

MAINTENANCE

public

**Maintenance Handbook for
LESER Product Group API
Series 526**

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Introduction

About MAINTENANCE

MAINTENANCE provides a collection of documents for repairing or maintaining LESER safety valves. The following topics are covered:

- Maintenance Fundamentals of LESER safety valves (terminology, design elements relevant for valve operation)
- Repair process
- Suggested equipment for assembling, disassembling and rework of critical parts
- Disassembly, including sectional drawings
- Rework of critical parts including an overview of critical dimensions
- Assembly, including options
- Spring charts
- Testing procedures (set pressure and leak tests)
- Spare parts lists
- Guidelines for inspection, storage and transport
- Trouble shooting


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Contents

Chapter	Content	Sources
1.1 Introduction	Introdocution and table of contents	LID EN 1001-00 "Introduction"
1.2 Maintenance Fundamentals	Terminology: - Parts - Set pressure - Overpressure & blowdown Critical parts: - Nozzle & disc - Spring - Adjusting ring - Parts providing alignment - Lifting devices	LID EN 1002-00 "Maintenance Fundamentals"
1.3 Repair process	-Process of Safety Valves to Repair -Repair Traveller	LGS 4111 "Process of Safety Valves to Repair" LGS 4112 "Repair Traveller"
1.4 Suggested equipment	Equipment for disassembly and lapping - Required equipment with technical information - Order numbers of LESER equipment - LGS 4456: Most relevant sections are: Page 1-4; 7; 11-12; 14-17, 28 – 30, 34 - Equipment and materials	LGS 4460 "Specification of the API Tool Kit" LGS 4456 "Standard Tool Specification" LGS 4116 "Operating materials and supplies for repaired valves"

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	LESER Information Document - Deutschland Maintenance Handbook for LESER Product Group API	LID_DE 1001.00
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1.5 Disassembly and Cleaning	Disassembly instruction: - Step-by-step instruction for disassembly Cleaning instructions	LGS 4109 “Dismantling instructions for type 526 API“ LGS 4115 “Cleaning repaired valves”
	1.6 Rework of critical parts	Critical dimensions for refinishing disc and nozzle: - Lowest allowable tolerances for refinishing - LDeS 3309.05 includes dimensions for other LESER safety valves. Relevant pages for this valve type: Page 1-2; 15-16
	Rework of the seat: - Procedure of lapping by hand, illustrated with pictures	LGS 4113 “Reworking repaired valves”
1.7 Assembly	Assembly instruction: - Step-by-step instruction for assembly	LGS 4104 “Assembly instructions for type 526 API”
	Torques: - Assembly torques for body-bonnet connection, caps, test gags, O-ring discs and bellows	LGS 3323 “Torques for screw, nuts and caps H2 / lifting devices” LGS 3325 “Torque for O-Ring-Disc and bellows connection“
	After Assembly: - Color finishing and painting - Component plate	LGS 4114 “Paint touch-up and painting repaired valves” LGS 4118 “Component plates”


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1.8 Spring charts	Spring charts: - Overview of spring ranges for set pressure adjustments and spring selection in bar and psi	LGS 3630 "Spring charts Type 526"
1.9 Testing Procedures	Testing set pressure: - Procedures and equipment for setting and testing the cold differential test pressure, including tolerances	LDeS 1001.69 "CDTP-Cold differential test pressure"
	Leak testing: - Procedures and equipment for testing functional tightness (disc-nozzle connection) - Procedures and equipment for testing shell tightness (nozzle, cap)	LGS 4434 "Performing Leak Tests"
	Tightness requirements: - Seat tightness - Shell tightness - Back seat tightness	LGS 0201 "Tightness Test"
	Last visual check up	LGS 4117 "Final visual inspection of repaired valves"
1.10 Spare parts	Spare parts list	Extract from LWN 480.00 "Type 526 spare-parts"
1.11 Installation & storage	Testing and inspection before installation: - visual inspection of the valve - hydraulic pressure test	Extract from LWN 753.00 "Installation and Plant Design"
	Inspection intervals	Extract from LWN 753.00 "Installation and Plant Design"
	Storage and transport	Extract from LWN 753.00 "Installation and Plant Design"
1.12 Trouble	Typical errors	Extract from LWN 765.01 "Trouble"

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