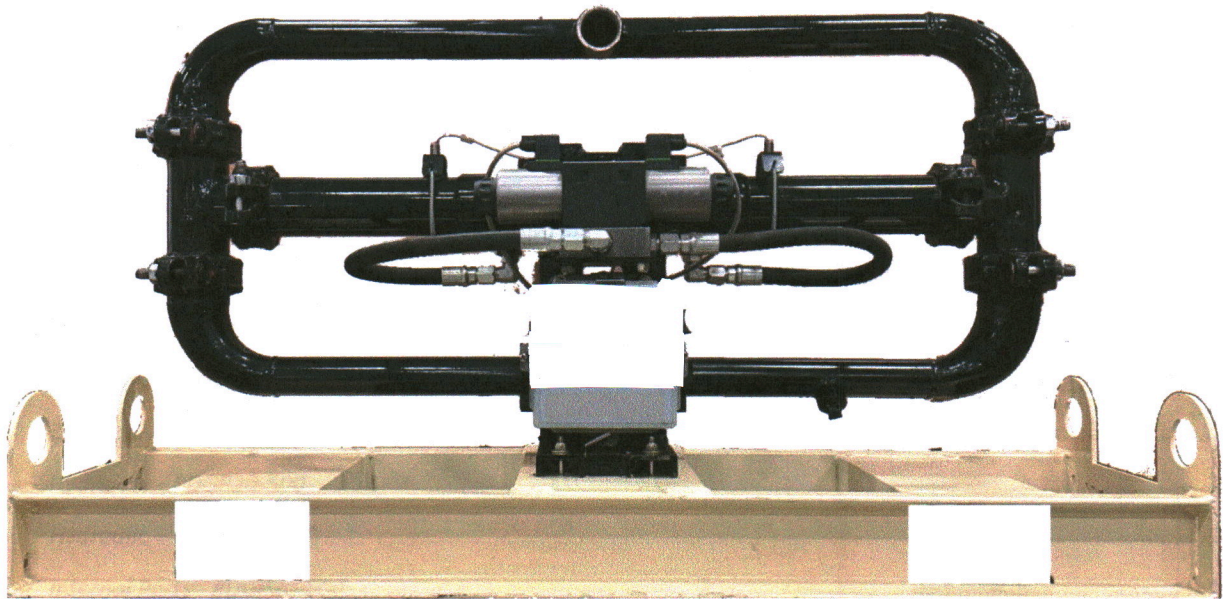


OPERATIONS & PARTS MANUAL

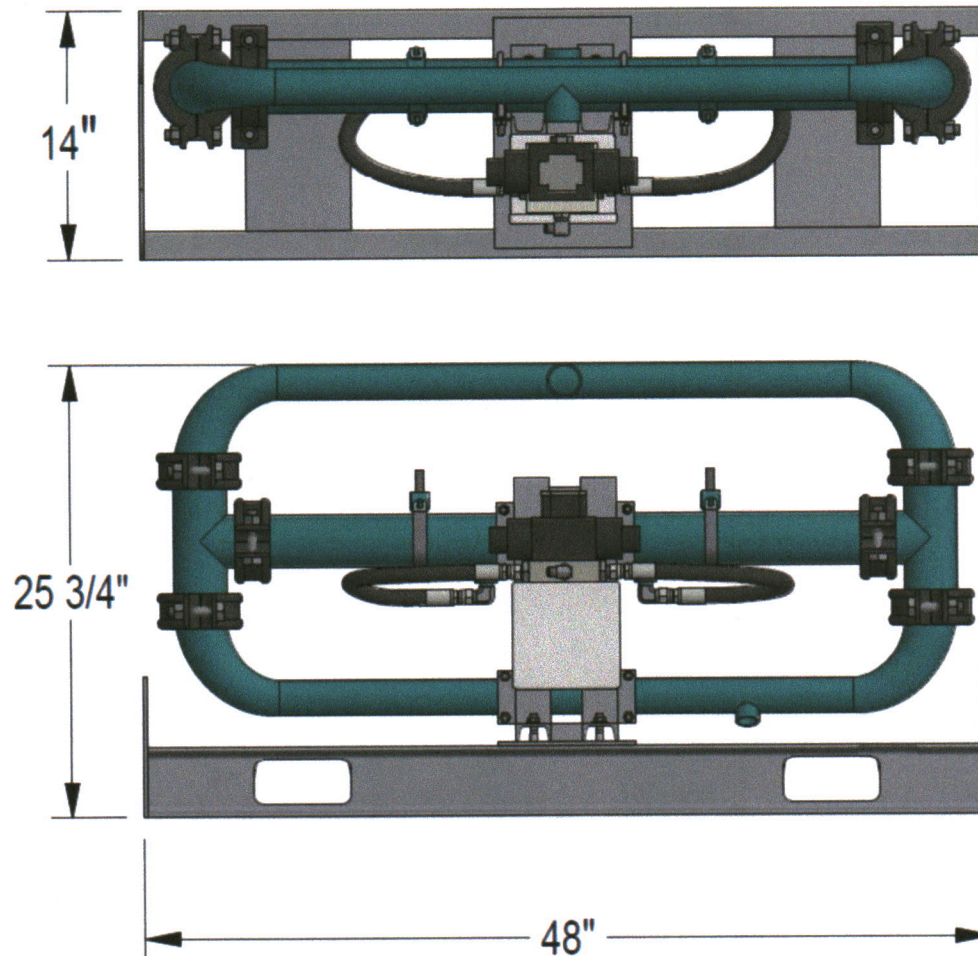
REVISION B, OCTOBER 2022

PDGP20 GROUT PUMP



TECHNICAL SPECIFICATIONS

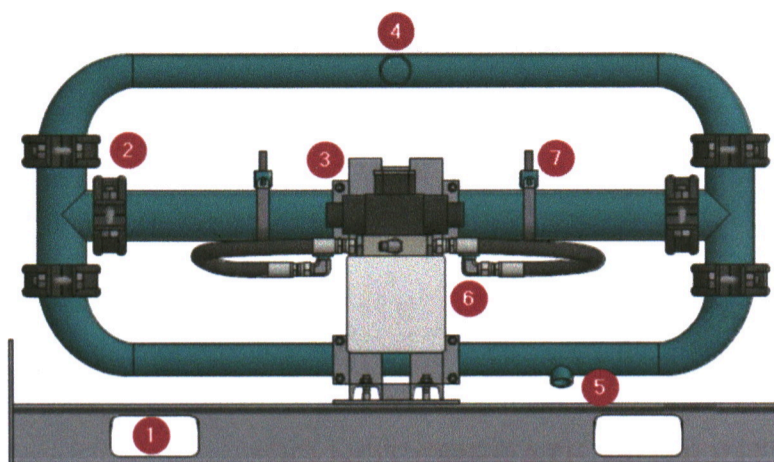
Dimensions



Equipment Specifications

- 20 Gallons per minutes
- Max Pressure:
 - PDGP20-500: 500 psi
 - PDGP20-1000: 1000 psi
- Double action piston
- Weight – 220 lbs.

MACHINE OVERVIEW

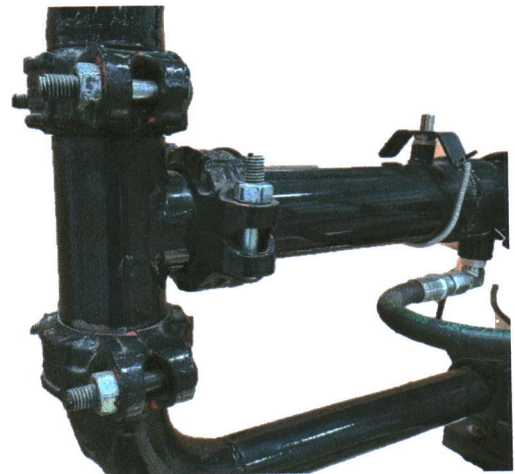


1. FORK POCKET
2. PIPE CLAMPS
3. HYDRAULIC SYSTEM
4. OUTLET PORT
5. DRAIN PORT
6. ELECTRIC PANEL
7. PROXIMITY SENSORS

DAILY OPERATION ***DO NOT OPERATE WITHOUT LIQUID***

Before beginning a day's operation, the following items should be checked to ensure that the pump is prepared for operation and that no condition exists which will lead to a breakdown.

- Machine Operation
 - The unit is powered from the hydraulic source.
 - Stop the hydraulic power if shutdown is required
- Electrical System
 - Check all wiring for damage, corrosion, or loose connections.
- General Mechanical
 - Check for loose or missing hydraulic, electrical, and grout line connections
 - Check for structural damage.
- Safety Tests
 - The equipment may only be used when all safety devices are in place and in proper working order.
 - Be observant of oil spills from the hydraulic system. If there is a spill, find the cause and repair it. High pressure oil spray can cause severe burns and poisoning.
- Maintenance
 - Flush system after every use until water runs clear



MAINTENANCE

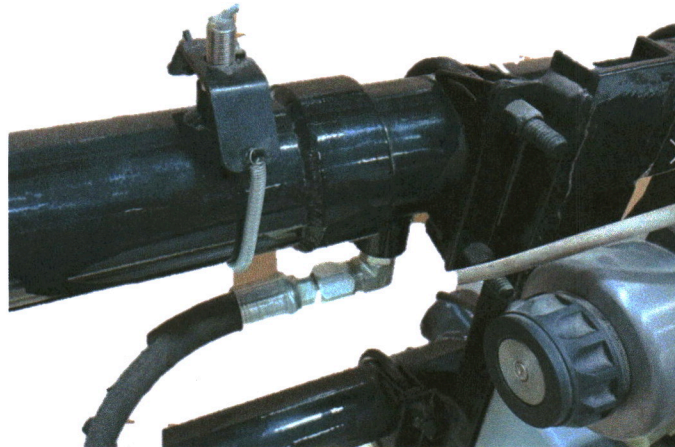
Safety Guidelines for Maintenance

- Have maintenance carried out by only skilled personnel.
- Replace with genuine parts from PennDrill Manufacturing.
- Carry out the maintenance at the prescribed intervals.
- Also observe the other manufacturers' service instructions for components of the equipment.

Maintenance

The maintenance for this equipment is organized based on inspection:

- Inspect unit for any hydraulic leaks
 - Replacement of seals
- Pressure not met
 - Balls and seals could require replacement
- Grout leakage
 - Replacement of material seals
- Clean out after every use. Flush until water runs clear.

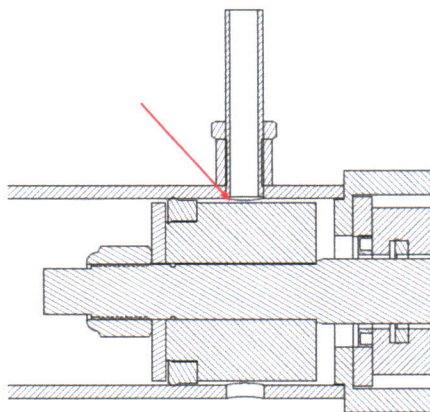


COMPONENTS

Electrical

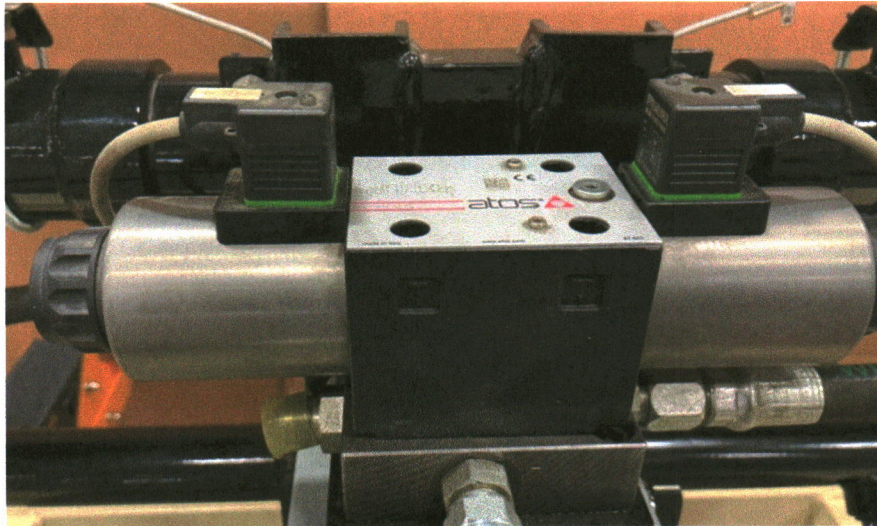


<i>Part Number</i>	<i>Description</i>
W2430116	LABEL - LEFT RIGHT
W2430115	LABEL – AUTO OFF ON
W2139692	ENCLOSURE
W2139631	RELAY SOCKET BASE
W2139556	RELAY
W2139553	PROXIMITY SENSOR *see installation note below*
RP2190020	PROXIMITY SENSOR HOLD
RP2190019	PROXIMITY SENSOR SPRING
W2137182	3-POS MAINTAINED SELECTOR SWITCH
W2137140	3-POS MOMENTARY SELECTOR SWITCH
W2135978	IN-LINE FUSE HOLDER
HB2130014	20A FUSE – BLADE
W5930035	COMPLETE ELECTRICAL PANEL



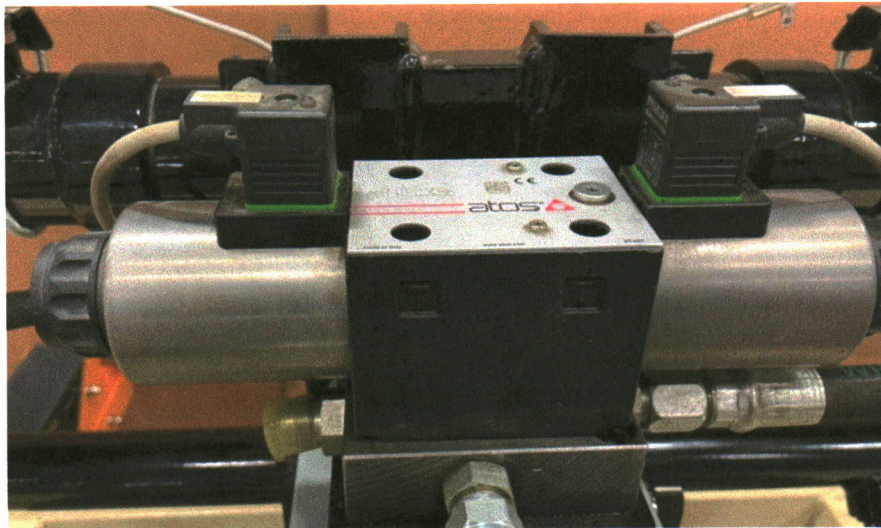
NOTE: For installation of proximity sensor, bottom out prox then back off 1 ½ threads to allow for clearance

Hydraulic – PDGP20-500



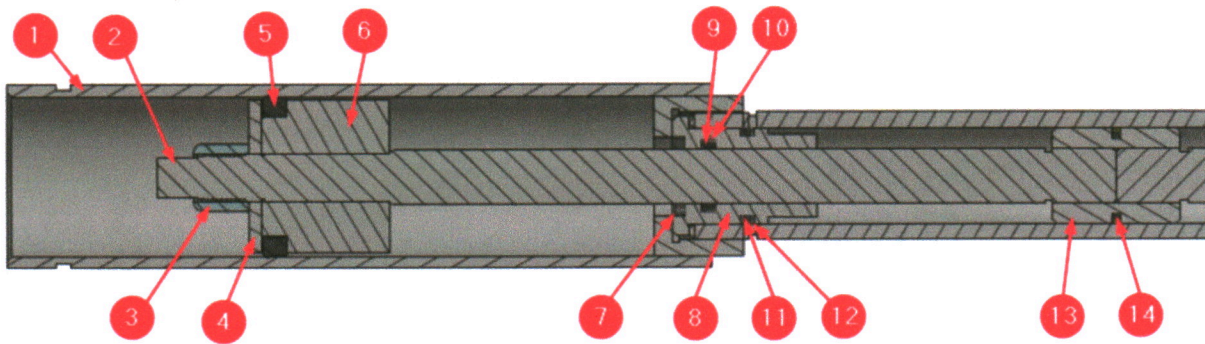
<i>Part Number</i>	<i>Description</i>	<i>QTY</i>
RP2190023	VALVE COIL DS03 PDGP-500	2
RP2190025	REPLACEMENT VALVE PDGP20-500	1
RP2190028	VALVE MANIFOLD DS-03 SERIES PDGP20-500	1
RP2130000	DIN CONNECTOR W LED 12VDC	2
	PRESSURE RELIEF VALVE	1
HA062ST9016.5	HYDRAULIC HOSE, 3/8"	-
RP2190021	VALVE STACK ASSEMBLY – PDGP20-500	-

Hydraulic – PDGP20-1000



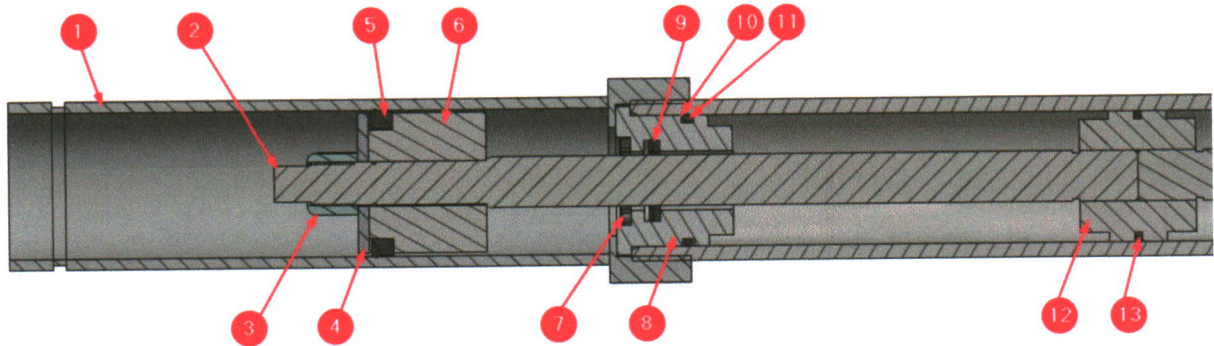
Part Number	Description	QTY
RP2190024	VALVE COIL DS05 PDGP-1000	2
RP2190026	REPLACEMENT VALVE PDGP20-1000	1
RP2190028	VALVE MANIFOLD DS-05 SERIES PDGP20-1000	1
RP2130000	DIN CONNECTOR W LED 12VDC	2
W2190042	PRESSURE RELIEF VALVE	1
HA082ST9016.5	HYDRAULIC HOSE, 1/2"	-
RP2190022	VALVE STACK ASSEMBLY – PDGP20-1000	-

Internal Parts - PDGP20-500



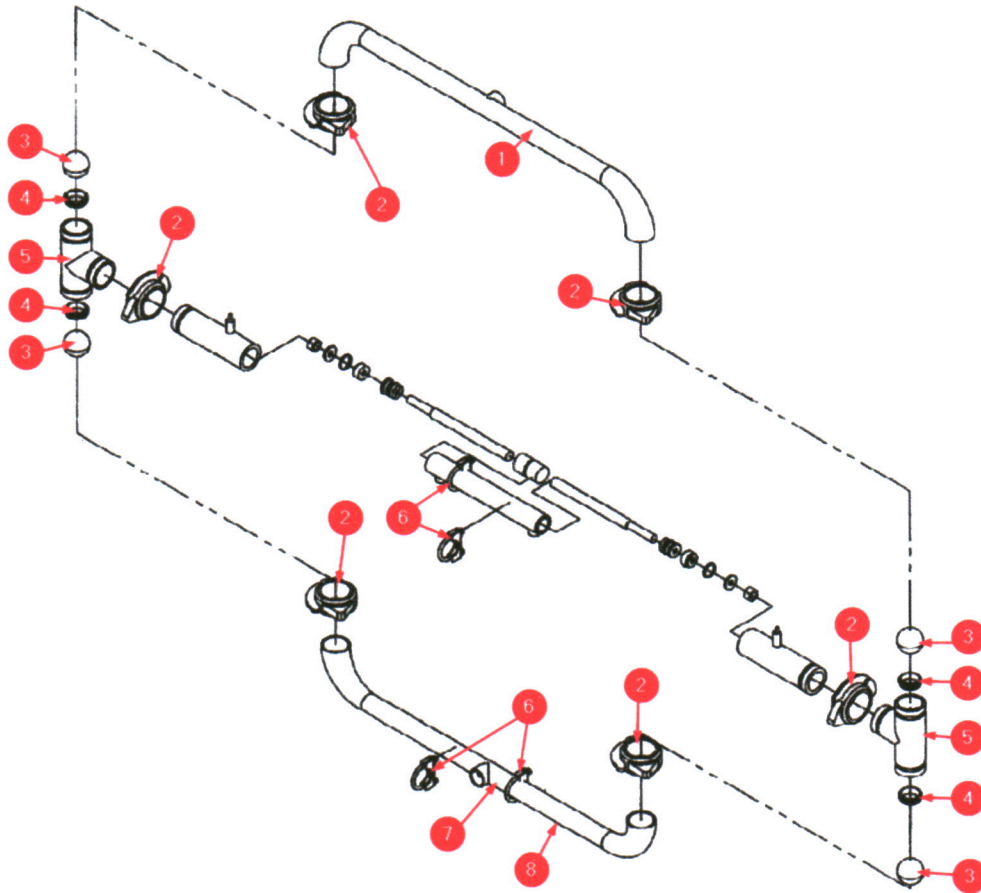
ITEM #	PART #	DESCRIPTION	QTY
1	RP5990019	MATERIAL AND HYDRAULIC CYLINDER SET - 500	1
2	RP2190010	ROD, PISTON, 500PSI	2
3	W2198763-8	NUT, 3/4-16 NYLOC	2
4	RP2190006	WASHER, MATERIAL PISTON	2
5	RP2270004	SEAL, MATERIAL	2
6	RP2190005	PISTON, MATERIAL	2
7	RP2270001	CYLINDER ROD WIPER, 500PSI	2
8	RP2190004	GLAND, HYDRAULIC, 500PSI	2
9	RP2210002	BACKUP RING	2
10	RP2270002	CYLINDER ROD SEAL, 500PSI	2
11	RP2210003	GLAND BOX OUTER SEAL BACKUP, 500PSI	2
12	RP2210001	GLAND BOX OUTER SEAL, 500PSI	2
13	RP2190007	PISTON, HYDRAULIC, 500PSI	1
14	RP2270003	CYLINDER PISTON SEAL, 500PSI	1
-	RP5990017	COMPLETE CENTER SECTION ASSEMBLY - 500	-

Internal Parts – PDGP20-1000



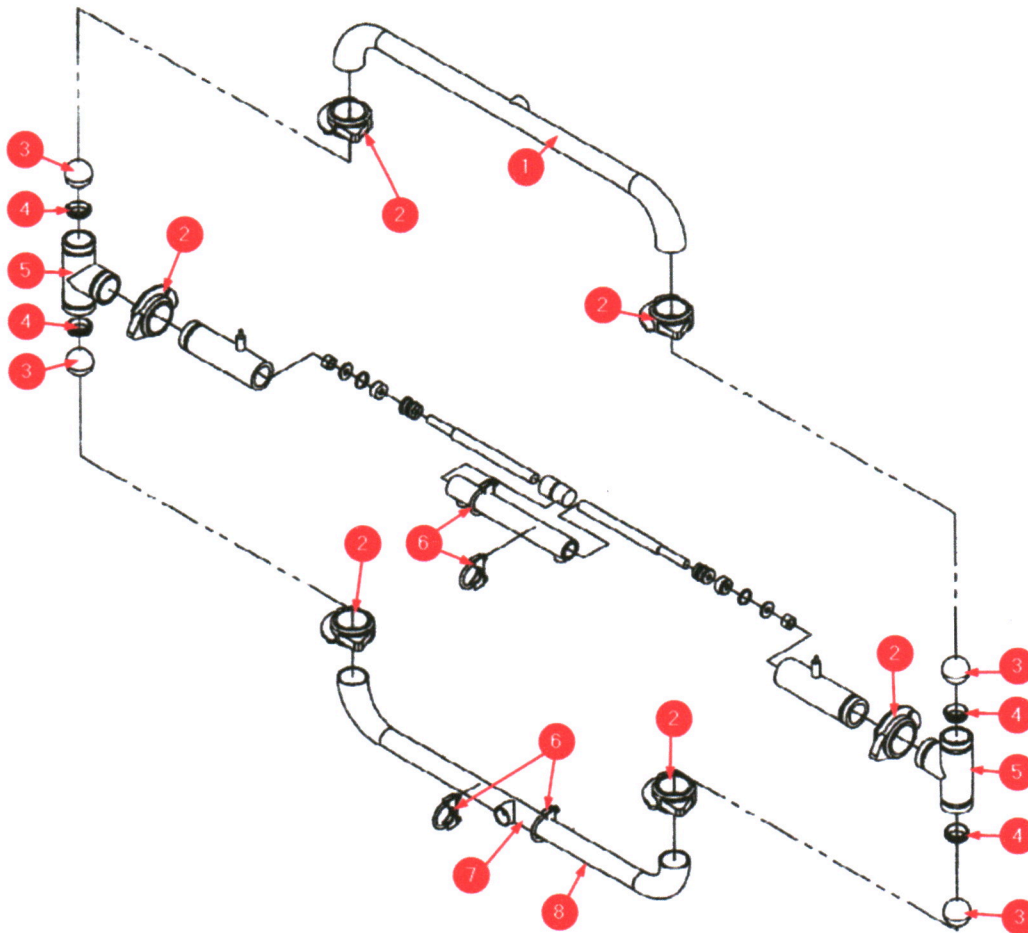
ITEM #	PART #	DESCRIPTION	QTY
1	RP5990020	FLUID AND HYDRAULIC CYLINDER SET - 1000	1
2	RP2190016	ROD, PISTON, 1000PSI	2
3	W2198763-8	NUT, 3/4-16 NYLOC	2
4	RP2190006	WASHER, MATERIAL PISTON	2
5	RP2270004	SEAL, MATERIAL	2
6	RP2190005	PISTON, MATERIAL	2
7	RP2270005	CYLINDER ROD WIPER, 1000PSI	2
8	RP2190008	GLAND, HYDRAULIC, 1000PSI	2
9	RP2270006	CYLINDER ROD SEAL, 1000PSI	2
10	RP2210004	GLAND BOX OUTER SEAL, 1000PSI	2
11	RP2210005	GLAND BOX OUTER SEAL BACKUP, 1000PSI	2
12	RP2190009	PISTON, HYDRAULIC, 1000PSI	1
13	RP2270007	CYLINDER PISTON SEAL, 1000PSI	1
-	RP5990016	COMPLETE CENTER SECTION ASSEMBLY – 1000	-

Maintenance Parts – PDGP20-500



ITEM #	PART #	DESCRIPTION	QTY
1	RP5990010	WELDMENT, OUTLET PIPE	1
2	W7993053	CLAMP, MATERIAL	6
2*	W2198763-16S	2 1/2" VICTAULIC SEAL	6
3	W2198763-12	VALVE, BALL	4
4	RP2190001	SEAT, BALL VALVE	4
4*	W2115374	O RING SEAL GP-20 BALL SEAT	4
5	RP5990007	WELDMENT, TEE	2
6	W2060005	U-BOLT W/ SADDLE CLAMP, 1-1/2"	4
7	RP5990032	WELDMENT, SUCTION PIPE	1
8	W2236442	DRAIN PLUG	1

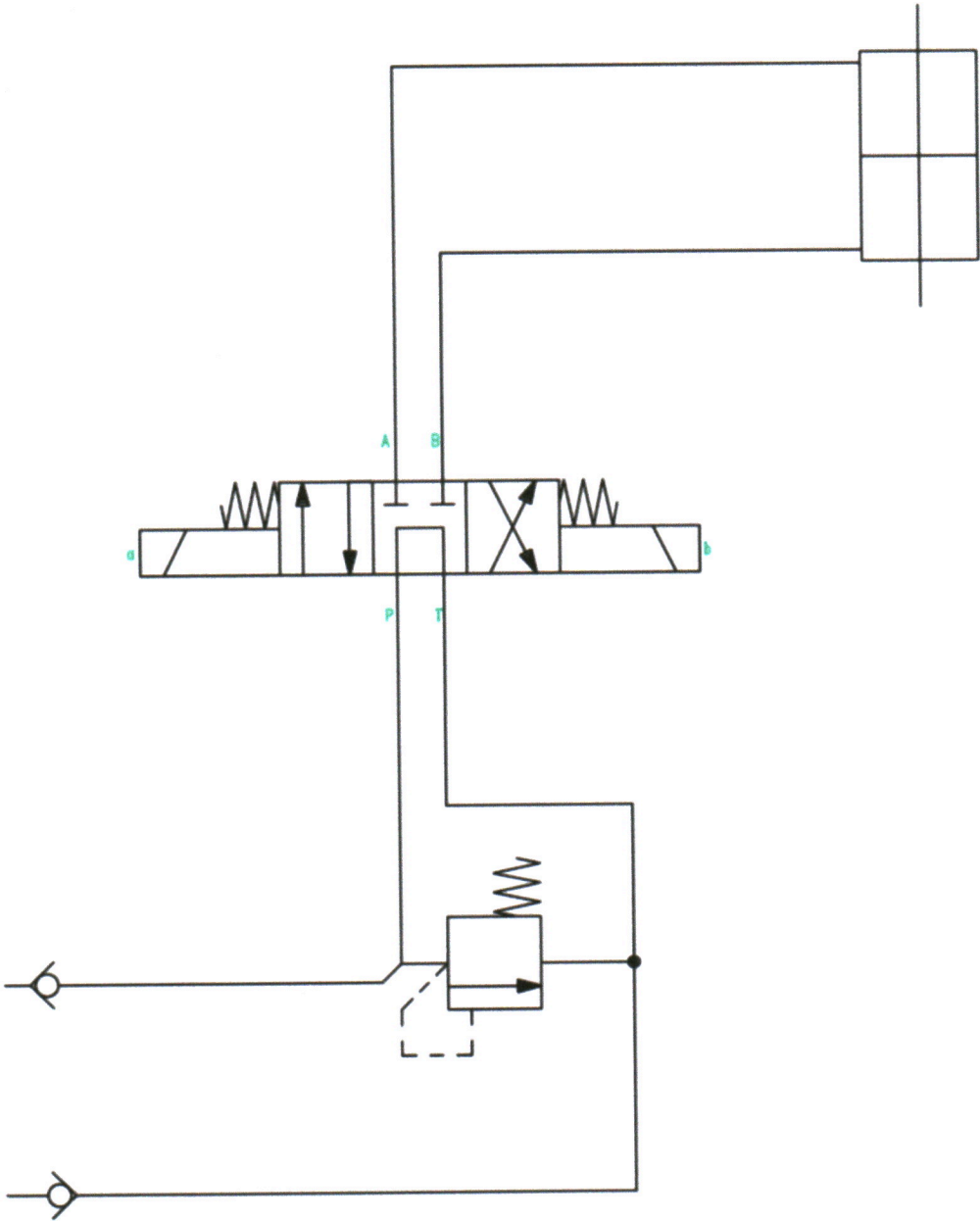
Maintenance Parts – PDGP20-1000



ITEM #	PART #	DESCRIPTION	QTY
1	RP5990004	WELDMENT, OUTLET PIPE	1
2	W7993054	CLAMP, MATERIAL	6
2*	W2198763-16S	2 1/2" VICTAULIC SEAL	6
3	W2198763-12	VALVE, BALL	4
4	RP2190001	SEAT, BALL VALVE	4
4*	W2215374	O RING SEAL GP-20 BALL SEAT	4
5	RP5990007	WELDMENT, TEE	2
6	W2065105	U-BOLT W/ SADDLE CLAMP, 2-3/4"	4
7	RP5990005	WELDMENT, SUCTION PIPE	1
8	W2236442	DRAIN PLUG	1

DIAGRAMS

Hydraulic Diagram



Wiring Diagram

