### DEN-JET HIGH PRESSURE WATER BLASTERS



# CP-20 WATER BLASTER 500 Bar Petrol (Gasoline) Driven Unit With Unloader

## USER GUIDE & SPARE-PART BOOK



RTH Renders Technischer Handel Böttcherweg 27 25355 Barmstedt

Telefon: +49 4122 - 55 444 Mobil: +49 172 - 411 30 90 Fax: +49 4122 - 95 38 64 Thank you for choosing our water blaster. For your safety and correct operation, please carefully read the information and instructions in this manual before use.

NOTE: All of the information stated in this manual is based on data available at the time of printing. DEN-JET reserves the right to modify or change its products and / or specification data at any time without prior notice.

DEN-JET has no responsibility or liability regarding misuse of the product or use of the product with third party products.

DEN-JET warranty's is limited to repair or replacement of faulty items at the time of manufacture.

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May 2005

Model: Technical details:	CP-20-500		
W.P. Bar / Psi Flow Lpm / Gpm	500 / 7250 16 / 4.2		
Engine Spec. Motor Hp/ Kw	22hp		
Dimensions L x W x H mm Weight Kg	1100 x 740 x 880 175		

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### **Certificate of E.U conformity:**

DEN-JET Nordic A/S Terndrupvej 7, Astrup DK-9510 Arden Denmark

According to E.U. Machine Directive 2006/42/EC. Appendix IIA

We hereby declare that the petrol (gasoline) driven high-pressure water blaster machines [CP20-500] has been designed, manufactured and tested to fully comply with the health and safety requirements of the E.U. machine regulations.

ANY modification or change of the machine without our prior consent will render this declaration null and void.

Appropriate E.U. regulations: E.U. Machine Directive (2006/42/EC) Current issue.

E.U. Low Voltage Directive (2006/95/EC)

E.U. EMC Directive (2004/108/EC).

Coordinated standards

Used particularly: EN 809 pr EN 1889

EN 292 part 1 & 2 EN 60204-1 EN 574 EN 294

> EN 50081-2 EN 6100-6-2

Date: Aug. 2011 Benny S. Jensen

Managing Director.

### **Safety Precautions:**

To safeguard the operator who uses the machine and its accessories and as accident prevention and protection of bystanders and property, the following safety precautions must be observed. Always treat the water blaster in the same way as any other power driven high speed cutting tool!

Never let children or people who have not been properly instructed operate the machine.

Use the electric plug in a proper socket with ground to earth wiring. The entire electrical installation must be with earth wiring! All electrical installations must be made only by an electrician. A GFCI (Residual current device) is recommended.

Always keep the high-pressure cleaner and the belonging accessories in good working condition. Check that the machine and its accessories are free from defects, and in good working condition, with special attention to the insulation on the electric cable. In case of defect: Do NOT OPERATE THE MACHINE! Get the machine serviced.

Eye protection must be worn at all times when operating the machine to protect against repelling or ricocheting materials hitting the eyes and causing damage.

Ear protection must be worn at all times when operating the machine to protect against hear loss during operation.

Proper footwear and protective clothing must be worn at all times when using the equipment to avoid and prevent damage to the operator.

NEVER direct the jet at yourself. Do not attempt to clean your clothes or footwear with the machine.

Precautions must be made to keep bystanders away from the working range. NEVER spray-jet on humans or live animals, the high pressure jet can cause severe injury.

NEVER spray at electrical equipment, or at the machine itself. Make sure the machine is turned off and disconnected from the main power supply before service or repair.

### **Safety Precautions:**

The below shown protective clothing and devices should be worn both by personnel operating the water blaster system and equipment and by those working nearby:

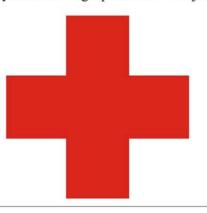
GOGGLES  VISOR  EYE PROTECTION	Operators must wear visors or goggles to guard against spray and flying debris. A combination of both goggles and visor is recommended. It will protect the eyes and the face during both water-blasting as well as abrasive water-blasting.
HEAD PROTECTION	Safety helmets must be worn at all time by personnel within the work area.  Helmet material must be able to withstand mechanical shock exceeding 10G in 8ms without fracturing.
HAND PROTECTION	Shear proof gloves must be worn by the operator at all times. A glove combination of a cloth inner lining and a water tight outer layer is preferable.
TOE-CAPS METATARSAL GUARDS  METATARSAL GUARDS  FOOT PROTECTION	Safety boots with steel toecaps minimum 0.5mm (0.02") thick must be worn. The toecap must cover at least 30% of the footwear length. Basic safety footwear must also be equipped with metatarsal guards to protect the instep. Safety boots are available in numerous designs.
HEARING PROTECTION	Operators and other personnel exposed to noise levels of more than 90-dBa for more than 1 hour must wear suitable ear protection. Ear plugs or ear muffs are usually sufficient.
PROTECTIVE CLOTHING	Waterproof clothes protect the operator only from spray and flying debris. They do NOT deflect direct jet impact. Therefore, an operator must take care never to point a waterjet either at them selves or other personnel.

### **Medical emergency information:**

Immediate medical attention should be given to personnel who sustain equipment related injuries while operating the system. In such cases, it is vital that medical personnel be apprised of all facts relevant to such injuries. Therefore, all operating personnel should be provided with waterproof emergency medical alert tags or cards, describing the nature of their work and the possibility of injury inherent in the use of water jetting equipment. The below example of a standard card can be printed out or photo copied, bend, laminated and used as medical alert tag.

### **MEDICAL ALERT**

This card is to be carried by personnel working with high-pressure water jetting equipment. Obtain medical treatment immediately for ANY high-pressure water-jet injuries.



This person has been working with water jetting at pressures up to 55,000 psi (374Mpa, 3,740bar, 3,867 kg/cm²) with a jet velocity of up to 3,000 fps (914 mps). This should be taken into account during diagnosis. Unusual infections with microaerophilic organisms occouring at lower temperatures have been reported. These may be gram-negative pathogens such as found in sewage. Bacterial swabs and blood cultures may therefore be helpful. A local poison control centre should be contacted for additional treatment information and advise.

#### **DEN-JET Nordic A/S**

Terndrupvej 7, Astrup, DK-9510 Arden, Denmark Tel: +45 98 55 88 68 Fax: +45 98 55 88 18 www.denjet.com

### Preparing the machine for operation:

#### 1) Place the machine in a safe location and secure the unit with lashing belts.

#### 2) Freshwater Connection.

Prepare the water supply for the blaster, by attaching a 3/4" hose to the supplied low pressure inlet coupling on the side of the water tank. Connect the other end to the **fresh water** supply from the vessel. Open for the water supply and fill up the water tank before starting the machine. Always use the inlet connection on the tank for supplying water.

#### 3) High Pressure Hose Connection

Mount the ½" high pressure hose to the blaster by attaching the swivel of the hose to the outlet fitting of the pump head. Please use 2 x 27mm spanners / wrenches to tighten the connection. Additional high pressure hoses supplied with the machine should be mounted now by using the supplied ½" nipples male-male to connect the hoses together. Please use 2 x 27mm spanners / wrenches to tighten the connection.

### 4) Trigger Gun Connection

Mount the trigger gun with lance to the high pressure hose. Please use 2 x 27mm spanners / wrenches to tighten the connection. Mount the correct nozzle at the end of the lance.

#### 5) Machine is now ready for operation.

#### **Operation of the Machine:**

- A) Ensure that the water supply is open.
- B) Turn START key machine starts.

Allow the machine to idle a few minutes.

C) Get a firm grip with both hands on the trigger gun handle and lance handle. Press the trigger and start blasting. Always be aware of other crew members in your working area – Safety is first priority.

**Note:** Do NOT let the machine run idle for more than 10 minutes, as it may cause damage to the pump. (water heats up).

#### **Shut-down of the Machine:**

- A) Press the red STOP button machine stops.
- B) Squeeze the trigger gun to release the pressure inside the high pressure hose.
- C) Turn off the water supply.

#### Storage of machine during Winter time.

Store the machine in a frost free location.

Drain the water from the machine and flush the pump with anti-freeze fluid.

#### The machine is equipped with the following safety devices:

- a) Key starter shut down the unit when turned to 0.
- b) Safety valve. The safety valve built onto the top of the pump is protecting against overpressure (pos. 1 -500 Bar Pump assembly.

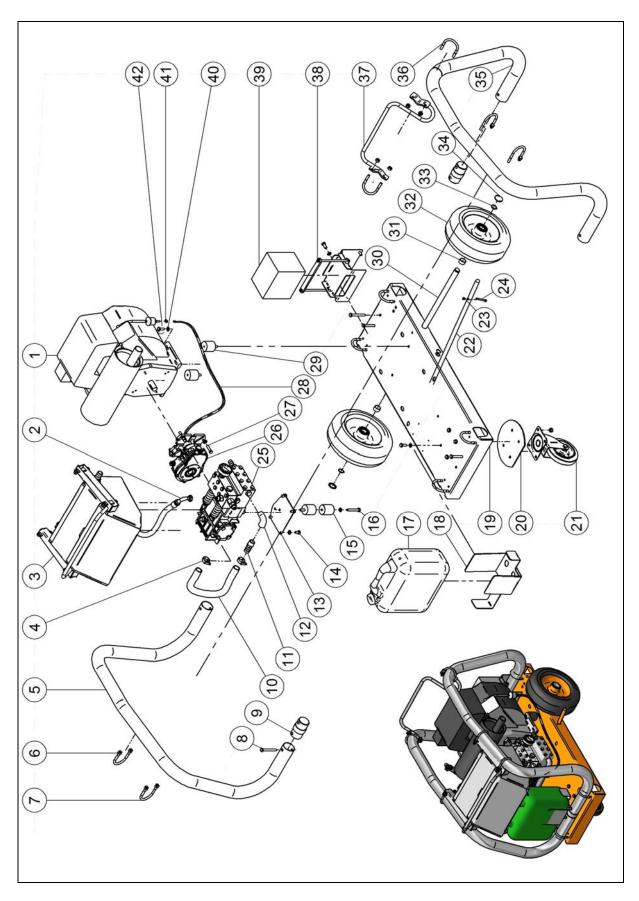
### Set-Up & Use:

Check	Task							
Daily	Check the strainer.							
Inspection	Clean if necessary.							
	Check the oil level on the crankcase of the pump, gearbox and engine.							
	Fill up if necessary.							
	Check high pressure connections for leakage.							
	NEVER tighten connections under pressure.							
	Check high pressure hoses for wear and cracks.							
	Replace if necessary.							
	Check the air intake grill of the engine radiator.							
	Clean for dust if necessary.							
	·							
	<b>Notice:</b> To prevent damage to hoses, avoid letting the high-pressure							
	hoses rub against sharp edges for example manholes or getting							
	squeezed in door openings etc. Replace if necessary.							
	Inlet water temperature must be below 60°C (140°F)							

### Maintenance:

Maintenance	Task
Lubrication	Oil renewal on the pump crankcase and gear box is to be completed the first time after no more than 50 hours of use. Oil renewal is hereafter to be completed in every 400 hours of use. Or at least one time a year.
	For Pump and Engine use a SAE 30 or 10W40 Oil (part number: 83600870)
	For Gearbox use a SAE 75W90 Oil (part number: 83600854)
	Quantity: 1,04 Liter for pump, 0,5Liter for the gearbox.
	Fill up until the oil level is visible in the sight glass.
	Oil renewal for the engine to be completed after 100 hours of use. Oil renewal is hereafter to be completed in every 400 hours of use. Or at least one time a year.
Renewal of oil	Switch off the machine. Loosen the oil drain screw on the lower back of the pump crank-case. Let the oil drain out into a waste oil-tray. Remount the oil drain screw and pour in new oil through the oil inlet on top of the pump until visible in the oil sight glass.  Notice: Always dispose of the used oil in a proper manner.
Cleaning	A part of keeping the machine and its accessories in good working condition is keeping it clean. But NEVER clean the machine itself with high-pressure. Do not use solvents.
Storage	Keep the unit frost free, or flush the pump thoroughly with non alcoholic antifreeze fluid.

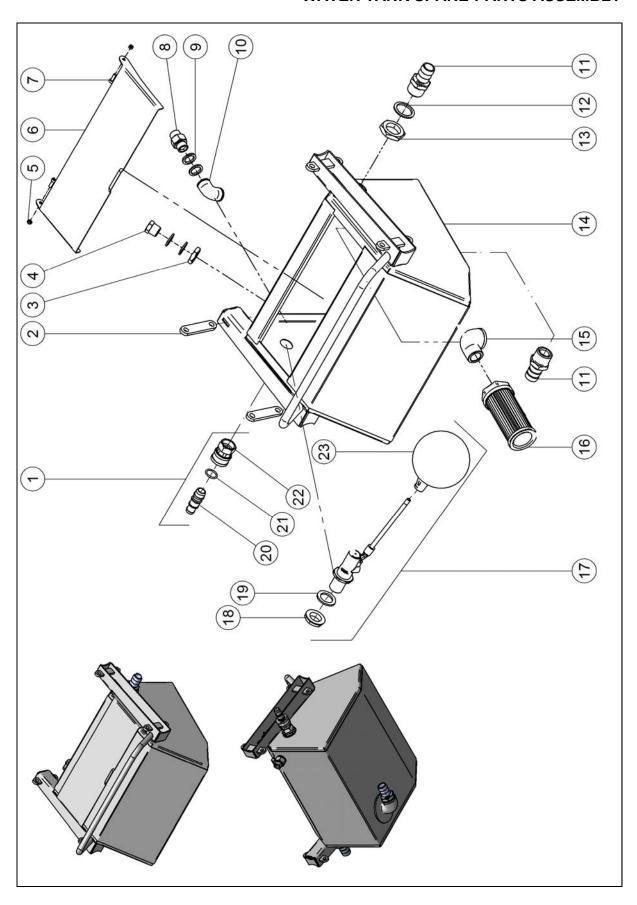
### CP20-500 WATER-BLASTER MAIN SPARE-PARTS ASSEMBLY



### CP20-500 WATER-BLASTER MAIN SPARE-PARTS LIST

Pos.	Item No.	Qty.	Description			
1	81100839	1	ENGINE PETROL 22HP			
2	81300594	1	HOSE DUMP BACK			
3		1	WATER TANK CP20 COMPLETE			
4	80100527	2	HOSE CLIPS			
5	81000249	1	RIGHT FRAME			
6	80100259	33	LOCK NUT			
7	80100617	4	U-BOLT LONG			
8	80100379	4	SCREW			
9	81001229	2	ADAPTOR FRAME			
10	83400524	0,5 m	HOSE SUCTION			
11	80500695	1	HOSE NIPPLE			
12	80500437	1	ELBOW			
13	81001230	1	BRACKET PUMP HOLDER			
14	80100648	4	SCREW			
15	81001231	1	DISTANCE BUSHING			
16	80100598	1	SCREW			
17	81000939	1	PETROL CAN GREEN			
18	81001232	1	BRACKET FOR PETROL CAN			
19	81000242	1	BASE PLATE			
20	81000445	1	SUPPORT CASTOR WHEEL			
21	81000235	1	CASTOR WHEEL			
22	81000251	1	MECHANICAL BRAKE			
23	80100053	1	LOCK NUT			
24	80100254	1	SCREW			
25	81200639	1	PUMP			
26	81000713	1	GEAR BOX			
27	80100759	4	SCREW			
28	83400624	1,5 m	RUBBER HOSE			
29	81000940	3	RUBBER FOOT			
30	81000621	1	AXLE			
31	81000623	2	BUSHING			
32	81000618	2	WHEEL			
33	80100669	2	CIRCLIP			
34	81000619	2	HUB-CAP STAR LOCK			
35	81000248	1	LEFT FRAME			
36	80100775	6	U-BOLT SHORT			
37	81000447	1	CABLE HOLDER			
38	81000744	1	BRACKET FOR BATTERY			
39	81100956	1	BATTERY			
40	80100506	34	WASHER			
41	80100904	1	HOSE CLIP			
42	80100258	8	SCREW			
N/A	81001153	1	OIL FILTER ENGINE			

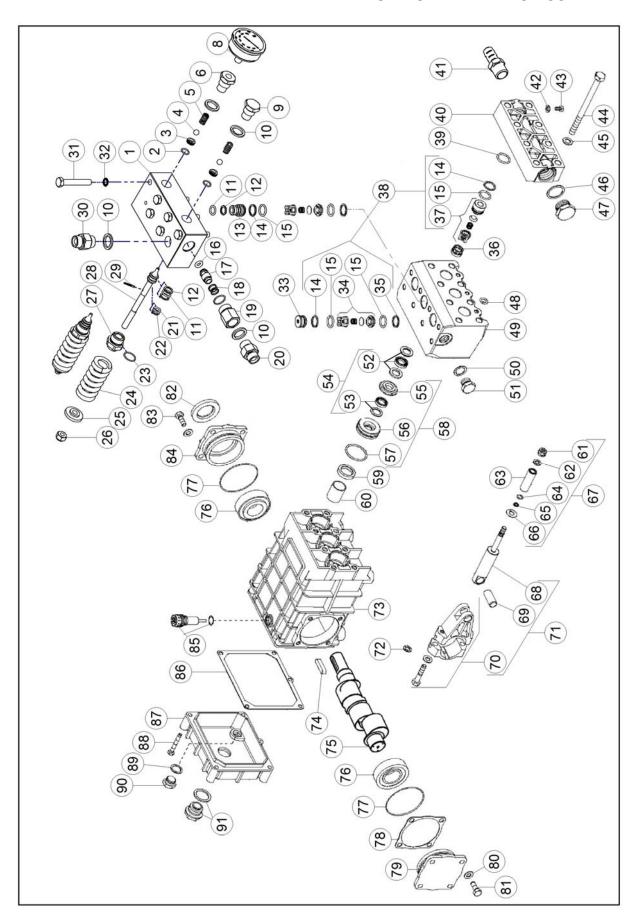
### CP20-500 WATER BLASTER WATER TANK SPARE-PARTS ASSEMBLY



### CE20-500 WATER BLASTER WATER TANK SPARE-PARTS LIST

Pos.	Item No.	Qty.	Description			
1	80500423	1	QUICK COUPLING			
2	81000425	4	BRACKET FOR U BOLT			
3	80100632	1	CONTRA NUT			
4	80500495	1	PLUG			
5	80100513	2	LOCK NUT			
6	81000311	1	LID WATER TANK			
7	80100605	2	SCREW			
8	80500427	1	NIPPLE			
9	80500429	4	BONDED SEAL			
10	80500647	1	ELBOW			
11	80500227	2	HOSE NIPPLE			
12	80500975	1	BONDED SEAL			
13	80100405	1	CONTRA NUT			
14	81000941	1	WATER TANK WELDED			
15	80500237	1	ELBOW			
16	81000199	1	FILTER STRAINER			
17	81000602	1	FLOAT VALVE COMPLETE			
18	80100802	1	CONTRA NUT			
19	80500974	1	BONDED SEAL			
20	80500603	1	QUICK COUPLING HOSE NIPPLE			
21	80200612	1	O-RING			
22	80500604	1	QUICK COUPLING FEMALE			
23	81000606	1	BALL			

### CP20-500 WATER BLASTER PUMP SPARE-PARTS ASSEMBLY



### CP20-500 WATER BLASTER PUMP SPARE-PARTS LIST

Pos.	Item No.	Qty.	Description					
1	81300293	1	HOUSING UNLOADER					
2	80200597	2	O-RING Part of rep. kit 81300619					
3	81300595	2	VALVE SEAT Part of rep. kit 81300619					
4	81300559	2	BALL	Part of rep. kit 81300619				
5	80300555	2	SPRING					
6	81300597	1	PLUG GAUGE					
7	N/A							
8	81300821	1	GAUGE					
9	81300596	1	PLUG SPRING					
10	80500429	4	BONDED SEAL					
11	80200606	3	O-RING	Part of rep. kit 81300619				
12	80200605	5	BACK UP RING	Part of rep. kit 81300619				
13	81300598	1	CONNECTOR	-				
14	80200611	6	BACK UP RING	Part of valve kit 81200822 (pos.38)				
15	80200608	9	O-RING	Part of valve kit 81200822 (pos.38)				
16	80200291	1	O-RING	Part of rep. kit 81300619				
17	81300290	1	CHECK VALVE	·				
18	80300556	1	SPRING					
19	81300289	1	OUTLET FITTING					
20	80500375	1	NIPPLE					
21	80200598	2	O-RING Part of rep. kit 81300619					
22	80200604	2	BACK UP RING Part of rep. kit 81300619					
23	80200599	3	O-RING Part of rep. kit 81300619					
24	80300549	2	SPRING BLACK	·				
25	81300550	2	SPRING GUIDE					
26	80100259	2	LOCK NUT					
27	81300292	2	PISTON HOUSING					
28	81300548	2	PISTON					
29	81300551	2	PIN					
30	80500792	1	NIPPLE					
31	80100598	6	SCREW Torque: 50Nm / 37 lbf•ft					
32	80100599	6	SPRING WASHER					
33	81200618	2	VALVE PLUG					
34	81200712	3	DISCHARGE VALVE	Part of valve kit 81200822 (pos.38)				
35	80200840	3	BACK UP RING Part of valve kit 81200822 (pos.38					
36	81200609	3	SPACER CAN THE SPACE IN CONTRACT OF THE SPACE					
37	81200711	3	SUCTION VALVE Part of valve kit 81200822 (pos.38					
38	81200822	1	VALVE KIT					
39	80200612	3	O-RING					
40	81200613	1	INLET BLOCK					
41	80500436	1	HOSE NIPPLE					
42	80200609	1	WASHER					
43	80100601	1	SCREW					
44	80100602	8	SCREW Torque: 50Nm / 37 lbf•ft					
45	80100599	8	SPRING WASHER					
46	81200614	1	WASHER					

### CP20-500 WATER BLASTER PUMP SPARE-PARTS LIST

Pos.	Item No.	Qty.	Description					
47	81200615	1	PLUG Torque: 140Nm / 103 lb <sub>f</sub> •ft					
48	80200598	3	O-RING					
49	81200608	1	PUMP HEAD					
50	80500605	2	BONDED SEAL					
51	80500598	2	PLUG Torque: 80Nm / 60 lb <sub>f</sub> •ft					
52	81200607	3	HIGH PRESSURE SEAL	KIT Part of seal rep. kit 81200619 (pos.54)				
53	81200605	3	LOW PRESSURE SEAL KIT Part of seal rep. kit 81200619 (pos.54)					
54	81200619	1	SEAL KIT COMPLETE					
55	81200606	3	BACK UP RING Part of back up ring rep. kit 81200634 (pos.58)					
56	81200604	3	BRASS RING	Part of back up ring rep. kit 81200634 (pos.58)				
57	80200607	3	O-RING	Part of back up ring rep. kit 81200634 (pos.58)				
58	81200634	1	BACK UP RING KIT					
59	81200603	3	OIL SEAL					
60	81200903	3	GUIDE BEARING					
61	81200630	3	PLUNGER NUT	Torque: 15Nm / 11 lbf•ft				
				Part of plunger rep. kit 81200704 (pos.67)				
62	80100398	3	COPPER SEAL	Part of plunger rep. kit 81200704 (pos.67)				
63	81200616	3	PLUNGER SLEEVE					
64	80200610	3	O-RING	Part of plunger rep. kit 81200704 (pos.67)				
65	81200601	3	RING Part of plunger rep. kit 81200704 (pos.67)					
66	81200600	3		PLUNGER.DISC Part of plunger rep. kit 81200704 (pos.67)				
67	81200704	1	PLUNGER REP KIT W/O PLUNGER SLEEVE					
68	81200638	3	CROSS HEAD	Part of connecting rod kit 81200599 (pos.71)				
69	81200637	3	WRIST PIN	Part of connecting rod kit 81200599 (pos.71)				
70	81200636	3	CONNECTING ROD	Torque: 30Nm / 22 lbf•ft				
71	81200599	3	CONNECTING DOD AS	Part of connecting rod kit 81200599 (pos.71)				
72	80100879	<u> </u>	CONNECTING ROD ASSEMBLY WASHER					
73	81200631	1	CRANK CASE					
74	81200631	1	KEY					
75	81200629	1	CRANKSHAFT 60 Hz.					
76	80400506	2	BEARING					
77	80200407	2	O-RING					
78	81200632	1	SHIM					
79	81200620	1	FLANGE CLOSED					
80	80100170	8	WASHER					
81	80100603	4	SCREW	Torque: 25Nm / 19 lb <sub>f</sub> •ft				
82	81200635	<del></del> 1	OIL SEAL	Torque. 23NIII/ 19 ID/10				
83	80100171	4	SCREW	Torque: 25Nm / 19 lb <sub>f</sub> •ft				
84	81200633	1	FLANGE OPEN	1019α0. 2011117 10 10[-1]				
85	81200621	<u>'</u> 1	OIL BREATHER					
86	81200622	<u>'</u> 1	BACK COVER GASKET					
87	81200623	<u>'</u> 1	CRANK CASE COVER					
88	80100604	5	SCREW Torque: 11Nm / 8 lb <sub>f</sub> •ft					
89	81200624	1	GASKET					
90	81200625	1	PLUG Torque: 11Nm / 8 lb <sub>f</sub> •ft					
91	81200365	1	· · · · · · · · · · · · · · · · · · ·					
J 1	31200000	<u> </u>	OIL LL VLL OLAGO					

### CP20-500 WATER BLASTER VALVE REPAIR KIT

Item No./Kit Description	Pos.	Item No.	Qty.	Description
Pos. 38 81200822 VALVE KIT	14	80200611	6	BACK-UP RING
	15	80200608	9	O-RING
	34	81200712	3	DISCHARGE VALVE
	35	80200840	3	BACK UP RING
	37	81200711	3	SUCTION VALVE

Item No./Kit Description	Pos.	Item No.	Qty.	Description
Pos. 71	70	81200636	1	CONNECTING ROD
81200599 /	69	81200637	1	WRIST PIN
CONNECTING ROD KIT	68	81200638	1	CROSS HEAD

<sup>3</sup> set of Connecting Rod Kit are required to overhaul one pump

Item No./Kit Description	Pos.	Item No.	Qty.	Description
Pos. 67 81200704 / PLUNGER REP. KIT	61	81200630	3	PLUNGER NUT
	62	80100398	3	COPPER SEAL
	64	80200610	3	O-RING
	65	81200601	3	RING
	66	81200600	3	PLUNGER DISC

Item No./Kit Description	Pos.	Item No.	Qty.	Description
Pos. 54	53	81200605	3	LOW PRESSURE SEAL KIT
81200619 / SEAL REP. KIT	52	81200607	3	HIGH PRESSURE SEAL KIT

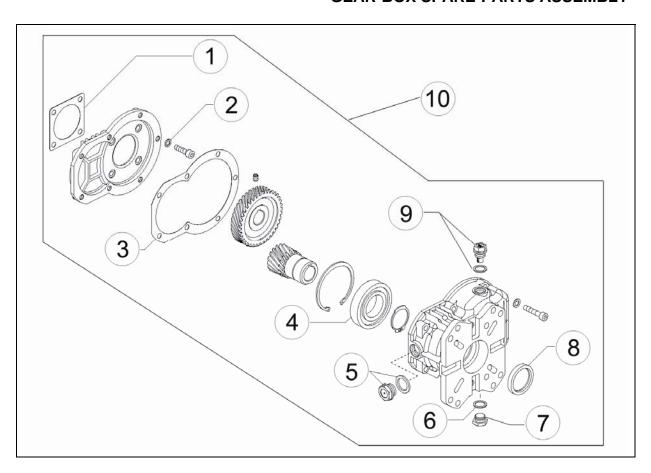
Item No./Kit Description	Pos.	Item No.	Qty.	Description
Pos. 58	55	81200606	3	BACK UP RING
81200634 /	56	81200604	3	BRASS RING
BACK UP RING REP. KIT	57	80200607	3	O-RING

#### **UNLOADER REPAIR KIT**

Item No./Kit Description	Pos.	Item No.	Qty.	Description
	2	80200597	1	O-RING
81300619	3	81300595	1	VALVE SEAT
REP. KIT	4	81300559	1	BALL
UNLOADER & SAFETY	11	80200606	1	O-RING
VALVE	12	80200605	2	BACK UP RING
	16	80200291	1	O-RING
	21	80200598	1	O-RING
	22	80200604	1	BACK UP RING
	23	80200599	2	O-RING

<sup>2</sup> set of Repair Kit are required to overhaul both unloader and safety valve

### CP20-500 WATER BLASTER GEAR-BOX SPARE-PARTS ASSEMBLY



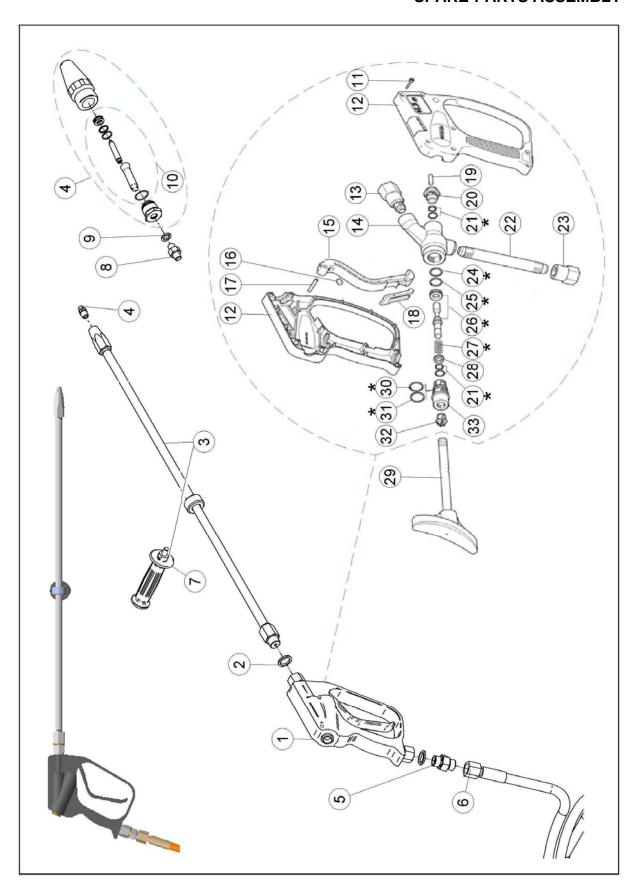
### CP20-500 WATER BLASTER GEAR-BOX SPARE-PARTS LIST

Pos.	Item No.	Qty.	Description
4	80400607	1	BEARING
5	81000846	1	SIGHT GLASS WITH PACKING
6	80100640	1	PACKING WASHER DRAIN SCREW
7	80500598	1	DRAIN SCREW
9	81200621	1	OIL FILLER CAP WITH PACKING
10	81000713	1	GEAR BOX COMPLETE (see pos. 23 page 11)

### CP20-500 WATER BLASTER GEAR BOX SEAL KIT

Item No./Kit Description	Pos.	Item No.	Qty.	Description
	1	81000845	1	GASKET PUMP HOUSING GEARBOX
04000040	2	80500045	4	BONDED SEAL
81000843 GEAR BOX SEAL KIT	3	81000844	1	GASKET GEAR BOX
OLAN BOX OLAL NII	6	80100640	1	PACKING DRAIN SCREW
	8	80200353	1	OIL SEAL

### DRY SHUT GUN 8KPSI SPARE-PARTS ASSEMBLY



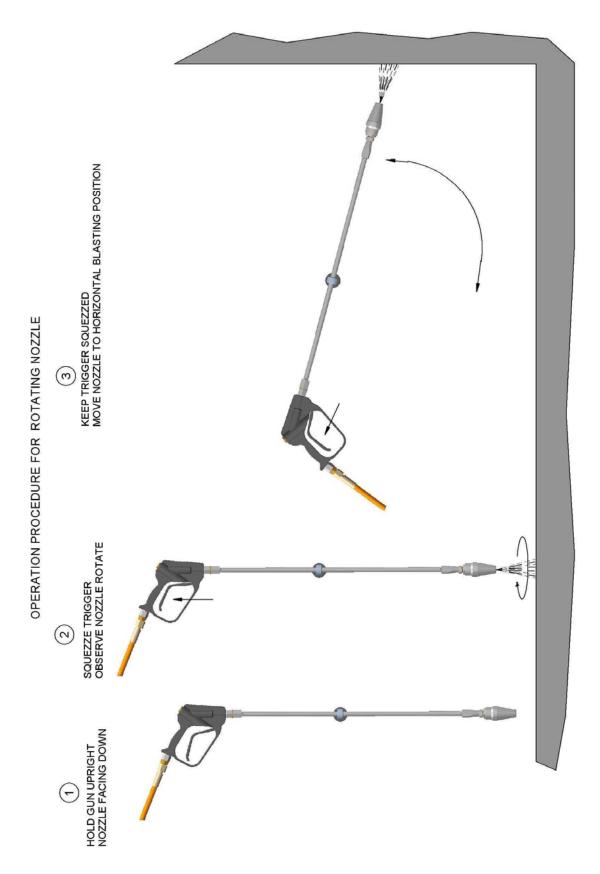
### DRY SHUT GUN 8KPSI SPARE-PARTS LIST

Pos	Item No.	Qty	Description					
	81400895		GUN DRY SHUT WO (NOZZLE ,HOSE ,NIPPLE, SHOULDER REST)					
1	81400860	1	TRIGGER HANDLE					
2	80500429	2	BONDED SEAL					
3	81400644	1	LANCE LONG 560BAR 1000mm					
4		1	NOZZLE					
5	80500375	1	NIPPLE					
6	81400776		HOSE (H.P) 20m 1200 BAR W 1/2"I	BSPP SWIVEL				
6	81400639		HOSE (H.P) 20m 1000 BAR W 1/2"I	BSPP SWIVEL				
6	81400962		HOSE (H.P) 20m 500 BAR W 1/2"B	SPP SWIVEL				
7	81400075	1	SIDE HANDLE					
8	80500654	1	NIPPLE					
9	80500971	2	BONDED SEAL					
10			REP KIT ROTATING NOZZLE					
11	80100594	7	SCREW	(Not available separately)				
12	81400903	1	HOUSING SET	(Not available separately)				
13	81400902	1	OUTLET FITTING	(Not available separately)				
14	81400901	1	VALVE HOUSING	(Not available separately)				
15	81400906	1	TRIGGER	(Not available separately)				
16	81400905	1	STRIKER	(Not available separately)				
17	81400904	1	PIN	(Not available separately)				
18	81400907	1	SAFETY LATCH	(Not available separately)				
19	81400864	1	ACTUATOR ROD	(Not available separately)				
20	81400863	1	PLUG	(Not available separately)				
21	80200694	2	SEAL ASSY.	Part of rep. kit 81400861				
22	81400900	1	BACK PIPE	(Not available separately)				
23	81400899	1	INLET FITTING	(Not available separately)				
24	80200074	1	BACK UP RING	Part of rep. kit 81400861				
25	80200070	1	O-RING	Part of rep. kit 81400861				
26	81400898	1	PISTON-SEAT	Part of rep. kit 81400861				
27	80300613	1	SPRING	Part of rep. kit 81400861				
28	81400897	1	SPACER	(Not available separately)				
29	81400231	1	SHOULDER REST					
30	80200601	1	O-RING	Part of rep. kit 81400861				
31	80200693	1	BACK UP RING	Part of rep. kit 81400861				
32	81400896	1	PLUG	(Not available separately)				
33	81400862	1	SPRING HOLDER	(Not available separately)				
*	81400861		REP. KIT FOR GUN 560BAR (Pos.2	21,24,25,26,27,30,31)				

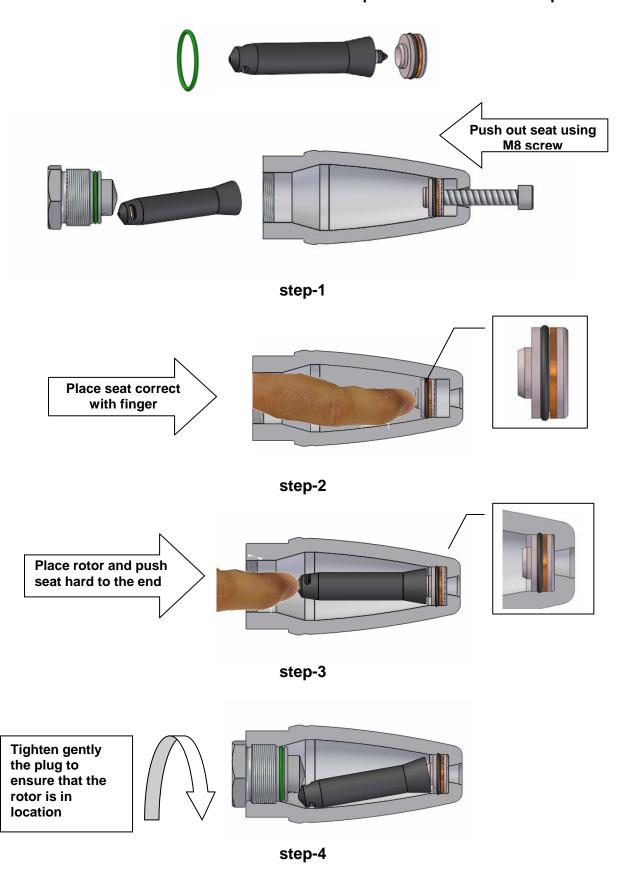
### **NOZZLE LIST**

Pos	Item No.	Qty	Description		
4	81500618	1	ROTATING NOZZLE	035	
10	81500620		REP. KIT ROT. NOZZLE	035	
4	81500629	1	NOZZLE STRAIGHT JET	035	
4	81500630	1	NOZZLE FAN JET	035/15°	

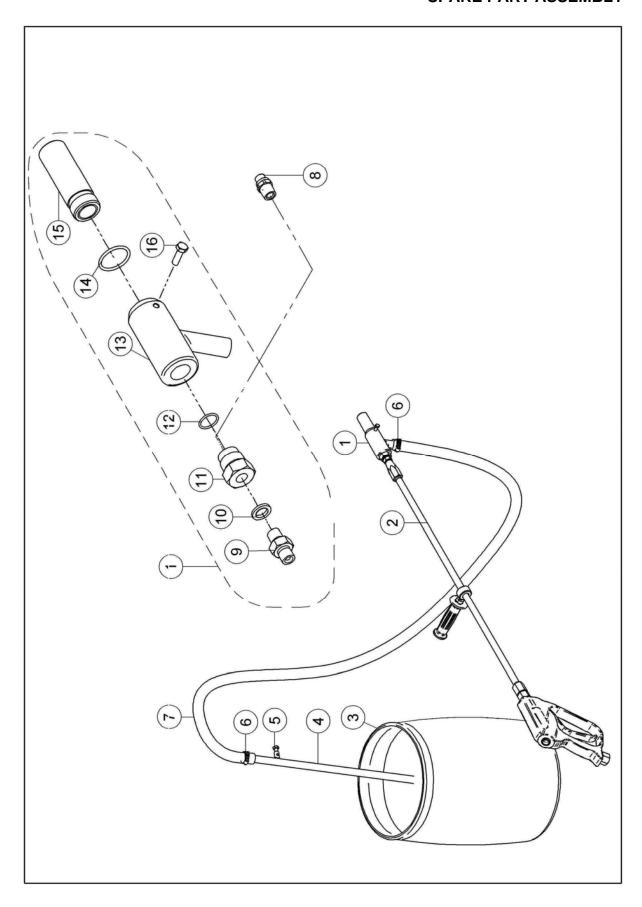
### **OPERATION PROCEDURE FOR ROTATING NOZZLE**



### Rotating Nozzle Replacement Procedure Repair Kit



### SAND BLASTING EQUIPMENT 1/4" BSPP SPARE PART ASSEMBLY



### SAND BLASTING EQUIPMENT 1/4" BSPP SPARE PART LIST

Pos.	Item No.	Qty.	Description
1	81400643	1	VENTURI HOUSING COMPLETE FOR 1/4"BSPP FEMALE INLET
2			TRIGGER GUN (NOT INCLUDED)
3	81400641	1	GRIT CONTAINER 120 LITER W/ LID
4	81400629	1	POKER FOR SANDBLASTING EQUIP.
5	80100671	1	SCREW
	80100672	1	NUT
6	80100527	2	HOSE CLIPS
7	83400596	15m	HOSE
8	81500702	1	WATER NOZZLE SAND BLASTING 035
9	80500654	1	NIPPLE
10	80500971	1	BONDED SEAL
11	81400472	1	NOZZLE ADAPTOR 1/4"BSPP FOR VENTURI SAND BLASTER
12	80200057	1	O RING
13	81500469	1	VENTURI SANDBLASTING
14	80200397	1	O-RING
15	81500567	1	NOZZLE S.B BORON CARBIDE
16	80100385	1	SCREW
	81400654		SAND BLASTING KIT 1/4"BSPP W. POKER Pos.(1,4,5,6,7)

#### Blasting media:

If available, we recommend "Copper slag" 10/30 Grit (0,5mm to 1,8mm) as blasting media. If using "Quarts sand", use a blend of 0,8mm-1,8mm, do NOT use too fine sand, it will not flow and it does not give an efficient use of the equipment.