

PARTS & INSTRUCTION MANUAL

FOR

POLYPUMP

MILLENNIUM SERIES

MODELS: DP-193-PP
DP-282-P
DP-332-P
DP-448-P
DP-555-P
DP-605.2-P



CDS-JOHN BLUE COMPANY

DIVISION OF ADVANCED SYSTEMS TECHNOLOGY, INC.

290 Pinehurst Drive • Huntsville, Alabama 35806

P. O. Box 1607 • Huntsville, Alabama 35807

Telephone: (256) 721-9090 • FAX (256) 721-9091 • Call Toll Free: 1-800-253-2583

Table of Contents

NOTES TO THE OWNER.....	3
SELECTION OF PUMP AND EQUIPMENT DESIGN.....	3
SAFETY PRECAUTIONS.....	3-4
GENERAL	3
OPERATIONAL	4
INSTALLATION	4
INSTALLATION SCHEME.....	5-6
CHECKS TO MAKE BEFORE USING THE PUMPS	5
SUCTION HEAD	5
OPERATING INSTRUCTIONS	6
AFTER USE	6
ORDINARY MAINTENANCE FOR DIAPHRAGM PUMPS.....	6-7
VALVE ASSEMBLY AND O-RING REPLACEMENT	6
DIAPHRAGM REPLACEMENT	7
OIL CHANGE	7
COUPLING TO AGRICULTURAL MACHINERY	8
COUPLING TO ELECTRIC MOTORS AND GASOLINE ENGINES	8
PRESSURE REGULATOR OPERATING INSTRUCTIONS.....	9
CHEMICAL RESISTANCE CHART.....	9
PARTS LIST AND DRAWINGS.....	10-19
PUMP DIMENSIONS	20-21
TROUBLES AND CURES REFERENCE CHART.....	BACK COVER
WARRANTY.....	BACK COVER

WARNING: USE OF THIS PRODUCT FOR ANY PURPOSES OTHER THAN ITS ORIGINAL INTENT, ABUSE OF THE PRODUCT, AND/OR MODIFICATION TO THE ORIGINAL PRODUCT IS STRICTLY PROHIBITED BY CDS-JOHN BLUE COMPANY. CDS-JOHN BLUE COMPANY RESERVES THE RIGHT TO DENY WARRANTY OR LIABILITY CLAIMS IN ANY/ALL SITUATIONS INVOLVING MISUSE, ABUSE OR MODIFICATION.

THE ORIGINAL INTENT OF THIS PRODUCT DOES NOT INCLUDE USE WHERE THE MAXIMUM ALLOWED SPEED, PRESSURE, OR TEMPERATURE IS EXCEEDED. AND IT DOES NOT INCLUDE APPLICATIONS UTILIZING FLUIDS THAT ARE NOT COMPATIBLE WITH THE PRODUCTS COMPONENT MATERIALS. DO NOT USE THIS PRODUCT WITH FLAMMABLE OR COMBUSTIBLE FLUIDS SUCH AS GASOLINE, KEROSENE, DIESEL, ETC ..., AND DO NOT USE IN EXPLOSIVE ATMOSPHERES. FAILURE TO FOLLOW THIS NOTICE MAY RESULT IN SERIOUS INJURY AND/OR PROPERTY DAMAGE AND WILL VOID THE PRODUCT WARRANTY. IF IN DOUBT ABOUT YOUR APPLICATION, CONTACT YOUR STOCKING DEALER OR THE CDS-JOHN BLUE TECHNICAL STAFF AT 1-800-253-2583.

NOTES TO THE OWNER

Thank you for purchasing a CDS-John Blue pump. These pumps are equipped with mechanical diaphragms. They are manufactured with materials that make them suitable for weed control, liquid fertilizer, spraying and washing. A complete system with accessories is easily adapted to tractors, sprayers and boom sprayers, electric motors and gasoline/diesel engines.

This manual has been prepared and illustrated to assist you in the maintenance of your CDS-John Blue pump. Enter your serial number and date of purchase for the diaphragm pump in the space provided below for ordering parts and service information.

Because our engineering department is constantly improving products, we reserve the right to make design and specification changes without notice.

Serial No. _____

Purchase Date _____

SELECTION OF PUMP AND EQUIPMENT DESIGN

With regard to safety, all pumps meet the regulations in effect at publishing time.

Choose the pump type carefully, according to the kind of liquid used and to the technical specifications (output, pressure) needed. If there are any questions about which pump type should be used, please contact our Technical Department.

CDS-John Blue pumps are designed and manufactured with materials that are compatible with water. They are also compatible with most pesticides and herbicides currently on the market in the concentration recommended by manufacturer. Use only pump liquid that is compatible with the pump component materials. Failure to follow this warning can result in injury and/or property damage.

The technical specifications of each pump (RPM, output, pressure) are shown on the label attached to the pump. For more information, call our Technical Department at 1-800-253-2583.

Carefully evaluate which pump model series to use. Using the correct pump type and size for the operation system can prevent possible bodily injury. Also use similar care when selecting the electric, gasoline/diesel motors or driven systems so they conform to the recommended performance to prevent personal injury and environment damage. Finally, it is important to be cautious during the design and construction of the equipment to prevent bodily injury, coming not from the pump, but from the design, construction or improper use of equipment.

A certified electrician should be used when wiring an electrically driven pump.

SAFETY PRECAUTIONS

GENERAL

- Do not operate equipment until you read and understand Operators Manual.
- Carry a first aid kit and five (5) gallons of clean water to flush contaminated skin and eyes.
- Agricultural chemicals can be dangerous. Improper selection or application can injure persons, animals, plants, soils or other property. Follow label from chemical manufacturer.
- Always wear eye protection and protective clothing when in the area of spray pump and/or control.
- In addition to the pressure regulator, use the proper safety relief valve in the plumbing after the pump.
- Before each use, make certain that all connections are tight and secure.
- Disconnect power before servicing.

- Do not pump flammable or combustible fluids.
- Do not operate pump above recommended rpm.
- Provide adequate protection in guarding around the moving parts such as the shaft and the pulley.
- Stop pump and release all pressure within the system before servicing any component.
- Do not operate pump above 145°F (62°C) liquid temperature.
- Do not remove the pressure dampener until air pressure has been completely vented.

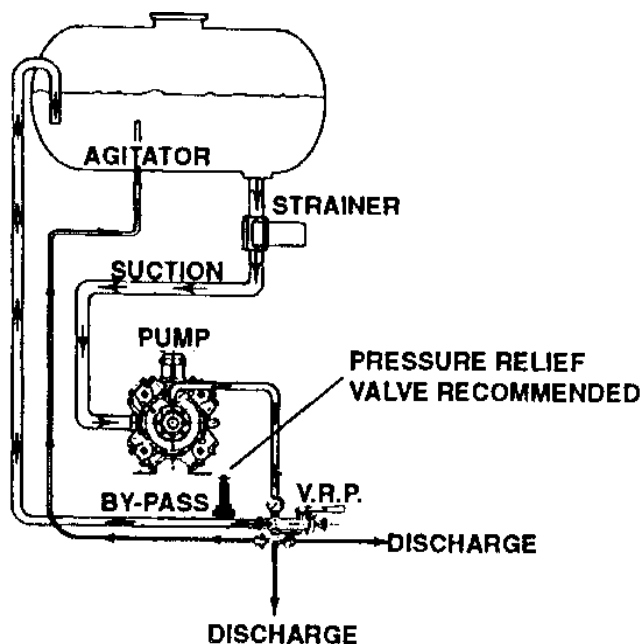
WARNING: Severe Bodily injury may occur if the above precautions are not taken.

OPERATIONAL

- Equipment should be operated only by trained, responsible people.
- Do not allow anyone but operator on equipment.
- Wear safety goggles and/or respirator when operating applicator.
- Do not attempt any service or disassembly without stopping machine and releasing all pressure from system.
- Do not operate equipment with shields removed.
- Make a visual inspection of all hose and fittings for soundness on a scheduled basis.
- Replace anything which appears questionable.

INSTALLATION

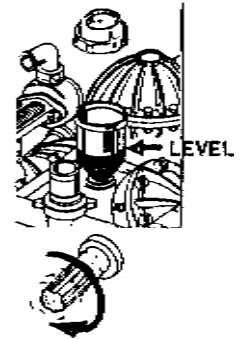
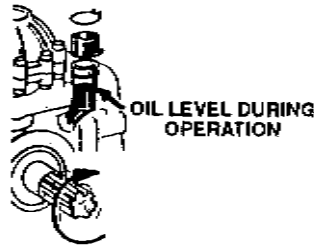
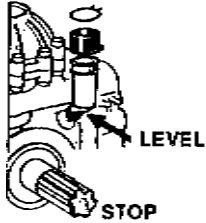
1. Pump should be installed perfectly lined up with the driven gears (pulleys, gear boxes, overgears, etc.).
2. Attach the pump to a strong base plate and anchor it with bolts sufficiently strong enough to hold it in place.
3. Proper selection of type and hose size is vital to good performance:
 - Diameter of suction, discharge and by-pass hoses should be at least that of the pump hose barb or greater.
 - Use only hoses rated for maximum pressure rating of the pump.
4. Use suction line of spiral steel wire braid reinforced suction hose to prevent collapse. Use good quality hose clamps and tighten securely.
5. Use only components (hose, fittings, clamps, etc.) rated for maximum pressure rating of the pump.
6. Failure to follow the above information can result in malfunctions of the pump and will void the product warranty.



INSTALLATION SCHEME

CHECKS TO MAKE BEFORE USING THE PUMPS

- With the pump not running, check to make sure that the oil level is correct. Add oil, if needed, taking care not to exceed the indicated level. Repeat with pump running. See “Oil Change” on page 7.



- Check to make sure the inlet and discharge hoses are not crimped. Also make sure the strainer is clean.
- Prevent any hose restrictions and be sure connections are tight to prevent air entering, since these conditions will compromise pump performance.
- If pumping from a tank, check to make sure that the control unit by-pass line is not too close to the inlet line. Make sure that it does not create turbulence inside the tank.
- Turn the pressure adjustment lever to the by-pass position when starting the pump.
- The pulsation dampener on the pump or on the pressure line is generally charged at 80-120 psi, the recommended pressure rating for the pump.
- For different working pressures, set the pressure of the pulsation dampener as follows:

WORKING PRESSURE	PULSATION DAMPENER PRESSURE
300 - 700 psi	80 - 120 psi
150 - 300 psi	70 - 80 psi
70 - 150 psi	15 - 70 psi

Note: As a general rule, set the pulsation dampener to 1/3 the working pressure without exceeding 100 psi. Also, with the pump not running, check the pressure with a pressure gauge. It is a good practice to inspect the pulsation dampener diaphragm at regular intervals.

SUCTION HEAD

Do not use pump for filling the tank. The hydroinjector, with a proper nozzle, can be used for this purpose. Avoid suction head higher than approximately 10 ft. and use the correct length for hoses, without elbow runs, better if pre-charged. In this case some problems may occur with the pump diaphragms.

OPERATING INSTRUCTIONS

- When starting pump, turn the valve lever to the dump position (by-pass) to facilitate priming. Once the pump is primed, turn the valve lever to the “PRESS” position and adjust the working pressure with the knob: turning knob clockwise will increase pressure, turning knob counterclockwise will decrease pressure.
- Operating pump above recommended rpm will not improve performance, but may damage the pump. Operation at rpm higher than specification voids all warranties.
- Be sure that the oil level is not above the maximum level with the pump running with pressure.

AFTER USE

After use, in order to prevent damage, flush the pump and let it operate for a few minutes at working pressure with a solution that will neutralize the liquid last pumped (refer to that manufacturer’s instructions). Afterward empty the pump, so that the pressure drops to zero (“O”), and then let the pump run without liquids for two minutes.

To protect pump from freezing, flush pump per instructions above (after use) and then flush with straight RV-antifreeze. Empty the pump per the instructions above.

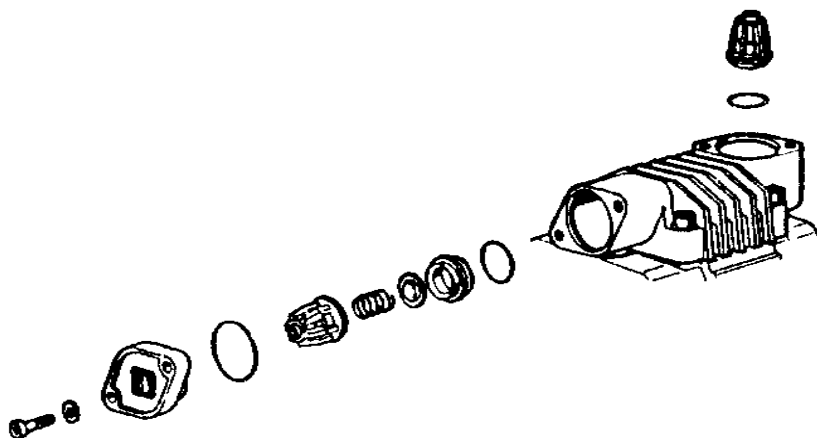
ORDINARY MAINTENANCE FOR DIAPHRAGM PUMPS

Routine maintenance on the pump includes changing the diaphragms, oil, valve assembly and o-rings, all of which are normal wear parts.

VALVE ASSEMBLY AND O-RING REPLACEMENT

Occasionally, debris can cause the valves to not seat properly or damage o-rings. To check for this problem, please follow these steps:

1. Remove the valve cover (or the manifold) and remove the valves, check for debris and wear. Check o-rings as well.
2. Replace necessary parts and reassemble.
3. Repeat for all valves. Consult the parts list for the corresponding valve kit or o-ring kit part number.



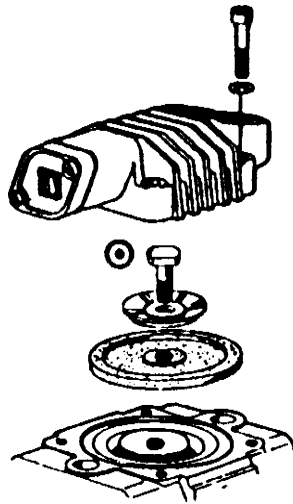
DIAPHRAGM REPLACEMENT

1. Remove the pump heads one by one.
2. Use a wrench to remove the diaphragm bolt, diaphragm and support washer.
3. If you removed the piston sleeves, replace them one at a time in their previous position. It is a good idea to mark them as they are removed.
4. Insert the new diaphragm on the piston and install it with its bolt. Use these tightening torques:

		Diaphragm Bolt Size	Torque
M 6 x 1	= 5 N.m.	6 mm	44 inch-pounds
M 8 x 1,25	= 12 N.m.	8 mm	106 inch-pounds
M 10 x 1,25	= 25 N.m.	10 mm	221 inch-pounds

The diaphragms should be replaced with the piston at its bottom and the edges inserted perfectly into the groove all the way around.

5. Replace the heads and attach them with their bolts.
6. Refill pump with oil through the reservoir and rotate the shaft to distribute oil and fill to proper level. Repeat all the checks described above in the section "Checks to make before using the pump."
7. Check the oil level with the pump running and without pressure until all air bubbles have been vented. Close the cap on the oil sight tube after the air has been completely emptied.
8. After the first inspection of the oil level as above, check the oil level again with the pump running with pressure.



OIL CHANGE

Change oil after 500 hours as follows:

1. Remove the tank plug and the drain plug.
2. Rotate the shaft until the oil stops flowing.
3. Wash inside parts with diesel oil.
4. Put the drain plug and pour oil (SAE 30) slowly into sight tube while turning the pump shaft.
5. Start the pump at zero ("0") pressure for a few minutes to allow the correct lubrication of inside parts.
6. While the pump is operating, check the oil level inside the reservoir.
7. If necessary, fill oil to proper level.

WARNING: Too much oil causes pressure into the crankcase and this can result in leakage or diaphragm failures.

For pumps without the drain plug, it is not necessary to periodically change the oil. However, the oil should be changed when replacing diaphragms.

COUPLING TO AGRICULTURAL MACHINERY

1. Check that the PTO of the machine does not exceed the maximum rpm shown on the pump plate.
2. Synchronized the PTO with the motor speed, consult the service manual to get the gear number and rpm corresponding to the maximum pump rotation speed.
3. When the rpm of the PTO is higher than the maximum speed, use the suggested reduction gear.
4. Disconnect PTO when moving pump out of service. If that is impossible, then disengagement should be provided.

COUPLING TO ELECTRIC MOTORS AND GASOLINE ENGINES

For direct coupling always use the suggested reduction gear.

For coupling with pulley, check alignment of the two pulleys.

$$\text{Maximum Transmission Ratio} \frac{\text{Motor RPM}}{\text{Max Pump RPM}} = K$$

After determining K, you can establish the motor or pump pulley diameter:

$$\text{Motor Pulley Pitch Diameter} = \frac{\text{Pump Pulley Pitch Diameter}}{\text{Pump RPM}} = K$$

$$\text{Pump Pulley Pitch Diameter} = \text{Motor Pulley Pitch Diameter} \times K$$

For special installation or application consult our Technical Department for the necessary modifications.

WARNING: All wiring should be done by a qualified electrician.

WARNING: Do not handle a pump or pump motor with wet hands or when standing on a wet damp surface, or in water.

ORIGINAL SPARE PARTS

Use only original spare parts otherwise warranty will be declined.

Always enter the serial number printed on the pump label.

When ordering parts, please specify the following:

- pump model
- part number
- description
- quantity
- means of shipment

PRESSURE REGULATOR OPERATING INSTRUCTIONS

Before starting, turn the valve lever counterclockwise to the dump position (by-pass flow). Failure to follow this will void the warranty on the pump.

Turn the adjustment knob counterclockwise to decrease the pressure to zero ("0") psi. In the initial start-up this is absolutely recommended.

When the valve is in the by-pass line, start the unit and let it run for at least two (2) minutes or until oil is displaced in the cylinder and air is evacuated from circuit.

Turn the valve lever clockwise to pressure position, close the spray gun or spray boom. Turn the adjustment knob clockwise to achieve operating pressure. Then open the spray gun or spray boom.

CHEMICAL RESISTANCE CHART

The recommendations in the chart below are based upon information from material suppliers and careful examination of available published information and are believed to be accurate. The resistance of metals, plastics and elastomers may be affected by concentration, temperature, presence of other chemicals and other factors. This information should be considered as a general guide rather than an unqualified guarantee. All recommendations assume ambient temperatures unless otherwise noted. The ratings for these materials are based upon the chemical resistance only.

Material	Viton	Buna N (Nitrile)
Acetaldehyde	A	B
Acetamide	A	A
Acetate Solv ²	D	D
Acetic Acid, Glacial	D	D
Acetic Acid 20%	D	D
Acetic Acid 80%	D	C
Acetic Acid	C	C
Acetic Anhydride	D	A

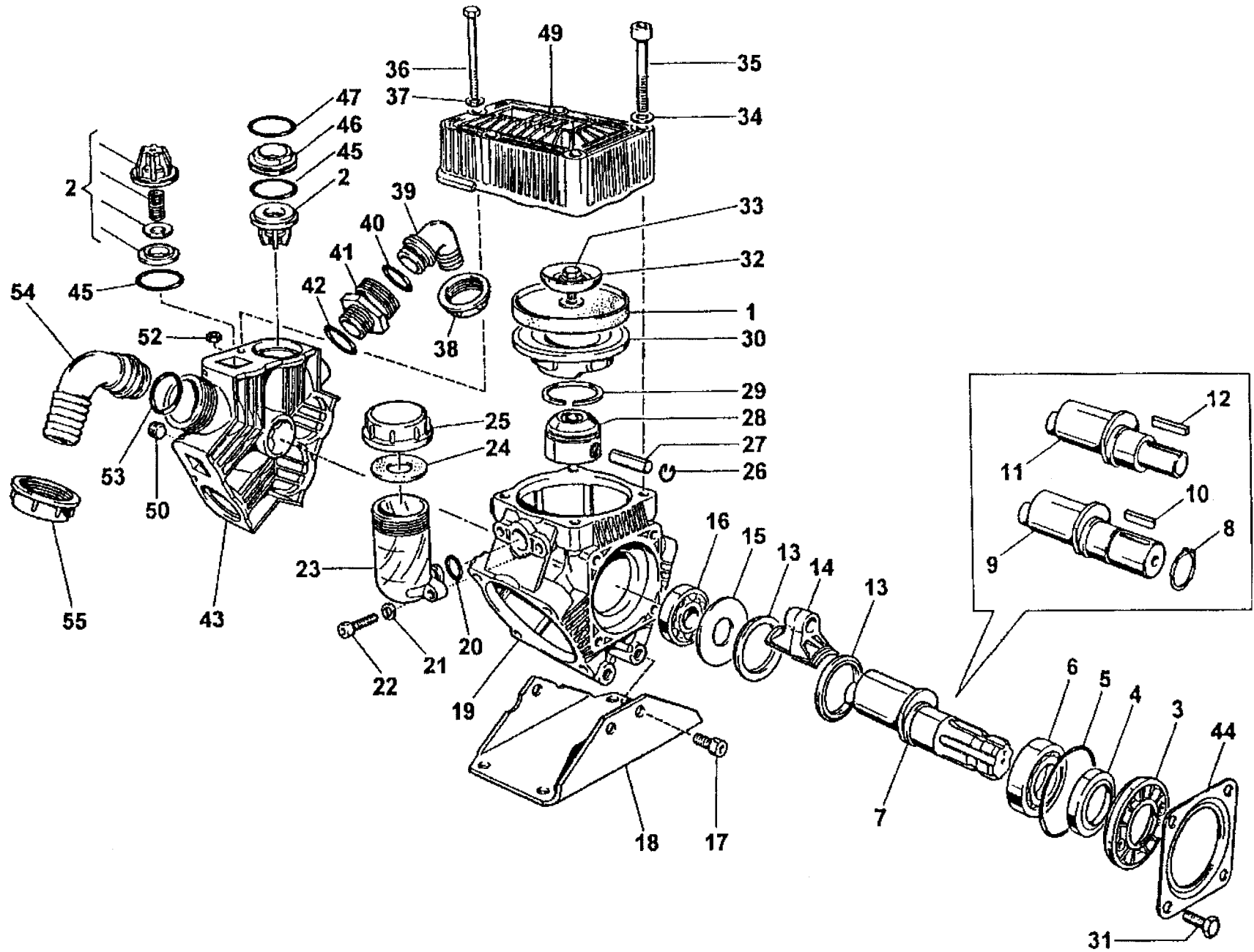
Material	Viton	Buna N (Nitrile)
Acetone	D	D
Acetylen ²	A	A
Acrylonitrile	C	D
Alcools Amyl	A	A
Benzyl	A	D
Butyl	A	A
Diacelon ²	D	D

Material	Viton	Buna N (Nitrile)
Ethyl	A	A
Hezyl	A	A
Isobutyl	A	C
Isopropyl	A	C
Methyl	C	B
Octyl	A	B
Propyl	A	A

A = Acceptable, No effect
 B = Acceptable, Minor effect

C = Questionable, Moderate effect
 D = Not Recommended, Severe effect

DP-193-PP

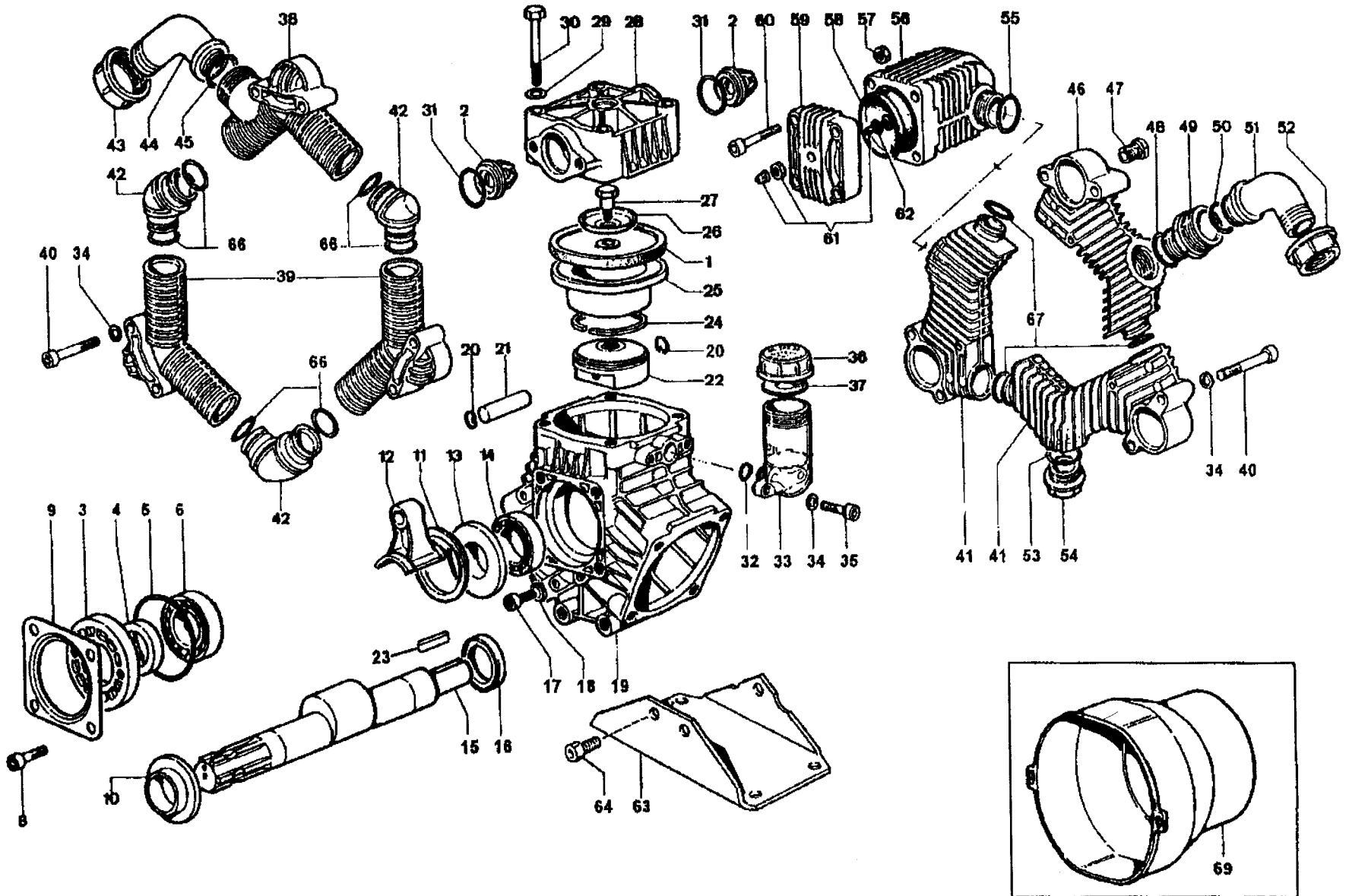


DP-193-PP

* Pump Kit: DP-63988097 ■ Pump Kit with Shaft Seals: DP-63988197 □ SS-Valve Kit: DP-639872973 ◆ Desmopan Diaphragm Kit: DP-63987397

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
■◆ 1	DP-95004000	DESMOPAN PISTON DIAPHRAGM	3	30	DP-63001501	PISTON SLEEVE	3
□ 2	DP-28980997	SS VALVE ASSY	6	31	DP-86318400	SCREW M10 X 16 UNI5739	4
3	DP-53000732	HOUSING	1	32	DP-63001768	DISK	3
■* 4	DP-80214310	OIL SEAL DIA. 35 X 52 X 7	1	33	DP-63001851	DIAPHRAGM LOCKING BOLT	3
■* 5	DP-80331000	O-RING 4, 0 X 82	1	34	DP-84380150	WASHER DIA. 10, 5 X 21 X 2	12
6	DP-81283700	BALL BEARING DIA. 35 X 62 X 14	1	35	DP-86356250	SCREW M10 X 70 UNI5931	12
11	DP-63001626	CRANKSHAFT "VA" VERSION	1	36	DP-86300200	SCREW M8 X 75 UNI5931	3
12	DP-80647500	TAB 6, 36 X 6, 36 X 38	1	37	DP-84369300	WASHER DIA. 8, 4 X 17 X1, 6	3
13	DP-26004776	RING	2	■ 38	DP-82006750	WING NUT G. 1-1/4"	1
14	DP-23000409	SET OF 3 LIGHT ALLOY CONRODS	1	39	DP-84054240	90° ELBOW CONNECTOR DIA. 25	1
15	DP-95009761	CRANKSHAFT SPACER	1	■ 40	DP-80321905	O-RING 3, 0 X 25 VITON	1
16	DP-81264600	BALL BEARING DIA. 20 X 52 X 15	1	41	DP-83508900	NIPPLES G.1" - G.1-1/4"	1
17	DP-86326400	SCREW M10 X 25 UNI5931	3	■ 42	DP-80321910	O-RING 3, 0 X 30	1
18	DP-63000661	MOUNTING RAIL	1	43	DP-63000332	MANIFOLD	1
19	DP-63000109	CRANKCASE	1	44	DP-17001661	FLANGE	1
■ 20	DP-80318000	O-RING 2, 62 X 15, 08	1	■*◆□ 45	DP-80332060	O-RING 5, 34 X 40, 65	6
21	DP-84368550	WASHER DIA. 8, 2 X 15 X 1, 5	2	46	DP-28022932	VALVE ASSY SPACER	4
22	DP-86268250	SCREW M8 X 25 UNI5931	2	■*◆□ 47	DP-80321980	O-RING 3, 0 X 39	4
23	DP-23000832	OIL FILLER	2	49	DP-63002232	HEAD	3
■ 24	DP-82412000	GASKET DIA. 45 X19 X 1, 5	1	50	DP-85258500	CAP G.3/8	1
25	DP-85275000	OIL FILLER CAP	1	52	DP-81457450	NUT M8 UNI5588	3
26	DP-80002100	RING DIA. 15	6	■ 53	DP-80321915	O-RING 3, 0 X 30 VITON	1
27	DP-85200670	PISTON PIN DIA. 15	3	54	DP-84057100	90° ELBOW CONNECTOR DIA. 38	1
28	DP-63001409	PISTON	3	55	DP-82007000	WING NUT G. 1-1/2"	1
29	DP-81850450	PISTON RING	3				

DP-282-P/DP-332-PP



DP-282-P & DP-332-P

* Pump Kit: DP-62980397

■ Pump Kit with Shaft Seals: DP-62981097

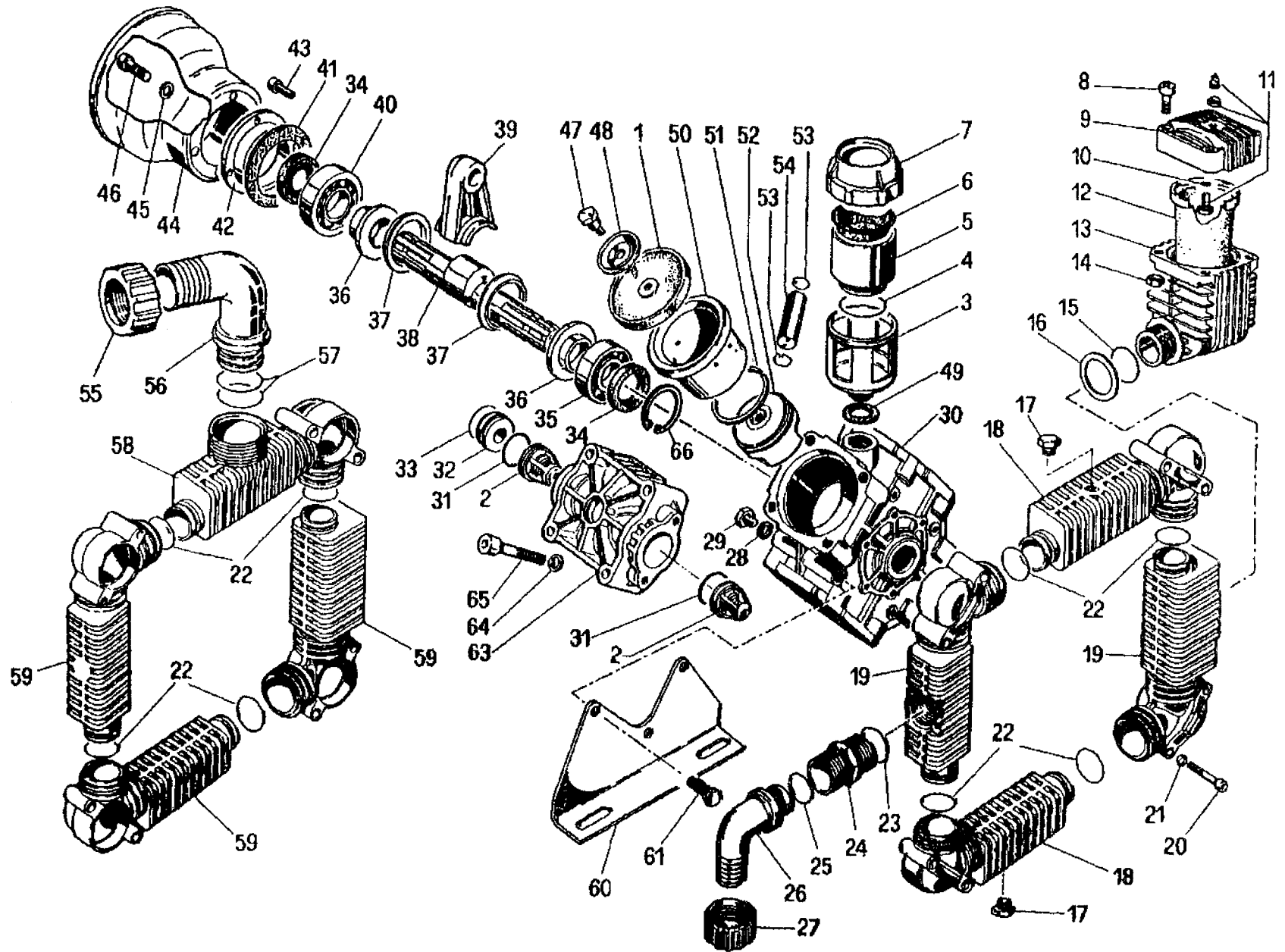
□ SS Valve Kit: DP-62980597

◆ Desmopan Diaphragm Kit: DP-62980797

13

POS	PART NUMBER	QTY	DESCRIPTION	POS	PART NUMBER	QTY	DESCRIPTION
■◆ 1	DP-62004000	3	DESMOPAN PISTON DIAPHRAGM	33	DP-23000832	1	OIL FILLER
1	DP-62004036	3	HPS PISTON DIAPHRAGM (OPT)	34	DP-84368550	14	WASHER DIA. 8, 2 X 15 X 1, 5
□ 2	DP-28980997	6	SS VALVE ASSY	35	DP-86268250	2	SCREW M8 X 25 UNI5931
3	DP-53000732	1	HOUSING	36	DP-85275000	1	OIL FILLER CAP
■* 4	DP-80214310	1	OIL SEAL DIA. 35 X 52 X 7	■37	DP-82412000	1	GASKET DIA. 45 X 19 X 1, 5
■* 5	DP-80331000	1	O-RING 4. 0 X 82	38	DP-62000432	1	MANIFOLD PIPE G. 1-1/2"
6	DP-81284600	1	BALL BEARING DIA. 35 X 72 X 17	39	DP-62000332	2	MANIFOLD PIPE
8	DP-86318750	4	SCREW M10 X 18 UNI 5931	40	DP-86296000	12	SCREW M8 X 65 UNI5931
9	DP-17001661	1	FLANGE	41	DP-62000232	2	MANIFOLD PIPE (OUTLET)
10	DP-62002909	1	SPACER CRANKSHAFT	42	DP-62000732	3	ELBOW MANIFOLD
11	DP-98004776	2	CONNECTING ROD RINGS	43	DP-82007000	1	WING NUT G. 1-1/2"
12	DP-62000811	3	BRONZE CONRODS	44	DP-84057100	1	90° ELBOW CONNECTOR DIA. 38
13	DP-28002709	1	SHAFT SPACER	■45	DP-80321910	1	O-RING 3, 0 X 30
14	DP-81283700	1	BALL BEARING DIA. 35 X 62 X 14	46	DP-62003132	1	MANIFOLD PIPE G. 3/8
15	DP-62002726	1	CRANKSHAFT "VDA"	47	DP-85257600	1	CAP G. 3/8
■16	DP-80214310	1	OIL SEAL DIA. 35 X 52 X 7	■48	DP-80321910	1	O-RING 3, 0 X 30
17	DP-86369450	1	SCREW M12 X 20 UNI 5931	49	DP- 83508900	1	NIPPLES G. 1- G. 1-1/4"
■18	DP-82407900	1	GASKET DIA. 13, 2 X 17 X 1 COPPER	■50	DP-80321900	1	O-RING 3, 0 X 25
19	DP-62003009	1	CRANKCASE	51	DP-84054240	1	90° ELBOW CONNECTOR DIA .25
20	DP-80002100	6	RING DIA. 15	52	DP-82006750	1	WING NUT G. 1-1/4"
21	DP-85200670	3	PISTON PIN DIA. 15	■53	DP-80320600	1	O-RING 2, 62 X 28, 25
22	DP-62001809	3	PISTON DIA. 78 (DP-332)	54	DP-85271000	1	CAP G 1 "
22	DP-63001309	3	PISTON DIA. 72 (DP-282)	■55	DP-80321910	1	O-RING 3, 0 X 30
23	DP-80647500	1	TAB 6, 36 X 6, 36 X 38	56	DP-27003532	1	DAMPER BODY
24	DP-81854000	3	PISTON RING DIA. 78 (DP-332)	57	DP-81457450	4	NUT M8 UNI5588
24	DP-81853000	3	PISTON RING DIA. 72 (DP-282)	■58	DP-23004131	1	BALLASTER DIAPHRAGM
25	DP-62001901	3	PISTON SLEEVE (DP-332)	59	DP-11000409	1	BALLASTER COVER
25	DP-62000501	3	PISTON SLEEVE DIA. 72 (DP-282)	60	DP-86275210	4	SCREW M8 X 35 UNI 5931
26	DP-28008568	3	DISK (DP-332)	61	DP-86160850	1	AIR VALVE
26	DP-41005468	3	DISK INOX (DP-282)	■62	DP-80321300	1	O-RING 3, 0 X 6
27	DP-62004551	3	DIAPHRAGM LOCKING BOLT	63	DP-63000661	1	MOUNTING RAIL
28	DP-62002532	3	HEAD	64	DP-86326400	3	SCREW M10 X 25 UNI5931
29	DP-84384450	12	WASHER DIA. 12, 2 X 21 2, 5	■*66	DP-80320600	6	O-RING 2, 62 X 28, 25
30	DP-86406800	12	SCREW M12 X 75 UNI5931	■*67	DP-80321750	3	O-RING 3, 0 X 19
■*□31	DP-80331400	6	O-RING 4, 5 X 40	69	DP-31146832	1	PLAIN SAFETY CONE (OPT)
■32	DP-80318000	1	O-RING 2, 62 X 15, 08				

DP-448-P



DP-448-P

* Pump Kit: DP-28988397

■ Pump Kit with Shaft Seals: DP-28989397

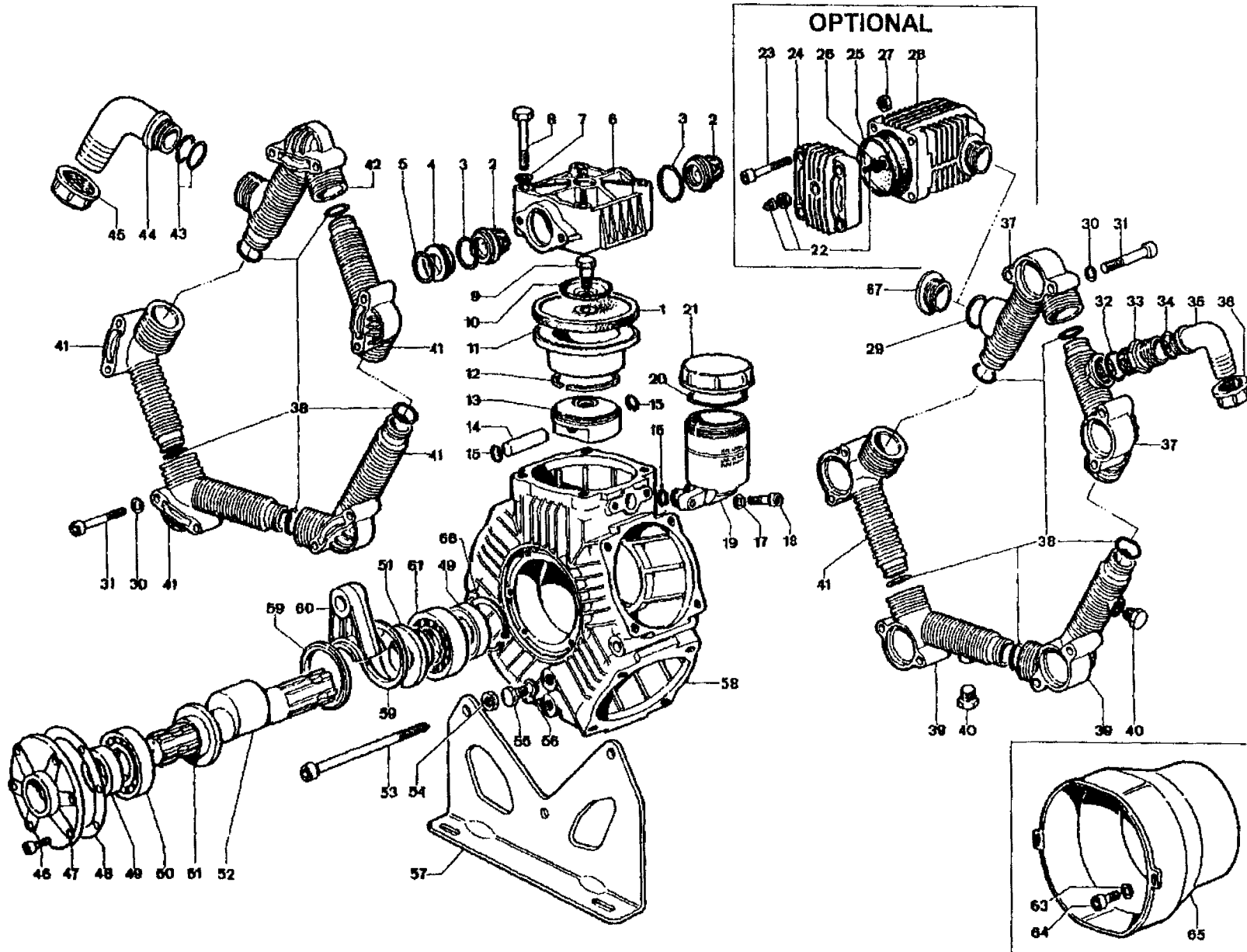
□ SS Valve Kit: DP-28988597

◆ HPS Diaphragm Kit: DP-28988897

15

POS	PART NUMBER	QTY	DESCRIPTION	POS	PART NUMBER	QTY	DESCRIPTION
■ ◆ 1	DP-62004036	4	HPS PISTON DIAPHRAGM	■ 33	DP-80320940	4	O-RING 2, 62 X 44, 12
1	DP-62004000	4	DESMOPAN PISTON DIAPHRAGM (OPT)	■ * 34	DP-80214310	2	OIL SEAL DIA. 35 X 52 X 7
□ 2	DP-28980997	8	SS VALVE ASSY	35	DP-81284600	1	BALL BEARING DIA. 35 X 72 X 17
3	DP-41001509	1	BOWL OIL FILLER	36	DP-28002709	2	SHAFT SPACER
■ 4	DP-80320940	1	O-RING 2, 62 X 44, 12	37	DP-98004776	2	CONNECTING ROD RING
5	DP-41001632	1	OIL FILLER	38	DP-62002426	1	CRANKSHAFT "VD"
■ 6	DP-41001731	1	OIL FILLER DIAPHRAGM	39	DP-28003411	1	SET OF 4 CONRODS
7	DP-28014432	1	OIL FILLER CAP	40	DP-81286700	1	BALL BEARING DIA. 35 X 80 X 21
8	DP-86275210	4	SCREW M8 X 35 UNI 5931	■ * 41	DP-98011072	1	GASKET
9	DP-11000409	1	BALLASTER COVER	42	DP-98010809	1	COVER
■ 10	DP-80321300	1	O-RING 3, 0 X 6	43	DP-86256250	4	SCREW M8 X 20 UNI5931
11	DP-86160850	1	AIR VALVE	44	DP-31146832	1	PLAIN SAFETY CONE (OPT)
■ 12	DP-23004131	1	BALLASTER DIAPHRAGM	45	DP-84371000	4	WASHER DIA. 8, 5 X 24 X 2
13	DP-27003532	1	DAMPER BODY	46	DP-86268250	4	SCREW M 8 X 25 UNI 5931
14	DP-81457450	4	NUT M8 UNI5588	47	DP-62004551	4	DIAPHRAGM LOCKING BOLT
■ 15	DP-80324750	1	O-RING 3, 53 X 28, 17	48	DP-28008568	4	DISK
16	DP-27003746	1	SPACER	■ 49	DP-82419100	1	GASKET DIA. 27 X 38 X 2
17	DP-85257600	2	CAP G. 3/8	50	DP-62001901	4	PISTON SLEEVE
18	DP-28007432	2	MANIFOLD PIPE WITH HOLE G.3/8	51	DP-81854000	4	PISTON RING DIA. 78
19	DP-28007132	2	MANIFOLD PIPE G.1"	52	DP-62001809	4	PISTON DIA. 78
20	DP-86296000	16	SCREW M8 X 65 UNI5931	53	DP-80002100	8	RING DIA. 15
21	DP-84368550	16	WASHER DIA. 8, 2 X 15 X 1 , 5	54	DP-85200670	4	PISTON PIN DIA. 15
■ * 22	DP-80325000	8	O-RING 3, 53 X 31, 34	55	DP-82012000	1	WING NUT G.2"
■ 23	DP-80321910	1	O-RING 3, 0 X 30	56	DP-84061000	1	90° ELBOW CONNECTOR D. 50
24	DP-83508900	1	NIPPLES G.1" - G.1-1/4"	■ 57	DP-80320910	2	O-RING 2, 62 X 40, 95
■ 25	DP-80321900	1	O-RING 3, 0 X 25	58	DP-28007232	1	MANIFOLD PIPE G. 2"
26	DP-84054240	1	90° ELBOW CONNECTOR DIA. 25	59	DP-28007032	3	INLET -OUTLET MANIFOLD PIPE
27	DP-82006750	1	WING NUT G. 1-1/4"	60	DP-28002161	2	MOUNTING RAIL
■ 28	DP-82407900	1	GASKET DIA. 13, 2 X 17 X 1 COPPER	61	DP-86327700	6	SCREW M10 X 30 UNI5931
29	DP-85254250	1	CAP G. 1/4	63	DP-62002532	4	HEAD
30	DP-28000307	1	CRANKCASE	64	DP-84384450	16	WASHER DIA. 12, 2 X 21 X 2, 5
■ * □ 31	DP-80331400	8	O-RING 4, 5 X 40	65	DP-86406800	16	SCREW M12 X 75 UNI5931
32	DP-28022932	4	VALVE ASSY SPACER	66	DP-80136900	1	RING DIA. 52

DP-555-P



DP-555-P

※ Pump Kit: DP-555980197

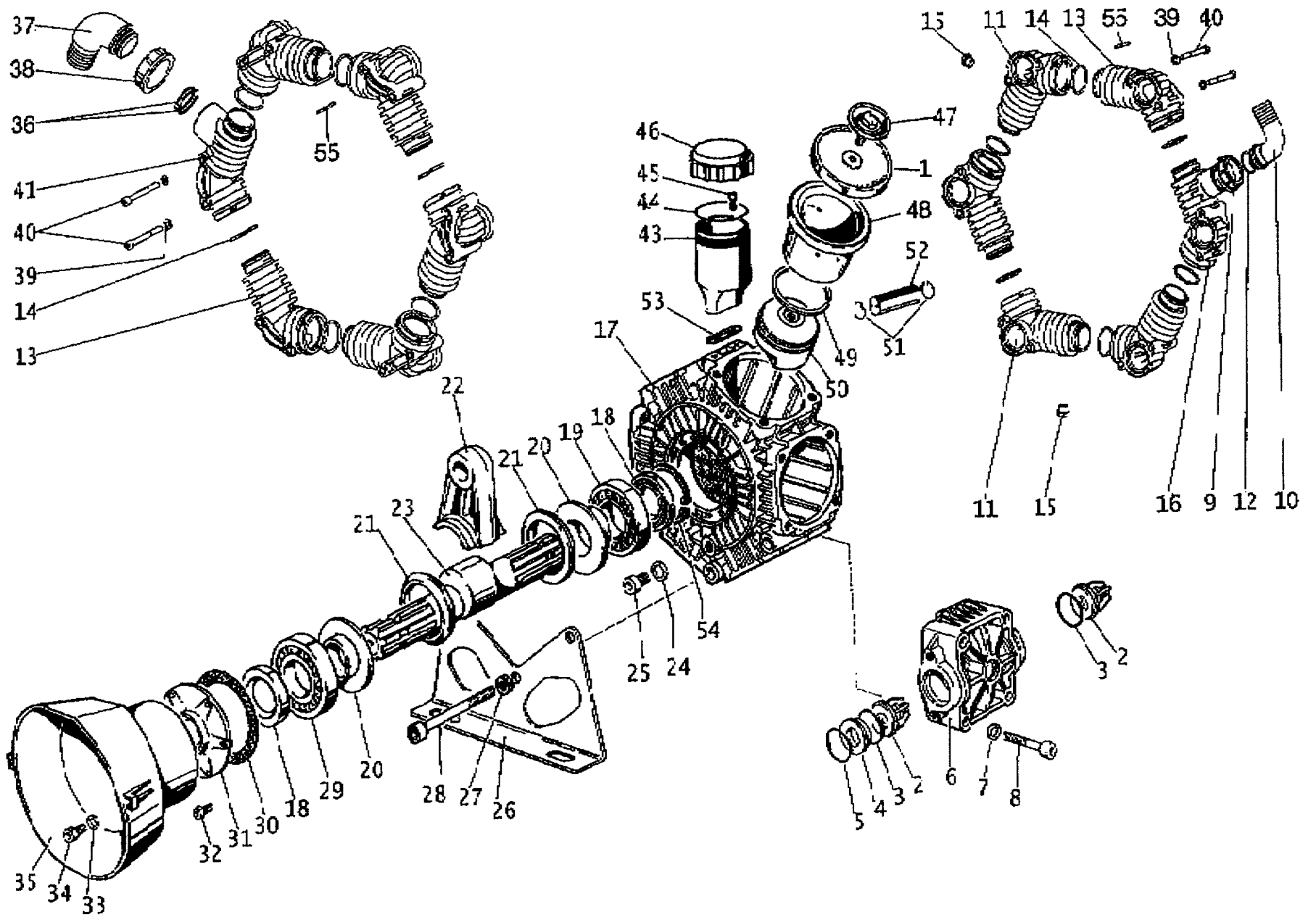
■ Pump Kit with Shaft Seals: DP-55980997

□ SS Valve Kit: DP-55980397

◆ HPS Diaphragm Kit: DP-55980697

POS	PART NUMBER	QTY	DESCRIPTION	POS	PART NUMBER	QTY	DESCRIPTION
■◆ 1	DP-62004036	5	HPS PISTON DIAPHRAGM	■ 34	DP-80321900	1	O-RING 3, 0 X 25
1	DP-62004000	5	DESMOPAN PISTON DIAPHRAGM (OPT)	35	DP-84054240	1	90° ELBOW CONNECTOR DIA. 25
□ 2	DP-28980997	10	SS VALVE ASSY	36	DP-82006750	1	WING NUT G.1"1/4
■※◆□ 3	DP-80331400	10	O-RING 4, 5 X 40	37	DP-55000832	2	MAINFOLD PIPE G.1"
4	DP-28022932	5	VALVE ASSY SPACER	■ *38	DP-80325000	10	O-RING 3, 53 X 31, 34
■ 5	DP-80320940	5	O-RING 2, 62 X 44, 12	39	DP-55000932	2	MAINFOLD PIPE G.3/8"
6	DP-62002532	5	HEAD	40	DP-85257600	2	CAP G.3/8"
7	DP-84384450	20	WASHER DIA. 12, 2 X 21 X 2, 5	41	DP-55000632	5	MAINFOLD PIPE
8	DP-86406800	20	SCREW M12 X 75 UNI5931	42	DP-55000732	1	MAINFOLD PIPE G.2"
9	DP-62004551	5	DIAPHRAGM LOCKING BOLT	■ 43	DP-80320910	2	O-RING 2, 62 X 40, 95
10	DP-28008568	5	DISK	44	DP-84061000	1	90° ELBOW CONNECTOR DIA. 50
11	DP-62001901	5	PISTON SLEEVE	45	DP-82012000	1	WING NUT G.2"
12	DP-81854000	5	PISTON RING DIA. 78	46	DP-86256250	6	SCREW M8 X 20 UNI5931
13	DP-62001809	5	PISTON DIA. 78	47	DP-14001109	1	COVER
14	DP-85200670	5	PISTON PIN DIA. 15	■ *48	DP-91011072	1	COVER GASKET
15	DP-80002100	10	RING DIA. 15	■ *49	DP-80214310	2	OIL SEAL DIA. 35 X 52 X 7
■ 16	DP-80318000	1	O-RING 2, 62 X 15, 08	50	DP-81287600	1	BALL BEARING DIA 35 X 100 X 25
17	DP-84368550	2	WASHER DIA. 8, 2 X 15 X 1, 5	51	DP-14001601	2	SHAFT SPACER
18	DP-86268250	2	SCREW M8 X 35 UNI5931	52	DP-14000926	1	CRANSHAFT POLYPUMP 260
19	DP-55000432	1	OIL FILLER	53	DP-86413900	3	SCREW M12 X 160
■ 20	DP-80310920	1	O-RING 1, 8 X 67	54	DP-81468950	3	M12 UNI 5589 DACROMET NUT
21	DP-28004432	1	OIL FILLER CAP	55	DP-86369450	1	SCREW M12 X 20 UNI5931
22	DP-86160850	1	AIR VALVE	■ 56	DP-82407900	1	GASKET DIA. 13, 2 X 17 X 1 COPPER
23	DP-86275210	4	SCREW M8 X 35 UNI5931	57	DP-55000361	2	MOUNTING RAILS
24	DP-11000409	1	BALLASTER COVER	58	DP-55000109	1	CRANKCASE
■ 25	DP-23004131	1	BALLASTER DAIPHARGM	59	DP-14001576	2	CONROD RING
■ 26	DP-80321300	1	O-RING 3, 0 X 6	60	DP-55000511	5	CONNECTING ROD
27	DP-81457450	4	NUT M8 UNI5588	61	DP-81286700	1	BALL BEARING DIA. 35 X 80 X 21
28	DP-27003532	1	DAMPER BODY	63	DP-84371000	2	WASHER DIA. 8, 5 X 24 X 2
■ 29	DP-80321910	1	O-RING 3, 0 X 30	64	DP-86268250	2	SCREW M8 X 25 UNI 5931
30	DP-84368550	20	WASHER DIA. 8, 2 X 15 X 1, 5	65	DP-31146832	1	PLAIN SAFETY CONE (OPT)
31	DP-86299000	20	SCREW M8 X 70 UNI 5931	66	DP-80136900	1	RING DIA. 25
■ 32	DP-80321910	1	O-RING 3, 0 X 30	67	DP-85271000	1	CAP G.1"
33	DP-83508900	1	NIPPLE G.1" - G.1-1/4"				

DP-605.2-P



PARTS LIST

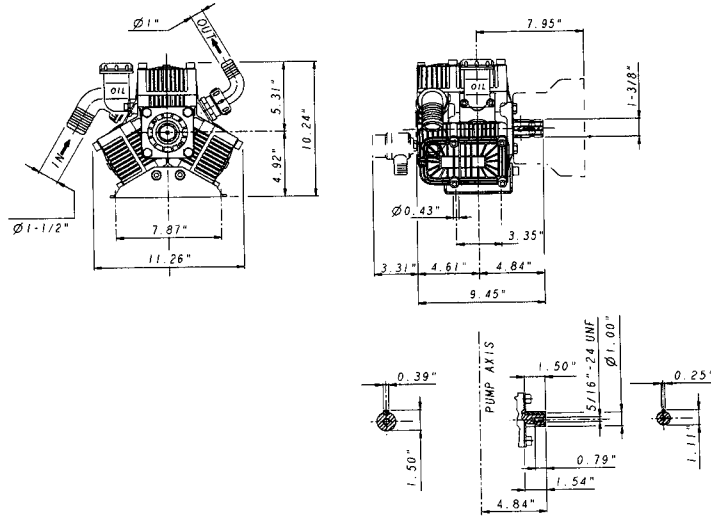
DIAPHRAGM PUMP DP-605.2-P

※ Pump Kit: DP-14987497 ■ Pump Kit with Shaft Seals: DP-14989397 □ SS-Valve Kit: DP-14987697 ◆HPS Diaphragm Kit: DP-14987997

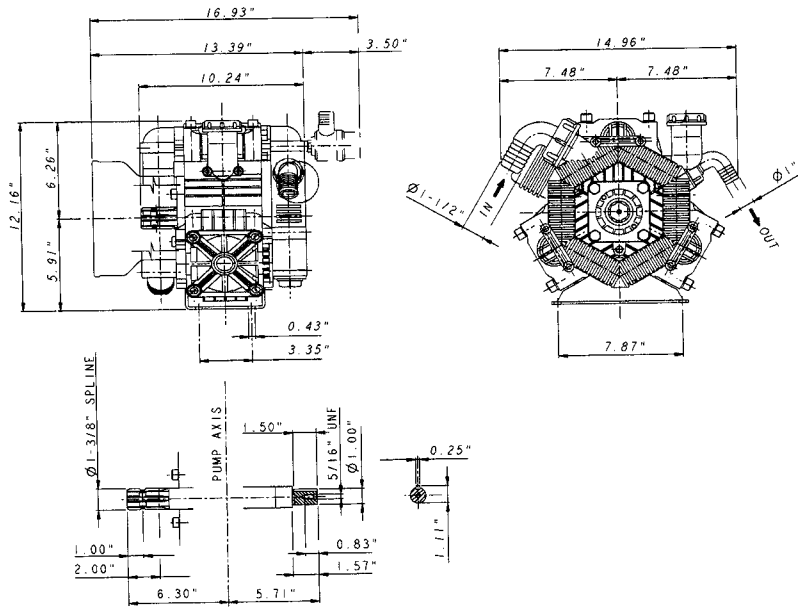
ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
■◆ 1	DP-62004036	HPS PISTON DIAPHRAGM	6	27	DP-81468950	NUT M12	3
1	DP-62004000	PISTON DIAPHRAGM	6	28	DP-86413900	SCREW M12X160	3
□ 2	DP-28980997	SS VALVE ASSY	12	29	DP-81287600	BALL BEARING 35X100X25	1
■◆□※ 3	DP-80331400	O-RING 4,5X40	12	■※ 30	DP-91011072	COVER GASKET	1
4	DP-28022932	VALVE ASSY SPACER	6	31	DP-14001109	COVER	1
■□※ 5	DP-80320940	O-RING 2,62X44,12	6	32	DP-86256250	SCREW M8X20	6
6	DP-62002532	HEAD	6	34	DP-86268250	SCREW M8X25	2
7	DP-84384450	WASHER 12,2X21X2,5	24	35	DP-31146832	PLAIN SAFETY CONE	1
8	DP-86406800	SCREW M12X75	24	■ 36	DP-80320910	O-RING 2,62X40.95	2
9	DP-82007000	WING NUT G.1"1/2	1	37	DP-84061000	90 DEG. ELBOW CONNECTOR	1
10	DP-84056100	90 DEG. ELBOW CONN.	1	38	DP-82012000	WING NUT G.2"	1
11	DP-14003032	PIPE MANIFOLD G. 3/8"	1	39	DP-84369700	WASHER 8,4X18X2	24
■※ 12	DP-80321910	O-RING 3.0X30	1	40	DP-86304450	SCREW M8X90	24
13	DP-14002932	PIPE MANIFOLD	8	41	DP-14003232	PIPE MANIFOLD G2"	1
■ 14	DP-80330900	O-RING 4,0X40	12	43	DP-14001232	BOWL OIL FILLER	1
15	DP-85257600	CAP G.3/8	2	■ 44	DP-80310920	O-RING 1,8X67	1
16	DP-14003132	PIPE MANIFOLD G1"1/2	1	45	DP-86221600	SCREW M6X25	2
17	DP-14000109	CRANKCASE	1	46	DP-28014432	OIL FILLER CAP	1
■※ 18	DP-80214310	OIL SEAL 35X52X7	2	47	DP-62981197	KIT, SCREW/DISK	6
19	DP-81286700	BALL BEARING 35X80X21	1	48	DP-62002001	PISTON SLEEVE	6
20	DP-14001601	SHAFT SPACER	2	49	DP-81854000	PISTON RING DIA. 78	6
21	DP-14001576	CONROD RING	2	50	DP-62001809	PISTON DIA. 78	6
22	DP-14002711	CONROD	6	51	DP-80002100	RING DIA. 15	12
23	DP-14000226	CRANKSHAFT	1	52	DP-85200670	PISTON PIN DIA. 15	6
24	DP-82407900	GASKET 13,2X17X1	1	■ 53	DP-14001772	GASKET	1
25	DP-86369450	SCREW M12X20	1	54	DP-80136900	RING DIA. 52	1
26	DP-14001861	MOUNTING RAIL	2	55	SC-85116100	PIN D.4X45	24

PUMP DIMENSIONS

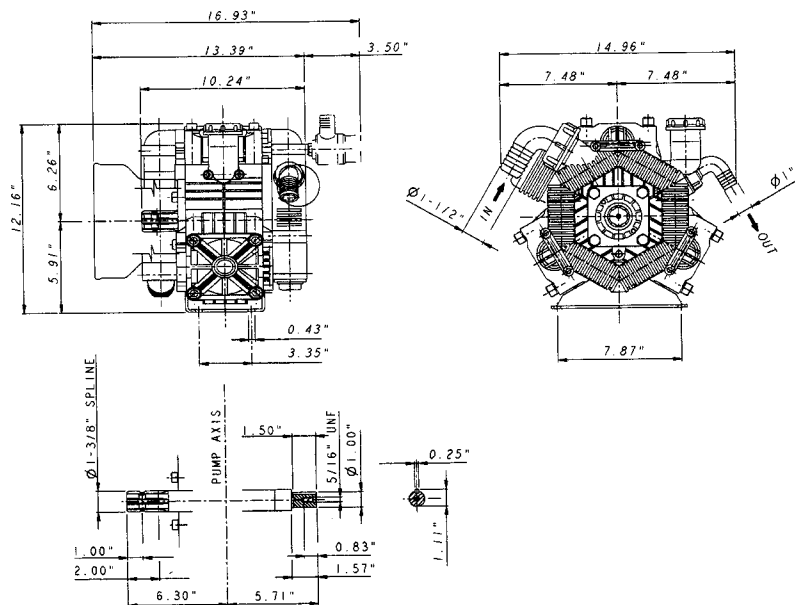
DP-193-PP



DP-282-P

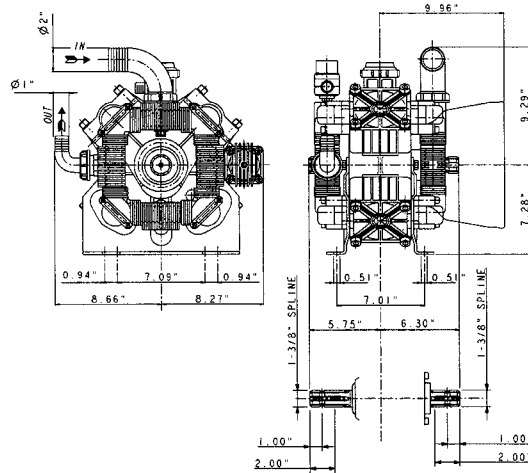


DP-332-P

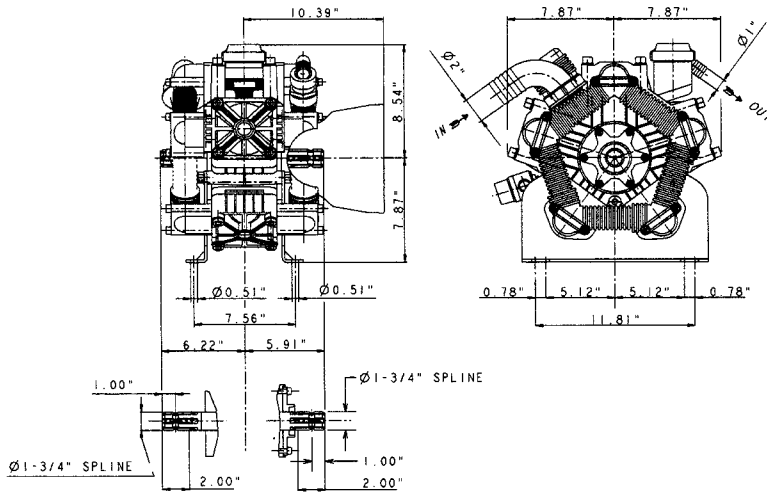


PUMP DIMENSIONS

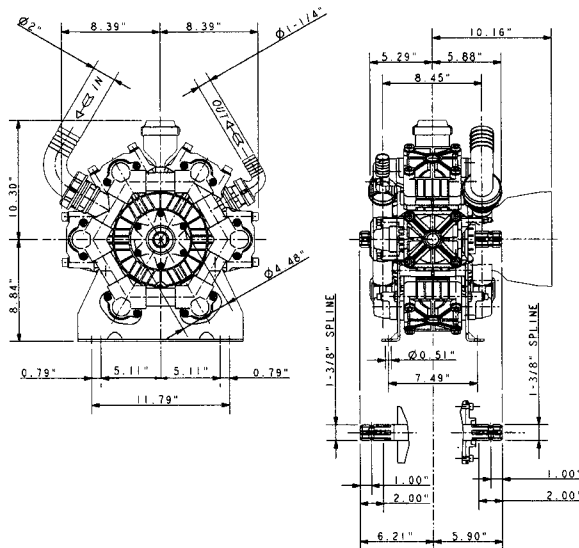
DP-448-P



DP-555-P



DP-605.2-P



NOTES

NOTES



DIVISION OF ADVANCED SYSTEMS TECHNOLOGY, INC.
 290 Pinehurst Drive • Huntsville, Alabama 35806
 P. O. Box 1607 • Huntsville, Alabama 35807
 Telephone: (256) 721-9090 • FAX (256) 721-9091
 Call Toll Free: 1-800-253-2583

TROUBLES AND CURES

TROUBLES	CAUSES	CURES
The pump doesn't reach the required pressure	<ul style="list-style-type: none"> • valves have worn seats • suction hose with air pockets or irregular elbows • worn nozzles or with wrong diameter (see chart) • Clogged strainer 	<ul style="list-style-type: none"> • check valves • check hoses • check nozzles • clean strainer
The pressure gauge fluctuates	<ul style="list-style-type: none"> • pump is sucking air, or air hasn't been evacuated completely • valves blocked 	<ul style="list-style-type: none"> • start pump with the gun open, to evacuate the air and commutate • clean and change valves
The liquid flow is irregular	<ul style="list-style-type: none"> • the air in the pulsation-damper is incorrectly set 	<ul style="list-style-type: none"> • check pressure in pulsation damper (see chart)
Output drops and the pump is noisy	<ul style="list-style-type: none"> • oil level is too low 	<ul style="list-style-type: none"> • top up with oil to correct level (halfway of the sump), when pump is operating
Oil comes out of the discharge pipe	<ul style="list-style-type: none"> • one or more diaphragms are broken 	<ul style="list-style-type: none"> • Drain the pump of oil. Dismantle the head and change diaphragms. Fill to the correct oil level.
Oil is changing color into white	<ul style="list-style-type: none"> • Diaphragm failures. Stop pump immediately. 	<ul style="list-style-type: none"> • Drain the pump of oil. Dismantle the head and change diaphragms. Fill to the correct oil level.

LIMITED WARRANTY

THIS WARRANTY IS IN LIEU OF ALL OTHER WRITTEN OR EXPRESS WARRANTIES AND REPRESENTATIONS. ANY IMPLIED WARRANTIES INCLUDING MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE ARE EXPRESSLY LIMITED TO THIS WRITTEN WARRANTY. CDS-JOHN BLUE COMPANY SHALL NOT BE LIABLE FOR CONSEQUENTIAL DAMAGES.

Use of this product for any purpose other than its original intent, abuse of the product, and/or any modification to the original product is strictly prohibited by the manufacturer, CDS-John Blue Company. Any modification to the product should be approved by CDS-John Blue Company prior to use. CDS-John Blue Company will deny Warranty claims and liability in any situation involving misuse, abuse or modification.

Each new machine or component manufactured by CDS-John Blue Company through original buyer is warranted by CDS-John Blue Company to buyer and to any party or parties to whom buyer may resell, lease or lend the equipment to be free from defects in material and workmanship under normal use and service. The obligation of CDS-John Blue Company under this warranty is limited to the repair or replacement of defective parts or correction of improper workmanship of any parts of such equipment which shall within one year from the date of CDS-John Blue Company original delivery thereof, be returned to CDS-John Blue's factory, transportation charges prepaid and which CDS-John Blue Company shall determine to its satisfaction upon examination thereof to have been thus defective. When it is impractical to return the defective parts of such equipment to CDS-John Blue's factory, then CDS-John Blue shall have no liability for the labor cost involved in repairing or replacing any such parts and shall be liable solely for supplying the material necessary to replace or repair the defective parts, provided that prior thereto CDS-John Blue Company shall have determined to its satisfaction that any such parts are thus defective.

This warranty shall not apply to any equipment which shall have been repaired or altered outside CDS-John Blue's factory in any way so as to affect its durability, nor which has been subjected to misuse, abuse, negligence or accident or operated in any manner other than in accordance with operating instructions provided by CDS-John Blue Company. This warranty does not extend to repairs made necessary by the use of inferior or unsuitable parts or accessories, or parts or accessories not recommended by CDS-John Blue Company.

CDS-John Blue Company makes no warranties in respect to parts, accessories, or components not manufactured by CDS-John Blue Company, same ordinarily being warranted separately by their respective manufacturers.

DIVISION OF ADVANCED SYSTEMS TECHNOLOGIES

HUNTSVILLE, ALABAMA

(256) 721-9090