

MANDATORY SERVICE BULLETIN

NO. MSB-42-035

I TECHNICAL DETAILS

I.1 Category

Mandatory

I.2 Airplanes Affected

Type: DA 42

Serial Numbers: all

I.3 Time of Compliance

Aircraft with more than 200 hours of operation since new:

At next scheduled maintenance action and thereafter at every 200 hours inspection.

Aircraft with less than 200 hours of operation since new:

At every 200 hours inspection.

I.4 Subject

Coolant Tank Cap – Pressure Relieve Test

I.5 Reason

Some caps showed decreasing relieve pressure values during service. Since a proper relieve pressure is required by TAE, it became necessary to check and adjust the cap's relieve pressure in the field.

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 42-228, 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.8 Accomplishment/Instructions

Comply with WI-MSB-42-035, latest effective issue.

I.9 Mass (Weight) and CG

No appreciable affect on Mass and CG.

II PLANNING INFORMATION

II.1 Material & Availability

See WI-MSB-42-035, latest effective issue.

II.2 Special Tools

See WI-MSB-42-035, latest effective issue.

II.3 Labor Effort

Preparation of test and equipment and testing for the first time: approx. 1.5 hours

Recurring testing: approx. 0.5 hours additional maintenance time

II.4 Credit

None.

II.5 Reference Documents

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

III REMARKS

1. All measures must be carried out by the 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.

EXECUTION REPORT
for MSB 42-035**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. **43-2622-26700-369 or e-mail to
airworthiness@diamond-air.at

WORK INSTRUCTION

WI-MSB 42-035

Coolant Tank Cap – Pressure Relieve Test

I GENERAL INFORMATION

I.1 Subject

Pressure relieve check of coolant tank cap and description of adjustment to meet the required pressure relieve values.

I.2 Reference Documents

DA 42 Series 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

D60-7526-30-29

II.2 Special Tools

Suitable manual pump with manometer or pressurized-air hose with suitable pressure reduction valve.



Photo shows an example.

II.3 Material

Qty	Description	Part Number
A/R	Shim washer - Brass	D60-7526-30-30 (0,5 mm) alternative D60-7526-30-31 (0,3 mm) alternative S1450-6B14-010
A/R	Coolant tank cap kit <ul style="list-style-type: none"> Coolant tank cap (1 pcs) Shim washers (2 pcs D60-7526-30-30 2 pcs D60-7526-30-31) 	D60-7526-30-29-Kit
4	Oetiker 1-ear-clamp, 13.8 GER	15400032

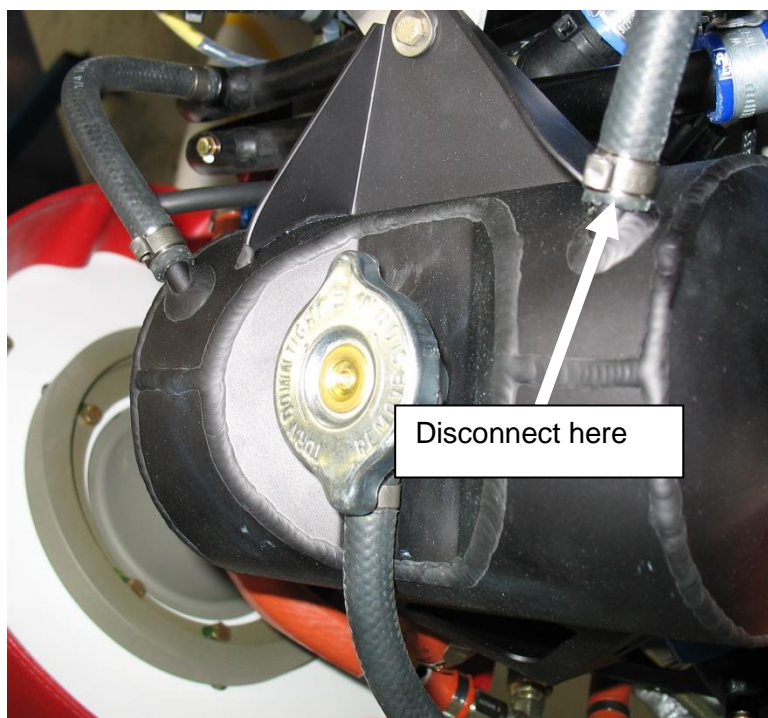
III INSTRUCTIONS

NOTE

Perform coolant tank cap pressure relieve check before the coolant system pressure test is done. The coolant system pressure test is also required after the pressure relieve check.

1. Unplug the hose at connector 1 and plug the hose.

CAUTION The plugged hose must not leak at the max. test pressure of 2,3 bar (33,3 psi)




2. Connect pump to connector 1.

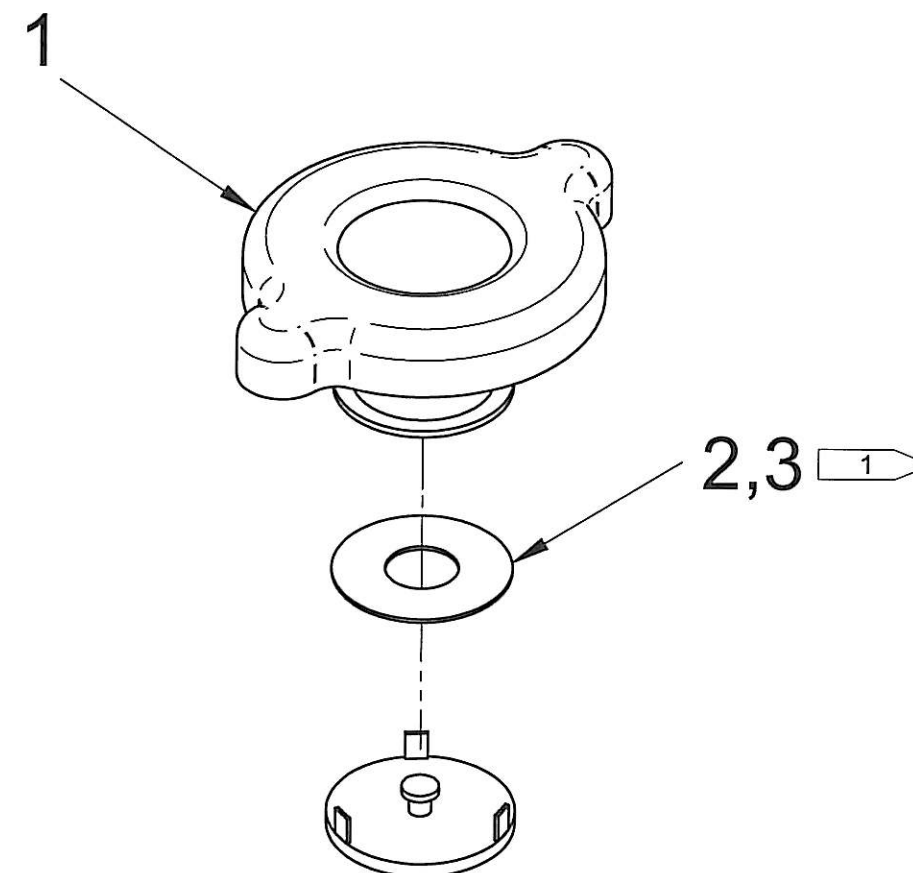


3. Unplug the breather line and install a clear hose. Fill clear hose partly with coolant liquid or water.



4.	<p>Pressurize up to release pressure of the cap. Rising bubbles in the clear hose indicate pressure relieve.</p> <p>CAUTION Check for a proper fit of the coolant tank cap.</p> <p>CAUTION The pressure must not exceed 2,3 bar (33.3 psi) at any time of testing.</p> <p>CAUTION Do not relieve the pressure by opening the coolant tank cap – Use the pressure relieve unit on the pump.</p>
5.	<p>For both orientations of the cap, the cap's relieve pressure must be within following limits:</p> <p>Minimum relieve pressure: 1,8 bar (26.1 psi)</p> <p>Maximum relieve pressure: 2,3 bar (33.3 psi)</p> <p>CAUTION The pressure must not exceed 2,3 bar (33.3 psi) at any time of testing.</p>
6.	<p>If the caps relieve pressure does not meet the requirements, the cap needs to be modified in accordance with drawing D60-7526-30-29.</p> <p>Redo the checking procedure (items 4 and 5); add 1 washer each time until the requirements are met for both cap positions.</p> <p>NOTE: It is just necessary to bend one of the 3 latches to remove the lower portion of the cap.</p> <p>NOTE: Experience has shown that each latch can be bended (up and back again) 3 to 4 times. It is advised to alter the latches during the adjustment process.</p> <p>CAUTION: The bent latches must be inspected for cracks and proper fit before the cap gets released to service.</p> <div data-bbox="274 1339 1401 1937">  </div>

7.	Unplug all test equipment and reinstall disconnected hoses (at connector 1 and at the breather line) using 2 Oetiker 1-ear-clamps.
8.	Perform coolant system pressure test in accordance with the AMM Section 75-00-00.
9.	Clean working area and check for foreign objects.
10.	Test all systems in working area for function.
11.	Redo whole procedure (items 1 to 10) for the engine installation on the opposite side.



Notes:

1 Anzahl der Scheiben Pos. 2 oder Pos. 3 oder in Kombination nach Bedarf um einen Ablassdruck von 1,8 bis 2,3 bar in beiden Deckelstellung zu erreichen.

Shim washers item 2 or item 3 or any combination as required to achieve a relieve pressure of 1,8 to 2,3 bar (26.1 psi to 33.3 psi) at both cap positions.

3	alt.	-	D60-7526-30-31	Washer 0,3mm		
2	alt.	-	D60-7526-30-30	Washer 0,5mm		
1	1	-	49090019	1,8 bar cap		Fa. KTM
Pos.	QTYL	QTYR	Part Number	Description	Specification	Supplier
Approved : 			Checked : 		General Tolerance : ISO 2768	 Scale: 1:1
Date: 6 FEB 2007			Date: 05 FEB 2007			
				Next Higher Assembly : D60-7529-30-00	Title : Coolant tank cap - mod	
				 Diamond AIRCRAFT Industries GmbH		
				DA 42 Twin Star	Drawing Number: D60-7526-30-29	Sheet from
Rev.	Change	Date	Name	Saved under : D60-7526-30-29.asm		
"a"	MAM 42-228a	26.01.07	Schuster			
"-"	MAM 42-228	07.12.06	Kremnitzer			

Weight: 0,016 kg
Calculated Weight: calculated