

## MANDATORY SERVICE BULLETIN

NO. MSB-42-019/4

SUPERSEDES MSB-42-019/3

### I TECHNICAL DETAILS

#### I.1 Category

Mandatory

#### I.2 Airplanes affected

Type: DA 42

Serial Numbers: All serial numbers with the Auxiliary Fuel Tank installed prior to 21-Jun-2006

#### I.3 Date of Effectivity

23-Jun- 2006

#### I.4 Time of Compliance

During the next scheduled inspection,  
Not later than 31-Oct-2006

#### I.5 Subject

Exchange of the Auxiliary Fuel Tank check valve and installation of additional filter.

#### I.6 Reason

In the fuel line between Auxiliary Fuel Tank and Main Fuel Tank a check valve is installed, which prevents the fuel from flowing out of the Main Fuel Tank back into the Auxiliary Fuel Tank. In a few installations it occurred that the check valve lost its function and fuel flew from the Main Fuel Tank into the Auxiliary Fuel Tank and in case of a full Auxiliary Fuel Tank through the vent line of the Auxiliary Fuel Tank over board. The reason for this problem has been found in a combination of contamination and the design of the check valve, which is very sensitive to contamination.

#### I.7 Concurrent Documents

None

## **I.8 Approval**

The technical information or instructions contained in this document relate to the Design Change Advisory No. OÄM 42-056/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**

a) If RSB 42-019 has been complied with

- Remove nacelle backward inspection cover (access to auxiliary tank)
- Remove female plug D-6 on the t-fitting
- Remove male plug D-6 on the fuel line
- Remove placard containing "Auxiliary Fuel Tank not useable" inside both Auxiliary Fuel Tank Filler Covers and near the Auxiliary Pump Switches
- Further steps for installation of new check valve and filter in accordance with WI-MSB-42-019 , latest effective revision.

b) If RSB 42-019 has not been complied with

- Install new check valve and filter in accordance with WI-MSB-42-019 latest effective revision.

## **I.10 Mass (Weight) and CG**

Mass and CG are not affected

# **II PLANNING INFORMATION**

## **II.1 Material & Availability**

Refer to WI-MSB-42-019, latest effective revision.

## **II.2 Special Tools**

None

## **II.3 Credit**

Material can be ordered from spareparts@diamond-air.at, Diamond Aircraft's General Distributors or its Service Stations.

Material and 2 hours of work will be credited after sending warranty application.

#### **II.4 Reference Documents**

DA42 Series Airplane Maintenance Manual, Doc. No. 7.02.01, always latest revision.

DA 42 AMM-TR-OÄM-42-056/e or later revision.

Work Instruction WI-MSB-42-019, latest effective revision.

#### **III REMARKS**

1. All measures must be carried out by manufacturer, a certified aircraft station or a certified aircraft mechanic
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-42-019

### „Auxiliary Fuel Tank Check Valve and Filter“

#### **I GENERAL INFORMATION**

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

Installation of the new auxiliary tank check valve and an inline filter in the fuel line between auxiliary tank and check valve.

##### **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. 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:**

None

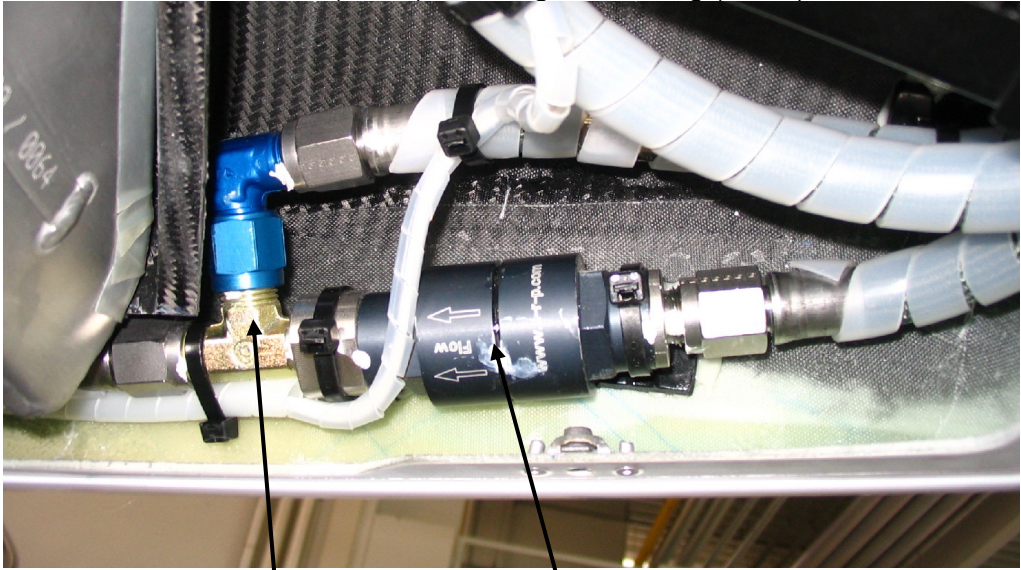
##### **II.2 Special Tools:**

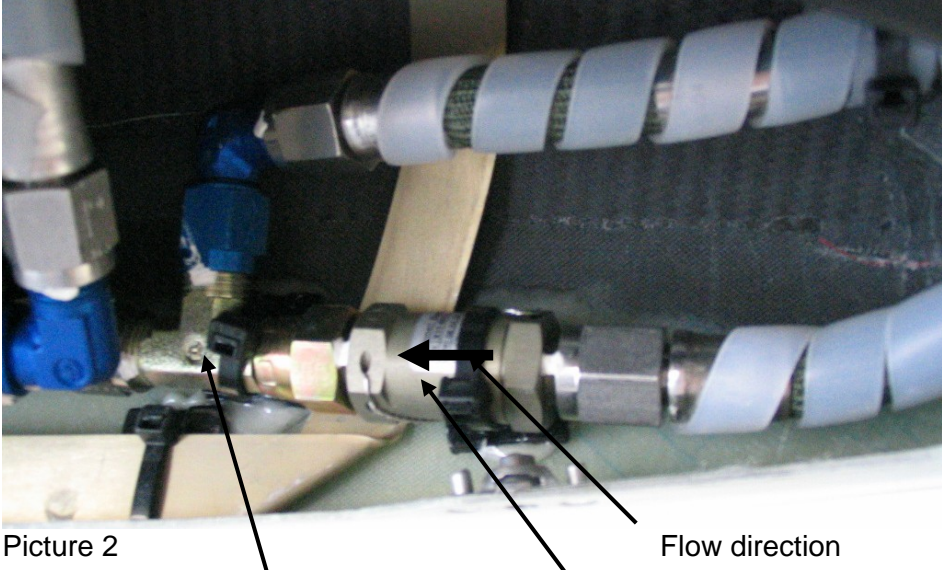
None

### II.3 Material:

Qty	Description	Part Number
2	Inline Filter	QA03152 (Fa. Pall)
2	Check Valve	X11-0012-00-00.00 (Fa. Mayer)
2	T-Fitting EVL_9_16_UNF	EVL_9_16_UNF

## III INSTRUCTIONS

1	Remove nacelle backward inspection cover (access to fuel cooler)
2	Open fuel line direct at the outlet of the fuel transfer pump
3	Insert Inline Filter into fuel line Take care not to damage the fuel line (The filter fits easily – it must be possible to insert the filter without any force)
4	Attach the fuel line to the outlet of the fuel transfer pump Take care not to bend the line in the filter area
5	Remove the check valve (Pos 1) including the T-fitting (Pos 2)  <p>Picture 1</p> <p>Pos 2</p> <p>Pos 1</p>
6	Install the new T-fitting (Pos 1, picture 2)

7	<p>Install the new check valve (Pos 2, picture 2) at the female connection of the T-Fitting (flow direction towards the main tank)</p>  <p>Picture 2</p> <p>Pos 1</p> <p>Pos 2</p> <p>Flow direction</p>
8	Attach the fuel lines to the check valve and the T-fitting
9	Fix the check valve and the T-fitting to cable wire sockets.
10	Clean working area and check for foreign objects.
11	<p>Perform system check:</p> <ul style="list-style-type: none"> <li>• fuel aux tanks</li> <li>• perform a test of the auxiliary fuel system in acc. with the AMM Section 28-20</li> <li>• check system for leakages</li> </ul>
12	Close the nacelle backward inspection cover