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**MANDATORY SERVICE BULLETIN NO. MSB 40-091 REV. 0**

**I TECHNICAL DETAILS**

**I.1 Category**

Mandatory

**I.2 Airplanes Affected**

Type: DA 40

Serial Numbers: All equipped with the Lycoming IO-360-M1A engine, and D41-3223-10-00 or D41-3223-10-00\_1 nose landing gear legs

**I.3 Date of Effectivity**

18 January 2021

**I.4 Time of Compliance**

For airplanes equipped with the D41-3223-10-00 nose landing gear leg, within the next 25 hours of operation if operated on unprepared surfaces, or within the next 100 hours of operation if operated on paved surfaces. Inspection must be repeated every 100 hours thereafter.

For airplanes equipped with the D41-3223-10-00\_1 nose landing gear leg, and with a TTAF of 3000 hours or greater, within the next 25 hours of operation if operated on unprepared surfaces, or within the next 100 hours of operation if operated on paved surfaces. Inspection must be repeated every 100 hours thereafter.

The terminating action of this service bulletin is the installation of a D41-3223-10-00\_2 or later nose landing gear leg.

**I.5 Subject**

Dye penetrant inspection of D41-3223-10-00 and D41-3223-10-00\_1 nose landing gear legs.

ATA Code: 32-20

**I.6 Reason**

It has been found that Diamond Aircraft nose landing gear legs with part numbers D41-3223-10-00 and D41-3223-10-00\_1 are susceptible to cracking at the nose gear fork pivot, which may lead to a loss of the nose wheel and fork assembly.

This service bulletin describes the repeated inspection and, when necessary, the replacement of the D41-3223-10-00 and D41-3223-10-00\_01 nose landing gear legs.

Terminating action for this service bulletin is the installation of a nose landing gear leg with a part number of D41-3223-10-00\_02, or later version.

**I.7 Concurrent Documents**

None

**I.8 Approval**

The technical information and instructions contained in this document are approved as part of the type design.

**I.9 Accomplishment/Instructions**

See WI-MSB 40-091, latest effective issue.

**I.10 Mass (Weight) and CG**

The change in mass and CG is negligible.

**II PLANNING INFORMATION**

**II.1 Material and Availability**

None

**II.2 Special Tools**

None

**II.3 Labour Effort**

Approximately 1 hour

*This estimate is for direct labour performed by a technician, and it does not include setup, planning, familiarization, cure time, part fabrication, or tool acquisition.*

**II.4 Credit**

None

**II.5 Reference Documents**

DA 40 Airplane Maintenance Manual, Doc. No. 6.02.01, latest effective issue.

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### **III REMARKS**

1. All work must be completed by the appropriate authorized personnel.
2. All work, particular that, which is not especially described in this service bulletin, must be done in accordance with the referenced maintenance manual.
3. Completion of all work must be recorded in the logbook.
4. In case of doubt, contact Diamond Aircraft Industries.

To obtain satisfactory results, procedures specified in this service bulletin must be accomplished in accordance with accepted methods and current government regulations. Diamond Aircraft cannot be responsible for the quality of work performed in accomplishing the requirements of this service bulletin. Diamond Aircraft reserves the right to void continued warranty coverage in the area affected by this service bulletin if it is not incorporated.

If you no longer own the aircraft to which this service bulletin applies, please forward it to the current owner and send the name of the current owner to Diamond Aircraft at the address below.

Diamond Aircraft Industries Inc.  
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Technical Publications:  
E-mail: Techpubs@diamondaircraft.com



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**EXECUTION REPORT TO  
SERVICE BULLETIN  
MSB 40-091 REV. 0**

**AIRPLANE DATA**

Airplane serial number \_\_\_\_\_

Airplane registration \_\_\_\_\_

Airplane operator \_\_\_\_\_

Hours of operation airplane (TSN) \_\_\_\_\_

Typical operation of airplane private, club, training, other: \_\_\_\_\_

**MAINTENANCE DATA:**

Date of work \_\_\_\_\_

Work performed by \_\_\_\_\_

P/N of NLG leg installed on the aircraft at the start of work: \_\_\_\_\_

Was the NLG leg replaced? \_\_\_\_\_

Date \_\_\_\_\_

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Name \_\_\_\_\_ Signature \_\_\_\_\_

Please e-mail the completed form to [Techpubs@diamondaircraft.com](mailto:Techpubs@diamondaircraft.com)

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**WORK INSTRUCTION WI-MSB 40-091 REV. 0**

**I GENERAL INFORMATION**

**I.1 Subject**

Inspection of nose landing gear legs D41-3223-10-00 or D41-3223-10-00\_1.

**I.2 Reference Documents**

DA 40 Series Airplane Maintenance Manual, Doc. No. 6.02.01, latest effective issue.

**I.3 Remarks**

1. All work must be done by a certified aircraft service station or a certified aircraft maintenance mechanic.
2. All work, in particular if not described in this work instruction, must be done in accordance with the referenced maintenance manual.
3. For conversion factors between SI units and US/Imperial units, refer to AMM Chapter 02.
4. In case of doubt, contact Diamond Aircraft Industries Inc.

**II DRAWINGS, SPECIAL TOOLS & MATERIALS**

**II.1 Drawings**

None

**II.2 Special Tools**

None

**II.3 Material**

None

### **III INSTRUCTIONS**

1. Remove the cowlings. Refer to AMM Section 71-10-00.
2. Disconnect the battery. Refer to AMM Section 24-31-00.
3. If installed, remove the nose wheel fairing. Refer to AMM Section 32-20-00.
4. Remove the nose wheel fork. Refer to AMM Section 32-20-00.
5. Clean the pivot axle.
6. Inspect the nose landing gear leg pivot axle using dye penetration inspection. Pay special attention to the radius at the top of the axle as shown below.

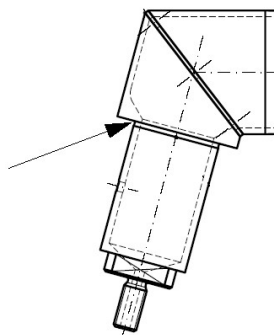


Figure 1. Pay special attention to the radius indicated by the arrow during dye penetrant inspection.

7. If cracks are detected, replace the nose landing gear with P/N D41-3223-10-00\_2. Refer to AMM Section 32-20-00.
8. Install the nose wheel fork. Refer to AMM Section 32-20-00.
9. Check the steering friction. Refer to AMM Section 32-20-00.
10. Install the nose wheel fairing if it was removed. Refer to AMM Section 32-20-00.
11. Install the engine cowlings. Refer to AMM Section 71-10-00.
12. Clean working areas, check for foreign objects.
13. Check all altered, replaced, repaired parts for proper function.
14. Test all systems in working area for function.
15. Make all necessary entries in the logbooks.
16. Submit the execution report to [Techpubs@diamondaircraft.com](mailto:Techpubs@diamondaircraft.com).