

OPERATING INSTRUCTIONS

and

SPARE PART LIST

Wallboard Forks
Series WG602...



**Brought to you by
Robert's Diesel Works Inc.
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Orlando, Fl. 32805
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Preface

This manual is for wallboard forks of the series:

WG602-18-54-60	WG602-18-54-72	WG602-18-49-60	WG602-18-49-72
WG602-24-54-60	WG602-24-54-72	WG602-24-49-60	WG602-24-49-72
WG602-18-54-63	WG602-18-54-84	WG602-18-49-63	WG602-18-49-84
WG602-24-54-63	WG602-24-54-84	WG602-24-49-63	WG602-24-49-84

Before mounting the attachment or before starting any operation, please read the instructions in order to become familiar with it. The manufacturer is not liable for any damages that may occur from improper operation or use of the attachment. Beyond the manual, the respective rules for the prevention of accidents are to be applied.

1. Description

1.1 Technical Data

Model	capacity (lbs.)	Stack Height Stack Width (inch)	Tines (inch)	Tines adjust max. (inch)
WG602-18-54-60	6000	18 x 54	1,57 x 4,9	60
WG602-24-54-60	6000	24 x 54	1,57 x 4,9	60
WG602-18-54-63	6000	18 x 54	1,57 x 4,9	63
WG602-24-54-63	6000	24 x 54	1,57 x 4,9	63
WG602-18-54-72	6000	18 x 54	1,57 x 4,9	72
WG602-24-54-72	6000	24 x 54	1,57 x 4,9	72
WG602-18-54-84	6000	18 x 54	1,57 x 4,9	84
WG602-24-54-84	6000	24 x 54	1,57 x 4,9	84
WG602-18-49-60	6000	18 x 49	1,57 x 4,9	60
WG602-24-49-60	6000	24 x 49	1,57 x 4,9	60
WG602-18-49-63	6000	18 x 49	1,57 x 4,9	63
WG602-24-49-63	6000	24 x 49	1,57 x 4,9	63
WG602-18-49-72	6000	18 x 49	1,57 x 4,9	72
WG602-24-49-72	6000	24 x 49	1,57 x 4,9	72
WG602-18-49-84	6000	18 x 49	1,57 x 4,9	84
WG602-24-49-84	6000	24 x 49	1,57 x 4,9	84

Hydr. pressure range: 175 - 320 bar
Safety valves: Integrated

1.2 Range of Application

The WG series wallboard forks are designed for the use on truck mounted cranes. The forks are for one-man-operated loading and unloading of drywall boards and similar building materials. Other applications are not allowed.

1.3 Description

The wallboard fork has to be connected to the lifting device by a cardanic suspension link and a hydraulic rotator. A hydraulic cylinder controls the opening and closing of the prongs. The necessary oil flow and pressure is provided by the hydraulic system of the crane and is transmitted to the hydraulic cylinder of the wallboard fork via hydraulic tubes and oil ducts in the rotator.

2. Installation, Removal, Transport

2.1 Installation

The installation at the lifting device has to be done by a cardanic suspension link and a rotator.

Attention: Installation and removal only by skilled staff

No modifications are to be made to the attachment.

Ensure that the wallboard fork can settle in any position

The suspension has to be cardanic link

The wallboard fork has to be installed with suited suspension links and rotators only

The wallboard fork is screwed to the rotator with M16 screws, quality 8.8 or 10.9, plain washers and new self-locking nuts. The tightening torque is 210 Nm.

Please follow the installation instructions of the rotator.

Switch off the hydraulic system before installing the hydraulic lines. After that actuate the operating lever several times in both directions (to reduce the hydraulic pressure). All hydraulic connections have to be cleaned.

Connect the hydraulic cylinder to the rotator by using the hoses attached at the fork. Then start operation of the hydraulic system and actuate the functions "Close Fork", "Open Fork" and hold them for a moment. Check the hydraulic connections for leakages and tighten if necessary.

Attention: The hydraulic system has to be leakproof by any means. Leakage causes a drop in pressure which can cause an unsafe condition.

For a reverse function of "Open Fork" and "Close Fork" the hydraulic connections have to be interchanged.

2.2 Removal

Place the wallboard fork on a proper ground and switch off the hydraulic system. Depressure the hydraulic lines. Reverse the installation following all precautions. The hydraulic parts must be capped to prevent contamination of the hydraulic system.

2.3 Transport

The wallboard fork has to be secured when transported.

3. Operation

The wallboard fork and rotator are actuated with the hydraulic operating lever mounted at the truck. The functions are executed as long as the lever is actuated and the wallboard fork has not returned to its final position. The control functions should happen smoothly in order to avoid pressure hammer in the hydraulic lines.

Attention: Avoid needless and strong lateral pull. Most rotators will be bended or damaged.

To lift up the load, open the fork and place the prongs under the load. Now close the fork and lift the load from a horizontal to a vertical position. Another closing presses the drywall sheets against the traverse of the fork and thus they are secured against slipping under normal operating conditions. Please make additional safety precautions for difficult or dangerous loading procedures.

Opening of the prongs releases the boards and they can be unloaded as a pack or removed individually.

4. Maintenance, Repair

4.1 Service notes

Regular service intervals are absolutely necessary in order to keep the lifetime of the attachment and to avoid downtimes.

- Shorten service intervals in case of use under extremely dirty conditions
- Execution of maintenance work under clean conditions only
- All hydraulic connections must be cleaned so contamination of the hydraulic system does not occur.
- Disassembling and dismounting of a cylinder etc. of the hydraulic system by skilled staff only.

Maintenance Operations	every 50 hours	every 100 hours	<u>yearly</u>
Lubricate the grease nipples		X	
Clean the attachment carefully	X		
Check bolts, retighten if necessary	X	X	
Test hydraulic ports for leaks, seal if necessary		X	
Inspection by specialist			X

In case an overload has occurred you have to do a check by a specialist !

5. Safety requirements

5.1 Safety notes

The following safety precautions must be followed by any means:

- Operation of the device by skilled staff only.
- Only one person is allowed to operate the device at the same time
- If the device can't be overseen from the control stand, the operator has to be guided by a second person
- No other persons are allowed in the working area
- Keep away from electric wires
- It is not allowed to operate the device manually. Risk of injury!
- Never overload
- It is not allowed to pull with a higher force than the prescribed capacity.

5.2 Safety instructions

VBG (Regulations for the Prevention of Accidents)

- VBG 1 General Regulations
- VBG 9a Crane Operation for Load Suspension Devices

ZH Bibliography

- ZH1/74 Safety Regulations for Hydraulic Lines
- ZH1/215 Safety Regulations for Hydraulic Fluids
- ZH1/283 Safe Operation of Truck Loading Cranes

5.3 Prohibited operating actions

- Moving the attachment above persons
- Use for other than the intended purpose (as stated in the operating instructions)
- Loading other goods than drywalls

5.4 Tests, Test Specifications

The following test specifications have to be considered:

- According to the current European regulations for the prevention of accidents, the owner is obliged to have the device examined for fractures, wear, corrosion, tightness of the hydraulic system and functional safety at least once per year or earlier (according to operating conditions) by an expert.
- Load suspension devices have to pass an extra examination by an inspector after any damage or maintenance work.
- We recommend to file the examinations in the inspection certificate enclosed (safety badges are available at Liftall upon request)

Time Interval	Minimum Safety Examination
Before initial operation	Examination and release for operation by an expert (see VBG 9a - § 39)
Annually or earlier according to operating conditions	Examination for fractures, wear, corrosion, other defects and functional safety by an expert (see VBG 9a - § 40 – 43)

The first safety check is made in the factory before delivery. The safety examination of the complete functional unit (truck, crane, add-on unit) **has to be made by the owner.**

Safety Check



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5.4 Inspection Certificate

We recommend to attach the test sticker "Next Examination" in a visible location on the attachment.

The following test certificates refer to the wallboard fork:

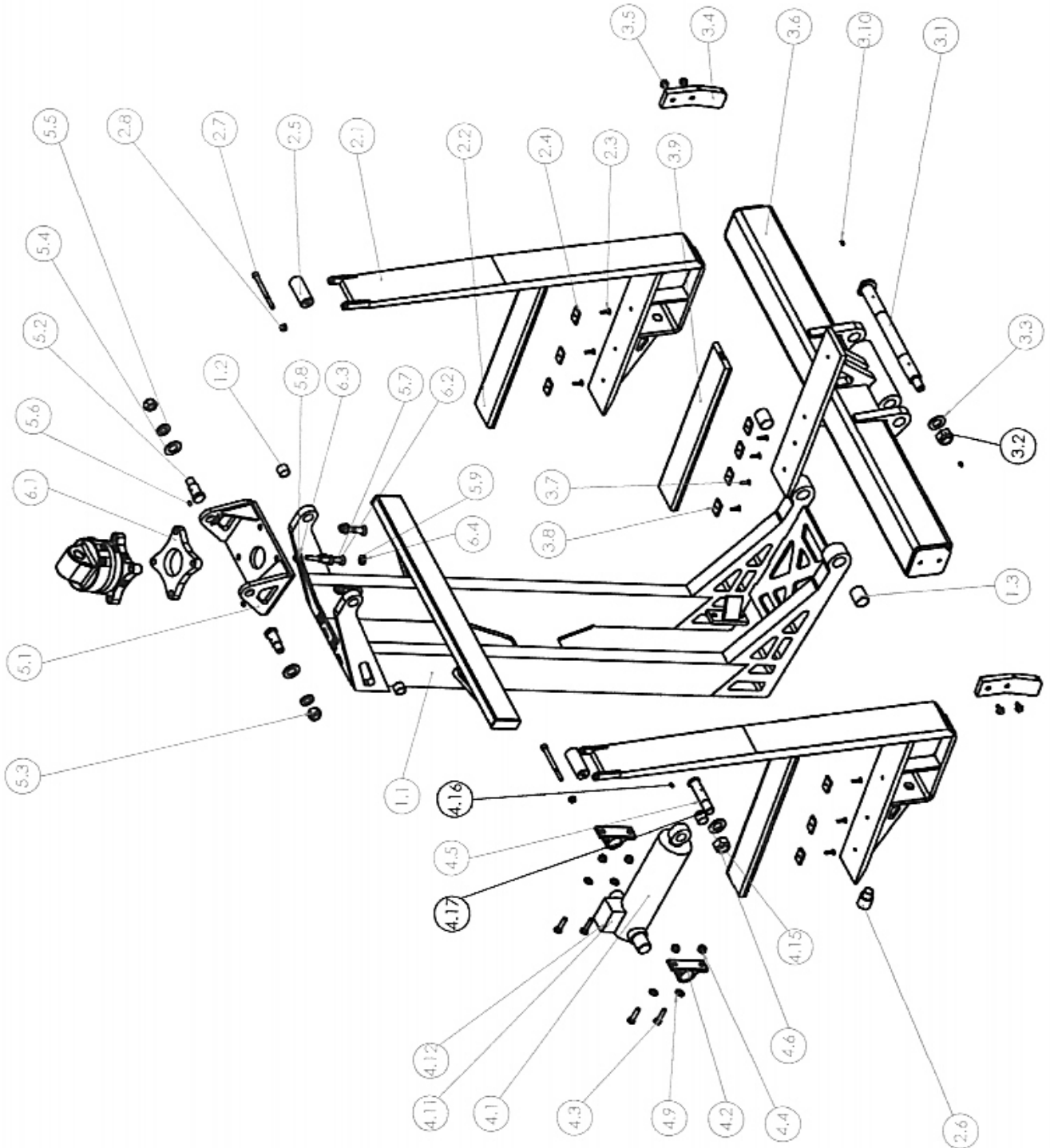
Serial Number:

_____ (see last page)

Certification of Safety Tests:

Year	Date	Inspector	Company
2002			
2003			
2004			
2005			
2006			
2007			
2008			
2009			
2010			
2011			
2012			
2013			
2014			
2015			

WG



7. Spare part list

valid for:

WG602-xx-yy-zz xx: depth yy: height zz: width

example: **WG602-18-54-63**

Module 1.0 – Main body for WG602:

			valid for: height 54“-depth 18”	valid for: height 54“-depth 24”
Pos.	piece	Part-Name	Part-No.	Part-No.
1.1	1	Main Body	451050656	451050700
1.2	2	Bushing (top) 30x34x30	137015311	137015311
1.3	2	Bushing (bottom) 40x44x50	135050412	135050412
1.4	2	Lock Nut M10	121000145	121000145
1.5	2	Set Screw M10x35	120050718	120050718

Module 2.0 – Prongs for WG602 (2 pieces)

			valid for: depth 18 “	valid for: depth 24 “
Pos.	piece	Part-Name	Part-No.	Part-No.
2.1	1	Prong	460050658	460050702
2.2	1	Pad	485050688	485050712
2.3	3	Pad Screw M 8x30	120010244	120010244
2.4	3	Lock Plate M 8	121050713	121050713
2.5	1	Roller	485050689	485050689
2.6	1	Prong Lock	463050692	463050692
-	1	Knob	150050717	150050717
2.7	1	Roller Bolt	120012144	120012144
2.8	1	Lock Nut	121000155	121000155

Module 3.0 – Bottom Section for WG602 for 18 inch

			valid for: width 60"	valid for: width 63"	valid for: width 72"	valid for: width 84"
Pos.	piece	Part-Name	Part-No.	Part-No.	Part-No.	Part-No.
3.1	1	Main Pin	512052185	512052185	512052185	512052185
3.2	1	Lock Nut M30x2	121050721	121050721	121050721	121050721
3.3	1	Washer D31	122000036	122000036	122000036	122000036
3.4	2	Tube Support	483050695	483050695	483050695	483050695
3.5	4	Hex Head Screw M10x20	120013828	120013828	120013828	120013828
3.6	1	Main tube		453050657		453050734
3.7	3	Pad Screw M 8x30	120010244	120010244	120010244	120010244
3.8	3	Lock Plate M 8	121050713	121050713	121050713	121050713
3.9	1	Pad	485050694	485050694	485050694	485050694
3.10	2	Grease nipple	132000137	132000137	132000137	132000137
-	2	Bushing 40x44x20	135050114	135050114	135050114	135050114

Module 3.0 – Bottom Section for WG602 for 24 inch

			valid for: width 60"	valid for: width 63"	valid for: width 72"	valid for: width 84"
Pos.	piece	Part-Name	Part-No.	Part-No.	Part-No.	Part-No.
3.1	1	Main Pin	512052185	512052185	512052185	512052185
3.2	1	Lock Nut M30x2	121050721	121050721	121050721	121050721
3.3	1	Washer D31	122000036	122000036	122000036	122000036
3.4	2	Tube Support	483050695	483050695	483050695	483050695
3.5	4	Hex Head Screw M10x20	120013828	120013828	120013828	120013828
3.6	1	Main tube				453050701
3.7	4	Pad Screw M 8x30	120010244	120010244	120010244	120010244
3.8	4	Lock Plate M 8	121050713	121050713	121050713	121050713
3.9	1	Pad	485050711	485050711	485050711	485050711
3.10	2	Grease nipple	132000137	132000137	132000137	132000137
-	2	Bushing 40x44x20	135050114	135050114	135050114	135050114

Module 4.0 - Hydraulic Cylinder, Hydraulic Parts for WG602

			18 inch / 54 inch	24 inch / 54 inch
Pos.	piece	Part-Name	Part-No.	Part-No.
4.1	1	Hydraulic Cylinder (rod eye 50mm/1.97")	201051953	201051953
		Hydraulic Cylinder (rod eye 28mm/1.10")	201051921	201051921
4.2	2	Bearing support (rear)	287051922	287051922
-	2	Bushing 40x44x40	135050711	135050711
4.3	4	Hex Head Screw (rear) M14x50	120050722	120050722
4.4	4	Nut (rear) M14	121010317	121010317
4.5	1	Pin (rod-side)	512052189	512052189
4.6	1	Nut (rod-side) M30x2	121050721	121050721
4.7	1	Hydraulic hose (180°)	296051925	296051934
4.8	1	Hydraulic hose (90°)	296051924	296051933
4.9	4	Washer (rear) D15	122000163	122000163
4.10	1	Seal Kit	255051923	255051923
4.11	1	Holding Valve (Cartridge)	270012579	270012579
4.12	1	Pressure Valve (Cartridge)	270051935	270051935
4.13	4	Cylinder fittings	291010035	291010035
4.14	-	-	-	-
4.15	1	Washer (rod-side) D31	122000036	122000036
4.16	1	Grease nipple	132000137	132000137
4.17	-	-	-	-
4.18	3	Pipe clamp	145050727	145050727
4.19	4	Dust cape	291011547	291011547
4.20	-	-	-	-
4.21	4	Screw M 6x30	120000077	120000077
4.22	4	Washer	122011549	122011549
4.23	2	Hose clamp	483050696	483050696
4.24	2	Screw M 8x20	120050724	120050724

Module 5.0 Rotator Carrier for WG602

Pos.	piece	Part-Name	Part-No.
5.1	1	Rotator Carrier	483050659
5.2	2	Pin	512052188
5.3	2	Lock Nut M24x2	121050720
5.4	-	-	-
5.5	2	Washer D25	122000217
5.6	2	Grease nipple M8x1	132000137
5.7	4	Screw	120050719
5.8	4	Lock Nut	121000156
5.9	4	Washer D17	122000044