ENGLISH

POSEIDON 7 - C3

SERVICE MANUAL

Nilfisk ALTO
works for you

Preface

This service manual contains detailed description of the main repair work on the cold HPW POSEIDON 7.

Repair work requires a suitable testing workplace with the necessary water and power supply.

If operating errors are evident, refer the customer to the operating instructions.

A fault in the cleaner can have several causes as described in the section on troubleshooting.

Refer to the illustrated spare parts lists during repairs. They show the assembly position and the sequence in which the individual components should be assembled.

See ”Technical Service Bulletin (TSB) sheets. They include information on technical modifications that have been made after this repair manual was printed.

”Technical Service Bulletin” sheets are also valid as a supplement to the spare parts list until publication of a new edition.

Repair manuals and ” Technical Service Bulletin” sheets should be available at the site where repairs are carried out.

It is not permitted to give them to third parties.

Use original **Nilfisk-ALTO** spare parts only.

A. Safety instructions

B. Technical data

C. Construction

D. Function

E. Troubleshooting

F. Service / Repair

G. Adjustment / Test

H. Wiring diagrams

I. Special tools /Spare parts

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For your own safety

Repair work should be carried out by persons instructed in electrical installations or by trained electricians only.

Observe valid safety regulations for electrical equipment. In particular, observe the following regulations:

IEC 60335-2-79

EN 60335-2-79

Additionally:

Also see national regulations

Before using the cleaner, always read the operating instructions and keep them readily available.

ESD measures (electrostatic discharge)

Take the following ESD precautions before carrying out any repairs to the electronics:

- Touch the earth conductor before repairing the cleaner (to discharge electrostatic charge from your body).
- Wear wrist band if necassary.
- Use a conductive floor covering or a conductive table cover.
- Never touch the printed circuit board or electronic components (always hold on to plastic).
- Transport electronic components in conductive packaging (e.g. ESD bag).

Parent item no: 107146800	Description: POSEIDON 7-67 FA 400/3/50 EU	
Service data	**Unit**	**Value**
Model		POSEIDON 7-67 FA
Item no. →		107146800
Technical Data ↓		
Pump:		
Pressure pump head @ Qiec	bar	184
Pressure pump outlet @ Qiec	bar	183
Pressure gun outlet @ Qiec	bar	150
Retaining pressure*	bar	-
Flow. Qiec	l/min	18,4
Suction height dry	m	1
Suction height primed	m	2,5
Pump type		C3
Number of pistons		4
Piston type		Full Ceramic
Stroke	mm	0
Pump oil type		Castrol ALPHASyn 150
Pump oil amount	l	1,1
Electric:		
Electric data		
Control voltage	V	
Highvoltage (HV) test voltage	V	1,5
HV Insulation resistance		1
Earth circuit resistance		0,2
Pump revolutions		1450
Electrical diagram no.		106420552
Unit Data:		
Nozzle size, water		NT 0680
Max. Inlet temp. (primed)	°C	-
Max. Inlet temp. (suction)	°C	70
Max. Inlet temp. (pressure fed)	°C	85
Gun Type		ERGO 2000 STD INCL. SWIVEL NILFISK
Primary Lance Type		TORNADO PLUS LANCE 1120 BEND
Secondary Lance Type		None
Hose		DN10 x 10m - Black
Guarantied sound power		88
Impactfactor calculated		0
Vibration ISO 5349, lance 1 / lance 2		#REF!
Protection Class		IPX5
Machine incl. standard acc.	kg	89
Size - Machine alone L x W x H	mm	#REF!

Parent item no: 107146801	Description: POSEIDON 7-67 FAXT 400/3/50 EU	
Service data	**Unit**	**Value**
Model		POSEIDON 7-67 FAXT
Item no. →		107146801
Technical Data ↓		
Pump:		
Pressure pump head @ Qiec	bar	190
Pressure pump outlet @ Qiec	bar	190
Pressure gun outlet @ Qiec	bar	149
Retaining pressure*	bar	-
Flow. Qiec	l/min	18,3
Suction height dry	m	1
Suction height primed	m	2,5
Pump type		C3
Number of pistons		4
Piston type		Full Ceramic
Stroke	mm	0
Pump oil type		Castrol ALPHASyn 150
Pump oil amount	l	1,1
Electric:		
Electric data		
Control voltage	V	
Highvoltage (HV) test voltage	V	1,5
HV Insulation resistance		1
Earth circuit resistance		0,2
Pump revolutions		1450
Electrical diagram no.		106420552
Unit Data:		
Nozzle size, water		NT 0680
Max. Inlet temp. (primed)	°C	-
Max. Inlet temp. (suction)	°C	70
Max. Inlet temp. (pressure fed)	°C	85
Gun Type		ERGO 2000 STD INCL. SWIVEL NILFISK
Primary Lance Type		TORNADO PLUS LANCE 1120 BEND
Secondary Lance Type		TURBOHAMMER PLUS 1040 STRAIGHT W/O
Hose		DN10 x 15m - Grey
Guarantied sound power		88
Impactfactor calculated		0
Vibration ISO 5349, lance 1 / lance 2		#REF!
Protection Class		IPX5
Machine incl. standard acc.	kg	95
Size - Machine alone L x W x H	mm	#REF!

Parent item no: 107146802	Description: POSEIDON 7-67 FFA 400/3/50 EU	
Service data	**Unit**	**Value**
Model		POSEIDON 7-67 FFA
Item no. →		107146802
Technical Data ↓		
Pump:		
Pressure pump head @ Qiec	bar	183
Pressure pump outlet @ Qiec	bar	183
Pressure gun outlet @ Qiec	bar	150
Retaining pressure*	bar	-
Flow. Qiec	l/min	18,4
Suction height dry	m	1
Suction height primed	m	2,5
Pump type		C3
Number of pistons		4
Piston type		Full Ceramic
Stroke	mm	0
Pump oil type		Castrol ALPHASyn 150
Pump oil amount	l	1,1
Electric:		
Electric data		
Control voltage	V	
Highvoltage (HV) test voltage	V	1,5
HV Insulation resistance		1
Earth circuit resistance		0,2
Pump revolutions		1450
Electrical diagram no.		106420552
Unit Data:		
Nozzle size, water		NT 0680
Max. Inlet temp. (primed)	°C	-
Max. Inlet temp. (suction)	°C	70
Max. Inlet temp. (pressure fed)	°C	85
Gun Type		ERGO 2000 STD INCL. SWIVEL NILFISK
Primary Lance Type		TORNADO PLUS LANCE 1120 BEND
Secondary Lance Type		None
Hose		DN10 x 10m - Grey
Guarantied sound power		88
Impactfactor calculated		0
Vibration ISO 5349, lance 1 / lance 2		#REF!
Protection Class		IPX5
Machine incl. standard acc.	kg	89
Size - Machine alone L x W x H	mm	#REF!

Parent item no: 107146803	Description: POSEIDON 7-67 FA 230;400/3/50 NO	
Service data	**Unit**	**Value**
Model		POSEIDON 7-67 FA
Item no. →		107146803
Technical Data ↓		
Pump:		
Pressure pump head @ Qiec	bar	183
Pressure pump outlet @ Qiec	bar	183
Pressure gun outlet @ Qiec	bar	150
Retaining pressure*	bar	-
Flow. Qiec	l/min	18,4
Suction height dry	m	1
Suction height primed	m	2,5
Pump type		C3
Number of pistons		4
Piston type		Full Ceramic
Stroke	mm	0
Pump oil type		Castrol ALPHASyn 150
Pump oil amount	l	1,1
Electric:		
Electric data		
Control voltage	V	
Highvoltage (HV) test voltage	V	1,5
HV Insulation resistance		1
Earth circuit resistance		0,2
Pump revolutions		1450
Electrical diagram no.		106420556
Unit Data:		
Nozzle size, water		NT 0680
Max. Inlet temp. (primed)	°C	-
Max. Inlet temp. (suction)	°C	70
Max. Inlet temp. (pressure fed)	°C	85
Gun Type		ERGO 2000 STD INCL. SWIVEL NILFISK
Primary Lance Type		TORNADO PLUS LANCE 1120 BEND
Secondary Lance Type		None
Hose		DN10 x 10m - Black
Guarantied sound power		89
Impactfactor calculated		0
Vibration ISO 5349, lance 1 / lance 2		#REF!
Protection Class		IPX5
Machine incl. standard acc.	kg	90
Size - Machine alone L x W x H	mm	#REF!

Parent item no: 107146804	Description: POSEIDON 7-67 FA 200/3/50 JP	
Service data	**Unit**	**Value**
Model		POSEIDON 7-67 FA
Item no. →		107146804
Technical Data ↓		
Pump:		
Pressure pump head @ Qiec	bar	183
Pressure pump outlet @ Qiec	bar	183
Pressure gun outlet @ Qiec	bar	150
Retaining pressure*	bar	230
Flow. Qiec	l/min	18,4
Suction height dry	m	1
Suction height primed	m	2,5
Pump type		C3
Number of pistons		4
Piston type		Full Ceramic
Stroke	mm	0
Pump oil type		Castrol ALPHASyn 150
Pump oil amount	l	1,1
Electric:		
Electric data		
Control voltage	V	
Highvoltage (HV) test voltage	V	1,5
HV Insulation resistance		1
Earth circuit resistance		0,2
Pump revolutions		1450
Electrical diagram no.		106420555
Unit Data:		
Nozzle size, water		NT 0680
Max. Inlet temp. (primed)	°C	-
Max. Inlet temp. (suction)	°C	70
Max. Inlet temp. (pressure fed)	°C	85
Gun Type		ERGO 2000 STD INCL. SWIVEL NILFISK
Primary Lance Type		TORNADO PLUS LANCE 1120 BEND
Secondary Lance Type		None
Hose		DN10 x 10m - Black
Guarantied sound power		88
Impactfactor calculated		0
Vibration ISO 5349, lance 1 / lance 2		#REF!
Protection Class		IPX5
Machine incl. standard acc.	kg	91
Size - Machine alone L x W x H	mm	#REF!

Parent item no: 107146805	Description: POSEIDON 7-67 FA 200/3/60 JP	
Service data	**Unit**	**Value**
Model		POSEIDON 7-67 FA
Item no. →		107146805
Technical Data ↓		
Pump:		
Pressure pump head @ Qiec	bar	185
Pressure pump outlet @ Qiec	bar	185
Pressure gun outlet @ Qiec	bar	151
Retaining pressure*	bar	230
Flow. Qiec	l/min	18,5
Suction height dry	m	1
Suction height primed	m	2,5
Pump type		C3
Number of pistons		4
Piston type		Full Ceramic
Stroke	mm	0
Pump oil type		Castrol ALPHASyn 150
Pump oil amount	l	1,1
Electric:		
Electric data		
Control voltage	V	
Highvoltage (HV) test voltage	V	1,5
HV Insulation resistance		1
Earth circuit resistance		0,2
Pump revolutions		1740
Electrical diagram no.		106420555
Unit Data:		
Nozzle size, water		NT 0680
Max. Inlet temp. (primed)	°C	-
Max. Inlet temp. (suction)	°C	70
Max. Inlet temp. (pressure fed)	°C	85
Gun Type		ERGO 2000 STD INCL. SWIVEL NILFISK
Primary Lance Type		TORNADO PLUS LANCE 1120 BEND
Secondary Lance Type		None
Hose		DN10 x 10m - Black
Guarantied sound power		88
Impactfactor calculated		0
Vibration ISO 5349, lance 1 / lance 2		#REF!
Protection Class		IPX5
Machine incl. standard acc.	kg	91
Size - Machine alone L x W x H	mm	#REF!

Parent item no: 107146806	Description: POSEIDON 7-67 FA 220;440/3/60 EXPT	
Service data	**Unit**	**Value**
Model		POSEIDON 7-67 FA
Item no. →		107146806
Technical Data ↓		
Pump:		
Pressure pump head @ Qiec	bar	185
Pressure pump outlet @ Qiec	bar	195
Pressure gun outlet @ Qiec	bar	151
Retaining pressure*	bar	230
Flow. Qiec	l/min	18,5
Suction height dry	m	1
Suction height primed	m	2,5
Pump type		C3
Number of pistons		4
Piston type		Full Ceramic
Stroke	mm	0
Pump oil type		Castrol ALPHASyn 150
Pump oil amount	l	1,1
Electric:		
Electric data		
Control voltage	V	
Highvoltage (HV) test voltage	V	1,5
HV Insulation resistance		1
Earth circuit resistance		0,2
Pump revolutions		1740
Electrical diagram no.		106420556
Unit Data:		
Nozzle size, water		NT 0680
Max. Inlet temp. (primed)	°C	-
Max. Inlet temp. (suction)	°C	70
Max. Inlet temp. (pressure fed)	°C	85
Gun Type		ERGO 2000 STD INCL. SWIVEL NILFISK
Primary Lance Type		TORNADO PLUS LANCE 1120 BEND
Secondary Lance Type		None
Hose		DN10 x 15m - Black
Guarantied sound power		88
Impactfactor calculated		0
Vibration ISO 5349, lance 1 / lance 2		#REF!
Protection Class		IPX5
Machine incl. standard acc.	kg	93
Size - Machine alone L x W x H	mm	#REF!

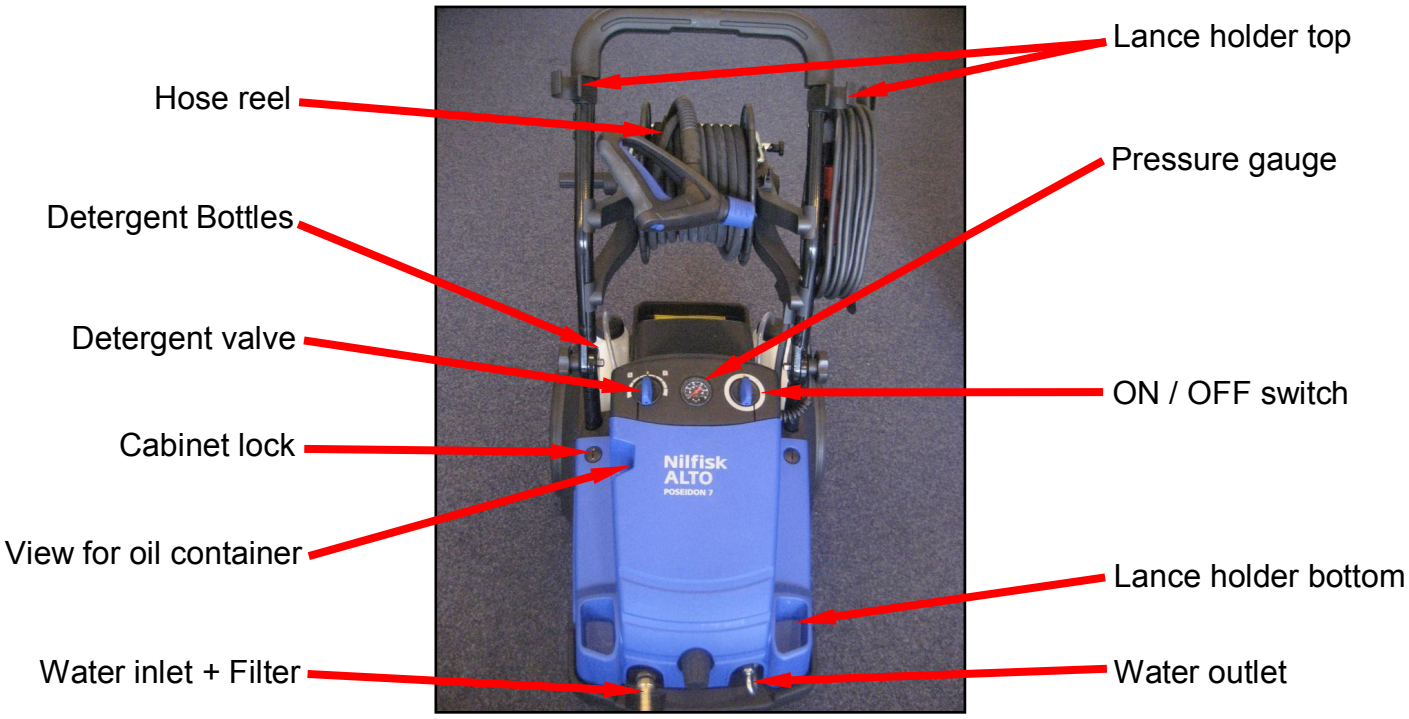
Parent item no: 107146808	Description: POSEIDON 7-52 FA 220-240/1/60 USA	
Service data	**Unit**	**Value**
Model		POSEIDON 7-52 FA
Item no. →		107146808
Technical Data ↓		
Pump:		
Pressure pump head @ Qiec	bar	147
Pressure pump outlet @ Qiec	bar	147
Pressure gun outlet @ Qiec	bar	117
Retaining pressure*	bar	200
Flow. Qiec	l/min	17,2
Suction height dry	m	1
Suction height primed	m	2,5
Pump type		C3
Number of pistons		4
Piston type		Full Ceramic
Stroke	mm	0
Pump oil type		Castrol ALPHASyn 150
Pump oil amount	l	1,1
Electric:		
Electric data		
Control voltage	V	
Highvoltage (HV) test voltage	V	1,5
HV Insulation resistance		1
Earth circuit resistance		0,2
Pump revolutions		1740
Electrical diagram no.		106420566
Unit Data:		
Nozzle size, water		NT 0700
Max. Inlet temp. (primed)	°C	-
Max. Inlet temp. (suction)	°C	70
Max. Inlet temp. (pressure fed)	°C	85
Gun Type		ERGO 2000 STD INCL. SWIVEL NILFISK
Primary Lance Type		TORNADO PLUS LANCE 1120 BEND
Secondary Lance Type		None
Hose		DN10 x 15m - Black
Guarantied sound power		88
Impactfactor calculated		0
Vibration ISO 5349, lance 1 / lance 2		#REF!
Protection Class		IPX5
Machine incl. standard acc.	kg	94
Size - Machine alone L x W x H	mm	#REF!

Parent item no: 107146809	Description: GERNI POSEIDON 7-67 FA 400/3/50	
Service data	**Unit**	**Value**
Model		GERNI POSEIDON 7-67 FA
Item no. →		107146809
Technical Data ↓		
Pump:		
Pressure pump head @ Qiec	bar	183
Pressure pump outlet @ Qiec	bar	183
Pressure gun outlet @ Qiec	bar	150
Retaining pressure*	bar	-
Flow. Qiec	l/min	18,4
Suction height dry	m	1
Suction height primed	m	2,5
Pump type		C3
Number of pistons		4
Piston type		Full Ceramic
Stroke	mm	0
Pump oil type		Castrol ALPHASyn 150
Pump oil amount	l	1,1
Electric:		
Electric data		
Control voltage	V	
Highvoltage (HV) test voltage	V	1,5
HV Insulation resistance		1
Earth circuit resistance		0,2
Pump revolutions		1450
Electrical diagram no.		106420552
Unit Data:		
Nozzle size, water		NT 0680
Max. Inlet temp. (primed)	°C	-
Max. Inlet temp. (suction)	°C	70
Max. Inlet temp. (pressure fed)	°C	85
Gun Type		ERGO 2000 ST GUN W. HOSE SWIVEL - GERNI
Primary Lance Type		TORNADO PLUS LANCE 1120 BEND
Secondary Lance Type		None
Hose		DN10 x 10m - Black
Guarantied sound power		88
Impactfactor calculated		0
Vibration ISO 5349, lance 1 / lance 2		#REF!
Protection Class		IPX5
Machine incl. standard acc.	kg	89
Size - Machine alone L x W x H	mm	#REF!

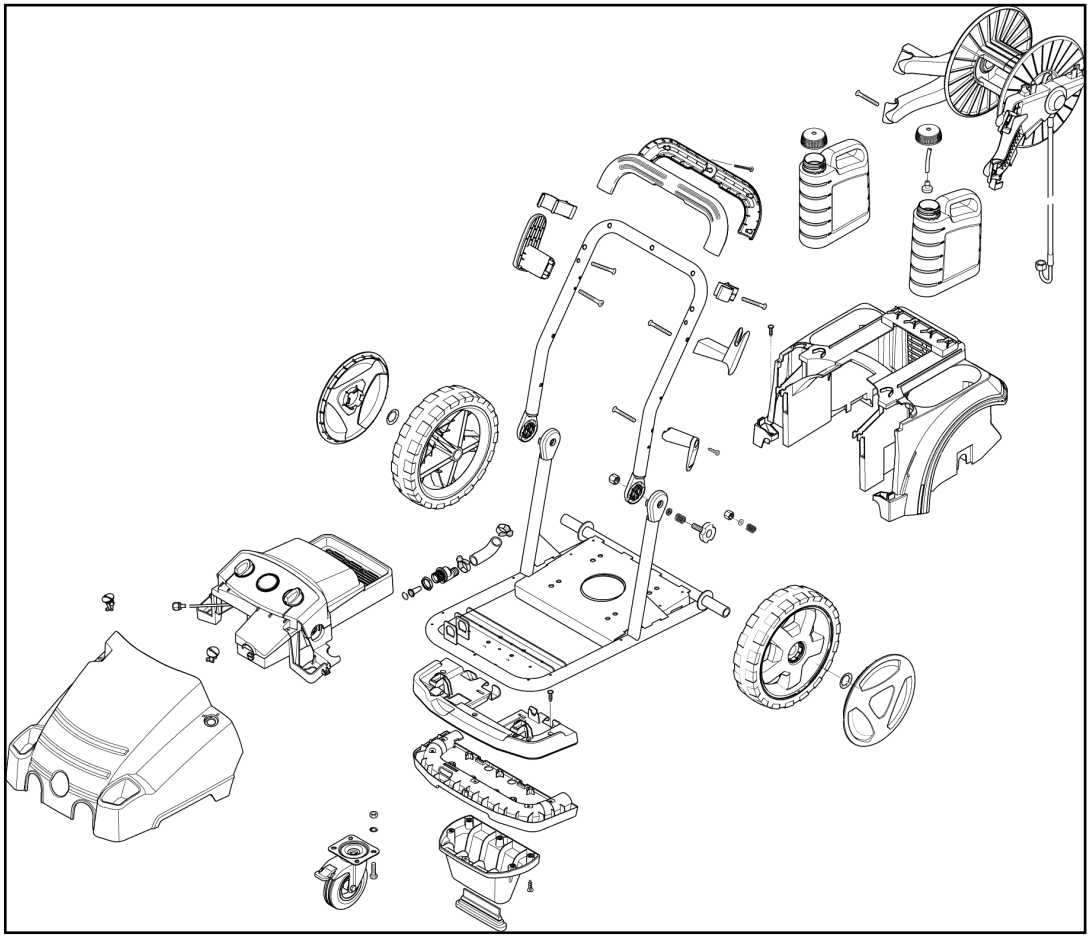
Parent item no: 107146811	Description: POSEIDON 7-67 FA 400/3/50 DK	
Service data	**Unit**	**Value**
Model		POSEIDON 7-67 FA
Item no. →		107146811
Technical Data ↓		
Pump:		
Pressure pump head @ Qiec	bar	183
Pressure pump outlet @ Qiec	bar	183
Pressure gun outlet @ Qiec	bar	150
Retaining pressure*	bar	-
Flow. Qiec	l/min	18,4
Suction height dry	m	1
Suction height primed	m	2,5
Pump type		C3
Number of pistons		4
Piston type		Full Ceramic
Stroke	mm	0
Pump oil type		Castrol ALPHASyn 150
Pump oil amount	l	1,1
Electric:		
Electric data		
Control voltage	V	
Highvoltage (HV) test voltage	V	1,5
HV Insulation resistance		1
Earth circuit resistance		0,2
Pump revolutions		1450
Electrical diagram no.		106420552
Unit Data:		
Nozzle size, water		NT 0680
Max. Inlet temp. (primed)	°C	-
Max. Inlet temp. (suction)	°C	70
Max. Inlet temp. (pressure fed)	°C	85
Gun Type		ERGO 2000 STD INCL. SWIVEL NILFISK
Primary Lance Type		POWERSPEED VARIO PLUS 1090 BEND W/O NOZZLE
Secondary Lance Type		None
Hose		DN10 x 10m - Black
Guarantied sound power		88
Impactfactor calculated		0
Vibration ISO 5349, lance 1 / lance 2		#REF!
Protection Class		IPX5
Machine incl. standard acc.	kg	89
Size - Machine alone L x W x H	mm	#REF!

Parent item no: 107146812	Description: POSEIDON 7-67 FBFA 400/3/50 EU	
Service data	**Unit**	**Value**
Model		POSEIDON 7-67 FBFA
Item no. →		107146812
Technical Data ↓		
Pump:		
Pressure pump head @ Qiec	bar	183
Pressure pump outlet @ Qiec	bar	183
Pressure gun outlet @ Qiec	bar	150
Retaining pressure*	bar	-
Flow. Qiec	l/min	18,4
Suction height dry	m	1
Suction height primed	m	2,5
Pump type		C3
Number of pistons		4
Piston type		Full Ceramic
Stroke	mm	0
Pump oil type		Castrol ALPHASyn 150
Pump oil amount	l	1,1
Electric:		
Electric data		
Control voltage	V	
Highvoltage (HV) test voltage	V	1,5
HV Insulation resistance		1
Earth circuit resistance		0,2
Pump revolutions		1450
Electrical diagram no.		106420552
Unit Data:		
Nozzle size, water		NT 0680
Max. Inlet temp. (primed)	°C	-
Max. Inlet temp. (suction)	°C	70
Max. Inlet temp. (pressure fed)	°C	85
Gun Type		ERGO 2000 STD INCL. SWIVEL NILFISK
Primary Lance Type		TORNADO PLUS LANCE 1120 BEND
Secondary Lance Type		None
Hose		DN10 x 10m - Grey
Guarantied sound power		88
Impactfactor calculated		0
Vibration ISO 5349, lance 1 / lance 2		#REF!
Protection Class		IPX5
Machine incl. standard acc.	kg	94
Size - Machine alone L x W x H	mm	#REF!

Overview Poseidon 7

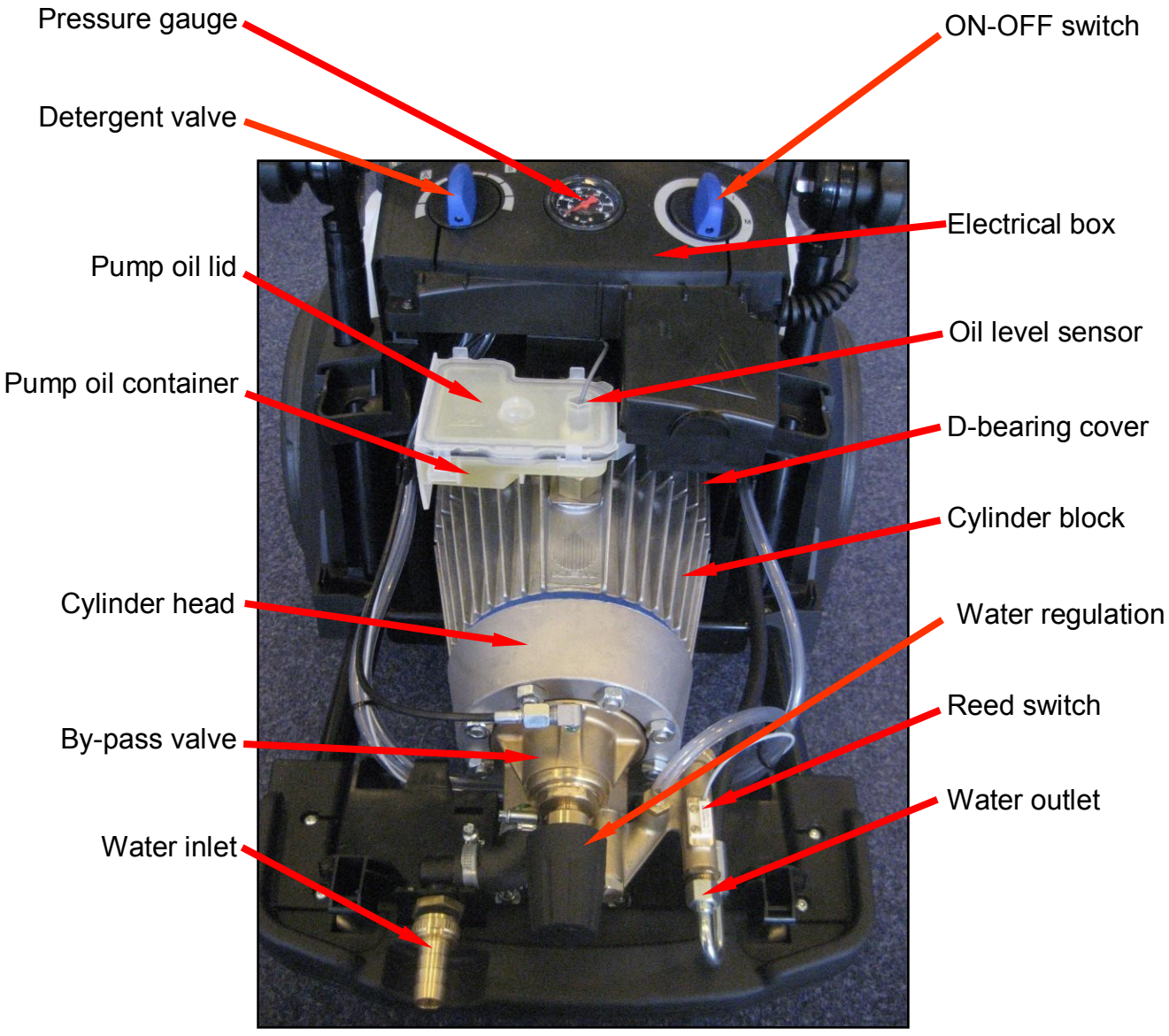


Pic. C1: POSEIDON 7



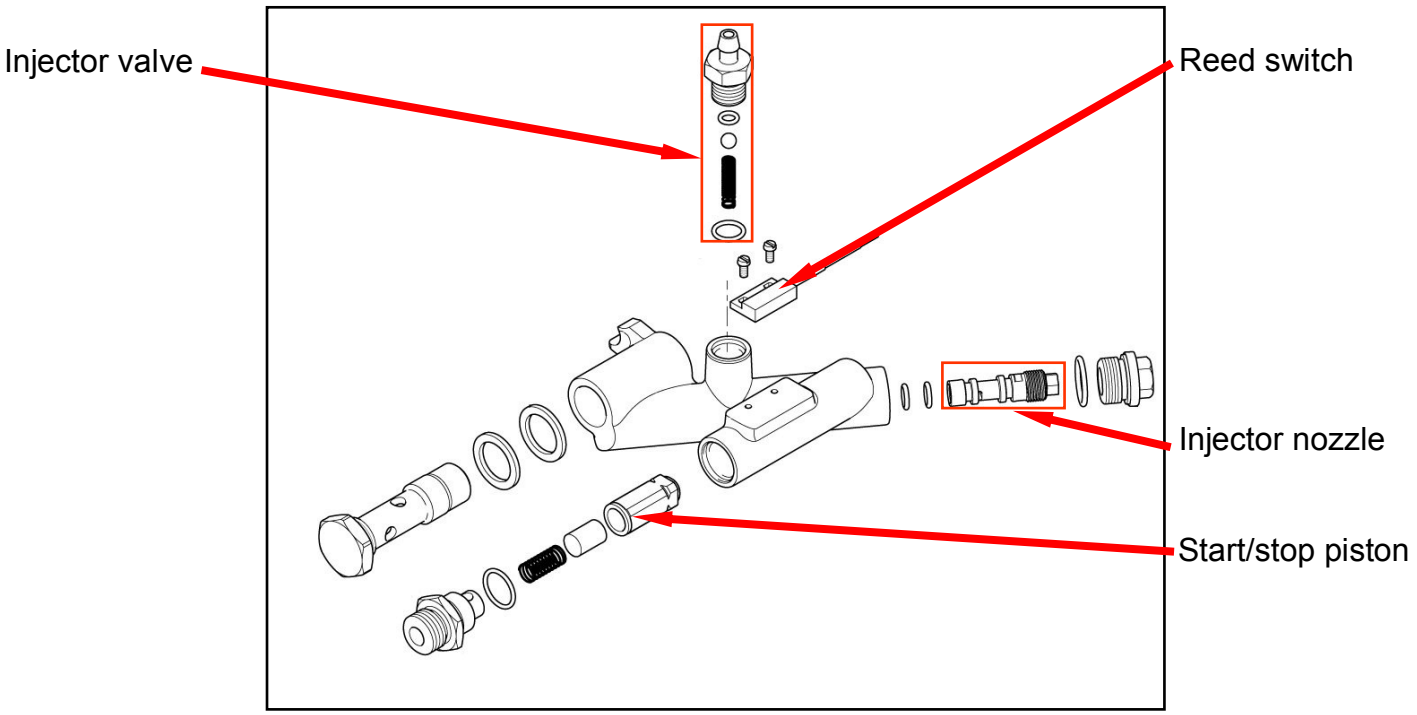
Pic. C2: POSEIDON 7 Cabinet & frame parts

Overview Poseidon 7



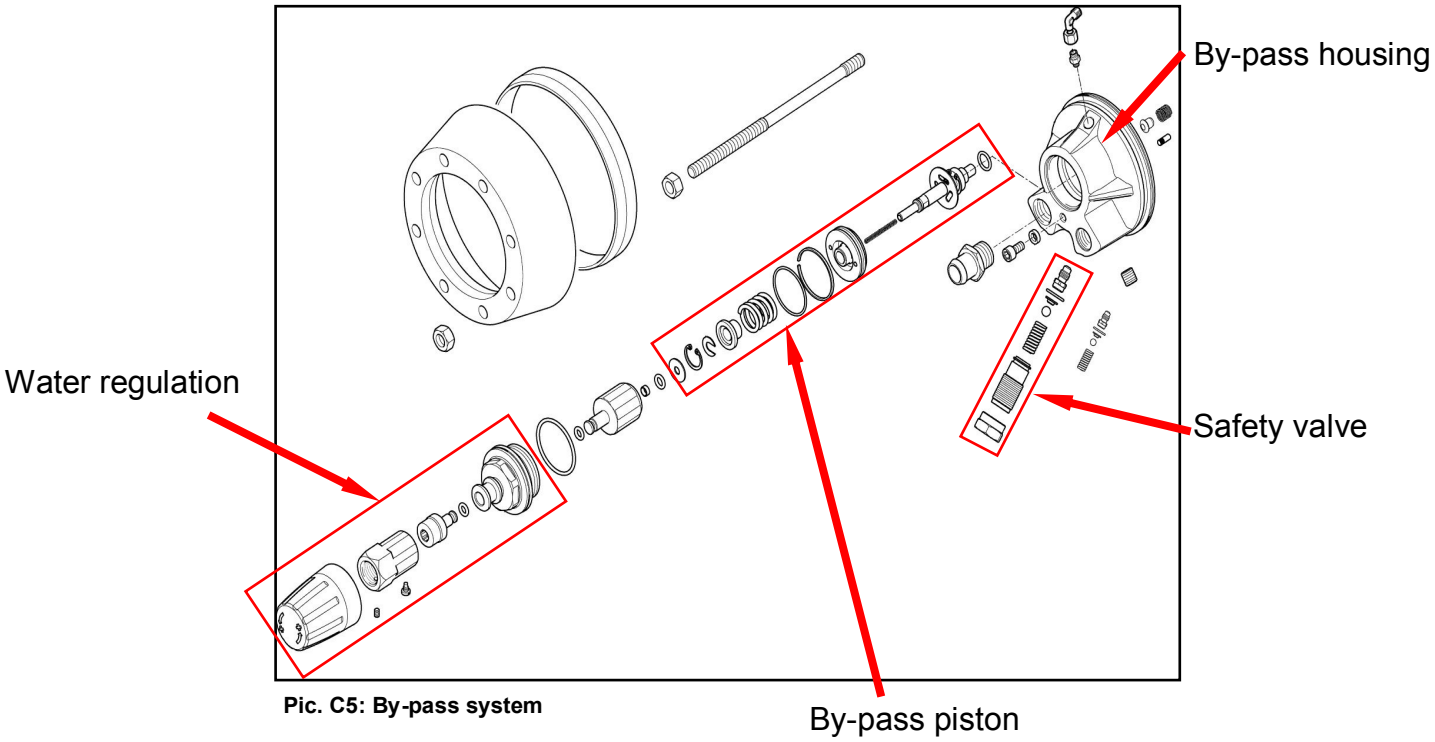
Pic. C3: Poseidon 7 without cabinet

C3 Water outlet



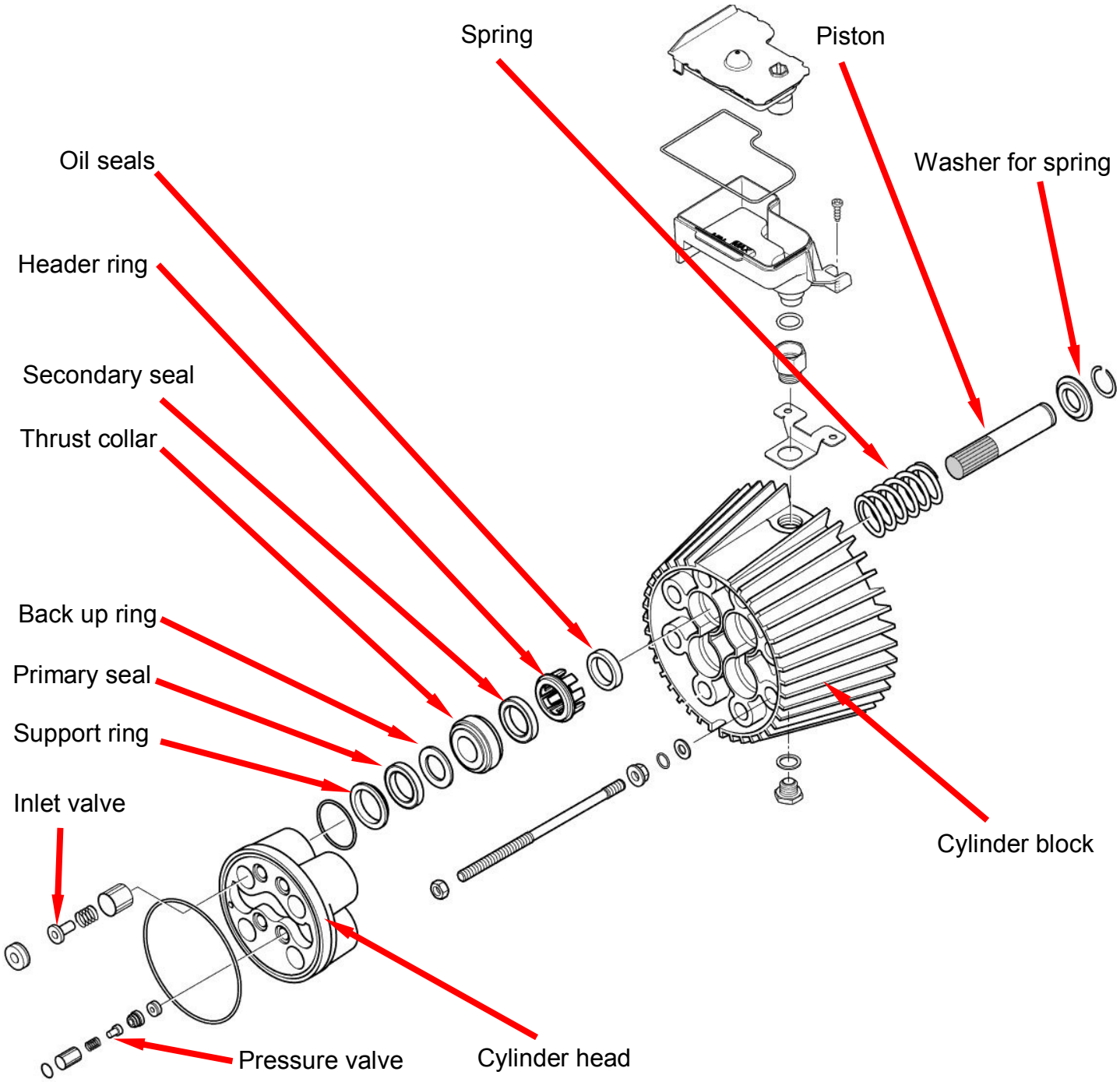
Pic. C4: Water outlet

C3 By-pass system



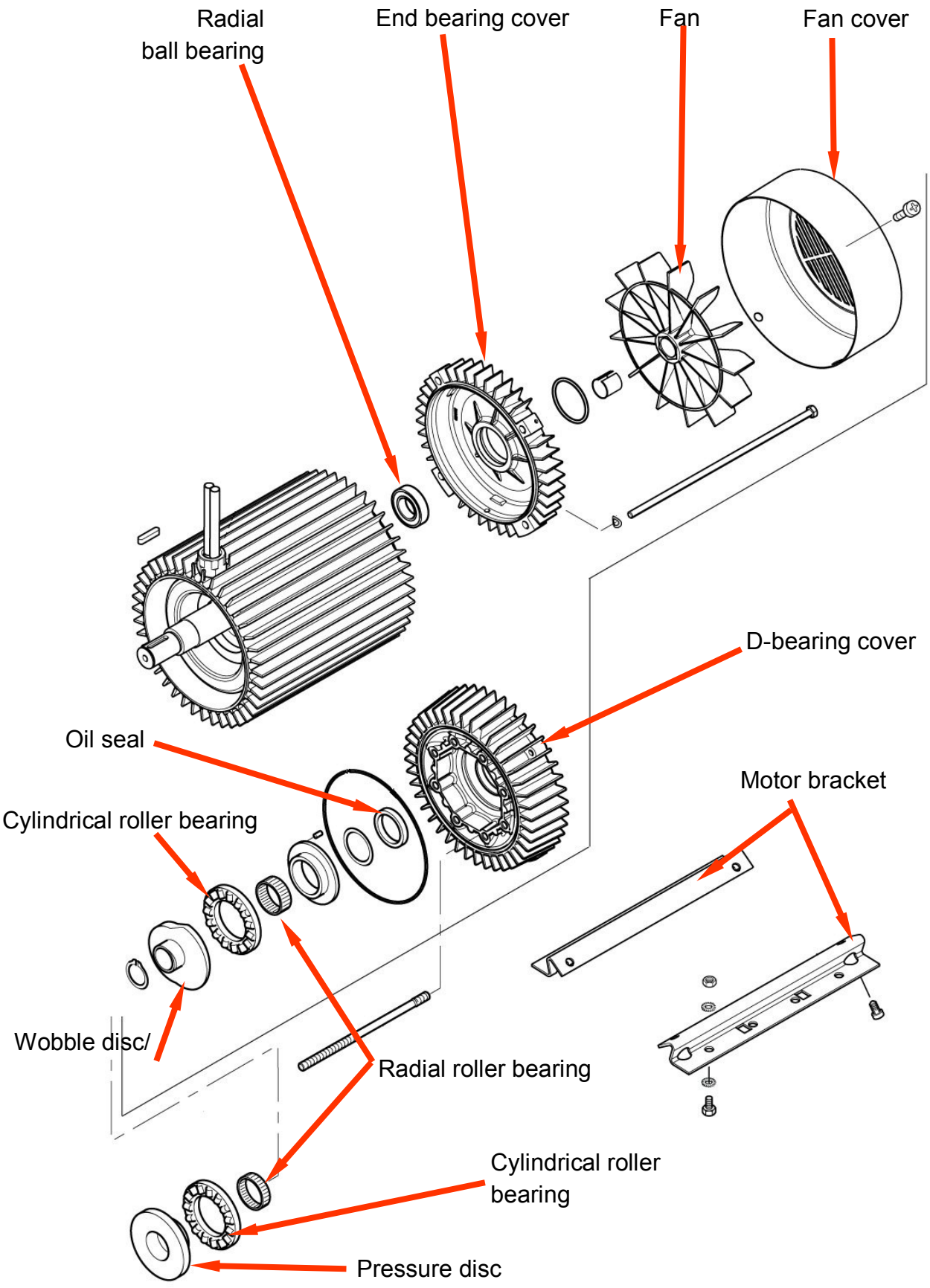
Pic. C5: By-pass system

Overview C3 Pump



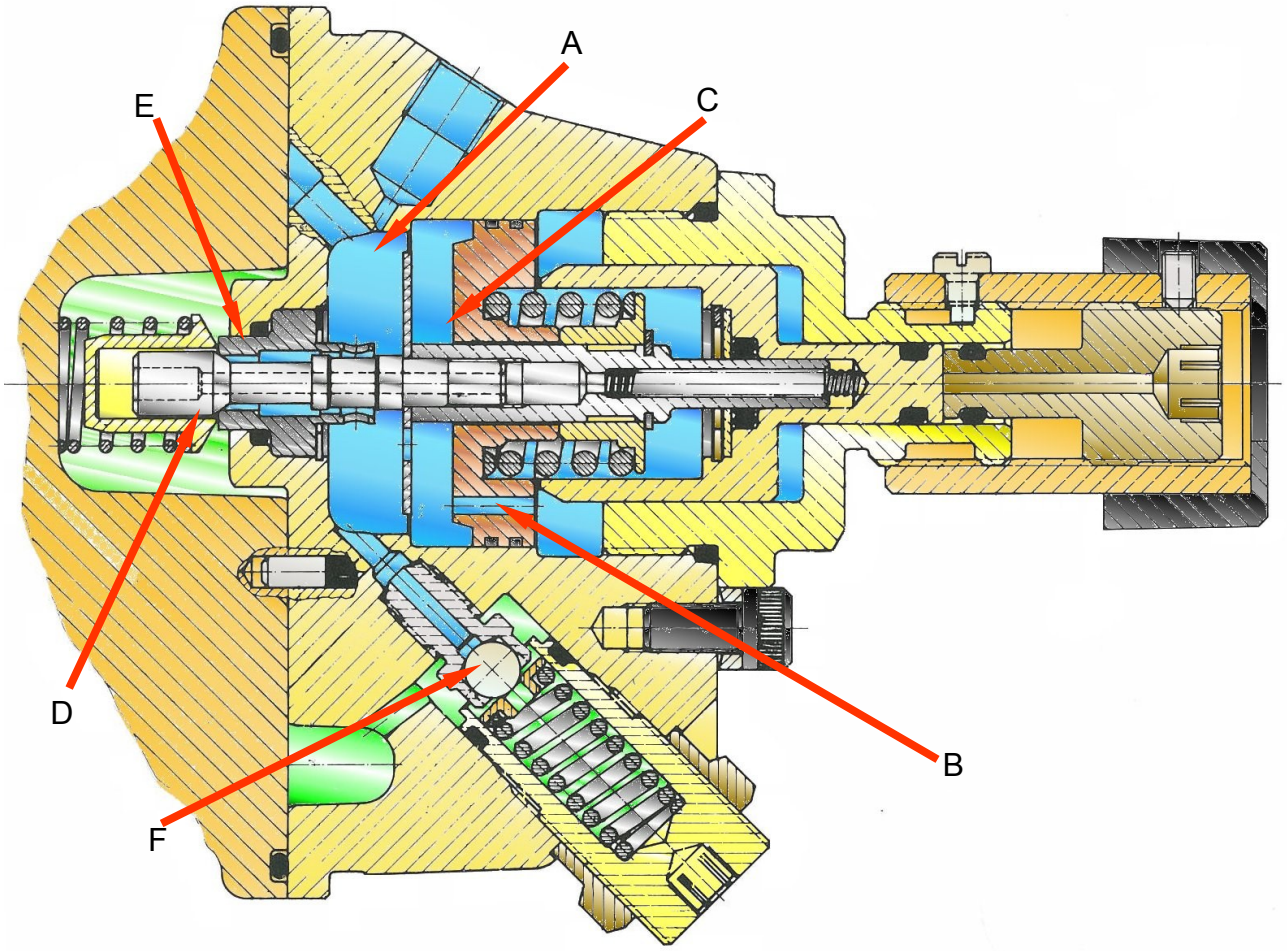
Pic. C6: Pump parts

Overview C3 Motor/Pump



Pic. C7: Motor/pump unit

Function By-pass system



Pic. D1: By-pass system

The bypass valve has 4 functions:

1. Protect the machine against excess pressure.
2. Relieve the pressure in bypass.
3. Fast conversion to high-pressure.
4. Ensure 0 pressure when the machine is stopped.

Operation:

The water from the pump is led into chamber A of the bypass valve.

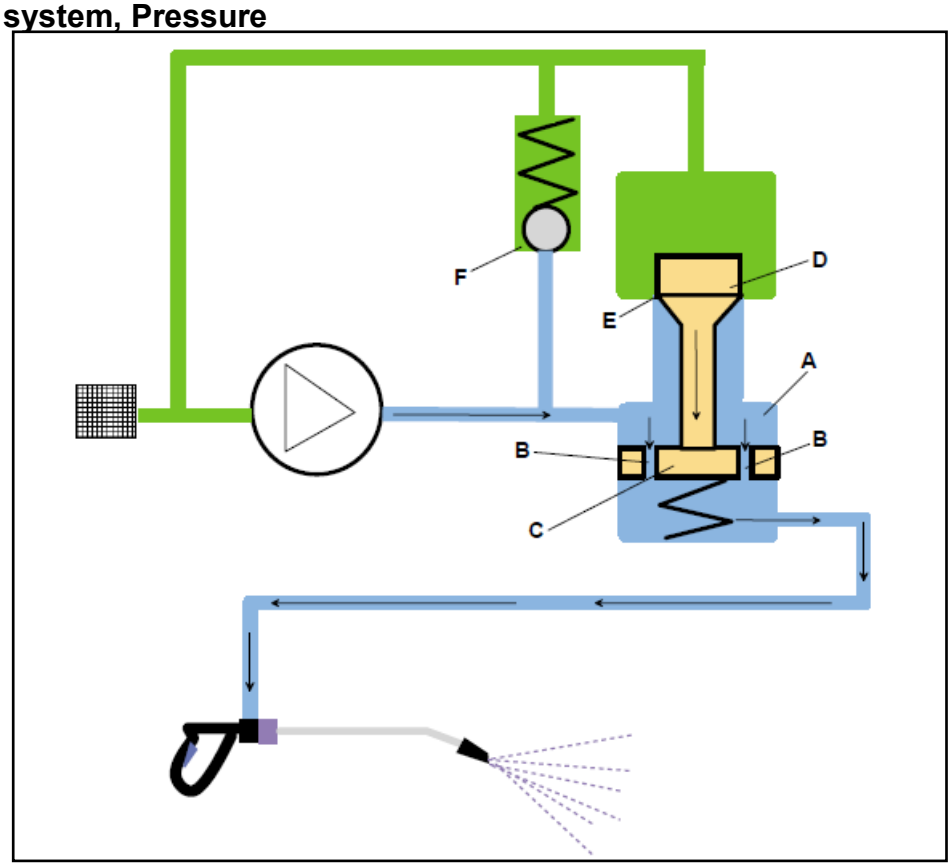
From there, the water passes through hole B in piston C and out of the machine.

This leads to a pressure imbalance in piston C, which keeps valve disc D closed to valve seat E.

Bypass:

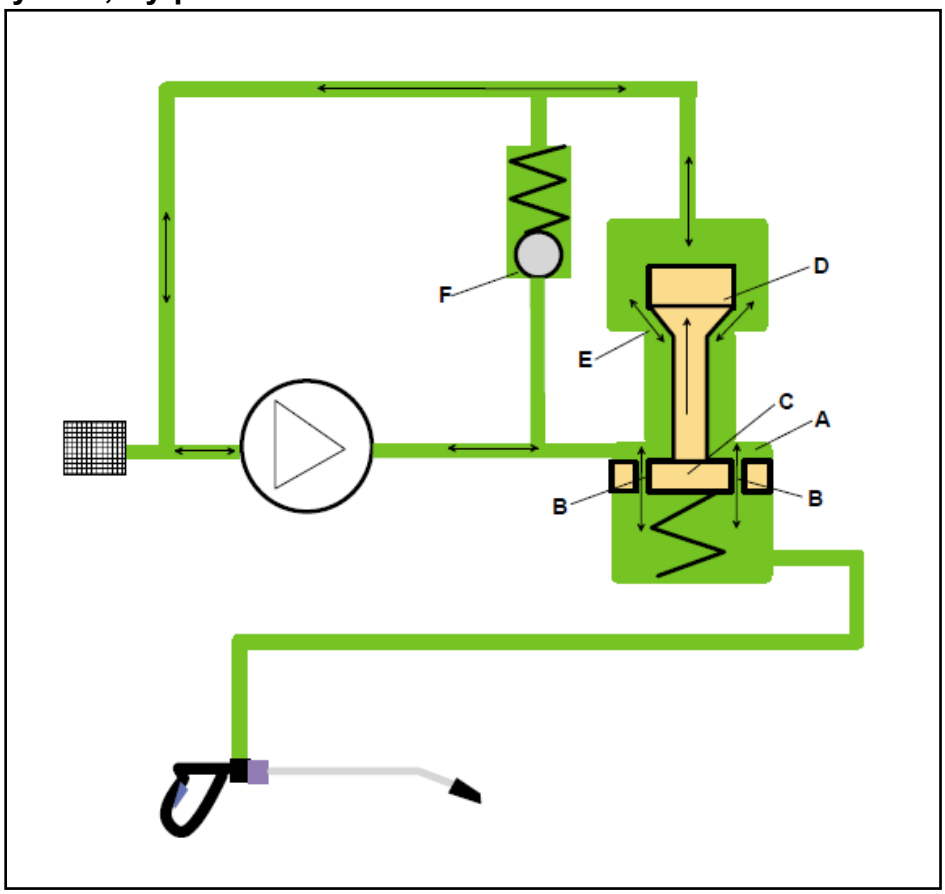
When water consumption stops (the spray handle is released), pressure increases briefly until safety valve F opens upon reaching the pressure setting, which should be adjusted to 25-30 bars over working pressure. This causes the pressure drop in piston C to disappear, and valve disc D moves from valve seat E. The machine is now running in bypass.

By-pass system, Pressure



Pic. D2: By-pass system

By-pass system, By-pass



Pic. D3: By-pass system

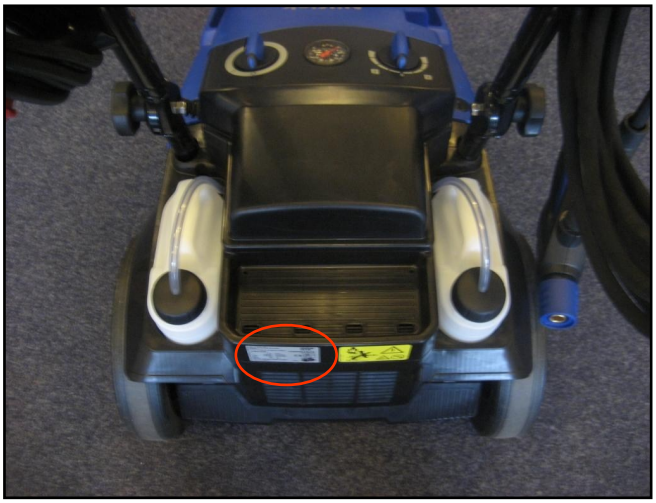
General failures.

Fault	Cause	Remedy
Pressure drop	- Air in the system.	- Vent the system by operating the spray gun several times at short intervals .If necessarly operate the cleaner for a short time without the High pressure hose connected.
	- High pressure nozzle blocked / worn.	- Clean / replace the high pressure nozzle.
	- Pressure control on the spray lance is not set correctly.	- Set the required working pressure.
	- Detergent container empty.	- Change container or close detergent valve.
	- Water inlet temperature too high.	- See technical data part ”B”.
Pressure fluctuations	- Lack of water	- Open water tap.
	- Water inlet hose is too long or its cross-section too small.	- Use specified water inlet hose (Refer to user manual).
	- Lack of water caused by blocked water filter.	- Clean the water filter in the water connection. (Never work without water filter).
	- Lack of water because max. permissible suction height has not been heeded.	- See technical data part ”B”
	-Pump sucks in air (suction mode)	- Check that the suction set is air tight.
The motor does not start when the machine is switced on.	- The plug is not inserted properly, i.e. there is no current.	- Check the plug, lead and switch. If necessary have them replaced by a trained electrician.
	- The main fuse is switced off.	- Switch on the main fuse.

Fig. E.1: Troubleshooting 1

General failures.

Fault	Cause	Remedy
When the cleaner is switched on the motor buzzes without starting.	– The main voltage is too low or there is a phase failure (3 ph model). – The pump is blocked or frozen. – Incorrect cross-section or lenght of the extension lead.	- Have the electrical connections checked. - Pump needs service (see part ”F”). - Use lead with correct cross section and length.
The motor switches off.	– The overload protection has been activated due to overheating or overloading of the motor. – High pressure nozzle is dirty.	- Check that the main voltage and the cleaner voltage are the same. Switch off the cleaner and allow it to cool for at least 3 minutes. - Change the high pressure nozzle.
Cleaner starts / stops by itself.	– Leakage on outlet side.	- Locate the leak and repair it.
No detergents drawn in.	– Injector is dirty or suction hose is blocked. – Detergent container empty. – The cap on the nozzle is not set at low pressure.	- Clean. - Top up/change the container. - Turn cap of the FlexoPower nozzle towards ”CHEM” up to the stop.
Working pressure too low. Working pressure too low and loud noise comming from pump .	- Suction - and pressure valves leaking. - Piston U-sleves in pump worn. - Piston stocked in pump.	- Replace parts. - Check pump for damaged parts — demount and reassemble pump housing with the right torque.



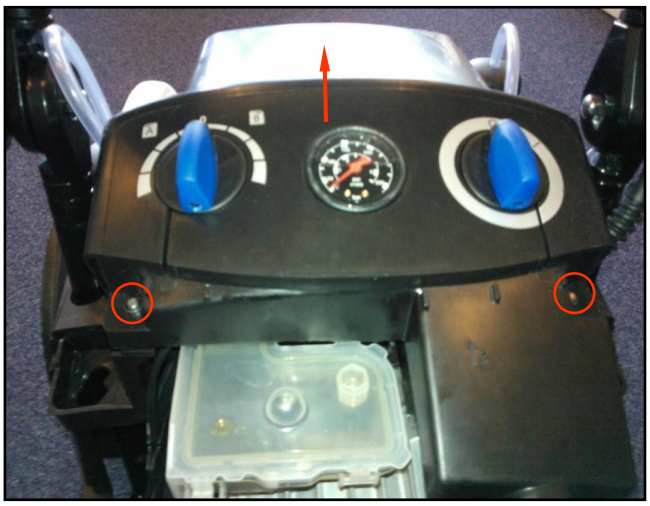
Pic. F1: Data Plate

- Identify the machine version at the dataplate.
- Find the techincal data for the machine version in this manual chapter ”A”.

Pic. F2: Cabinet

The cabinet is demounted by turning the two lock screws (1) on top of the cabinet.

Open the cabinet and pull forward.

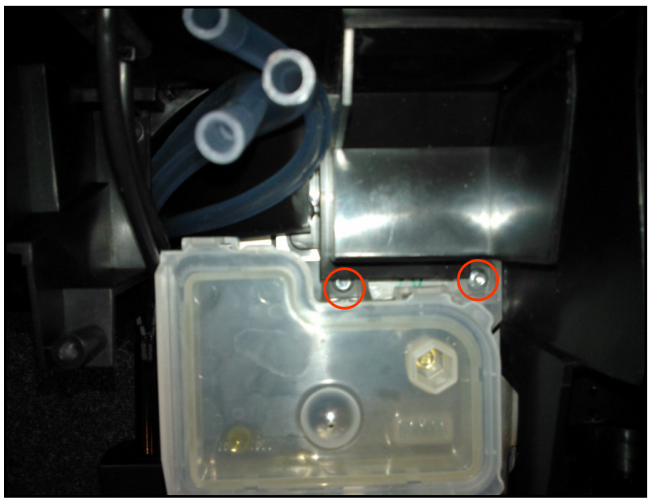


Pic. F3: E– box

The lid for the electrical box is fitted with

2 x torx T20 screws.

Remove the screws and push the lid back-wards to open the E-box.

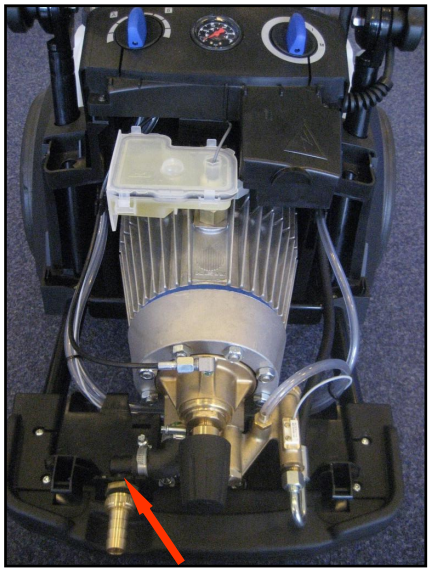


Pic. F4: Oil container

The oil container is fitted to the pump by the 2x Torx 20 screws.

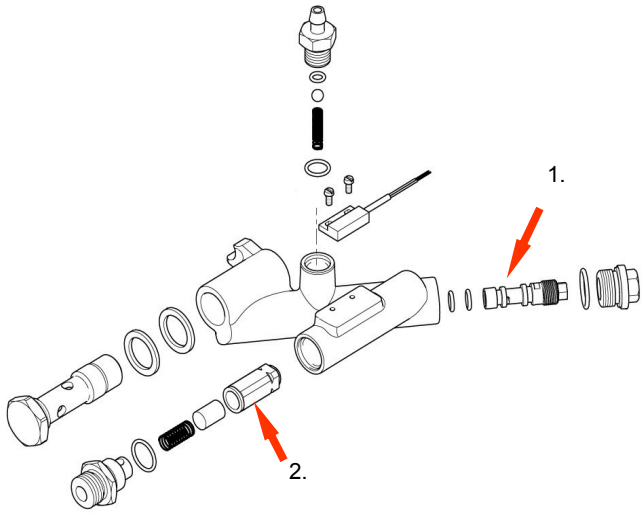
C3 Pump

By-pass valve.



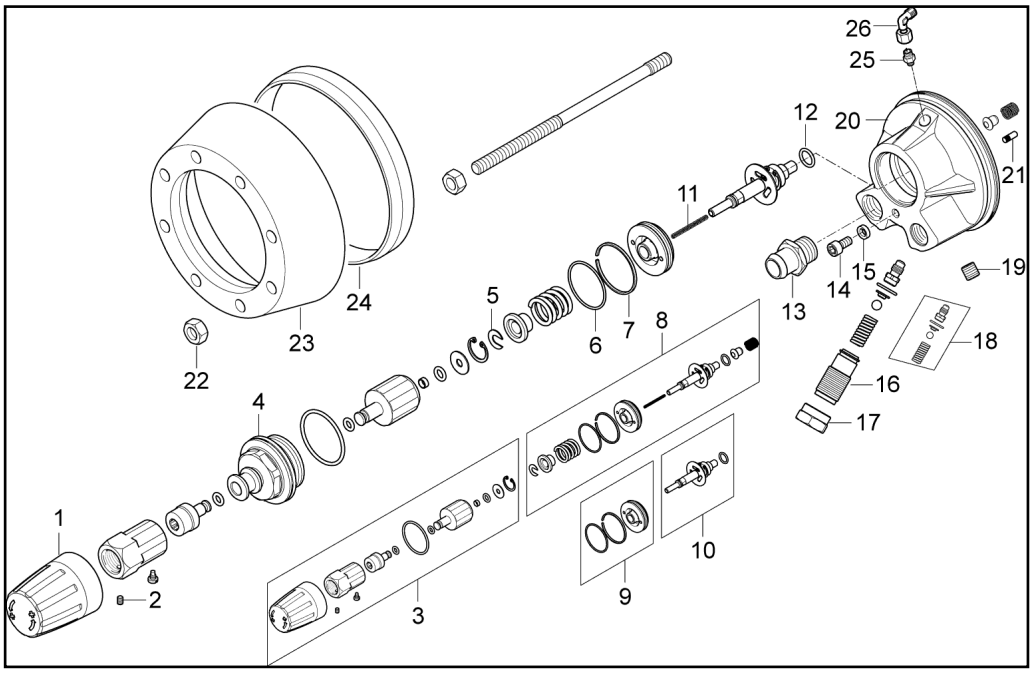
Pic. F5: Water inlet filter

Water inlet filter is placed in the housing for hose connector. Remove the circlip and filter check for impurities.



Pic. F6: Water outlet/ Injector

1. The injector nozzle is placed in the water outlet and is dismounted with a 10mm socket wrench.
2. Start/stop piston is placed behind the out let coupling.



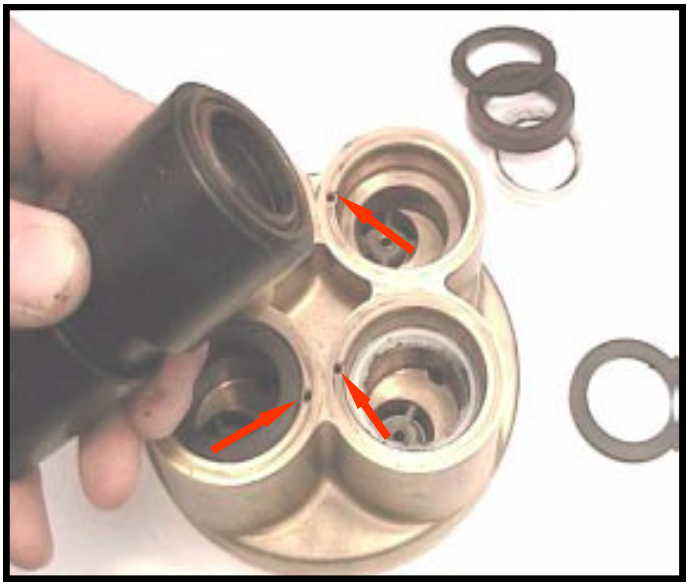
Pic. F7: By-pass system

All important wear parts in the by-pass system are available as spare part kits.

C3 Pump

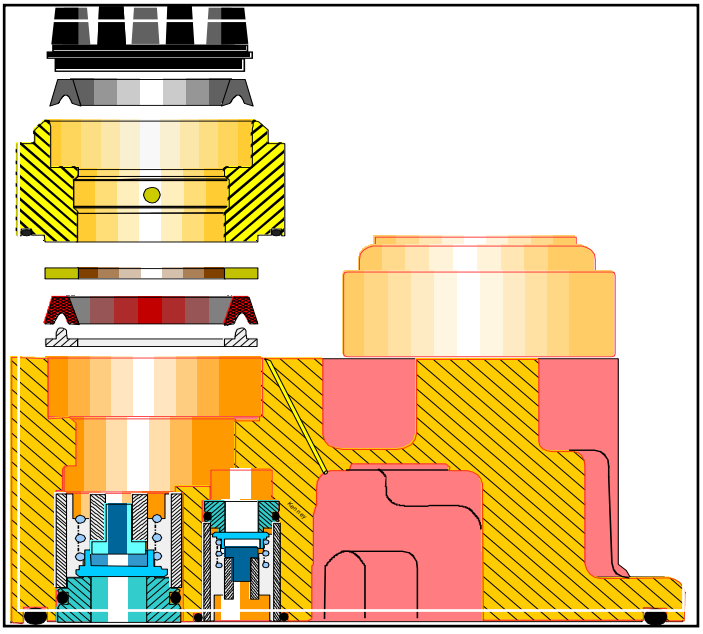
Pic. F8: Valve seats

Use an adequate tool to remove the valve seats. In the picture puller 1216506 is used.



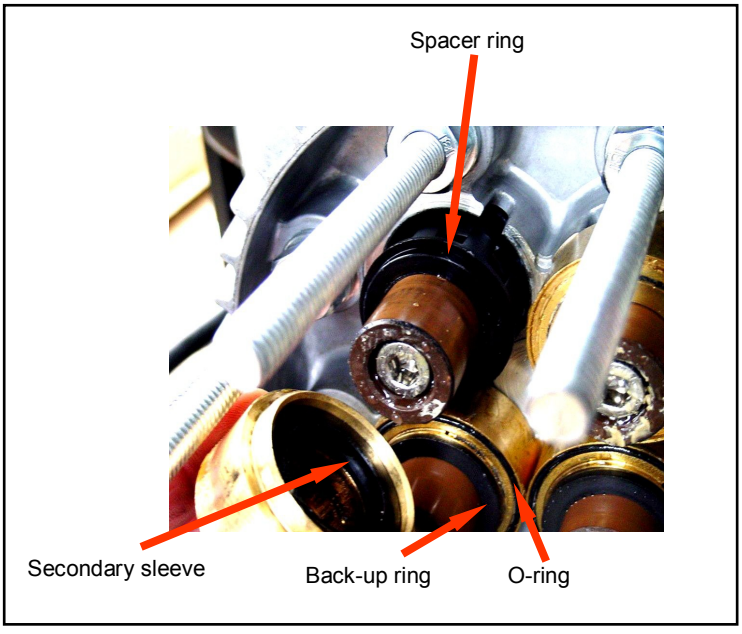
Pic. F9: Primary seals

Mounting of textile sleeves by means of tool no. 1220090. It is an advantage if the sleeves have been in a water bath for 3-4 hours before mounting them. Do not forget to blow air through the ducts.



Pic. F10: Water seals

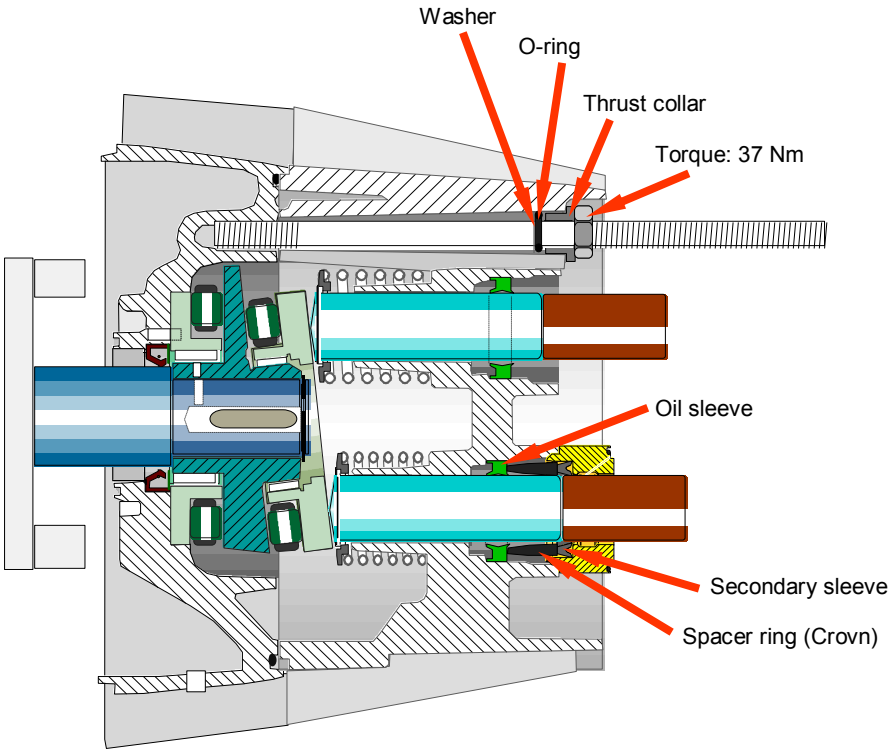
Be aware of the right direction and order of the pump parts by replacement.



Pic. F11: Water seals

Always replace secondary sleeves when replacing pressure sleeves. Check that there is a free passage from the drain holes.

C3 Pump



Pic. F12: Water seals

Drain off the oil. Loosen the 8 bolts gradually (because of the spring load). Special box head no.1206762 may be used.

Mount new O-rings on studs with tool no. 1206812.

Pic. F13: Oil seals

Carefully tip out the oil sleeves with an adequate screwdriver and discard them. Be careful not to scratch the surface.

Pic. F14: Oil seals

Before mounting the new sleeves, it will be a good idea to moisten the sleeves with soapy water. Mount new oil sleeves with punch no.1220429. Carefully knock or press them home.

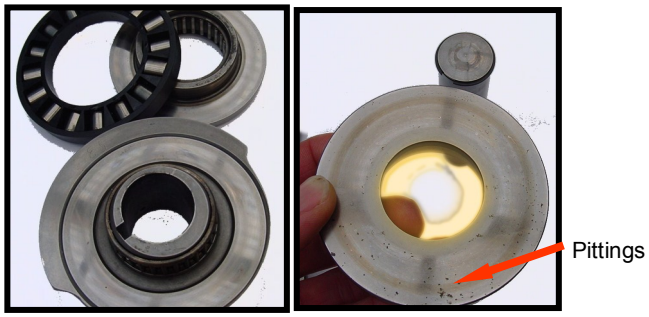
C3 Pump

Pic. F15: Woble disc

Dismount locking ring on the rotor shaft.

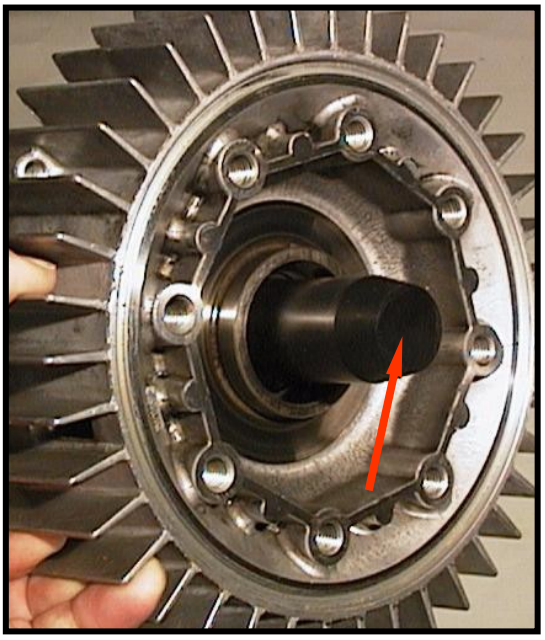
The wobble disc is easily dismounted with puller no. 1205715 and special legs no. 1206150/1206168. Do not forget to remove the key before dismounting the D-bearing cover.

Check bearing surfaces for wear. If in doubt, replace kit complete after approx. 2000 hours.



Pic. F17: Bearings and tracks

Check the bearing surfaces for wear. As long as the wear is even and shiny without pittings or grooves, the wobble disc can be re-used.



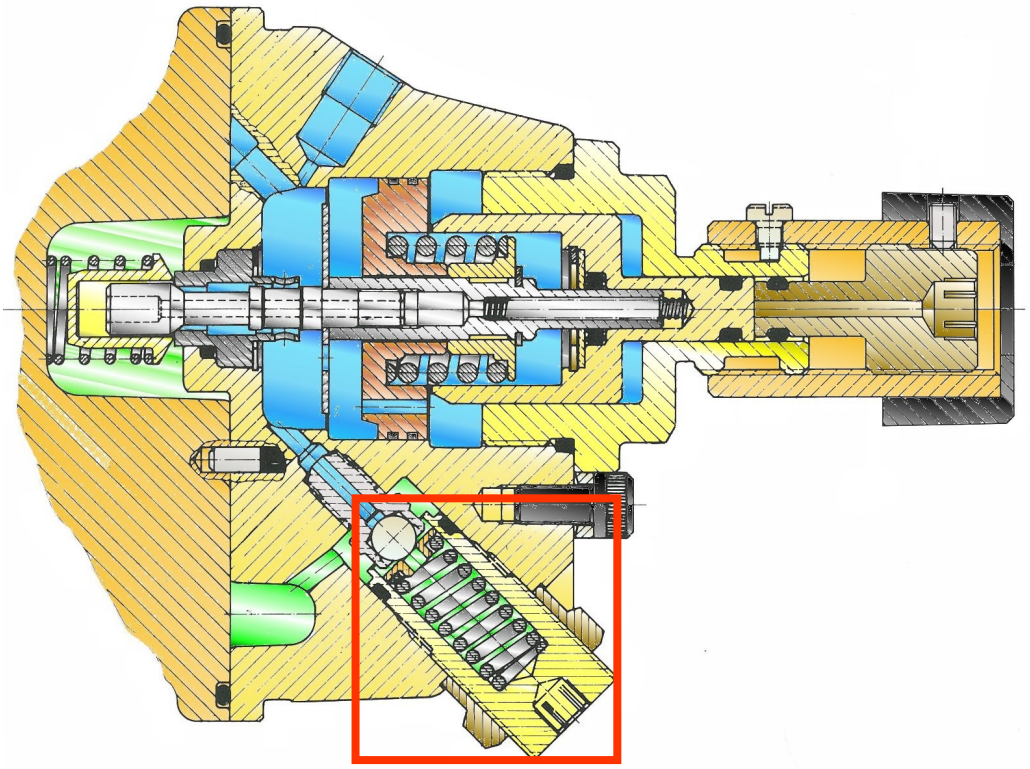
Pic. F16: D-bearing cover

When mounting the D-bearing cover complete,protect the U sleeve with tool no. 1206598 which is placed on the shaft, before placing the cover.

Pic. F18: Oil seals

When mounting the wobble disc, lubricate the bearings with oil. The big roller bearings are identical. Do not forget to mount the circlip on the rotor shaft. Refill with 1 l oil type Castrol Alphasynt ISO 150.

Safety valve



Pic. G1: Safety valve

The safety valve's factory setting for opening pressure = working pressure + 25 to +30 bars.

Upon each service inspection the setting must be tested and, if necessary, adjusted.

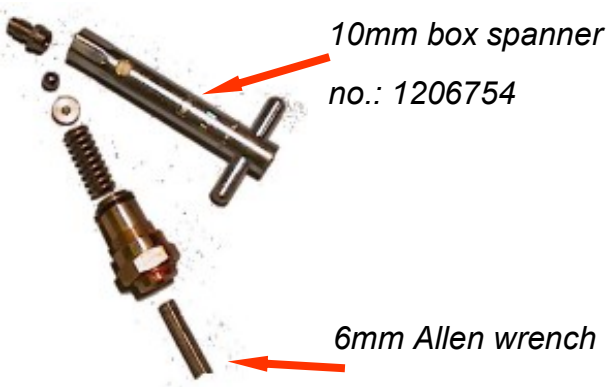
When mounting, affix ball and pressure plate to the spring with lubrication.

The seat is screwed on using a 10mm socket wrench (no gasket required).

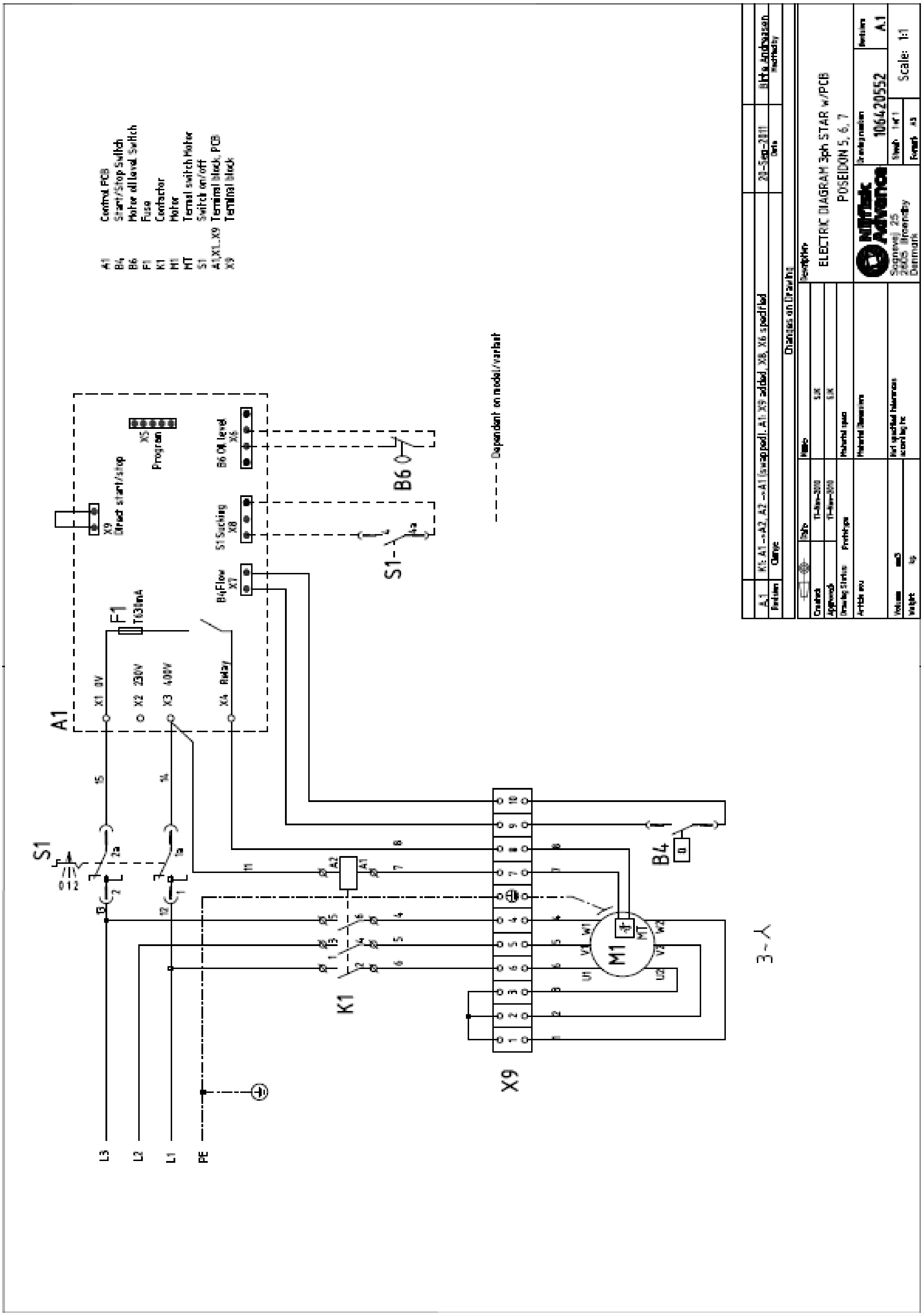
Before testing with a pressure gauge, make sure that two threads are visible behind the locknut.

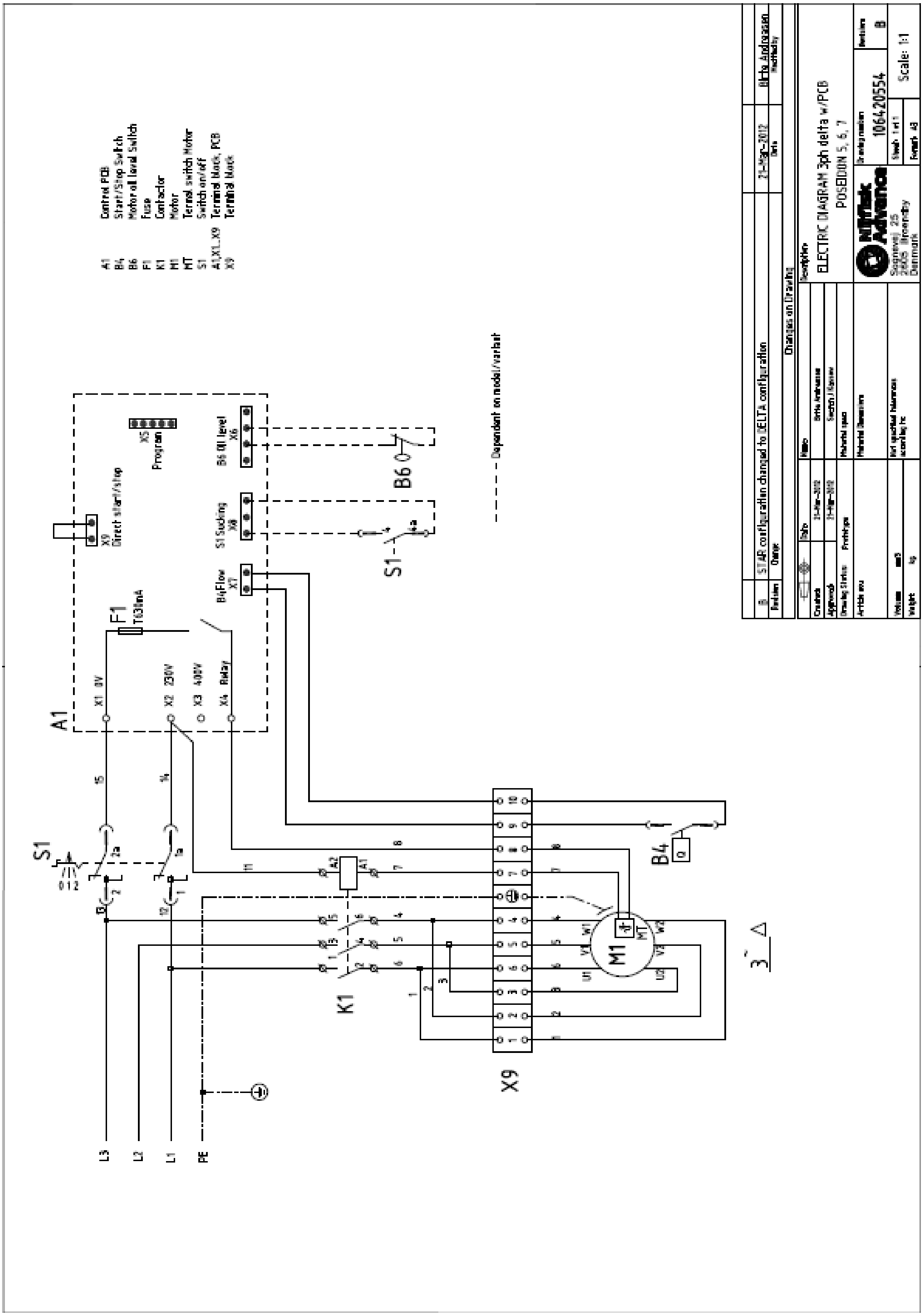
Warning: Before starting the pump, check that the test manometer valve is open. Close the valve slowly;

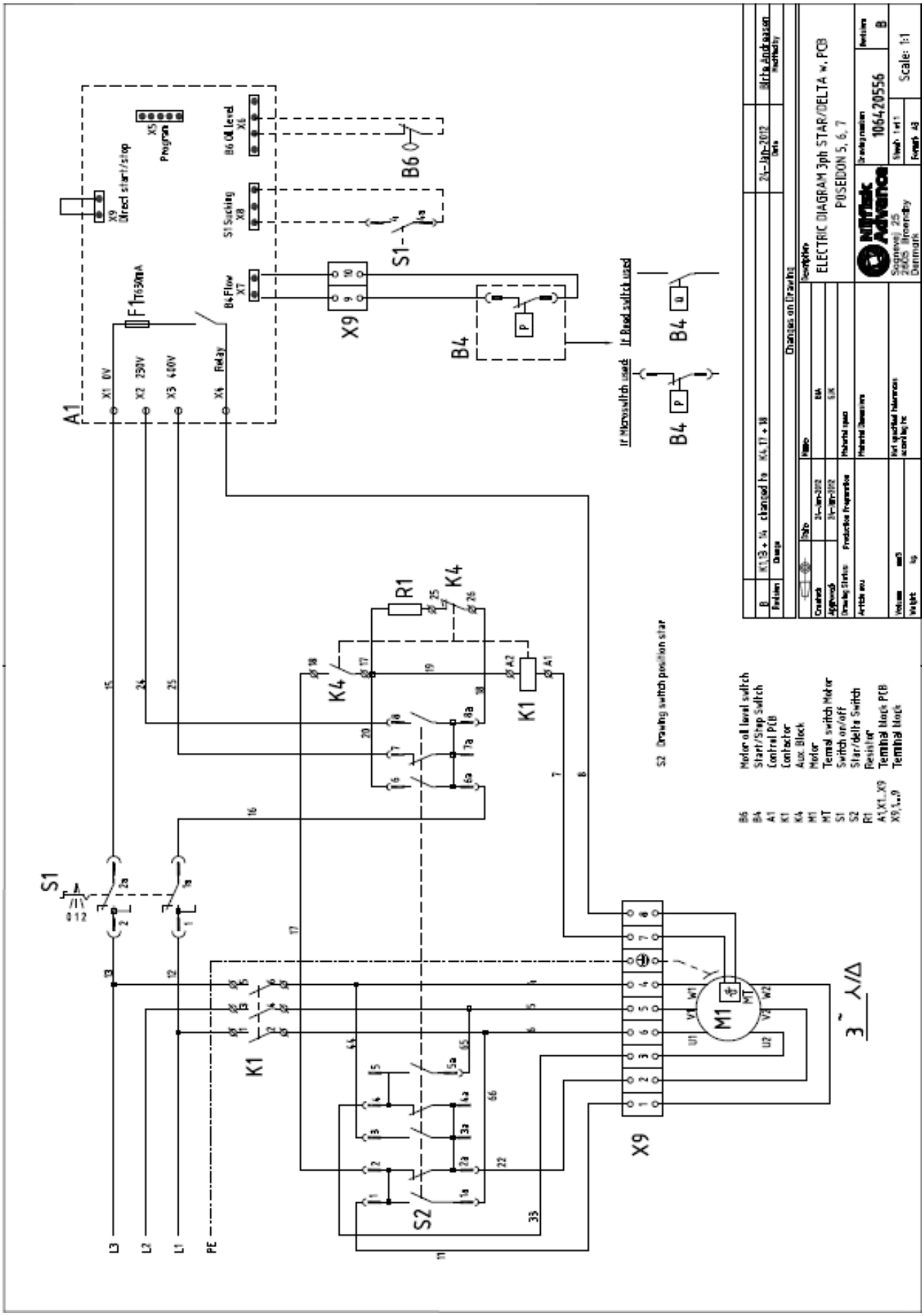
pressure must never exceed 250 bars.

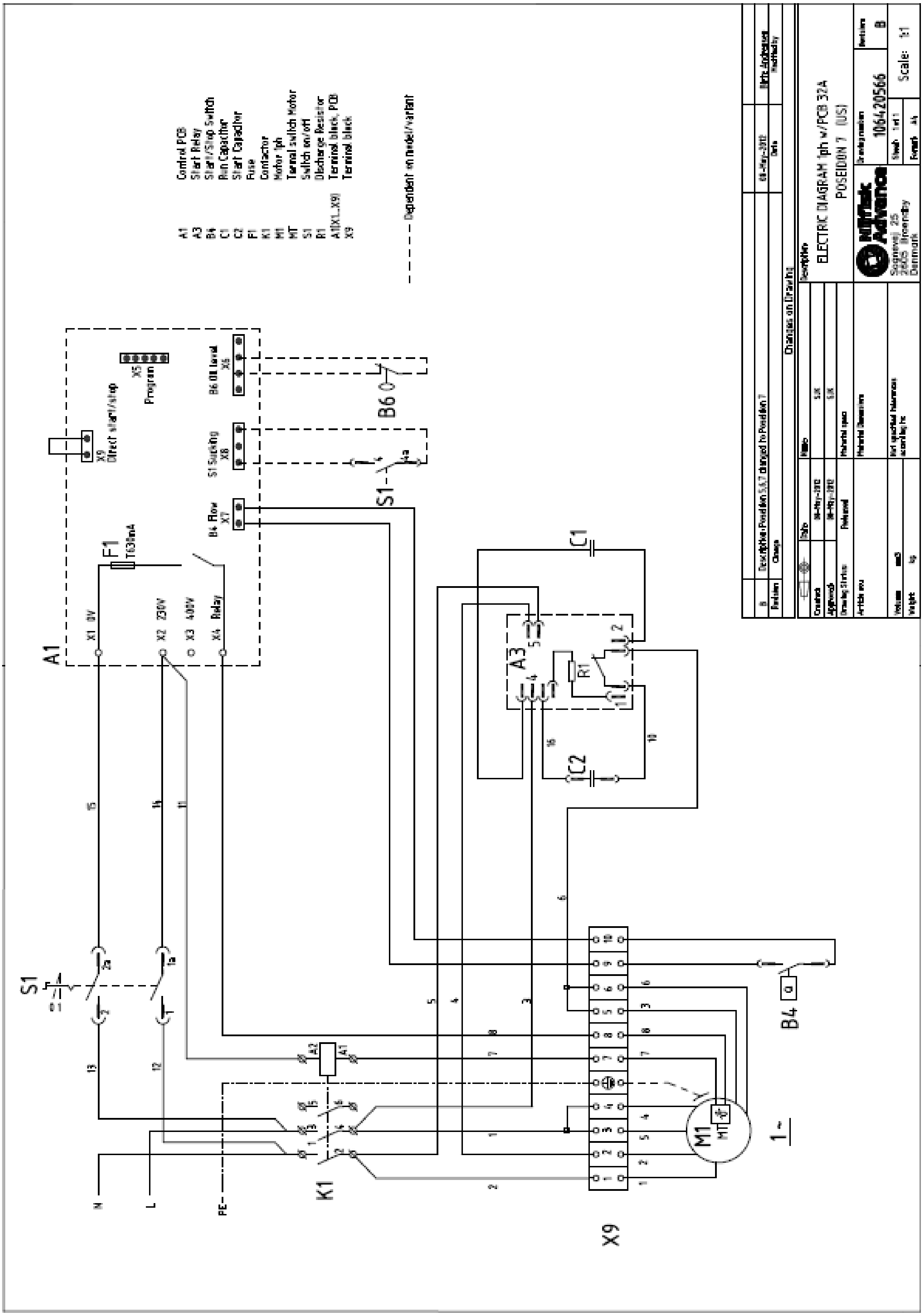


Pic. G2: Tool for Safety valve


A1 Control PCB
B4 Start/Stop Switch
B6 Motor oil level Switch
F1 Fuse
K1 Contactor
M1 Motor
MT Termal switch Motor
S1 Switch on/off
A1,X1..X9 Terminal block, PCB
X9 Terminal block
Dependant on model/variant
ELECTRIC DIAGRAM 3ph STAR w/PCB
POSEIDON 5, 6, 7
106420552
Scale: 1:1
L3
L2
L1
PE
X9
K1
M1
B4
B6
S1
F1
A1
3~ Y


A1 Control PCB
B4 Start/Stop Switch
B6 Motor oil level Switch
F1 Fuse
K1 Contactor
M1 Motor
MT Termal switch Motor
S1 Switch on/off
A1,X1..X9 Terminal block, PCB
X9 Terminal block
Dependent on model/variant
ELECTRIC DIAGRAM 3ph delta w/PCB
POSEIDON 5, 6, 7
106420554
Scale: 1:1
STAR configuration changed to DELTA configuration
Changes on Drawing
L3
L2
L1
PE
X9
K1
M1
S1
B4
B6
F1
T630mA


ELECTRIC DIAGRAM 3ph STAR/DELTA w. PCB
POSEIDON 5, 6, 7
1064209556
Nilfisk Advance
Sognevej 25
2605 Brøndby
Denmark
24-Jan-2012
Birte Andreasen
Changes on Drawing
Description
Date
Initials
Created
Approved
Drawing Status
Article no.
Material specification
Material dimensions
Material specification
Volume
Weight
Drawing position
Sheet 1 of 1
Format A3
Scale: 1:1
Revision
B
A1
F1 T630mA
X1 0V
X2 230V
X3 400V
X4 Relay
X5 Program
X6 B6 Oil level
X7 B4 Flow
X8 S1 Sucking
X9 Direct start/stop
B6
S1
B4
If Microswitch used
If Reed switch used
R1
K4
K1
S2 Drawing switch position star
M1
MT
3 ~ Y/Δ
L3
L2
L1
PE
B6 Motor oil level switch
B4 Start/Stop Switch
A1 Control PCB
K1 Contactor
K4 Aux Block
M1 Motor
MT Temal switch Motor
S1 Switch on/off
S2 Star/delta Switch
R1 Resistor
A1,X1..X9 Terminal block PCB
X9,1..9 Terminal block


A1 Control PCB
A3 Start Relay
B4 Start/Stop Switch
C1 Run Capacitor
C2 Start Capacitor
F1 Fuse
K1 Contactor
M1 Motor 1ph
MT Termal switch Motor
S1 Switch on/off
R1 Discharge Resistor
A1(X1..X9) Terminal block, PCB
X9 Terminal block
Dependent on model/variant
ELECTRIC DIAGRAM 1ph w/PCB 32A
POSEIDON 7 (US)
106420566
Scale: 1:1

Wiring diagrams

Notes

Nilfisk - ALTO

Division of Nilfisk - Advance A/S

Industrivej 1

9650 Hadsund

Denmark