

MANDATORY SERVICE BULLETIN

NO. MSB-42-032/1

SUPERSEDES MSB-42-032

I TECHNICAL DETAILS

I.1 Category

Mandatory

I.2 Airplanes affected

Type: DA 42

Serial Numbers: 42.015, 42.028, 42.036,
42.044, 42.055, 42.059,
42.062, 42.067, 42.069,
42.075 up to and incl. 42.100,
42.105, 42.106, 42.108, 42.114, 42.115,
42.117 up to and incl. 42.122,
42.124

I.3 Time of Compliance

Within the next scheduled maintenance action, but not later than 31-Mar-2007

NOTE:

Prior compliance with MSB42-032 does not preclude compliance with this MSB.

I.4 Subject

- Installation of a ventilation hole in Filler Cap Fitting, Auxiliary Fuel Tank
- Inspection of the Auxiliary Fuel Tank
- Inspection of the Fuel Tank Ventilation line
- Incorporation of the AMM-TR-OÄM-42-056f into the DA42 AMM

ATA-Code: 28

I.5 Reason

Sufficient ventilation of the auxiliary tank, to prevent from possible damage.

I.6 Concurrent Documents

None

I.7 Approval

The technical information or instructions contained in this document relate to the Design Change Advisory No. OÄM 42-056/g, which has been approved under the authority of DOA No. EASA.21J.052.

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

I.8 Accomplishment / Instructions

WI-MSB-42-032, Rev 1 or later effective issue must be complied with.

I.9 Mass (Weight) and CG

Not affected.

II PLANNING INFORMATION

II.1 Material & Availability

None

II.2 Special Tools

None

II.3 Credit

None

II.4 Labor effort:

Approx. 1 hour

II.5 Reference Documents

DA 42 Airplane Maintenance Manual Doc. No. 7.02.01, latest effective issue
WI-MSB-42-032 latest effective issue.
AMM-TR-OÄM-42-056f

III REMARKS

1. The work must be carried out by a certified aircraft service station or a certified aircraft maintenance mechanic, according to the relevant National procedures.
2. Accomplishment of the measures must be confirmed in the log book.
3. In case of any doubt, contact Diamond Aircraft Industries.

WORK INSTRUCTION

WI-MSB-42-032

„Installation of a ventilation hole, Auxiliary-Tank“

I GENERAL INFORMATION

I.1 Subject:

Installation of a ventilation hole in Filler Cap Fitting, Auxiliary Tank.

I.2 Reference Documents:

Diamond Aircraft AMM 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, according to the relevant National procedures.. In case of doubt, contact Diamond Aircraft.
- b) All works, particular those that are not especially described in this work instruction, have to be carried out in accordance with the referenced maintenance manual.

II DRAWINGS, SPECIAL TOOLS & MATERIALS

II.1 Drawings:

D60-2814-00-30 "f"


II.2 Special Tools:


Right angel drill

II.3 Material:

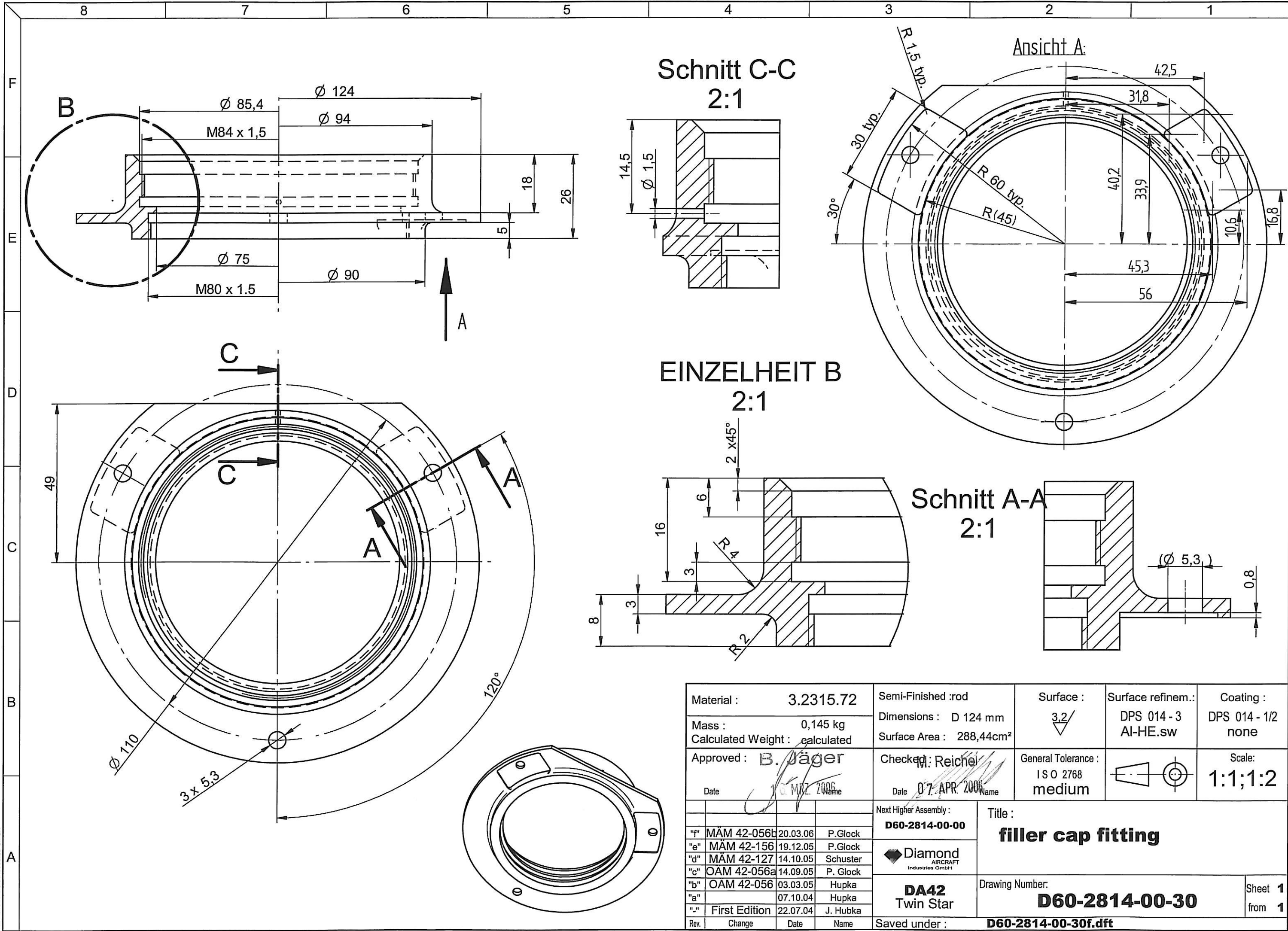
None

III INSTRUCTIONS


	<p>NOTE:</p> <p>If WI-MSB-42-032, rev. 0 has been carried out, start with item 7 of this Work Instruction.</p>
1	<p>Remove fuel filler cap and check filler cap fitting, if ventilation hole is drilled. (Refer to drawing D60-2814-00-30 "f", Section C-C.)</p> <p>Note: Filler cap fittings with revision level "f" or higher have the ventilation hole already installed.</p>
2	<p>If ventilation hole is not installed (prior revision level "f" of fuel filler fitting) :</p> <p>Seal fuel filler inlet for instance with tape. (Debris must not fall into the auxiliary tank)</p> 
3	Drill hole, diameter 1.5 mm (0.06 in) in filler cap fitting according to drawing D60-2814-00-30 "f", Section C-C
4	Remove tape from fuel filler inlet.
5	Clean working area and check for foreign objects.
6	Perform Items 1 to 5 for RH side.

7	<p>Check outlet positions LH of fuel filler drain and tank ventilation line of Auxiliary Tank:</p> <p>NOTE: Use compressed air to check position of the lines.</p> <p>CAUTION: Fuel filler cap must be removed!</p> <p>Check, that the fuel filler drain is connected to the rear outlet.</p>  <p>Check, that tank ventilation line of auxiliary tank is connected to the front outlet.</p> <p>Check also the air flow through the fuel bleed line. (Air must opt out of the Auxiliary tank, line must not be blocked.)</p>
8	<p>If position of fuel filler drain line and tank ventilation line is not installed according to positions given in item 7 of this work instruction, remove access cover and interchange positions.</p>
9	<p>Measure volume of the Tank:</p> <p>Drain Auxiliary Tank completely and refuel Tank.</p> <p>To ensure, that no damage occurred to the tank, prior this modification, the capacity must be at least 52 liters (13,7 US gal)</p>

	If fuel quantity is lower than 52 liters (13,7 US gal), replace Auxiliary Tank according to AMM.
10	Prepare item 7 to item 9 for RH side.
11	Check modified parts for proper function.
12	Incorporate Temporary Revision TR-OÄM-42-056/f into AMM.
13	Make necessary entries in aircraft logs.



Material : 3.2315.72	Semi-Finished : rod	Surface : 3,2/	Surface refinem.: DPS 014 - 3 AI-HE.sw	Coating : DPS 014 - 1/2 none
Mass : 0,145 kg	Dimensions : D 124 mm			
Calculated Weight : calculated	Surface Area : 288,44cm²			
Approved : B. Jäger	Checked : Reiche	General Tolerance : ISO 2768 medium		Scale: 1:1;1:2
Date : 10. MAR. 2006	Date : 07. APR. 2006			
	Next Higher Assembly : D60-2814-00-00	Title : filler cap fitting		
"f" MAM 42-056b	20.03.06 P. Glock			
"e" MAM 42-156	19.12.05 P. Glock			
"d" MAM 42-127	14.10.05 Schuster			
"c" OAM 42-056a	14.09.05 P. Glock			
"b" OAM 42-056	03.03.05 Hupka			
"a" 07.10.04	Hupka	DA42 Twin Star		
"-" First Edition	22.07.04 J. Hubka			
Rev. Change	Date Name	Saved under : D60-2814-00-30f.dft	Drawing Number: D60-2814-00-30	Sheet 1 from 1

EASA	AIRWORTHINESS DIRECTIVE
	<p>AD No : 2007-0047</p> <p>Date: 23 February 2007</p>
No person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive unless otherwise agreed with the Authority of the State of Registry.	
Type Approval Holder's Name : Diamond Aircraft Industries GmbH	Type/Model designation(s) : DA 42
TCDS Number : EASA.A.005	
Foreign AD : not applicable	
Supersedure : not applicable	
ATA 28	Fuel System – Auxiliary Fuel Tank Venting- Inspection / Modification
Manufacturer:	Diamond Aircraft Industries GmbH
Applicability:	DA 42 airplanes with serial numbers 42.015, 42.028, 42.036, 42.044, 42.055, 42.059, 42.062, 42.067, 42.069, 42.075 up to 42.100 inclusive, 42.105, 42.106, 42.108, 42.114, 42.115, 42.117 up to 42.122 inclusive and 42.124
Reason:	<p>From airplanes that have installed the Auxiliary Fuel Tank Optional Design Change (OÄM) No 42-056, three in-service failures of the auxiliary fuel tank venting system have been reported. These failures have led to the inability to supply the complete auxilliary fuel quantity to the main tanks and the collapse of the auxilliary tank. It is suspected that the vent lines were obstructed either by ice accretion under certain climatic conditions or by blockage of the vent valves because of fuel contaminants.</p> <p>Undetected malfunctions of the venting system and damaged auxiliary fuel tanks may lead to a lower usable fuel quantity, subsequent fuel starvation and/or fuel spillage into the nacelle.</p> <p>This Airworthiness Directive (AD) aims to check for proper operation the auxiliary fuel tank venting system, and check for damage the fuel tanks' structure.</p> <p>This AD also requires installation of ventilation holes in the filler caps'</p>

	fitting and introduction of a temporary revision into the Aircraft Maintenance Manual (AMM).
Effective Date:	09 March 2007
Compliance:	<p>At the next scheduled inspection, but no later than 15 April 2007:</p> <ol style="list-style-type: none"> 1. Inspect and modify the auxiliary fuel tank system as instructed in the Diamond Aircraft Industries Mandatory Service Bulletin (MSB) 42-032/1. 2. Insert into the DA 42 Maintenance Manual the AMM-TR-OÄM-42-056f Temporary Revision and update accordingly the operator's maintenance program to comply with.
Ref. Publications:	<p>Diamond Aircraft Industries Mandatory Service Bulletin MSB 42-032/1 or later approved revisions.</p> <p>DA 42 Maintenance Manual AMM-TR-OÄM-42-056f Temporary Revision</p>
Remarks :	<ol style="list-style-type: none"> 1. If requested and appropriately substantiated the responsible EASA manager for the related product has the authority to accept Alternative Methods of Compliance (AMOCs) for this AD. 2. This AD was posted as PAD 07-015 for consultation on 25 January 2007 until 16 February 2007. No comments were received during the consultation period. 3. Enquiries regarding this Airworthiness Directive should be addressed to the AD Focal Point - Certification Directorate, EASA. E-mail: ADs@easa.europa.eu 4. For any question concerning the technical content of the requirements in this AD, please contact Diamond Aircraft Industries GmbH, Austria. Ph.: +43 2622 26700 ; Fax: +43 2622 26780 E-mail: office@diamond-air.at