

OPTIONAL SERVICE BULLETIN

OSB 40-072 / OSB D4-086 / OSB F4-026

I TECHNICAL DETAILS

I.1 Category

Optional.

I.2 Airplanes affected

Type: DA 40, DA 40 D, DA 40 F
Serial numbers: 40.006 through 40.1119,
D4.001 through D4.399,
40.DS001 through 40.DS060,
40.FC001 through 40.FC029

I.3 Date of effectivity

14-Nov-2011

I.4 Time of Compliance

At owner's discretion.

I.5 Subject

Installation of a reinforced nose wheel fork.

ATA-Code: 32-20

I.6 Reason

For airplanes used for excessive initial training a reinforced nose wheel fork has been developed to withstand increased loads from frequent rough landings. The new nose wheel fork is now available for retrofit especially for airplanes in training environments. This Service Bulletin describes the replacement of the nose wheel fork and the modification of the fairing.

I.7 Concurrent Documents

None.

I.8 Approval

The technical information or instructions contained in this document relate to the Design Change Advisory No. MÄM 40-516, which has been approved under the authority of EASA Design Organization Approval ref. EASA.21J.052.

The technical content of this document has been approved under the authority of DOA ref. EASA.21J.052.

I.9 Accomplishments / Instructions

Comply with WI-OSB 40-072 / WI-OSB D4-086 / WI-OSB F4-026, 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

See WI-OSB 40-072 / WI-OSB D4-086 / WI-OSB F4-026, latest effective issue.

II.2 Special Tools

None.

II.3 Labour Effort

Approx. 2 hours.

II.4 Credit

None.

II.5 Reference Documents

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

III REMARKS

1. All work must be done by a certified aircraft service station or a certified aircraft maintenance mechanic.
2. All work, particular those that are 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 log book.
4. In case of doubt contact Diamond Aircraft Industries GmbH.



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DAI OSB 40-072
DAI OSB D4-086
DAI OSB F4-026
Page 4 of 4
14-Nov-2011

EXECUTION REPORT TO SERVICE BULLETIN OSB 40-072 / OSB D4-086 / OSB F4-026

AIRPLANE DATA

Airplane Serial Number: _____

Airplane Registration: _____

Airplane Operator: _____

Hours of operation of airplane: _____

No. of landings: _____

Hours of operation-engine _____

Typical operation of airplane: private, club, training, other _____

Date, Name, Sign

Please fax the completed form to Fax No. +43-2622-26700-1369 or e-mail to
airworthiness@diamond-air.at

WORK INSTRUCTION

WI-OSB 40-072 / WI-OSB D4-086 / WI-OSB F4-026

Installation of a reinforced NLG fork

I GENERAL INFORMATION

I.1 Subject

Installation of a reinforced NLG fork.

I.2 Reference Documents

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

I.3 Remarks

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

II DRAWINGS, SPECIAL TOOLS & MATERIALS

II.1 Drawings

None.

II.2 Special Tools

None.

II.3 Material

Quantity	Part Number	Description
1	D44-3223-30-00_1	NLG Fork Assy
1	LN94-20 020	Cotter Pin
1	DIN 985 M12-A2	Self-locking Nut
2	DIN 2093A-25X12.2X1.5	Spring washer

Material including drawing is available from Diamond Aircraft Industries.

III INSTRUCTIONS


1	Lift airplane on jacks i.a.w. AMM Section 07-10.
2	Remove the nose wheel fairing, if installed.
3	Remove nose wheel fork.
4	Remove nose wheel i.a.w. AMM Section 32-40.
5	<p>Modify nose wheel fairing, if installed. Fabricate Drill Pattern Template:</p> <ul style="list-style-type: none"> - Drill two 6 mm hole in a metal sheet with a distance of 197.5 ± 0.5 mm between them (refer to figure 1). - Check Template with drill pattern for fairing attachment on new NLG fork. 

Figure 1: Drill Pattern Template

- Drill new holes in fairing (refer to figure 2).
- Fix Template to nose wheel fairing on aft hole.
 - Drill new 6 mm hole centered between the front two old holes.
 - Repeat on other side fairing.

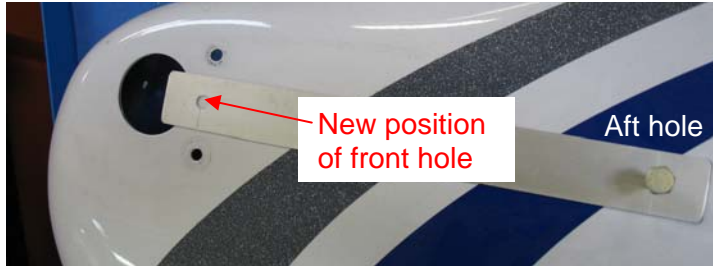


Figure 2: Location drill hole

Fill old holes with thickened resin and cover them from the inside with glass fabric (1 layer 92110). Touch up old holes with paint after precuring.

6	Reinstall NLG Fork. Use a new self locking nut and new spring washers. Install both spring washers in the same direction.
7	<p>Install nose wheel i.a.w. AMM Section 32-40.</p> <ul style="list-style-type: none"> • Use a new cotter pin. • Spin wheel while tightening the axle nut. <p>Note The wheel must rotate smoothly without axial play. Note Axial play can be compensated by installing shims DIN 988 10 x 16 A2 between NLG fork and axle bushings.</p>
8	Adjust the Nose Wheel Steering Friction i.a.w. AMM Section 32-20.
9	Install the nose wheel fairing if previously installed.
10	Lower the airplane i.a.w. AMM Section 07-10
11	Clean working areas, check for foreign objects.
12	Check all altered, replaced, repaired parts for proper function.
13	Test all systems in working area for function.
14	Make all necessary entries in the airplane logs.