

40. (C) Ltr. 14 Jan. 1943
Fr: Brig. Gen. A.E. Jones
Chief, Proc. Div., WF
To: Douglas Aircraft Co., Inc.
El Segundo, Cal.
(File: Bomb. Br., Proc. Div.)
~~UNCLASSIFIED~~

Proc. Div. (WF) made detailed comments on the design changes required to convert A-26 bomber airplanes into A-26B attack airplanes, including the 75 mm. cannon installation, relocation of bombing controls in the pilot's compartment, and armament, radio, and camera installations. Mat. Center was expediting delivery of machine tools and materials in an effort to enable Douglas to meet A-26 schedules and had authorized Douglas to delay engineering schedules on other AAF projects in order to accelerate delivery of A-26 airplanes.

 UNCLASSIFIED

January 14, 1943

Subject: Contract AC-21393
Model A-26B Airplanes
Design Changes

To: Douglas Aircraft Company, Inc.
El Segundo, California

Through: AEP Resident Representative

Reference: a. Douglas letter 825-4830 dated November 26, 1942.
b. EAC-543-490 dated December 15, 1942.

1. The data submitted with reference a pertained to various design changes which have been made to convert the original A-26 bomber version airplane to the A-26B attack version. The Contractor was advised in reference b that the quotations for the change proposals covered by reference a were accepted and that the design changes appeared generally satisfactory, but that any pertinent comments pertaining to the technical details would be forwarded at a later date. These data have now been examined and the following comments pertaining thereto are forwarded for the Contractor's attention.

2. Installation of 75 mm. Cannon.

a. The means for adjustment of this gun in elevation is not shown on drawing 5193013. Information is requested as to the amount of vertical adjustment provided for the gun and the method of accomplishing the same. In this connection, it is pointed out that the setting for the 75 mm. gun with respect to the horizontal reference line of the airplane will have to be determined from tactical tests in order to arrive at the desired setting. As a matter of preliminary information it is indicated that the desired speed will be about 300 m.p.h. However the range of adjustment should permit horizontal boreighting at speeds between 225 m.p.h. and 325 m.p.h. if possible.

b. Information is requested as to the means provided for adjustment of the gun in train for boreighting.

c. It is desired that provisions be made to remove the breech block from the bottom of the gun for cleaning and servicing of the breech block and gun. It is desired to know whether a door could be provided in the floor of the cockpit to permit the breech block to be removed in this manner.

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Bomb. Br.
(p. 2/4)Douglas Aircraft Co.
El Segundo, Calif.WFB/vb/70-2
1/14/43

2. The Contractor has been previously advised that the T-9 cannon and T-13 mount would be furnished for all airplanes on contract in lieu of M-4 cannon and M-6 mount, and the Contractor may therefore design for the T-9 cannon and T-13 mount accordingly.
3. Armor Installation.
4. The armor installation shown on drawing 5191178 is satisfactory for release.
4. Relocation of Bombing Controls in Pilot's Compartment (Drawing 5191340).
5. The arrangement whereby the wing racks and bomb bay racks cannot be selected independently is extremely undesirable, and it is requested that the installation be changed to provide independent selection of either wing racks or bomb bay racks in order that bombs can be dropped from the bomb bay without first releasing the chemical tanks in the event that chemical tanks are carried in combination with bombs. Information is requested as to the method by which this change can be accomplished.
6. The bomb fusing selector switch should be marked "None" and "Tail" instead of "Delayed" and "Impact".
7. The bomb selector switch should be marked "On" and "Off" instead of "Open" and "Closed".
8. It is requested that a wiring diagram of the bombing circuit be submitted for examination.
9. SCR-595 and SCR-515 Radio Installation (Drawing No. 5191013).
10. The arrangement of the antenna for the SCR-595 and SCR-515 radio sets are in accordance with the locations previously requested. However, information is now furnished that, based on tests conducted at Materiel Center, the antenna mast for the SCR-595 radio could be located on the top side of the fuselage and close to the receiver. It was previously thought necessary to locate this mast on the under side of the airplane in order to obtain satisfactory results, but since this is no longer necessary it would be desirable for it to be located on top of the fuselage, which location would shorten the transmission line and simplify the installation. However, if the Contractor has already designed the installation as shown on the reference drawing, it is not necessary that this change be made at this time. Comments are requested.

Bomb. Br.
(pg. 3/4)

Douglas Aircraft Co.
El Segundo, Calif.

SPB/vb/70-2
1/14/43

- b. In the event that the Contractor is able to relocate the antenna mast for the SCR-595 set as noted above, the forward transmitting antennas for the SCR-515 radio should be located on the under side of the fuselage ^{between} the bomb bay doors and lower gun turret. This antenna may be located up to 10° off of vertical. This change is not requested, however, unless the Contractor shall find it convenient to relocate the mast for the SCR-595 radio as discussed above.
- c. In other respects the radio installation shown on drawing 5191013 is satisfactory.
- b. Orientation Camera Installation.
- a. The camera installation shown on Drawing 5056695 is satisfactory. A wiring diagram for this installation was not submitted and in this connection the Contractor is advised that Army Air Forces Drawing 104294169 should be used as basis for the wiring.
7. Installation of Production Type Turrets and Sighting Station.
- a. The design changes in the fuselage structure necessary to accommodate the production type turrets and sighting station, as shown on the various drawings submitted with reference a, are satisfactory.
- b. In connection with the Contractor's desire to have the mounting ring for the General Electric turrets redesigned so as to be rigid enough to provide for support at three points only, which request was informally relayed to the Material Center, information is furnished that this matter is being given consideration by the General Electric Company. It is proposed to have a discussion on this matter between Contractor's, General Electric and Material Center representatives in order to arrive at a practicable and satisfactory solution, since it is recognized that the present method of supporting the mounting ring at 24 points is unsatisfactory from a production installation standpoint. The Contractor has been informed of this action in a separate communication. Any changes made in the design of the turret mounting ring as a result of these discussions will not be incorporated in production turrets until such time as any structural modifications to the airplanes which may be necessary to provide for a different method of mounting the turrets can be incorporated in airplanes without any delay in production.

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Bomb. Br.
(pg. 7/10)

Douglas Aircraft Co.
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12B/vb/70-2
1/14/43

8. The Contractor was advised in reference b that the cost quotations for accomplishing the above changes in the subject airplanes were accepted. A Change Order covering all these changes will be issued at a later date and will include other design changes previously approved for which change orders have not yet been issued.

9. The reduction in high speed at 17,000 feet from 372 m.p.h. to 361 m.p.h. by the increase in gross weight from 26,700 pounds to 27,900 pounds, as outlined in paragraph 1/a of reference a, appears to be an excessive loss of speed for the amount of additional weight involved. It is noted that the high speeds quoted in this paragraph are based upon the airplanes equipped with the Hamilton Standard 6457A-6 propeller blades. Information is requested whether this reduction in speed of 11 m.p.h. may have been based upon the use of 6359A-18 propellers instead of 6457A-6 propellers, since it is understood that the former propeller which is now to be used will involve a reduction in high speed from the original figure of 372 m.p.h.

10. In regard to the delivery schedule outlined in paragraph 1/a of reference a, the Contractor is advised that this delayed schedule starting in October, 1943, is not acceptable in view of the urgency of delivering airplanes to the Army Air Forces at the earliest possible time. The Contractor will be expected to comply with the S-L schedule established by the Joint Aircraft Committee. The Contractor is aware that the Materiel Center is making every effort to expedite the delivery of machine tools and materials in order to make it possible for the Contractor to meet this schedule and at the same time the Materiel Center has authorized the Contractor to delay engineering schedules on other Army Air Forces projects in order to accelerate delivery of A-26B airplanes. The Materiel Center therefore does not approve the Contractor's schedule as given in reference a.

For the Commanding General, Army Air Forces Materiel Center:

A. E. JONES,
Brig. General, U.S.A.,
Chief, Procurement Division.

cc - AAF Representative
AF Dist. Suprv.

Contract Sec.
Aircraft Radio Lab.
Armament Lab.
Aero. Equip. Br., Arm. Unit
Prod. Cont. Sec., Follow-Up Br.

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