
SERVICE INFORMATION LETTER NO. SI40-166

NOTE: Service information letters (SIL) are used only:

1. To distribute information from Diamond Aircraft Industries Inc. to our customers.
2. To distribute applicable information/documents from our suppliers to our customers with additional information.

NOTE: Typically there is no revision service for SILs. Each new information or change will be sent along with a new SIL.

1. TECHNICAL DETAILS

1.1 Aircraft Affected

DA 40 aircraft with the Lycoming IO-360-M1A engine.

1.2 Subject

Nose landing gear maintenance and inspections.

1.3 Reason

It has been observed that the nose landing gear strut on the DA 40 aircraft may develop cracks at the top of the pivot or at the top of the stud (see the figure below), which may lead to a nose gear collapse, or the loss of the nose wheel and fork. This service information letter highlights the importance of inspecting the nose landing gear, and highlights updates to the aircraft maintenance manual.

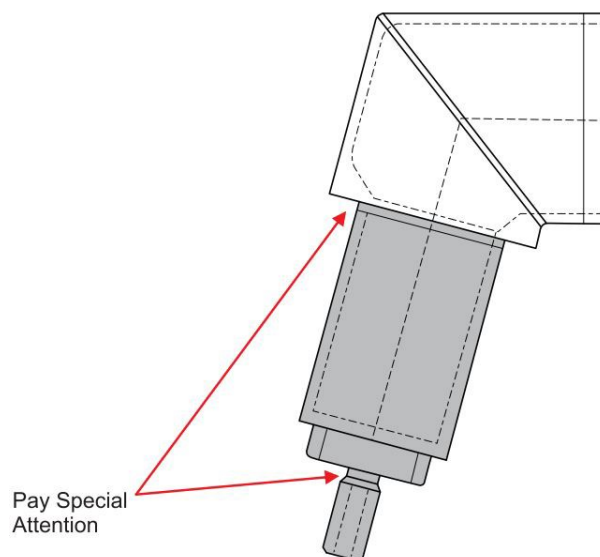


Figure 1. Nose landing gear pivot.

1.4 Information

The following have been observed:

1. D41-3223-10-00_1 and earlier struts are more prone to failure than later designs.
2. A single hard landing may severely reduce the life of a nose gear strut.
3. Improper assembly of the nose gear are major contributors to cracking at the stud, which may result in the loss of the fork assembly.

As there are many environmental and operating conditions that may affect the life of the gear, Diamond Aircraft strongly recommends a thorough check of the nose gear pivot and stud every 100 hr in accordance with AMM Section 05-28-50 and Section 32-20-00, which have been updated with more detailed information regarding the disassembly and assembly of the fork assembly. Details have also been added to Section 05-50-00 for greater clarity during hard landing inspections. It is imperative that all suspected hard landings are reported and the airplane inspected.

If there is doubt regarding the part number of the nose gear strut, measure the thickness of the pivot. There is a small hole at the front of the pivot where this measurement may be taken.

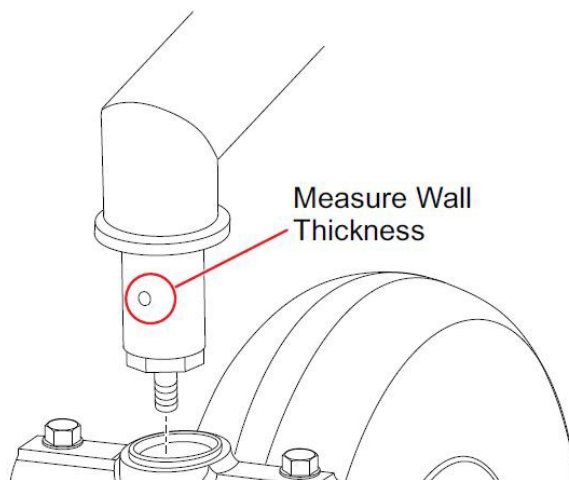


Figure 2. Location of the small hole in the pivot.

Wall Thickness (mm)	Part Number
3.5	D41-3223-10-00
4.5	D41-3223-10-00_1
5.5	D41-3223-10-00_2

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2. OTHER DETAILS

To obtain satisfactory results, procedures specified in this service information letter must be accomplished in accordance with accepted methods and current government regulations. Diamond Aircraft Industries Inc. cannot be responsible for the quality of work performed in accomplishing the requirements of this service information letter. Diamond Aircraft reserves the right to void continued warranty coverage in the area affected by this service information letter if it is not incorporated. If you no longer own the aircraft to which this service information letter applies, please forward it to the current owner and send the name of the current owner to Diamond Aircraft Industries Inc. at the address below.

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