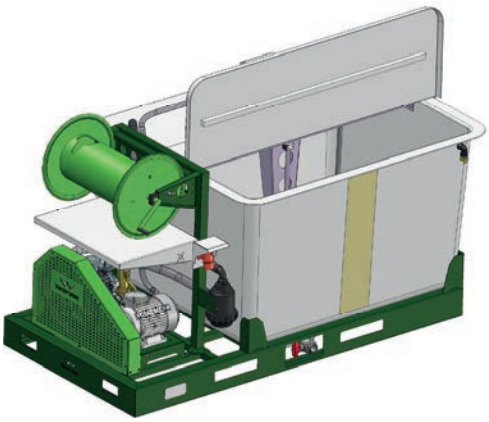
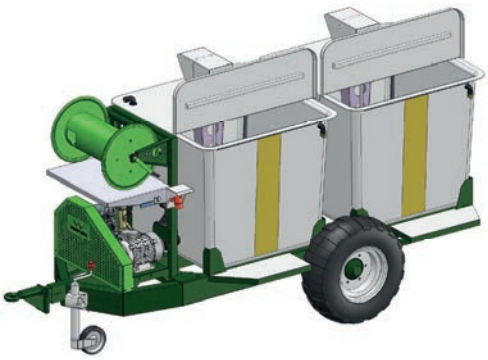
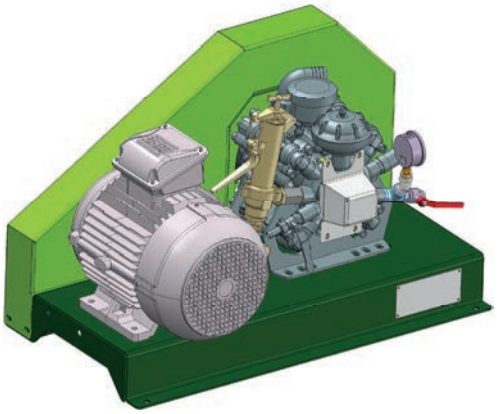
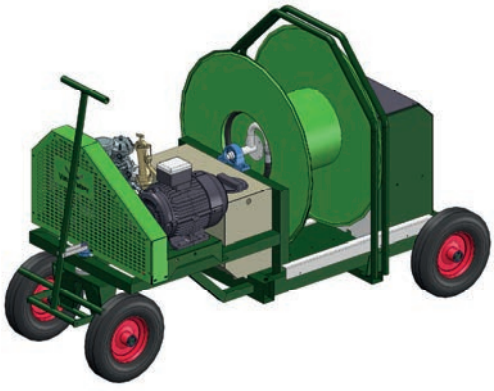
Van der Waay

User manual pump units









Translation of the original Dutch user manual
March 2016

Table of content

1 Preface

Dear Sir / Madam,

Thank you for purchasing this pump unit. You can use this user manual and appendices to get familiar with its operation, so you as an end user can apply and control it safely. You should therefore consider this user manual with appendices as permanent part of the machine.

All information in this user manual is based on the most current product information, which was available at the time of print. The manufacturer always preserves its right to make amendments without any obligations.

Although the manufacturer pays a lot of attention to all its products and the relevant user manual, it cannot exclude inaccuracies. Please inform us of any errors or inaccuracies you may find.
This manual could comprise of one or more original user manuals of several parts of the machine. When referred to these manuals, please read these thoroughly and follow the instructions.

Contact details manufacturer:
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Belgiëlaan 7
2391 PH Hazerswoude, Nederland
Tel.: +31 (0) 172 210311
info@vdwaay.nl

2 Introduction

2.1 Intended use

It is only allowed to use the pump unit for the following applications:

- To pump shading agents, coatings or cleaner to remove these shading agents or coatings
- To pump water, provided that it is not used for human consumption

2.2 Unintended use

It is absolutely prohibited to use this pump unit to pump:

- Fluids with a higher density and viscosity than water
- Solutions of chemical solvents that are used as plant protection products
- Sea water or water with a high salt concentration
- Fuels and lubricants; combustible fluids or liquid gas; fluid foods
- Solvents and dilutions
- Fluids with a temperature over 41ºC (104ºF)
- Fluids that contain granules, massive or grinded parts
- It is prohibited to use the pump to clean humans, animals, electric appliances, delicate objects, the pump itself or the machine that the pump is part of

2.3 Audience of this manual

This user manual is made for both the persons that operate the pump unit, as the persons that perform technical inspections or maintenance of the pump unit.

The manufacturer assumes that these persons:

- Can read and understand the manual
- Are familiar with operating similar equipment
- Are aware of possible danger and act on it
- Possess a so-called spraying licence, if applicable
- Are authorized to drive a tractor, if applicable

The needed maintenance and/or inspections, as stated in this user manual, may only be performed by aforementioned persons if indicated by the symbol. 

3 User safety

3.1 Safety signs


Dangerous


Dangerous tension


Entrapment danger


Dangerous substances


No smoking


No eating and drinking


Consult manual


Protective clothing


Safety gloves


Eye protection


Disconnect electric power

Heavy


Technician


Insert fork-lift truck's fork


Reel brake


Reel speed

The warning sign  is used to identify safety information about dangers that could lead to injury.
A signal word (**DANGER, WARNING, or CAREFUL**) is used alongside the warning sign to indicate the probability and potential seriousness of the injury. A danger sign can be used to indicate the kind of danger.

- **WARNING** means danger of **possible severe or even lethal injury**
- **CAUTION** means danger of **physical injury,**
- **WATCH OUT** means danger of **material damage**

3.2 Before you start

WARNING

DANGEROUS TENSION. DANGER OF ELECTRIC SHOCK.

Electric connection of the pump:

- Only use undamaged extension cords and plugs.
- Only use extension cords with a minimum cable diameter of 4mm²
- Only connect the pump to an electricity socket that has been installed and connected in accordance with the guidelines
- Never use the unit outside in case of rain or thunderstorms

WARNING

HEAVY PARTS

Placing a separate pump:

- Place the pump horizontally
- Anchor the pump by bolting the pump frame onto a solid construction
- A minimum of 2 persons has to lift the pump onto its place

WARNING

DANGER OF ENTRAPMENT OR AMPUTATION OF BODY PARTS

Connecting the pump to the tractor's PTO:

- Never wear loose clothing and/or jewellery
- Only use a coloured power take-off
- Never start the pump without assembled protective cover of the power take-off

3.3 During and after work

WARNING

DANGEROUS SUBSTANCES

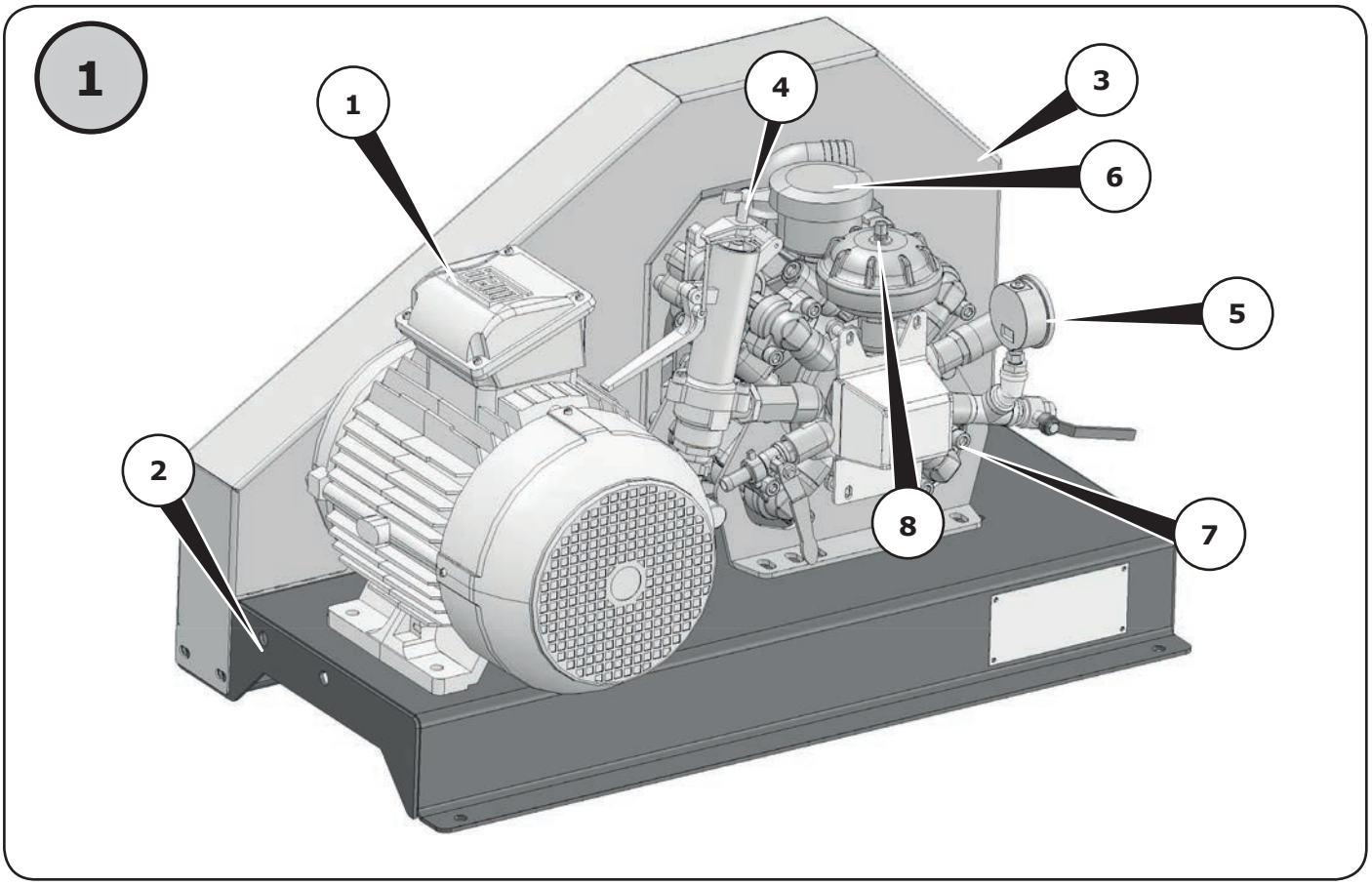
- Read the safety information sheet (SIS) and follow the instructions
- Wear protective clothing, as described
- Do not smoke, eat or drink
- Keep an eye flush nearby
- Trigger an alarm in case of (possible) poisoning and consult a doctor and/or call an ambulance

WARNING

- Never point a high-pressure jet to people, animals or the equipment itself
- Always hold a possible spraying pistol firmly, considering the response pressure of the spray nozzle
- Never exceed the maximum pump pressure
- Never cover the electric motor(s) when they are rotating
- Never fill the fuel tank when the motor rotates. Wait until the motor has cooled down sufficiently
- Prevent unintended rolling of the pump unit when disconnecting the pulling vehicle
- Wash your hands and change clothes

4 Characteristics

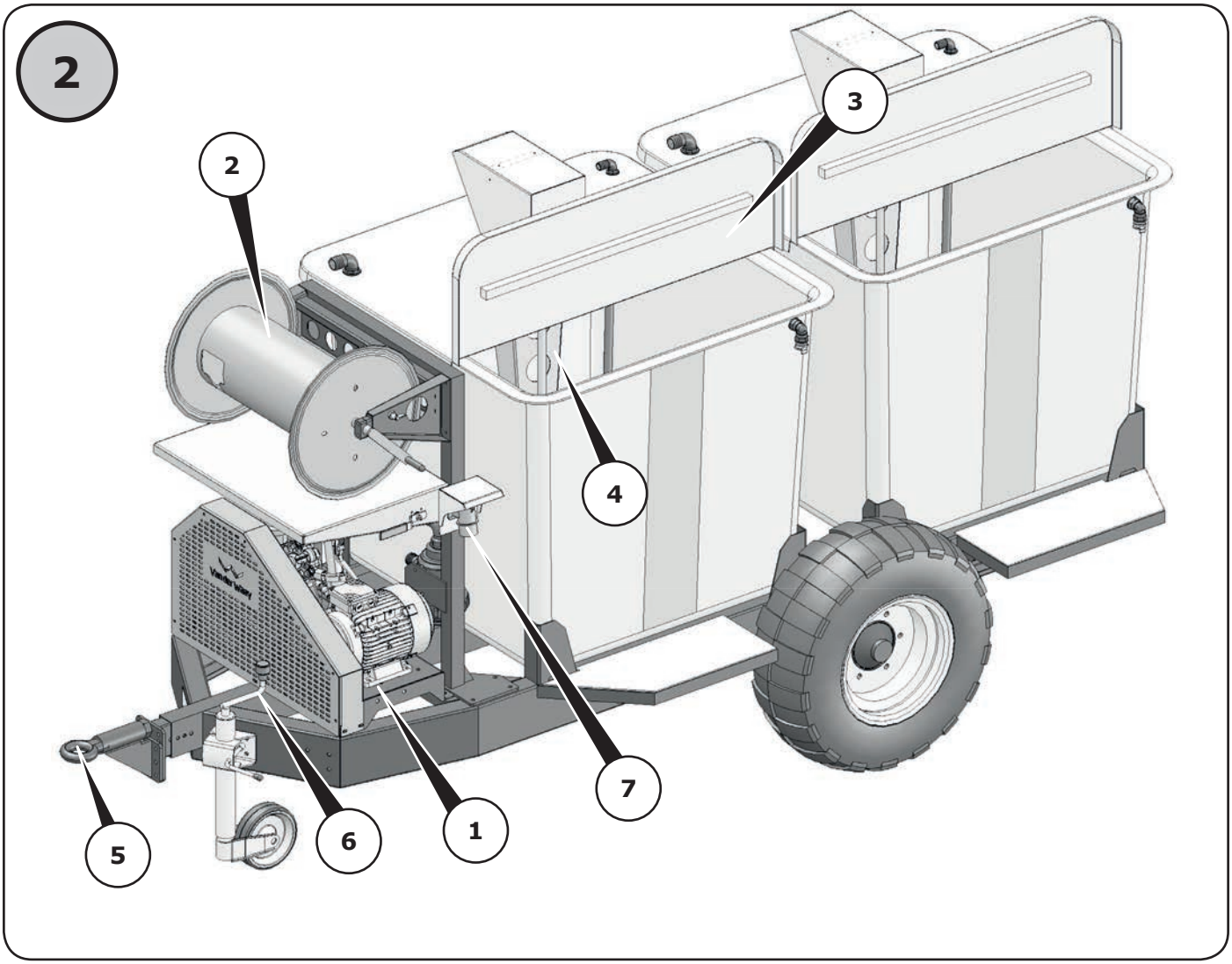
4.1 Important parts



1

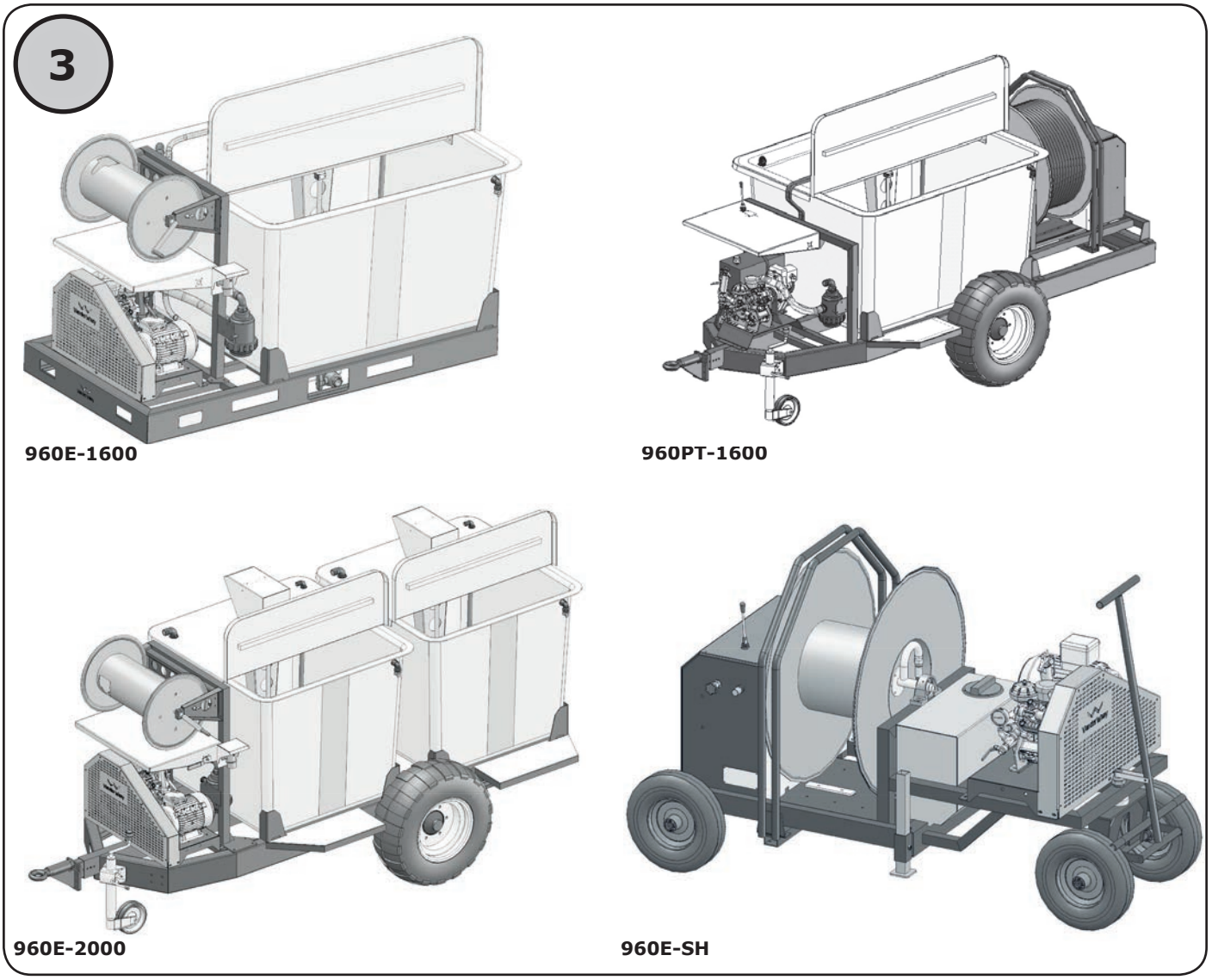
Compare the image with your pump to familiarize with the most important controls and components.

1. Drive motor
2. Pump frame
3. Protection cover drive belts
4. Pressure control
5. Pressure gauge
6. Oil reservoir
7. Overpressure protection
8. Accumulator



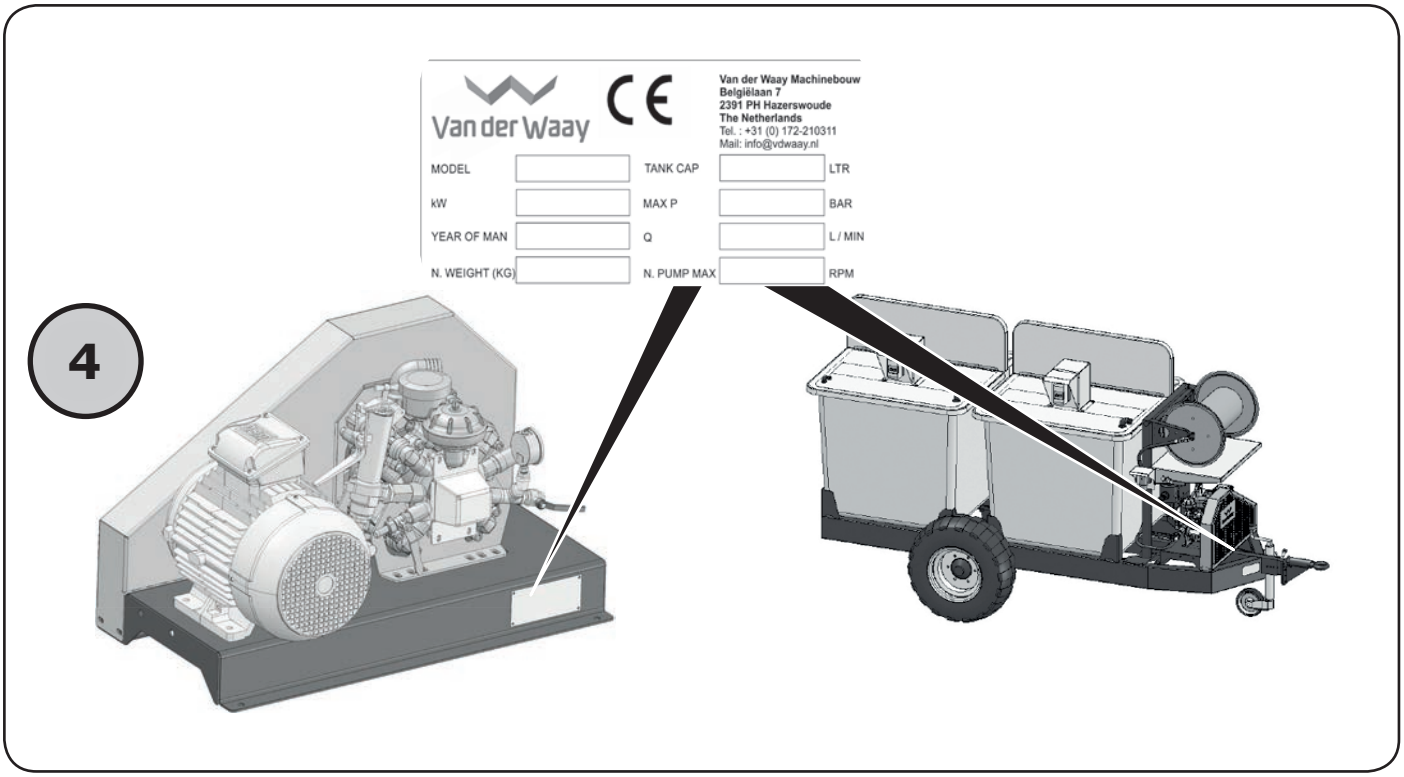
2 Compare the image with your pump unit to familiarize with the most important controls and components.

1. High pressure pump, COMET IDS960
2. Hose reel, manual or automatic drive. Suitable for 1/2” or 5/8” hose, depending on the model
3. Mixing barrel(s) with 1,000 or 1,600 litres
4. Stir mixer, with electric or hydraulic drive
5. Adjustable drawbar eye
6. Nose wheel
7. Contra socket



4.2 General specifications

Description	Specification
Model	Please see ID 4
Manufacturer	Van der Waay BV
Year of manufacture	Please see ID 4
Land of origin	The Netherlands
Technical longevity	10 Years
Operate	Manual



4.3 Technical specifications high pressure pump

Quantity	Unit
Drive	400/480V 50/60Hz via PTO
Maximum capacity (Pmax)	4,0 Kw 5,5 Kw 7,5 Kw 8,5 Kw via PTO
Maximum water capacity per minute	4,0 Kw = 43 Ltr - 11US gal 5,5 Kw = 57 Ltr - 15US gal 7,5 Kw = 70 Ltr - 18US gal 8,5 Kw = 93 Ltr - 24US gal
PTO speed	Min. 400 - Max. 540 RPM on PTO
Spline axis (only for PTO variants)	1-3/8” (6)
Maximum work pressure pump	50 bar – 725 psi
Allowed temperature splaying liquid	Min. 5°C / 41°F - Max. 40°C / 104°F
Sound level	<70 dB(A)
Empty weight	Please see ID 4
Motor oil	20W40

4.4 Technical specifications power take-off

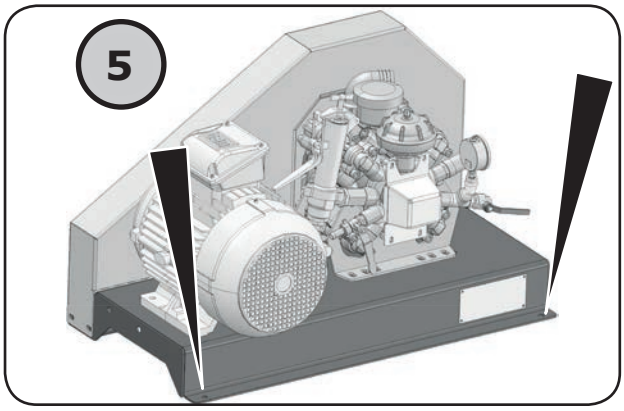
Description	Unit
Brand / model	Walterscheid/ W2100560
Max. dynamic capacity at 540 rpm	12 kW - 210 Nm
Max. bend angle	5°
Connections	Tractor side 1-3/8” (6) zip fastening, Pump side 1-3/8” (6) pressure pin
Length	560 mm
Protection	SD05
Technical longevity	1,000 hours

5 Commissioning

5.1 Placing the high pressure pump

WARNING

HEAVY PARTS



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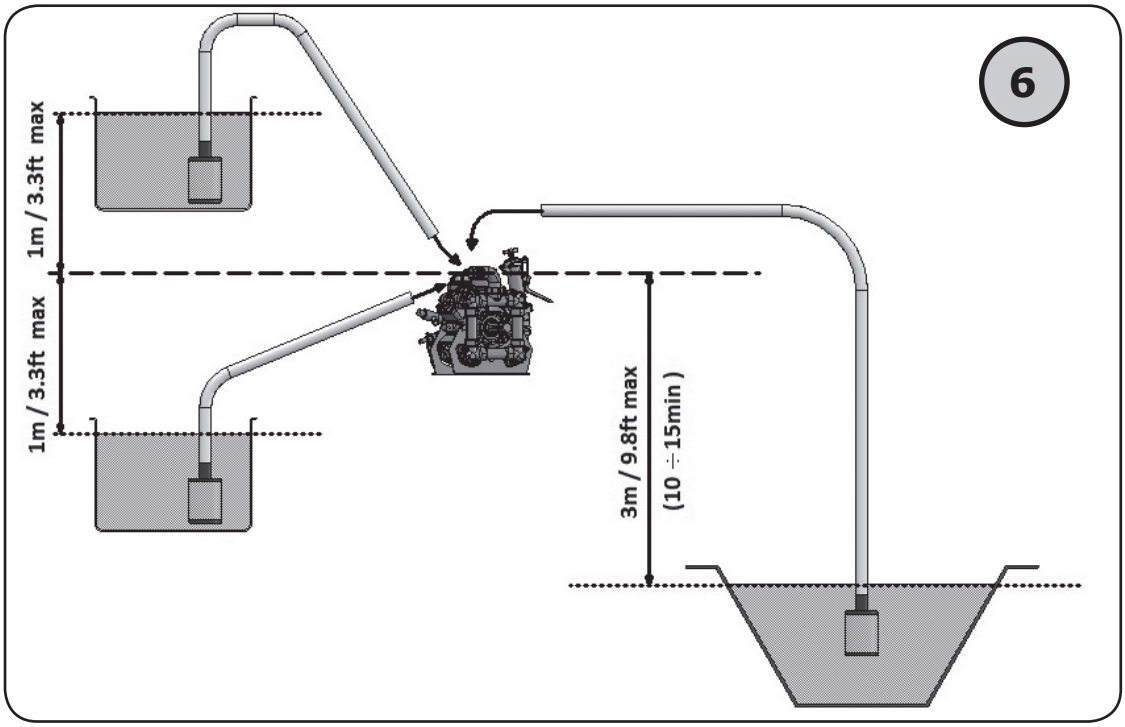
- Place the pump on a solid construction and anchor the pump frame with M10 bolts and nuts in the specific holes of the pump frame.
- Place the pump horizontally.

CAREFUL



6

- **Never exceed the maximum length of the suction hose. The bottom of a mixing barrel can be placed at a maximum height of 1 metre above or under pump level**
- **Make sure the delivered suction filter is always assembled on the suction hose**

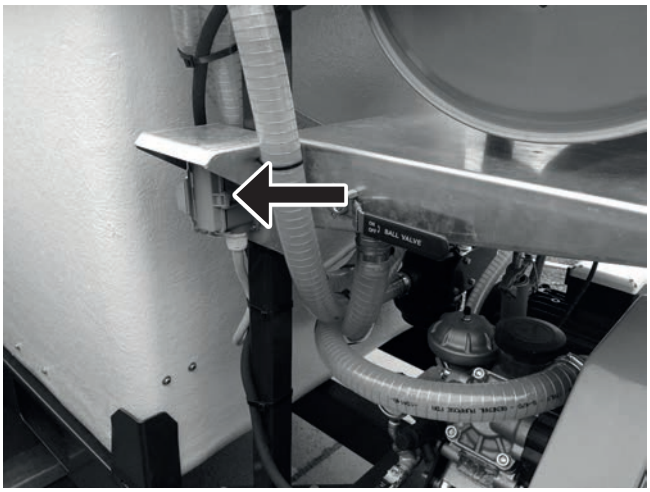
5.2 Electric connection

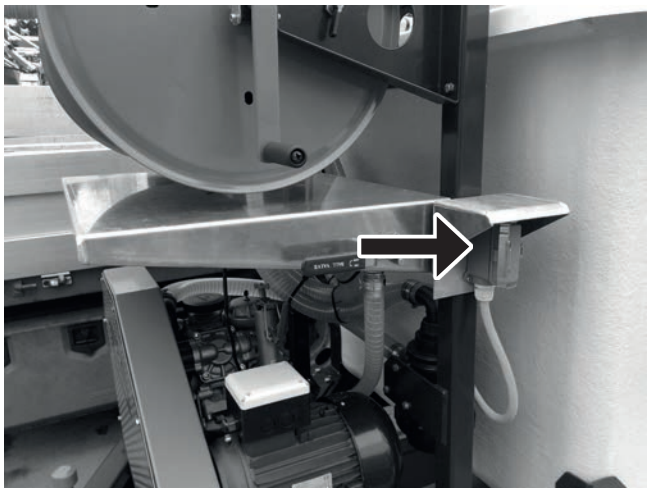
WARNING

DANGEROUS TENSION, ELECTRIC SHOCK

- **Only use undamaged extension cords and plugs**
- **Only use extension cords with a minimum cable diameter of 4mm²**
- **Only connect the pump to an electricity socket that has been installed and connected in accordance with the guidelines**
- **Never use the unit outside in case of rain or thunderstorms**

7





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2 Electricity sockets have been assembled onto the frame in case of pump unites with an electric drive. The type of socket can be different and depends on where the pump unit is used:

- Right side (view back of pump unit) = mains in (photo left)
- Left side (view back of pump unit) = power out to roof cleaner or chalking machine (photo right)

6 Mixing barrel

6.1 Filling the mixing barrel

DANGER

DANGEROUS SUBSTANCES

- **Read the safety information sheet (SIS) and follow the instructions**
- **Wear protective clothing, as described**
- **Do not smoke, eat or drink**
- **Keep an eye flush nearby**
- **Trigger an alarm in case of (possible) poisoning and consult a doctor and/or call an ambulance**

8 Connect a fill hose to the indicated fill connection, and fill the barrel with 100 litres of water.

9

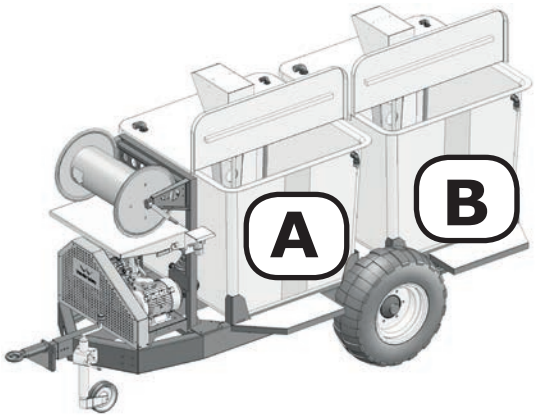
1. Switch on the stir mixer
2. Start the high pressure pump and leave it to pump without pressure
3. Pour the needed amount of coating into the mixing barrel
4. Now fill the mixing barrel with water to reach the desired amount of spraying liquid

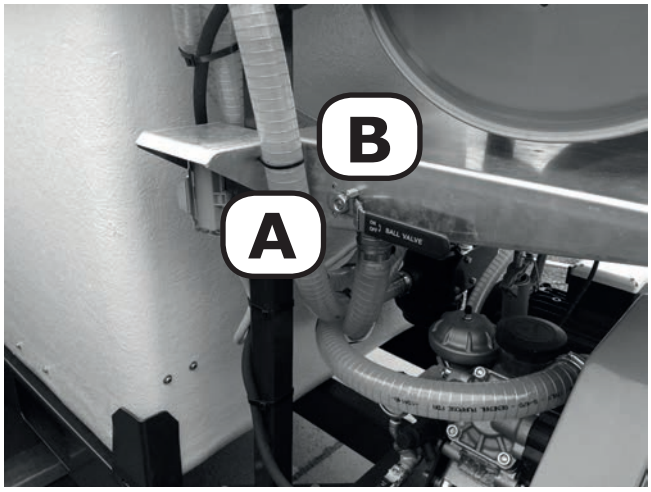
6.2 Selection taps mixing barrels

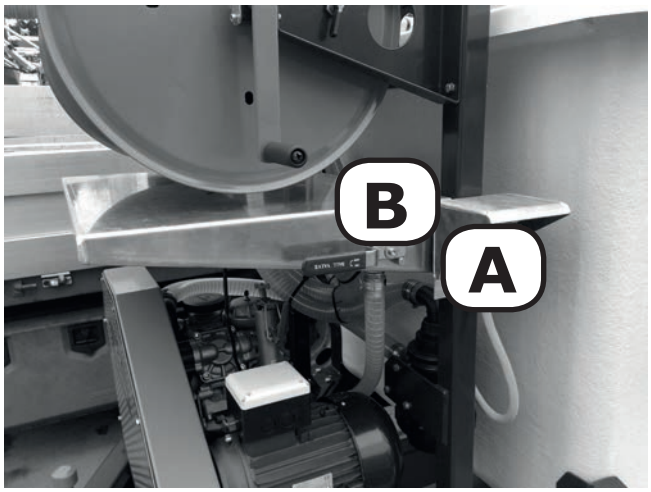
CAREFUL

- **Prevent the pump from running dry**
- **Always put both taps in the same position to prevent returned fluid from ending up in the wrong mixing barrel**

10







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Pump units with two mixing barrels are equipped with ball valves for an intake from the right mixing barrel and an outlet of the return fluid to the right mixing barrel.

- Right side (view back of pump unit) = selection tap suction hose mixing barrel A or B
- Left side (view back of pump unit) = selection tap return hose mixing barrel A or B

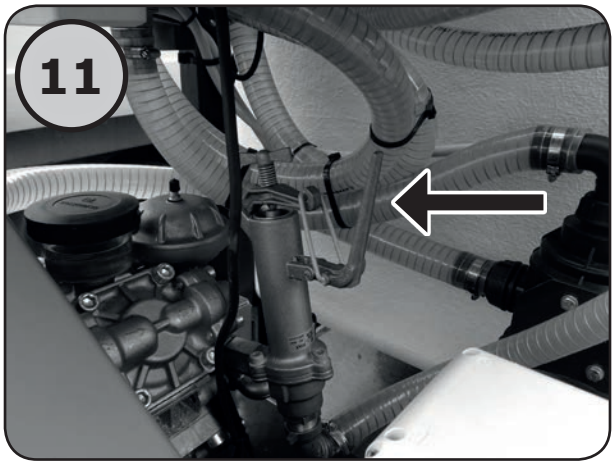
7 Adjusting and operating the high pressure pump

WARNING

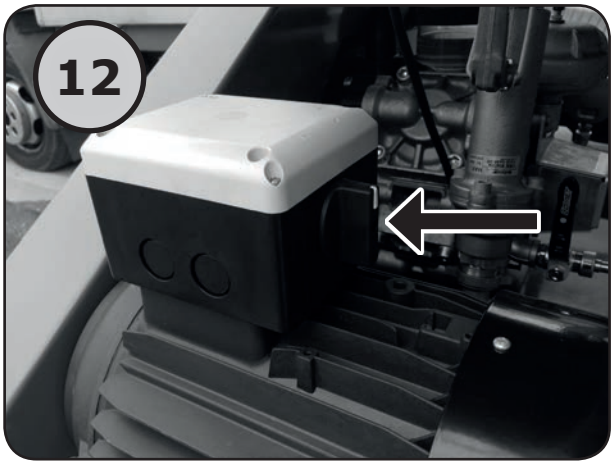
- **Never point a high-pressure jet to humans, animals or the equipment itself**
- **Always hold a possible spraying pistol firmly, considering the response pressure of the spray nozzle**
- **Never cover the electric motor(s) when they are rotating**

CAREFUL

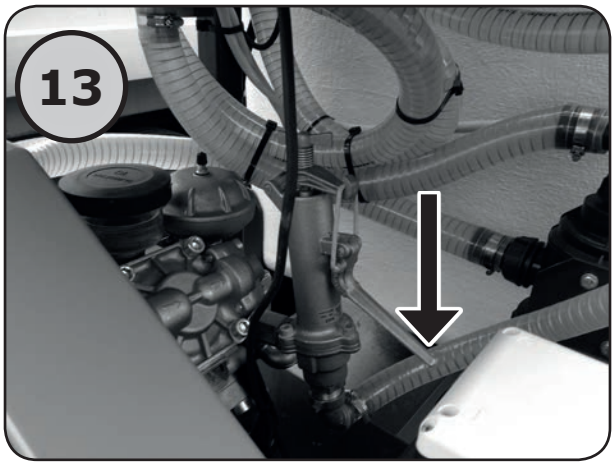
- **Prevent the pump from running dry**
- **Never exceed the maximum pressure of 50 bar! A higher pressure could cause damage to the equipment**



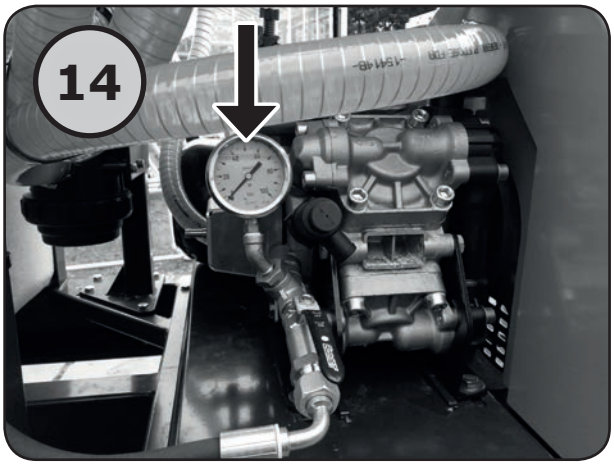
11 Open the pressure accumulator by pulling the lever upwards. The pump starts pumping the fluid without pressure.



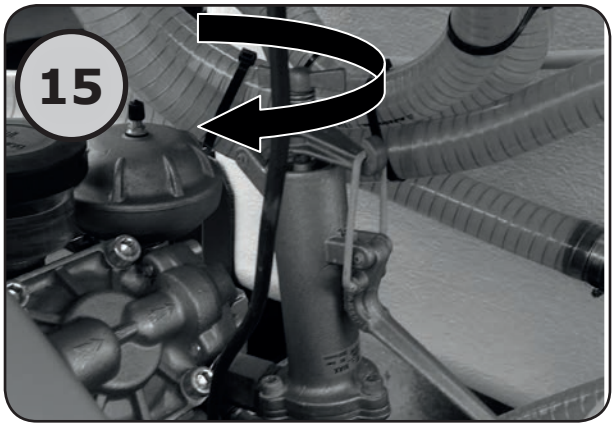
12 Start the pump. Please note: **turn the so-called star/delta switch twice.**



13 Press the lever of the pressure accumulator down so the pump accumulates pressure.



14 Read the value of the pressure gauge. The pressure is never to exceed 50 bar!



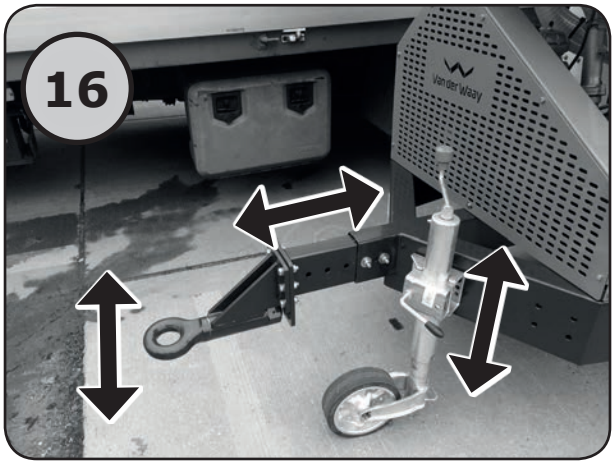
15 Correct the pressure by adjusting the rotary knob on top of the pressure accumulator:
Clockwise = more pressure
Counter clockwise = less pressure

8 Pump trailers towed by tractors

CAREFUL

- **Prevent unintended rolling of the pump unit when uncoupling the towing vehicle**
- **When you are about to tow the pump unit on the public road, you have to follow the applicable traffic regulations. This mainly applies to lighting when you have to drive in the dark**
- **Only drive a tractor when you have a permit**

8.1 Adjusting the drawbar eye



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Wheeled pump units are equipped with a fully adjustable Adjustable drawbar eye so you can couple the unit to the towing hook of a tractor.

1. Use the nose wheel to adjust the pump trailer to a horizontal position
2. Position the tractor in front of the pump trailer
3. Adjust the drawbar eye to the same height of the tractor's towing hook.

8.2 Adjusting and assembling the power take-off

WARNING

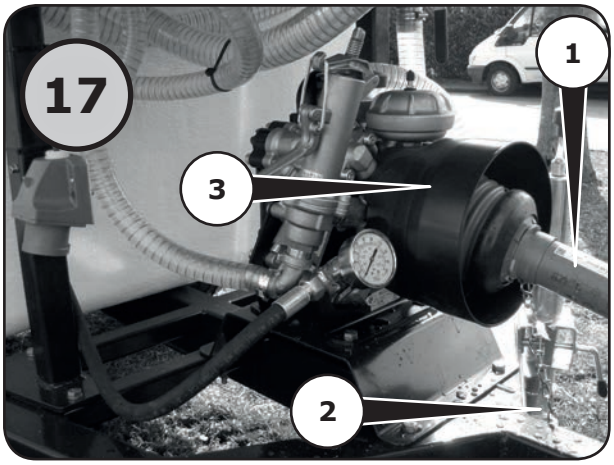
DANGER OF ENTRAPMENT OR AMPUTATION OF BODY PARTS

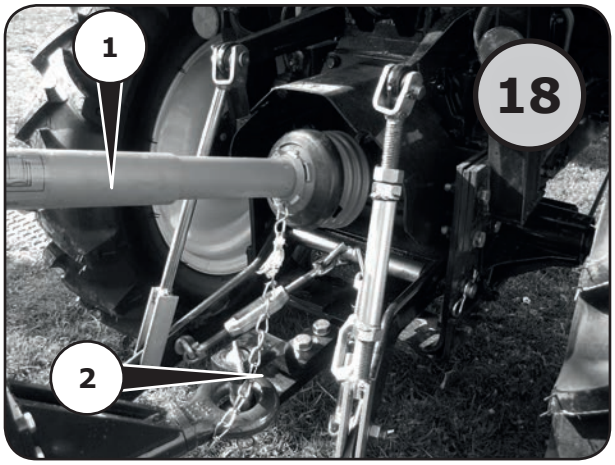
- **Do not wear loose clothing and / or jewellery**
- **Only use an approved power take-off**
- **Never start the pump without assembled protection cover**
- **Never remove the protection covers of the power take-off**
- **Never stick body parts in a rotating power take-off**
- **Make sure no persons are in the vicinity of the pump trailer when it is started**

TECHNICIAN

Perform the following tasks by a specialist:

- **Customizing the power take-off**
- **When the connections of the power take-off do not align with the tractor's connection**





17 18

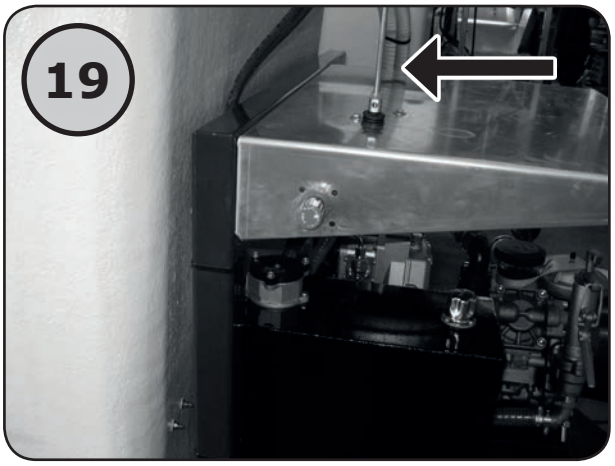
Please read the separate original factory manual for other assembly and maintenance instructions.

1. PTO connection axis
2. Safety chain protection PTO axis
3. Protection cover pump

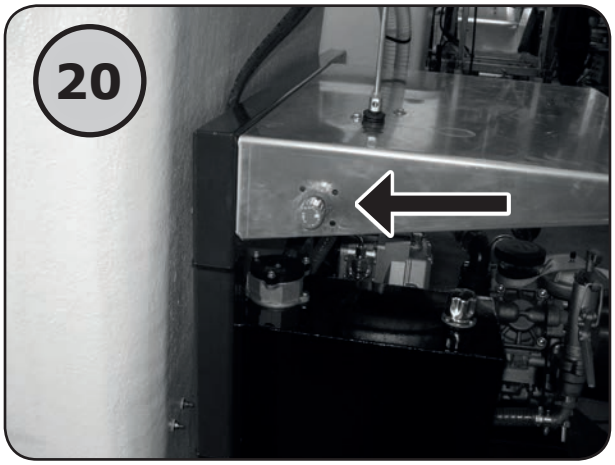
9 Hydraulics

Some pump trailers are equipped with a hydraulic system to operate the stir mixers and hose reel.

9.1 Operating stir mixers



19 Switch on the stir mixers to pull the lever.



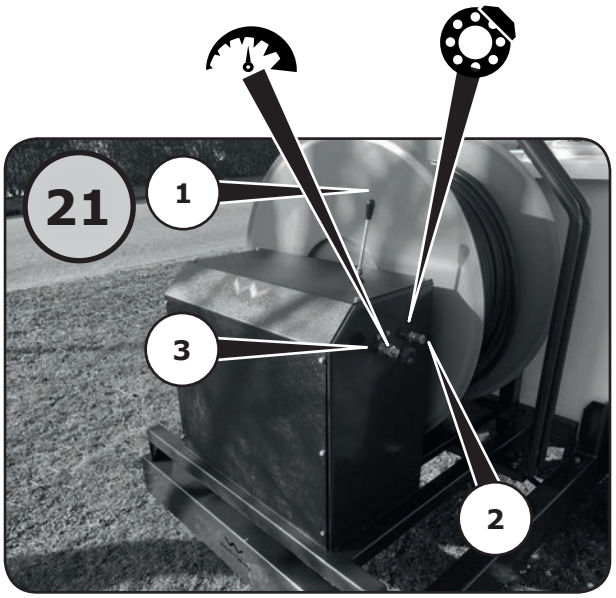
20 Increase / decrease the rpm of the stir mixers by turning the knob.

9.2 Operating the hose reel

WARNING

DANGER OF ENTRAPMENT OR AMPUTATION OF BODY PARTS

- **Do not wear loose clothing and / or jewellery**
- **Never stick body parts in a rotating reel**



21

1. Reel on / off
2. Reel power
3. Unrolling resistance

Adjusting reel power:

- Reel pulls hose too strongly; turn knob 2 left
- Speed is too low; turn knob 2 right

Adjusting rolling resistance:

- Reel keeps turning after the hose has unrolled; turn knob 3 left
- Hose unrolls too heavy; turn knob 3 right

10 After use

DANGER

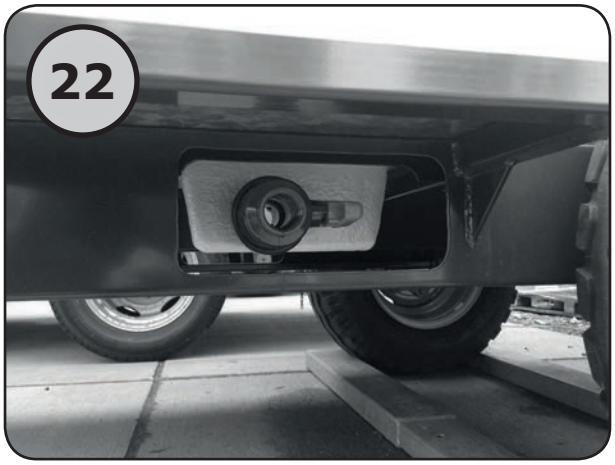
DANGEROUS SUBSTANCES

- **Read the safety information sheet (SIS) and follow the instructions**
- **Wear protective clothing, as described**
- **Do not smoke, eat or drink**
- **Keep an eye flush nearby**
- **Trigger an alarm in case of (possible) poisoning and consult a doctor and/or call an ambulance**

CAREFUL

- **Prevent the residual fluids from ending up in the environment. Drain it away in accordance with the local guidelines**

10.1 Draining the mixing barrel



22 You can use the ball valve at the bottom of the mixing barrel to drain residual fluids. Drain it away in accordance with the local guidelines.

10.2 Cleaning the filter

23 After use, clean the filter element thoroughly and pull off the lid.

24 Remove the filter element and flush it.

10.3 Cleaning the pump and hose

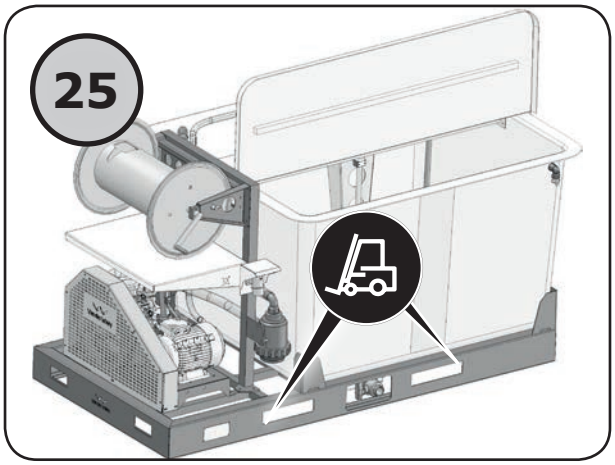
Fill the mixing barrel with some water, start the pump and keep it running until clean water comes out the hose.

11 Transport

CAREFUL

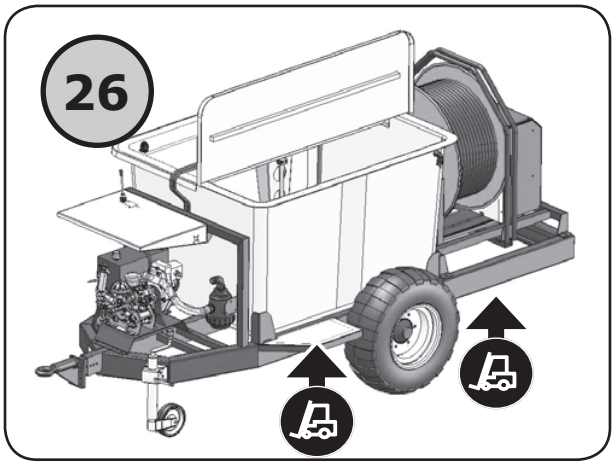
- **Transport the pump unit on a flat surface and lash it down firmly**
- **Only transport the pump unit with empty mixing barrels**
- **When you are about to tow the pump unit on the public road, you have to follow the applicable traffic regulations. This mainly applies to lighting when you have to drive in the dark. You have to take care of lighting yourself, as it is not delivered by default**
- **Only lift the pump unit with a fork-lift truck with sufficient capacity. Consult the ID for the empty weight of your pump unit**

You can transport the pump unit with a for-lift truck with sufficient lifting capacity.



25 **For pump units without wheels:**
Insert fork-lift truck's fork into the special recesses.

Please note the minimum needed fork length = 120 cm



26 **For wheeled pump units:**
Insert the form-lift truck's forks underneath the frame door, at the left and the right of the wheels..

Please note the minimum needed fork length = 150 cm

12 Storage

Follow the instructions below when the pump unit is not used for a longer time:

CAREFUL

- **Prevent the residual fluids from ending up in the environment. Drain it away in accordance with the local guidelines**

- Thoroughly clean the mixing barrels and stir mixers with clean water
- Clean the inside of the pump and hoses by pumping clean water for several minutes

CAREFUL

- **Prevent freezing!**

1. Store the pump unit in a frost-free room
2. Drain the mixing barrels
3. Remove the suction filter
4. Pump antifreeze with sufficient protection capacity for several minutes if desired

13 Maintenance

DANGER

Disconnect the electric power before performing maintenance, repairs or inspections.

- **Maintenance may only be carried out by persons with enough technical expertise on the area of subjoined activities**

13.1 Maintenance schedule

- **The below schedule is only for indicative purposes. More frequent maintenance or inspections can be necessary in case of intensive use**
- **Frequent maintenance is very important. Non-timely maintenance has a negative effect on the good operation and longevity**
- **Only use original parts, which are available at your supplier or manufacturer**
- **Consult a technician when you see this symbol**

Maintenance frequency	Tasks
Before every use	• Check wires and plugs for damage • Check the oil level • Clean the suction filter • Check oil or water leaks
After every use	• Flush the mixing barrel(s), hoses and suction filter with clean water • Flush the pump with clean water for several minutes
Every 10 operating hours	• Lubricate the PTO connection axis (please see separate manual)
Every 50 operating hours	• Check the pressure in the accumulator, it has to be 7 bar – 102 psi • Check all hose (connections) for leaks • Check if all bolts of the pump frame are tightly secured • Check the tension of the drive belts
Every 300 operating hours	• Replace motor oil of the pump (20W40) • Check the suction valves / tailgates and valve lids, replace these if wear/tear is visible
Every year	• Check the membranes and replace these in case of visible damage • Replace the membranes irrespective of the status when aggressive solvents have been used
Every 1,000 operating hours	• Replace the PTO connection axis

13.2 Cleaning the suction filter

DANGER

DANGEROUS SUBSTANCES

- **Read the safety information sheet (SIS) and follow the instructions**
- **Wear protective clothing, as described**
- **Do not smoke, eat or drink**
- **Keep an eye flush nearby**
- **Prevent the residual fluids from ending up in the environment. Drain it away in accordance with the local guidelines**

Thoroughly clean the filter element after every use by flushing it with clean water.

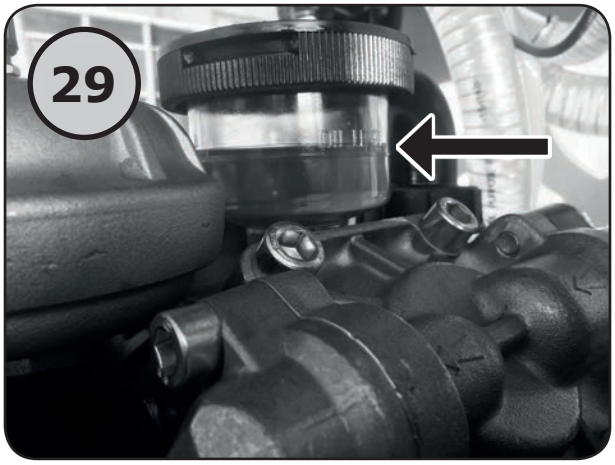
27 Screw off the black ring of the filter casing and remove the lid

28 Remove the inner filter, rinse it and place it back

13.3 Checking the oil level and filling

CONSULT TECHNICIAN IF:

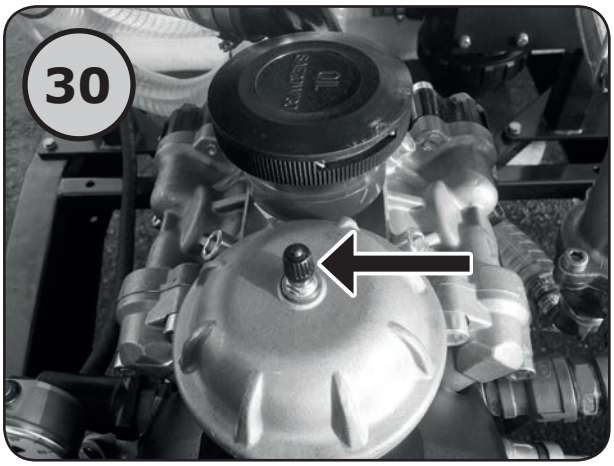
- **You have to fill oil regularly**
- **The oil turns white**



29 The oil level should correspond to the mark on the level glass.
Screw off the black ring of the level glass and fill it with 20W40 until it reaches the mark.

13.4 Checking the admission pressure of the accumulator

The accumulator takes care of smooth running of the pump. When the air pressure in the accumulator is too low, the pump will make a lot of noise and will run irregularly.

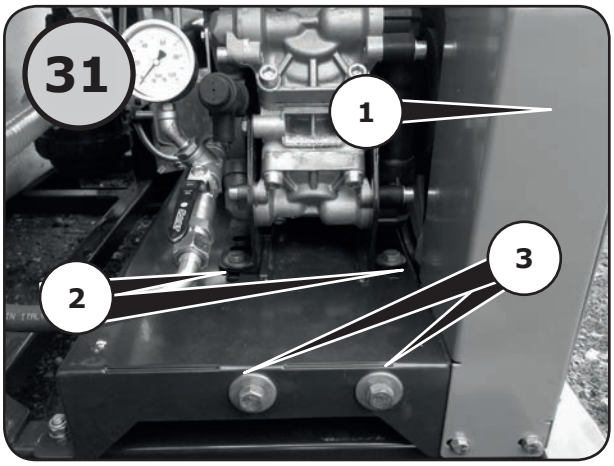


30

Check the pressure by connecting a pressure gauge to the accumulator.
The pressure in the accumulator always has to be 7 bar – 102 psi.

13.5 Checking the drive belts

The tension of the drive belts has to be checked after every 50 operating hours when you use a pump unit with an electric motor.



31

1. Remove the front cover of the protection cover (1) by removing the 8 bolts.
2. Loosen the 4 bolts (2).
3. Tighten the belts with the 2 locking screws (3). Please keep a flat line alongside the pulleys. The belts have to be in a neat, straight line. The tension of the belts is correct when you can move them up / down freely for about 10 mm between your thumb and index finger.
4. Fasten the 4 bolts (2) again.
5. Assemble the front cover of the protection cover again.

13.6 Trouble shooting

CAREFUL

- **Only use original parts, which are available at your supplier or manufacturer**
- **Consult a technician when you see this symbol** 

Error	Possible cause	Solution
No or low pressure	Pump sucks up air	Check the seal of the suction filter and suction hoses
	Suction filter clogged	Clean the suction filter
	Drive belts slips	Tension drive belts
	Suction hose to long	Shorten the suction hose up to a maximum of 1 metre – 3 ft. above or below the level of the pump construction
	Pressure accumulator's inside is worn	Replace the inside of the pressure accumulator
	One or more suction valves / tailgates broken	 Replace all valves / tailgates
	Pump's rpm too low	Increase the PTO's rpm up to a maximum of 550 rpm
	Membrane torn	 Replace the membranes and oil
Oil leak	Worn oil seals	 Replace the oil seals
Oil is white	Water in oil	 Replace the membranes and the oil
Pump vibrates	Pressure of accumulator too low	Pressurize the accumulator
Electric motor buzzes	Phase is missing	 Check the cable and plugs for loose wires or wire fractures
Pump has no power	Motor operates in star	Turn star/delta switch one extra position

14 Removal and environment

Old and warn parts must be removed in as environmentally friendly a way, for instance by bringing them to a qualified recycling company. This also includes cloths, etc. that has been polluted with oil or grease.

Electronic parts and components may not be thrown away with regular garbage. In accordance with guideline 2012/19/EC, electric and electronic components and equipment need to be recycled separately in an environmentally friendly manner, in accordance with the applicable legislation and regulation.

If oil and other chemical substances or fluids are used, these have to be removed in an environmentally friendly way.
Familiarize yourself with national and local regulations with regard to the sustainable removal of parts and materials.

15 EG declaration of Conformity

EG declaration of Conformity

In accordance with appendix II.1.A of the Machinery Directive 2006/42/EG)

Manufacturer	:	Van der Waay BV
Address	:	Belgiëlaan 7 2391PH Hazerswoude The Netherlands

Declares that the pump units:

960E-1600, 960PT-1600, 960E-2000, 960PT-200, 960E-SH

conform to the following guidelines:

- Machinery Directive 2006/42/EG
- Low tension guideline 2006/95/EG (for the 960E models)
- EMC guideline 20014/108/EG (for the 960E models)

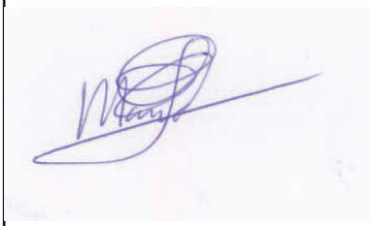
Whereby the following standards have been used/consulted:

- NEN-EN-ISO 12100: 2010
- ISO-4254-6-2009-en

Hazerswoude, 16.02.2016

On behalf of Van der Waay B.V.

M. Koolmees (CEO)



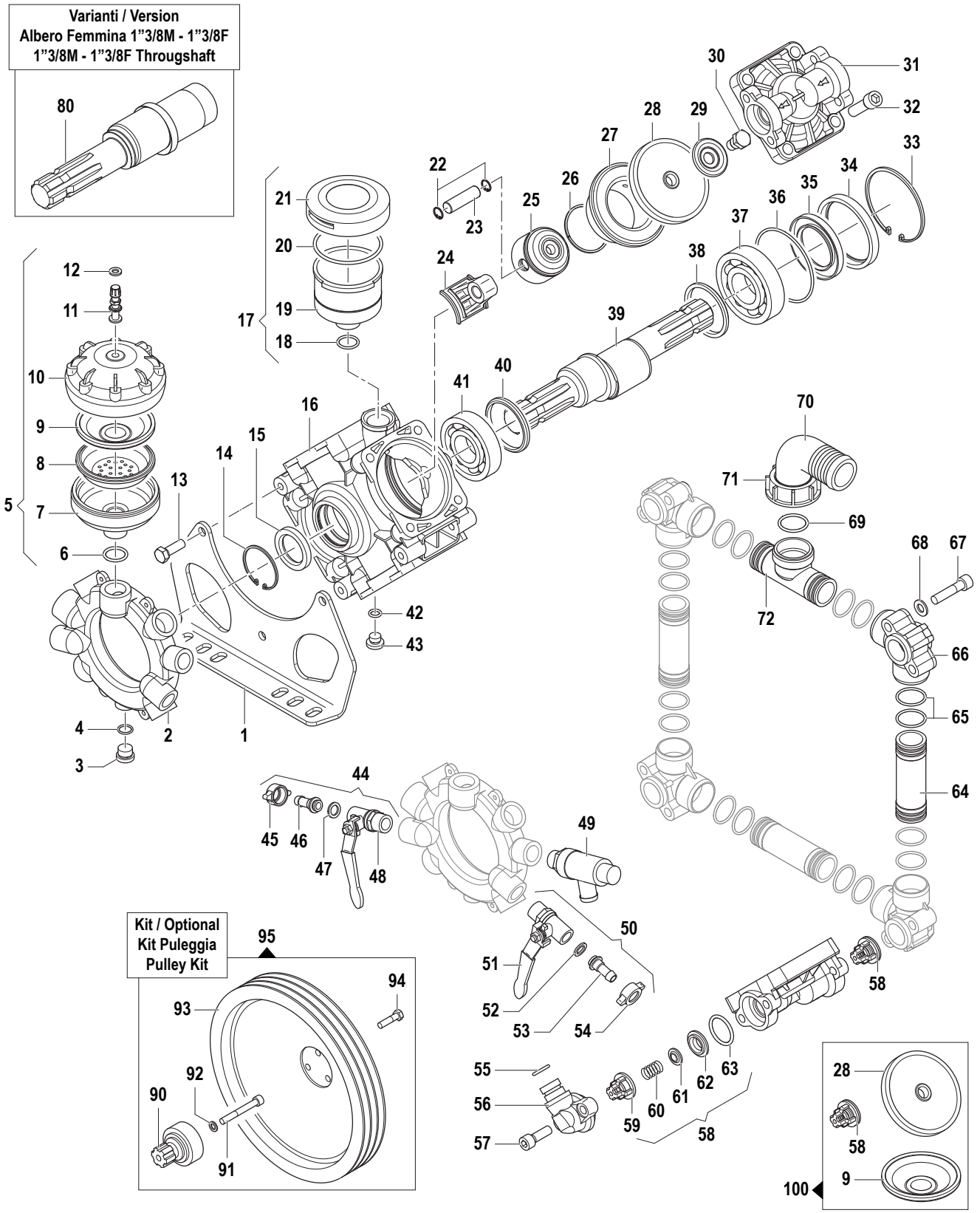
16 Spare parts pump

IDS Series

IDS 960

Pompe a Membrana - *Diaphragm Pumps*

550 RPM



Pompa Base Albero Passante 1"3/8 M-M
Standard Pump *1"3/8 M-M Throughshaft*

N	Cod.	Description	Note	Quant.
1	24.000.109	Pump Mounting Bracket		2
2	4.150.063	Delivery Manifold		1
3	32.000.121	Plug	G3/8”	1
4	12.100.441	O-Ring	Ø2x14	1
5	12.250.029	Pressure Accumulator Kit		1
6	12.100.599	O-Ring	Ø3x22,5	1
7	20.038	Pressure Accumulator		1
8	4.600.040	Diaphragm Support Cap		1
9	18.000.033	Diaphragm		1
10	30.038	Pressure Accumulator		1
11	36.100.003	Air Valve		1
12	12.090.033	Gasket	Ø14x7,5x3	2
13	36.070.220	Hexagonal Screw	M10x30	6
14	30.200.013	Inner Seeger	Ø52	1
15	190.073	Oil Seal	Ø35x52x7	1
16	4.030.171	Pump Crankcase		1
17	12.080.015	Volumetric Compensator Kit		1
18	12.100.002	O-Ring	Ø2,62x20,8	1
19	4.210.012	Volumetric Compensator		1
20	12.100.373	O-Ring	Ø3,53x73,04	1
21	4.020.143	Volumetric Compensator Cover		1
22	30.200.029	Inner Seeger	Ø14	8
23	30.110.021	Gudgeon Pin	Ø14x47,5	4
24	2.050.073	Connecting Rod Assembly		1
25	24.090.067	Piston	Ø59	4
26	200.008	Compression Ring	Ø58x2x2,4	4
27	4.000.090	Piston Sleeve	Ø58x8,9	4
28	18.000.088	Diaphragm	Rubber	4
	18.000.096	Diaphragm	Desmopan ®	4
	18.000.095	Diaphragm	Viton ®	4
29	6.020.010	Disc		4
30	36.050.005	Diaphragm Holder Screw	M12x1,5	4
31	32.180.378	Pump Manifold		4
32	36.090.189	Screw	M12x40	16
33	30.200.002	Inner Seeger	Ø90	1
34	90.345	Ring		1
35	190.125	Oil Seal	50x80x8	1
36	12.100.225	O-Ring	Ø2,62x88,58	1
37	4.380.041	Ball Bearing	Ø50x90x20	1
38	100.021	Connecting Rod Ring	Ø68x59x5,5	1
39	10.558	Throughshaft	M-M 1”3/8	1
40	100.021	Connecting Rod Ring	Ø68x59x5,5	1
41	4.380.012	Ball Bearing	Ø35x80x21	1
42	12.100.044	O-Ring	Ø2,62x 9,93	1
43	32.000.010	Plug	G1/4”	1
44	12.140.019	Left Tap Assembly		1
45	12.000.038	Wing Nut	G1/2”	1
46	28.020.018	Delivery Hose Tail	Ø8x11	1
47	12.090.013	Gasket	Ø12x18x3	1
48	28.260.031	Left Tap	G1/2-1/2”	1
49	12.190.041	Safety Valve Assembly	50 bar	1

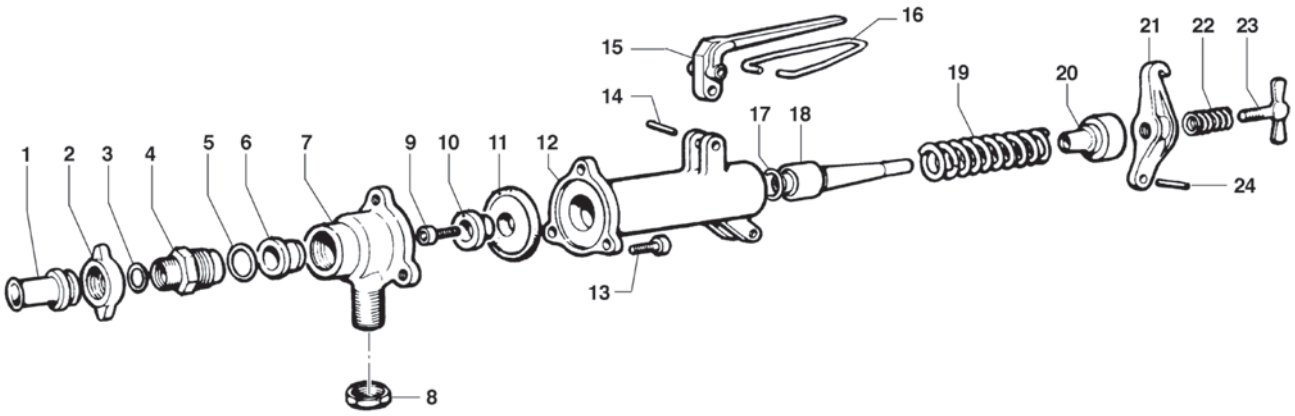
N	Cod.	Description	Note	Quant.
50	12.140.018	Right Tap Assembly		1
51	28.260.032	Right Tap	G1/2-1/2”	1
52	12.090.013	Gasket	Ø12x18x3	1
53	28.020.018	Delivery Hose Tail	Ø8x11	1
54	12.000.038	Wing Nut	G1/2”	1
55	12.100.003	O-Ring	Ø3x16,3	4
56	28.060.032	Delivery Hose Tail		4
57	36.090.021	Screw	M10x30	8
58	12.200.095	Suct./Delivery Valve Ass.y kit		8
59	12.050.029	Suction/Delivery Valve Cage		8
60	18.020.015	Spring (Wire Ø0,8)	Øe11x18	8
61	36.040.023	Suction/Delivery Valve		8
62	30.090.234	Suction/Delivery Valve Seat		8
63	12.100.487	O-Ring	Ø3,53x31,34	8
64	32.130.026	Suction Hose		3
65	12.100.101	O-Ring	Ø2,62x29,83	16
66	28.060.031	Suction Hose Tail		4
67	36.090.050	Screw	M10x45	8
68	28.110.002	Washer	Ø10,5x20x2	8
69	12.100.180	O-Ring	Ø3x30	1
70	28.010.055	Elbow Coupling	Ø41	1
71	12.000.054	Wing Nut	G1”1/2”	1
72	32.120.040	Suction Hose		1
21	4.020.143	Volumetric Compensator Cover		1
22	30.200.029	Inner Seeger	Ø14	8
80	10.559	Throughshaft	"1”3/8 M-F 6 Fori"	1
90	10.090.044	Flange	1”3/8-6F	1
91	36.090.051	Screw	M10x90	1
92	28.190.001	Spring Washer	Ø10,5x17,5x2,2	1
93	24.240.035	Pulley	3A - Øp350	1
	24.240.016	Pulley	3A - Øp292	1
	24.240.017	Pulley	3B - Øp290	1
94	36.090.095	Screw	M10x50	3
95	50.010.071	Kit Puleggia	3A - Øp350	1
	50.010.070	Pulley	3A - Øp292	1
	50.010.074	Pulley Kit	3B - Øp290	1
100	50.260.346	Ordinary Maintenance Kit		1
51	28.260.032	Right Tap	G1/2-1/2”	1
52	12.090.013	Gasket	Ø12x18x3	1

VRS

50 Bar

Gruppi Comando Pompe

Pump Control Unit



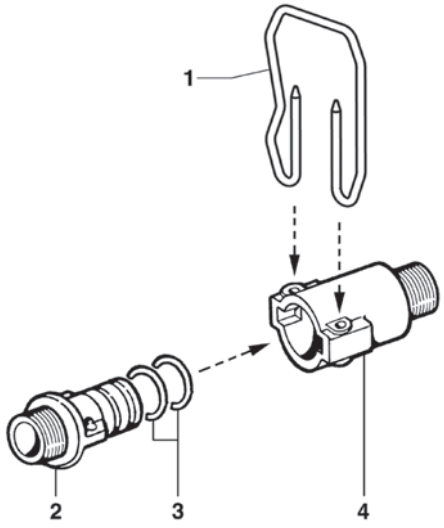
N°	Cod.	Descrizione	*Description*	Note	Q.ty	Model
1	2800 0004	Raccordo p.g. Curvo	*Elbow Tail*		1	
2	1200 0005	Galletto	*Wing Nut*	30MB	1	
3	1210 0002	Guarnizione OR	*O-Ring*	Ø2,62x20,7	1	
4	2000 0012	Nipplo	*Nipple*	M36x2 - M30x2	1	
5	1210 0033	Guarnizione OR	*O-Ring*	Ø3,0x28	1	
6	3009 0042	Sede Valvola Pressione	*Pressure Valve Seat*		1	
7	0424 0072	Corpo Infer. Valvola Reg.	*Regulation Valve Body*		1	
8	0604 0050	Dado	*Nut*	G3/4x7	1	
9	3609 0047	Vite	*Screw*	M6x14	1	
10	3600 0020	Valvola Pressione	*Pressure Valve*		1	
11	1800 0039	Membrana Valv. Regolaz.	*Regulat. Valve Diaphragm*		1	
12	0424 0077	Corpo Super. Valvola Reg.	*Regulation Valve Body*		1	

N°	Cod.	Descrizione	*Description*	Note	Q.ty	Model
13	3609 0157	Vite	*Screw*	M8x18	3	
14	3021 0011	Spina Elastica	*Elastic Pin*	Ø4x26	1	
15	1600 0014	Leva Valvola Regolazione	*Lever*		1	
16	1202 0002	Gancio Valvola Regol.	*Hook*		1	
17	1210 0033	Guarnizione OR	*O-Ring*	Ø3,0x28	1	
18	0015 0068	Asta Valvola Regolazione	*Regulation Valve Rod*		1	
19	1802 0085	Molla (Filo Ø8)	*Spring (Wire Ø8)*	Øe34x18	1	
20	0432 0022	Cappellotto Premi Molla	*Special Cap*		1	
21	0208 0002	Bilancere Valvola Regol.	*Lever*		1	
22	1802 0010	Molla (Filo Ø2)	*Spring (Wire Ø2)*	Øe15x28	1	
23	3605 0003	Vite Speciale Galletto	*Wing Nut Screw*		1	
24	3021 0011	Spina Elastica	*Elastic Pin*	Ø4x26	1	

Attacchi Rapidi Pompa

Pump Quick Coupling

G 3/4 "



N°	Cod.	Descrizione	*Description*	Note	Q.ty	Model
1	1202 0060	Gancio Fissaggio Mandata	*Delivery Hook*		1	
2	2803 0048	Raccordo p.g. Mand. Maschio	*Delivery Hose Tail*	G3/4 CD	1	
3	1210 0002	Guarnizione OR	*O-Ring*	Ø2,62x20,7	2	
4	2803 0047	Raccordo p.g. Mand. Femm.	*Delivery Hose Tail*	G3/4 CD	1	