

MANDATORY SERVICE BULLETIN

MSB 42-140/1

SUPERSEDES MSB 42-140

I TECHNICAL DETAILS

I.1 Category

Mandatory.

I.2 Airplanes affected

Type: DA 42, DA 42 M

Serial numbers: 42.004 through 42.391, 42.AC001 through 42.AC135,
42.394 through 42.396, 42.AC137 through 42.AC145,
42.399 through 42.402, 42.AC148, 42.AC150,
42.405 through 42.416, 42.AC151, 42.AC152,
42.427 42.M001 through 42.M026

I.3 Date of effectivity

22-May-2020

I.4 Time of Compliance

- Initial check of main landing gear (MLG) axles – during next scheduled maintenance inspection.
- Replacement of affected MLG axles - within 200 flight hours after initial check, but not later than 30-Jun-2021.

I.5 Subject

Replacement of MLG axle.

ATA-Code: 32-10

I.6 Reason

Diamond Aircraft Industries have received two reports of broken MLG axles on airplanes, which were equipped with the initial design of the MLG axle D60-3217-21-31, up to revision "f". A reinforced MLG axle was introduced with revision "g", which is not affected by this failure mode. This Service Bulletin prescribes to replace those initial MLG axles with the reinforced MLG axle to avoid, that cracks in the MLG axle remain undetected.

Approximately 30 airplanes (early production airplanes) were equipped with affected MLG axles during production process. Because it cannot be excluded, that affected parts were removed from these airplanes and re-installed in other airplanes, all DA 42 airplanes and all DA 42 M airplanes are addressed by this Service Bulletin.

The Work Instruction of this Service Bulletin provides a simple method to identify, which design of the MLG axle is installed, without removing any components, just by measuring the inner diameter of the MLG axles.

Because only a small number of airplanes is affected, Diamond Aircraft Industries recommends the service centers to order replacement MLG axles only after identification of affected MLG axles.

Note: A preliminary identification of the MLG axle may be done by the operator prior to the initial check, in order to accelerate the parts ordering process.

In any case the initial check must be done by authorized maintenance personnel.

I.7 Concurrent Documents

None.

I.8 Approval

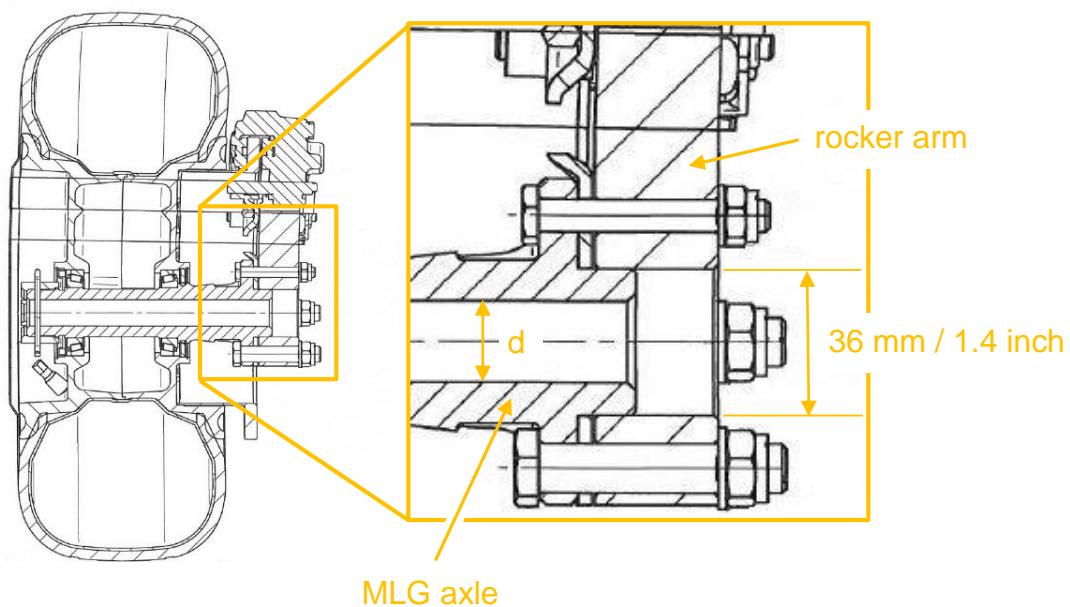
The technical information or instructions contained in this document relate to the Design Change Advisory No. MÄM 42-014, which has been approved under the authority of EASA Design Organization Approval ref. EASA.21J.052.

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I.9 Accomplishments / Instructions

– Initial check

1. Measure the inner diameter **d** of the MLG axle of the left hand MLG and of the right hand MLG in accordance with the figure below.
2. If on both MLG axles the inner diameter **d** is 20 mm / 0.8 inch or 25 mm / 0.98 inch, no further measures are required. Make all necessary entries in the airplane logs.
3. If on one or on both MLG axles the inner diameter **d** is 14 mm / 0.55 inch, continue with step 4.



– Replacement of MLG axle

4. Replace all MLG axles, which have an inner diameter **d** of 14 mm / 0.55 inch with the latest MLG axle design in accordance with AMM, section 32-10.
5. Do a landing gear extension and retraction test in accordance with AMM, section 32-30.
6. Clean working areas, check for foreign objects.
7. Test all systems in working area for function.
8. Make all necessary entries in the airplane logs.

I.10 Mass (Weight) and CG

Mass and Center of Gravity are not affected.

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

Quantity	Part Number	Description
2	D60-3217-21-31, rev "k" or later	MLG axle
4	LN9348-M8	self-locking nut
4	LN9348-M12	self-locking nut
2	DIN94-4x60-A2	cotter pin

II.2 Special Tools

None.

II.3 Labour Effort

Initial check - 5 minutes

Replacement - approx. 1 hour along with the 200 hour maintenance inspection, otherwise approx. 3.5 hours.

II.4 Credit

None.

II.5 Reference Documents

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

III REMARKS

1. All work must be done by a certified aircraft service station or a certified aircraft maintenance mechanic.
2. A tolerance on the flight hours in the time of compliance in the same amount as on the corresponding scheduled maintenance inspection in accordance with AMM, Section 05-10 applies.
3. All work, particular that which is not especially described in this Service Bulletin, must be done in accordance with the referenced Maintenance Manual.
4. Completion of all work must be recorded in the log book.
5. In case of doubt contact Diamond Aircraft Industries GmbH.

**EXECUTION REPORT TO
SERVICE BULLETIN
MSB 42-140/1**

AIRPLANE INFORMATION

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 _____

- Airplane was not affected.
- MLG axles with a diameter of 14 mm / 0.55 inch were identified during initial check and will be replaced within time of compliance.
- Affected MLG axles were replaced with new MLG axles.

Date, Name, SignPlease e-mail the completed form to executionreports@diamondaircraft.com .