

MANDATORY SERVICE BULLETIN

NO. MSB 42-063/1

SUPERSEDES MSB 42-063

I TECHNICAL DETAILS

I.1 Category

Mandatory.

I.2 Airplanes Affected

Type: DA 42, DA 42 M

Serial Numbers: 42.160 through 42.167,
42.171 through 42.174,
42.179, 42.181 through 42.285,
42.287 through 42.296,
42.298 through 42.323,
42.325 through 42.335,
42.337 through 42.351,
42.353 through 42.357,
42.359 through 42.365,
42.367 through 42.379,
42.382, 42.388, 42.404, 42.407,
42.417 through 42.426,
42.M001, 42.M003,
42.M005 through 42.M019,
42.AC026, 42.AC027, 42.AC029,
42.AC033 through 42.AC036,
42.AC040 through 42.AC131

I.3 Date of Effectivity

24-Nov-2009.

I.4 Time of Compliance

Within 100 flight hours from the date of effectivity, but not later than 31-Mar-2010 for inspection and reworking of the NLG leg.

Within 100 flight hours after inspection, but not later than 30-Sep-2010 for replacement of the mounting block in case the prescribed criteria are met.

I.5 Subject

Inspection and Modifications of the NLG centering unit mount.

I.6 Reason

Due to sharp edges on the casing mounting main part of the NLG leg the centering unit mounting block can be damaged and cracks can occur in the block. By removing the sharp edges future damage can be avoided.

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 42-302/c, which has been approved under the authority of EASA Design Organization Approval No. EASA.21J.052.

The technical content of this document has been approved und the authority of DOA No. EASA.21J.052.

I.9 Accomplishment/Instructions

Comply with WI-MSB 42-063, which is attached to this Service Bulletin.

I.10 Mass (Weight) and CG

Negligible.

II PLANNING INFORMATION**II.1 Material & Availability**

See WI-MSB 42-063, which is attached to this Service Bulletin.
Material listed in WI-MSB 42-063 II.3a is available through Diamond Aircraft.

II.2 Special Tools

None.

II.3 Labour Effort

Approx. 1 hour.

II.4 Credit

Material listed in WI-MSB 42-063 II.3a and 1.0 hour of labour.

II.5 Reference Documents

Diamond Aircraft DA 42 Airplane Maintenance Manual, Doc. No. 7.02.01, latest effective issue.

WI-MSB 42-063, which is attached to this Service Bulletin.

III REMARKS

1. All work must be carried out by a certified aircraft maintenance station or a certified aircraft mechanic.
2. The work instruction must be recorded in the aircraft log book.
3. Accomplishment of the measures must be confirmed in the log book.
4. If material and/or labor hours are subject to be credited through Diamond Aircraft Industries, the Service Bulletin must be carried out by an authorized Diamond Service Center and the Warranty Application incl. Work Report must be sent not later than 30 days after the end of time of compliance.
5. In case of doubt, contact Diamond Aircraft Industries.

EXECUTION REPORT**for MSB 42-063/1**

AIRPLANE DATA

Airplane Serial Number: _____

Airplane Registration: _____

Airplane Operator: _____

Hours of operation of airplane: _____

No. of landings: _____

Hours of operation-engine LH: _____

RH: _____

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

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

WORK INSTRUCTION

WI-MSB 42-063

“Modification of NLG centering unit mount”

I GENERAL INFORMATION

I.1 Subject

This Work Instruction describes the inspection and modification of the mounting blocks on the NLG.

I.2 Reference Documents:

Diamond Aircraft DA 42 Airplane Maintenance Manual, Doc. No. 7.02.01, latest effective issue.

I.3 Remarks:

- a) The work must be carried out by a certified aircraft service station or a certified aircraft maintenance mechanic.
- b) All works, particular those that are not especially described in this work instruction, must be carried out in accordance with the referenced maintenance manual.
- c) In case of doubt, contact Diamond Aircraft Industries GmbH.

II DRAWINGS, SPECIAL TOOLS & MATERIALS

II.1 Drawings

None.

II.2 Special Tools:

None.

II.3a Material:

1	Mounting block	P/N: D60-3223-64-51_1
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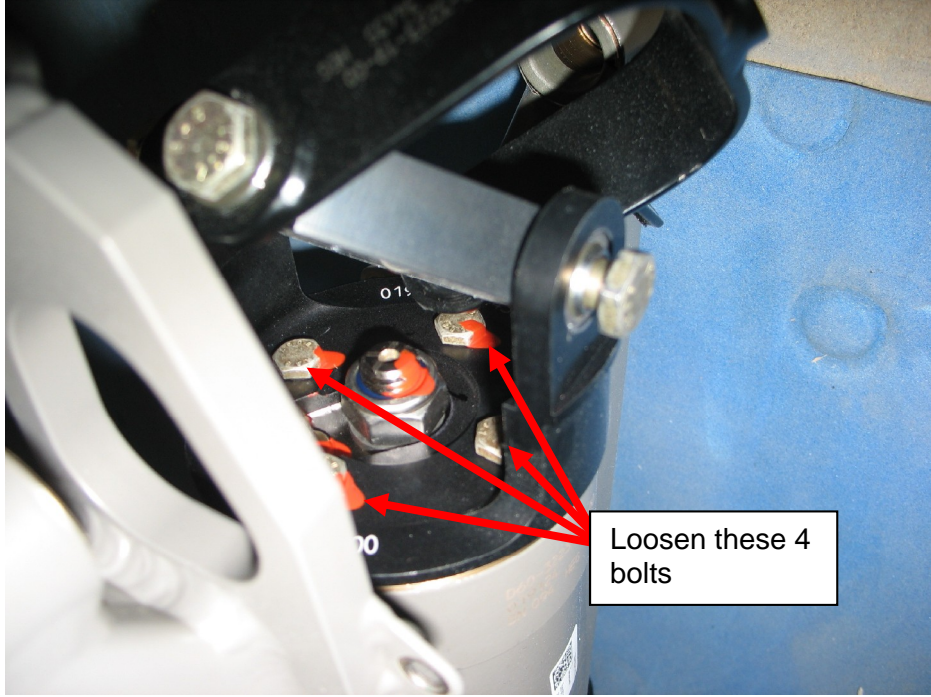
Material is available from Diamond Aircraft Industries.

II.3b Consumables:

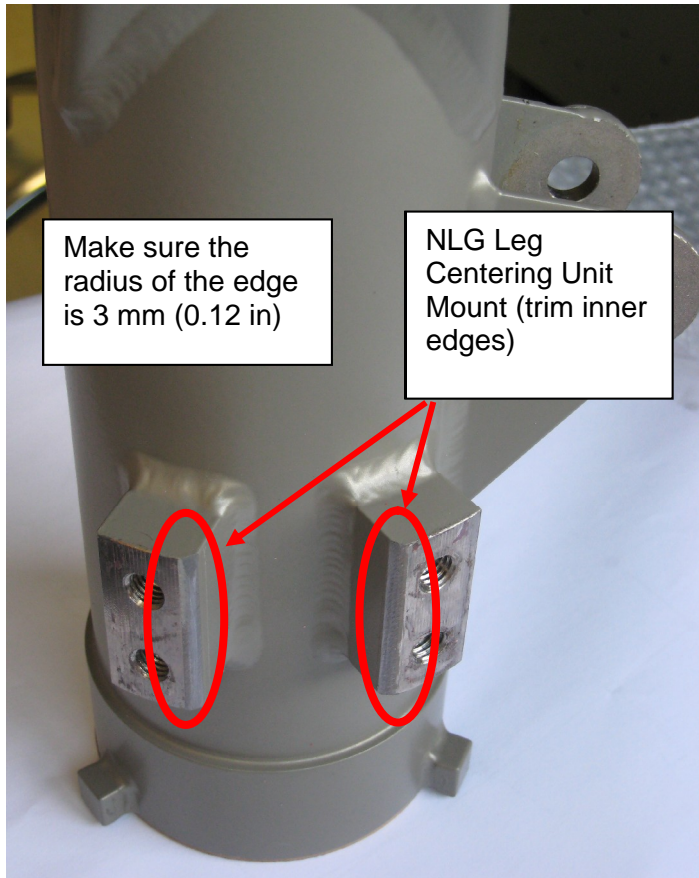
- Autocolor P580 primer or equivalent corrosion protection paint
- Loctite 243 or equivalent thread locker
- Aeroshell Grease 5 or equivalent

III INSTRUCTIONS

1.	Pull the GEAR and PITOT HEAT circuit-breakers. WARNING: Failure to pull circuit breakers may lead to damage to the aircraft or injury in case of inadvertent landing gear operation.
2.	Raise the airplane on jacks and move the wing and rear fuselage trestles into position to support the airplane. Refer to AMM Section 32-20.
3.	Unhook the connecting rods of the NLG-doors.

4.	<p>Remove preload of centering unit spring:</p> <p>WARNING: The centering unit is spring loaded. The spring force can cause serious injury to personnel.</p> <p>Loosen and turn each of the 4 bolts of the damper unit on top of the NLG-leg three revolutions to give at least 3 mm (0.12 in) travel of NLG-damper unit.</p>  <p>Loosen these 4 bolts</p>
5.	<p>Remove centering unit:</p> <p>Remove the 4 bolts which fix the centering unit onto the NLG leg. Use a heat gun to loosen the thread locker, but do not exceed 150 °C/ 302 °F on screw head.</p> <p>Caution: Do not damage NLG leg powder coat.</p> <p>Make sure there is no tension on the centering unit mechanism. Move the centering unit clear of the NLG.</p>

Modification of the centering unit mount:
Mark 3 mm (0.12 in) left and right from the inner edges of the mount.
File the edges to a radius of 3 mm (0.12 in).

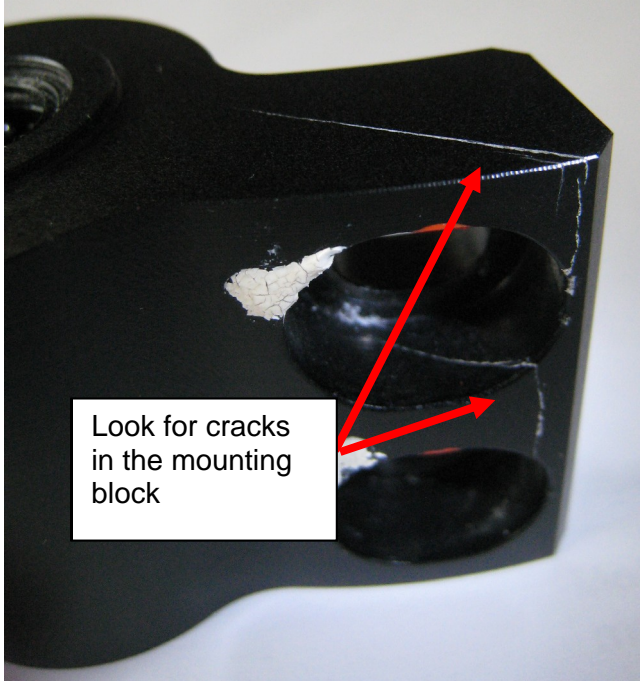


CAUTION: Make sure not to damage the NLG surface while filing the edges.

7.

Prime the exposed surface of the NLG using Autocolor P580 primer or equivalent corrosion protection paint. See the product datasheet for further instructions.

CAUTION: Always observe Health & Safety Instruction given by the Manufacturer of the paint.

<p>8.</p>	<p>Inspect the mounting block P/N: D60-3223-64-51 for cracks.</p> <p>Criterion 1 If there are cracks one both sides, replace the damaged mounting block with a new one (D60-3223-64-51_1) immediately.</p> <p>Criterion 2 If there are cracks similar to the ones in the picture below on one side only, replace the damaged mounting block with a new one (D60-3223-64-51_1) within the next 100 flight hours from the inspection. If this criterion is met proceed with step 10.</p> 
<p>9.</p>	<p>Remove the ring P/N D60-3223-64-31 from the cracked mounting block and push the bearing P/N LBBR 12-2LS clean of Mounting Block with a 16mm (0.63in) pin. Install the bearing in the new mounting block, use Aeroshell 5 or equivalent and tighten the ring.</p>
<p>10.</p>	<p>Make sure the tire is aligned straight. Align the centring unit. Install the centering unit back onto the NLG leg by securing it with the four bolts (20Nm /15 ft lb). Apply Loctite 243 or equivalent onto the threads.</p>
<p>11.</p>	<p>Tighten the four bolts on the top of the NLG to secure the NLG damper (10Nm /7.4 ft lb). Use Loctite 243 or equivalent.</p>
<p>12.</p>	<p>Re-connect the NLG door.</p>
<p>13.</p>	<p>Lower the airplane and remove the wing and rear fuselage trestles.</p>
<p>14.</p>	<p>Set the GEAR and PITOT HEAT circuit-breaker.</p>
<p>15.</p>	<p>Clean working area and check for foreign objects.</p>



Diamond Aircraft Industries GmbH
N. A. Otto-Straße 5
A-2700 Wiener Neustadt

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16.	Test all systems in working area for function.
17.	Do a taxiing check and look for directional stability. Refer to DA 42 AFM.
18.	Make necessary entries into aircraft log.