

97. (S) 1st Ind. 22 Feb. 1945

Fr: Maj. H.F. Mullins  
Office, Chief of Admin. WF

To: CG, AAF, Wash.

Attn: AG/AS, M&S

Prod. Br., Mat. Div., Wash.

(File: Central Files)

Information was submitted concerning service difficulties on the A-26 and the measures being taken to correct them. Douglas was making a study of complete redesign of the nose gear door interlocking mechanism in order to replace it with a mechanically operated sequence valve.

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ATSC Form No. 45  
(16 Sep 44)  
ent. P. 452.1  
(Pg. 1/3)

Basic Communications: Ltr. of Hqs. AAF, Washington, D. C. (AFM-4B) dated 13 Jan 45. Subj: Technical Difficulty on the A-26 Airplane as Reported by the United States Strategic Air Forces in Europe

- COORDINATION DIRECTOR OR DEP.
- AIR INSPECTOR
- MGT. CONTROL
- CHIEF OF ADMN.
- SPECIAL STAFF
- CHIEF, ENG. & PROC.
- CHIEF, SUPPLY & MAINT.
- PERS. & BASE SERV. DIV.
- MAINT. DIV.
- SUPPLY DIV.
- ENGINEERING DIV.
- PROCUREMENT DIV.
- READJUST DIV.
- OTHER

1st Indorsement

FED/SMS/mgs  
TSHFR317

Hqs., Air Technical Service Command, Wright Field, Dayton, Ohio  
22 February 1945.

To: Commanding General, Army Air Forces, Washington 25, D. C.  
Attn: AC/AS, Materiel and Services, Production Branch, Materiel Div.

1. The following information is submitted regarding A-26 service difficulties reported in U. S. Strategic Air Forces in Europe letter AAF-379 dated 9 January 1945:

A. Moisture and Corrosion Difficulties:

1. Water leaking into cockpit: Contractor is now fabricating cockpit covers for both pilot's and gunner's compartments. In addition the Contractor has been directed to improve the seal around the cockpit enclosure to prevent water from leaking inside the airplane.
2. Fuel Booster Pump Rotary Selector: Contractor has installed a deflector shield that protects switch from water. This shield is installed effective on the 251st Long Beach airplane and the 176th Tulsa airplanes. Contractor is now investigating the possibility of replacing the Paul Henry Type Switch with an improved switch.
3. Radio Connector Plugs: Improvement of the seal about the cockpit enclosure will prevent water from entering the airplane and leaking onto the radio connector plugs. Contractor is also investigating the use of a suitable sealing compound to be applied to connector plugs. In addition "drip loops" are to be provided in the wiring entering the connector plugs to keep water from reaching the connections.
4. A-1 Bomb Release Receptacle: It is believed that the failure of the A-1 bomb release receptacle to transfer to the next station is due to insufficient contact pressure rather than corrosion of the contact points. Very early bomb release receptacles manufactured by the P. E. Mallory Company did not have as strong a contact pressure as later production items. If it is found in pre-flight test of the bomb release system that an A-1 bomb release receptacle is defective, it is recommended that it be replaced by one manufactured by Lights Incorporated or Sparks Whittington Manufacturing Company.

*Russell*  
F. B. Downey  
S. M. SKINNER  
RUSSELL  
READJUST DIV.  
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**SECRET**FD-302/rev  
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(Pg. 2/3)**COORDINATION**

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MGT. CONTROL

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The contacts of the A-1 bomb release receptacle are made from fine silver and it is therefore doubtful that corrosion has taken place. It is requested that, if possible, a sample of the defective bomb release receptacle be forwarded to ATSC for investigation.

5. Bomb Door Safety Switches: With regard to the reported corrosion of bomb bay door safety switches, Douglas has been requested to replace the present MCM-1902 and MCM-1904 switches with AN-3210-1 switches. In addition, the AN-3210-1 switches will be encased in a moisture proof housing.
6. Action Switches in Sighting Station: Under MCR-417 Contractor is improving the seal around the gunners enclosure hatch to prevent water leakage. In addition, the plastic casing surrounding the action switch has been redesigned to prevent water from coming in contact with the working parts. This change has already been incorporated into production aircraft. T. O. 00-65-24, pp 542E, has been issued covering work to be accomplished in the field to protect the old type of action switch from water.
7. Corrosion of Battery Disconnect Relays: New B-4A relays have been subjected to severe weathering and corrosion tests with satisfactory results. It is suggested that present defective B-4 relays be replaced with B-4A relays. Change to B-4A relays in production is being initiated. Method of water-proofing present relays is also under investigation by the Contractor.
8. Landing Gear Position Indicator Switches: Contractor changed from toggle type landing gear position indicator switch to micro type switch in an attempt to prevent moisture from entering switches. The presence of moisture in these switches, however, still presents a problem which the ATSC and Contractor are endeavoring to remedy.
9. In addition to the above, Douglas has initiated a general water proofing program under MCR-374. Where practical, improvements developed under this program will be incorporated in Service airplanes.

B. A-1 Release Units:

The reported freezing of moisture in the A-1 bomb rack release is under extensive investigation by ATSC. Conditions of freezing of the release has been duplicated under severe conditions and a method of preventing the entrance of moisture into the releases already in service is being studied. As soon as a definite

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solution for preventing the entrance of the moisture into the release is found, it will be forwarded to service activities. Enclosing of the switch inside the bomb rack release is being investigated and will be incorporated in the new A-5 bomb rack release if it is found to be the solution to the freezing problem.

G. Nose Gear:

It is concurred that the use of a mud guard over the nose wheel would be impracticable for the reasons stated. Contractor is actively studying a complete redesign of the nose gear door interlocking mechanism to eliminate the present system of links, levers and cams and to replace same with a mechanically operated sequence valve. In this manner, there would be only a minimum of exposed working parts and these could readily be protected from exposure to mud and slush by suitable covers or baffles. In addition, measures are being taken to shield the nose gear down lock mechanism from mud and water.

D. Main Landing Gear:

Contractor is proceeding with design of a mechanical up lock release for the main gear, and this change will be incorporated in production as soon as a satisfactory design has been accomplished.

H. Bomb Shackles Suspension Hook Latches:

Double type latches AAF Dwg. 45812985 have been installed in production effective on the 201st Long Beach Article Serial No. 41-39300 and the 136th Tulsa Article Serial No. 43-22387. These latches are identical to those now incorporated in the B-26 airplane. This change is not practical on service airplanes inasmuch as it was necessary for Douglas to change the bomb rails to accommodate the double type latches.

F. Hydraulic Pressure Regulator and Selector Valves:

Contractor is now installing hydraulic pressure regulator and selector valves incorporating poppets of Formica "LF" compound which do not swell objectionably. A Technical Order will be issued to cover the replacing of the present poppets in Service airplanes with poppets of the "LF" compound.

For the Director:

Incl: n/c

H. F. MULLINS  
Major, Air Corps  
Office, Chief of Administration



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