

# MANDATORY SERVICE BULLETIN

## NO. MSB-42-062/1

### Supersedes MSB-42-062

## I TECHNICAL DETAILS

### I.1 Category

Mandatory

### I.2 Airplanes affected

Type: DA 42, DA 42 M

Serial Numbers: 42.004 up to and incl. 42.429  
42.AC001 up to and incl. 42.AC152  
42.M001 up to and incl. 42.M039

### I.3 Time of Compliance

**Action 1:** within the next 100 flight hours and within every 200 flight hours thereafter until Action 2 is carried out

**Action 2:** not later than 31-Dec-2009

### I.4 Subject

Replacement of the Landing Gear - Down Lock Pin

ATA-Code: 32

### I.5 Reason

It has been reported, that on a few airplanes circlips of the Landing Gear Down Lock Pins fell off because of corrosion of the clips. To correct this situation, this Bulletin addresses the replacement of the Down Lock Pin circlips of the Landing Gear and subsequently the replacement of these pins with a modified design as the terminating action for repetitive replacement of the circlips.

**I.6 Concurrent Documents**

None

**I.7 Approval**

The technical information or instructions contained in this document relate to the Design Change Advisory No. MÄM 42-275, which has been approved under the authority of DOA No. EASA.21J.052.

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**I.8 Accomplishment / Instructions**

WI-MSB-42-062, latest effective issue must be complied with.

**I.9 Mass (Weight) and CG**

Negligible

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

The Work Instruction WI-MSB-42-062 is attached to this Service Bulletin.  
Appropriate necessary materials are available through Diamond Aircraft Industries.

**II.2 Special Tools**

None

**II.3 Credit**

Action 1: None.

Action 2: Material as mentioned in WI-MSB-42-062 and 1 hour of labor.

**II.4 Labor effort:**

Action 1: Approx. 0.5 hours additional during scheduled maintenance

Action 2: Approx. 1 hour additional during scheduled maintenance

## **II.5 Reference Documents**

DA 42 Series Airplane Maintenance Manual Doc. No. 7.02.01, latest effective issue  
WI-MSB-42-062, latest effective issue.

## **III REMARKS**

1. All measures must be carried out by a certified aircraft service station or a certified maintenance aircraft mechanic.
2. Accomplishment of the measures must be confirmed in the log book.
3. In case of any doubt, contact Diamond Aircraft Industries.
4. If material and labor hours are subject to be credited through Diamond Aircraft Industries, the SB must be carried out by an authorized Diamond Service Center and the Warranty Application must be sent not later than 30 days after completion of work.

# WORK INSTRUCTION

## WI-MSB 42-062

### „Replacement of the Landing Gear - Down Lock Pins“

#### **I GENERAL INFORMATION**

##### **I.1 Subject:**

MSB-42-062 / Action 1:

Replacement of the Circlips of the Landing Gear Down Lock Pins every 200 hours.

MSB-42-062 / Action 2:

Replacement of the Locking Pins as terminating action (Modified design without circlips).

##### **I.2 Reference Documents:**

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

##### **I.3 Remarks:**

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

## **II DRAWINGS, SPECIAL TOOLS & MATERIALS**

### **II.1 Drawings**

None.

### **II.2 Special Tools**

None.

### **II.3 Material**

<b>MSB-42-062 / Action 1</b>		
<b>Replacement of the NLG- and MLG- Down Lock Bolt circlips every 200 hours.</b>		
<b>Qty</b>	<b>Description</b>	<b>Part Number</b>
6	Circlip	DIN 471-08-verzinkt
3	Self locking nut	DIN 985-M6-A2

<b>MSB-42-062 / Action 2</b>		
<b>Replacement of the Locking Pins as terminating action. (Modified design without circlips)</b>		
<b>Qty</b>	<b>Description</b>	<b>Part Number</b>
1	NLG Locking Bolt	D60-3233-00-35
1	NLG Locking Bolt- Nut Assy.	D60-3233-70-00
2	MLG Locking Bolt	D60-3237-11-37
2	MLG Locking Bolt-Nut Assy.	D60-3237-70-00
3	Self locking nut	DIN 985-M6-A2
a/r	Corrosion inhibitive sealant	P/S 870 Class A-2

### III INSTRUCTIONS

GENERAL:

Torque all screws without special torque acc. to the values given in the AMM, Section 20.

**Action 1:**

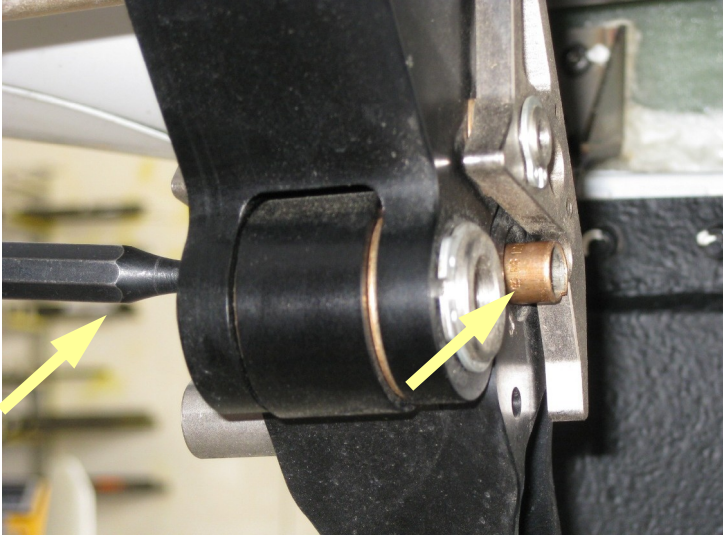
**Replacement of the Circlips (Repetitive action every 200 hours)**

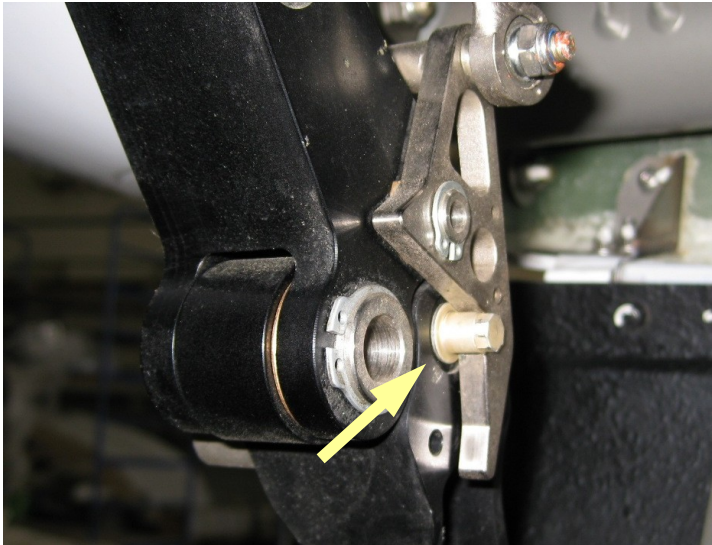
<p><b>Warning:</b> Do not begin any disassembly without consulting the DA 42 Series Airplane Maintenance Manual, latest effective issue.</p> <p><b>Warning:</b> Take precautions by securing the area around the airplane before you perform maintenance on the landing gear retraction system. The landing gear retraction system can cause serious injury to persons if operated accidentally.</p> <p><b>Warning:</b> The folding stay and Landing Gear Legs are spring loaded. Due to the high forces involved the elements can cause serious injury to persons.</p>	
1	Pull the GEAR circuit-breaker.
2	Pull the PITOT and STALL WRN circuit breakers.
3	Raise the airplane on jacks and move the wing and rear fuselage trestles into position to support the airplane.
4	Release the hydraulic pressure from the hydraulic system: <ul style="list-style-type: none"> <li>• Fold the rear passenger seat-backs forward. Refer to AMM Section 25-10.</li> <li>• Remove the rear baggage compartment lower access panel. Refer to AMM Section 25-60.</li> <li>• Operate the accumulator dump-valve at the hydraulic and control assembly.</li> <li>• Install the rear baggage compartment lower access panel. Refer to AMM Section 25-60.</li> </ul>
5	Remove the screw which connects the Hook Rod and the Hook Assembly and turn back the Hook Assembly. Discard the self locking nut.
6	Replace the two circlips which hold the bolt in position.  <b>CAUTION:</b> Do not overstress the circlip during the installation!
7	Turn the Hook Assembly into position and reinstall the screw connecting the Hook Assembly with the Hook Rod. Install the new self locking M6 - nut.
8	Clean working area and check for foreign objects.
9	Carry out step 5 – 8 on the Nose Landing Gear and the Main Landing Gear Assemblies.
10	Push the GEAR circuit-breaker and perform a retraction test.

11	Perform an operational check of the landing gear indication system.
12	Lower the airplane with the jacks. Refer to AMM Section 07-10.  <b>CAUTION:</b> Make sure that the area around the airplane is clear of equipment.
13	Push the PITOT and STALL WRN circuit breakers.
14	Make appropriate entries in aircraft documents.

**Action 2:**

**Replacement of the Locking Pins as terminating action. (Modified design without circlips)**

<p><b>Warning:</b> Do not begin any disassembly without consulting the DA 42 Series Airplane Maintenance Manual, latest effective issue.</p> <p><b>Warning:</b> Take precautions by securing the area around the airplane before you perform maintenance on the landing gear retraction system. The landing gear retraction system can cause serious injury to persons if operated accidentally.</p> <p><b>Warning:</b> The folding stay and Landing Gear Legs are spring loaded. Due to the high forces involved the elements can cause serious injury to persons.</p>	
15	Carry out Step 1 – 5 of this Work Instruction.
16	Remove the circlips and the bolts from the landing gear assemblies.
17	<p>Carefully remove the two bushings which are pressed into the Brace Assemblies of the Nose and Main Landing Gear.</p> <p><b>CAUTION:</b> Do not damage the Aluminum-surface inside the hole.</p> 

18	<p>Install P/N D60-3237-11-37 and P/N D60-3237-70-00 on the Main Landing Gear Assemblies. (see picture)</p> <p>Prior to installation, apply P/S 870 Class A-2 sealant on Locking Bolts by dipping. Refer also to the sealant manufacturer's instructions. Remove excessive sealant and clean surrounding surfaces.</p> <p>Torque Locking Bolt assemblies with 16+/-2 Nm (11.8 ± 1.5 ft.lbf.).</p> <p><b>NOTE:</b> New parts are self locking, no additional securing required.</p> 
19	<p>Install P/N D60-3233-00-35 and P/N D60-3233-70-00 on the Nose Landing Gear Assembly.</p> <p>Prior to installation, apply P/S 870 Class A-2 sealant on Locking Bolts by dipping. Refer also to the sealant manufacturer's instructions. Remove excessive sealant and clean surrounding surfaces.</p> <p>Torque Locking Bolt assembly with 16+/-2 Nm (11.8 ± 1.5 ft.lbf.).</p> <p><b>NOTE:</b> New parts are self locking, no additional securing required.</p>
20	<p>Carry out steps 5, 7, 8 and 10 – 14 of this Work Instruction.</p>