54. (U) IOM 24 Jan. 1944
Fr: Brig. Gen. F.O. Carroll
Chief, Eng. Div., WF
To: CG, AAF, Wash.
Attn: AC/AS, MMSD
Devel. Eng. Br.
(File: Central Files)

Eng. Div. (WF) stated that space was available for a co-pilot installation in all versions of the A-26 airplane except that mounting a 75 mm. cannon. However, permanent installation of copilot controls was not considered feasible because such an installation would not allow the installation of the 75 mm. cannon, would block access to the bombardier's station, and would involve major redesign of the airplane. A kit consisting of the necessary copilot controls which could be dismantled in flight was under development. Eight .50 cal. wing package guns could be installed in any configuration of the A-26 airplane. When the bombardier nose was installed, available fire-power consisted of ten fixed forward-firing guns, in addition to two twin .50 cal. gun turrets, and a flexible nose gun. The all purpose gun nose version provided fourteen fixed forward-firing guns and two upper turret guns which could be fixed in the forward position, plus a two gun lower turret. The original design gross weight of the XA-26 airplane was 26,700 pounds, but when the airplane was actually built it weighed 700 pounds less. A combination of loadings of all the bomb, gun, and armor plate arrangements of the A-26 airplane would produce a plane 10,000 pounds heavier than the design gross weight. Since all loadings would not be carried at one time, the normally considered combat weight of the A-26 airplane was 33,400 pounds.

UNCLASSIFIED

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Please reply & ENVELOPE to:

Commanding General
AAF Materiel Command
Engineering Division
Reference VRE:do:58
Wright Field, Dayton, Ohio

cont. F.452.1
(pg. 1/3)

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KV2.1

17923/641

24 January 1944

A-26B Airplanes - Design Studies re Installation of Co-Pilot and Additional Guns

Commanding General
Army Air Forces
Washington 25, D. C.

Attn: Asst. C/AS, M.M. & D.
Development Engineering Branch

COM. GEN.
TECH. EXC.
ADM. EXC.
C. O.
BUD. OFF.
EXP. ENG.
CONTRACT
INSP.
PROD. DIV.
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MAT. S.
A. S. C.
TECH. DATA
CIV. PERS.
OTHERS

54

1. TI-1583, dated 18 December 1943, directs that studies be initiated:

a. to determine the possibility of providing a co-pilot in the A-26B,

b. to provide for an all .50 caliber nose for the subject airplane (8 or 10 guns), and

c. to provide for the anticipated requirement of two pairs of external fuselage package guns.

Action on these studies is under way, but no definite recommendations can be made at this time. However, preliminary discussion, as contained below, is believed pertinent and may be of interest to the initiator of the action required by TI-1583.

2. Space is available to seat a co-pilot beside the pilot in all configurations except when carrying a 75 mm cannon. However, permanent provisions for a co-pilot will render the installation of the 75 mm cannon impossible, and will block off access to the bombardier's station when the bombardier's nose is fitted. Moreover, no solution to the problem of installing a permanent system has yet been found that does not involve a major redesign of the airplane. In view of these compromises, the installation of permanent co-pilot's provisions does not appear, at first glance, to be feasible. Hence, present activity is towards development of a kit which can be easily dismounted and stowed in flight. This kit consists of a co-pilot's wheel cantilevered off the top of the pilot's control column by a beam which is bowed up slightly to give adequate clearance above the throttles, and a pair of folding rudder pedals with necessary cables and pulleys.

AAFMC-190-WF-5-20-42-2 Mil.

CENTRAL FILES

AC/AS, M.M. & D., Dev. Engr. Branch
A-26B Airplanes - Design Studies re Installation of Co-pilot and Additional Guns
24 January 1944.

3. The production A-26B airplanes will be provided with either a bombardier's nose or an "all purpose" gun nose. With either of these noses, any or all of the eight wing package guns may be carried. Hence, even with the bombardier's nose (which carries two fixed .50 cal. guns and one flexible gun), a total of ten guns may be carried fixed forward in addition to the two twin .50 cal. turrets and the single flexible nose gun. The all purpose nose carries the mounts and other provisions for the following selection of guns, any of which may be installed in a few minutes time:

a. 6 - .50 cal. guns

b. 4 - .50 cal. and 1 - 37 mm cannon

c. 2 - .50 cal. and 1 - 75 mm cannon

d. 2 - 37 mm cannon

e. 1 - 37 mm and 1 - 75 mm cannon

Consequently, the possible selections include one with fourteen fixed guns (nose plus wing) and two turrets of two guns each. The two upper turret guns can also be locked forward by the pilot, if desired. The arrangement described above is considered to provide rather devastating fire power -- particularly so when the airplane also carries a bomb load. The arrangement is believed to be most effective in that any gun, cannon, and/or bomb combination can be installed quickly, in the field, to combat whatever situation might arise. This flexibility is believed to be of utmost importance and should not be destroyed by the introduction of a new nose which does not have this feature.

4. Originally the design gross weight of the XA-26 airplane was 26,700 pounds. The airplane, as actually built, weighed 700 pounds less. No substantial structural change was made on the A-26B production airplane, but it was provided with so many flexible arrangements for carrying bombs, guns, cannon, and armor plate that the combination of all these loadings, if carried simultaneously, produced an airplane 10,000 pounds heavier than its design gross weight. Of course, not all of the various loads will be carried at once, but the normally considered combat weight is 33,400 pounds. Additional weight, in the form of fuselage package guns or more nose guns cannot be carried unless other parts of the pay load are deleted.

Cent. F. 452.1
(19-3/0)

5. It is recommended that the above facts be brought to the attention of the office originating the request for these design studies.

For the Commanding General:

F. O. CARROLL,
Brig. General, U.S.A.,
Chief, Engineering Division.

CC: Prod. Div. (Capt. Bache)
Tech. Executive

3 FEB 1944

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