

SO. (U) Ltr. 26 Oct. 1944
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O-1-f, of Eng. and Proc.
ATSC, WF
To: Maj. Gen. W.T. Larson
CG, 3rd AF
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Difficulty was encountered with the nose gear down lock on A-26 airplanes during accelerated service and winterization tests. On 17 June 1944, ATSC requested Douglas to improve operation of the lock. This change was incorporated in airplanes delivered 27 June 1944 from Douglas-Long Beach and 17 July 1944 from Douglas-Tulsa. There were six cases of nose wheel failures on A-26 airplanes in the Third AF between 15 June 1944 and 13 Oct. 1944. In five of these failures the nose gear failed to lock in the down position. In each of the five failures the indicator showed the gear down and locked, although unsatisfactory toggle switch installations which had previously caused this condition had been replaced by micro-switch installations.

26 October 1944

A-26B & A-26C Airplanes
Malfunction of Nose Gear Down Lock

W. T. LARSON,
Major General, U.S.A.,
Commanding General,
3rd Air Force.

1. The following is a report of action taken by this Command to improve operation of the nose gear down lock on A-26 airplanes.

2. During the course of accelerated service tests and winterization tests on A-26 airplanes, some difficulty was experienced in getting the nose gear to lock in the down position. No accidents resulted because in every case the pilot was finally able to get the gear locked. On 17 June 44, this Command requested Douglas to take action to improve operation of the down lock. Douglas accomplished a revision to the nose gear down lock mechanism under MCR 248. This change was incorporated in production on the 65th Long Beach airplane, Serial No. 41-39164, and subsequent, and the 28th Tulsa airplane, Serial No. 43-22279 and subsequent. Airplane No. 41-39164 was delivered from the factory on 27 June 44 and airplane No. 43-22279 was delivered from the factory on 17 July 44.

3. The description of MCR 248 given by Douglas is as follows:

REASON: To improve operation and prevent malfunctioning of nose gear down lock mechanism for the protection of personnel and aircraft.

DETAILED DESCRIPTION: To prevent possible interference between pin and slot, controlling dimension has been added to slot and tolerances on parallelism of slot to axis added. To eliminate possibility of threads of screws bottoming on latch pin, dog point set screw has been replaced by dog point hex head bolt. To avoid possibility of pin being restrained from rotation sufficiently to prevent

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80.

engagement, tolerance on slot in pin has been decreased and the dog on screw reduced in diameter. In addition, the tensile strength of the screw was increased by different heat treatment. To avoid possible sticking of the pin in upper link, tolerances on eccentricities were added and the pin chrome plated. To reduce possibility of malfunction in service, the adjusting screw has been replaced by the hex head bolt and initial adjustment accomplished by laminated shims under the bolt head.

4. Douglas has advised that parts for the service change will become available approximately 7 Nov 44. A service bulletin is being completed and will be supplied with kits of parts as soon as possible, in order to make the change on the 91 service airplanes which do not yet incorporate MGR 243.

5. As a result of telephone conversation with Capt. Gordon Fulton, Supervisor of Maintenance for the 3rd Air Force Bomber Command, MacMill Field, Tampa, Florida, and Lt. Saunders of the Office of Flying Safety, Winston-Salem, North Carolina, it was learned that there have been a total of six cases of nose wheel failures on B-26 aircraft in the 3rd Air Force between 15 June 44 and 13 Oct 44. Of these six cases, the gear failed to lock in the down position on five airplanes, AAF Serial Nos. 41-39151, 41-39157, 41-39167, 43-22309 and 41-39169, and the nose gear collapsed upon landing. In these five cases, the indicator showed that the gear was in the down and locked position. On all of these airplanes, a change had been accomplished to remedy an initial faulty installation which allowed the indicator to show the nose gear down and locked when the lock pin was not fully engaged. This change consisted of replacing the toggle switch with a micro-switch; however, in view of the above accidents, it appears that the Douglas engineered micro-switch installation can also give a false indication. Action will be taken to correct this condition on production and service airplanes. On one airplane, Serial No. 43-25260, it was reported that the nose wheel did not come out of the wheel well. Pilot landed airplane with main gear down, nose wheel up. Further detailed information is not available at this time.

6. The Douglas Aircraft Company Service Representative, Mr. Curtis Wilmore is enroute to Wright Field this date from the Marianna Air Base. Mr. Wilmore has been with this group of airplanes for a long period of time and it is expected that detailed information on the nose gear difficulties together with information on further corrective action can be obtained upon Mr. Wilmore's arrival.

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