

8. (G) Memo Rpt. No. EXP-M-50/534
28 April 1941
(File: Contract Files)

The mock-up of the XA-26 was inspected between 11 April and 16 April 1941. The Mock-up Committee decided to make this the official mock-up inspection for the following reasons: (1) the mock-up was complete except for the power plant installation, (2) arrangements had been made for an officer representing GHQ Air Force to attend, personnel were available from the most interested Laboratories and Sections of Mat. Div., (3) the mock-up had been inspected by representatives of the RAF and their recommendations were available, and (4) it was necessary to give Douglas a "go ahead" as soon as possible because of the early delivery date of the airplane. The Mock-up Committee recommended that the mock-up be considered satisfactory with the exception of the power plant and chemical tank installations which would be mocked up later.

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**WAR DEPARTMENT
AIR CORPS, MATERIEL DIVISION**

MEMORANDUM REPORT ON

LCC:mss

Date April 28, 1941

SUBJECT: Mock-up Inspection of
Douglas XA-26 Airplane

SECTION: Experimental Engineering

SERIAL No.: EXP-16-50/534

Contract No. W-535-AG-17946

Expenditure Order No. 127-1-18

Purchase Order No.

17946

A. Purpose

1. To report on the inspection of the Mock-up of the Douglas XA-26 Airplane.

B. Factual Data

1. The mock-up of the XA-26 airplane was inspected between the dates of April 11 and April 16, 1941. The Mock-up Committee consisted of the following personnel:

Major L. C. Craigie, A. C., Wright Field, Dayton, Ohio

Major F. C. Wolfe, A. C., Wright Field, Dayton, Ohio

Major M. D. Burnside, A. C., Wright Field, Dayton, Ohio

Major Robert F. Tate, A. C., HQ Air Force, March Field

Major D. L. Rutt, A. C., Wright Field, Dayton, Ohio, was scheduled as a member of the above Committee but was prevented from attending because of duties in connection with the XB-19 Airplane.

2. The following personnel inspected the mock-up prior to its completion and submitted recommendations which were considered by the Mock-up Committee:

Major John E. Mills, A. C., Wright Field, Dayton, Ohio

Major R. C. Wilson, A. C., Wright Field, Dayton, Ohio

3. The Douglas Company had indicated to the Materiel Division by letter dated March 19, 1941, that this was to be a preliminary mock-up to be followed at a later date by a complete one. Upon arrival of the Committee at the Douglas plant, however, it was learned that the Douglas Company desired that this be the official and final mock-up as far as

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the Air Corps was concerned. It was their intention that the more complete mock-up which was to follow would be for their own information in working out final and accurate installation details.

4. In view of the following factors, it was agreed to consider this the official mock-up:

- a. The mock-up was complete in all respects except for the power plant installation.
- b. Arrangements had been made through the Western Procurement District Headquarters at Riverside, California, for attendance of an officer representing the G.H. Air Force.
- c. Personnel were available representing those Laboratories and Sections of the Materiel Division which were most vitally concerned.
- d. The mock-up had been inspected by representatives of the R.A.F. and their recommendations were at hand.
- e. It was considered essential that the contractor be given a "go-ahead" at the earliest possible date in view of the early delivery date contemplated for this airplane.

5. All changes which were desired were discussed with representatives of the Douglas Company and when such changes were feasible, were incorporated in the mock-up.

6. Representatives of the Royal Air Force had inspected the mock-up on April 9, 1941. A copy of their inspection report was made available to the Mock-up Committee and was carefully studied. In most cases, it was possible to comply with the recommendations of the British. A separate report has been prepared commenting on the specific items covered in the R.A.F. report. A copy of this report is attached as Exhibit "B".

7. The power plant installation was in process of fabrication and not ready for inspection. It is estimated by the Douglas Company that this portion of the mock-up will be completed and ready for inspection approximately May 15, 1941.

8. The aft portion of the fuselage, including tail surfaces, the right wing, engine nacelle, and the outer portion of the left wing were not mocked up, but silhouettes were painted on the wall of the mock-up room to represent them. The wing tips are visible from the pilot's cockpit.

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9. The double slotted flap contemplated for this airplane was not mocked up. This is, at present, being studied in the wind tunnel. A working model will be mocked-up at a later date.

10. The final details of the mock-up, including changes requested by the Committee, were scheduled for completion by April 19. A complete set of photographs was to be made on that date and the required number of copies furnished the Materiel Division.

11. Every effort was made to eliminate non-essentials in order to permit the maximum weight of fuel and bombs to be carried.

12. Considerable emphasis was placed on the matter of obtaining the maximum interchangeability of fuel and bomb load. To achieve this, the length of the bomb bay was increased approximately 24 inches and the fuselage 9 inches. Although the normal bomb load is only 1200 lb., the airplane, as re-designed, can accommodate on the internal racks 4 - 1000-lb. bombs or 6 - 500-lb. bombs.

13. The normal fuel load is 440 gallons. Approximately 410 gallons of additional fuel can be carried as alternate load, disposed as follows: Approximately 160 gallons may be carried in the main fuel tanks in the engine nacelles. This was made possible by extending the tank several inches to the rear. Approximately 250 gallons can be carried in a leak-proofed tank mounted in the upper portion of the forward bomb bay. With this latter tank installed, it is possible to carry 4 - 1000-lb. bombs or 6 - 500-lb. bombs as there is no interference between bombs and bomb bay tanks.

14. Detailed comments pertaining to the mock-up changes made thereto are contained in Exhibit "A".

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C. Recommendations

1. It is recommended that the mock-up of the airplane be considered satisfactory with the exception of the power plant and chemical tank installations which will be mocked up and inspected at a later date.

2. It is recommended that the contractor be authorized to proceed with the detail design and construction of the airplane.

MEMBERS OF COMMITTEE

Laurence C. Craigie

LAURENCE C. CRAIGIE, Major, Air Corps
Recorder.

Franklin C. Wolfe

FRANKLIN C. WOLFE, Major, Air Corps

ROBERT F. TATE, Major, Air Corps

MERRILL D. BURNSIDE, Major, Air Corps

H. Z. Bogert

Approved by H. Z. BOGERT, Lt. Colonel, A.C.,
Chief, Technical Staff

F. O. Carroll

Approved by F. O. CARROLL, Lt. Colonel, A. C.,
Chief, Experimental Engineering Section

*(Carbon - back signed by
Brig Genl Kenney Jones)*

Approved by GEORGE C. KENNEY, Brig. General, U.S.A.,
Ass't. Chief, Materiel Division

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