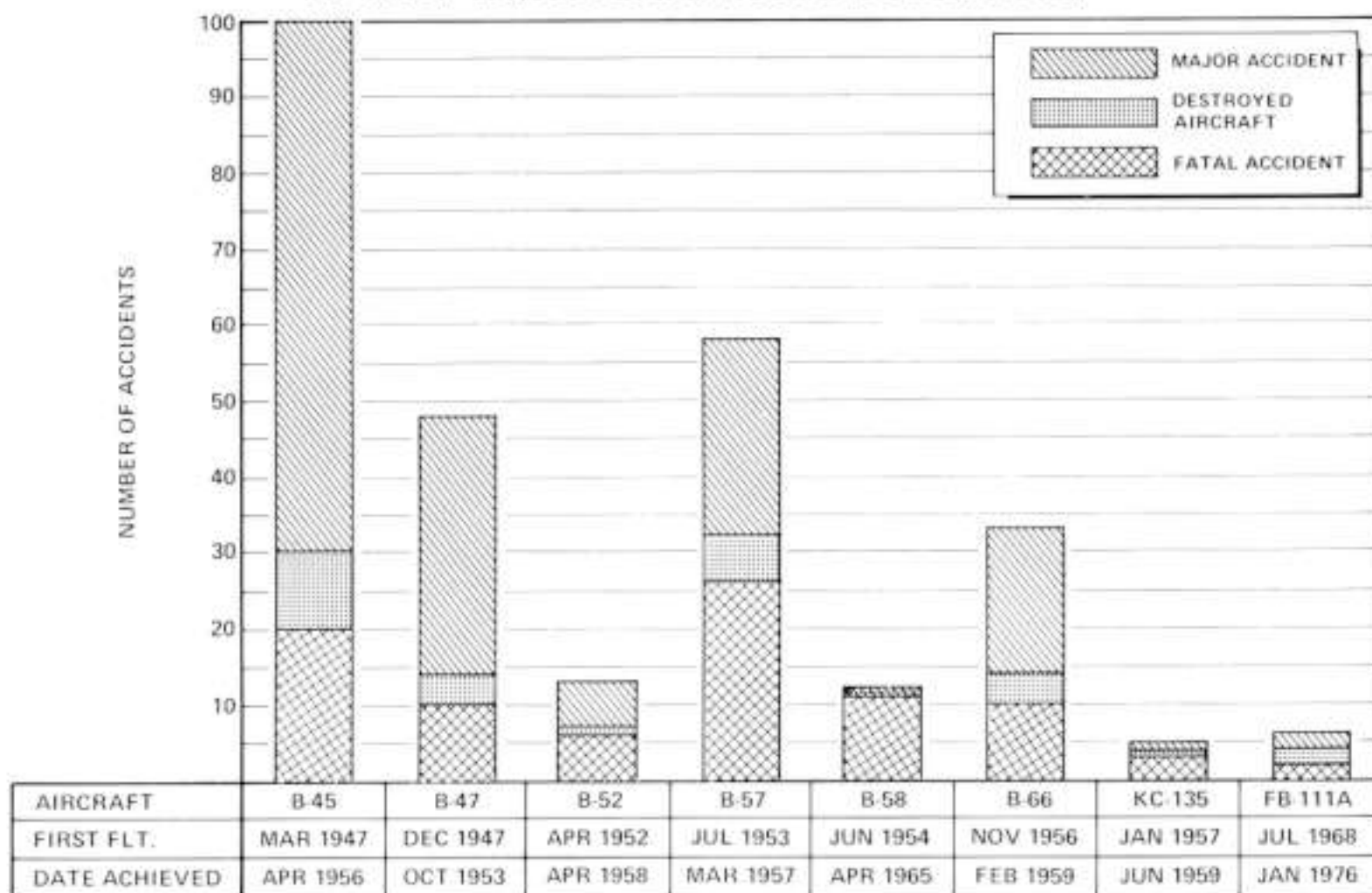
AT FIRST 750,000 HOURS OF FLIGHT TIME



*Includes Navy data 1st 150,000 hours and Air Force data only beyond 150,000 hours.
 **600,000 flt hrs (has not achieved 750,000 flt hrs)

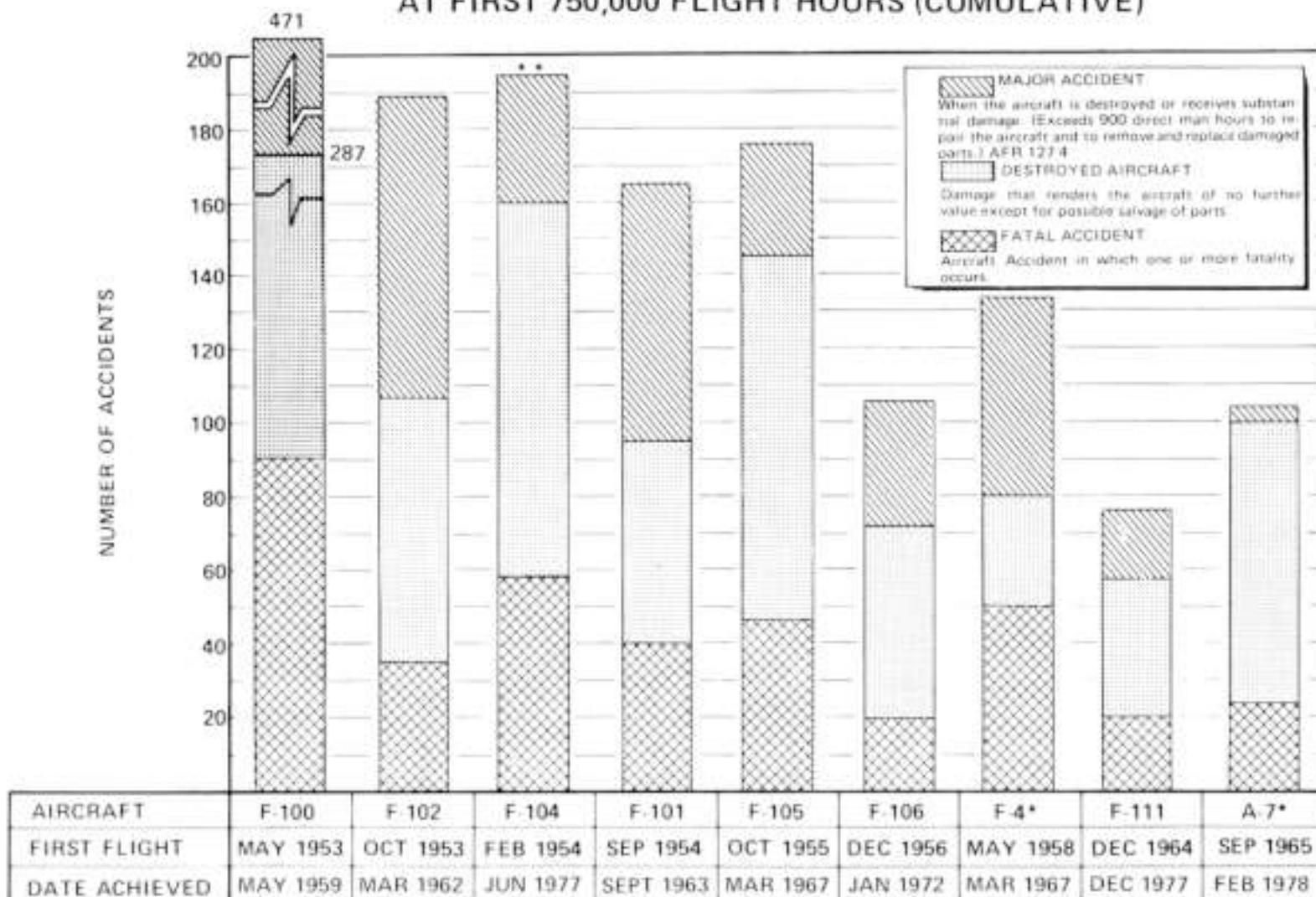
Bomber/Tanker Aircraft Accident Comparison

AT FIRST 100,000 FLIGHT HOURS (CUMULATIVE)



Aircraft Accident Comparison

AT FIRST 750,000 FLIGHT HOURS (CUMULATIVE)



*Includes Navy data 1st 150,000 hours and Air Force data only beyond 150,000 hours.
 **600,000 flt hours (has not achieved 750,000 flt hrs)

SOME OBSERVATIONS ON THE ROLE AND PERFORMANCE OF THE F-111

THE WASHINGTON POST, "Pentagon Plans to Double Number of F-111s in Britain, September 25, 1976."

"The swing-wing F-111 is widely viewed as the best warplane now in any Western arsenal capable of attacking targets with heavy bomb loads in the bad weather and flying conditions that are typical in Central Europe much of the year."

Capt. John Francis, Jr., USAF, in "F-111 — a Pilot's View," April 1971 issue of AIR FORCE Magazine

"There's only one word that describes the F-111 in a nutshell. The word is unique. As any military planner will tell you, when a weapon system has a unique capability, it becomes a priceless machine. Unique doesn't mean just higher, faster and farther than some previous model. It means opening a combat arena where you have superiority because you are the only one operating there. The F-111A has such a unique capability."

George Weiss in "The F-111: The Swing-Wing May Surprise You Yet," July 19, 1971, issue of ARMED FORCES JOURNAL

"It (the F-111) carries more bombs than any other fighter and surpasses all other known fighters for automatic navigation accuracy, weapons accuracy, maintainability and short or rough-field operations. As a single ship attack aircraft it can operate as no other can without extensive air cover, tanker and electronic countermeasures support. In addition, it has a 24-hour attack capability in bad weather, giving it an 80 percent advantage over other aircraft in the European Theater."

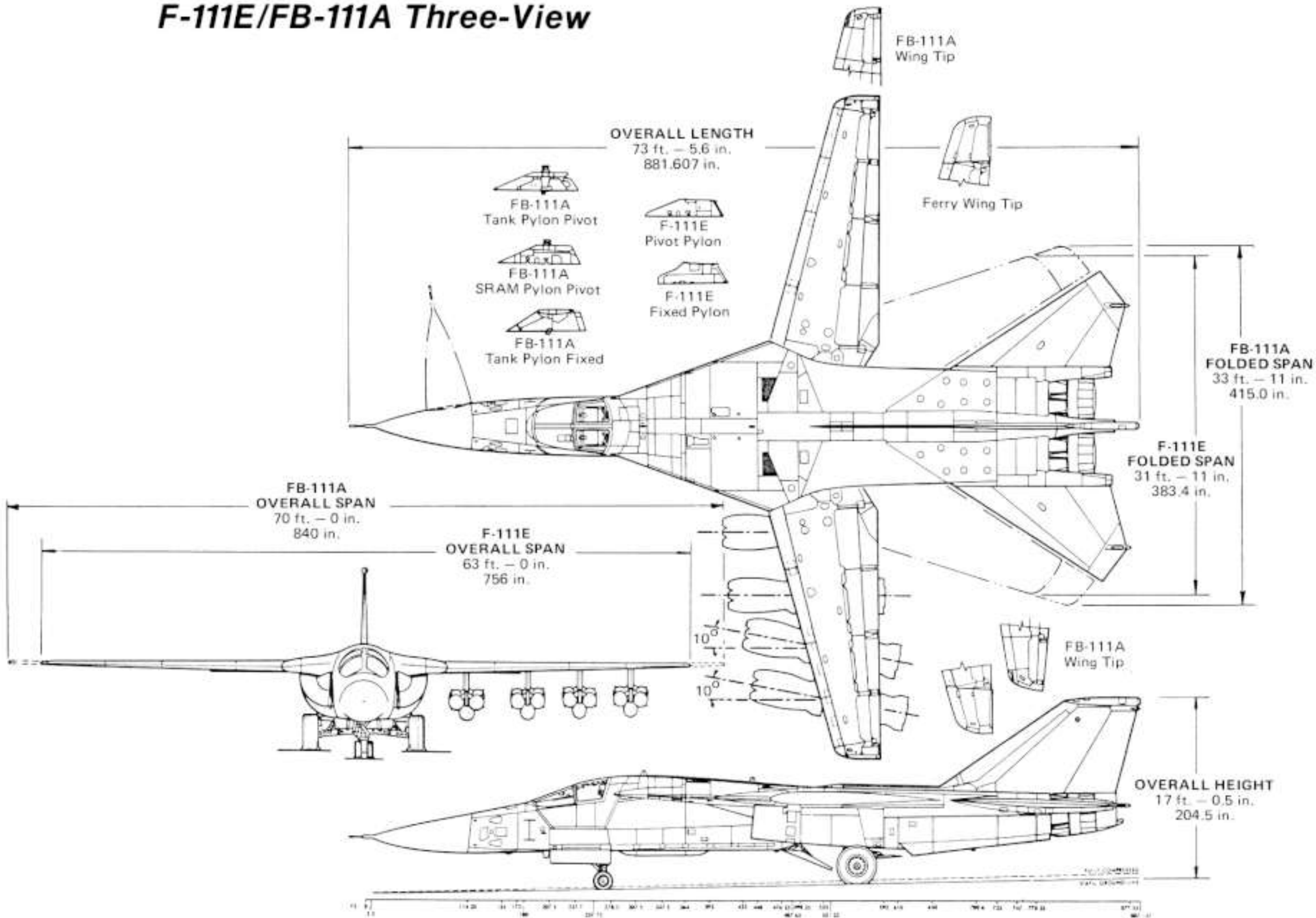
G. Francis Farrell, in "That Swing Wing Thing," May 1971 issue of COMBAT CREW

"The FB-111A aircraft is so designed that most maintenance and all servicing can be accomplished from ground level and with a minimum of personnel. Its performance — together with its reliability and maintainability — yields a fine weapon system in terms of operational capability, cost effectiveness and safety. . . . When an aircrew comes out on top in bombing at the SAC's Bombing Competition, it's an outstanding achievement, even with a seasoned aircraft. When the crew wins in an FB-111, the newest strategic bomber in SAC, while making its first appearance in the competition, the achievement becomes doubly significant."

General George S. Brown, former Chairman Joint Chiefs of Staff, in speech to Washington Chapter, American Ordnance Association, Fort McNair, Washington, D.C., April 12, 1971

"The judgments on the F-111 — which were also not made solely by military or industrial people — tell a similar story. Program stretchouts, changes in quantity from thousands to hundreds, up-and-down financing, a multiplicity of different models, inflation — all these things inevitably drove the price up. Yet, as I have pointed out, even at the higher cost we have actually bought one of the greatest airplanes flying today. And despite the sensational accident stories that have gotten so much attention, the F-111 has a better history — a better safety record — than any of our supersonic fighters to date."

F-111E/FB-111A Three-View



F-111A Aircraft-3 View

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