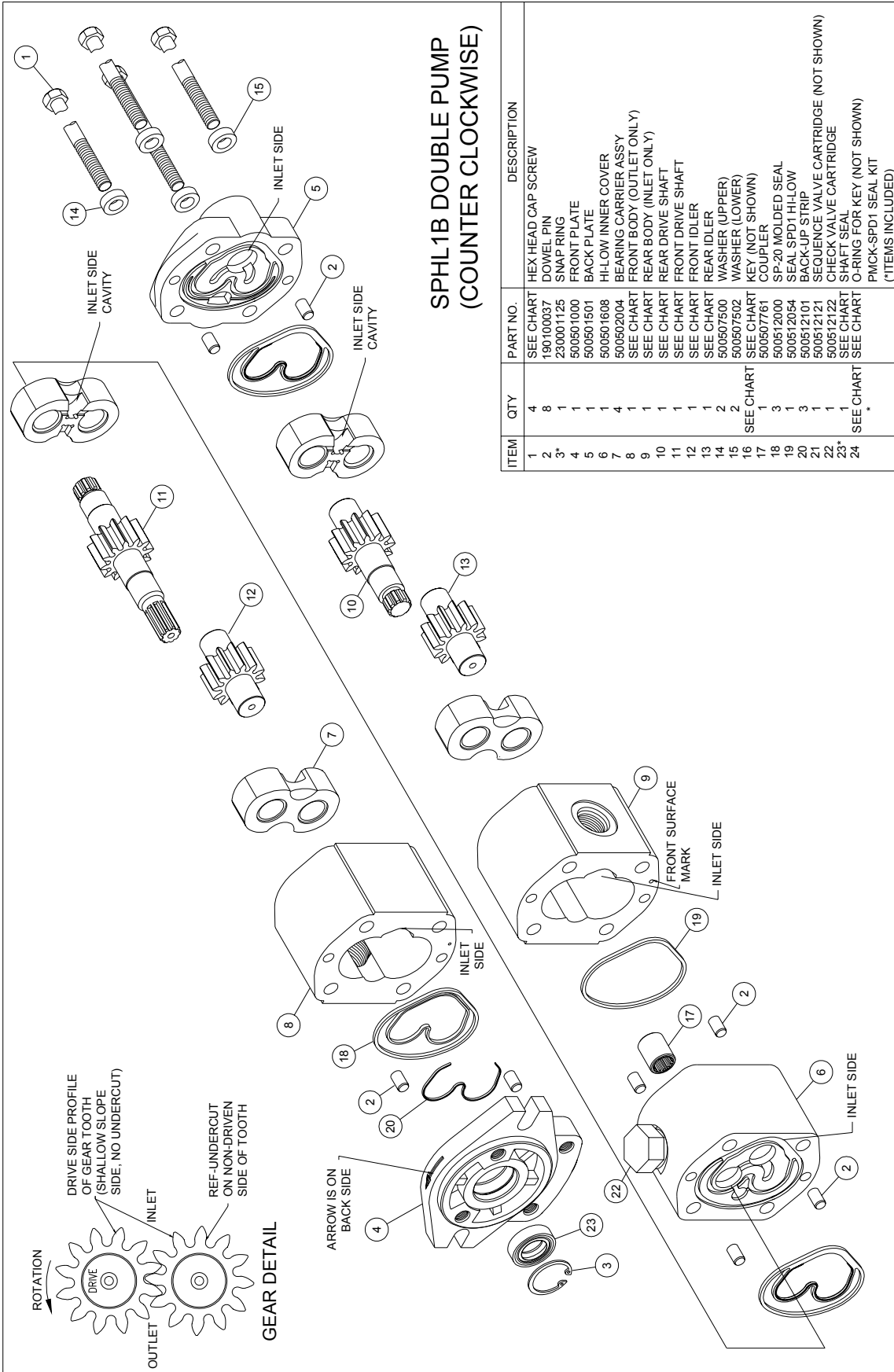


SPHL1B DOUBLE PUMP (CLOCKWISE)

ITEM	QTY	PART NO.	DESCRIPTION
1	4	SEE CHART	HEX HEAD CAP SCREW
2	8	190100037	DOWEL PIN
3*	1	230001125	SNAP RING
4	1	500501010	FRONT PLATE
5	1	500501501	BACK PLATE
6	1	500501609	H-HIGH INNER COVER
7	4	500502004	BEARING CARRIER ASSY
8	1	SEE CHART	FRONT BODY (OUTLET ONLY)
9	1	SEE CHART	REAR DRIVE SHAFT
10	1	SEE CHART	FRONT DRIVE SHAFT
11	1	SEE CHART	FRONT IDLER
12	1	SEE CHART	REAR IDLER
13	1	SEE CHART	FRONT IDLER
14	2	500507500	WASHER (UPPER)
15	2	500507502	WASHER (LOWER)
16	2	SEE CHART	KEY (NOT SHOWN)
17	1	500507761	COUPLER
18	3	500512000	SP-20 MOLDED SEAL
19	1	500512054	SEAL SPD1 H-HIGH
20	3	500512101	BACK-UP STRIP
21	1	500512121	SEQUENCE VALVE CARTRIDGE
22	1	500512122	CHECK VALVE CARTRIDGE (NOT SHOWN)
23*	1	SEE CHART	SHAFT SEAL
24	1	SEE CHART	O-RING FOR KEY (NOT SHOWN)
			PMWCK-SPD1 SEAL KIT (*ITEMS INCLUDED)



SPHL1B DOUBLE PUMP (COUNTER CLOCKWISE)

ITEM	QTY	PART NO.	DESCRIPTION
1	4	SEE CHART	HEX HEAD CAP SCREW
2	8	190100037	DOWEL PIN
3*	1	230001125	SNAP RING
4	1	500501000	FRONT PLATE
5	1	500501501	BACK PLATE
6	1	500501608	HILLOW INNER COVER
7	4	500502004	BEARING CARRIER ASSY
8	1	SEE CHART	FRONT BODY (OUTLET ONLY)
9	1	SEE CHART	REAR BODY (INLET ONLY)
10	1	SEE CHART	REAR DRIVE SHAFT
11	1	SEE CHART	FRONT DRIVE SHAFT
12	1	SEE CHART	FRONT IDLER
13	1	SEE CHART	REAR IDLER
14	2	500507500	WASHER (UPPER)
15	2	500507502	WASHER (LOWER)
16	SEE CHART	SEE CHART	KEY (NOT SHOWN)
17	1	500507761	COUPLER
18	3	500512000	SP-20 MOLDED SEAL
19	1	500512054	SEAL SPD1 HILLOW
20	3	500512101	BACK-UP STRIP
21	1	500512121	SEQUENCE VALVE CARTRIDGE (NOT SHOWN)
22	1	500512122	CHECK VALVE CARTRIDGE
23*	1	SEE CHART	SHAFT SEAL
24	SEE CHART	SEE CHART	O-RING FOR KEY (NOT SHOWN)
			PMCK-SPD1 SEAL KIT (*ITEMS INCLUDED)

NOTES:

1. ASSEMBLE WITH INLET SIDE OF BEARING CASE ADJACENT TO INLET SIDE OF BODY. THE INLET RECESS ON THE BEARING CARRIER AS SHOWN ABOVE GOES TOWARD THE GEAR.
2. ROTATION DIRECTION IS DETERMINED BY VIEWING THE PUMP FROM THE DRIVE SHAFT END. TO INSURE CORRECT PARTS/ORIENTATION OF PARTS, OBSERVE THE FOLLOWING WHEN ROTATING THE DRIVE GEAR IN THE DESIRED DIRECTION:
 - A.) THE DRIVE SIDE OF THE DRIVE GEAR TOOTH AND DRIVE SIDE OF THE IDLER GEAR TOOTH ARE IN CONTACT. (THE LIKE PROFILES ARE TOUCHING).
 - B.) THE TEETH ARE COMING OUT OF MESH ON THE INLET SIDE OF THE PUMP.
 3. FRONT, BACK AND INNER COVERS MUST ALSO BE ORIENTATED SO THAT THE INLET SIDE IS ADJACENT TO THE INLET SIDE OF THE PUMP BODY.
 4. BOLT TORQUE (LUBRICATED THREADS) 24 FT-LBS ±2 FT-LBS. THE 0.060" THICK WASHERS SHALL BE PLACED ON THE BOLTS THREADING INTO PILOT AREA OF FRONT COVER.
 5. THE GROOVE ON THE MOLDED SEAL IS TO BE TO THE OUTSIDE OF THE GEAR SET.
 6. THE FRONT FACES OF THE BODIES ARE IDENTIFIED BY THE DRILL POINT MARK IN THE FRONT FACE.
 7. THE BREAK-IN AND TEST PROCESSES ARE AS FOLLOW:
 - A.) THE PUMP IS TO BE ASSEMBLED WITH A PLUG TO SEAL THE CHECK VALVE CAVITY AND WITH A DUMMY CARTRIDGE IN THE SEQUENCE CAVITY TO PREVENT FLOW OUT THE NOSE OF THE CAVITY.
 - B.) THE PUMP IS TO BE MOUNTED TO THE TEST STAND AND USE THE CYCLIC BREAK-IN PROCEDURE FOR THE SPHL1 0616-HXX PUMP OR THE SPHL1 0823-HXX PUMP.
 - C.) MINIMUM FLOW (FOR THE COMBINED SECTIONS) AT 1200 PSI SHOULD BE 4.5 GPM (SPHL1 0616-HXX) OR 6.3 GPM (SPHL1 0823-HXX). MINIMUM EFFICIENCY SHOULD BE 73 % (SPHL1 0616-HXX) OR 73% (SPHL1 0823-HXX). MAX TORQUE SHOULD BE 320 IN-LB (SPHL1 0616-HXX) OR 520 IN-LB (SPHL1 0823-HXX).
 - D.) AFTER STANDARD BREAK-IN IS COMPLETE AND PERFORMANCE CHECKS HAVE BEEN MADE, THE DUMMY PLUGS ARE TO BE REPLACED BY THE CHECK VALVE AND THE SEQUENCE VALVE. TORQUE THE CHECK VALVE CARTRIDGE TO 45 FT-LB. TORQUE THE SEQUENCE VALVE CARTRIDGE TO 25 FT-LB.
 - E.) TO SET THE ADJUSTMENT ON THE SEQUENCE VALVE AND TO CHECK THE PERFORMANCE OF THE VALVES, THE TEST STAND IS SET TO THE MANUAL MODE.
 - F.) ON THE PUMP LOOSEN THE SEQUENCE VALVE LOCK NUT AND SCREW IN THE ADJUSTER SEVERAL TURNS.
 - G.) LOAD THE FLOW OF THE PUMP BY USE OF THE MANUAL VALVE AND ADJUST THE PRESSURE TO 500 PSI (FULL FLOW I.E. 4.5 GPM - SPHL1 0616-HXX AND 6.3 GPM - SPHL1 0823-HXX OR GREATER SHOULD BE MAINTAINED. IF THE FLOW STARTS TO DROP-SCREW IN SEQUENCE VALVE ADJUSTER FURTHER)
 - H.) NOTE WHAT THE FULL FLOW VALUE FROM THE PUMP IS AND THEN SLOWLY SCREW THE SEQUENCE VALVE ADJUSTER OUT UNTIL THE FLOW STARTS DROPPING TIGHTEN THE LOCK NUT.
 - I.) REDUCE THE MANUAL VALVE PRESSURE TO 350 PSI OR LESS AND SLOWLY INCREASE PRESSURE. AT 500 PSI THE FULL FLOW SHOULD START TO DROP AND BY 800±100 PSI THE FLOW SHOULD BE BETWEEN 1.2 AND 1.6 GPM FOR THE SPHL1 0616-HXX AND 1.4 AND 2.2 GPM FOR THE SPHL1 0823-HXX PUMP.

SHAFT CODE	ORING (ITEM #24)	KEY (ITEM #16)		SHAFT SEAL (ITEM #23)		PUMP MODEL	RPM	APPROXIMATE LOW FLOW (GPM)	APPROXIMATE HIGH FLOW (GPM)	APPROXIMATE COMBINED HIGH FLOW (GPM)	APPROX. INPUT HP AT 3000 PSI
		NO. REQD	PWC PART NO.	NO. REQD.	STANDARD BUNA-N (MODEL CODE OMITTED)						
9 (9 TOOTH)	---	0	---	0	MED. PRESSURE BUNA-N (MODEL CODE H)	SPHL1B0616-HXX	1800	2.9	10.4	7.5	7.5
2 (.625 DIA)	240000015	1	500507504	1		SPHL1B0823-HXX	1800	3.6	21.0	16.5	16.5
							3600	7.5	28.2	20.8	20.8

SHAFT CODE	ORING (ITEM #24)	KEY (ITEM #16)		SHAFT SEAL (ITEM #23)		PUMP MODEL	RPM	APPROXIMATE LOW FLOW (GPM)	APPROXIMATE HIGH FLOW (GPM)	APPROXIMATE COMBINED HIGH FLOW (GPM)	APPROX. INPUT HP AT 3000 PSI
		NO. REQD	PWC PART NO.	NO. REQD.	STANDARD BUNA-N (MODEL CODE OMITTED)						
9 (9 TOOTH)	---	0	---	0	MED. PRESSURE BUNA-N (MODEL CODE H)	SPHL1B0616-HXX	1800	2.9	10.4	7.5	7.5
2 (.625 DIA)	240000015	1	500507504	1		SPHL1B0823-HXX	1800	3.6	21.0	16.5	16.5
							3600	7.5	28.2	20.8	20.8

PUMP MODEL/ DISPLACEMENT	FRONT DRIVE GEAR (ITEM #11)						REAR DRIVE GEAR (ITEM #10)		FRONT BODY STD OUTLET PORT ONLY (ITEM #8)	REAR IDLER GEAR (ITEM #12)	REAR IDLER GEAR (ITEM #13)	FRONT BODY STD INLET PORT ONLY (ITEM #9)	HEX HEAD CAP SCREW (ITEM #1)
	LEFT HAND ROTATION		RIGHT HAND ROTATION		LEFT HAND ROTATION	RIGHT HAND ROTATION							
	SPLINED SHAFT CODE 9	KEYED SHAFT CODE 2	SPLINED SHAFT CODE 9	KEYED SHAFT CODE 2									
SPHL1B 06 16	500505515	500505516	500504517	500504518	500505034	500504034	500506010	500506004	500503014	500503144	170002100 (9.00")		
SPHL1B 08 23	500505020	500505120	500504020	500504120	500505036	500504036	500506000	500506006	500503010	500503136	170002101 (9.50")		