



**INSTALLATION, OPERATION & MAINTENANCE MANUAL  
FAHRENHEIT®  
J-F & JX-F SERIES  
SIDE DISCHARGE  
Electric Submersible Pumps**

**Single Phase  
115V & 230V**

**CAST IRON  
SINGLE PHASE**

J400-F J1500H-F

J750-F

J1500-F

**316 STAINLESS STEEL**

**SINGLE PHASE**

JX400SS-F JX1500HSS-F

JX750SS-F

JX1500SS-F

Read this manual carefully before installing, operating or servicing these pump models. Observe all safety information. Failure to comply with instructions may result in personal injury and/or property damage. Please retain these instructions.

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## INTRODUCTION

This Installation, Operation and Maintenance manual provides important information on safety and the proper inspection, disassembly, reassembly and testing of the BJM Pumps® J-F & JX-F Series submersible pump. This manual also contains information to optimize performance and longevity of your **BJM Pumps®** submersible pump. The F Series Fahrenheit® pumps are engineered to pump water based liquids up to 200° Fahrenheit (93°C).

**The submersible J-F Series pumps are designed to pump water and wastewater. The JX-F Series pumps are designed to pump corrosive liquids in concentrations chemically compatible with 316SS and FKM. The J-F & JX-F Series pumps are not explosion proof. They are not designed to pump volatile or flammable liquids.**

**Note: Consult a chemical resistance chart for compatibility between pump materials and liquid before operating pump. Consult BJM engineering if there is a question on chemical compatibility.**

If you have any questions regarding the inspection, disassembly, assembly or testing please contact your **BJM Pumps®** distributor, or Industrial Flow Solutions Operating, LLC

Industrial Flow Solutions Operating, LLC  
104 John W Murphy Drive  
New Haven, CT 06513

Fax: 860-399-7784  
Phone: 860-399-5937

Information, including pump data sheets and performance curves, is also available on our web site: [www.flowsolutions.com](http://www.flowsolutions.com)

For assistance with your electric power source, please contact a certified electrician.

Please pay attention to the following alert notifications. They are used to notify operators and maintenance personnel to pay special attention to procedures, to avoid causing damage to the equipment, and to avoid situations that could be dangerous to personnel.

***NOTE: Instructions to aid in installation, operation, and maintenance or which clarify a procedure.***

** DANGER** Immediate hazards that WILL result in severe personal injury or death. These instructions describe the procedure required and the injury which will result from failure to follow the procedure.

** WARNING** Hazards or unsafe practices that COULD result in severe personal injury or death. These instructions describe the procedure required, and the injury which could result from failure to follow the procedure.

** CAUTION** Hazards or unsafe practices which COULD result in personal injury or product or property damage. These instructions describe the procedure required and the possible damage which could result from failure to follow the procedure.

## SAFETY

Pump installations are seldom identical. Each installation and application can vary due to many different factors. It is the owner/service mechanics responsibility to repair, service, and test to ensure that the pump integrity is not compromised according to this manual.

**⚠ WARNING** Risk of electric shock – this pump has not been investigated for use in swimming pool areas.

**⚠ DANGER** Do not pump flammable or volatile liquids. Death or serious injury will result.

**⚠ WARNING** Before attempting to open or service the pump:

- 1) Familiarize yourself with this manual.
- 2) Unplug or disconnect the pump power cable to ensure that the pump will remain inoperative.
- 3) Allow the pump to cool if overheated.

**⚠ WARNING** Do not operate the pump with a worn or damaged electric power cable. Death or serious injury could occur.

**⚠ WARNING** Never attempt to alter the length or repair any power cable with a splice. The pump motor and pump motor and cable must be completely waterproof. Damage to the pump or personal injury may result from alterations.

**⚠ WARNING** After the pump has been installed, make sure that the pump and all piping are secure before operation.

**⚠ WARNING** Do not lift the pump by the power cable piping or discharge hose. Attach proper lifting equipment to the lifting handle (or lifting rings) fitted to the pump. Do not suspend the pump by the power cable.

**⚠ WARNING** Obtain the services of a qualified electrician to troubleshoot, test and/or service the electrical components of this pump.

**⚠ CAUTION** Pumps and related equipment must be installed and operated according to all national, local and industry standards.

## INSPECTION

**Review all safety information before servicing pump.**

The following are recommended installation practices/procedures for the pump. If there are questions in regards to your specific application, contact your local **BJM Pumps** distributor or Industrial Flow Solutions Operating, LLC.

### PRE-INSTALLATION INSPECTION

- 1) Check the pump for damage that may have occurred during shipment.
- 2) Inspect the pump for any cracks, dents, damaged threads, etc.
- 3) Check power cable and sensor cable for any cuts or damage.
- 4) Check for, and tighten any hardware that appears loose.
- 5) Carefully read all tags, decals and markings on the pump.

If anything appears to be abnormal, contact your **BJM Pumps®** distributor or Industrial Flow Solutions Operating, LLC. If damaged, the pump may need to be repaired before use. Do not install or use the pump until appropriate action has been taken.

### LUBRICATION:

No additional lubrication is necessary. The shaft seal and bearings are fully lubricated from the factory. Seal oil should be checked once per year. See table on page 7.

### OIL FILL QUANTITY/TYPE

Qty. oil in seal chamber			
Models	U.S. fl. oz.	C.C.	Type of oil
J400-F	5.1	150	ISO 32 NSF Food Grade Mineral Oil
J750-F	9	265	ISO 32 NSF Food Grade Mineral Oil
J1500-F	9	265	ISO 32 NSF Food Grade Mineral Oil

Qty. oil in seal chamber			
Models	U.S. fl. oz.	C.C.	U.S. fl. oz.
J1500H-F	9	265	ISO 32 NSF Food Grade Mineral Oil

Qty. oil in seal chamber			
Models	U.S. fl. oz.	C.C.	Type of oil
JX400SS-F	5.1	150	ISO 32 NSF Food Grade Mineral Oil
JX750SS-F	10.1	300	ISO 32 NSF Food Grade Mineral Oil
JX1500SS-F	10.1	300	ISO 32 NSF Food Grade Mineral Oil

Qty. oil in seal chamber			
Models	U.S. fl. oz.	C.C.	Type of oil
J1500HSS-F	10.1	300	ISO 32 NSF Food Grade Mineral Oil

**Note: The stator on this model is oil filled. This needs to be changed annually when the seal oil is changed. With the power cable entry removed, fill the motor chamber with oil to a level that insures the oil is covering the motor windings by ½”, and that will be above the upper bearing. Do not overfill, an air gap of 10-15% must be maintained for heat expansion.**

### PUMP INSTALLATION

J-F & JX-F Series pumps have been evaluated for use with water or water based solutions. Please contact the manufacturer for additional information.

#### Lifting:

Attach a rope or lifting chain (not included) to the handle (or lifting rings) on the top of the pump.

**⚠ CAUTION** Do not lift the pump by the power cable or discharge hose/piping. Proper lifting equipment (rope/chain) must be used.

## POSITIONING THE PUMP

**BJM Pumps®**, J-F & JX-F Series pumps are designed to operate **fully submerged**. Data sheets can be obtained online at [www.flowsolutions.com](http://www.flowsolutions.com) or by calling Industrial Flow Solutions Operating, LLC at (860) 399-5937.

### **CAUTION**

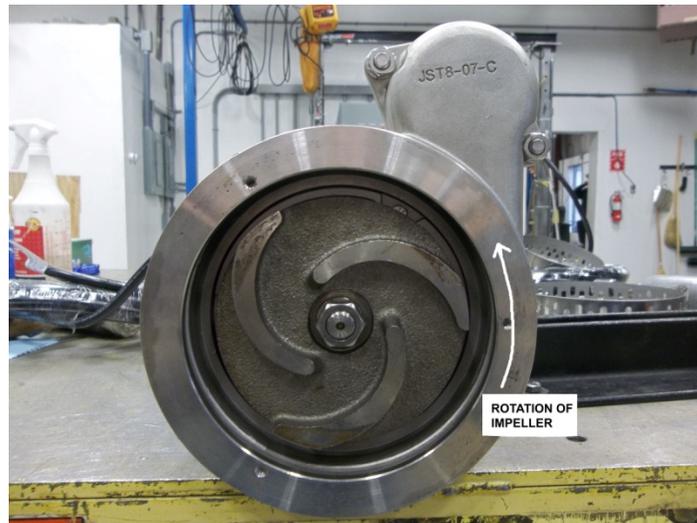
- Do not run pump dry.
- Pump liquid should not exceed a maximum temperature of 200°F (93°C).
- Never place the pump on loose or soft ground. The pump may sink, preventing water from reaching the impeller. Place on a solid surface or suspend the pump with a lifting rope/chain. The J-F & JX-F Series pumps are provided with a suction strainer to prevent large solids from clogging the impeller. Any spherical solids which pass through the strainer should pass through the pump.
- For maximum pumping capacity, use the proper size non-collapsible hose or rigid piping. A check valve may be installed after the discharge to prevent back flow when the pump is shut off.

## PUMP ROTATION

If wired properly to the control, the single phase BJM Pumps® J-F and JX-F Series pump should operate with the correct pumping rotation. Verification is recommended prior to installing into the sump basin.

Two ways to check the correct pump rotation:

1. By looking at the impeller; the rotation of the impeller should be counter clockwise as shown in the picture below.



2. By looking from the top of the pump. Since the impeller cannot be seen, the best way to check the rotation is to check the kick back motion of the pump when the pump just starts. The kick back motion of the pump should be counter clockwise as shown in the picture below.



## PUMP OPERATION

**⚠ WARNING** This pump is designed to handle dirty water that contains some solids. It is not designed to pump volatile or flammable liquids. Do not attempt to pump any liquids which may damage the pump or endanger personnel as a result of pump failure.

**⚠ DANGER** Do not operate this pump where explosive vapors or flammable material exist. Death or Serious injury may result.

**NOTE: Maximum recommended starts should not exceed 10 times per hour.**

All J-F & JX-F models are provided with a 50' (15m) power cable. NEVER splice the power cable due to safety and warranty considerations. Always keep the lead end dry.

Note: The single phase 115V and 230V high temperature pumps are designed to be connected directly to a proper pump control and cannot be directly plugged into a power outlet.

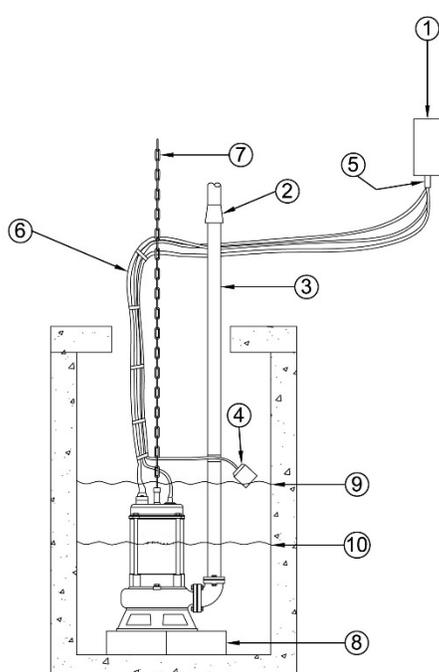
**⚠ WARNING** Do not alter the length or repair any power cable with a splice. The pump motor and cable must be completely waterproof. Damage to the pump or personal injury may result from alterations.

The BJM Pumps, J-F and JX-F series pumps require a special control that contains the starting components, thermal sensor and Seal Minder connections. These pumps cannot be directly connected to a power source.

## TYPICAL AUTOMATIC DEWATERING INSTALLATION



TYPICAL AUTOMATIC INSTALLATION (WITH OPTIONAL ONE FLOAT CONTROL)



- 1)** BJM control panel with optional on/off wide angle float switch. Electrical wiring and protection must be in accordance with National Electrical Code in U.S.A. or Canadian Electrical Code in Canada and state / provincial and local electrical codes.
- 2)** Optional ( approx. 50' / 15 meters) : If pumping in a small confined space at high head, it may be beneficial to install a check valve 3' (1 meter) above the discharge of the pump. This will help eliminate backflow and unnecessary running of the pump. For best results use a section of high temperature rated pipe.
- 3)** High temperature rated pipe or rigid hose recommended. Collapsible high temperature rated hose will work but not as efficiently.
- 4)** Attach high temperature rated float to the pump top or high temperature rated pipe. Never place the float lower than the top of the strainer inlet.
- 5)** All electrical connections must be kept dry.
- 6)** High temperature rated float switch cord should be tied or taped to the pump power cord every 3' (1 meter).
- 7)** Always lower the pump by a separate rope or chain. Never lift or lower the pump by the power cord, float switch cord or discharge hose.
- 8)** For best results, place the pump on a solid object, or suspend pump 4" - 6" (100 mm - 150 mm) above the bottom. This will keep the pump from digging itself into silt, sand and mud.
- 9)** Recommended submergence level.
- 10)** Minimum submergence level.

REVISION 1/16/2012      Not for use in hazardous locations.      SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

BJM Pumps, LLC. - 123 SPENCER PLAIN ROAD, OLD SAYBROOK, CT 06475 - PHONE: 860-399-5937 - FAX: 860-399-7784

**NOTE: Maximum recommended starts should not exceed 10 times per hour.**

### STOPPING

To stop the pump (manual and automatic mode), turn the pump off at the control, turn off the breaker, and/or turn the power source off (generator).

### CONTROL PANELS CONNECTION OPTIONS

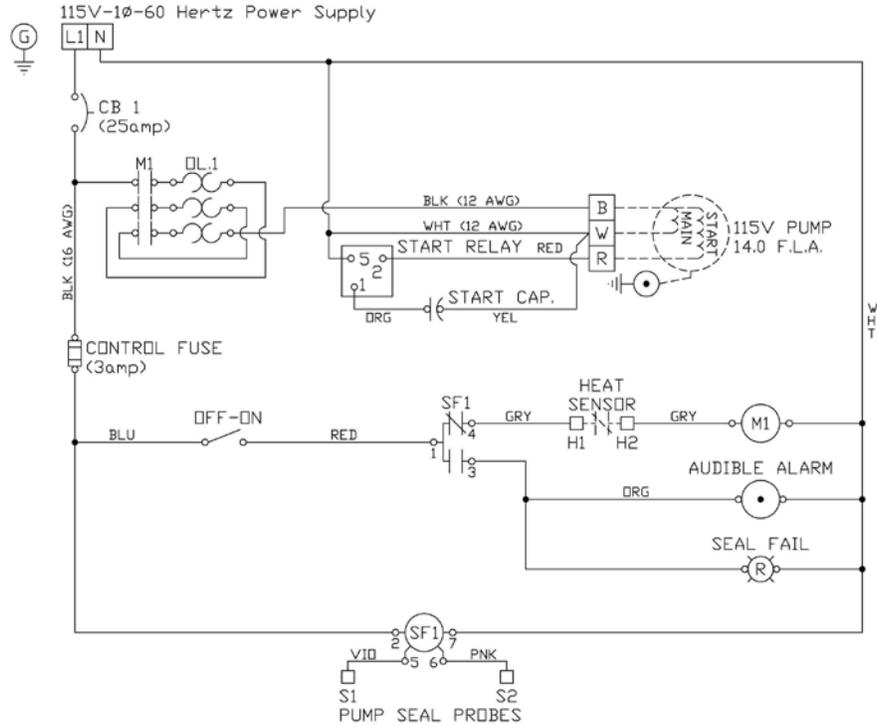
**⚠ CAUTION** Use with approved motor control that matches motor input in full load amperes. "UTILISER UN DÉMARREUR APPROUVÉ CONVARIANT AU COURANT À PLEINE CHARGE DU MOTEUR."

**BJM Pumps** submersible pumps have been evaluated for use with water or water based solutions. Please contact the manufacturer for additional information.

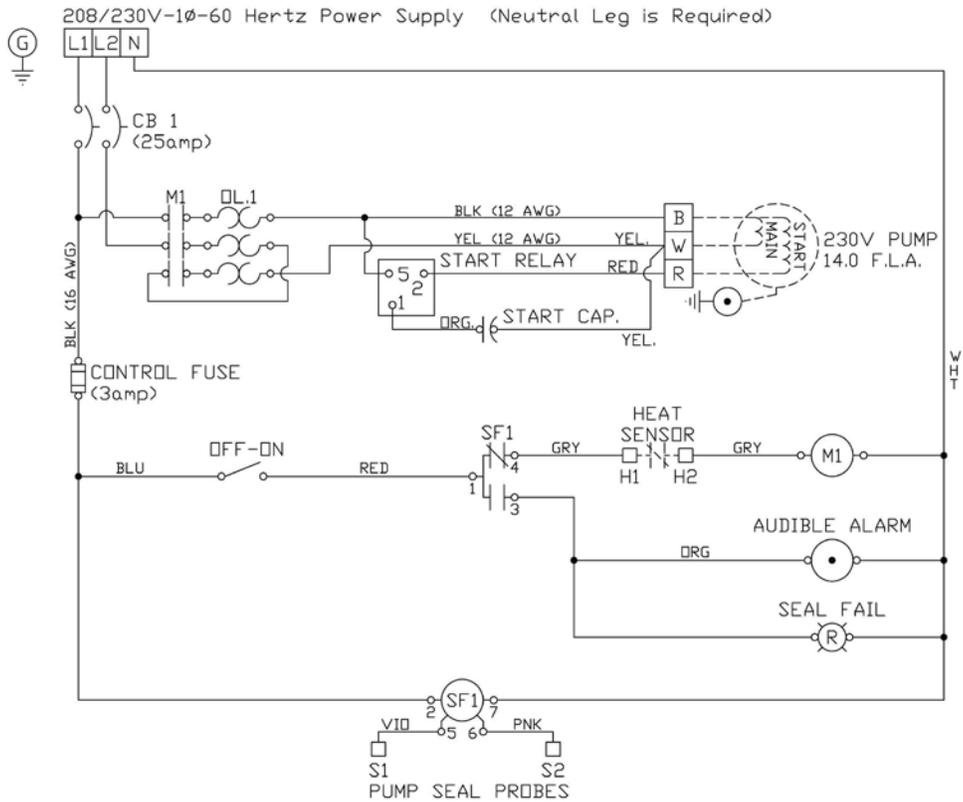
**⚠ WARNING** **FOR YOUR PROTECTION, ALWAYS DISCONNECT PUMP FROM ITS POWER SOURCE BEFORE HANDLING.**

**⚠ WARNING** "Risk of electrical shock" Do not remove power supply cable and strain relief or connect conduit directly to the pump

**⚠ WARNING** Installation and checking of electrical circuits and hardware should be performed by a qualified licensed electrician.



**Figure 1 Single Phase 400F-115 and 750F-115 Control**



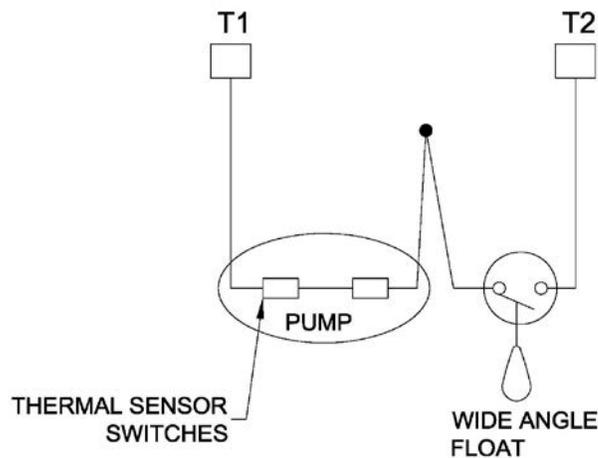
**Figure 2 Single Phase 400F-230, 750F-230 and 1500F-230 Control**

### OPTIONAL FLOAT CONNECTION

BJM Pumps® utilizes a control for all of the single phase “F” series pumps. The wiring diagram included in this manual (and with the control) should be followed to properly connect the pump power and sensor leads to the control, and the power supply to the control. Care should be taken to make sure all of the connections are proper and that the system is properly grounded. The control can be utilized as a portable control or as a permanently mounted control enclosure. All Connections should be done to meet the National Electric Code and all applicable local codes and ordinances.

The BJM Pumps® control is supplied as a manual ON/OFF control. A wide angle float can be wired in series with the thermal sensors to allow the pumps to operate in an automatic mode. See the wiring diagram provided in this manual for proper connection. A separate alarm control with float is available as an option from BJM Pumps®.

Optional wide angle float connection -  
wire thermal heat sensor switches in  
series with wide angle float as shown:



## TROUBLE SHOOTING



**Disconnect the power source to the pump BEFORE attempting any type of trouble shooting, service or repair.**

### PUMP WILL NOT RUN

1. Check power supply (fuses, breaker). Reset power.
2. Blocked impeller. Remove strainer, check and clean.
3. Defective cable or incorrect wiring.
4. Strainer clogged. Check and clean as necessary.
5. Float switch tangled/obstructed. Clean and free float switch from obstruction.
6. Float switch defective. Replace float switch.
7. Capacitor or start relay in control failed.
8. Thermal Sensor switch is open/or failed.

### PUMP RUNS BUT DOES NOT DELIVER RATED CAPACITY

1. Discharge line clogged, restricted or hose kinked. Check discharge hose/pipe.
2. Worn impeller and/or suction cover. Inspect and replace as necessary.
3. Pump overloaded due to liquid pumped being too thick.
4. Pumping air. Check liquid level and position of pump.
5. Excessive voltage drops due to long cables.
6. Pump running backwards, check rotation.

### SERVICING YOUR SUBMERSIBLE PUMP

Pump should be disconnected from the electric power supply before proceeding to do any service or maintenance.

**The design of the “F” Series high temperature pump models is unique and requires specific knowledge to perform the proper assembly. Industrial Flow Solutions Operating, LLC recommends that all electrical service work be performed at the factory or by a factory trained and certified repair technician, to insure that the materials and assembly methods meet BJM standards.**

### MAINTAINING YOUR PUMP

- Pump should be disconnected from the electric power supply before proceeding to do any service or maintenance.
- Pump should be inspected at regular intervals (At least 2 times per year).
- More frequent inspections are required if the pump is used in a harsh environment.
- Preventative maintenance should be performed to reduce the chance of premature failure.
- Worn impellers and lip seals should be replaced.

- Cut or cracked power cables must be replaced. **(Never operate a pump with a cut, cracked or damaged power cable.)**
- Seal oil should be checked once per year.
- Maintenance should always be done when taking a pump out of service before storage.
  - 1) Clean pump of dirt and other build up.
  - 2) Check condition of oil around the shaft seals.
  - 3) Check hydraulic parts: check for wear.
  - 4) Inspect power cable. Make sure that it is free of nicks or cuts.

### **CHANGING SEAL OIL**

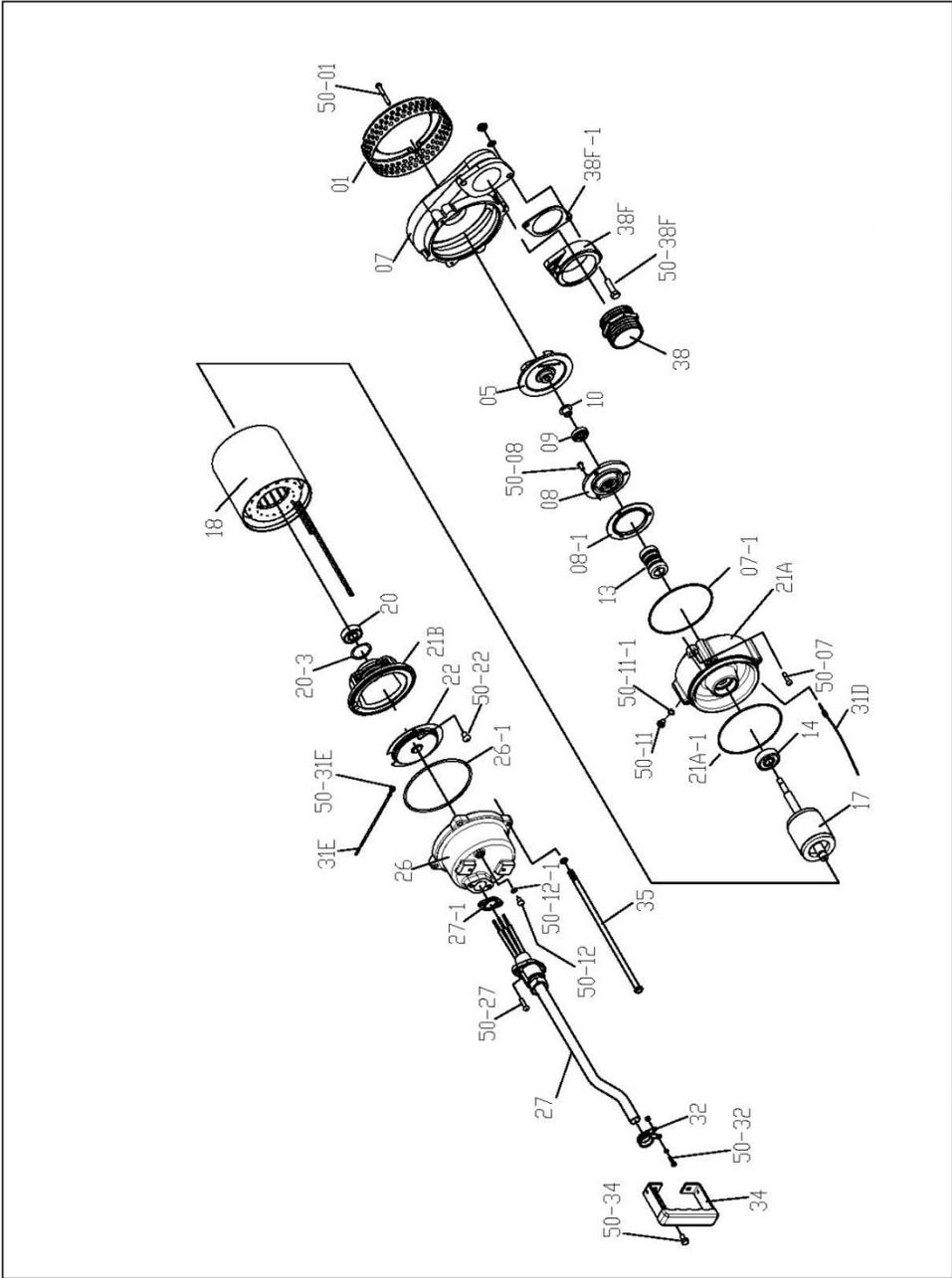
Changing the seal oil in the J-F & JX-F Series pumps is very easy.

- 1) Make sure that the pump is deenergized and locked out for service.
- 2) Lay the pump down on its side.
- 3) Remove the screws that hold the bottom plate in place.
- 4) Remove bottom plate.
- 5) Remove screws holding the suction cover.
- 6) Remove the suction cover.
- 7) Remove the impeller.
- 8) Remove the inspection screw for the oil chamber (pos#50-08). Pour out a small sample of the oil. If it is milky white, or contains water, then the oil and possible, the mechanical seal, should be changed. If an oil change is needed:
- 9) Remove the screws that hold the oil chamber cover in place & remove the oil.
- 10) Replace the mechanical seal if necessary.
- 11) Replace the oil.
- 12) Assemble the pump.

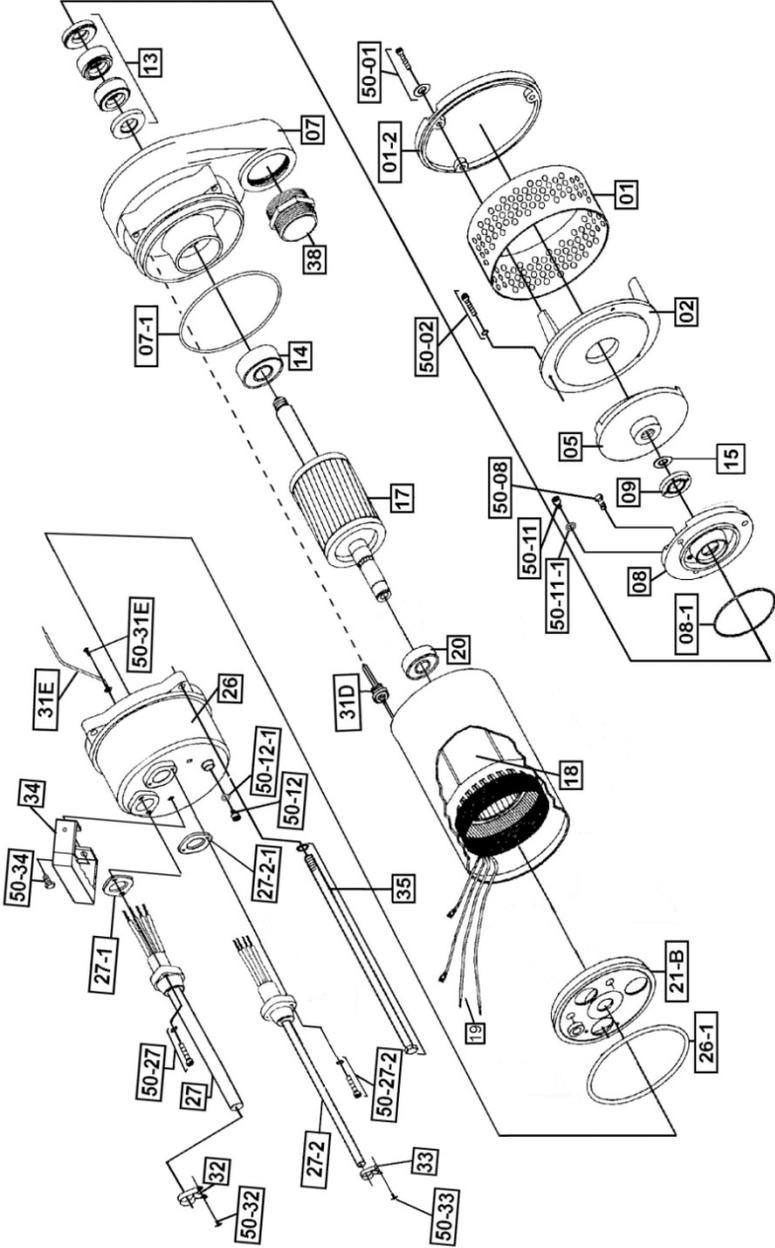
### **STATOR REPLACEMENT OR ELECTRICAL REPAIR**

The BJM Pumps® “F” Series designed pumps utilize unique construction methods and materials. The inner connection of all wiring requires use of a BJM Pumps® wire connection kit. Included in this kit are specific instructions on how a qualified factory trained and certified repair technician can perform this work properly. No other materials or methods should be used on this product.

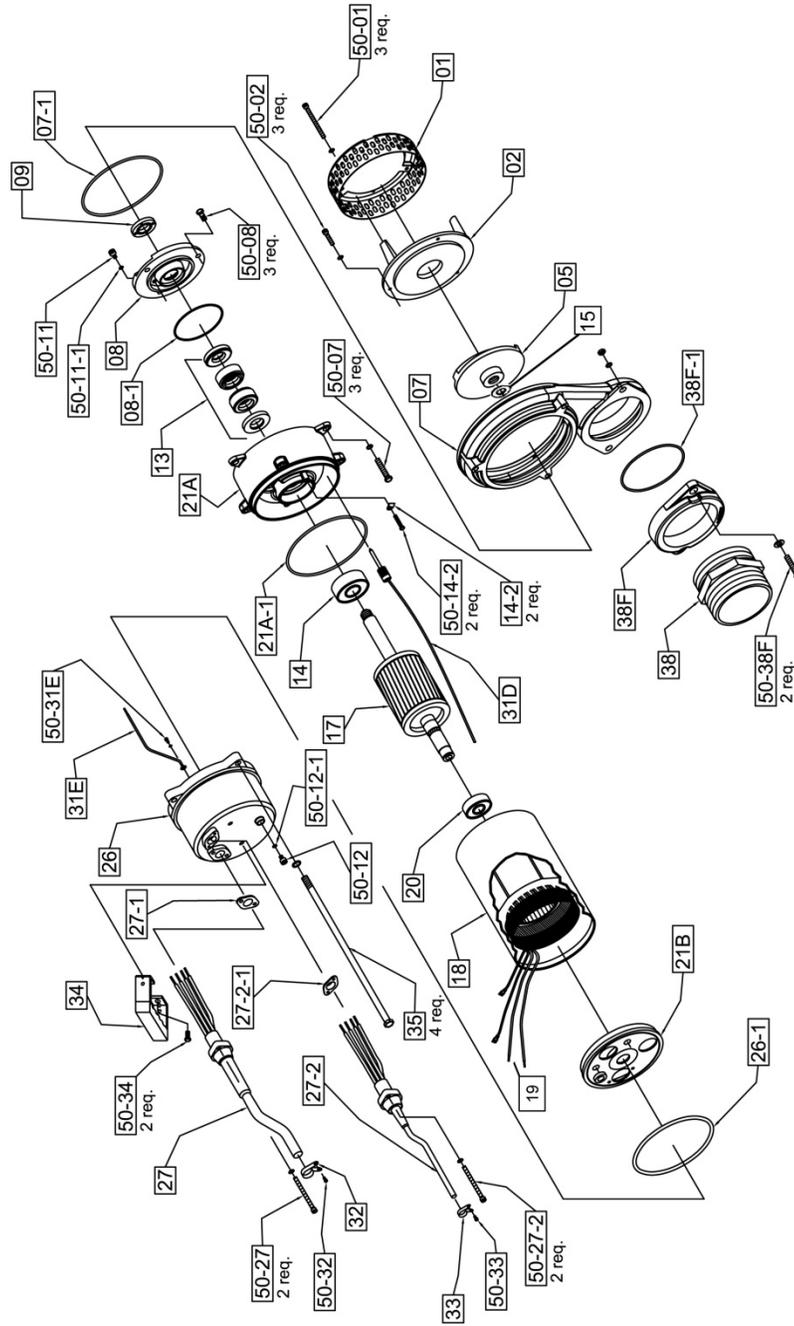
**EXPLODED VIEW OF J400-F, JX400SS-F**



EXPLODED VIEW OF J750-F, J1500H-F & J1500HSS F



## EXPLODED VIEW OF JX750SS-F, JX1500SS-F & JX1500HSS-F



## J-F SERIES PARTS LIST

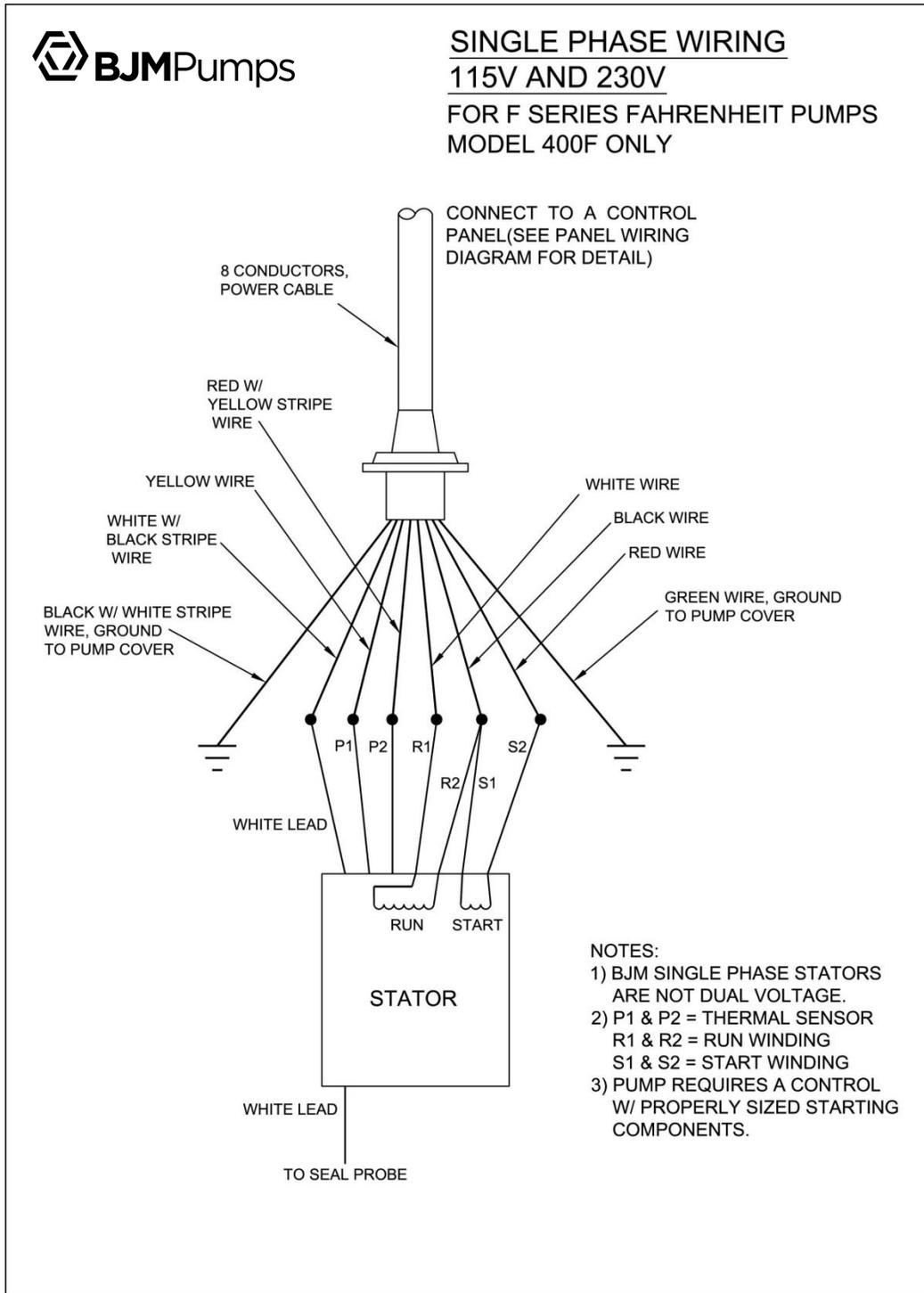
Pos. No.	Part Description	Pump Model			
		J400F Item #	J750F Item #	J1500F Item #	J1500HF Item #
01	Strainer with Bottom Plate	201964	-	-	-
01	Strainer	-	201969	201969	201969
01-2	Bottom Plate	-	202007	202007	202007
02	Suction Cover	-	202026	202026	202026
05	Impeller	202055	202930	202062	202064
07	Pump Housing	202993	202163	202165	202163
07 -1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit
08	Oil Chamber Cover	202207	202211	202211	202211
08 -1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit
09	Lip Seal FKM	202230	202233	202233	202233
10	Shaft Sleeve	202258	-	-	-
13	Mechanical Seal FKM	202260	204240	204240	204240
14	Lower Ball Bearing	200493	200958	200958	200958
15	Impeller Shim Kit (Required)	-	200481	200481	200480
17	Rotor w/ Shaft 115/230V, 1PH	202302	204060	204109	204109
18	Stator w/Casing, 115V, 1PH (High-Temp)	201032	201036	-	-
18	Stator w/Casing, 230V, 1PH (High-Temp)	201033	201037	201040	201040
19	Wire Connection Kit*	204204	204211	204211	204211
20	Upper Ball Bearing	200957	200967	200967	200967
21A	Oil Chamber	202796	-	-	-
21A-1	O-Ring (Kit Only)	Kit	-	-	-
21B	Motor Cover	202365	202368	202368	202368
22	Cover Plate Upper	202380	-	-	-
26	Pump Top Cover	203120	202433	202433	202433
26-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit
27	Power Cable w/ Gland-115V, 1PH (High-Temp)	204457	204454	-	-
27	Power Cable w/ Gland-230V, 1PH (High-Temp)	204457	204456	204454	204454
27-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit
27-2	Seal Minder Cable (High-Temp)	-	204455	204455	204455
27-2-1	O-Ring (Kit Only)	-	Kit	Kit	Kit
31D	Seal Minder Probe	202409	202409	202409	202409
31E	Ground Wire w/Ring Term.	203145	203145	203145	203145
32	Power Cord Line Clip / Strain Relief	203161	203161	203161	203161
33	Seal Minder Cable Line Clip	-	203163	203163	203163
34	Handle	202517	202517	202517	202517
35	Holding Rods	202665	202666	202668	202668
38	Discharge Nipple	202531	202531	202534	202531
38F	Discharge Flange	202562	-	-	-
38F-1	Gasket -Discharge Flange - FKM	203207	-	-	-
50-01	Bolt - Strainer/Stand	202694	203238	203238	203238
50-02	Screw	-	203216	203216	203216
50-07	Bolt - Suction Cover	203216	-	-	-
50-08	Screw	203215	203219	203219	203219
50-11	Screw	203218	203218	203218	203218
50-11-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit
50-12	Screw	203218	203218	203218	203218
50-12-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit
50-22	Screw	202692	-	-	-
50-27	Screw	203216	203216	203216	203216
50-27-2	Screw for Seal Minder Cable	-	203216	203216	203216
50-31E	Screw	202692	202692	202692	202692
50-32	Screw	203214	203214	203214	203214
50-33	Screw	-	203214	203214	203214
50-34	Screw	203219	203219	203219	203219
50-38F	Bolt - Discharge Flange	203230	-	-	-
<b>O-Ring Kit-FKM</b>		202626	202631	202631	202631
<b>* "F" Series High Temperature Pumps Only</b>					

## JX-F SERIES PARTS LIST

Pos. No.	Part Description	Pump Model			
		JX400SSF	JX750SSF	JX1500SSF	JX1500HSSF
		Item #	Item #	Item #	Item #
01	Strainer with Bottom Plate	201965	201971	201971	201971
02	Suction Cover	-	202027	202027	202028
05	Impeller	202056	202060	202063	202065
07	Pump Housing	202994	202164	202166	202164
07 -1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit
08	Oil Chamber Cover	202208	202214	202214	202214
08 -1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit
09	Lip Seal FKM	202230	202232	202232	202232
10	Shaft Sleeve	202258	-	-	-
13	Mechanical Seal FKM	202260	204240	204240	204240
14	Lower Ball Bearing	200493	200958	200958	200958
14-2	Lower Bearing Retainer Clip	-	202279	202279	202279
15	Impeller Shim Kit (Required)	-	200481	200480	200480
17	Rotor w/ Shaft 115/230V, 1PH	202303	204061	204109	204109
18	Stator w/Casing, 115V, 1PH (High-Temp)	201034	201038	-	-
18	Stator w/Casing, 230V, 1PH (High-Temp)	201035	201039	201041	201041
19	Wire Connection Kit*	204204	204211	204211	204211
20	Upper Ball Bearing	200957	200967	200967	200967
21A	Oil Chamber	202992	202197	202197	202197
21A-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit
21B	Motor Cover	202365	202368	202368	202368
22	Cover Plate Upper	202380	-	-	-
26	Pump Top Cover	203121	202434	202434	202434
26-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit
27	Power Cable w/ Gland-115V, 1PH (High-Temp)	202785	202783	-	-
27	Power Cable w/ Gland-230V, 1PH (High-Temp)	202785	202784	202783	202783
27-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit
27-2	Seal Minder Cable (High-Temp)	-	201743	201743	201743
27-2-1	O-Ring (Kit Only)	-	Kit	Kit	Kit
31D	Seal Minder Probe	202409	202408	202408	202408
31E	Ground Wire w/Ring Term.	203145	203145	203145	203145
32	Power Cord Line Clip / Strain Relief	203161	203161	203161	203161
33	Seal Minder Cable Line Clip	-	203163	203163	203163
34	Handle	202517	202517	202517	202517
35	Holding Rods	202665	202682	202683	202683
38	Discharge Nipple	202532	202532	202535	202532
38F	Discharge Flange	202563	202563	202546	202563
38F-1	O-Ring - Discharge Flange FKM	202723	202723	202724	202723
50-01	Bolt - Strainer/Stand	202694	203215	203215	203215
50-02	Bolt - Suction Cover	-	203216	203216	203216
50-07	Screw	203216	203296	203296	203296
50-08	Screw	203215	203219	203219	203219
50-11	Screw	203218	203218	203218	203218
50-11-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit
50-12	Screw	203218	203218	203218	203218
50-12-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit
50-14-2	Srew	-	203219	203219	203219
50-22	Screw	202692	-	-	-
50-23	Screw	-	202700	202700	202700
50-27	Screw	202692	203295	203295	203295
50-27-2	Screw for Seal Minder Cable	203216	203295	203295	203295
50-31E	Screw	202692	202692	202692	202692
50-32	Screw	203214	203214	203214	203214
50-33	Screw	-	203214	203214	203214
50-34	Screw	203219	203219	203219	203219
50-38F	Bolt - Discharge Flange	203230	-	-	-
<b>O-Ring Kit-FKM</b>		202626	202630	202630	202630
<b>* "F" Series High Temperature Pumps Only</b>					

## SINGLE PHASE WIRING DIAGRAM

**115V & 230V**



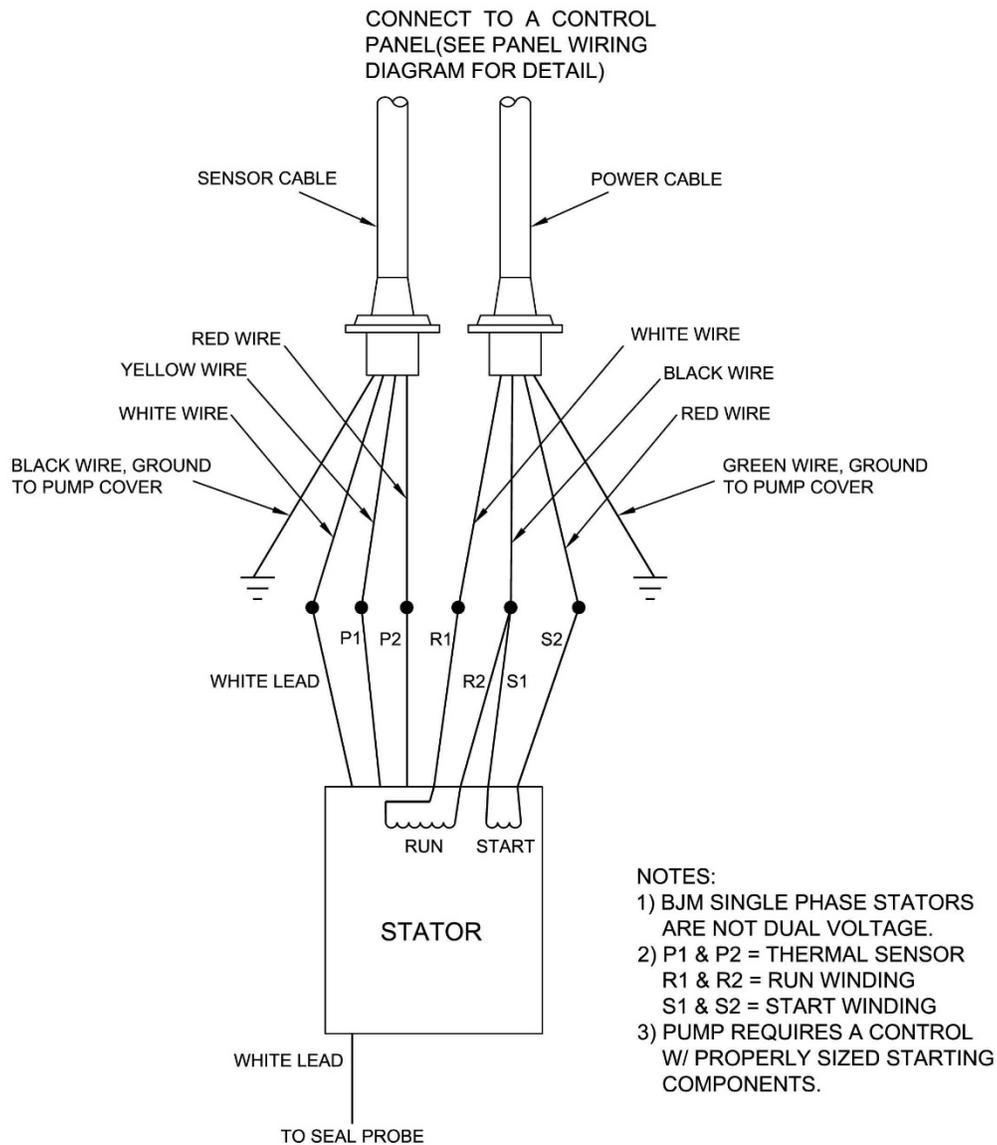
MODELS: J400-F & JX400-F

### 1150 & 230V



### SINGLE PHASE WIRING 115V AND 230V

FOR F SERIES FAHRENHEIT PUMPS  
MODEL 750F & 1500F ONLY



MODELS: J750-F, JX750SS-F, J1500-F, JX1500SS-F, J1500H-F, JX1500HSS-F

## **SEAL MINDER® - THERMAL MOTOR SENSOR SWITCH**

(For high temperature single phase pump models)

### **Seal Minder®:**

Also known as a seal fail circuitry (or moisture detection circuit) is designed to inform the pump operator that there is moisture within the oil chamber. This early warning can allow the operator to schedule repair & inspection on the pump. The **Seal Minder®** is a sensor probe inside the oil chamber. (The oil chamber houses the mechanical seals that are cooled & lubricated by oil). The Seal Minder, when properly connect to a control panel, can help indicate seal failure. The **Seal Minder** cord requires a seal fail circuitry in control panel for warning signal.

The open end of the **Seal Minder** circuit cord should be connected to a control panel with an optional seal failure alarm relay circuit or a standalone Seal Minder Panel manufactures can incorporate the Seal Minder cord option. BJM Pumps®, an Industrial Flow Solutions Company, has a standalone, Seal Minder panel for both simplex (P/N MSP8350A) and duplex (P/N MSP8350B) systems. For more information, contact Industrial Flow Solutions Operating, LLC or visit us online at [www.flowsolutions.com](http://www.flowsolutions.com)

The **Seal Minder** cord has two leads, black and white. Note that the power cable is much larger and has three to five leads, depending on the model. Inside the pump, the black lead is connected to the casing ground, and the white lead is connected to the seal probe that is suspended into the oil chamber. These leads need to be properly connected to the seal failure alarm relay circuit. Most controls that have proceeded this option have a connection terminal point that is clearly marked for these connections. Consult the control panel manual for proper connection instructions.

Although highly recommended, the pump does not need a control box with seal fail relay or standalone seal panel to operate.

If the operator does not use the **Seal Minder**:

- 1.) The recommended procedure is to take the **Seal Minder** cord off the pump and seal with a Seal Minder cap (P/N M02738) and gasket (P/N M05121 for Buna, P/N M05121V for FKM). This should be done by an authorized BJM Pumps® service center or distributor as not to void warranty (detailed instruction sheet available for this procedure).
- 2.) Alternate method of securing **Seal Minder** cable if not being used: Tape the **Seal Minder** cord to the power cord. Make sure that the cords are taped together in an even run, at about 2' to 3' apart. Use electrical tape to tape off the end of the Seal Minder cable (do not connect to power source). The taped leads should be kept dry and out of the liquid. (See next page for detailed drawing).



Industrial Flow Solutions Operating, LLC  
104 John W Murphy Drive  
New Haven, CT 06513

## **WARRANTY AND LIMITATION OF LIABILITY**

Unless otherwise expressly authorized in writing, specifying a longer or shorter period, BJM Pumps, LLC warrants for a period of eighteen (18) months from the date of shipment from the Point of Shipment, or one (1) year from the date of installation, whichever occurs first, that all products or parts thereof furnished by BJM Pumps, LLC under the brand name **BJM Pumps**, hereinafter referred to as the "Product" are free from defects in materials and workmanship and conform to the applicable specification.

BJM Pumps, LLC's liability for any breach of this warranty shall be limited solely to replacement or repair, at the sole option of BJM Pumps, LLC, of any part or parts of the Product found to be defective during the warranty period, provided the Product is properly installed and is being used as originally intended. Any breach of this warranty must be reported to BJM Pumps, LLC or BJM Pumps, LLC's authorized service representative within the aforementioned warranty period, and defective Product or parts thereof must be shipped to BJM Pumps, LLC or BJM Pumps, LLC's authorized representative, transportation charges prepaid. Any cost associated with removal or installation of a defective Product or part is excluded.

IT IS EXPRESSLY AGREED THAT THIS SHALL BE THE SOLE AND EXCLUSIVE REMEDY OF BJM PUMPS, LLC'S DISTRIBUTORS AND CUSTOMERS. UNDER NO CIRCUMSTANCES SHALL BJM PUMPS, LLC BE LIABLE FOR ANY COSTS, LOSS, EXPENSE, DAMAGES, SPECIAL DAMAGES, INCIDENTAL DAMAGES OR CONSEQUENTIAL DAMAGES ARISING DIRECTLY OR INDIRECTLY FROM THE DESIGN, MANUFACTURE, SALE, USE OR REPAIR OF THE PRODUCT, WHETHER BASED ON WARRANTY, CONTRACT, NEGLIGENCE, OR STRICT LIABILITY. IN NO EVENT WILL LIABILITY EXCEED THE PURCHASE PRICE OF THE PRODUCT.

THE WARRANTY AND LIMITS OF LIABILITY CONTAINED HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES, EXPRESSED OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED BY BJM PUMPS, LLC AND EXCLUDED FROM THIS WARRANTY.

BJM Pumps, LLC neither assumes, nor authorizes any person to assume for it, any other warranty obligation in connection with the sale of the Product. This warranty shall not apply to any Product or parts of Product which have (a) been repaired or altered outside of BJM Pumps, LLC's facilities unless such repair was authorized in advance by BJM Pumps, LLC or by its authorized representative; or (b) have been subject to misuse, negligence or accident; or (c) have been used in a manner contrary to BJM Pumps, LLC's instruction.

In any case of products not manufactured and sold under the BJM Pumps, LLC brand name, there is no warranty from BJM Pumps, LLC; however BJM Pumps, LLC will extend any warranty received from BJM Pumps, LLC's supplier of such products.

**START-UP REPORT FORM**

**START-UP REPORT FORM**

This form is designed to record the initial installation, and to serve as a guide for troubleshooting at a later date (if needed).

Industrial Flow Solutions Operating, LLC  
 104 John W Murphy Drive  
 New Haven, CT 06513

Pump Owner's Name			
Location of Installation			
Person in Charge			Phone(    )
Purchased From			
Model		Serial No	
Voltage	Phase	Hertz	HP
Does impeller turn freely by hand?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Condition of Equipment	<input type="checkbox"/> New <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor		
Condition of Cable Jacket	<input type="checkbox"/> New <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor		
Rotation: Direction of Impeller Rotation (Use C/W for clockwise, CC/W for counterclockwise): _____ Method used to check rotation (viewed from bottom) _____			
Resistance of cable and Pump Motor (measured at pump control)			
Red-Black_____ ohms	Red-White_____ ohms	White-Black_____ohms	
Resistance of ground circuit between control panel and outside of pumps _____ Ohms			
<b>MEG OHM CHECK OF INSULATION</b>			
Red to ground_____ White to ground_____ Black to ground_____			
Condition of location at start-up	<input type="checkbox"/> Dry <input type="checkbox"/> Wet <input type="checkbox"/> Muddy		
Was equipment stored If YES, length of storage:	<input type="checkbox"/> Yes <input type="checkbox"/> No.		
Liquid being pump			
Debris in bottom of station?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Was debris removed in your	<input type="checkbox"/> Yes <input type="checkbox"/> No		

**START-UP REPORT FORM**

presence?		
Are guide rails exactly vertical?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is base elbow installed level?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Liquid level controls: Model _____		
Is control installed away from turbulence?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>Operation Check</b>		
Tip lowest float (stop float), all pumps should remain off. Tip second float (and stop float), one pump comes on. Tip third float (and stop float), both pumps on (alarm on simplex). Tip fourth float (and stop float), high level alarm on (omit on simplex).		
If not on levels controls, describe type of controls		
Does liquid level ever drop below volute top?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Control Panel MFG & model no.		
Number of pumps operated by control panel		
<b>NOTE: At no time should hole be made in top of control panel, unless proper sealing devices are utilized.</b>		
Short Circuit protection:	Type:	
Number and size of short circuit device(s)	Amp rating:	
Overload type:	Size:	Amp rating:
Do protective devices comply with pump motor amp rating?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Are all pump connections tight?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is the interior of the panel dry?	<input type="checkbox"/> Yes	<input type="checkbox"/> No If No, correct moisture problem.
Electrical readings		
<b>SINGLE PHASE</b>		
Voltage supply at panel line connection, pump off	L1	L2
Voltage supply at panel line connection, pump on	L1	L2
Amperage load connection, pump on	L1	L2
<b>THREE PHASE</b>		
Voltage supply at panel line connection, pump off		
L1-L2	L2-L3	L3-L1

**START-UP REPORT FORM**

Voltage supply at panel line connection, pump on		
L1-L2	L2-L3	L3-L1
Amperage load connection, pump on		
L1	L2	L3
<b>FINAL CHECK</b>		
Is pump secured properly?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Was pump checked for leaks?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Do check valves operate properly?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Flow: Does station appear to operate at proper rate?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Noise level:	Acceptable <input type="checkbox"/>	Unacceptable <input type="checkbox"/>
Comments:		
Describe and equipment difficulties during start-up		
Installed by: Company: _____ Person: _____ Date: _____		
Maintained by: Company: _____ Person: _____		
Date and time of start-up _____ Present at start-up: ( ) Engineer's name _____ ( ) Contractor's name _____ ( ) Operator's name _____ ( ) others _____		



Industrial Flow Solutions Operating, LLC  
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**INSTALLATION, OPERATION & MAINTENANCE MANUAL  
FAHRENHEIT®  
J-F & JX-F SERIES  
SIDE DISCHARGE  
Electric Submersible Pumps**

**Three Phase  
208V, 230V, 460V & 575V**

**CAST IRON  
THREE PHASE**

J08-F J15H-F  
J15-F J22H-F  
J22-F J37H-F  
J37-F J55CH-F  
J55C-F J75CH-F  
J75C-F

**316 STAINLESS STEEL**

**THREE PHASE**

JX08SS-F JX15HSS-F  
JX15SS-F JX22HSS-F  
JX22SS-F JX37HSS-F  
JX37SS-F JX55CHSS-F  
JX55CSS-F JX75CHSS-F  
JX75CSS-F

Read this manual carefully before installing, operating or servicing these pump models. Observe all safety information. Failure to comply with instructions may result in personal injury and/or property damage. Please retain these instructions.

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## INTRODUCTION

This Installation, Operation and Maintenance manual provides important information on safety and the proper inspection, disassembly, reassembly and testing of the BJM Pumps® J-F & JX-F Series submersible pump. This manual also contains information to optimize performance and longevity of your **BJM Pumps®** submersible pump. The F Series Fahrenheit® pumps are engineered to pump water based liquids up to 200° Fahrenheit (93°C).

**The submersible J-F Series pumps are designed to pump water and wastewater. The JX-F Series pumps are designed to pump corrosive liquids in concentrations chemically compatible with 316SS and FKM. The J-F & JX-F Series pumps are not explosion proof. They are not designed to pump volatile or flammable liquids.**

**Note: Consult chemical resistance chart for compatibility between pump materials and liquid before operating pump. Consult BJM Pumps® engineering if there is a question on chemical compatibility.**

If you have any questions regarding the inspection, disassembly, assembly or testing please contact your **BJM Pumps** distributor, or Industrial Flow Solutions Operating, LLC.

Industrial Flow Solutions Operating, LLC  
104 John W Murphy Drive  
New Haven, CT 06513

Fax: 860-399-7784  
Phone: 877-256-7867  
Phone: 860-399-5937

Information, including pump data sheets and performance curves, is also available on our web site: [www.flowsolutions.com](http://www.flowsolutions.com)

For assistance with your electric power source, please contact a certified electrician.

Please pay attention to the following alert notifications. They are used to notify operators and maintenance personnel to pay special attention to procedures, to avoid causing damage to the equipment, and to avoid situations that could be dangerous to personnel.

***NOTE: Instructions to aid in installation, operation, and maintenance or which clarify a procedure.***

**⚠ DANGER** Immediate hazards that WILL result in severe personal injury or death. These instructions describe the procedure required and the injury which will result from failure to follow the procedure.

**⚠ WARNING** Hazards or unsafe practices that COULD result in severe personal injury or death. These instructions describe the procedure required, and the injury which could result from failure to follow the procedure.

**⚠ CAUTION** Hazards or unsafe practices which COULD result in personal injury or product or property damage. These instructions describe the procedure required and the possible damage which could result from failure to follow the procedure.

## SAFETY

Pump installations are seldom identical. Each installation and application can vary due to many different factors. It is the owner/service mechanics responsibility to repair, service, and test to ensure that the pump integrity is not compromised according to this manual.

**⚠ WARNING** Risk of electric shock – this pump has not been investigated for use in swimming pool areas.

**⚠ DANGER** Do not pump flammable or volatile liquids. Death or serious injury will result.

**⚠ WARNING** Before attempting to open or service the pump:

- 1) Familiarize yourself with this manual.
- 2) Unplug or disconnect the pump power cable to ensure that the pump will remain inoperative.
- 3) Allow the pump to cool if overheated.

**⚠ WARNING** Do not operate the pump with a worn or damaged electric power cable. Death or serious injury could occur.

**⚠ WARNING** Never attempt to alter the length or repair any power cable with a splice. The pump motor and pump motor and cable must be completely waterproof. Damage to the pump or personal injury may result from alterations.

**⚠ WARNING** After the pump has been installed, make sure that the pump and all piping are secure before operation.

**⚠ WARNING** Do not lift the pump by the power cable piping or discharge hose. Attach proper lifting equipment to the lifting handle (or lifting rings) fitted to the pump. Do not suspend the pump by the power cable.

**⚠ WARNING** Obtain the services of a qualified electrician to troubleshoot, test and/or service the electrical components of this pump.

**⚠ CAUTION** Pumps and related equipment must be installed and operated according to all national, local and industry standards.



## INSPECTION

**Review all safety information before servicing pump.**

The following are recommended installation practices/procedures for the pump. If there are questions in regards to your specific application, contact your local **BJM Pumps** distributor or Industrial Flow Solutions Operating, LLC.

### PRE-INSTALLATION INSPECTION

- 1) Check the pump for damage that may have occurred during shipment.
- 2) Inspect the pump for any cracks, dents, damaged threads, etc.
- 3) Check power cord and sensor cable for any cuts or damage.
- 4) Check for, and tighten any hardware that appears loose.
- 5) Carefully read all tags, decals and markings on the pump.

If anything appears to be abnormal, contact your **BJM Pumps** distributor or Industrial Flow Solutions Operating, LLC. If damaged, the pump may need to be repaired before use. Do not install or use the pump until appropriate action has been taken.

### LUBRICATION:

No additional lubrication is necessary. The shaft seal and bearings are fully lubricated from the factory. Seal oil should be checked once per year. See table on page 7.

**OIL FILL QUANTITY/TYPE**

Qty. oil in seal chamber			
Models	U.S. fl. oz.	C.C.	Type of oil
J08-F	9	265	ISO 32 NSF Food Grade Mineral Oil
J15-F	9	265	ISO 32 NSF Food Grade Mineral Oil
J22-F	10.8	320	ISO 32 NSF Food Grade Mineral Oil
J37-F	10.8	320	ISO 32 NSF Food Grade Mineral Oil
J55C-F	45.6	1350	ISO 32 NSF Food Grade Mineral Oil
J75C-F	45.6	1350	ISO 32 NSF Food Grade Mineral Oil

Qty. oil in seal chamber			
Models	U.S. fl. oz.	C.C.	U.S. fl. oz.
J08H-F	9	265	ISO 32 NSF Food Grade Mineral Oil
J15H-F	9	265	ISO 32 NSF Food Grade Mineral Oil
J22H-F	10.8	320	ISO 32 NSF Food Grade Mineral Oil
J37H-F	10.8	320	ISO 32 NSF Food Grade Mineral Oil
J55CH-F	45.6	1350	ISO 32 NSF Food Grade Mineral Oil
J75CH-F	45.6	1350	ISO 32 NSF Food Grade Mineral Oil

Qty. oil in seal chamber			
Models	U.S. fl. oz.	C.C.	Type of oil
JX08SS-F	10.1	300	ISO 32 NSF Food Grade Mineral Oil
JX15SS-F	10.1	300	ISO 32 NSF Food Grade Mineral Oil
JX22SS-F	13.5	400	ISO 32 NSF Food Grade Mineral Oil
JX37SS-F	13.5	400	ISO 32 NSF Food Grade Mineral Oil
JX55CSS-F	45.6	1350	ISO 32 NSF Food Grade Mineral Oil
JX75CSS-F	45.6	1350	ISO 32 NSF Food Grade Mineral Oil

Qty. oil in seal chamber			
Models	U.S. fl. oz.	C.C.	Type of oil
J08HSS-F	10.1	300	ISO 32 NSF Food Grade Mineral Oil
JX15HSS-F	10.1	300	ISO 32 NSF Food Grade Mineral Oil
JX22HSS-F	13.5	400	ISO 32 NSF Food Grade Mineral Oil
JX37HSS-F	13.5	400	ISO 32 NSF Food Grade Mineral Oil
JX55CHSS-F	45.6	1350	ISO 32 NSF Food Grade Mineral Oil
JX75CHSS-F	45.6	1350	ISO 32 NSF Food Grade Mineral Oil

**Note: The stator on this model is oil filled. This needs to be changed annually when the seal oil is changed. With the power cable entry removed, fill the motor chamber with oil to a level that insures the oil is covering the motor windings by ½”, and that will be above the upper bearing. Do not overfill, an air gap of 10-15% must be maintained for heat expansion.**

## PUMP INSTALLATION

J-F & JX-F Series pumps have been evaluated for use with water or water based solutions. Please contact the manufacturer for additional information.

### Lifting:

Attach a rope or lifting chain (not included) to the handle (or lifting rings) on the top of the pump.

**⚠ CAUTION** Do not lift the pump by the power cable or discharge hose/piping. Proper lifting equipment (rope/chain) must be used.

## POSITIONING THE PUMP

**BJM Pumps®**, J-F & JX-F Series pumps are designed to operate fully submerged. Data sheets can be obtained online at [www.flowsolutions.com](http://www.flowsolutions.com) or by calling Industrial Flow Solutions Operating, LLC at (860) 399-5937.

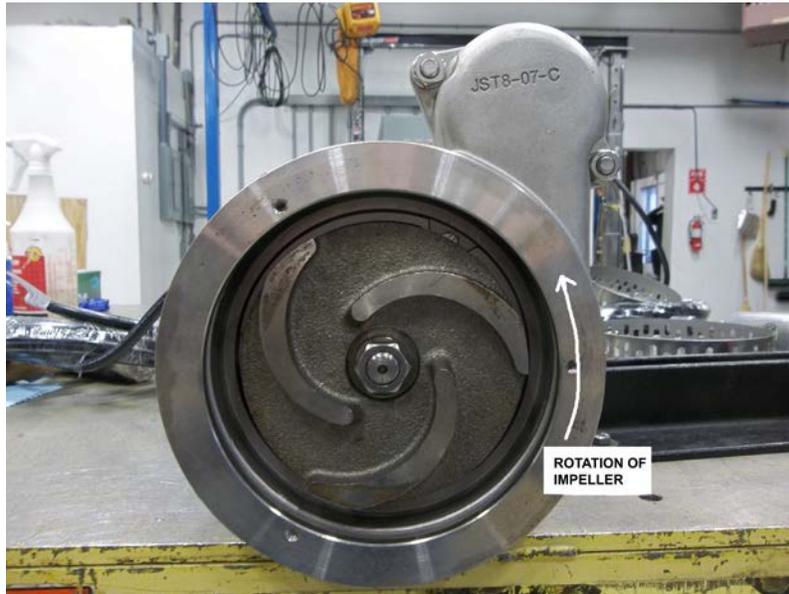
### **⚠ CAUTION**

- Do not run pump dry.
- Pump liquid should not exceed a maximum temperature of 200°F (93°C).
- Never place the pump on loose or soft ground. The pump may sink, preventing water from reaching the impeller. Place on a solid surface or suspend the pump with a lifting rope/chain. The J-F & JX-F Series pumps are provided with a suction strainer to prevent large solids from clogging the impeller. Any spherical solids which pass through the strainer should pass through the pump.
- For maximum pumping capacity, use the proper size non-collapsible hose or rigid piping. A check valve may be installed after the discharge to prevent back flow when the pump is shut off.

## PUMP ROTATION

Two ways to check the correct pump rotation:

1. By looking at the impeller; the rotation of the impeller should be counter clockwise as shown in the picture below.



2. By looking from the top of the pump. Since the impeller cannot be seen, the best way to check the rotation is to check the kick back motion of the pump when the pump just starts. The kick back motion of the pump should be counter clockwise as shown in the picture below.



## PUMP OPERATION

**⚠ WARNING** This pump is designed to handle dirty water that contains some solids. It is not designed to pump volatile or flammable liquids. Do not attempt to pump any liquids which may damage the pump or endanger personnel as a result of pump failure.

**⚠ DANGER** Do not operate this pump where explosive vapors or flammable material exist. Death or Serious injury will result.

## TYPICAL MANUAL WATER/WASTEWATER EFFLUENT INSTALLATION

**NOTE: Maximum recommended starts should not exceed 10 times per hour.**

All J-F & JX-F models are provided with a 33" (10m) power cord. NEVER splice the power cable due to safety and warranty considerations. Always keep the lead end dry.

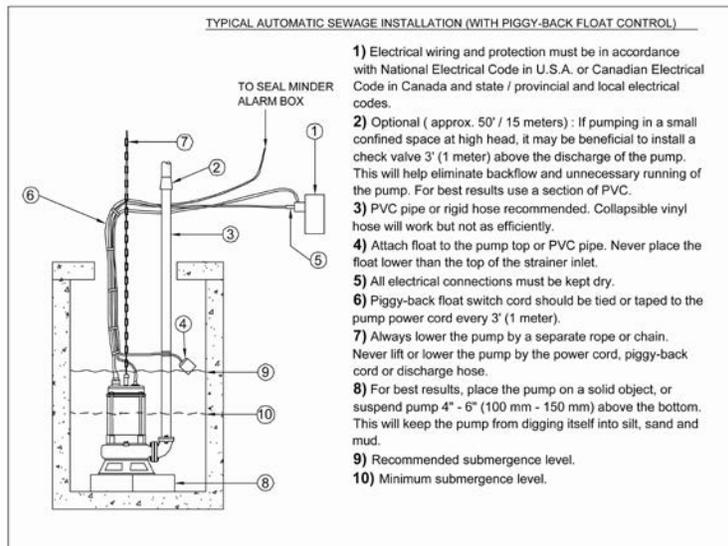
Note: 208V, 230V, 460V & 575V three phase units do not have a plug and have to be provided separately.

**⚠ WARNING** Do not alter the length or repair any power cable with a splice. The pump motor and cable must be completely waterproof. Damage to the pump or personal injury may result from alterations.

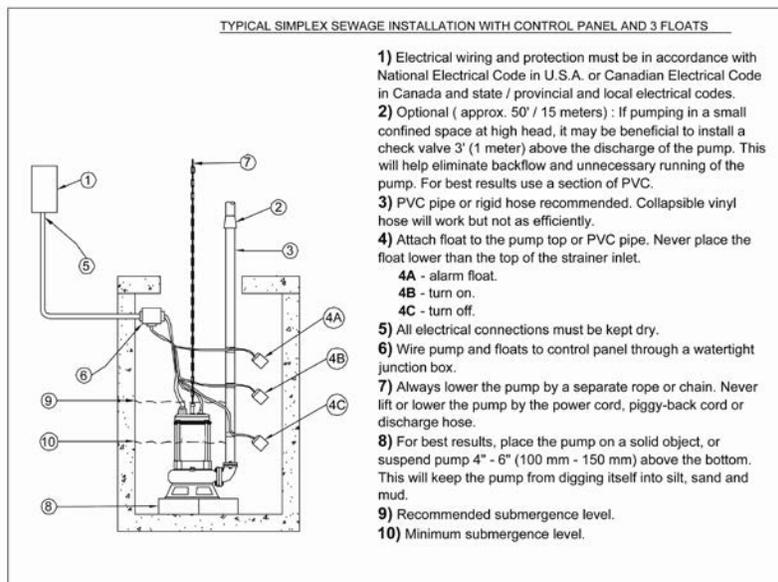
For manual operation: 208, 230, 460 & 575 volt: Connect directly to the power source or control box. Check the direction of the rotation. Tilt the pump and start it. It should twist in the opposite direction of the arrow (on pump).

## TYPICAL AUTOMATIC WATER/WASTEWATER EFFLUENT INSTALLATION

**NOTE: Maximum recommended starts should not exceed 10 times per hour.**

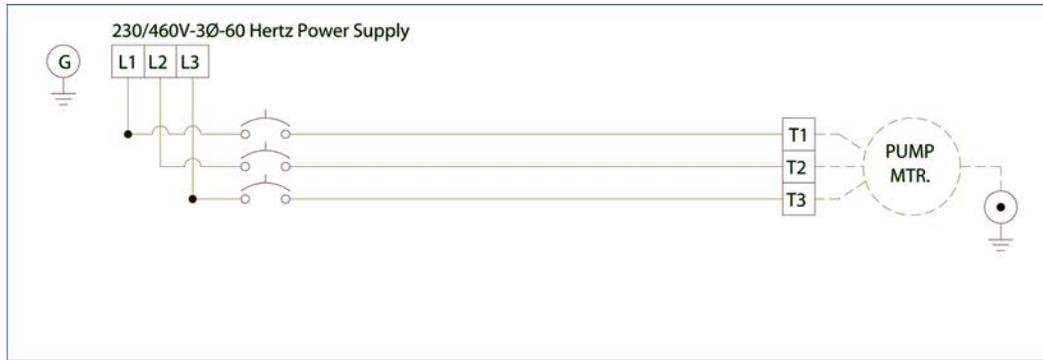


**Three phase pumps need a separate control box with float(s) for automatic operation.**



## STOPPING

To stop the pump (manual and automatic mode), unplug it from the power source, turn off the breaker, or turn the power source off (generator).



Typical 3 Phase Manual Control 1

### INTENDED METHODS OF CONNECTION

**⚠ CAUTION** Use with approved motor control that matches motor input in full load amperes. “UTILISER UN DÉMARREUR APPROUVÉ CONVARIANT AU COURANT À PLEINE CHARGE DU MOTEUR.”

**BJM Pumps** submersible pumps have been evaluated for use with water or water based solutions. Please contact the manufacturer for additional information.

**⚠ WARNING** **FOR YOUR PROTECTION, ALWAYS DISCONNECT PUMP FROM ITS POWER SOURCE BEFORE HANDLING.**

**⚠ WARNING** “Risk of electrical shock” Do not remove power supply cord and strain relief or connect conduit directly to the pump.

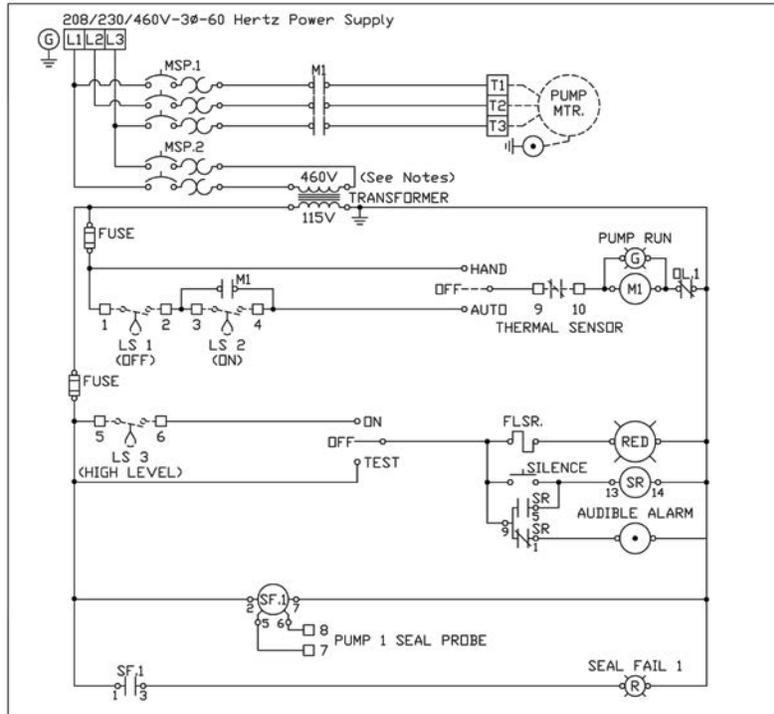
**⚠ WARNING** Installation and checking of electrical circuits and hardware should be performed by a qualified licensed electrician.

### THREE PHASE WIRING INSTRUCTIONS

**⚠ WARNING** **FOR YOUR PROTECTION, ALWAYS DISCONNECT PUMP FROM ITS POWER SOURCE BEFORE HANDLING.**

**⚠ WARNING** “Risk of electrical shock” Do not remove power supply cord and strain relief.

**⚠ WARNING** Installation and checking of electrical circuits and hardware should be performed by a qualified licensed electrician.



**Typical 3 Phase Auto Control 1**

To automatically operate a non-automatic three phase pump, a control panel is required. Follow the instructions provided with the panel to wire the system. For automatic three phase pumps see automatic three phase wiring diagram.

Before installing a pump, make sure both of the ground leads and the power leads have been connected properly. Once the power connections have been confirmed, then check the pump rotation. Momentarily energize the pump, observing the directions of kick back due to starting torque. Momentarily energize the pump, observing the directions of kick back due to starting torque. Rotation is correct if kick back is in the opposite direction of rotation arrow on the pump casing. If rotation is not correct, switching of any two power leads other than ground will provide the proper rotation.

Three phase pumps do NOT have integral motor overload protection. Pumps **must** be installed in accordance with the National Electrical Code and all applicable local codes and ordinances. Pumps are not to be installed in locations classified as hazardous in accordance with National Electrical Code, ANSI/NFPA 70.

Connect pump to a junction box, outlet box, control box, enclosure with a wiring compartment that meets NEC and local codes. The provision for supply connection shall reduce the risk of water entry during temporary, limited submersion and shall comply with the applicable requirements of the Standard for Enclosures for Electrical Equipment, UL 50, or the standard for Metallic Outlet Boxes, UL 514A, and the standard for Motor-Operated Water Pumps. UL 778.

## TROUBLE SHOOTING



**Disconnect the power source to the pump BEFORE attempting any type of trouble shooting, service or repair.**

### PUMP WILL NOT RUN

1. Check power supply (fuses, breaker). Reset power.
2. Blocked impeller. Remove strainer, check and clean.
3. Defective cable or incorrect wiring.
4. Strainer clogged. Check and clean as necessary.
5. Float switch tangled/obstructed. Clean and free float switch from obstruction.
6. Float switch defective. Replace float switch.

### PUMP RUNS BUT DOES NOT DELIVER RATED CAPACITY

1. Discharge line clogged, restricted or hose kinked. Check discharge hose/pipe.
2. Worn impeller and/or suction cover. Inspect and replace as necessary.
3. Pump overloaded due to liquid pumped being too thick.
4. Pumping air. Check liquid level and position of pump.
5. Excessive voltage drops due to long cables.
6. Three phase only; pump running backwards, check rotation.

### SERVICING YOUR SUBMERSIBLE PUMP

Pump should be disconnected from the electric power supply before proceeding to do any service or maintenance.

The design of the “F” Series high temperature pump models is unique and requires specific knowledge to perform the proper assembly. Industrial Flow Solutions Operating, LLC recommends that all electrical service work be performed at the factory, or by a factory trained and certified repair technician, to insure that the materials and assembly methods meet Industrial Flow Solutions Operating, LLC standards.

### MAINTAINING YOUR PUMP

- Pump should be disconnected from the electric power supply before proceeding to do any service or maintenance.
- Pump should be inspected at regular intervals.
- More frequent inspections are required if the pump is used in a harsh environment.
- Preventative maintenance should be performed to reduce the chance of premature failure.
- Worn impellers and lip seals should be replaced.
- Cut or cracked power cords must be replaced. **(Never operate a pump with a cut, cracked or damaged power cord.)**

- Seal oil should be checked once per year.
- Maintenance should always be done when taking a pump out of service before storage.
  - 1) Clean pump of dirt and other build up.
  - 2) Check condition of oil around the shaft seals.
  - 3) Check hydraulic parts: check for wear.
  - 4) Inspect power cable. Make sure that it is free of nicks or cuts.

### **CHANGING SEAL OIL**

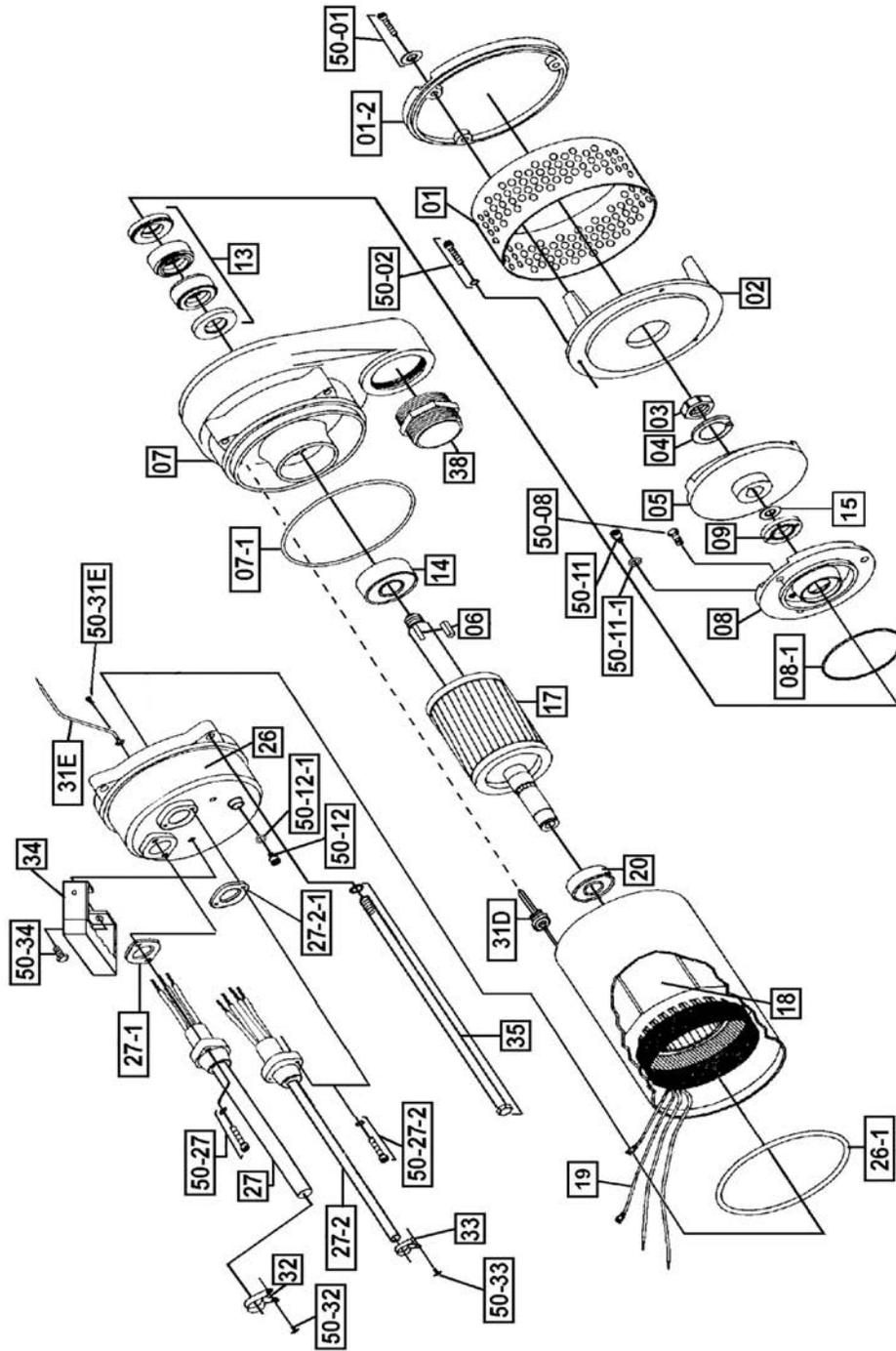
Changing the seal oil in the J-F & JX-F Series pumps is very easy.

- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1) Make sure that the pump is deenergized and locked out for service.</li> <li>2) Lay the pump down on its side.</li> <li>3) Remove the screws that hold the bottom plate in place.</li> <li>4) Remove bottom plate.</li> <li>5) Remove screws holding the suction cover.</li> <li>6) Remove the suction cover.</li> <li>7) Remove the impeller.</li> <li>8) Remove the inspection screw for the oil chamber (pos#50-08). Pour out a small</li> </ol> | <p style="text-align: center;">sample of the oil. If it is milky white, or contains water, then the oil and possible, the mechanical seal, should be changed. If an oil change is needed:</p> <ol style="list-style-type: none"> <li>9) Remove the screws that hold the oil chamber cover in place &amp; remove the oil.</li> <li>10) Replace the mechanical seal if necessary.</li> <li>11) Replace the oil.</li> <li>12) Assemble the pump.</li> </ol> |
|--|--|

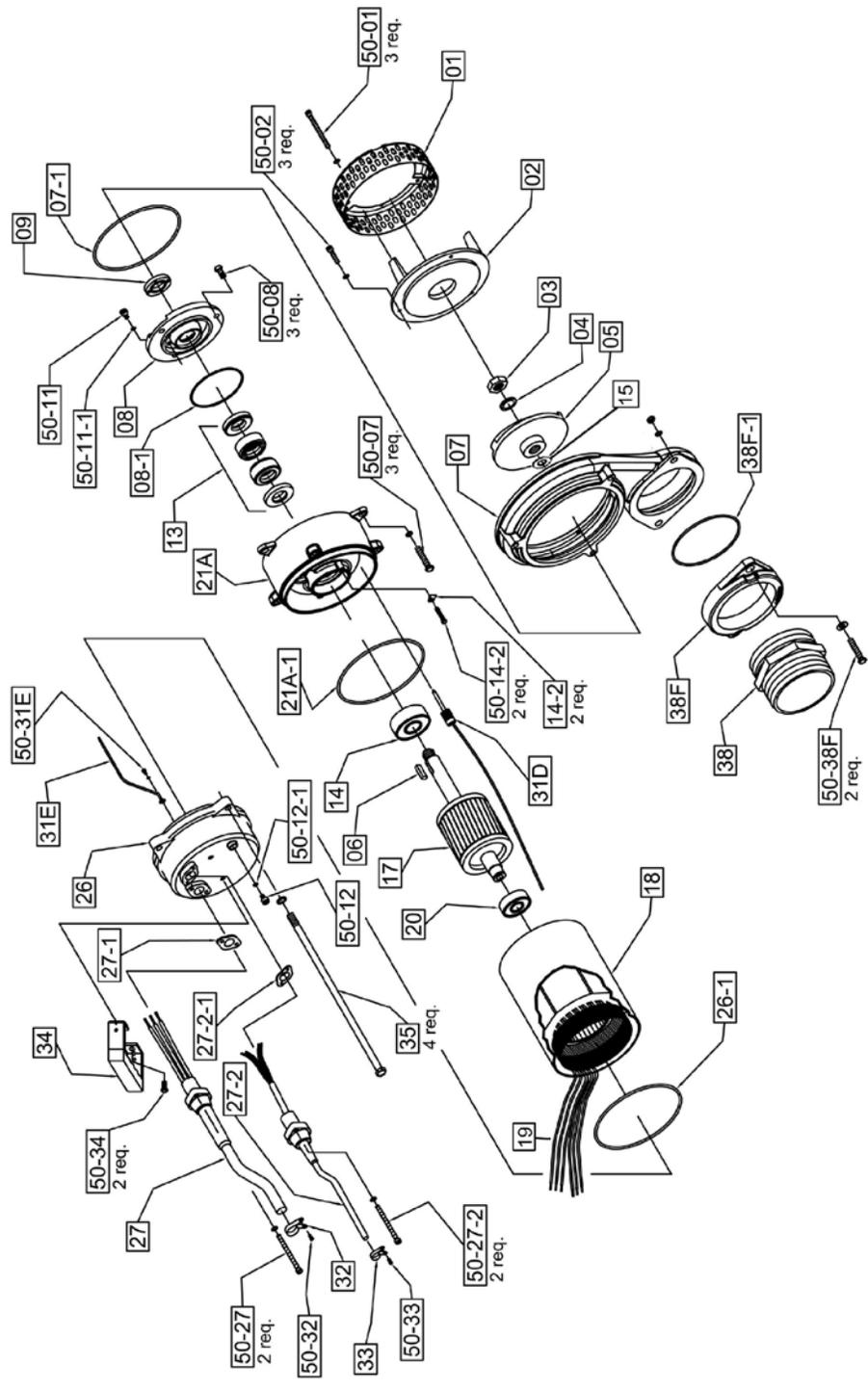
### **STATOR REPLACEMENT OR ELECTRICAL REPAIR**

The BJM Pumps® “F” Series designed pumps utilize unique construction methods and materials. The inner connection of all wiring requires use of a BJM Pump® wire connection kit. Included in this kit are specific instructions on how a qualified factory trained and certified repair technician can perform this work properly. No other materials or methods should be used on this product.

EXPLODED VIEW OF J08-F, J15-F, J15H-F

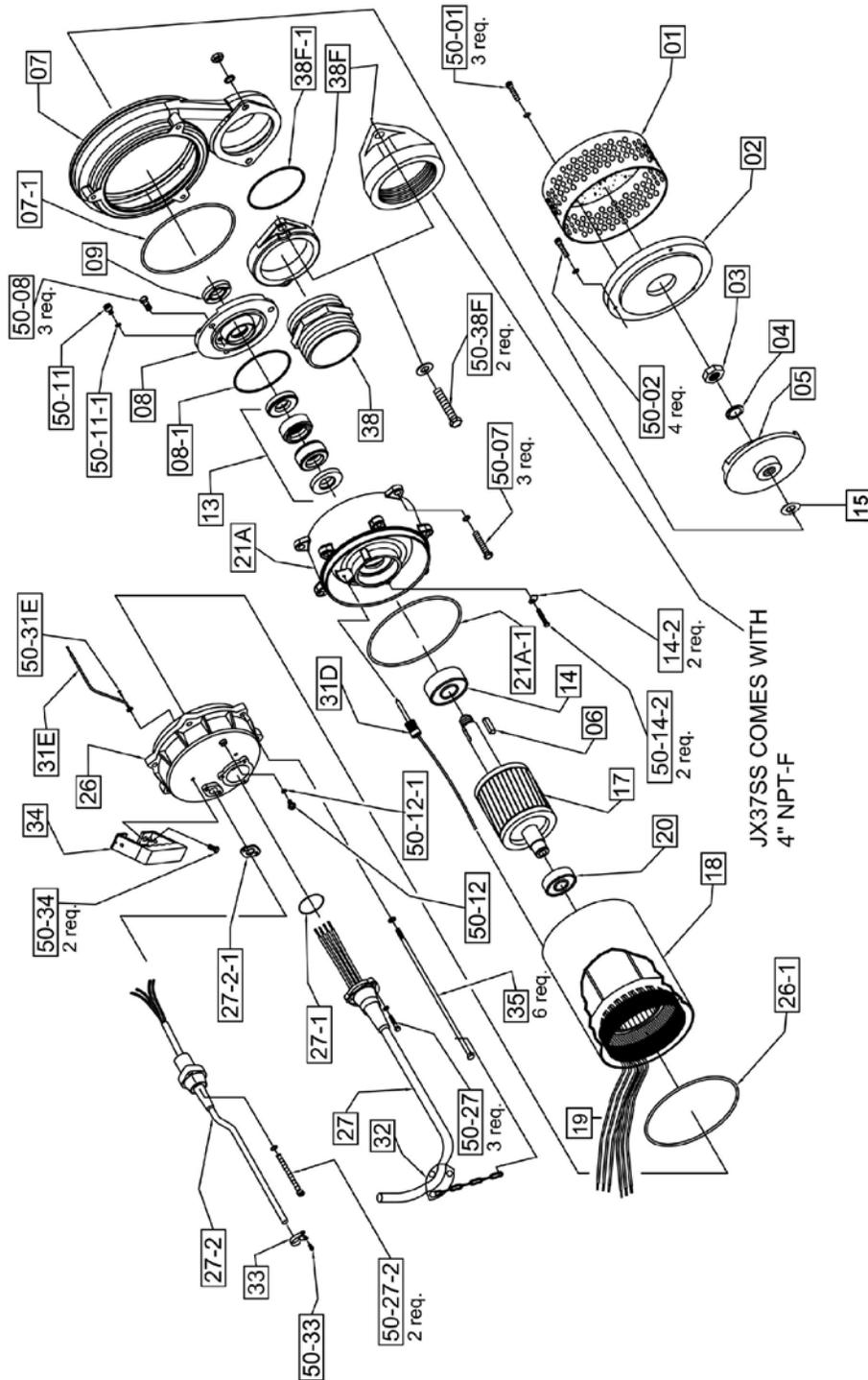


### EXPLODED VIEW OF JX08SS-F, JX15SS-F, JX15HSS-F

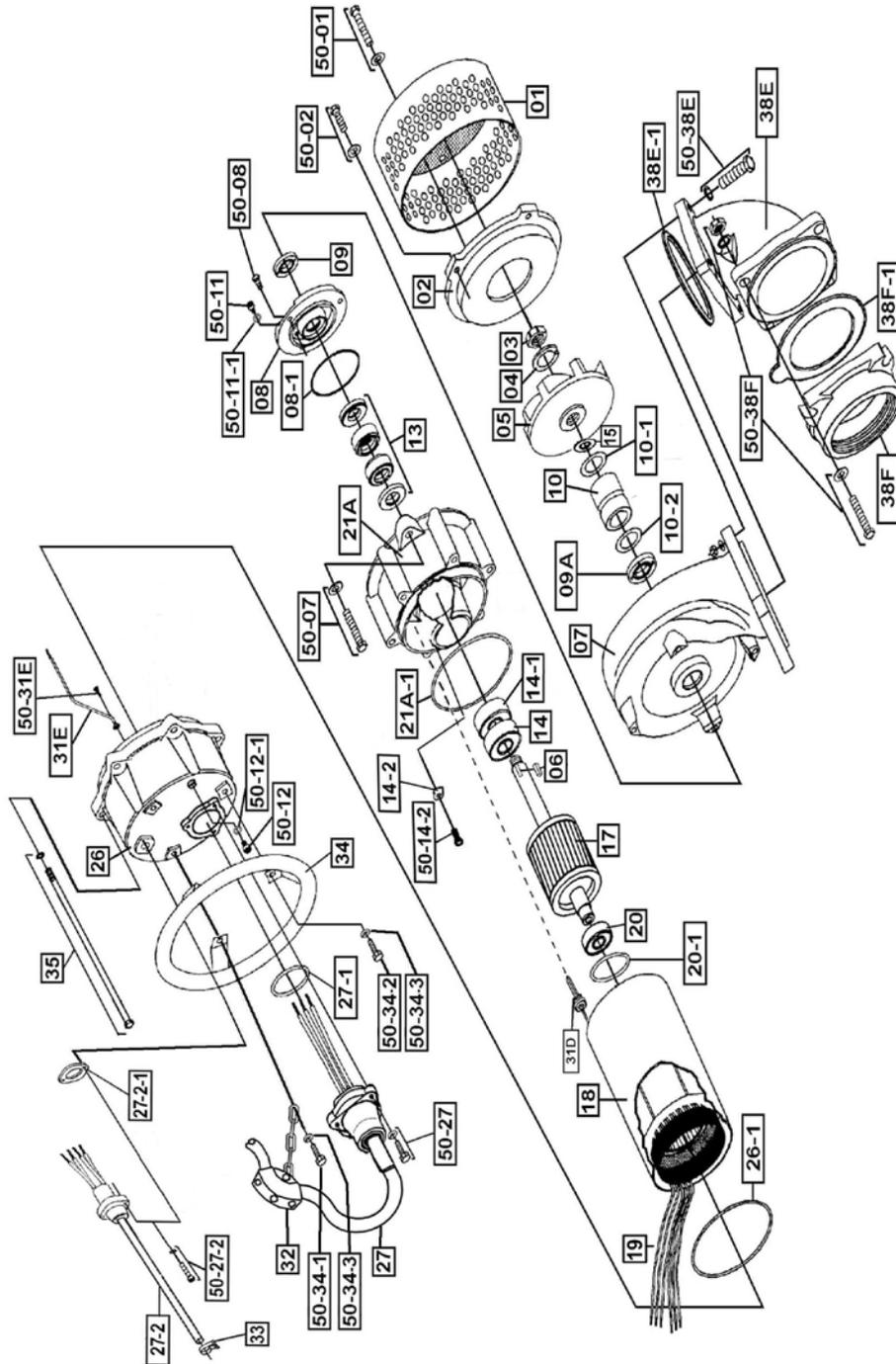




**EXPLODED VIEW OF JX22SS-F, JX22HSS-F, JX37SS-F, JX37HSS-F**

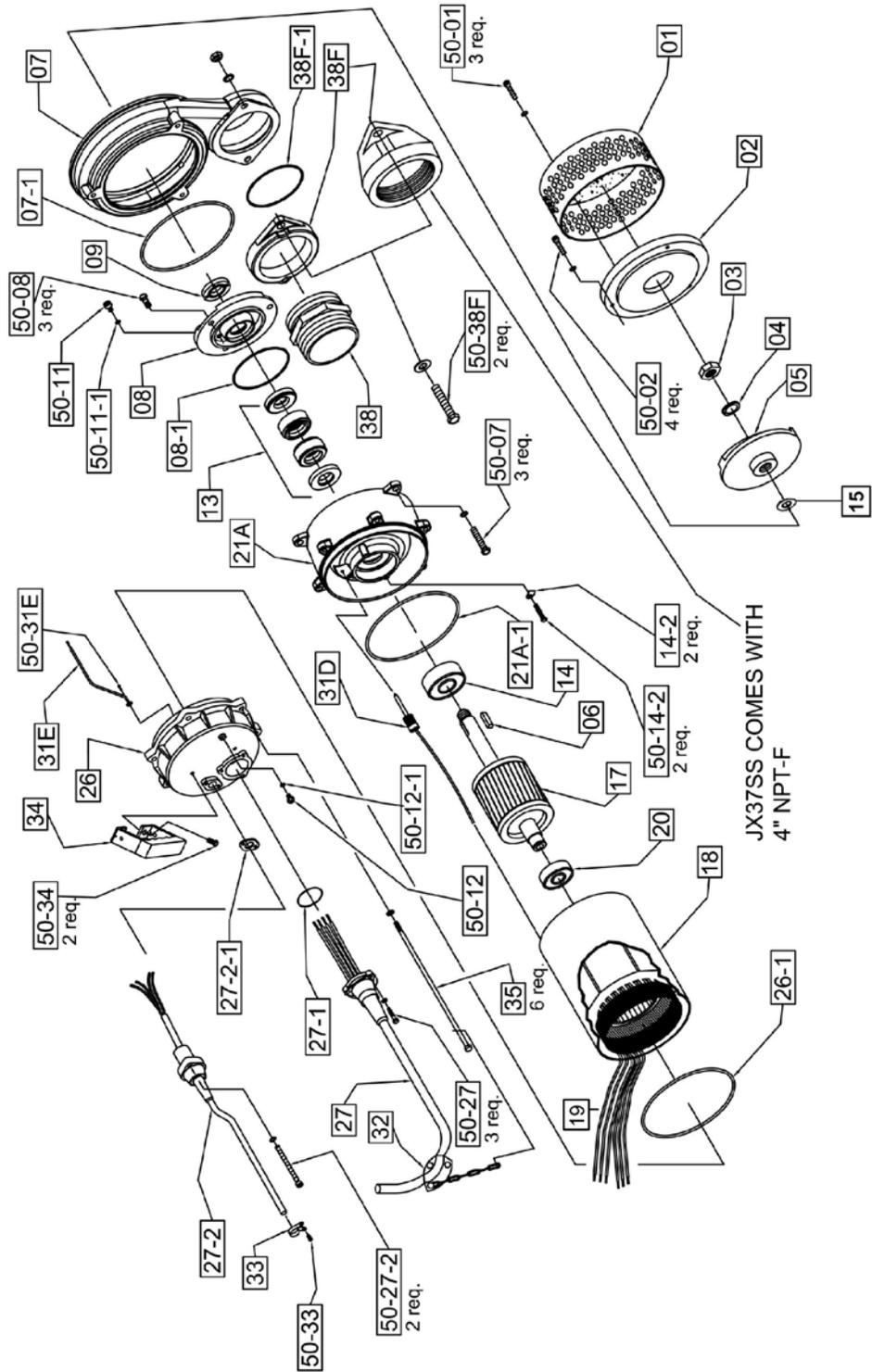


**EXPLODED VIEW OF J55C-F, JX55CSS-F, J55CH-F, JX55CHSS-F, J75C-F, JX75CSS-F, J75CH-F, JX75CHSS-F**





**EXPLODED VIEW OF JX22SS-F, JX37SS-F (PRECISION CAST MODELS)**



## J-F SERIES PARTS LIST

	Pump Model	J08F	J15F	J15HF	J22F	J22HF	J37F	J37HF	J55CF	J55CHF	J75CF	J75CHF
Pos. No.	Part Description	Item #										
01	Strainer with Bottom Plate	-	-	-	201973	201973	201973	201973	201976	201976	201976	201976
01	Strainer	201969	201969	201969	-	-	-	-	-	-	-	-
01-2	Bottom Plate	202007	202007	202007	-	-	-	-	-	-	-	-
02	Suction Cover	202026	202026	202026	202009	202011	202009	202011	202031	202032	202031	202032
03	Impeller Nut	202894	202894	202894	202894	202894	202894	202894	202895	202895	202895	202895
04	Lock washer	202907	202907	202907	202907	202907	202907	202907	202904	202904	202904	202904
05	Impeller	202933	202067	202069	202937	202072	202074	202076	202078	202079	202082	202083
06	Impeller Key	202140	202140	202140	202140	202140	202140	202140	202141	202141	202141	202141
07	Pump Housing	202163	202165	202163	202167	202167	202167	202167	203007	203007	203007	203007
07 -1	O-Ring (Kit Only)	Kit										
08	Oil Chamber Cover	202211	202211	202211	202211	202211	202211	202211	203043	203043	203043	203043
08 -1	O-Ring (Kit Only)	Kit										
09	Lip Seal FKM	202233	202233	202233	202233	202233	202233	202233	203058	203058	203058	203058
09A	Double Lip Seal FKM	-	-	-	-	-	-	-	202240	202240	202240	202240
10	Shaft Sleeve	-	-	-	-	-	-	-	202256	202256	202256	202256
10-1	O-Ring (Kit Only)	-	-	-	-	-	-	-	Kit	Kit	Kit	Kit
10-2	O-Ring (Kit Only)	-	-	-	-	-	-	-	Kit	Kit	Kit	Kit
13	Mechanical Seal FKM	204240	204240	204240	204240	204240	204240	204240	200304	200304	200304	200304
14	Lower Ball Bearing	200958	200958	200958	200959	200959	200959	200959	200960	200960	200961	200961
14-1	Lower Ball Bearing	-	-	-	-	-	-	-	200960	200960	200961	200961
14-2	Lower Bearing Retainer Clip	-	-	-	-	-	-	-	202279	202279	202279	202279
15	Impeller Shim Kit (Required)	200480	200480	200480	200480	200480	200480	200480	200479	200479	200479	200479
17	Rotor w/ Shaft, 3 PH	204015	204016	204016	204017	204017	204018	204018	204019	204019	204020	204020
18	Stator w/Casing, 208V, 3PH	200525	200529	200529	200533	200533	200537	200537	200666	200666	-	-
18	Stator w/Casing, 230/460V, 3PH	200547	200551	200551	200555	200555	200559	200559	200563	200563	200567	200567
18	Stator w/Casing, 575V, 3PH	200589	200593	200593	200597	200597	200601	200601	200606	200606	200610	200610
19	Wire Connection Kit*	204202	204202	204202	204203	204203	204203	204203	204203	204203	204203	204203
20	Upper Ball Bearing	200967	200967	200967	200958	200958	200958	200958	200959	200959	200959	200959
20-1	O-Ring (Kit Only)	-	-	-	-	-	-	-	Kit	Kit	Kit	Kit
21A	Oil Chamber	-	-	-	-	-	-	-	202178	202178	202169	202169
21A-1	O-Ring (Kit Only)	-	-	-	-	-	-	-	Kit	Kit	Kit	Kit
26	Pump Top Cover	202435	202435	202435	202445	202445	202445	202445	202439	202439	202439	202439
26-1	O-Ring (Kit Only)	Kit										

27	Power Cable w/ Gland- 3PH (High-Temp)	204452	204452	204452	203776	203776	203776	203776	203776	203776	203776	203776
27-1	O-Ring (Kit Only)	Kit										
27-2	Seal Minder®/Temp. Sensor Cord (High-Temp)	204453	204453	204453	204453	204453	204453	204453	204453	204453	204453	204453
27-2-1	O-Ring (Kit Only)	Kit										
31D	Seal Minder® Probe	202409	202409	202409	203998	203998	203998	203998	204000	204000	204000	204000
31E	Ground Wire w/Ring Term.	203145	203145	203145	203145	203145	203145	203145	203145	203145	203145	203145
32	Power Cord Line Clip/Strain Relief	203161	203161	203161	202497	202497	202497	202497	202497	202497	202497	202497
33	Seal Minder® Cable Line Clip	203163	203163	203163	203163	203163	203163	203163	203163	203163	203163	203163
34	Handle	202517	202517	202517	202517	202517	202517	202517	203171	203171	203171	203171
35	Holding Rods	202669	202670	202670	202671	202671	202672	202672	202673	202673	202674	202674
38	Discharge Nipple	202531	202534	202531	202534	202818	202534	202531	-	-	-	-
38E	Discharge Elbow	-	-	-	-	-	-	-	202560	202560	202560	202560
38E-1	Gasket Discharge Elbow FKM	-	-	-	-	-	-	-	203211	203211	203211	203211
38F	Discharge Flange	-	-	-	202545	202543	202545	202543	202537	202538	202537	202537
38F	Discharge Connection 4" FNPT	-	-	-	202552	-	202552	-	-	-	-	-
38F-1	Gasket - Discharge Flange FKM	-	-	-	202660	202660	202660	202660	203211	203211	203211	203211
50-01	Bolt - Strainer/Stand	203238	203238	203238	203231	203231	203231	203231	203241	203241	203241	203241
50-02	Screw	203216	203216	203216	203228	203228	203228	203228	203229	203229	203229	203229
50-07	Screw	-	-	-	-	-	-	-	203229	203229	203229	203229
50-08	Screw	203219	203219	203219	203219	203219	203219	203219	203246	203246	203246	203246
50-11	Screw	203218	203218	203218	203218	203218	203218	203218	203218	203218	203218	203218
50-11-1	O-Ring (Kit Only)	Kit										
50-12	Screw	203218	203218	203218	203218	203218	203218	203218	203218	203218	203218	203218
50-12-1	O-Ring (Kit Only)	Kit										
50-14-2	Screw	-	-	-	-	-	-	-	203219	203219	203219	203219
50-26	Acorn Nut and Washer	-	-	-	-	-	-	-	-	-	-	-
50-27	Screw	203216	203216	203216	203246	203246	203246	203246	203246	203246	203246	203246
50-27-2	Screw for Seal Minder Cable	203216	203216	203216	203216	203216	203216	203216	203216	203216	203216	203216
50-31E	Screw	202692	202692	202692	202692	202692	202692	202692	202692	202692	202692	202692
50-32	Screw	203214	203214	203214	-	-	-	-	-	-	-	-
50-33	Screw	203214	203214	203214	203214	203214	203214	203214	-	-	-	-
50-34	Screw	203219	203219	203219	203219	203219	203219	203219	-	-	-	-
50-34-1	Screw for Handle w/ Cable Chain	-	-	-	-	-	-	-	203228	203228	203228	203228
50-34-2	Screw for Handle	-	-	-	-	-	-	-	203288	203288	203288	203288
50-34-3	Lock Washer	-	-	-	-	-	-	-	202902	202902	202902	202902
50-38E	Bolt - Discharge Elbow	-	-	-	-	-	-	-	203287	203287	203287	203287
50-38F	Bolt - Discharge Flange	-	-	-	203253	203253	203253	203253	203287	203287	203287	203287
	<b>O-Ring Kit-FKM</b>	202648	202648	202648	202643	202643	202643	202643	202645	202645	202645	202645

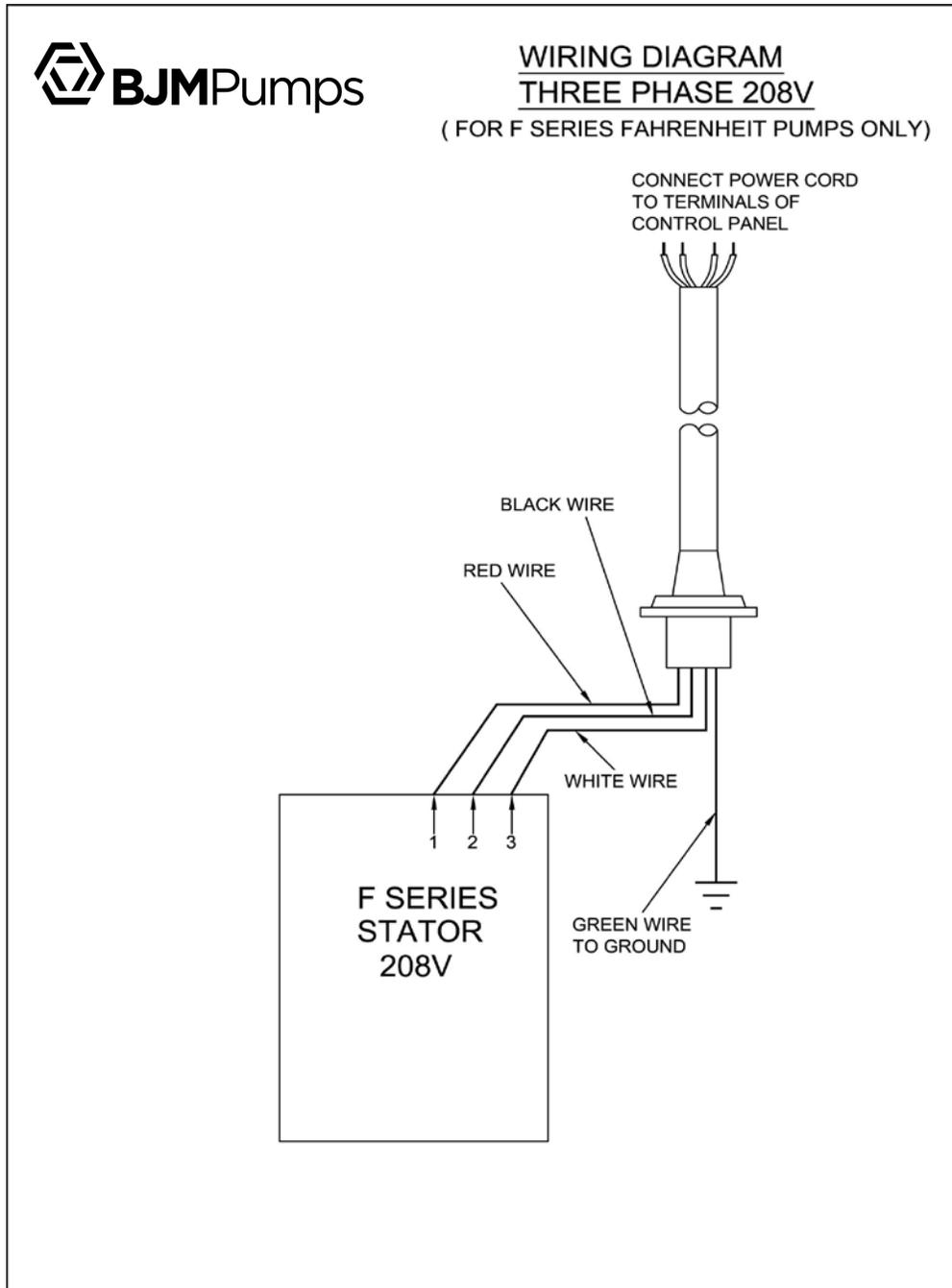
## JX-F SERIES PARTS LIST

	Pump Model	JX08SSF	JX15SSF	JX15HSSF	JX22SSF	JX22HSSF	JX37SSF	JX37HSSF	JX55CSSF	JX55CHSSF	JX75CSSF	JX75CHSSF
Pos. No.	Part Description	Item #	Item #	Item #	Item #	Item #	Item #	Item #	Item #	Item #	Item #	Item #
01	Strainer with Bottom Plate	201971	201971	201971	201974	201974	201974	201974	201977	201977	201977	201977
02	Suction Cover	202027	202028	202027	202010	202012	202010	202012	202034	202033	202034	202033
03	Impeller Nut	202894	202894	202894	202894	202894	202894	202894	202895	202895	202895	202895
04	Lock washer	202907	202907	202907	202907	202907	202907	202907	202904	202904	202904	202904
05	Impeller	202066	202068	202070	202071	202073	202075	202077	202081	202080	202085	202084
06	Impeller Key	202140	202140	202140	202140	202140	202140	202140	202141	202141	202141	202141
07	Pump Housing	202164	202166	202164	202168	202168	202168	202168	202171	202171	202171	202171
07 -1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
08	Oil Chamber Cover	202214	202214	202214	202219	202219	202219	202219	202216	202216	202216	202216
08 -1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
09	Lip Seal FKM	202232	202232	202232	202235	202235	202235	202235	203058	203058	203058	203058
09A	Double Lip Seal FKM	-	-	-	-	-	-	-	202240	202240	202240	202240
10	Shaft Sleeve	-	-	-	-	-	-	-	202257	202257	202257	202257
10-1	O-Ring (Kit Only)	-	-	-	-	-	-	-	Kit	Kit	Kit	Kit
10-2	O-Ring (Kit Only)	-	-	-	-	-	-	-	Kit	Kit	Kit	Kit
13	Mechanical Seal FKM	204240	204240	204240	204243	204243	204243	204243	200304	200304	200304	200304
14	Lower Ball Bearing	200958	200958	200958	200959	200959	200959	200959	200960	200960	200961	200961
14-1	Lower Ball Bearing	-	-	-	-	-	-	-	200960	200960	200961	200961
14-2	Lower Bearing Retainer Clip	202279	202279	202279	202279	202279	202279	202279	202279	202279	202279	202279
15	Impeller Shim Kit (Required)	200480	200480	200480	200480	200480	200480	200480	200479	200479	200479	200479
17	Rotor w/ Shaft, 3 PH	204021	204022	204022	204023	204023	204024	204024	204051	204051	204052	204052
18	Stator w/Casing, 208V, 3PH	200527	200531	200531	200535	200535	200539	200539	200668	200668	-	-
18	Stator w/Casing, 230/460V, 3PH	200549	200553	200553	200557	200557	200561	200561	200565	200565	200569	200569
18	Stator w/Casing, 575V, 3PH	200591	200595	200595	200599	200599	200603	200603	200608	200608	200612	200612
19	Wire Connection Kit*	204202	204202	204202	204203	204203	204203	204203	204203	204203	204203	204203
20	Upper Ball Bearing	200967	200967	200967	200958	200958	200958	200958	200959	200959	200959	200959
20-1	O-Ring (Kit Only)	-	-	-	-	-	-	-	Kit	Kit	Kit	Kit
21A	Oil Chamber	202197	202197	202197	202198	202198	202198	202198	202179	202179	202170	202170
21A-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
26	Pump Top Cover	202436	202436	202436	202438	202438	202438	202438	202440	202440	202440	202440
26-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
27	Power Cable w/ Gland- 3PH (High Temp)	201733	201733	201733	203777	203777	203777	203777	203777	203777	203777	203777
27-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit

27-2	Seal Minder®/Temp. Sensor Cord (High Temp)	201741	201741	201741	201741	201741	201741	201741	201741	201741	201741	201741
27-2-1	O-Ring (Kit Only)	Kit										
31D	Seal Minder® Probe	202408	202408	202408	202410	202410	202410	202410	204000	204000	204000	204000
31E	Ground Wire w/Ring Term.	203145	203145	203145	203145	203145	203145	203145	203145	203145	203145	203145
32	Power Cord Line Clip / Strain Relief	203161	203161	203161	202499	202499	202499	202499	202499	202499	202499	202499
33	Seal Minder® Cable Line Clip	203163	203163	203163	203163	203163	203163	203163	203163	203163	203163	203163
34	Handle	202517	202517	202517	202517	202517	202517	202517	203171	203171	203171	203171
35	Holding Rods	202684	202685	202685	202686	202686	202687	202687	202673	202673	202674	202674
38	Discharge Nipple	202532	202535	202532	202535	202532	202535	202532	-	-	-	-
38E	Discharge Elbow	-	-	-	-	-	-	-	202561	202561	202561	202561
38E-1	Gasket Discharge Elbow FKM	-	-	-	-	202818	-	-	203211	203211	203211	203211
38F	Discharge Flange	202563	202546	202563	202546	202544	202546	202544	202540	202539	202540	202540
38F	Discharge Connection 4" NPT-F	-	-	-	202553	-	202553	-	-	-	-	-
38F-1	O-Ring - Discharge Flange FKM	202723	202724	202723	202724	202724	202724	202724	-	-	-	-
38F-1	O-Ring - Discharge 4" NPT-F FKM	-	-	-	203328	-	203328	-	-	-	-	-
38F-1	Gasket Discharge Flange FKM	-	-	-	-	-	-	-	203211	203211	203211	203211
50-01	Screw	203215	203215	203215	203297	203297	203297	203297	203241	203241	203241	203241
50-02	Screw	203216	203216	203216	203220	203220	203220	203220	203229	203229	203229	203229
50-07	Screw	203296	203296	203296	203296	203296	203296	203296	203229	203229	203229	203229
50-08	Screw	203219	203219	203219	203219	203219	203219	203219	203246	203246	203246	203246
50-11	Screw	203218	203218	203218	203218	203218	203218	203218	203218	203218	203218	203218
50-11-1	O-Ring (Kit Only)	Kit										
50-12	Screw	203218	203218	203218	203218	203218	203218	203218	203218	203218	203218	203218
50-12-1	O-Ring (Kit Only)	Kit										
50-14-2	Screw	203219	203219	203219	203219	203219	203219	203219	203219	203219	203219	203219
50-27	Screw	203295	203295	203295	203246	203246	203246	203246	203246	203246	203246	203246
50-27-2	Screw for Seal Minder Cable	203295	203295	203295	203295	203295	203295	203295	203216	203216	203216	203216
50-31E	Screw	202692	202692	202692	202692	202692	202692	202692	202692	202692	202692	202692
50-32	Screw	203214	203214	203214	-	-	-	-	-	-	-	-
50-33	Screw	203214	203214	203214	203214	203214	203214	203214	-	-	-	-
50-34	Screw	203219	203219	203219	203296	203296	203296	203296	-	-	-	-
50-34-1	Screw for Handle w/ Cable Chain	-	-	-	-	-	-	-	203228	203228	203228	203228
50-34-2	Screw for Handle	-	-	-	-	-	-	-	203288	203288	203288	203288
50-34-3	Lock Washer	-	-	-	-	-	-	-	202902	202902	202902	202902
50-38E	Bolt - Discharge Elbow	-	-	-	-	-	-	-	203287	203287	203287	203287
50-38F	Bolt - Discharge Flange	203229	203294	203229	203294	203294	203294	203294	203287	203287	203287	203287
	<b>O-Ring Kit-FKM</b>	202647	202647	202647	202642	202642	202642	202642	202645	202645	202645	202645

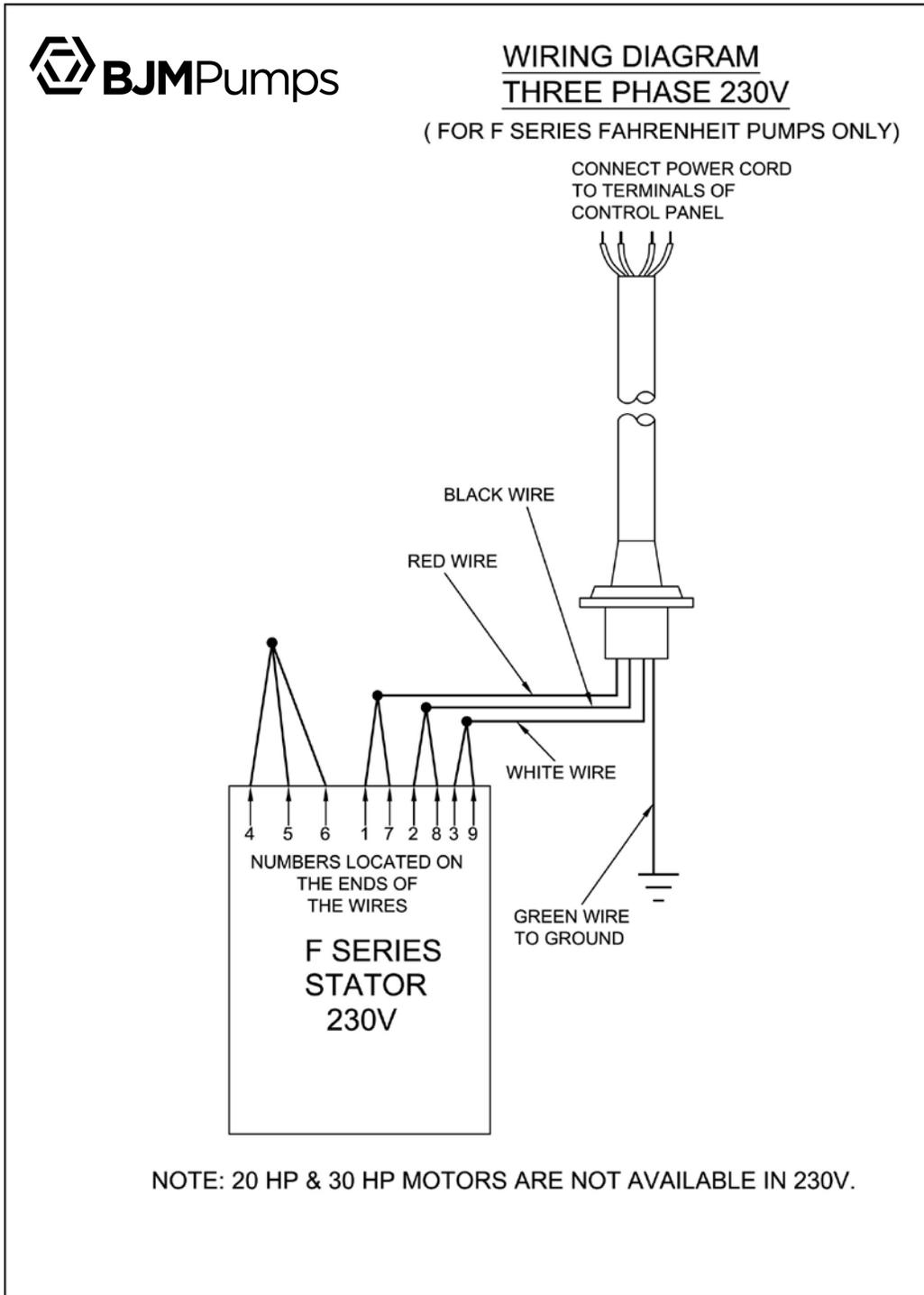
## THREE PHASE WIRING DIAGRAM

208V



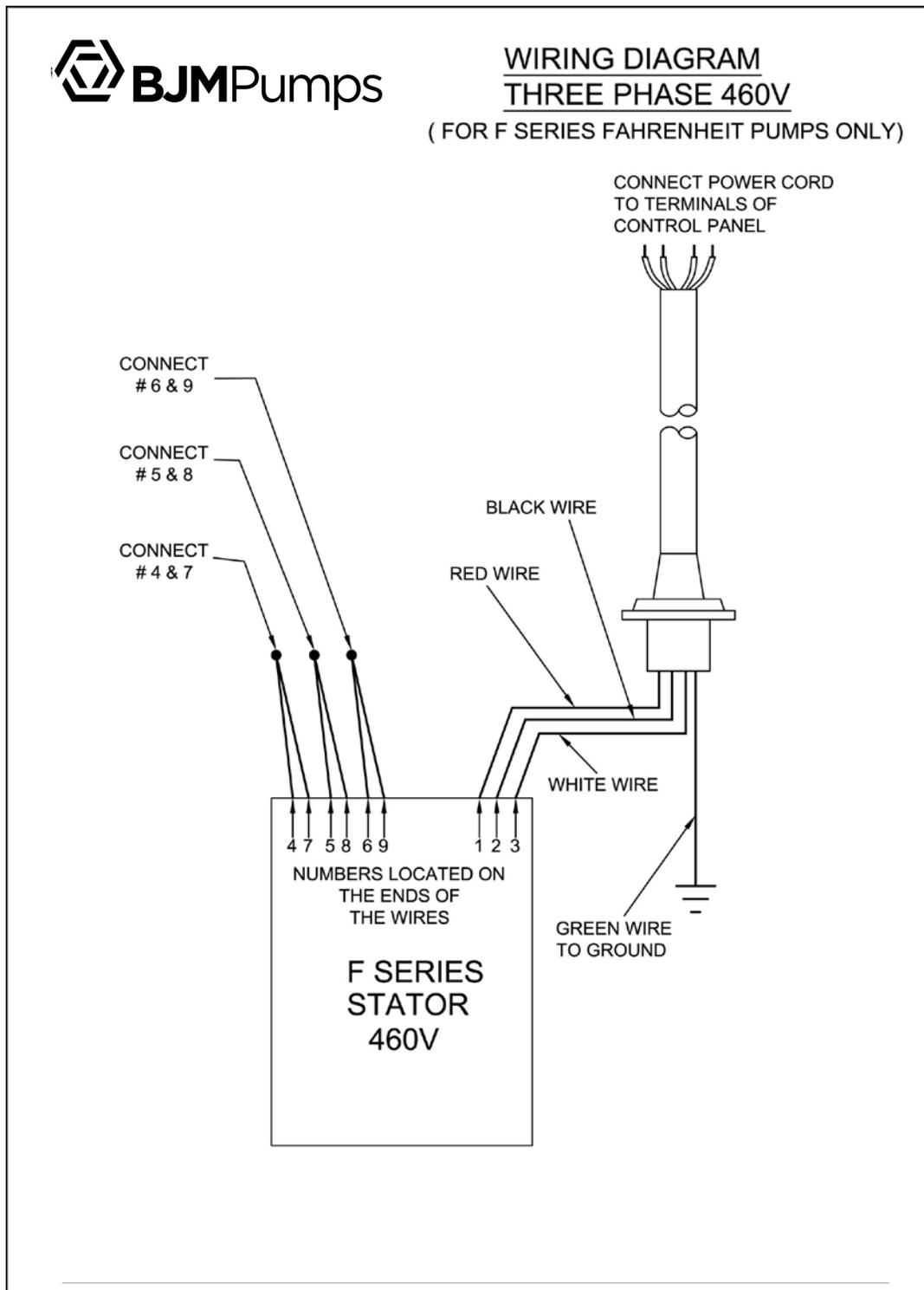
MODELS: J08-F, JX08SS-F, J15-F, JX15SS-F, J15H-F, JX15HSS-F, J22-F, JX22SS-F,  
J22H-F, JX22HSS-F, J37-F, JX37SS-F, J37H-F, J37HSS-F, J55C-F, J55CSS-F,  
J55CH-F, J55CHSS-F

### 230V



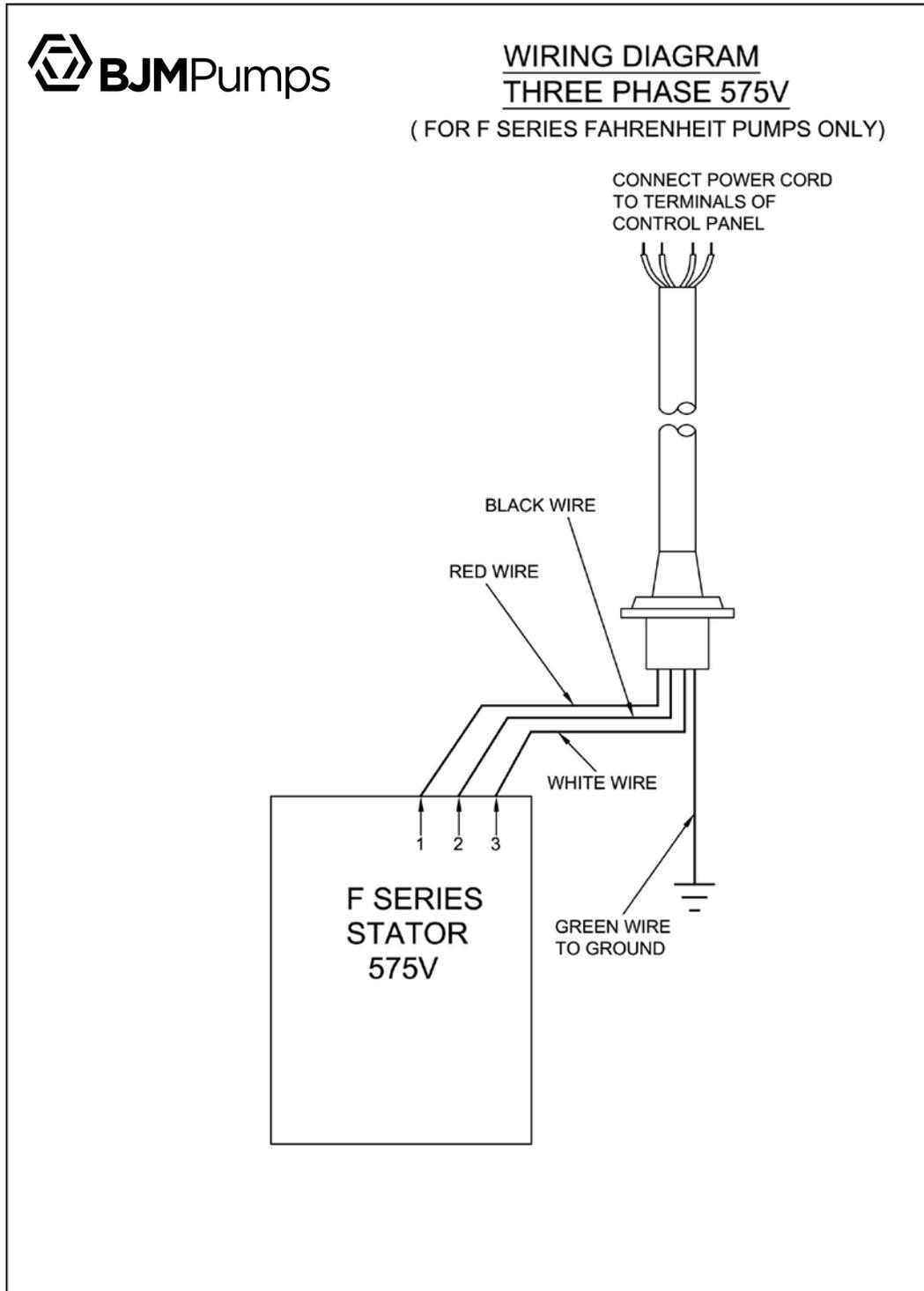
MODELS: J08-F, JX08SS-F, J15-F, JX15SS-F, J15H-F, JX15HSS-F, J22-F, JX22SS-F, J22H-F, JX22HSS-F, J37-F, JX37SS-F, J37H-F, J37HSS-F, J55C-F, J55CSS-F, J55CH-F, J55CHSS-F, J75C-F, JX75CSS-F, J75CH-F, J75CHSS-F

**460V**



MODELS: J08-F, JX08SS-F, J15-F, JX15SS-F, J15H-F, JX15HSS-F, J22-F, JX22SS-F, J22H-F, JX22HSS-F, J37-F, JX37SS-F, J37H-F, J37HSS-F, J55C-F, J55CSS-F, J55CH-F, J55CHSS-F, J75C-F, JX75CSS-F, J75CH-F, J75CHSS-F

575V



MODELS: J08-F, JX08SS-F, J15-F, JX15SS-F, J15H-F, JX15HSS-F, J22-F, JX22SS-F, J22H-F, JX22HSS-F, J37-F, JX37SS-F, J37H-F, J37HSS-F, J55C-F, J55CSS-F, J55CH-F, J55CHSS-F, J75C-F, JX75CSS-F, J75CH-F, J75CHSS-F



## SEAL MINDER® - THERMAL MOTOR SENSOR SWITCH

(For high temperature pump models)

### Seal Minder®:

Also known as a seal fail circuitry (or moisture detection circuit) is designed to inform the pump operator that there is moisture within the oil chamber. This early warning can allow the operator to schedule repair & inspection on the pump. The Seal Minder® is a sensor probe inside the oil chamber. (The oil chamber houses the mechanical seals that are cooled & lubricated by oil). The Seal Minder, when properly connect to a control panel, can help indicate seal failure. The Seal Minder cord requires a seal fail circuitry in control panel for warning signal.

The open end of the Seal Minder circuit cord should be connected to a control panel with an optional seal failure alarm relay circuit or a standalone Seal Minder Panel manufactures can incorporate the Seal Minder cord option. BJM Pumps®, an Industrial Flow Solutions Company, has a standalone, Seal Minder panel for both simplex (P/N MSP8350A) and duplex (P/N MSP8350B) systems. For more information, contact Industrial Flow Solutions Operating, LLC or visit us online at [www.flowsolutions.com](http://www.flowsolutions.com)

The Seal Minder cord has two leads, black and white. Note that the power cable is much larger and has three to five leads, depending on the model. Inside the pump, the black lead is connected to the casing ground, and the white lead is connected to the seal probe that is suspended into the oil chamber. These leads need to be properly connected to the seal failure alarm relay circuit. Most controls that have proceeded this option have a connection terminal point that is clearly marked for these connections. Consult the control panel manual for proper connection instructions.

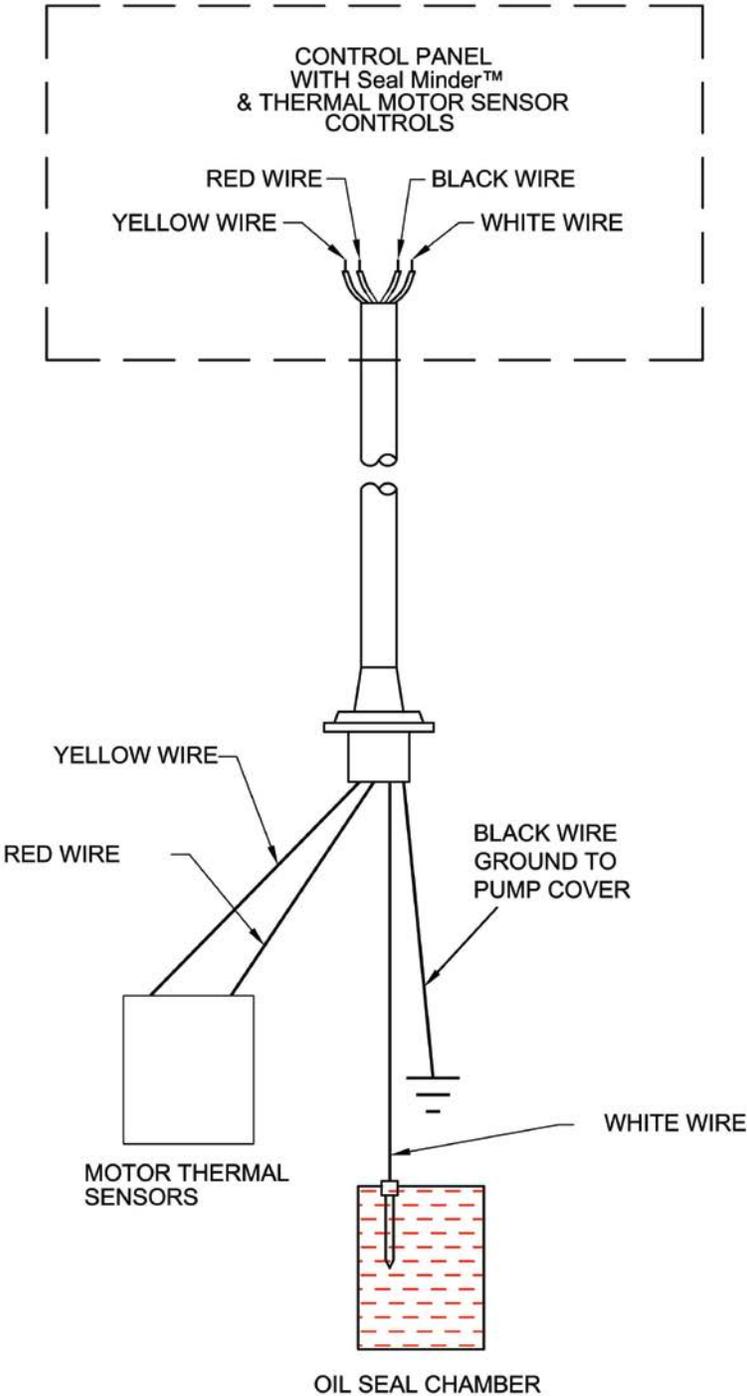
Although highly recommended, the pump does not need a control box with seal fail relay or standalone seal panel to operate.

If the operator does not use the Seal Minder:

- 1.) The recommended procedure is to take the Seal Minder cord off the pump and seal with a Seal Minder cap (P/N M02738) and gasket (P/N M05121 for Buna, P/N M05121V for FKM). This should be done by an authorized BJM Pumps® service center or distributor as not to void warranty (detailed instruction sheet available for this procedure).
- 2.) Alternate method of securing Seal Minder cable if not being used: Tape the Seal Minder cord to the power cord. Make sure that the cords are taped together in an even run, at about 2' to 3' apart. Use electrical tape to tape off the end of the Seal Minder cable (do not connect to power source). The taped leads should be kept dry and out of the liquid. (See next page for detailed drawing).

Seal Minder® is a registered trademark of Industrial Flow Solutions Operating, LLC. All rights reserved.

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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.



Industrial Flow Solutions Operating, LLC  
104 John W Murphy Drive  
New Haven, CT 06513

## **WARRANTY AND LIMITATION OF LIABILITY**

Unless otherwise expressly authorized in writing, specifying a longer or shorter period, BJM Pumps, LLC warrants for a period of eighteen (18) months from the date of shipment from the Point of Shipment, or one (1) year from the date of installation, whichever occurs first, that all products or parts thereof furnished by BJM Pumps, LLC under the brand name **BJM Pumps**, hereinafter referred to as the "Product" are free from defects in materials and workmanship and conform to the applicable specification.

BJM Pumps, LLC's liability for any breach of this warranty shall be limited solely to replacement or repair, at the sole option of BJM Pumps, LLC, of any part or parts of the Product found to be defective during the warranty period, provided the Product is properly installed and is being used as originally intended. Any breach of this warranty must be reported to BJM Pumps, LLC or BJM Pumps, LLC's authorized service representative within the aforementioned warranty period, and defective Product or parts thereof must be shipped to BJM Pumps, LLC or BJM Pumps, LLC's authorized representative, transportation charges prepaid. Any cost associated with removal or installation of a defective Product or part is excluded.

IT IS EXPRESSLY AGREED THAT THIS SHALL BE THE SOLE AND EXCLUSIVE REMEDY OF BJM PUMPS, LLC'S DISTRIBUTORS AND CUSTOMERS. UNDER NO CIRCUMSTANCES SHALL BJM PUMPS, LLC BE LIABLE FOR ANY COSTS, LOSS, EXPENSE, DAMAGES, SPECIAL DAMAGES, INCIDENTAL DAMAGES OR CONSEQUENTIAL DAMAGES ARISING DIRECTLY OR INDIRECTLY FROM THE DESIGN, MANUFACTURE, SALE, USE OR REPAIR OF THE PRODUCT, WHETHER BASED ON WARRANTY, CONTRACT, NEGLIGENCE, OR STRICT LIABILITY. IN NO EVENT WILL LIABILITY EXCEED THE PURCHASE PRICE OF THE PRODUCT.

THE WARRANTY AND LIMITS OF LIABILITY CONTAINED HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES, EXPRESSED OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED BY BJM PUMPS, LLC AND EXCLUDED FROM THIS WARRANTY.

BJM Pumps, LLC neither assumes, nor authorizes any person to assume for it, any other warranty obligation in connection with the sale of the Product. This warranty shall not apply to any Product or parts of Product which have (a) been repaired or altered outside of BJM Pumps, LLC's facilities unless such repair was authorized in advance by BJM Pumps, LLC or by its authorized representative; or (b) have been subject to misuse, negligence or accident; or (c) have been used in a manner contrary to BJM Pumps, LLC's instruction.

In any case of products not manufactured and sold under the BJM Pumps, LLC brand name, there is no warranty from BJM Pumps, LLC; however BJM Pumps, LLC will extend any warranty received from BJM Pumps, LLC's supplier of such products.

**START-UP REPORT FORM**

**START-UP REPORT FORM**

This form is designed to record the initial installation, and to serve as a guide for troubleshooting at a later date (if needed).

Industrial Flow Solutions Operating, LLC  
 104 John W Murphy Drive  
 New Haven, CT 06513

Pump Owner's Name			
Location of Installation			
Person in Charge			Phone(    )
Purchased From			
Model		Serial No	
Voltage	Phase	Hertz	HP
Does impeller turn freely by hand?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Condition of Equipment	<input type="checkbox"/> New <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor		
Condition of Cable Jacket	<input type="checkbox"/> New <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor		
Rotation: Direction of Impeller Rotation (Use C/W for clockwise, CC/W for counterclockwise):			
_____			
Method used to check rotation (viewed from bottom) _____			
Resistance of cable and Pump Motor (measured at pump control)			
Red-Black_____ ohms	Red-White_____ ohms	White-Black____ohms	
Resistance of ground circuit between control panel and outside of pumps			
_____ Ohms			
<b>MEG OHM CHECK OF INSULATION</b>			
Red to ground_____ White to ground_____ Black to ground_____			
Condition of location at start-up	<input type="checkbox"/> Dry <input type="checkbox"/> Wet <input type="checkbox"/> Muddy		
Was equipment stored	<input type="checkbox"/> Yes <input type="checkbox"/> No.		
If YES, length of storage:			
Liquid being pump			
Debris in bottom of station?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
Was debris removed in your	<input type="checkbox"/> Yes <input type="checkbox"/> No		

**START-UP REPORT FORM**

presence?		
Are guide rails exactly vertical?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is base elbow installed level?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Liquid level controls: Model _____		
Is control installed away from turbulence?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>Operation Check</b>		
Tip lowest float (stop float), all pumps should remain off. Tip second float (and stop float), one pump comes on. Tip third float (and stop float), both pumps on (alarm on simplex). Tip fourth float (and stop float), high level alarm on (omit on simplex).		
If not on levels controls, describe type of controls		
Does liquid level ever drop below volute top?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Control Panel MFG & model no.		
Number of pumps operated by control panel		
<b>NOTE: At no time should hole be made in top of control panel, unless proper sealing devices are utilized.</b>		
Short Circuit protection:	Type:	
Number and size of short circuit device(s)	Amp rating:	
Overload type:	Size:	Amp rating:
Do protective devices comply with pump motor amp rating?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Are all pump connections tight?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Is the interior of the panel dry?	<input type="checkbox"/> Yes	<input type="checkbox"/> No If No, correct moisture problem.
Electrical readings		
<b>SINGLE PHASE</b>		
Voltage supply at panel line connection, pump off	L1	L2
Voltage supply at panel line connection, pump on	L1	L2
Amperage load connection, pump on	L1	L2
<b>THREE PHASE</b>		
Voltage supply at panel line connection, pump off		
L1-L2	L2-L3	L3-L1

**START-UP REPORT FORM**

Voltage supply at panel line connection, pump on		
L1-L2	L2-L3	L3-L1
Amperage load connection, pump on		
L1	L2	L3
<b>FINAL CHECK</b>		
Is pump secured properly?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Was pump checked for leaks?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Do check valves operate properly?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Flow: Does station appear to operate at proper rate?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Noise level:	Acceptable <input type="checkbox"/>	Unacceptable <input type="checkbox"/>
Comments:		
Describe and equipment difficulties during start-up		
Installed by: Company: _____ Person: _____ Date: _____		
Maintained by: Company: _____ Person: _____		
Date and time of start-up _____ Present at start-up: ( ) Engineer's name _____ ( ) Contractor's name _____ ( ) Operator's name _____ ( ) others _____		



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