

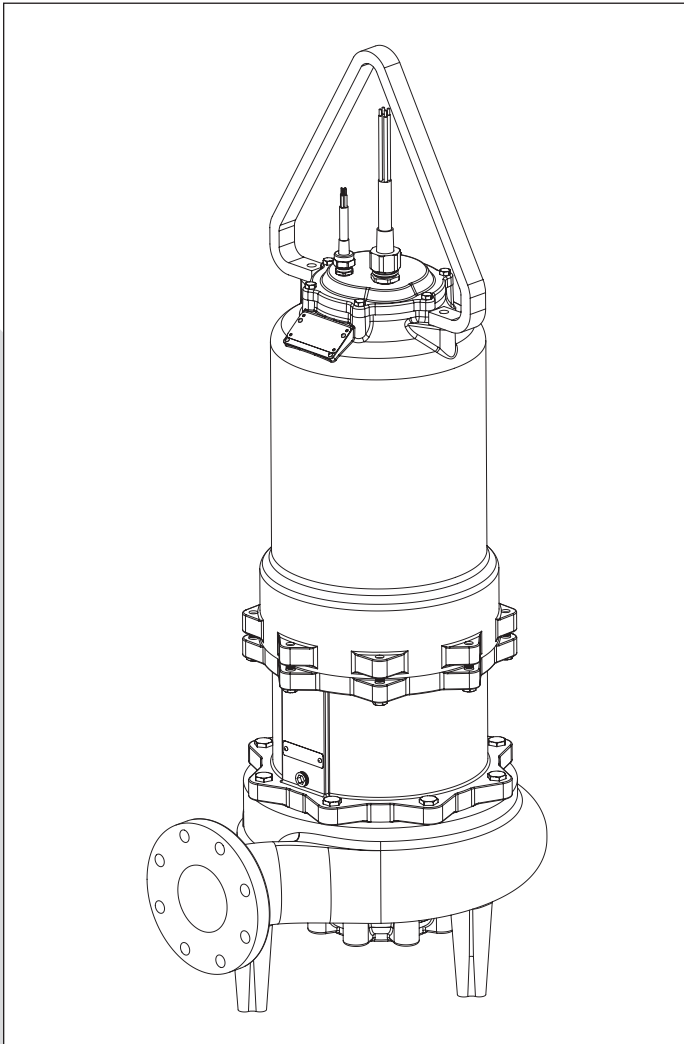
INSTALLATION AND SERVICE MANUAL

# SUBMERSIBLE SOLIDS HANDLING PUMP

Models

C4H(X)P, H4Q(X)P, S4K(X)P,  
S4L(X)P, S4LV(X)P, S4B(X)P,  
S6L(X)P, S6A(X)P and S8F(X)P

(Class I, Division 1, Groups C & D): FM



ENGLISH: PAGES 2-16

## Installation and Service Manual

For use with product built with Premium Efficient motor.

Make sure this manual is provided to the owner of the equipment or to the responsible party who maintains the system.

(Hazardous Location  
Motor End)



 **PENTAIR**  
HYDROMATIC

# General Information

## Attention:

This manual contains information for the safe use of this product. Read completely and do not throw away.

Reasonable care and safe methods should be practiced. Check local codes and requirements before installation.

## Unpacking Pump:

When unpacking unit, check for damage. Claims for damage must be made at the receiving end through the delivery carrier. Damage cannot be processed from the factory.

**WARNING: Before handling these pumps and controls, always disconnect the power first. Do not smoke or use sparkable electrical devices or flames in a septic (gaseous) or possible septic sump.**

## CALIFORNIA PROPOSITION 65 WARNING:

**⚠ WARNING** This product and related accessories contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

## Pumps in Storage or Not Operating:

Pumps with silicon/carbide seals must have impellers manually rotated (6 revolutions) after setting non-operational for 3 months or longer and prior to electrical start-up.

Pumps with tungsten carbide seals must have impellers manually rotated (6 revolutions) after setting non-operational for 3 weeks or longer and prior to electrical start-up.

## Seal Failure Probes:

All hazardous location submersible pumps have two factory installed moisture detectors (seal failure probes). They are in a normally open series circuit in the seal chamber. Under normal operating conditions, the circuit remains open. If the lower seal leaks and moisture enters this chamber, the moisture would settle to the bottom of the chamber and will complete the circuit between the moisture detectors.

This circuit must be connected to a sensing unit and signaling device. This is supplied in a Hydromatic® built control panel.

**NOTE: Failure to install such a device negates all warranties by Hydromatic.**

## Heat Sensors:

All motors in this family have heat sensors on or embedded in the motor winding to detect excessive heat. This prevents damage to the motor. If sensor trips due to excessive winding temperature, the starter in the panel breaks power to the pump. Once the sensor resets, the starter is automatically reset for FM for continued operation of the pump. This circuitry is supplied in a Hydromatic control panel.

*The sensors are set to trip at 130°C.*

**NOTE: Failure to install such circuitry would negate FM approvals and all warranties by Hydromatic.**

## Power Cords:

The power cord and heat sensor seal failure cord are potted into the cord cap. The cords must not be spliced.

**NOTE: Each cable has a green lead. This is the ground wire and must be grounded properly per NEC and/or local codes. Cords should be inspected for abnormal wear and replaced accordingly.**

## Overload Heaters:

If the Hydromatic electrical panel is not used, starters with 3 leg overload relay must be supplied on 3 phase pumps. Each leg is to have an identical heater sized in accordance with the nameplate amps on the motor housing. The amp draw on these submersible motors is slightly higher than a corresponding horsepower surface motor, so heaters must be sized by the nameplate rating.

Capacitor start single phase pumps have a run and start winding that draws different currents. To adequately protect these windings with the appropriate heaters, consult the factory.

**NOTE: The red lead is always the start winding of a pump using single phase.**

# Pump Installation

## Installing Sump Level Controls Float Controls:

In either simplex, duplex or triplex systems the lower or turn-off control is to be set to maintain a minimum level in the sump. This level shall be no more than 3-1/4" from the top of the motor housing down to the surface of the sewage.

The second or turn-on control is set above the lower turn-off control. The exact distance between the two floats must be a compromise between a frequent pumping cycle (10 starts per hour max.) to control septicity, solids and a slower cycle for energy economy. This distance should be determined by the engineer or consulting engineer, depending on the conditions of the application.

## Installing Pump in Sump:

Before installing the pump in the sump, lay it on its side and rotate impeller. Impeller may be slightly stuck due to factory test water. The impeller should turn freely. Do not connect the power until after this test.

Clean all debris from sump and connect pump to piping. A check valve must be installed on each pump. A gate or plug valve in each pump discharge is highly recommended. This valve should be installed on the discharge side of the check valve so if necessary to service the check valve, the line pressure can be cut off. Single pump systems are sometimes installed without a check valve where it is desirable to self-drain the discharge line to prevent freezing. This can be done only with short discharge lines; otherwise water will return to the sump and cause short cycling of the pump.

## Making Electrical Connections:

All electrical wiring must be in accordance with local code, and only qualified electricians should make the installations. All wires should be checked for shorts to ground with an ohmmeter or Megger® after the connections are made. This is important, as one grounded wire can cause considerable trouble.

**IMPORTANT: If equipment is not properly wired and protected as recommended, Hydromatic warranty is void.**

Caution: The 230 volt 3 phase pump has a dual marked nameplate. Voltage may be rewired by the manufacturer or a Class I Div 1 equipment qualified electrician. Once the voltage is changed, the factory cord tag indicating 230 volt 3 phase must be removed.

For record keeping purposes, we suggest the pump be marked externally with the new voltage and qualified personnel that performed the change. Pumps shipped from the factory as 460 volt 3 phase cannot be rewired to any other voltage.

**To Re-wire the pump from 230V to 460V 3 phase:**

Only a 230V pump from the factory is considered dual voltage, a cord label clearly states the factory wound voltage.

Remove all six cap screws then raise the cord cap assembly enough to slip a prying instrument on opposite sides between the cord cap casting and the motor housing. Take care to not damage the o-ring or the machined surfaces of the castings. Doing so could void FM agency certifications. While prying evenly on both sides; separate the cord cap casting from the motor housing, the assembly is airtight and will have a vacuum effect when disassembling. Once separated, the cord cap can be inverted and rotated to the outside of the pump assembly, and a bolt can be

re-used to secure the upside down cord cap to the motor housing for ease of rewiring.

Refer to the wiring diagram within this manual for wiring details. Once all electrical connections are finished and secure (a crimped electrical connector is best to prevent issues due to vibration if required), the cord cap should be re-attached reversing the steps above. Ensure the o-ring is in place and perform a hi-pot test for safety once everything is complete.

**Heat Sensor and Seal Failure Connections:**

If a Hydromatic® control panel is used, terminal blocks are provided for heat sensor and seal failure connections. If a control panel is supplied by others, it must allow heat sensor and seal failure terminations.

**Pump Operations**

**Starting System:**

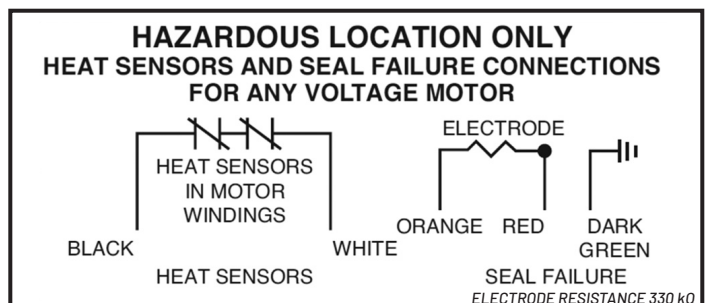
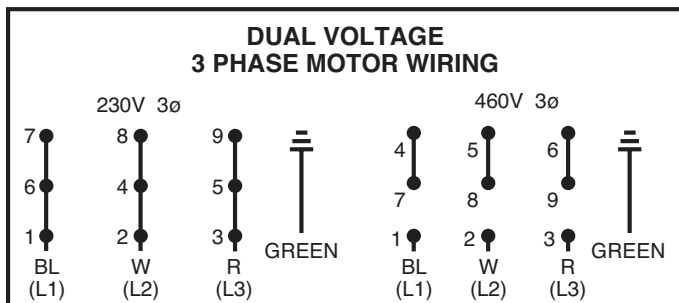
1. Double check all wire connections.
2. Turn pumps to Off position on H-O-A switches.
3. Turn on breakers.
4. When using three phase pumps, turn the H-O-A switch to Hand position on one pump and notice operation. If pump is noisy and vibrates, rotation is wrong. To

change rotation, interchange any two line leads to pump. Do not interchange main incoming lines. Check rotation of all pumps in this same manner.

5. Now set both H-O-A switches to Auto position and allow water to rise in sump until one pump starts. Allow pump to operate until the level drops to turn-off point.
6. Allow sump level to rise to start other pump(s). Notice run lights in panel. Pumps should alternate on each successive cycle of operation.
7. Turn both H-O-A switches to Off position and allow sump to fill to the override control level(s).
8. Turn switches to Auto position, and pumps should start and operate together until level drops to turn-off point.
9. Repeat this operation and cycle several times before leaving the job.
10. Check voltage when pumps are operating and check the amp draw of each pump. Check amps on each wire as sometimes a high leg will exist. For excessive voltage on one leg, the electric utility company should be consulted.

**NUMBER OF CONDUCTORS REQUIRED BETWEEN CONTROL PANEL AND NEMA 4 JUNCTION BOX  
POWER LINES AND CONTROL WIRES CAN BE CARRIED IN CONDUIT OR CAN BE UNDERGROUND BURIED CABLE**

System Type	Number of Control Wires	Number of Power Lines	Number of Ground Wires #8	HEAT SENSOR & SEAL FAILURE	
				Number of Sensor Wires	Number of Ground Wires
Simplex	4	3	1	3	1
Simplex with Alarm	6	3	1	3	1
Duplex	6	6	2	6	2
Duplex with Alarm	8	6	2	6	2



## Pump Maintenance

As the motors are oil filled, no lubrication or other maintenance is required.

If the heat sensor and seal failure are hooked up properly, no attention is necessary as long as the seal failure indicator light does not come on. To ensure continuity of the seal sensor leads, a test light is provided on intrinsically safe Hydromatic panels as standard equipment.

Pump should be checked every quarter for corrosion and wear.

### Field Service on Hydromatic Hazardous Location Pumps:

If a Hydromatic hazardous location pump is used in a hazardous location, the pump must be returned to the factory for electrical and motor service. This will ensure the integrity of the hazardous location rating of the pump and comply with our warranty requirements.

The quick disconnect cords, upper and lower seal, volute and impeller components may be repaired or replaced by an authorized Hydromatic service facility without compromising the hazardous location rating to the pump.

Any time the seal is disturbed, it must be replaced.

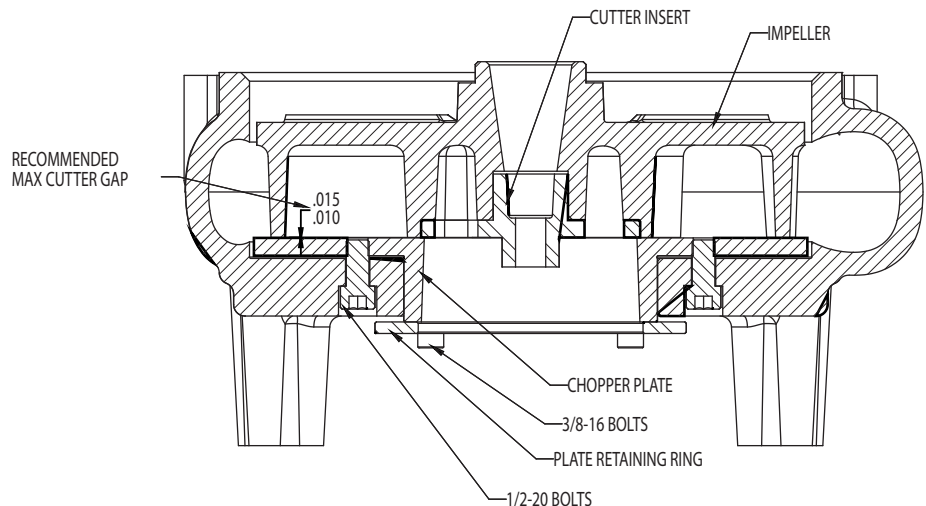
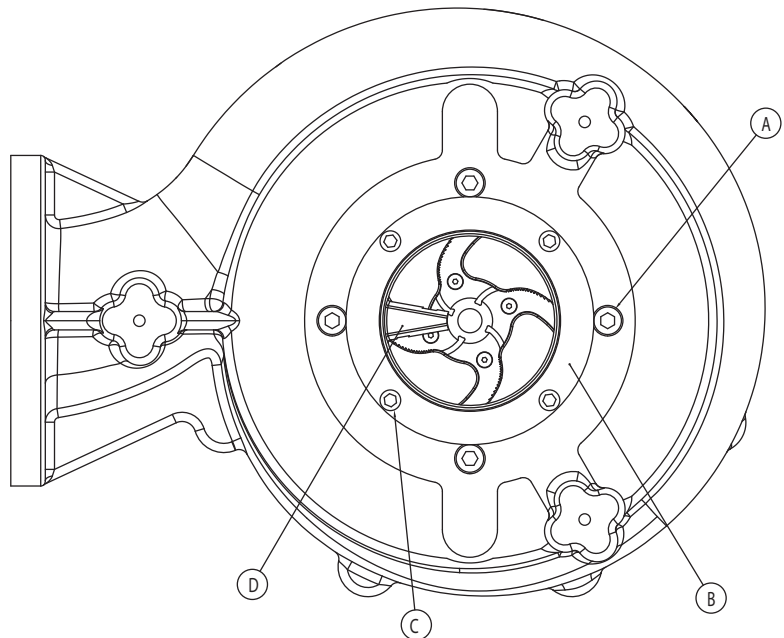
Check the pump for proper rotation before returning to service.

## Adjust Cutter Clearance on Chopper Pump

**WARNING: Disconnect power before adjusting chopper clearance; always keep fingers and hands away from chopper parts.**

1. First install the chopper plate (Item D) into the volute. It may be helpful to install 1/2-20 studs into the chopper plate to line up the holes with the corresponding volute holes. You may have to tap the plate all the way down with a rubber hammer.

2. Remove the studs and replace with four 1/2-20 x 1 (Item A) in long socket head screws from beneath the volute, do not tighten.
3. Install motor with impeller mounted, tighten motor housing bolts to the volute.
4. Install the chopper retainer ring (Item B) and tighten the four 3/8-16 x 1" long (Item C) socket head cap screws to force the chopper plate up against the impeller and chopper blade.
5. Next back off these 3/8-16 (Item C) bolts one quarter of a turn. This should give you .015 clearances.
6. Tighten the outer four 1/2-20 screws (Item A) to 75-85 Ft-lbs.
7. Measure the clearance with a feeler gage it should be between .010 and .015.
8. Spin impeller with a hex wrench on the Impeller hub screw or use a wooden pry bar to spin impeller to make sure there is no rub.
9. If you hear or feel a rub readjust the clearance by loosening the inner 3/8-16 screws evenly and tightening the 1/2-20 screws.



## Pump Troubleshooting

Below is a list of common problems and the probable causes:

### **Pump will not start.**

1. No power to the motor. Check for blown fuse or open circuit breaker.
2. Selector switch may be in the Off position.
3. Control circuit transformer fuse may be blown.
4. Overload heater on starter may be tripped. Push to reset.

### **Pump will not start and overload heaters trip.**

1. Turn off power and check motor leads with Megger or ohmmeter for possible ground.
2. Check resistance of motor windings. All 3 phases should show the same reading.
3. If no grounds exist and the motor windings check OK, remove pump from sump and check for clogged or blocked impeller.

### **Pump operates with selector switch in Hand position but will not operate in Auto position.**

1. This indicates trouble in the float level control or the alternator relay.
2. Check control panel for trouble.

### **Pump runs but will not shut off.**

1. Pump may be air locked. Turn pump off and let set for several minutes, then restart.
2. Lower float control may be hung-up in the closed position. Check in sump to be sure control is free.
3. Selector switch may be in the Hand position.

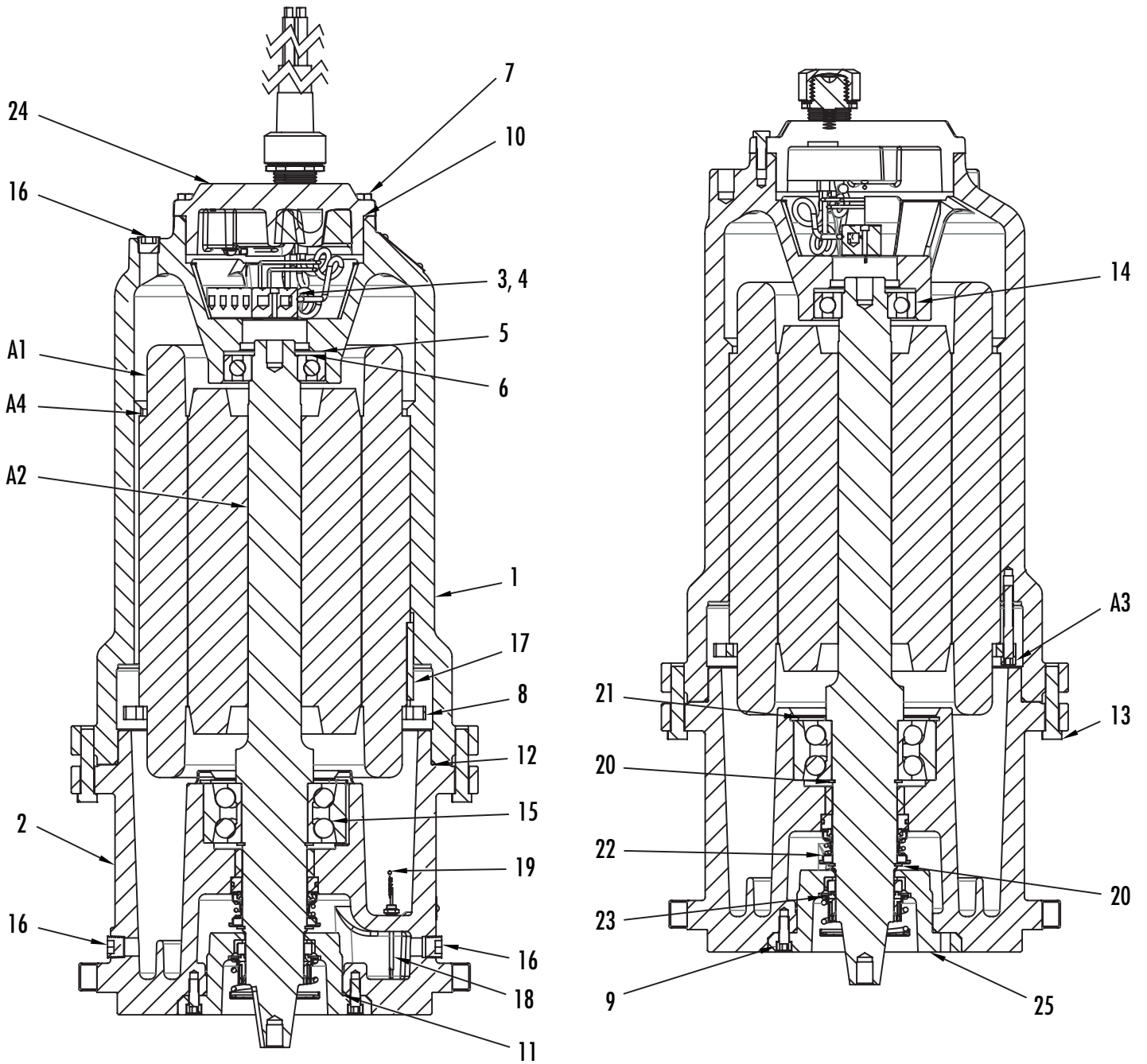
### **Pump does not deliver proper capacity.**

1. Discharge gate valve may be partially closed or partially clogged.
2. Check valve may be partially clogged. Raise level up and down to clear.
3. Pump may be running in wrong direction. Low speed pumps can operate in reverse direction without much noise or vibration.
4. Discharge head may be too high. Check total head with gauge when pump is operating. Total head is discharge gauge pressure converted to feet plus vertical height from water level in sump to center line of pressure gauge in discharge line. Gauge should be installed on pump side of all valves. Multiply gauge pressure in pounds by 2.31 to get head in feet.
5. If pump has been in service for some time and capacity falls off, remove pump and check for wear or clogged impeller.

### **Motor stops and then restarts after short period but overload heaters in starter do not trip.**

1. This indicates heat sensors in the motor are tripping due to excessive heat. Impeller may be partially clogged giving a sustained overload but not high enough to trip overload heater switch.
2. Motor may be operating out of liquid due to a failed level control.
3. Pump may be operating on a short cycle due to sump being too small or from water returning to sump due to a leaking check valve.

**C4H(X)P, H4Q(X)P, S4K(X)P, S4L(X)P, S4LV(X)P, S4B(X)P, S6L(X)P,  
S6A(X)P and S8F(X)P Parts List** For use with product built with Premium Efficient motor.



# C4H(X)P, H4Q(X)P, S4K(X)P, S4L(X)P, S4LV(X)P, S4B(X)P, S6L(X)P, S6A(X)P and S8F(X)P Parts List

For use with product built with Premium Efficient motor.

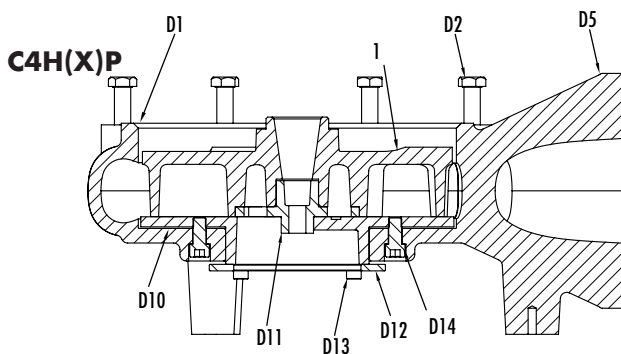
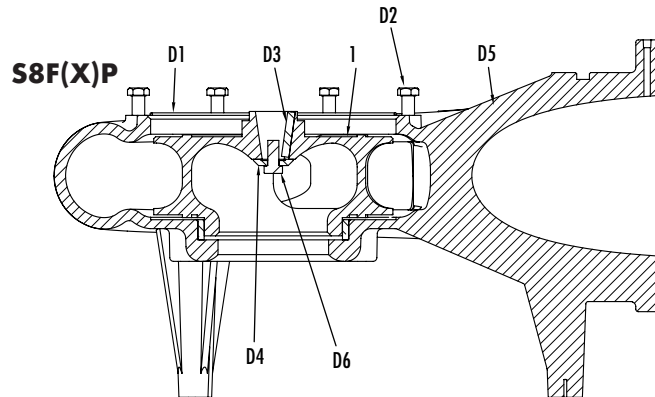
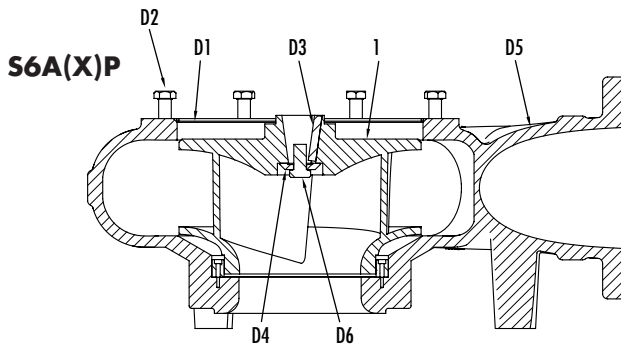
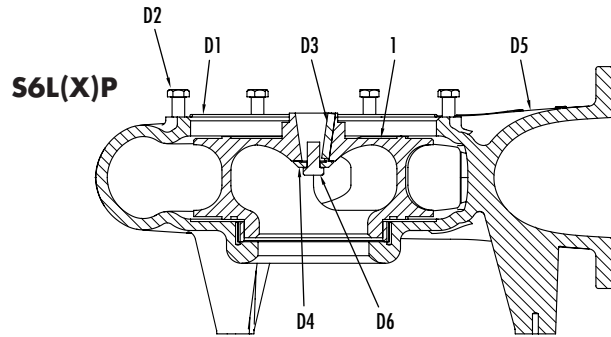
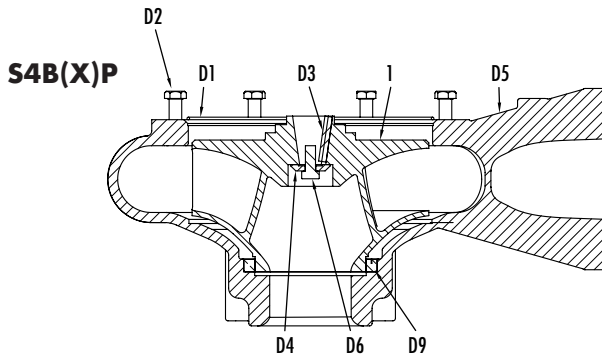
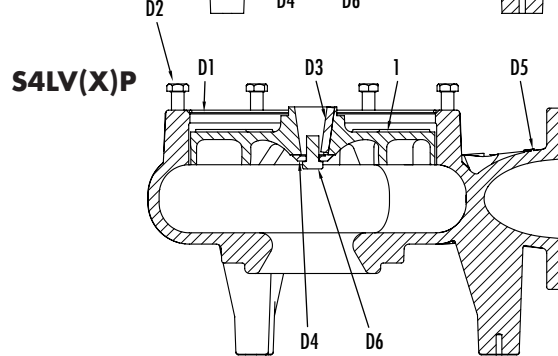
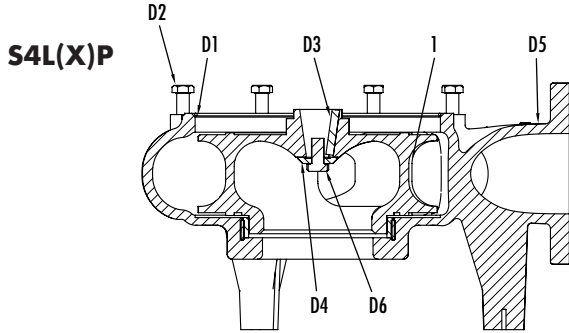
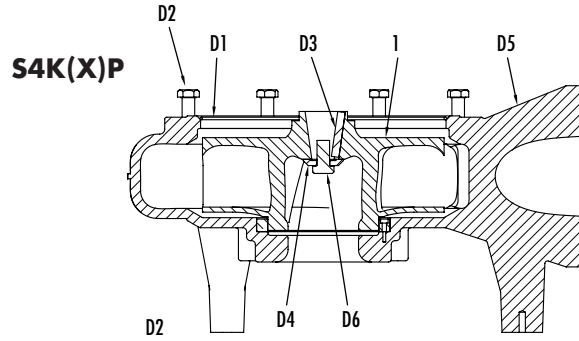
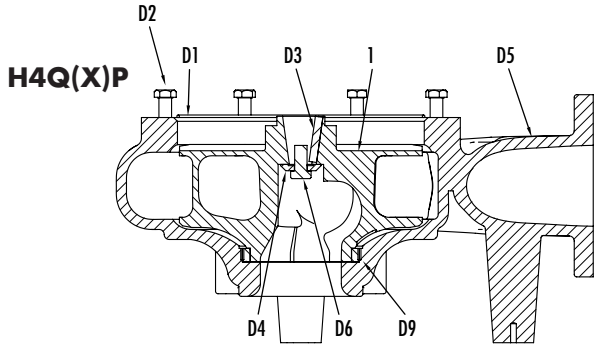
## 250 Frame Pumps

## 280 Frame Pumps

Item	Eng. No.	Description	Qty	Eng. No.	Description
1	28011D000	HOUSING - MOTOR	1	28012D000	HOUSING - MOTOR
2	27808D010	HOUSING - BEARING	1	27966D010	HOUSING - BEARING
3	27882A009	TERMINAL BLOCK*	1	27882A009	TERMINAL BLOCK*
4	06106A069	SCREW - CAP SKT HD.	2	06106A069	SCREW - CAP SKT HD.
5	110650043	SCREEN	1	110650043	SCREEN
6	19331A009	WASHER - SPRING	1	19331A009	WASHER - SPRING
7	19101A017	SCREW - CAP	6	19101A017	SCREW - CAP
8	026030003	RING - STATOR	1	026032801	RING - STATOR
9	06106A028	SCREW - SEAL PLATE	4	06106A028	SCREW - SEAL PLATE
10	001500191	O-RING - CORD CAP	1	001500191	O-RING - CORD CAP
11	05876A112	O-RING - SEAL PLATE	1	05876A112	O-RING - SEAL PLATE
12	05876A178	O-RING - MOTOR HOUSING	1	001500441	O-RING - MOTOR HOUSING
13	19103A048	SCREW - CAP	8	19103A062	SCREW - CAP
14	08565A026	BALL BEARING	1	08565A026	BALL BEARING
15	071670171	ANG. CONTACT DBL ROW BALL BEARING	1	071670171	ANG. CONTACT DBL ROW BALL BEARING
16	009240101	PLUG - PIPE 1/2" SKT HD. BRASS	3	009240101	PLUG - PIPE 1/2" SKT HD. BRASS
17	05818A012	STATOR KEY	1	05818A012	STATOR KEY
			1	05818A005	STATOR KEY - All 1750RPM & 30hp 1150RPM
18	109010021	PROBE - SEAL FAILURE	2	109010021	PROBE - SEAL FAILURE
19	109000045	SEAL - SENSOR ASSEMBLY	1	109000045	SEAL - SENSOR ASSEMBLY
20	12558A036	RETAINING RING - EXTERNAL	2	12558A036	RETAINING RING - EXTERNAL
21	009740041	RETAINING RING - INTERNAL	1	009740041	RETAINING RING - INTERNAL
22	27994A000	SIL CAR/CARBON - NITRILE UPPER	1	27994A000	SIL CAR/CARBON - NITRILE UPPER
23	080732251	SIL CAR/CARBON - NITRILE LOWER	1	080732251	SIL CAR/CARBON - NITRILE LOWER
24	152880315	CORD CAP ASSEMBLY - 10-4 SOOW	1	152880315	CORD CAP ASSEMBLY 10-4 SOOW
	152880325	CORD CAP ASSEMBLY - 8-4 W	1	152880325	CORD CAP ASSEMBLY 8-4 W
	152880335	CORD CAP ASSEMBLY - 6-4 W	1	152880335	CORD CAP ASSEMBLY 6-4 W
	152880345	CORD CAP ASSEMBLY - 4-4 W	1	152880345	CORD CAP ASSEMBLY 4-4 W
25	107550312	SEAL PLATE	1	107550312	SEAL PLATE
	132531001	OIL, DIELECTRIC	Varies	132531001	OIL, DIELECTRIC

\* Terminal block requires 460/575V and 8 AWG or smaller wire.

# Hydraulic End Parts List



D3, D6, D15 - Not shown in this view



## Hydraulic End Parts List

Item	Description	S4L(X)P	S4B(X)P	S4K(X)P	S4LV(X)P	H40(X)P	S6L(X)P	S6A(X)P	S8F(X)P	C4H(X)P
1	IMPELLER	025940002	136920012	137200012	110430002	151510012	025940002	136940052	025940002	153590002
D1	O-RING	05876A178	05876A178	05876A178	05876A178	05876A178	05876A178	05876A178	05876A178	05876A178
D2	SCREW-CAP	005700601 (8)	005700601 (8)	005700601 (8)	005700601 (8)	005700601 (8)	005700601 (8)	005700601 (8)	005700601 (8)	005700601 (8)
D3	KEY	05818A010	05818A010	05818A010	05818A010	05818A010	05818A010	05818A010	05818A010	05818A010
D4	WASHER- IMPELLER	019450001	019450001	019450001	019450001	019450001	019450001	019450001	019450001	N/A
D5	VOLUTE	089190015	136910022	137190002	107830002	151520015	089180015	136930012	089260025	153580002
D6	IMP BOLT	005700181	005700181	005700181	005700181	005700181	005700181	005700181	005700181	005680191
D7	SCREW - MACHINE (NOT SHOWN)	SEE VOLUTE ASSY	008290061 (3)	008290061 (3)	N/A	SEE VOLUTE ASSY	SEE VOLUTE ASSY	008290091 (4)	SEE VOLUTE ASSY	N/A
D9	WEAR RING	SEE VOLUTE ASSY	136900003	136900003	N/A	SEE VOLUTE ASSY	SEE VOLUTE ASSY	136950003	SEE VOLUTE ASSY	N/A
D10	CUTTER PLATE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	153600002
D11	CUTTER INSERT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	153320014
D12	RETAINER PLATE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	153330001
D13	SCREW-CAP (RETAINER PLATE)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	06106A028 (4)
D14	SCREW-CAP (CUTTER PLATE)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	005680021 (4)
D15	SCREW-FLAT HEAD SCKT (INSERT)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	07597A037 (4)

## 250 Frame Pumps Motor Parts Group

Item	4-Pole 1750 RPM	40 hp 460/3/60	40 hp 575/3/60	30 hp 230/3/60	30 hp 460/3/60	30 hp 575/3/60	20 - 25 hp 208-230/3/60	20 - 25 hp 460/3/60	20 - 25 hp 575/3/60
A1	STATOR	27904D003	27904D603	27903D003	27903D003	27903D603	27902D003	27902D003	27902D603
A2	ROTOR/SHAFT ASSEMBLY	27904D011	27904D011	27903D011	27903D011	27903D011	27902D011	27902D011	27902D011
A3	BOLT - STATOR (4)	06106A071	06106A071	06106A027	06106A027	06106A027	06106A027	06106A027	06106A027
A4	SPACER	-	-	076650011	076650011	076650011	076650041	076650041	076650041
	CONNECTOR	12672A001	-	-	12672A001	-	-	12672A001	-

Item	6-Pole 1150 RPM	15 hp 208-230/3/60	15 hp 460/3/60	15 hp 575/3/60	7.5 - 10 hp 208-230/3/60	7.5 - 10 hp 460/3/60	7.5 - 10 hp 575/3/60
A1	STATOR	27901D003	27901D603	27901D603	27900D003	27900D003	27900D603
A2	ROTOR/SHAFT ASSEMBLY	27901D011	27901D011	27901D011	27900D011	27900D011	27900D011
A3	BOLT - STATOR (4)	06106A027	06106A027	06106A027	06106A027	06106A027	06106A027
A4	SPACER	076650041	076650041	076650041	076650121	076650121	076650121
	CONNECTOR	-	12672A001	-	-	12672A001	-

Item	8-Pole 870 RPM	5 - 7.5 hp 208-230/3/60	5 - 7.5 hp 460/3/60	5 - 7.5 hp 575/3/60
A1	STATOR	27898D003	27898D603	27898D603
A2	ROTOR/SHAFT ASSEMBLY	27898D011	27898D011	27898D011
A3	BOLT - STATOR (4)	06106A027	06106A027	06106A027
A4	SPACER	076650121	076650121	076650121
	CONNECTOR	-	12672A001	-

## 280 Frame Pumps Motor Parts Group

Item	4-Pole 1750 RPM	50 hp 460/3/60	50 hp 575/3/60
A1	STATOR	27959D003	27959D603
A2	ROTOR/SHAFT ASSEMBLY	27959D011	27959D011
A3	BOLT - STATOR (4)	06106A071	06106A071
	CONNECTOR	12672A001	-

Item	6-Pole 1150 RPM	20 - 25 hp 208-230/3/60	20 - 25 hp 460/3/60	20 - 25 hp 575/3/60
A1	STATOR	27961D003	27961D003	27961D603
A2	ROTOR/SHAFT ASSEMBLY	27961D011	27961D011	27961D011
A3	BOLT - STATOR (4)	005560081	005560081	005560081
	CONNECTOR	-	12672A001	-

Item	8-Pole 870 RPM	10 - 15 hp 208-230/3/60	10 - 15 hp 460/3/60	10 - 15 hp 575/3/60
A1	STATOR	27963D003	27963D003	27963D603
A2	ROTOR/SHAFT ASSEMBLY	27963D011	27963D011	27963D011
A3	BOLT - STATOR (4)	005560081	005560081	005560081
A4	SPACER	076651001	076651001	076651001
	CONNECTOR	-	12672A001	-

# 250 Frame Pumps Impeller Parts List

## H4Q(X)P

Cat. No.	Eng. No.	HP	Volt/Ph	Cord	Trim	Impeller
<b>1750 RPM</b>						
H4Q(X)P2000DC	528110007	20	208/3	6-4	9	151510062
H4Q(X)P2000EC	528110017	20	230/3	6-4	9	151510062
H4Q(X)P2000FC	528110027	20	460/3	8-4	9	151510062
H4Q(X)P2000GC	528110037	20	575/3	8-4	9	151510062
H4Q(X)P2500DC	528110047	25	208/3	4-4	10	151510042
H4Q(X)P2500EC	528110057	25	230/3	6-4	10	151510042
H4Q(X)P2500FC	528110067	25	460/3	8-4	10	151510042
H4Q(X)P2500GC	528110077	25	575/3	8-4	10	151510042
H4Q(X)P3000EC	528110087	30	230/3	4-4	11	151510022
H4Q(X)P3000FC	528110097	30	460/3	8-4	11	151510022
H4Q(X)P3000GC	528110107	30	575/3	8-4	11	151510022
H4Q(X)P4000FC	528110117	40	460/3	6-4	12	151510012
H4Q(X)P4000GC	528110127	40	575/3	8-4	12	151510012

## S4K(X)P

Cat. No.	Eng. No.	HP	Volt/Ph	Cord	Trim	Impeller
<b>1750 RPM</b>						
S4K(X)P2000DC	528090047	20	208/3	6-4	9.25	137200122
S4K(X)P2000EC	528090057	20	230/3	6-4	9.25	137200122
S4K(X)P2000FC	528090067	20	460/3	8-4	9.25	137200122
S4K(X)P2000GC	528090077	20	575/3	8-4	9.25	137200122
S4K(X)P2500DC	528090087	25	208/3	4-4	10.5	137200072
S4K(X)P2500EC	528090097	25	230/3	6-4	10.5	137200072
S4K(X)P2500FC	528090107	25	460/3	8-4	10.5	137200072
S4K(X)P2500GC	528090117	25	575/3	8-4	10.5	137200072
S4K(X)P3000EC	528090127	30	230/3	4-4	11	137200052
S4K(X)P3000FC	528090137	30	460/3	8-4	11	137200052
S4K(X)P3000GC	528090147	30	575/3	8-4	11	137200052
S4K(X)P4000FC	528090157	40	460/3	6-4	12	137200012
S4K(X)P4000GC	528090167	40	575/3	8-4	12	137200012

## S4B(X)P

Cat. No.	Eng. No.	HP	Volt/Ph	Cord	Trim	Impeller
<b>1750 RPM</b>						
S4B(X)P2000DC	528080007	20	208/3	6-4	9	136920132
S4B(X)P2000EC	528080017	20	230/3	6-4	9	136920132
S4B(X)P2000FC	528080027	20	460/3	8-4	9	136920132
S4B(X)P2000GC	528080037	20	575/3	8-4	9	136920132
S4B(X)P2500DC	528080047	25	208/3	4-4	9.5	136920112
S4B(X)P2500EC	528080057	25	230/3	6-4	9.5	136920112
S4B(X)P2500FC	528080067	25	460/3	8-4	9.5	136920112
S4B(X)P2500GC	528080077	25	575/3	8-4	9.5	136920112
S4B(X)P3000EC	528080087	30	230/3	4-4	10	136920092
S4B(X)P3000FC	528080097	30	460/3	8-4	10	136920092
S4B(X)P3000GC	528080107	30	575/3	8-4	10	136920092
S4B(X)P4000FC	528080117	40	460/3	6-4	11	136920052
S4B(X)P4000GC	528080127	40	575/3	8-4	11	136920052
<b>1150 RPM</b>						
S4B(X)P750DB	528080177	7.5	208/3	8-4	10	136920092
S4B(X)P750EB	528080187	7.5	230/3	8-4	10	136920092
S4B(X)P750FB	528080197	7.5	460/3	10-4	10	136920092
S4B(X)P750GB	528080207	7.5	575/3	10-4	10	136920092
S4B(X)P1000DB	528080217	10	208/3	8-4	11	136920052
S4B(X)P1000EB	528080227	10	230/3	8-4	11	136920052
S4B(X)P1000FB	528080237	10	460/3	10-4	11	136920052
S4B(X)P1000GB	528080247	10	575/3	10-4	11	136920052
S4B(X)P1500DB	528080257	15	208/3	8-4	12	136920012
S4B(X)P1500EB	528080267	15	230/3	8-4	12	136920012
S4B(X)P1500FB	528080277	15	460/3	8-4	12	136920012
S4B(X)P1500GB	528080287	15	575/3	10-4	12	136920012
<b>870 RPM</b>						
S4B(X)P500DA	528080297	5	208/3	8-4	11	136920052
S4B(X)P500EA	528080307	5	230/3	10-4	11	136920052
S4B(X)P500FA	528080317	5	460/3	10-4	11	136920052
S4B(X)P500GA	528080327	5	575/3	10-4	11	136920052
S4B(X)P750DA	528080337	7.5	208/3	8-4	12	136920012
S4B(X)P750EA	528080347	7.5	230/3	8-4	12	136920012
S4B(X)P750FA	528080357	7.5	460/3	10-4	12	136920012
S4B(X)P750GA	528080367	7.5	575/3	10-4	12	136920012

## S4LV(X)P

Cat. No.	Eng. No.	HP	Volt/Ph	Cord	Trim	Impeller
<b>1750 RPM</b>						
S4LV(X)P2000DC	528100117	20	208/3	6-4	8.63	110430132
S4LV(X)P2000EC	528100127	20	230/3	6-4	8.63	110430132
S4LV(X)P2000FC	528100137	20	460/3	8-4	8.63	110430132
S4LV(X)P2000GC	528100147	20	575/3	8-4	8.63	110430132
S4LV(X)P2500DC	528100157	25	208/3	4-4	9.25	110430122
S4LV(X)P2500EC	528100167	25	230/3	6-4	9.25	110430122
S4LV(X)P2500FC	528100177	25	460/3	8-4	9.25	110430122
S4LV(X)P2500GC	528100187	25	575/3	8-4	9.25	110430122
S4LV(X)P3000EC	528100197	30	230/3	4-4	10.38	110430382
S4LV(X)P3000FC	528100207	30	460/3	8-4	10.38	110430382
S4LV(X)P3000GC	528100217	30	575/3	8-4	10.38	110430382
S4LV(X)P4000FC	528100227	40	460/3	6-4	11.5	110430012
S4LV(X)P4000GC	528100237	40	575/3	8-4	11.5	110430012
<b>1150 RPM</b>						
S4LV(X)P750DB	528100287	7.5	208/3	8-4	10	110430042
S4LV(X)P750EB	528100297	7.5	230/3	8-4	10	110430042
S4LV(X)P750FB	528100307	7.5	460/3	10-4	10	110430042
S4LV(X)P750GB	528100317	7.5	575/3	10-4	10	110430042
S4LV(X)P1000DB	528100327	10	208/3	8-4	11.25	110430082
S4LV(X)P1000EB	528100337	10	230/3	8-4	11.25	110430082
S4LV(X)P1000FB	528100347	10	460/3	10-4	11.25	110430082
S4LV(X)P1000GB	528100357	10	575/3	10-4	11.25	110430082
S4LV(X)P1500DB	528100367	15	208/3	8-4	12	110430002
S4LV(X)P1500EB	528100377	15	230/3	8-4	12	110430002
S4LV(X)P1500FB	528100387	15	460/3	8-4	12	110430002
S4LV(X)P1500GB	528100397	15	575/3	10-4	12	110430002
<b>870 RPM</b>						
S4LV(X)P500DA	528100407	5	208/3	8-4	11.5	110430012
S4LV(X)P500EA	528100417	5	230/3	10-4	11.5	110430012
S4LV(X)P500FA	528100427	5	460/3	10-4	11.5	110430012
S4LV(X)P500GA	528100437	5	575/3	10-4	11.5	110430012
S4LV(X)P750DA	528100447	7.5	208/3	8-4	12	110430002
S4LV(X)P750EA	528100457	7.5	230/3	8-4	12	110430002
S4LV(X)P750FA	528100467	7.5	460/3	10-4	12	110430002
S4LV(X)P750GA	528100477	7.5	575/3	10-4	12	110430002

# 250 Frame Pumps Impeller Parts List

## S4L(X)P

Cat. No.	Eng. No.	HP	Volt/Ph	Cord	Trim	Impeller
<b>1750 RPM</b>						
S4L(X)P2000DC	528070047	20	208/3	6-4	9.88	025940372
S4L(X)P2000EC	528070057	20	230/3	6-4	9.88	025940372
S4L(X)P2000FC	528070067	20	460/3	8-4	9.88	025940372
S4L(X)P2000GC	528070077	20	575/3	8-4	9.88	025940372
S4L(X)P2500DC	528070087	25	208/3	4-4	10	025940062
S4L(X)P2500EC	528070097	25	230/3	6-4	10	025940062
S4L(X)P2500FC	528070107	25	460/3	8-4	10	025940062
S4L(X)P2500GC	528070117	25	575/3	8-4	10	025940062
S4L(X)P3000EC	528070127	30	230/3	4-4	10.5	025940082
S4L(X)P3000FC	528070137	30	460/3	8-4	10.5	025940082
S4L(X)P3000GC	528070147	30	575/3	8-4	10.5	025940082
S4L(X)P4000FC	528070157	40	460/3	6-4	11.38	025940202
S4L(X)P4000GC	528070167	40	575/3	8-4	11.38	025940202
<b>1150 RPM</b>						
S4L(X)P750DB	528070217	7.5	208/3	8-4	10.38	025940162
S4L(X)P750EB	528070227	7.5	230/3	8-4	10.38	025940162
S4L(X)P750FB	528070237	7.5	460/3	10-4	10.38	025940162
S4L(X)P750GB	528070247	7.5	575/3	10-4	10.38	025940162
S4L(X)P1000DB	528070257	10	208/3	8-4	11	025940102
S4L(X)P1000EB	528070267	10	230/3	8-4	11	025940102
S4L(X)P1000FB	528070277	10	460/3	10-4	11	025940102
S4L(X)P1000GB	528070287	10	575/3	10-4	11	025940102
S4L(X)P1500DB	528070297	15	208/3	8-4	11.88	025940002
S4L(X)P1500EB	528070307	15	230/3	8-4	11.88	025940002
S4L(X)P1500FB	528070317	15	460/3	8-4	11.88	025940002
S4L(X)P1500GB	528070327	15	575/3	10-4	11.88	025940002
<b>870 RPM</b>						
S4L(X)P500DA	528070337	5	208/3	8-4	11.63	025940182
S4L(X)P500EA	528070347	5	230/3	10-4	11.63	025940182
S4L(X)P500FA	528070357	5	460/3	10-4	11.63	025940182
S4L(X)P500GA	528070367	5	575/3	10-4	11.63	025940182
S4L(X)P750DA	528070377	7.5	208/3	8-4	11.88	025940002
S4L(X)P750EA	528070387	7.5	230/3	8-4	11.88	025940002
S4L(X)P750FA	528070397	7.5	460/3	10-4	11.88	025940002
S4L(X)P750GA	528070407	7.5	575/3	10-4	11.88	025940002

## S6L(X)P

Cat. No.	Eng. No.	HP	Volt/Ph	Cord	Trim	Impeller
<b>1750 RPM</b>						
S6L(X)P2000DC	528120047	20	208/3	6-4	9.88	025940372
S6L(X)P2000EC	528120057	20	230/3	6-4	9.88	025940372
S6L(X)P2000FC	528120067	20	460/3	8-4	9.88	025940372
S6L(X)P2000GC	528120077	20	575/3	8-4	9.88	025940372
S6L(X)P2500DC	528120087	25	208/3	4-4	10.25	025940072
S6L(X)P2500EC	528120097	25	230/3	6-4	10.25	025940072
S6L(X)P2500FC	528120107	25	460/3	8-4	10.25	025940072
S6L(X)P2500GC	528120117	25	575/3	8-4	10.25	025940072
S6L(X)P3000EC	528120127	30	230/3	4-4	10.5	025940082
S6L(X)P3000FC	528120137	30	460/3	8-4	10.5	025940082
S6L(X)P3000GC	528120147	30	575/3	8-4	10.5	025940082
S6L(X)P4000FC	528120157	40	460/3	6-4	11.88	025940002
S6L(X)P4000GC	528120167	40	575/3	8-4	11.88	025940002
<b>1150 RPM</b>						
S6L(X)P750DB	528120217	7.5	208/3	8-4	10.38	025940162
S6L(X)P750EB	528120227	7.5	230/3	8-4	10.38	025940162
S6L(X)P750FB	528120237	7.5	460/3	10-4	10.38	025940162
S6L(X)P750GB	528120247	7.5	575/3	10-4	10.38	025940162
S6L(X)P1000DB	528120257	10	208/3	8-4	11	025940102
S6L(X)P1000EB	528120267	10	230/3	8-4	11	025940102
S6L(X)P1000FB	528120277	10	460/3	10-4	11	025940102
S6L(X)P1000GB	528120287	10	575/3	10-4	11	025940102
S6L(X)P1500DB	528120297	15	208/3	8-4	11.88	025940002
S6L(X)P1500EB	528120307	15	230/3	8-4	11.88	025940002
S6L(X)P1500FB	528120317	15	460/3	8-4	11.88	025940002
S6L(X)P1500GB	528120327	15	575/3	10-4	11.88	025940002
<b>870 RPM</b>						
S6L(X)P500DA	528120337	5	208/3	8-4	11.5	025940122
S6L(X)P500EA	528120347	5	230/3	10-4	11.5	025940122
S6L(X)P500FA	528120357	5	460/3	10-4	11.5	025940122
S6L(X)P500GA	528120367	5	575/3	10-4	11.5	025940122
S6L(X)P750DA	528120377	7.5	208/3	8-4	11.88	025940002
S6L(X)P750EA	528120387	7.5	230/3	8-4	11.88	025940002
S6L(X)P750FA	528120397	7.5	460/3	10-4	11.88	025940002
S6L(X)P750GA	528120407	7.5	575/3	10-4	11.88	025940002

# 250 Frame Pumps Impeller Parts List

## S6A(X)P

Cat. No.	Eng. No.	HP	Volt/Ph	Cord	Trim	Impeller
<b>1750 RPM</b>						
S6A(X)P2500DC	528130007	25	208/3	4-4	9	136940132
S6A(X)P2500EC	528130017	25	230/3	6-4	9	136940132
S6A(X)P2500FC	528130027	25	460/3	8-4	9	136940132
S6A(X)P2500GC	528130037	25	575/3	8-4	9	136940132
S6A(X)P3000EC	528130047	30	230/3	4-4	9.5	136940112
S6A(X)P3000FC	528130057	30	460/3	8-4	9.5	136940112
S6A(X)P3000GC	528130067	30	575/3	8-4	9.5	136940112
S6A(X)P4000FC	528130077	40	460/3	6-4	10.5	136940072
S6A(X)P4000GC	528130087	40	575/3	8-4	10.5	136940072
<b>1150 RPM</b>						
S6A(X)P750DB	528130097	7.5	208/3	8-4	9	136940132
S6A(X)P750EB	528130107	7.5	230/3	8-4	9	136940132
S6A(X)P750FB	528130117	7.5	460/3	10-4	9	136940132
S6A(X)P750GB	528130127	7.5	575/3	10-4	9	136940132
S6A(X)P1000DB	528130137	10	208/3	8-4	10	136940102
S6A(X)P1000EB	528130147	10	230/3	8-4	10	136940102
S6A(X)P1000FB	528130157	10	460/3	10-4	10	136940102
S6A(X)P1000GB	528130167	10	575/3	10-4	10	136940102
S6A(X)P1500DB	528130177	15	208/3	8-4	11	136940052
S6A(X)P1500EB	528130187	15	230/3	8-4	11	136940052
S6A(X)P1500FB	528130197	15	460/3	8-4	11	136940052
S6A(X)P1500GB	528130207	15	575/3	10-4	11	136940052
<b>870 RPM</b>						
S6A(X)P500DA	528130217	5	208/3	8-4	9.5	136940112
S6A(X)P500EA	528130227	5	230/3	10-4	9.5	136940112
S6A(X)P500FA	528130237	5	460/3	10-4	9.5	136940112
S6A(X)P500GA	528130247	5	575/3	10-4	9.5	136940112
S6A(X)P750DA	528130257	7.5	208/3	8-4	10	136940102
S6A(X)P750EA	528130267	7.5	230/3	8-4	10	136940102
S6A(X)P750FA	528130277	7.5	460/3	10-4	10	136940102
S6A(X)P750GA	528130287	7.5	575/3	10-4	10	136940102

## S8F(X)P

Cat. No.	Eng. No.	HP	Volt/Ph	Cord	Trim	Impeller
<b>1750 RPM</b>						
S8F(X)P2000DC	528140047	20	208/3	6-4	9.63	025940302
S8F(X)P2000EC	528140057	20	230/3	6-4	9.63	025940302
S8F(X)P2000FC	528140067	20	460/3	8-4	9.63	025940302
S8F(X)P2000GC	528140077	20	575/3	8-4	9.63	025940302
S8F(X)P2500DC	528140087	25	208/3	4-4	10.13	025940172
S8F(X)P2500EC	528140097	25	230/3	6-4	10.13	025940172
S8F(X)P2500FC	528140107	25	460/3	8-4	10.13	025940172
S8F(X)P2500GC	528140117	25	575/3	8-4	10.13	025940172
S8F(X)P3000EC	528140127	30	230/3	4-4	10.5	025940082
S8F(X)P3000FC	528140137	30	460/3	8-4	10.5	025940082
S8F(X)P3000GC	528140147	30	575/3	8-4	10.5	025940082
S8F(X)P4000FC	528140157	40	460/3	6-4	11.38	025940202
S8F(X)P4000GC	528140167	40	575/3	8-4	11.38	025940202
<b>1150 RPM</b>						
S8F(X)P750DB	528140217	7.5	208/3	8-4	10.38	025940162
S8F(X)P750EB	528140227	7.5	230/3	8-4	10.38	025940162
S8F(X)P750FB	528140237	7.5	460/3	10-4	10.38	025940162
S8F(X)P750GB	528140247	7.5	575/3	10-4	10.38	025940162
S8F(X)P1000DB	528140257	10	208/3	8-4	10.88	025940272
S8F(X)P1000EB	528140267	10	230/3	8-4	10.88	025940272
S8F(X)P1000FB	528140277	10	460/3	10-4	10.88	025940272
S8F(X)P1000GB	528140287	10	575/3	10-4	10.88	025940272
S8F(X)P1500DB	528140297	15	208/3	8-4	11.5	025940122
S8F(X)P1500EB	528140307	15	230/3	8-4	11.5	025940122
S8F(X)P1500FB	528140317	15	460/3	8-4	11.5	025940122
S8F(X)P1500GB	528140327	15	575/3	10-4	11.5	025940122
<b>870 RPM</b>						
S8F(X)P500DA	528140337	5	208/3	8-4	11.25	025940112
S8F(X)P500EA	528140347	5	230/3	10-4	11.25	025940112
S8F(X)P500FA	528140357	5	460/3	10-4	11.25	025940112
S8F(X)P500GA	528140367	5	575/3	10-4	11.25	025940112
S8F(X)P750DA	528140377	7.5	208/3	8-4	11.88	025940002
S8F(X)P750EA	528140387	7.5	230/3	8-4	11.88	025940002
S8F(X)P750FA	528140397	7.5	460/3	10-4	11.88	025940002
S8F(X)P750GA	528140407	7.5	575/3	10-4	11.88	025940002

## C4H(X)P

Cat. No.	Eng. No.	HP	Volt/Ph	Cord	Trim	Impeller
<b>1750 RPM</b>						
C4H(X)P2000DC	528290007	20	208/3	6-4	9	153590232
C4H(X)P2000EC	528290017	20	230/3	6-4	9	153590232
C4H(X)P2000FC	528290027	20	460/3	8-4	9	153590232
C4H(X)P2000GC	528290037	20	575/3	8-4	9	153590232
C4H(X)P2000DC	528290047	25	208/3	4-4	9.5	153590192
C4H(X)P2000EC	528290057	25	230/3	6-4	9.5	153590192
C4H(X)P2000FC	528290067	25	460/3	8-4	9.5	153590192
C4H(X)P2000GC	528290077	25	575/3	8-4	9.5	153590192
C4H(X)P2000EC	528290087	30	230/3	4-4	10.5	153590112
C4H(X)P2000FC	528290097	30	460/3	8-4	10.5	153590112
C4H(X)P2000GC	528290107	30	575/3	8-4	10.5	153590112
C4H(X)P2000FC	528290117	40	460/3	6-4	11.88	153590002
C4H(X)P2000GC	528290127	40	575/3	8-4	11.88	153590002

## 280 Frame Pumps Impeller Parts List

### S4L(X)P

Cat. No.	Eng. No.	HP	Volt/Ph	Cord	Trim	Impeller
<b>1750 RPM</b>						
S4L(X)P5000FC	528075007	50	460/3	4-4	11.63	025940002
S4L(X)P5000GC	528075017	50	575/3	6-4	11.63	025940002
<b>1150 RPM</b>						
S4L(X)P2000DB	528075027	20	208/3	6-4	12	025940352
S4L(X)P2000EB	528075037	20	230/3	6-4	12	025940352
S4L(X)P2000FB	528075047	20	460/3	8-4	12	025940352
S4L(X)P2000GB	528075057	20	575/3	8-4	12	025940352

### S4B(X)P

Cat. No.	Eng. No.	HP	Volt/Ph	Cord	Trim	Impeller
<b>1750 RPM</b>						
S4B(X)P5000FC	528085007	50	460/3	4-4	12	136920012
S4B(X)P5000GC	528085017	50	575/3	6-4	12	136920012
<b>1150 RPM</b>						
S4B(X)P2000DB	528085027	20	208/3	8-4	12	136920012
S4B(X)P2000EB	528085037	20	230/3	8-4	12	136920012
S4B(X)P2000FB	528085047	20	460/3	8-4	12	136920012
S4B(X)P2000GB	528085057	20	575/3	10-4	12	136920012
<b>870 RPM</b>						
S4B(X)P1000DA	528085067	10	208/3	8-4	12	136920012
S4B(X)P1000EA	528085077	10	230/3	8-4	12	136920012
S4B(X)P1000FA	528085087	10	460/3	10-4	12	136920012
S4B(X)P1000GA	528085097	10	575/3	10-4	12	136920012

### S6L(X)P

Cat. No.	Eng. No.	HP	Volt/Ph	Cord	Trim	Impeller
<b>1750 RPM</b>						
S6L(X)P5000FC	528125007	50	460/3	4-4	11.88	025940002
S6L(X)P5000GC	528125017	50	575/3	6-4	11.88	025940002
<b>1150 RPM</b>						
S6L(X)P2000DB	528125027	20	208/3	6-4	12	025940352
S6L(X)P2000EB	528125037	20	230/3	6-4	12	025940352
S6L(X)P2000FB	528125047	20	460/3	8-4	12	025940352
S6L(X)P2000GB	528125057	20	575/3	8-4	12	025940352

### S4LV(X)P

Cat. No.	Eng. No.	HP	Volt/Ph	Cord	Trim	Impeller
<b>1750 RPM</b>						
S4LV(X)P5000FC	528105047	50	460/3	4-4	12	110430002
S4LV(X)P5000GC	528105057	50	575/3	6-4	12	110430002

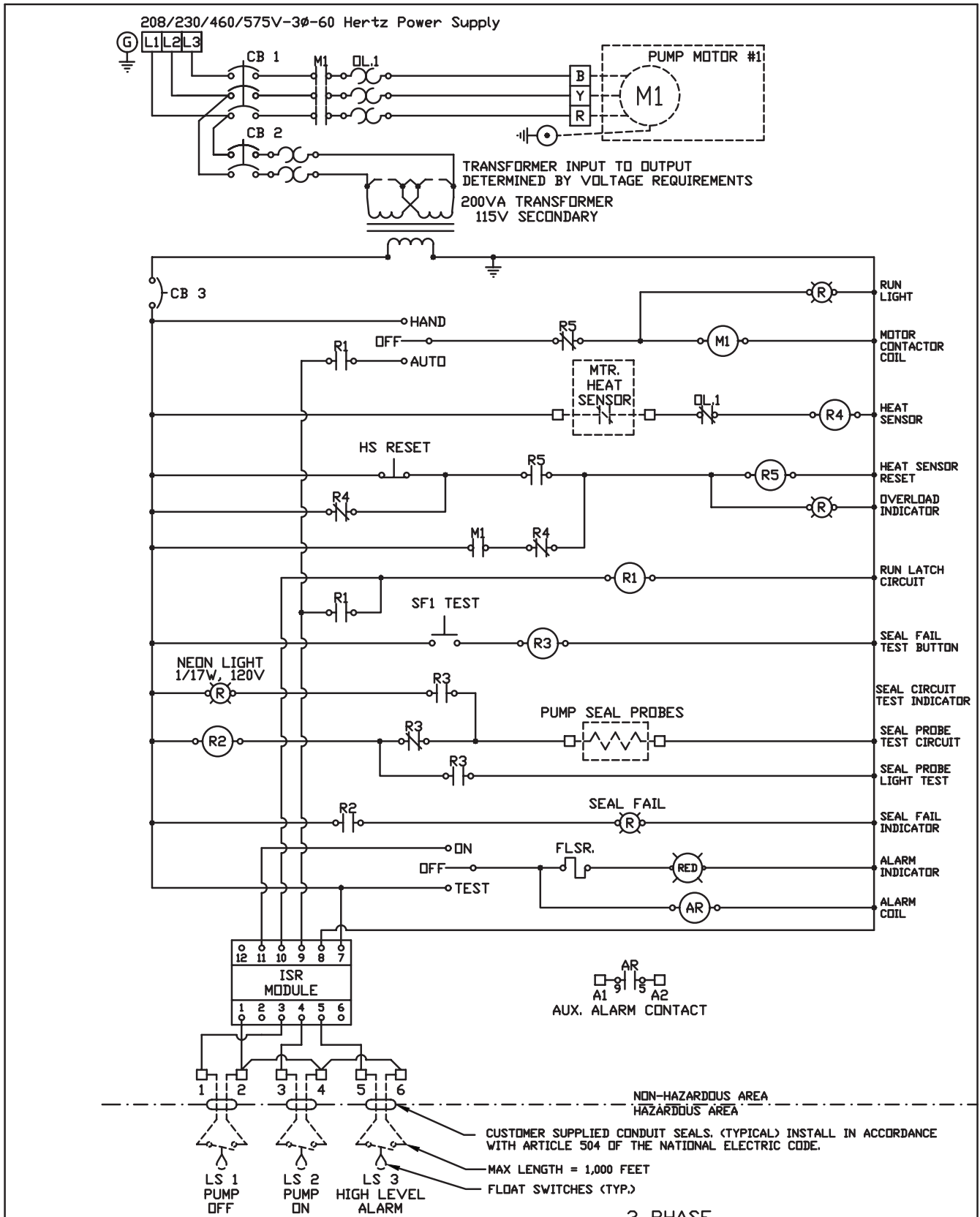
### S6A(X)P

Cat. No.	Eng. No.	HP	Volt/Ph	Cord	Trim	Impeller
<b>1750 RPM</b>						
S6A(X)P5000FC	528135007	50	460/3	4-4	11	136940052
S6A(X)P5000GC	528135017	50	575/3	6-4	11	136940052
<b>1150 RPM</b>						
S6A(X)P2000DB	528135027	20	208/3	6-4	11	136940052
S6A(X)P2000EB	528135037	20	230/3	6-4	11	136940052
S6A(X)P2000FB	528135047	20	460/3	8-4	11	136940052
S6A(X)P2000GB	528135057	20	575/3	8-4	11	136940052
S6A(X)P2500DB	528135187	25	208/3	4-4	12	136940012
S6A(X)P2500EB	528135197	25	230/3	6-4	12	136940012
S6A(X)P2500FB	528135207	25	460/3	8-4	12	136940012
S6A(X)P2500GB	528135217	25	575/3	8-4	12	136940012
<b>870 RPM</b>						
S6A(X)P1000DA	528135067	10	208/3	8-4	10	136940102
S6A(X)P1000EA	528135077	10	230/3	8-4	10	136940102
S6A(X)P1000FA	528135087	10	460/3	10-4	10	136940102
S6A(X)P1000GA	528135097	10	575/3	10-4	10	136940102
S6A(X)P1500DA	528135107	15	208/3	8-4	11	136940052
S6A(X)P1500EA	528135117	15	230/3	8-4	11	136940052
S6A(X)P1500FA	528135127	15	460/3	8-4	11	136940052
S6A(X)P1500GA	528135137	15	575/3	10-4	11	136940052

### S8F(X)P

Cat. No.	Eng. No.	HP	Volt/Ph	Cord	Trim	Impeller
<b>1750 RPM</b>						
S8F(X)P5000FC	528145007	50	460/3	4-4	11.88	025940002
S8F(X)P5000GC	528145017	50	575/3	6-4	11.88	025940002

# Wiring Diagram



- Notes:
- 1) Level Switches Must Be Rated a Minimum of 2 Amps at 120 Volts
  - 2) Torque all white field wiring terminals to 20 In.Lbs.
  - 3) Field Wiring Must Be 60°C Copper Wire Minimum.
  - 4) ----- = Items Not Supplied In Control Panel.
  - 5) Pump power, heat sensor, and seal probe cables must pass through approved NEC 501.15 conduit seals.

3 PHASE

## STANDARD LIMITED WARRANTY

Pentair Hydromatic® warrants its products against defects in material and workmanship for a period of 12 months from the date of shipment from Pentair Hydromatic or 18 months from the manufacturing date, whichever occurs first – provided that such products are used in compliance with the requirements of the Pentair Hydromatic catalog and technical manuals for use in pumping raw sewage, municipal wastewater or similar, abrasive-free, noncorrosive liquids.

During the warranty period and subject to the conditions set forth, Pentair Hydromatic, at its discretion, will repair or replace to the original user, the parts that prove defective in materials and workmanship. Pentair Hydromatic reserves the right to change or improve its products or any portions thereof without being obligated to provide such a change or improvement for prior sold and/or shipped units.

Start-up reports and electrical schematics may be required to support warranty claims. Submit at the time of start up through the Pentair Hydromatic website: <http://forms.pentairliterature.com/startupform/startupform.asp?type=h>. Warranty is effective only if Pentair Hydromatic authorized control panels are used. All seal fail and heat sensing devices must be hooked up, functional and monitored or this warranty will be void. Pentair Hydromatic will cover only the lower seal and labor thereof for all dual seal pumps. Under no circumstance will Pentair Hydromatic be responsible for the cost of field labor, travel expenses, rented equipment, removal/reinstallation costs or freight expenses to and from the factory or an authorized Pentair Hydromatic service facility.

This limited warranty will not apply: (a) to defects or malfunctions resulting from failure to properly install, operate or maintain the unit in accordance with the printed instructions provided; (b) to failures resulting from abuse, accident or negligence; (c) to normal maintenance services and parts used in connection with such service; (d) to units that are not installed in accordance with applicable local codes, ordinances and good trade practices; (e) if the unit is moved from its original installation location; (f) if unit is used for purposes other than for what it is designed and manufactured; (g) to any unit that has been repaired or altered by anyone other than Pentair Hydromatic or an authorized Pentair Hydromatic service provider; (h) to any unit that has been repaired using non factory specified/OEM parts.

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