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TRADE ASSOCIATION LIMITED

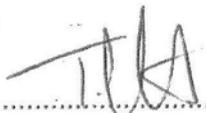
DSB SERVICE BULLETIN No. 10-2009 Issue 1

Transmittal

This page transmits the issue of the above numbered Marine Service Bulletin, which consists of this transmittal sheet plus one page.

Title: Replacement of Thanner OTS-65 Pressure Relief Valves after 10 years on all DSB marine inflatable life saving equipment

| Service Bulletin Number 10-2009 Issue 1 has technical approval by DSB GmbH.

Signed:  Date: 22-12-09

Tommy Scott
Marine Design Manager
Design Authority



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Title: Replacement of Thanner OTS-65 Pressure Relief Valves after 10 years on all DSB marine inflatable life saving equipment

1. Introduction

This service bulletin is reissued as Issue 1 and states that the original Issue 0 should now be withdrawn. In its place Appendix 1 (SB03/06) should continue to be used and applied.

2. Embodiment date

If it has not already been actioned, Service bulletin 03/06, (attached as Appendix 1), must be implemented at the next scheduled service of the liferaft.
Once it has been applied it must be reapplied again after 10 years from the first embodiment date of this bulletin.

3. Important points

Page 8 of the attached Appendix 1, states that the torque value of 35 Nm (25 Lbf/ft) is to be used. Please note this is to be revised.

NOTE: Use the torque wrench – calibrated to 30Nm / 22 Lbf/ft maximum (27Nm / 20 Lbf/ft is recommended) – mated to the PRV adaptor tool.

4. Acknowledgement receipt

Please ensure that receipt of this service bulletin is acknowledged by faxing the attached 'Technical Publications Transmittal Sheet' for the attention of the Marine Department at the above address.

5. Advice

If you have any questions regarding this bulletin, please contact DSB Service - Manager by phone, fax or e-mail: (fstichweh@deutsche-schlauchboot.de)



Isseta

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Appendix 1

DSB SERVICE BULLETIN No. 3-2006

For the information of all DSB approved service stations

Marine Liferaft and Slide Products Fitted with Thanner OTS-65 Type Pressure Relief Valve

1. Introduction

Thanner & Co has instructed their customers by service bulletin that all Thanner supplied OTS-65 pressure relief valves, (PRVs) fitted to liferafts before January 2005, must be replaced at next service. The Thanner service bulletin is included as Appendix 1 (Note: if conflict arises between Appendix 1 and this bulletin, the requirements of this bulletin shall prevail).

This bulletin mandates the replacement of all such pressure relief valves at next service on the marine liferaft and slide products identified in Section 2

In addition, a service life of 10 years has now been assigned to the revised design of Thanner OTS-65 pressure relief valve introduced in January 2005. This design of PRV is marked with a date of manufacture. Figure 1b shows the location of this mark. The arrow head denotes the month of manufacture and the digits in the centre denote the year.

To comply with the two paragraphs above, therefore, OTS-65 PRVs must be replaced as follows:

- Valves that have no date of manufacture mark (liferafts with a date of manufacture earlier than January 2005, generally) shall be replaced at next service.
- Valves displaying a date of manufacture must be replaced within 10 years of the date of manufacture of the PRV.

The OTS-65 valve is easily identifiable – see Figure 1a:



Figure 1a – The Thanner OTS-65 Pressure Relief Valve – Separate, on the left and, to the right, a typical liferaft installation

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Figure 1b –The Thanner OTS-65 Pressure Relief Valve – Date of Manufacture mark.

DSB part numbers for the OTS-65 range were not be changed.

The new OTS-65 is to differ from the old one, as the new PRV is marked with the date of manufacture. Only part numbers listed in Section 4 of this bulletin are to be used. Residual stocks of obsolescent valves must not be used.

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2. Equipment Affected

The following products are affected.

Note: products manufactured prior to circa 1998 are not affected because the Thanner OTS-65 valve was not used prior to that date.

Products Using Red Coded PRVs:

LR 97 L	12 – 25 (2)*	Persons	Davit Launch
LR 97 SR	25/35/50/100/102 (3 / 3 / 3 / 5 / 5)*	Persons	Throw Over Selfrighting
LR 97 LSR	25 & 35 (3)*	Persons	Davit Launch Selfrighting
LR 97 MOR	18 (2)*	Persons	Means of Rescue
LR 97 R	28/35/50/51/65/100 (2 / 2 / 2 / 2 / 2 / 5)*	Persons	Throw Over Open Reversible
LR 97 R - Selantic	25/100 (2 / 6)*	Persons	Boarding Platform, Open Reversible
LR 97 SR – KOPAS	102 (6)*	Persons	System Raft Throw Over
LR 97 R - KOPAS	65 / 100 / 150 (length 11 m) (2 / 5 / 5)*	Persons	System Raft Open Reversible
LR 97 R - KOPAS	51/65 (2 / 2)*	Persons	Attached Raft Open Reversible
LR 97 R – HADAG	65 (2)*	Persons	Open Reversible
Cat – Slide	Size 1 to 7 (3)*		
Mini – Slide	all Sizes (2 to 5)*		

Products Using Yellow Coded PRVs:

DSL 4	4 (2)*	Persons	Throw Over
LR 97	6 – 25 (2)*	Persons	Throw Over
LR 97 R	150 (4)*	Persons	Throw Over Open Reversible
LR 97 R – KOPAS	150 (4)*	Persons	System Raft Open Reversible

(x) * = Quantity of PRV

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3. Embodiment Date

This service bulletin must be implemented at the next scheduled service of the liferaft.

4. Parts Required

One of the pressure relief valve types listed in Table 4.1 shall be required. The valve type required for each specific product is listed in Section 2 above.

Table 4.1 – PRV Part Nos.

Valve Colour Code	Nominal Reseat Pressure	PRV Part Number	Quantity Req'd
RED	3.2 (p.s.i.) / 0,221 (bar)	00811400	See Section 2
YELLOW	2.8 (p.s.i.) / 0,193 (bar)	00811410	See Section 2

IMPORTANT: Any PRV fitted under authority of this bulletin must be the correct part number as listed above. Other part numbers are not suitable

The PRVs required must be purchased from DSB Deutsche Schlauchboot. Please quote 'DSB Service Bulletin No. 3-2006' on all replacement PRV orders.

5. Tools Required (1 off each)

5.1 DSB Purchased Parts

- ½" square drive Pressure Relief Valve adaptor tool (puncheon number 20) DSB Part No. 01106620.



5.2 Locally Sourced Parts

- Calibrated ½" square drive torque wrench (capable of being set to the torque of 35 Nm). This tool is to be locally sourced by the service station.
- ½" square drive ratchet. This tool is to be locally sourced by the service station.

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6. Action

Disassemble the liferaft according to the appropriate service manual.
Each pressure relief valve is clamped in a fabric doubler.

Remove the entire PRV assembly (comprising valve body, washers and nut) as detailed in Section 6.1. The doubler shall remain attached to the liferaft.

Note that if the correct procedure is adhered to; there is no requirement at any stage to cut or patch the raft fabric.

The time required to replace the PRVs (2 pieces), in addition to the regular service time for a liferaft, should be a maximum of 20 minutes.

6.1 ***Recommended Method for Removal of Old PRV***

- Inflate the raft to operating pressure.
- Using a $\frac{1}{2}$ " (13 mm) square drive ratchet and the PRV adaptor tool (No. 20), loosen each PRV body until it is just possible to unscrew the PRV assembly by hand.
- Deflate the air-holding chambers.
- Holding the internal PRV nut through the buoyancy fabric, unscrew the valve - valve body, washer with cap and washers. The old PRV nut should be removed through the hole from which the valve is removed

New pressure relief valves of the correct type shall be fitted as follows:

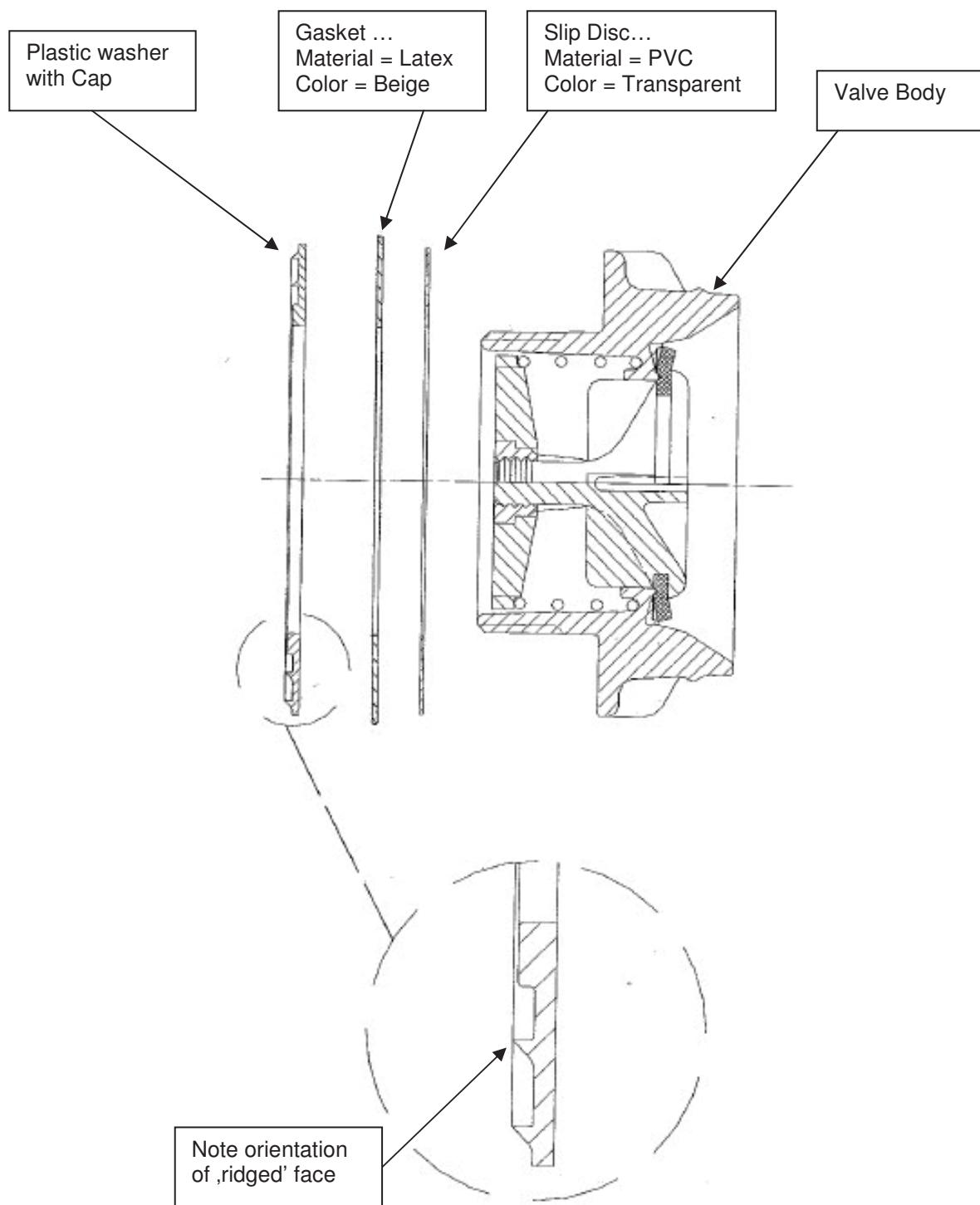
6.2 ***Installation Method for New PRV***

It is recommended that the following steps be followed independently for each air-holding chamber.

IMPORTANT: Replace the entire PRV assembly. Do not re-use any components from the old PRV.
Under no circumstances should components of the old and new PRV assemblies become mixed.

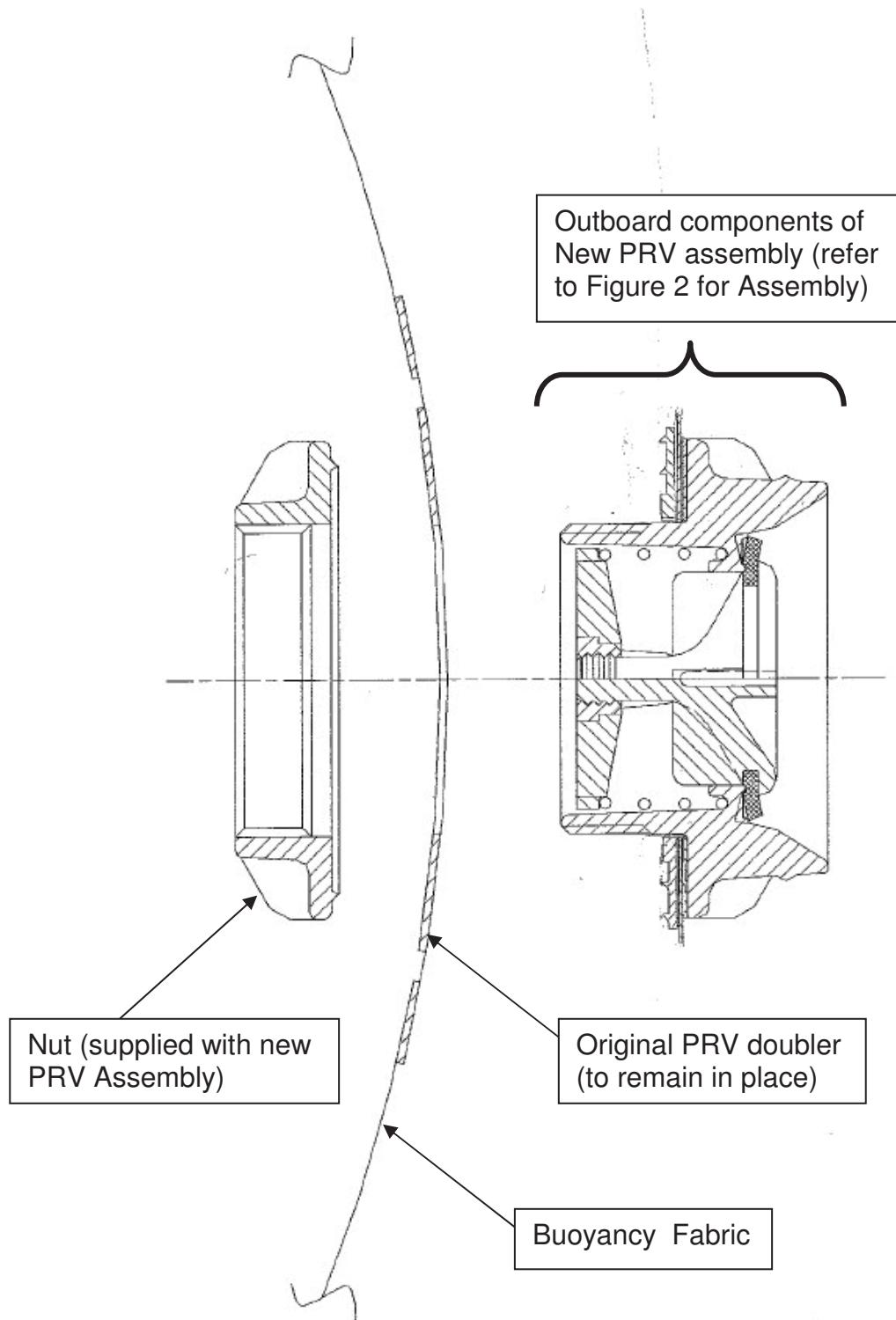
- Assemble loosely the 'outboard' components of the new pressure relief valve - see Figure 3. Leave these aside temporarily.
- Install the new nut through the hole in the doubler from which the old PRV was removed.
- Ensure inboard & outboard surfaces of the PRV doubler that will mate with the new PRV assembly are clean and dry. If necessary wipe clean using toluene solvent on a clean lint-free cloth. Allow any solvent to evaporate before continuing.

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**Figure 2 – ‘Outboard’ Components of New PRV Assembly
(Exploded section shown – not to scale)**

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**Figure 3 – Installation fo New PRV Assembly into Buoyancy
(Exploded section shown – not to scale)**

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- Holding the nut in place through the buoyancy fabric, slowly hand-tighten the pre-assembled “outboard” components of the new PRV onto the nut, clamping the buoyancy fabric doubler in the process - refer to Figure 3. Ensure the gasket remains flat when it mates against the PRV doubler by tightening the outboard components slowly.

IMPORTANT: When hand-tightening a new PRV assembly into the raft, ensure:

- the valve seating area of the doubler is held flat,
- the internal nut makes complete contact against the doubler and does not trap any buoyancy fabric,
- and that whilst tightening the valve the nut is held motionless against the doubler.

- Use the torque wrench – calibrated to 35Nm / 25 lbf-ft **maximum** – mated to the PRV adaptor tool.

Slowly inflate the chamber to which the PRV is fitted. When the buoyancy has taken shape and the pressure is starting to rise begin tightening the PRV body. Note that the pressure inside the buoyancy is required to stop the internal nut turning during the tightening process.

Ensure that the latex gasket remains undistorted where it mates with the PRV doubler.

IMPORTANT: Only the torque specified in this service bulletin should be applied. Once the torque wrench “breaks” indicating the correct torque has been applied:

- the PRV shall be subject to no further tightening,
- If there is leakage at the valve seating during the air-holding test or at any subsequent time the valve assembly must be dismounted and the seating checked before re-fitting (the specified torque range shall not be exceeded).

- Repeat the above procedures for the other chamber (s).
- Complete and record an air-holding test according to the normal procedure. Record the relief and reseat pressures of the new PRVs.
- Complete the raft service procedures in accordance with the relevant manual.

7. Recording

This service bulletin is to be recorded as “S.B. 03/06” on the Certificate of Re-inspection, the “Liferaft Service Record” Card (fitted inside Container I.D. Tube) and the Logcard. As per usual procedure, a copy of the Certificate of Re-inspection is to be forwarded to DSB.

8. Further Requirements

All PRV assemblies that are removed under authority of this bulletin are to be returned to the following address, marked:

‘For The Attention of the Quality Director (DSB Service Bulletin No. 3-2006)’,

DSB Deutsche Schlauchboot
GmbH & Co. KG
Angerweg 5
D 37632 Eschershausen
Germany

The entire old PRV assembly must be placed in a sealed plastic bag, which should be marked with the liferaft’s **serial number** and **date of manufacture**.

It shall aid efficiency if PRV assemblies are accumulated and returned to DSB on a monthly basis.

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9. Acknowledgement Receipt

Please ensure that receipt of this service bulletin is acknowledged by faxing the attached 'DSB Service Bulletin Acknowledgment' for the attention of DSB at the above address.

10. Advice

Please contact DSB Service - Manager by phone, fax or e-mail (fstichweh@deutsche-schlauchboot.de) if you have any questions regarding this bulletin.

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APPENDIX 1 – THANNER SERVICE BULLETIN

(Next two pages)

THANNER & CO A/S

P.O. Box 127 · DK-6701 Esbjerg
Randersvej 8-10 · DK-6700 Esbjerg
Telefon 75 13 00 66
Fax 75 45 29 93
E-mail admin@thanner.dk
Website www.thanner.dk

Deutsche Schlauchboot
Angerweg 5
37632 Eschershausen
Deutschland

Zu Hd. Herr Danneberg

Your ref.:

Your letter of:

Our ref.:

Date:

PJ/rbn

2006-09-08

Subject: Service bulletin

Thanner Pressure Relief Valve OTS 65- Life Time

Documentation from the supplier of the raw material used in the manufacture of this valve coupled with our own experience since the introduction of this valve indicates that valves produced prior to January 2005 have a limited service life period as a result of the stress in the valve created in certain installations.

The effects of this stress on service life of the valve are influenced by a number of factors which make it difficult to predict their effective service life.

Therefore from a safety point of view Thanner & CO A/S recommends that all valves produced prior to January 2005 be replaced. These valves can be identified by having no date marking.

Valves produced since January 2005, which are designated by the date of manufacturers stamp on the valve body and nut, should be replaced when their service life reaches a maximum of 10 years.

On replacement both valve section and nut must be replaced.

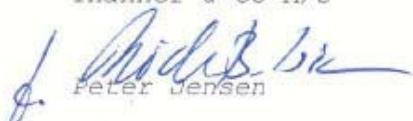
Replacement must be done according to Thanner instructions:

For part no. 65-000: QA no. 0055 issue 5

For part no. 65-008: QA no. 0130 issue 3

For part no. 65-065: QA no. 0128 issue 6

Thanner & Co A/S



Peter Jensen

THANNER & CO A/S is among the leading manufacturers of inflation systems for liferafts and other life-saving constructions since 1965.

THANNER & CO A/S KVALITETSIKRING QA SYSTEM	INSTALLATION MANUAL FOR THANNER PRESSURE RELIEF VALVE OTS 65 ITEM NO. 65-065	KS./QA DOK.NR. 0128 Udgave/Issue nr. 6 Dato: 2006-09-08
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The relief valve has 6 main elements:

- 1: Nut
- 2: Washer
- 3: Rubber washer
- 4: PVC washer
- 5: Valve section
- 6: Cap

Valves produced after October 2004 have a date marking on the body of the valve and on the nut.

Valves without date marking must be replaced at next service.

Valves with date marking have a life time of 10 years after installation.

1. The valve parts 1 and 5 are produced from weather proof Acetal Copolymer and parts no. 2 and 6 are produced from weather proof Polyamide. The valve is tightened to the raft by special tools. The nut, pos.1, can pass through the hole in the fabric and depending of the fabric, no reinforcement of the hole is necessary to fasten the valve.

Before fitting the valve, check the colour code of the valve for correct pressure. The colour of the seal relates to the pressure setting.

2. When the nut, pos. 1, is in position inside the tube, the rubber washer, pos. 3, is put over the hole, with the Polyamide washer, pos.2, on top of it and then the PVC washer, pos. 4. The grip rings of the washer, pos. 2, must lie against the rubber washer. The valve, pos.5, is screwed into the nut by hand, before the special tool is used.

Attention! The sealing washers must be fitted correctly.

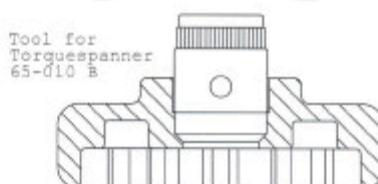
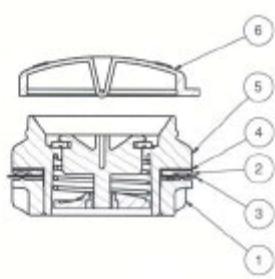
Size of hole: Ø 38 - 42 mm depending of the type of fabric.

Torque: 25-30 Nm " " " " "

Check that the locking cap, pos.6, fits well.

The loose cap must be packed into the raft with necessary instruction for use. The cap must not be fitted during inflation!

CAUTION! Do not separate the spring washer and the valve piston, it can change the pressure setting. The valve must not be retightened after installation. If a leakage appears between the tube and the valve it must taken off and re-installed until tight.



Closing pressure options:

Closing pressure options:		
Brown.	110mm HG	-0.145bar
White.	120mm HG	-0.150bar
Red.	180mm HG	-0.24 Bar
Yellow.	190mm HG	-0.20 bar
Black.	220mm HG	-0.29 bar

