



## INSTALLATION, OPERATION & MAINTENANCE MANUAL

**FARHENHEIT™**

### 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 **FARHRENHEIT™** 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 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 BJM Pumps, LLC.

BJM Pumps, LLC  
123 Spencer Plain Rd.  
Old Saybrook, CT 06475, USA

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.bjmpumps.com](http://www.bjmpumps.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 BJM Pumps, 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 BJM Pumps, 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**

Models	Qty. oil in seal chamber		
	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

Models	Qty. oil in seal chamber		
	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

Models	Qty. oil in seal chamber		
	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

Models	Qty. oil in seal chamber		
	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.bjmpumps.com](http://www.bjmpumps.com) or by calling BJM Pumps, 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.

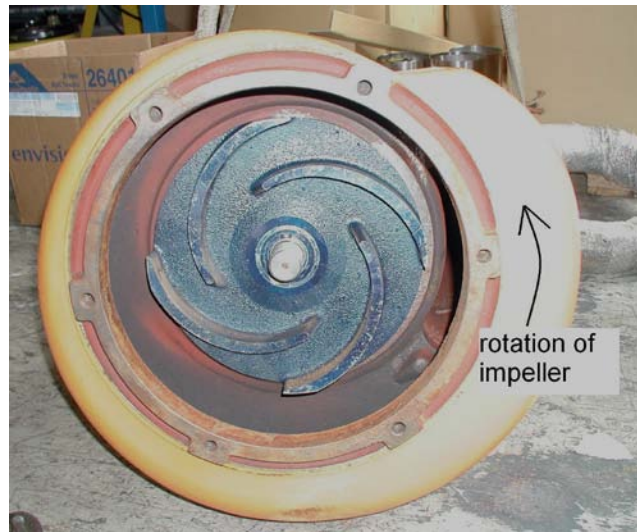




## PUMP ROTATION

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**

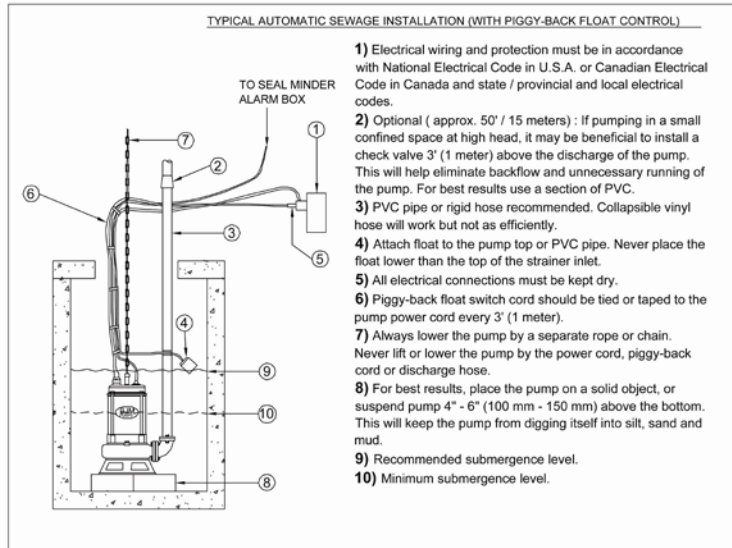
Do not alter the length or repair any power cable with a splice. The pump motor and cable must be completely waterproof. Damage to the pump or personal injury may result from alterations.

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).

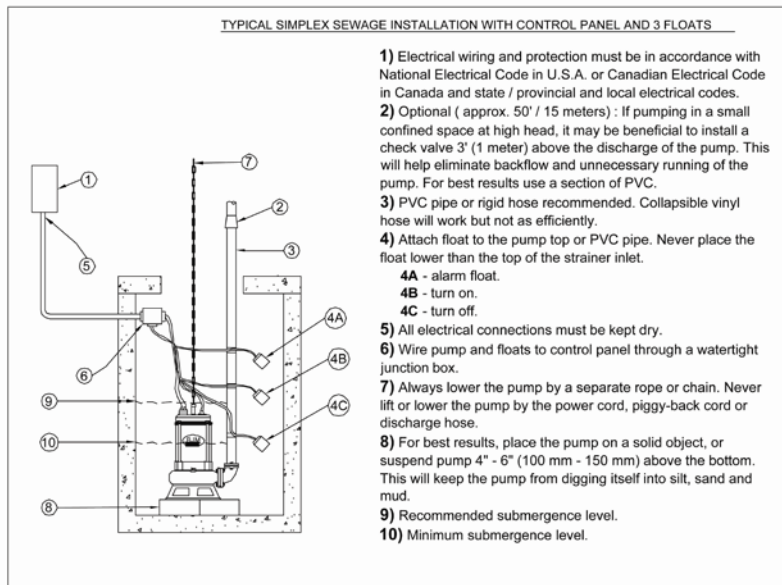


## TYPICAL AUTOMATIC WATER/WASTEWATER EFFLUENT INSTALLATION

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

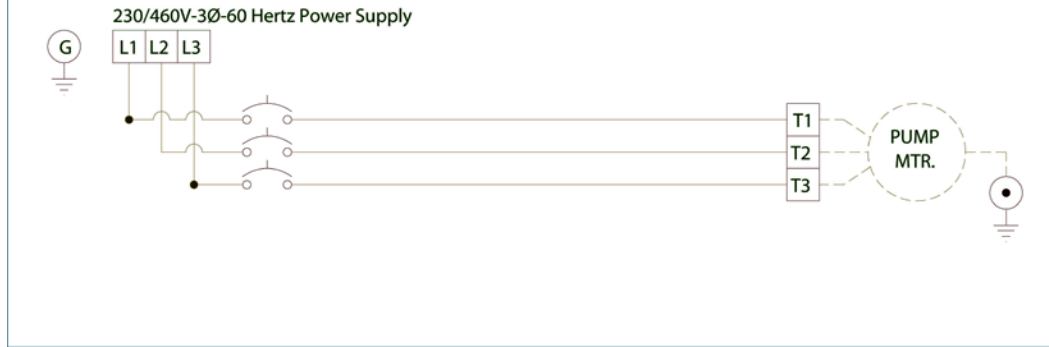


**Three phase pumps need a separate control box with float(s) for automatic operation.**



## 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 CONVENANT 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**

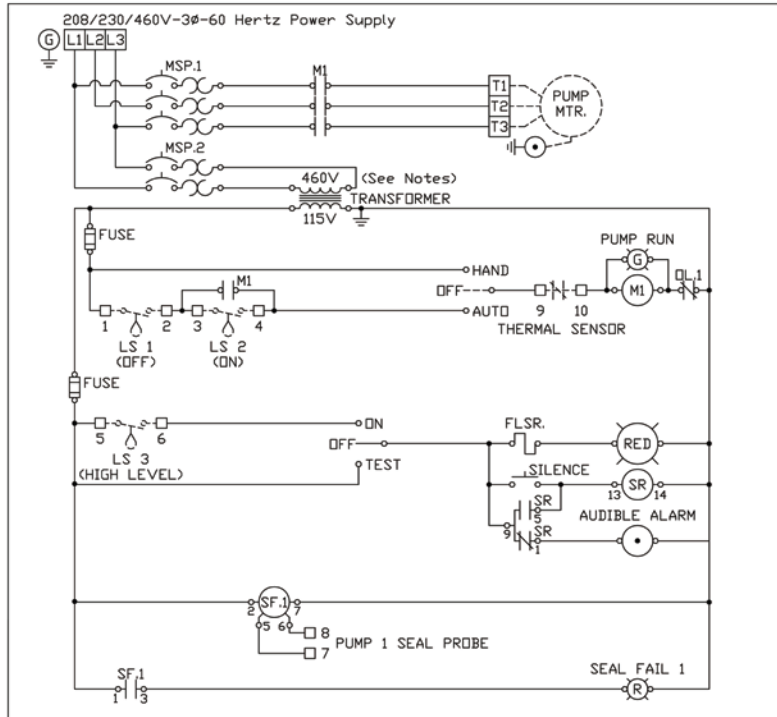
**FOR YOUR PROTECTION, ALWAYS DISCONNECT PUMP FROM ITS POWER SOURCE BEFORE HANDLING.**

**⚠ 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. BJM Pumps recommends that all electrical service work be performed at the factory 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.
- 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.

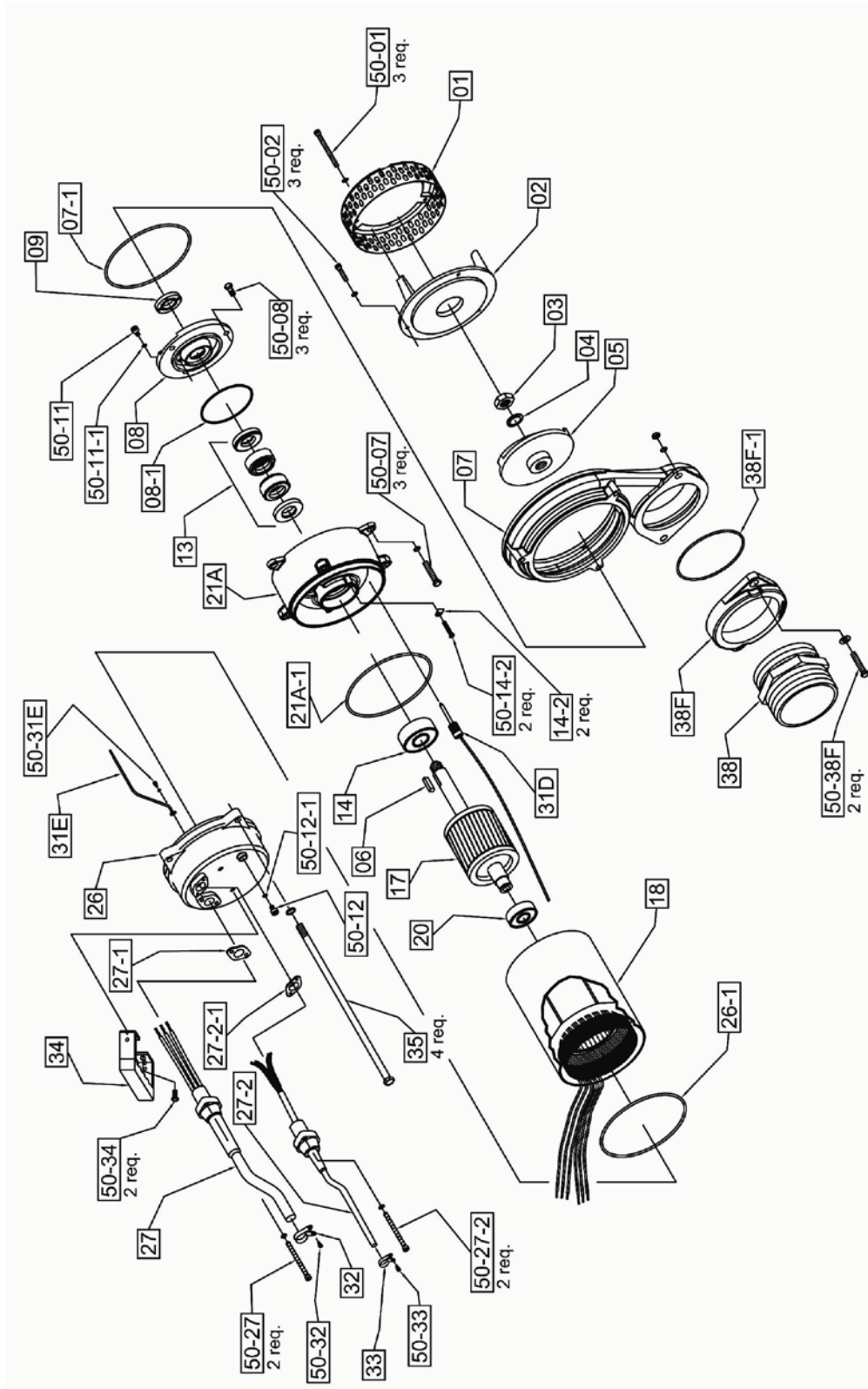
### **CHANGING SEAL OIL**

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

- 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.



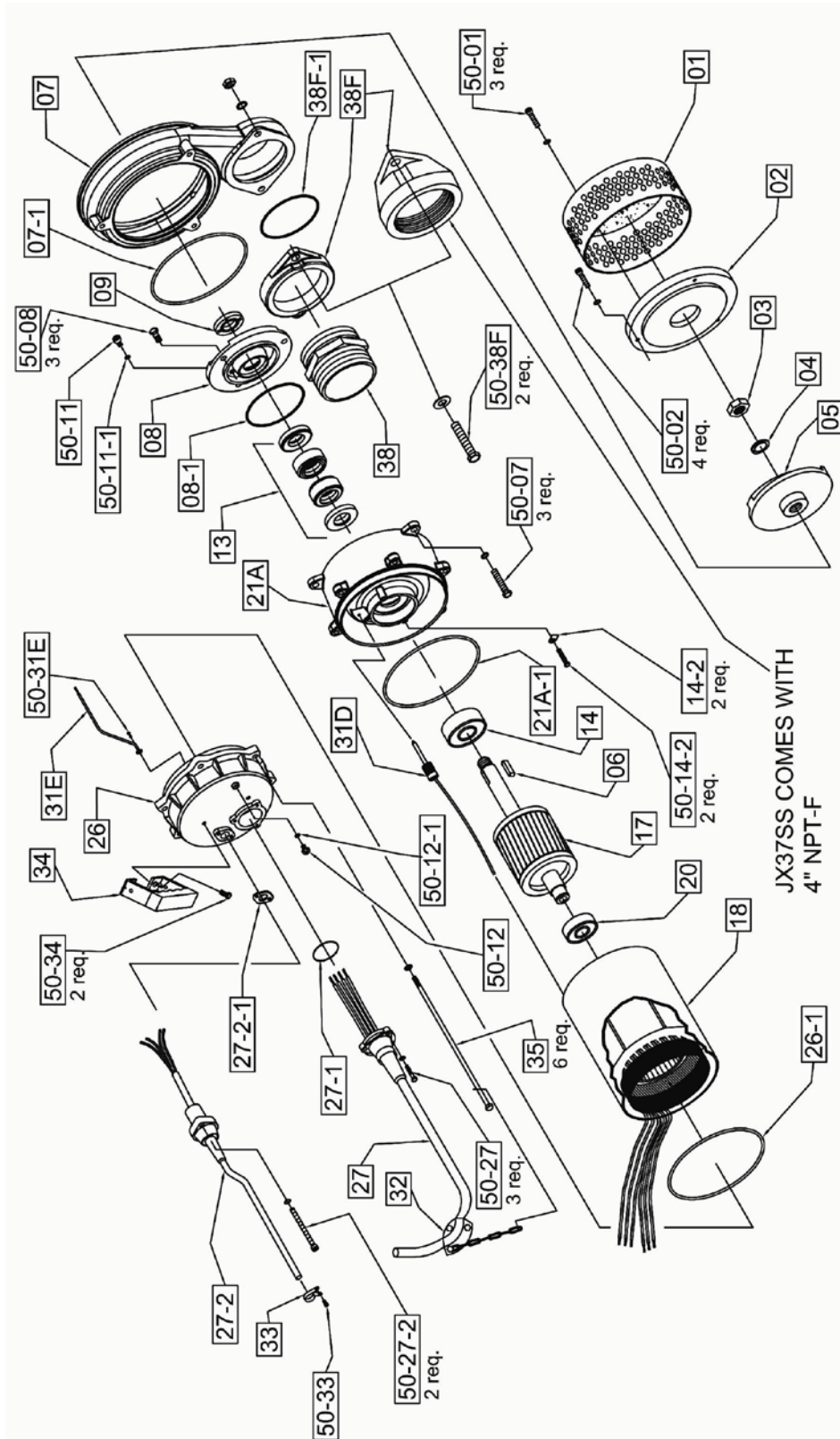
# EXPLODED VIEW OF J08-F, JX08SS-F, J15-F, JX15SS-F, J15H-F, JX15HSS-F





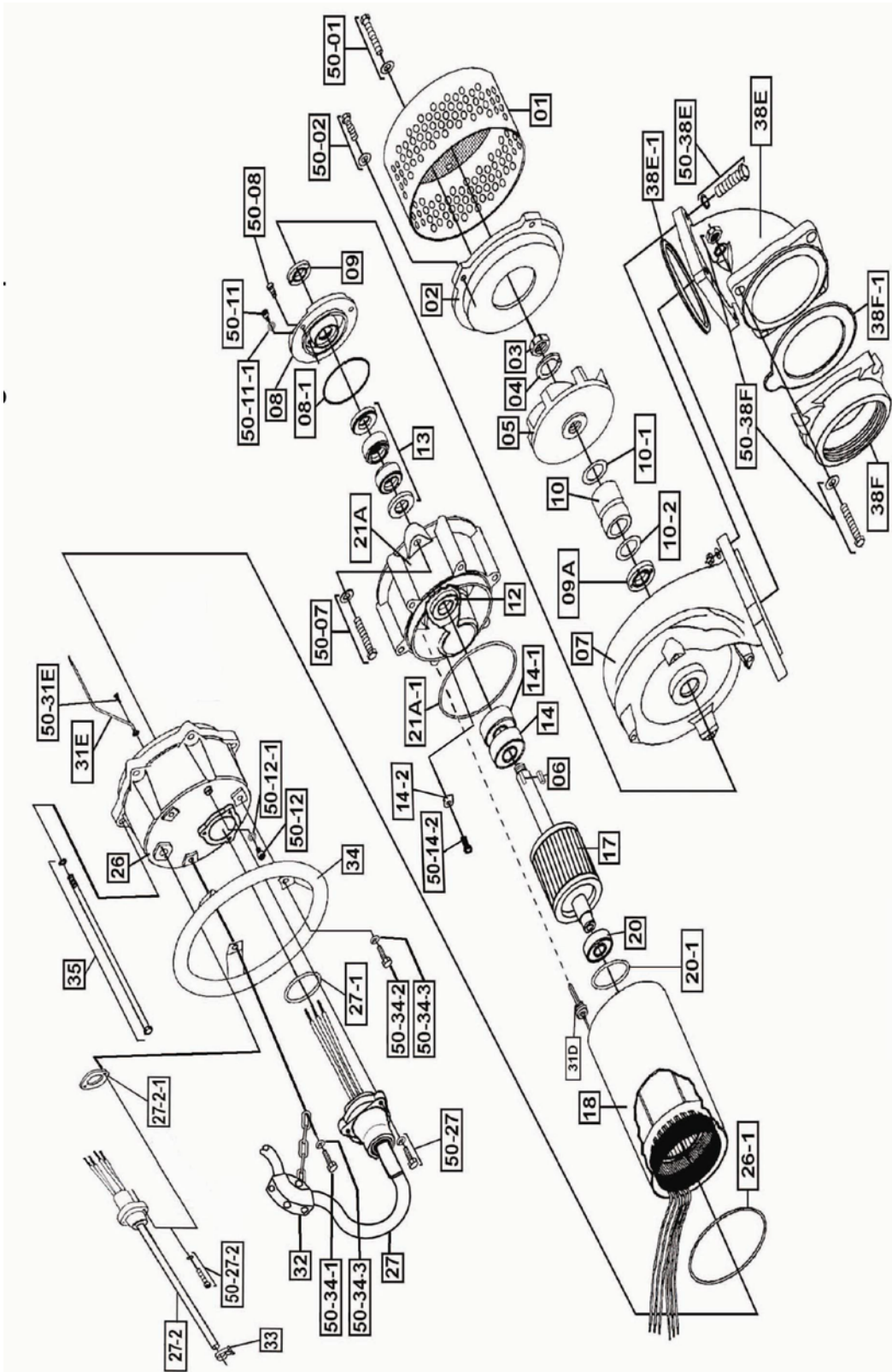


**EXPLODED VIEW OF J22-F, JX22SS-F, J22H-F, JX22HSS-F, J37-F, JX37SS-F, J37H-F, JX37HSS-F**



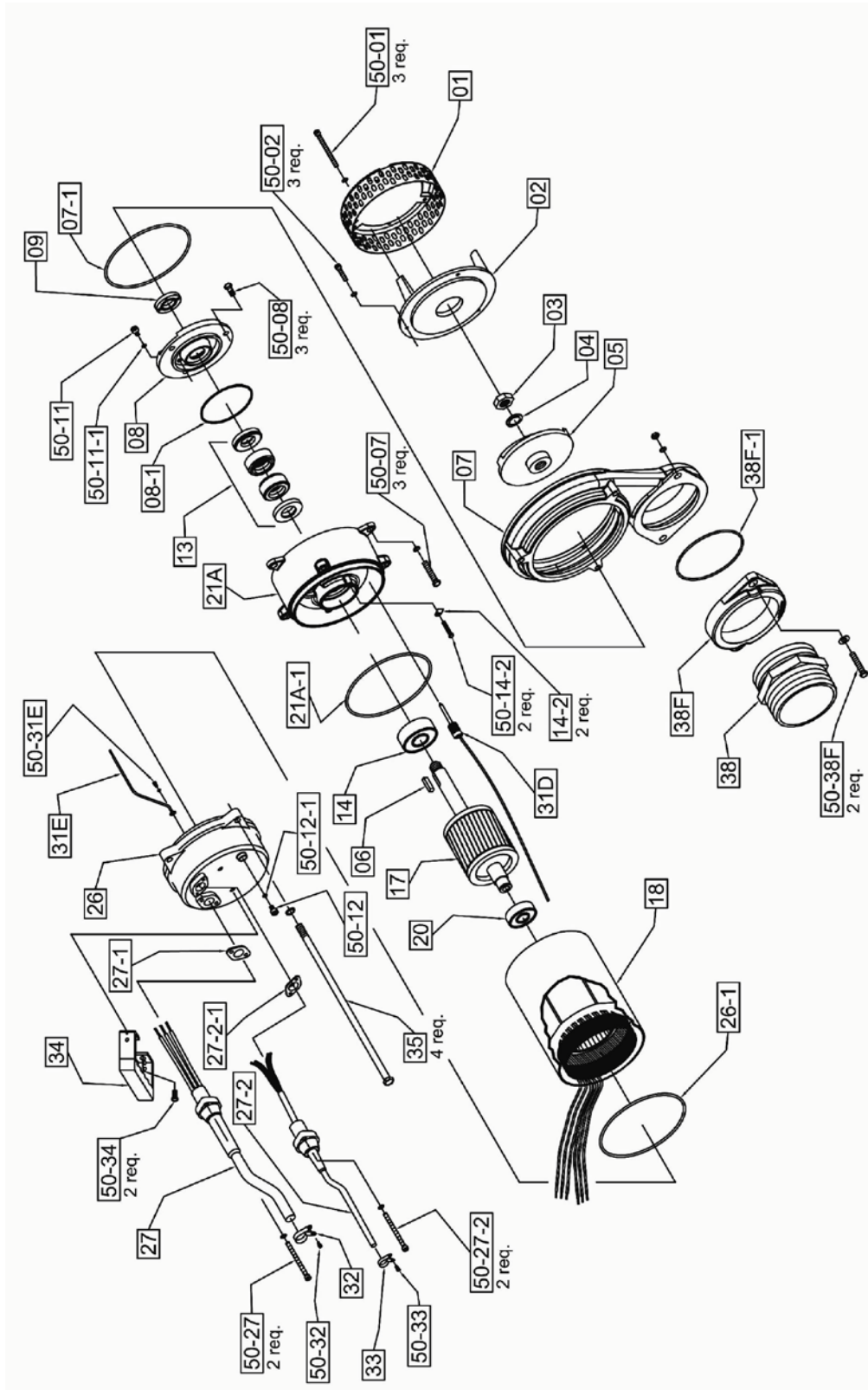


EXPLODED VIEW OF J55C-F, JX55CSS-F, J55CH-F, JX55CHSS-F, J75C-F, JX75CSS-F, J75CH-F, JX75CHSS-F



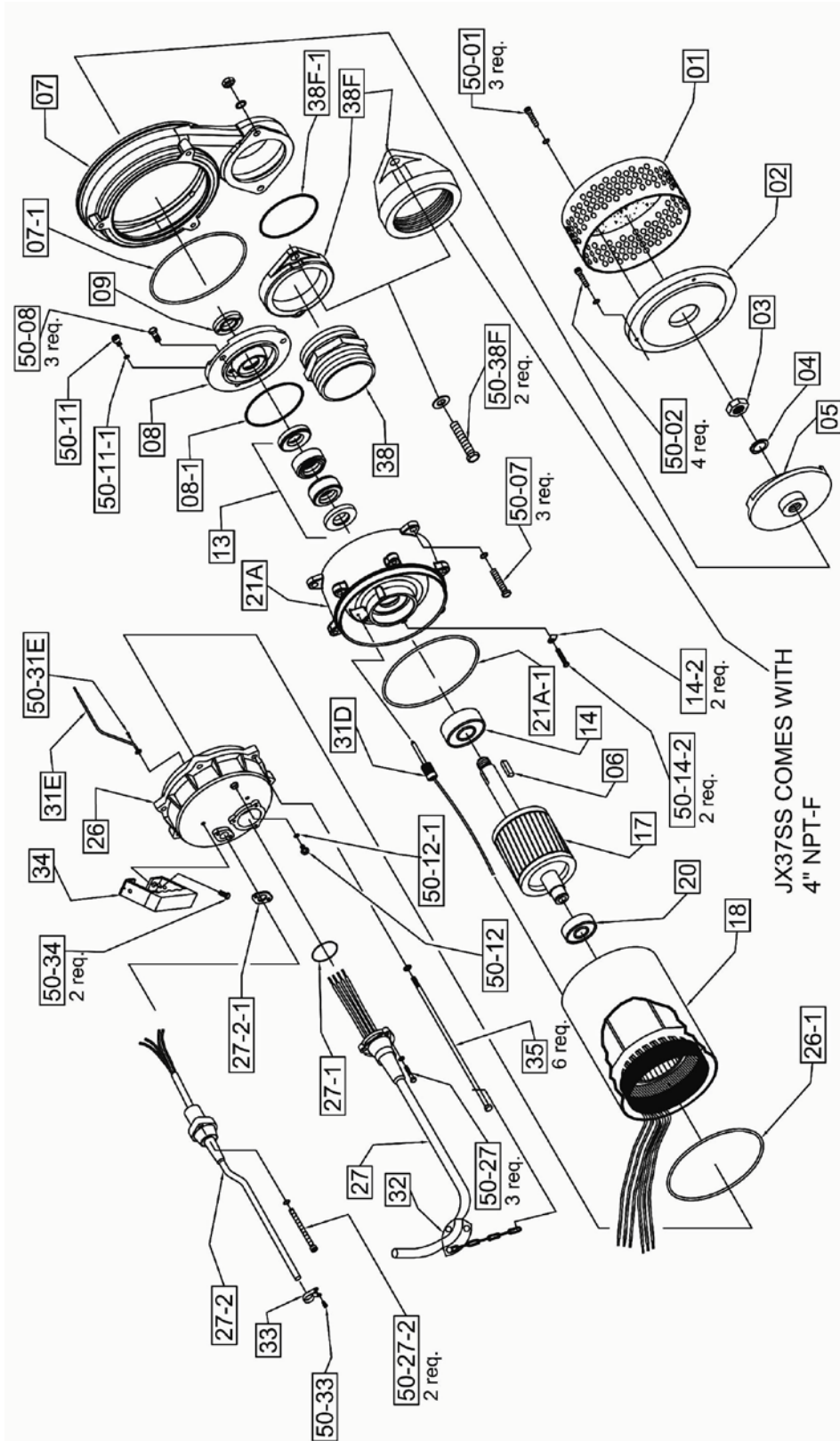


# EXPLODED VIEW OF JX08SS-F, JX15SS-F, JX15HSS-F (PRECISION CAST MODELS)





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



## J-F SERIES PARTS LIST

	<b>Pump Model</b>	<b>J08F</b>	<b>J15F</b>	<b>J15HF</b>	<b>J22F</b>	<b>J22HF</b>	<b>J37F</b>	<b>J37HF</b>	<b>J55CF</b>	<b>J55CHF</b>	<b>J75CF</b>	<b>J75CHF</b>
<b>Pos. No.</b>	<b>Part Description</b>	<b>Part #</b>	<b>Part #</b>	<b>Part #</b>	<b>Part #</b>	<b>Part #</b>	<b>Part #</b>	<b>Part #</b>	<b>Part #</b>	<b>Part #</b>	<b>Part #</b>	<b>Part #</b>
01	Strainer with Bottom Plate	-	-	-	104	104	104	104	105C	105C	105C	105C
01	Strainer	103	103	103	-	-	-	-	-	-	-	-
01-2	Bottom Plate	129	129	129	-	-	-	-	-	-	-	-
02	Suction Cover	140	140	140	130	130H	130	130H	146C	146CH	146C	146CH
03	Impeller Nut	305	305	305	305	305	305	305	306C	306C	306C	306C
04	Lock washer	405C	405C	405C	405C	405C	405C	405C	403C	403C	403C	403C
05	Impeller	528	529	529H	530	530H	531	531H	532C	532CH	533C	533CH
06	Impeller Key	602	602	602	602	602	602	602	603	603	603	603
07	Pump Housing	710B	711B	710B	713B	713B	713B	713B	716C	716C	716C	716C
07 -1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
08	Oil Chamber Cover	810	810	810	810	810	810	810	811C	811C	811C	811C
08 -1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
09	Lip Seal FKM	903V	903V	903V	903V	903V	903V	903V	910CV	910CV	910CV	910CV
09A	Double Lip Seal FKM	-	-	-	-	-	-	-	911CV	911CV	911CV	911CV
10	Shaft Sleeve	-	-	-	-	-	-	-	1000C	1000C	1000C	1000C
10-1	O-Ring (Kit Only)	-	-	-	-	-	-	-	Kit	Kit	Kit	Kit
10-2	O-Ring (Kit Only)	-	-	-	-	-	-	-	Kit	Kit	Kit	Kit
12	Lip Seal for Lower Bearing	-	-	-	-	-	-	-	907CV	907CV	907CV	907CV
13	Mechanical Seal FKM	200214	200214	200214	200214	200214	200214	200214	200304	200304	300304	300304
14	Lower Ball Bearing	1401	1401	1401	1402	1402	1402	1402	1404	1404	1405C	1405C
14-1	Lower Ball Bearing	-	-	-	-	-	-	-	1404	1404	1405C	1405C
14-2	Lower Bearing Retainer Clip	-	-	-	-	-	-	-	1453	1453	1453	1453
17	Rotor w/ Shaft, 3 PH	1708	1709	1709	1710	1710	1711	1711	1730C	1730C	1731C	1731C
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
20	Upper Ball Bearing	2002	2002	2002	2004	2004	2004	2004	2005	2005	2005	2005
20-1	O-Ring (Kit Only)	-	-	-	-	-	-	-	Kit	Kit	Kit	Kit
21A	Oil Chamber	-	-	-	-	-	-	-	722B	722B	714B	714B
21A-1	O-Ring (Kit Only)	-	-	-	-	-	-	-	Kit	Kit	Kit	Kit
21B-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
26	Pump Top Cover	2670B	2670B	2670B	2681B	2681B	2681B	2681B	2672B	2672B	2672B	2672B
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)	2722F	2722F	2722F	2731F	2731F	2731F	2731F	2731F	2731F	2731F	2731F
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)	2736BF	2736BF	2736BF	2736BF	2736BF	2736BF	2736BF	2736BF	2736BF	2736BF	2736BF
27-2-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit

31D	Seal Minder Sensor w/ wire	2332	2332	2332	2332	2332	2332	2332	2332	2332	2332	2332
31E	Ground Wire w/Ring Term.	2776	2776	2776	2776	2776	2776	2776	2776	2776	2776	2776
32	Power Cord Line Clip / Strain Relief	3200	3200	3200	3208	3208	3208	3208	3208	3208	3208	3208
33	Seal Minder Sensor Cord Line Clip	3203	3203	3203	3203	3203	3203	3203	3203	3203	3203	3203
34	Handle	3420	3420	3420	3420	3420	3420	3420	3422	3422	3422	3422
35	Holding Rods	4105	4106	4106	4107	4107	4108	4108	4109	4109	4110	4110
38	Discharge Nipple	3802	3804	3802	3804	3802	3804	3802	-	-	-	-
38E	Discharge Elbow	-	-	-	-	-	-	-	3821C	3821C	3821C	3821C
38E-1	Gasket Discharge Elbow Viton	-	-	-	-	-	-	-	4073V	4073V	4073V	4073V
38F	Discharge Flange	-	-	-	3810	3809A	3810	3809A	3806C	3806CH	3806C	3806C
38F	Discharge Connection 4" FNPT	-	-	-	3816C	-	3816C	-	-	-	-	-
38F-1	Gasket - Discharge Flange Viton	-	-	-	4071V	4071V	4071V	4071V	4073V	4073V	4073V	4073V
50-01	Bolt - Strainer/Stand	5024	5024	5024	5016	5016	5016	5016	5014	5014	5014	5014
50-02	Screw	5004	5004	5004	5013	5013	5013	5013	5014	5014	5014	5014
50-07	Screw	-	-	-	-	-	-	-	5014	5014	5014	5014
50-08	Screw	5009	5009	5009	5009	5009	5009	5009	5034	5034	5034	5034
50-11	Screw	5008	5008	5008	5008	5008	5008	5008	5008	5008	5008	5008
50-11-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
50-12	Screw	5008	5008	5008	5008	5008	5008	5008	5008	5008	5008	5008
50-12-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
50-14-2	Screw	-	-	-	-	-	-	-	5009	5009	5009	5009
50-26	Acorn Nut and Washer	-	-	-	-	-	-	-	-	-	-	-
50-27	Screw	5004	5004	5004	5034	5034	5034	5034	5034	5034	5034	5034
50-27-2	Screw	5004	5004	5004	5004	5004	5004	5004	5004	5004	5004	5004
50-31E	Screw	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
50-32	Screw	5001	5001	5001	-	-	-	-	-	-	-	-
50-33	Screw	5001	5001	5001	5001	5001	5001	5001	-	-	-	-
50-34	Screw	5009	5009	5009	5009	5009	5009	5009	-	-	-	-
50-34-1	Screw for Handle w/ Cable Chain	-	-	-	-	-	-	-	5013	5013	5013	5013
50-34-2	Screw for Handle	-	-	-	-	-	-	-	5082	5082	5082	5082
50-34-3	Lock Washer	-	-	-	-	-	-	-	402	402	402	402
50-38E	Bolt - Discharge Elbow	-	-	-	-	-	-	-	5081	5081	5081	5081
50-38F	Bolt - Discharge Flange	-	-	-	5041	5041	5041	5041	5081	5081	5081	5081
	<b>O-Ring Kit-FKM</b>	4046V	4046V	4046V	4044V	4044V	4044V	4044V	4045V	4045V	4045V	4045V

### JX-F SERIES PARTS LIST

	Pump Model	JX08SSF	JX15SSF	JX15HSSF	JX22SSF	JX22HSSF	JX37SSF	JX37HSSF	JX55CSSF	JX55CHSSF	JX75CSSF	JX75CHSSF
Pos. No.	Part Description	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #
01	Strainer with Bottom Plate	103BX	103BX	103BX	104BX	104BX	104BX	104BX	105CX	105CX	105CX	105CX
02	Suction Cover	140BX	140CX	140BX	130BX	130HBX	130BX	130HBX	146CX	146CHX	146CX	146CHX
03	Impeller Nut	305	305	305	305	305	305	305	306C	306C	306C	306C
04	Lock washer	405C	405C	405C	405C	405C	405C	405C	403C	403C	403C	403C
05	Impeller	528BX	529BX	529HBX	530BX	530HBX	531BX	531HBX	532CX	532CHX	533CX	533CHX
06	Impeller Key	602	602	602	602	602	602	602	603	603	603	603
07	Pump Housing	710PX	711PX	710PX	713PX	713PX	713PX	713PX	716CX	716CX	716CX	716CX
07 -1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
08	Oil Chamber Cover	810PX	810PX	810PX	822PX	822PX	822PX	822PX	811CX	811CX	811CX	811CX
08 -1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
09	Lip Seal FKM	903CV	903CV	903CV	905CV	905CV	905CV	905CV	910CV	910CV	910CV	910CV
09A	Double Lip Seal FKM	-	-	-	-	-	-	-	911CV	911CV	911CV	911CV
10	Shaft Sleeve	-	-	-	-	-	-	-	1000CX	1000CX	1000CX	1000CX
10-1	O-Ring (Kit Only)	-	-	-	-	-	-	-	Kit	Kit	Kit	Kit
10-2	O-Ring (Kit Only)	-	-	-	-	-	-	-	Kit	Kit	Kit	Kit
12	Lip Seal for Lower Bearing	-	-	-	-	-	-	-	907CV	907CV	907CV	907CV
13	Mechanical Seal FKM	200214	200214	200214	200301	200301	200301	200301	200304	200304	200304	200304
14	Lower Ball Bearing	1401	1401	1401	1402	1402	1402	1402	1404	1404	1405C	1405C
14-1	Lower Ball Bearing	-	-	-	-	-	-	-	1404	1404	1405C	1405C
14-2	Lower Bearing Retainer Clip	1453	1453	1453	1453	1453	1453	1453	1453	1453	1453	1453
17	Rotor w/ Shaft, 3 PH	1708CX	1709CX	1709CX	1710CX	1710CX	1711CX	1711CX	1730CX	1730CX	1731CX	1731CX
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	200612	200612
20	Upper Ball Bearing	2002	2002	2002	2004	2004	2004	2004	2005	2005	2005	2005
20-1	O-Ring (Kit Only)	-	-	-	-	-	-	-	Kit	Kit	Kit	Kit
21A	Oil Chamber	752PX	752PX	752PX	753PX	753PX	753PX	753PX	722BX	722BX	714BX	714BX
21A-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
21B-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
26	Pump Top Cover	2670BX	2670BX	2670BX	2671PX	2671PX	2671PX	2671PX	2672BX	2672BX	2672BX	2672BX
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)	2722F	2722F	2722F	2731XF	2731XF	2731XF	2731XF	2731XF	2731XF	2731XF	2731XF
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)	2736BXF	2736BXF	2736BXF	2736BXF	2736BXF	2736BXF	2736BXF	2736BXF	2736BXF	2736BXF	2736BXF
27-2-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit

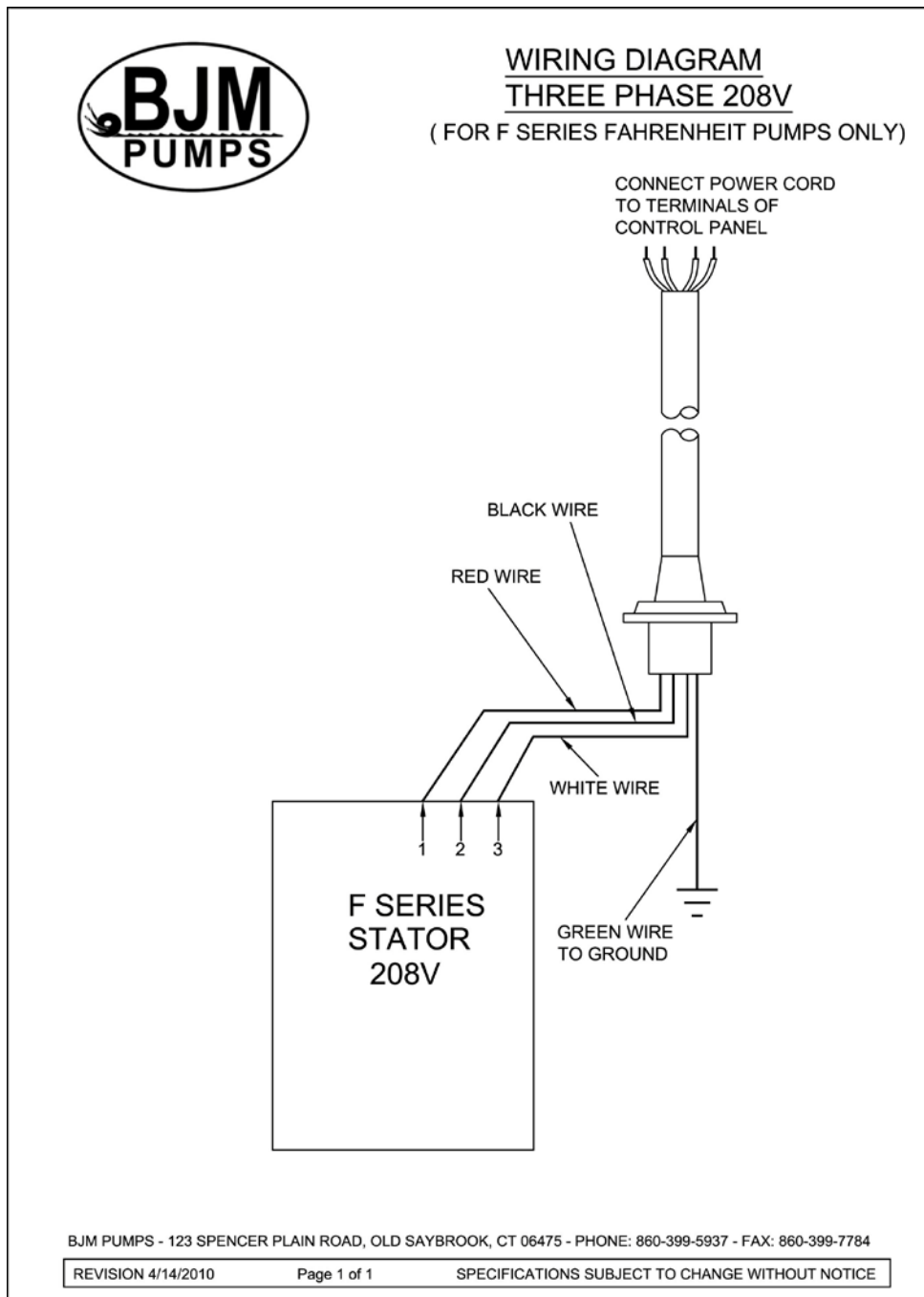
31D	Seal Minder Sensor w/ wire	2330	2330	2330	2330	2330	2330	2330	2332	2332	2332	2332
31E	Ground Wire w/Ring Term.	2776	2776	2776	2776	2776	2776	2776	2776	2776	2776	2776
32	Power Cord Line Clip / Strain Relief	3200	3200	3200	3216	3216	3217	3217	3208	3208	3208	3208
33	Seal Minder Sensor Cord Line Clip	3203	3203	3203	3203	3203	3203	3203	3203	3203	3203	3203
34	Handle	3420	3420	3420	3420	3420	3420	3420	3422	3422	3422	3422
35	Holding Rods	4120	4121	4121	4122	4122	4123	4123	4109	4109	4110	4110
38	Discharge Nipple	3802X	3804X	3802X	3804X	3802X	3804X	3802X	-	-	-	-
38E	Discharge Elbow	-	-	-	-	-	-	-	3821CX	3821CX	3821CX	3821CX
38E-1	Gasket Discharge Elbow FKM	-	-	-	-	-	-	-	4073V	4073V	4073V	4073V
38F	Discharge Flange	3822PX	3810PX	3822PX	3810PX	3809AX	3810PX	3809AX	3806CX	3806CHX	3806CX	3806CX
38F	Discharge Connection 4" NPT-F	-	-	-	3816PX	-	3816PX	-	-	-	-	-
38F-1	O-Ring - Discharge Flange FKM	5125V	5126V	5125V	5126V	5126V	5126V	5126V	-	-	-	-
38F-1	O-Ring - Discharge 4" NPT-F FKM	-	-	-	5129V	-	5129V	-	-	-	-	-
38F-1	Gasket Discharge Flange FKM	-	-	-	-	-	-	-	4073V	4073V	4073V	4073V
50-01	Screw	5003	5003	5003	5098	5098	5098	5098	5014	5014	5014	5014
50-02	Screw	5004	5004	5004	5010	5010	5010	5010	5014	5014	5014	5014
50-07	Screw	5097	5097	5097	5097	5097	5097	5097	5014	5014	5014	5014
50-08	Screw	5009	5009	5009	5009	5009	5009	5009	5034	5034	5034	5034
50-11	Screw	5008	5008	5008	5008	5008	5008	5008	5008	5008	5008	5008
50-11-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
50-12	Screw	5008	5008	5008	5008	5008	5008	5008	5008	5008	5008	5008
50-12-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
50-14-2	Screw	5009	5009	5009	5009	5009	5009	5009	5009	5009	5009	5009
50-27	Screw	5095	5095	5095	5034	5034	5034	5034	5034	5034	5034	5034
50-27-2	Screw	5095	5095	5095	5095	5095	5095	5095	5004	5004	5004	5004
50-31E	Screw	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
50-32	Screw	5001	5001	5001	-	-	-	-	-	-	-	-
50-33	Screw	5001	5001	5001	5001	5001	5001	5001	-	-	-	-
50-34	Screw	5009	5009	5009	5097	5097	5097	5097	-	-	-	-
50-34-1	Screw for Handle w/ Cable Chain	-	-	-	-	-	-	-	5013	5013	5013	5013
50-34-2	Screw for Handle	-	-	-	-	-	-	-	5082	5082	5082	5082
50-34-3	Lock Washer	-	-	-	-	-	-	-	402	402	402	402
50-38E	Bolt - Discharge Elbow	-	-	-	-	-	-	-	5081	5081	5081	5081
50-38F	Bolt - Discharge Flange	5014	5093	5014	5093	5093	5093	5093	5081	5081	5081	5081
<b>O-Ring Kit-FKM</b>		4046PV	4046PV	4046PV	4044PV	4044PV	4044PV	4044PV	4045V	4045V	4045V	4045V





## THREE PHASE WIRING DIAGRAM

208V



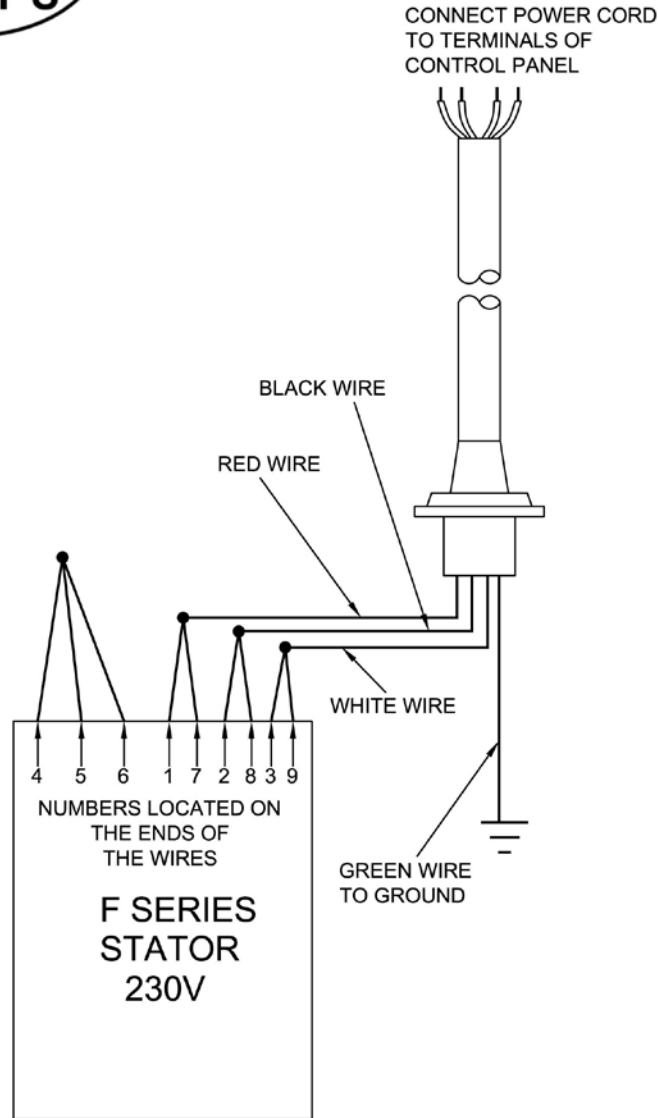
MODELS: J08-F, JX08SS-F, J15-F, JX15SS-F, J15H-F, JX15HSS-F, J22-F, JX22SS-F, J22H-F, JX22HSS-F, J37-F, JX37SS-F, J37H-F, J37HSS-F, J55C-F, J55CSS-F, J55CH-F, J55CHSS-F



230V



**WIRING DIAGRAM  
THREE PHASE 230V**  
( FOR F SERIES FAHRENHEIT PUMPS ONLY)



NOTE: 20 HP & 30 HP MOTORS ARE NOT AVAILABLE IN 230V.

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REVISION 4/14/2010

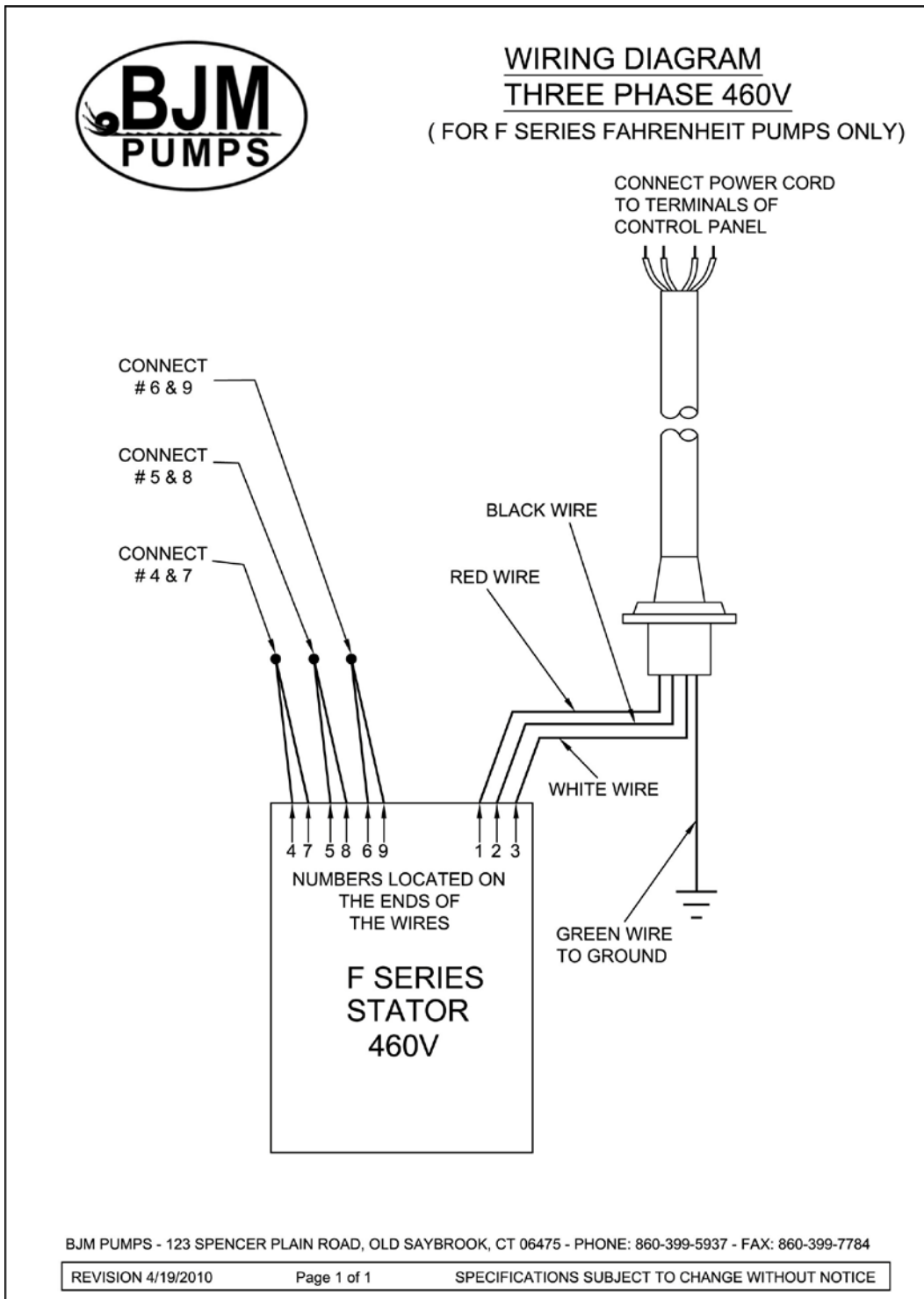
Page 1 of 1

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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



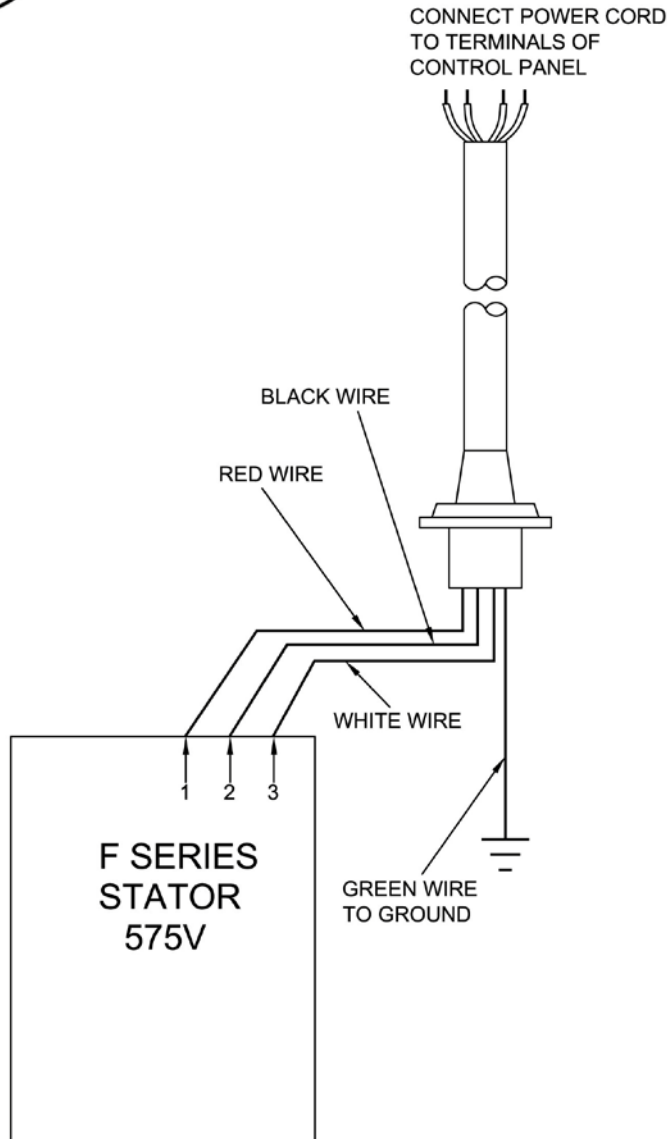
MODELS: J08-F, JX08SS-F, J15-F, JX15SS-F, J15H-F, JX15HSS-F, J22-F, JX22SS-F, J22H-F, JX22HSS-F, J37-F, JX37SS-F, J37H-F, J37HSS-F, J55C-F, J55CSS-F, J55CH-F, J55CHSS-F, J75C-F, JX75CSS-F, J75CH-F, J75CHSS-F



575V



**WIRING DIAGRAM**  
**THREE PHASE 575V**  
( FOR F SERIES FAHRENHEIT PUMPS ONLY)



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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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)

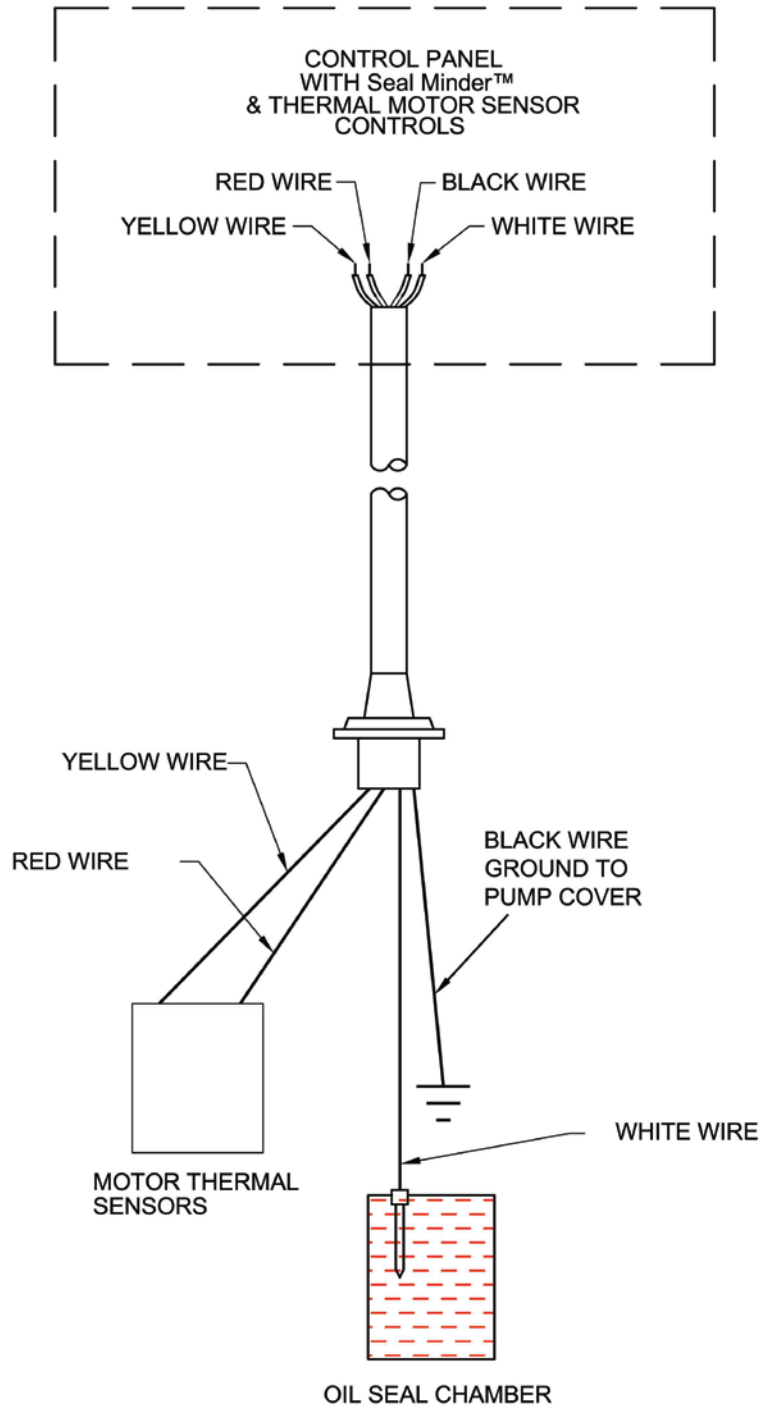
### **Seal Minder:**

Also known as a seal failure circuit (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** sensor probe is inside the oil chamber. (The oil chamber houses the mechanical seals that are cooled & lubricated by oil). The **Seal Minder**, when properly connected to a control panel, can help indicate seal failure. The **Seal Minder** cord requires a seal fail circuit in control panel for warning signal.

Along, with the **Seal Minder**, the **FAHRENHEIT™** Series high temperature pumps also feature thermal temperature sensor switches that are imbedded into the motor stator windings. Three switches are imbedded into the stator windings and wired in series. The leads are connected to the pump control panel through the sensor cable. If the windings would see a temperature above 300 degrees F, then the switch(s) would open and cut power to the pump. Once the temperature dropped below 300 degrees F, the switch(s) would reset, and the pump would be returned to a state of operation. This feature is designed to prevent damage to the stator winding and allow for longer pump life.

The sensor cable consists of four leads, two are connected to the **Seal Minder**, and two are connected to the thermal sensor switches located in the stator windings. These four leads run to the pump control panel and connect to the proper connections points for seal alarm and thermal cut off. The black and white wires are for the **Seal Minder** connections and the seal sensors will be connected to the yellow and red wires. The three phase automatic wiring diagram shown earlier in the manual will give a guide to the connections in the control panel. The manual for the control panel should be consulted for the exact connections.

The sensor cable with **Seal Minder** and thermal sensor switch connections is standard on all **FAHRENHEIT™** Series high temperature pumps. The cable is designed for a high temperature environment. The proper replacement part can be found parts list found in this manual. BJM Pumps, can supply a control with the Seal Minder and Thermal sensor switch option. Separate stand alone Seal Minder alarm panels are also available. Consult your BJM Pumps representative for part numbers and ordering details. BJM Pumps requires the **Seal Minder** and thermal sensor switches be used. Failure to connect or misuse of these devices will void warranty.



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



BJM Pumps, LLC  
123 Spencer Plain Road  
Old Saybrook, CT 06475, U.S.A.

## **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).

BJM Pumps, LLC  
123 Spencer Plain Road  
Old Saybrook, CT. 06475

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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