

Richard K. Smith  
History Dept., 415 L.H.  
University of Illinois  
Urbana, Illinois

15 July 1960

Commanding Officer  
Edwards A.F.B.  
Muroc, California

Dear Sir:

For the past two years here at the university I have been researching material for a historical study on the Navy's airships Akron and Macon of the early 1930's which, I hope, will be a definitive history of their brief and unhappy careers. The design of these airships was unique in that it provided for the carrying of five airplanes which were stowed inside and could be launched and retrieved while the airship was in flight. Peripheral to this study I had to look into this hook-on concept and its development, and toward more recent times this took me to the XF85. And this is what prompts this letter.

The people at McDonnell Aircraft have been very helpful in providing information on the XF85, the Air Force hook-on plane of 1945-1948 development, which was designed as a parasite fighter for the B-36A. But they suggested that I contact you, for the records of its 1948 testing are still held by you. I hope you can provide what information I need.

What I would like to know:


1. When did the flight-testing of the XF85 begin?
  - a. Its own testing, just to see how it flew.
  - b. Its hook-on tests with its B-29 mother plane.
2. How many flights did the XF85 make?
3. How many hook-ons did the XF85 make to the B-29's trapeze?
4. Who flew the XF85 during these tests?
5. On what date did the plane have to land on its skid?
  - a. Did this destroy the aircraft--or result in it having to be surveyed?
  - b. Do you have a photograph---or a reference to such a photo--of the aircraft after this incident?

6. I understand that a great deal of trouble was experienced in the XF85's stability. Would it be possible for you to quote me some of the more pertinent passages from the final report on this?
7. On what date was the XF85 project finally shelved?
8. Could you quote me some of the pertinent passages in which the decision was made to shelve the XF85 program?
9. Two of these XF85's were built; were both tested at Edwards AFB?

It may interest you to know that the first air-to-air hook-on was made by the old Army Air Service in December, 1924, at Scott Field, Illinois, when a Sperry "Messenger" biplane flew up to hook-on to a trapeze suspended beneath the blimp TC-3. The Germans and British had toyed with the idea before this, but their efforts were half-hearted and nothing ever came from them. The Navy sort of took over from there. However it's "historically fitting" that the most recent efforts (and perhaps the last), have been carried out by the Air Force. In 1948 with the XF85, and more recently with the RF84F/GRB36 combination in the now defunct FICON project.

It is my intention to write a survey of these developments for the Air Power Historian, which is my "need-to-know" in this instance. Any information you can provide will be of great assistance, since information on these post-World War II developments has yet to be retired to the National Archives.

Very sincerely,

  
R. R. Smith

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REPLY TO  
ATTN OF:

SUBJECT:



Wrote

25 July 1960

TO: Richard K. Smith  
History Dept., 415 L.H.  
University of Illinois  
Urbana, Illinois

Dear Mr. Smith

1. We have come up with a partial answer to your query of 15 July about the XF-85 from our records here. We have written the Armed Services Technical Information Agency to provide missing links, and hope to act on the remaining questions in the next 30 to 45 days.

2. Here are the data as we found it:

June 1948 - During June the XF-85 internally stowed fighter assembly was completed, the trapeze reworked and cycled, and the engine ground run performed.

July 1948 - McDonnell XF-85 Test, B-29 Mother Airplane flown for functional check of Trapeze which was extended and retracted during flight with parasite aircraft attached. Leak in hydraulic system cause for discontinuing second captive flight.

August 1948 - In early August, captive flights performed on XF-85 to check extension and retraction of trapeze and engine operation. Free flights and hook-ons were attempted 20 August 1948. On second approach for hook-on, trapeze bar contacted XF-85 canopy, shattering plexiglass. Pilot escaped injury and made a successful landing on lake bed.

September 1948 - XF-85 free flights number two, three, four, and five made with successful hook-on. On Number six free flight, no hook-on could be made and landing was taken on lake bed.



February 1949 - XF-85 internally stowed fighter airplane #1, #6523 arrived 2 February. Technical order compliance kept B-29 on ground during month. Airplanes awaiting favorable dry lake conditions and B-29 modifications.

March 1949 - XF-85 initial captive flight accomplished on #1 airplane. Airplane #2 made free flight No. 6 on 18 March. The trapeze mechanism was damaged during release, skid landing on lake bed was successfully performed.

April 1949 - XF-85 initial flight of airplane #1 was made 8 April 1949. Landing on lake bed was performed after three unsuccessful attempts were made to hook on trapeze. Program was put on inactive list pending modification of trapeze.

May 1949 - XF-85 airplane #1, S/N 6523 and #2, S/N 6524 placed on standby status pending completion of contractor agreement.

Extract of Speech Given by General Joseph T. McNarney on 13 April 1949.

Title: Recent Air Force Research and Development Activities

Published: Central Air Document Library, 1 June 1949

Volume 14, No. 11 on Page 14

"Interesting is the experimental XF-85, which takes off from and is taken on again by the B-36 Mother Ship by means of a retractable trapeze. Except for folding wings and short fat configuration, it is a conventional airplane. It has no landing gear or provision for ground take off or landing. Three ground landings, however, due to the failure of the hook-on mechanism have resulted in no great damage to the airplane or pilot."

CHARLES A. BROWN  
Colonel, USAF  
Director of Information