INSTALLATION, OPERATION & MAINTENANCE MANUAL

SV SERIES
SIDE DISCHARGE
Electric Submersible Pumps

Single Phase
115V & 230V
Three Phase
208V, 230V, 460V & 575V

CAST IRON

SINGLE PHASE	THREE PHASE
SV400	SV08
SV750	SV08C
SV750C	SV15
SV1500	SV22
	SV37
	SV55
	SV75

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.

Version 6/8/2011

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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 SV Series submersible pump. This manual also contains information to optimize performance and longevity of your BJM submersible pump.

The submersible SV Series pumps are designed to pump municipal and industrial wastewater. The SV 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.

If you have any questions regarding the inspection, disassembly, reassembly or testing please contact your BJM Pumps distributor, or BJM Pumps, LLC.

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

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

Information, including pump data sheets and performance curves, is also available on our web site: 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, inflammable or volatile liquids. <u>Death or serious injury will result.</u>**

⚠ 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 seal minder cord, if installed) 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.
6) **Important**: Always verify that the pump nameplate, amps, voltage, phase, and HP ratings match your control panel and power supply.

Warranty does not cover damage caused by connecting pumps and controls to an incorrect power source (voltage/phase supply). Record the model numbers and serial numbers from the pumps and control panel on the front of this instruction manual for future reference. Give it to the owner or affix it to the control panel when finished with the installation.
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 below.

OIL FILL QUANTITY/TYPE

	Oil in seal chamber		
Model	U.S. fl. oz.	cc.	Type of oil
SV250	5.1	150	ISO 32 NSF Food Grade Mineral Oil
SV400	5.1	150	ISO 32 NSF Food Grade Mineral Oil
SV750	9.3	275	ISO 32 NSF Food Grade Mineral Oil
SV750C	9.3	275	ISO 32 NSF Food Grade Mineral Oil

SV1500	9.3	275	ISO 32 NSF Food Grade Mineral Oil
SV08	7.862	233	ISO 32 NSF Food Grade Mineral Oil
SV08C	7.862	233	ISO 32 NSF Food Grade Mineral Oil
SV15	9.3	275	ISO 32 NSF Food Grade Mineral Oil
SV22	3.4	100	ISO 32 NSF Food Grade Mineral Oil
SV37	15	444	ISO 32 NSF Food Grade Mineral Oil
SV55	27	800	ISO 32 NSF Food Grade Mineral Oil
SV75	27	800	ISO 32 NSF Food Grade Mineral Oil

Note: EPDM seals will use Propylene glycol instead of ISO 32 NSF Food Grade Mineral Oil.

PUMP INSTALLATION

SV Series pumps have been evaluated for use with water or water based solutions. Please contact the manufacturer for additional information.

⚠WARNING **Risk of electric shock.** Pump models; SV400, SV750 (115v) are supplied with a grounding conductor and grounding-type attachment plug. 230V single phase pumps and all three phase pumps do not come with electric plug connectors. To reduce the risk of electric shock, be certain that it is connected only to a properly grounded, grounding-type receptacle.

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, SV Series pumps are designed to operate fully or partially submerged. Avoid running the pump dry for extended periods of time. Refer to data sheet for minimum submersion depth for your particular model. Data sheets can be obtained online at www.bjmpumps.com or by calling BJM Pumps, LLC at 860-399-5937. As a general rule, SV Series side discharge pumps can pump down to a level above the suction cover. Pumping lower than the cover will permit air to enter the pump and cavitate, lose prime or become air bound.

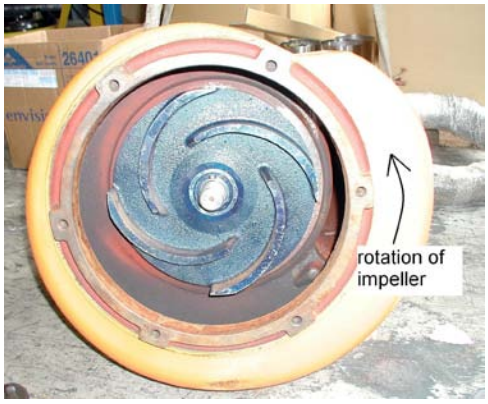
⚠ CAUTION

- Do not run the pump dry.
- Pump liquid should not exceed a maximum temperature of 104°F.
- 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 SV 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.

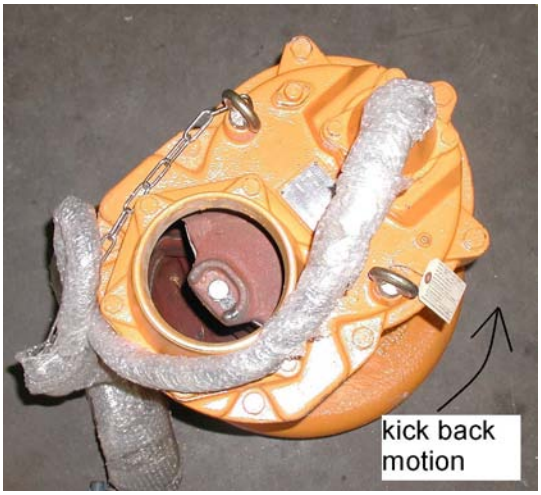
PUMP ROTATION

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 DEWATERING INSTALLATION

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

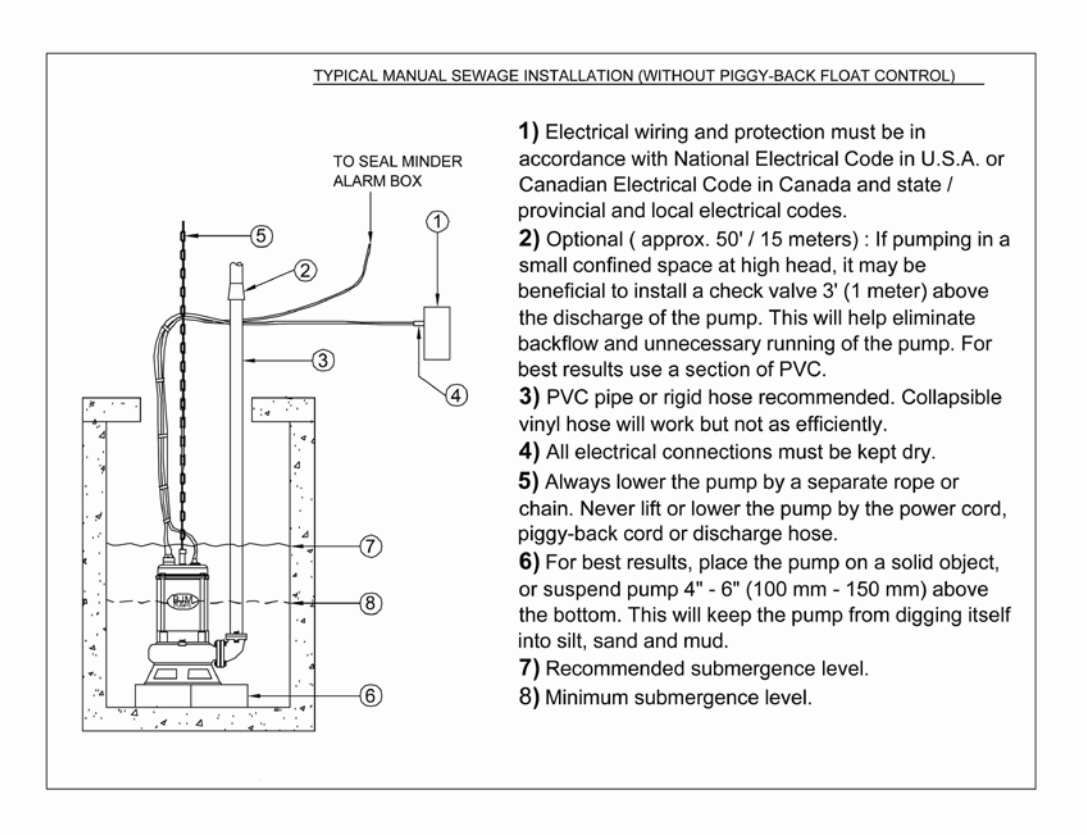
MANUAL OPERATION

All SV models are provided with a 33' (10 m) power cord. NEVER splice the power cable due to safety and warranty considerations. Always keep the plug end dry.
Note: 230V, single phase and 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.

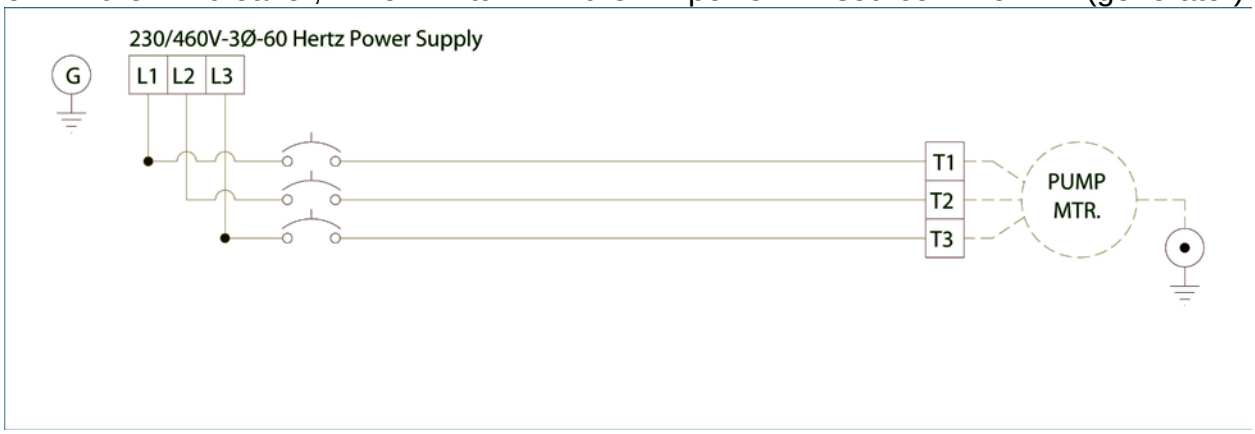
For manual operation: 115 volt: plug the power cable into any 115 volt grounded receptacle. 208, 230, 460 & 575 volt: Attach the proper plug, connect directly to the power source or control box. Check the direction of the rotation. Tilt the pump and start it. It should twist in the opposite direction of the arrow (on pump). It is recommended that a Ground Fault Interrupter (GFI) type receptacle (or equivalent) be used.

⚠ WARNING Single phase pumps always use a three-prong grounded receptacle. It is recommended that a Ground Fault Interrupter (GFI) type receptacle (or equivalent) be used.



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

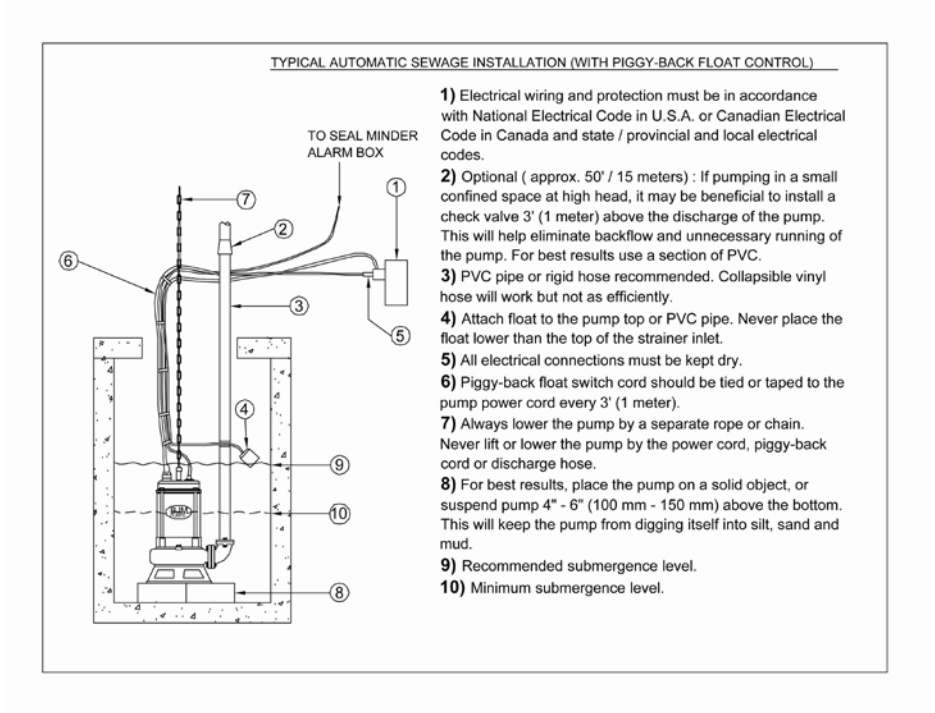
TYPICAL AUTOMATIC DEWATERING INSTALLATION

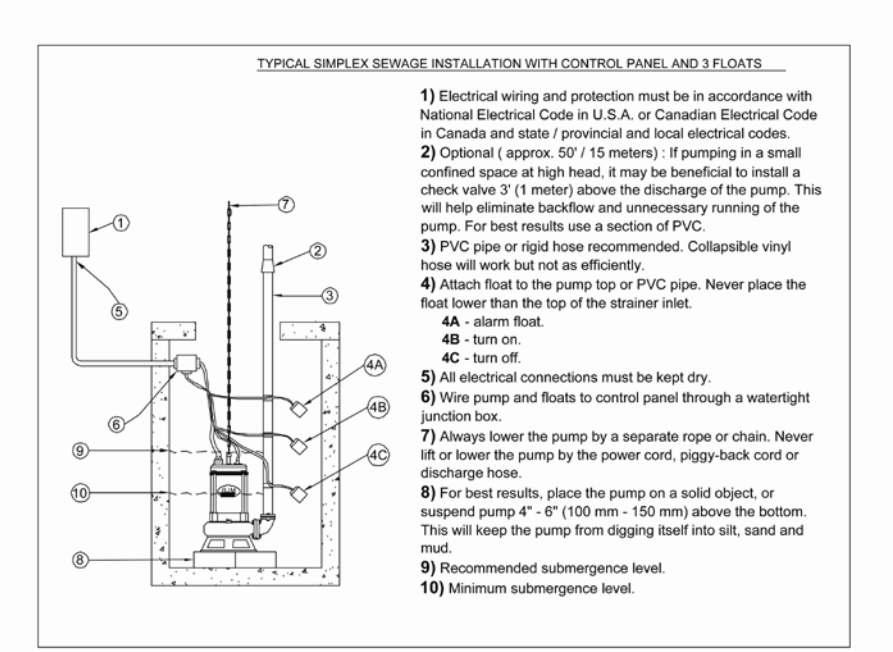
NOTE: Maximum recommended starts should not exceed 10 times per hour.

AUTOMATIC OPERATION

Float switches (wired into the pump motor or piggy-back style) are available from the factory as an option.
Note: 208V, 230V, 460V & 575V pumps do not have a plug installed.

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).

INTENDED METHODS OF CONNECTION

⚠ CAUTION Use with approved motor control that matches motor input in full load amperes. “UTILLISER UN DÉMARREAR APPROUVÉ CONVENANT AU COURANT Á PLEINE CHARGE DU MOTEUR.”

BJM Pumps has been evaluated for use with water or water based solutions. Please contact the manufacturer for additional information.

SINGLE PHASE WIRING INSTRUCTIONS

⚠ WARNING **FOR YOUR PROTECTION, ALWAYS DISCONNECT PUMP FROM ITS POWER SOURCE BEFORE HANDLING.** Single phase pumps are supplied with a three prong grounded plug to help protect you against the possibility of electrical shock. **DO NOT UNDER ANY CIRCUMSTANCES REMOVE THE GROUND PIN.** The three prong plug **must** be inserted into a mating three prong grounded receptacle. **IF** the installation does not have such a receptacle it must be changed to the proper type, wired and grounded in accordance with the National Electrical Code and all applicable local codes and ordinances.

⚠ CAUTION **“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.

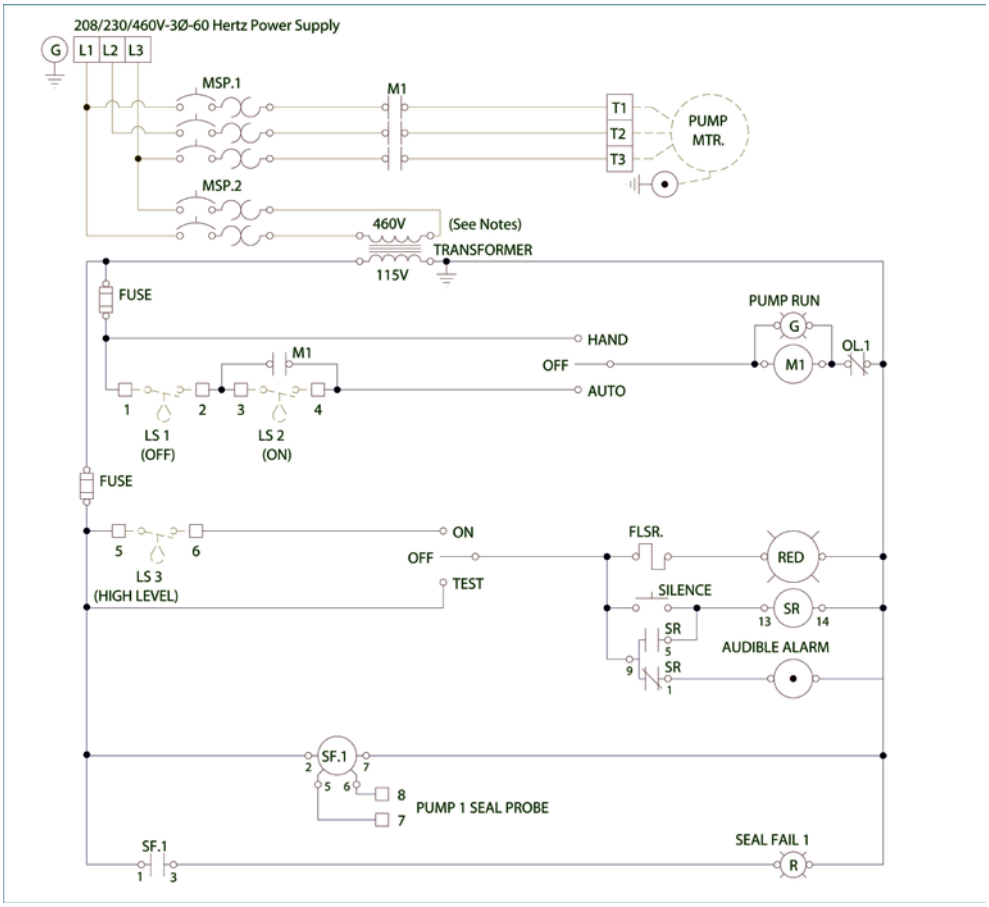
THREE PHASE WIRING INSTRUCTIONS

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

⚠ CAUTION **“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.

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.



Typical 3 phase Auto Control 1

Before installing a pump, check the pump rotation to insure that wiring has been connected properly to power source, and that the green lead of power cord (See wiring diagram), is connected to a valid ground, 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.

⚠ DANGER **DO NOT PLACE HANDS IN PUMP SUCTION WHILE CHECKING MOTOR ROTATION. TO DO SO WILL CAUSE SEVERE PERSONAL INJURY.**

BJM three phase pumps have integral motor overload protection. BJM recommends that all three phase pumps using a motor starting device also incorporate 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

⚠WARNING **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. Pump overheated or temperature of liquid exceeds pump operating temperature.

Warning: Pump will restart automatically when motor over-heat protection switch cools.

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**.**
To service or repair your pump, please contact your local BJM Pumps distributor. Service should only be performed by a qualified electrician.

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.

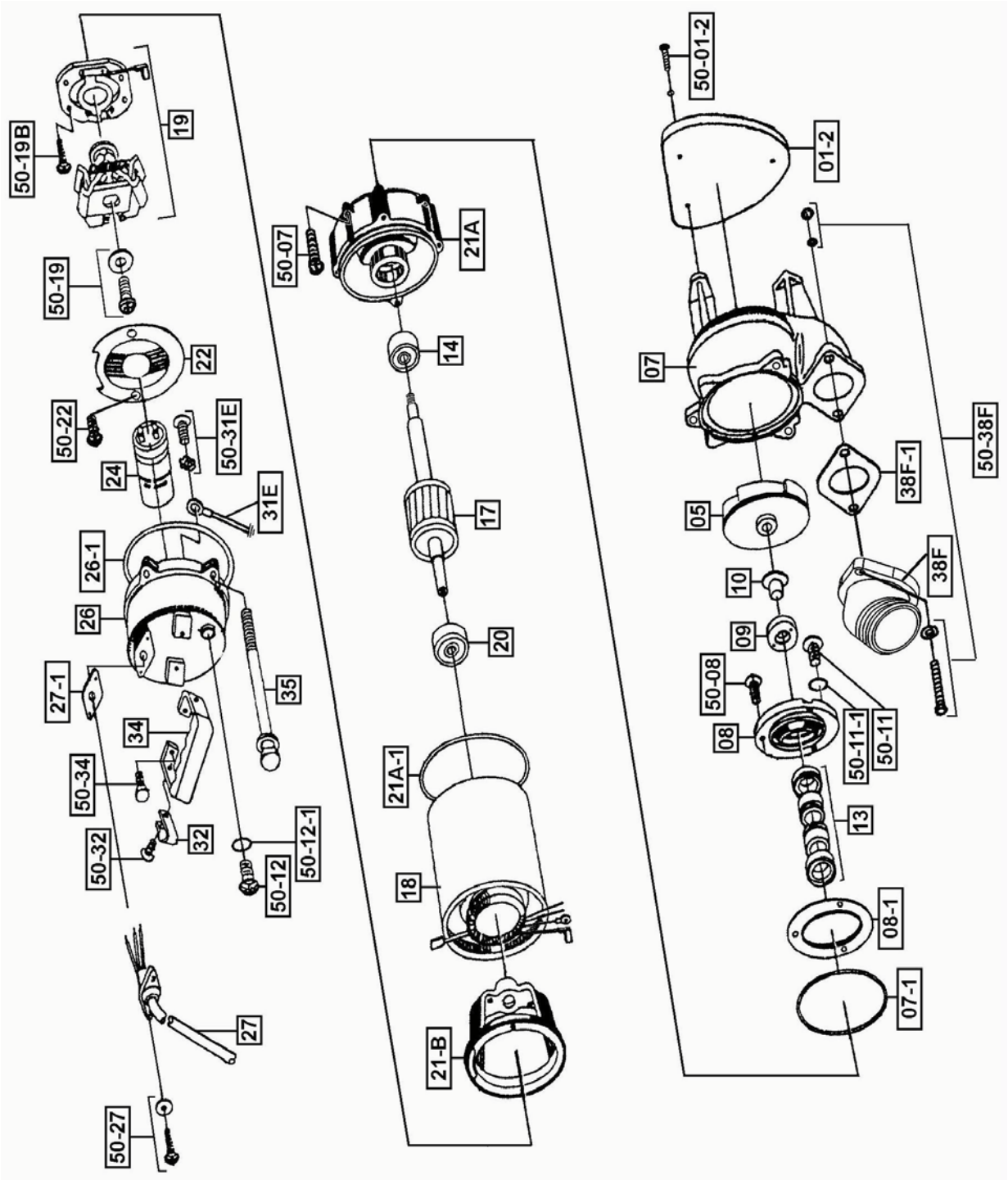
1) Clean pump of dirt and other build up.
2) Check condition of oil around the shaft seals.
3) Check hydraulic parts: check for wear.
4) Inspect power cable. Make sure that it is free of nicks or cuts.

CHANGING SEAL OIL

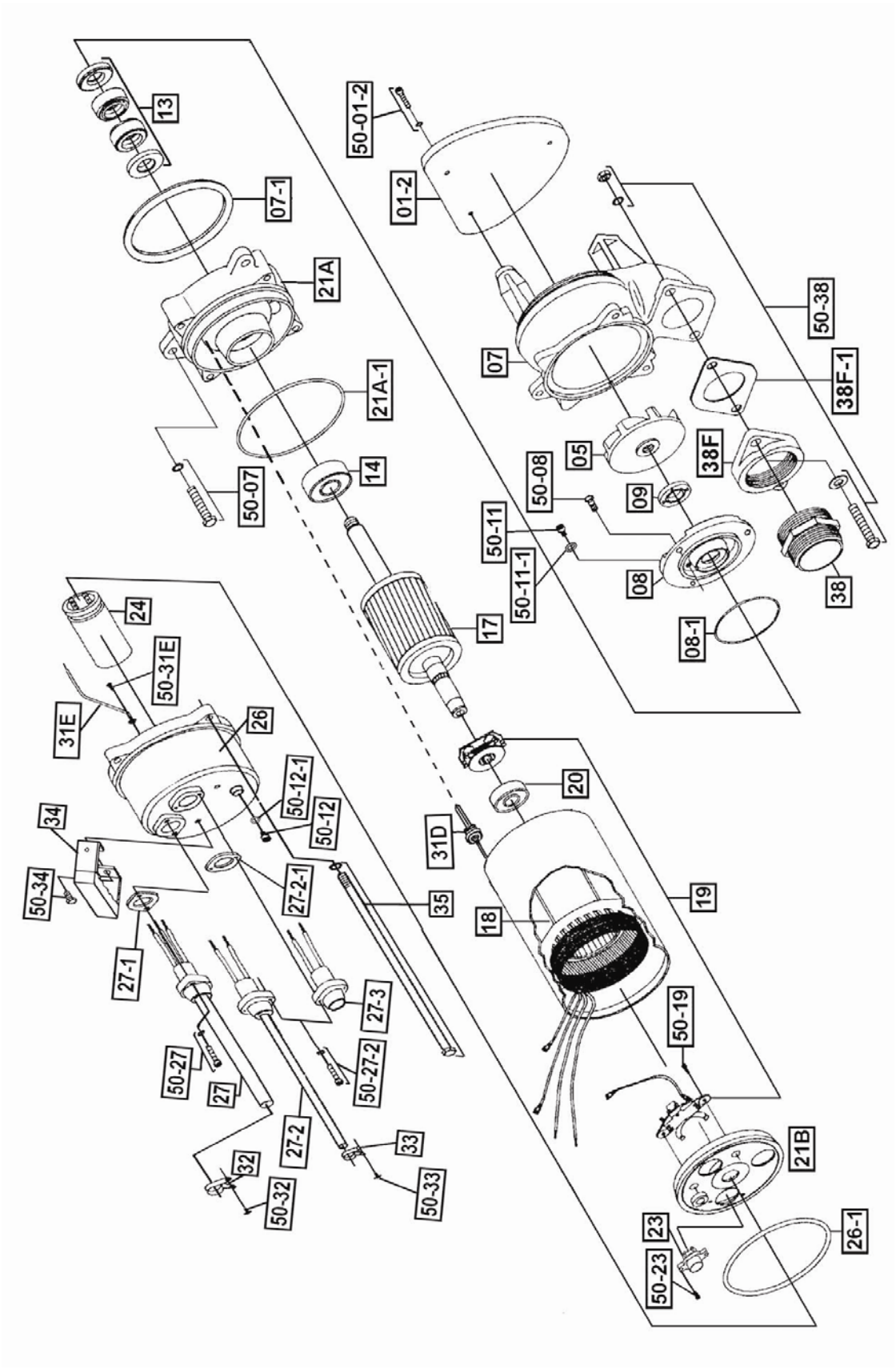
Changing the seal oil in the SV series pumps is very easy.

1) Make sure that the pump cable is disconnected from the power source.
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) Reassemble the pump.

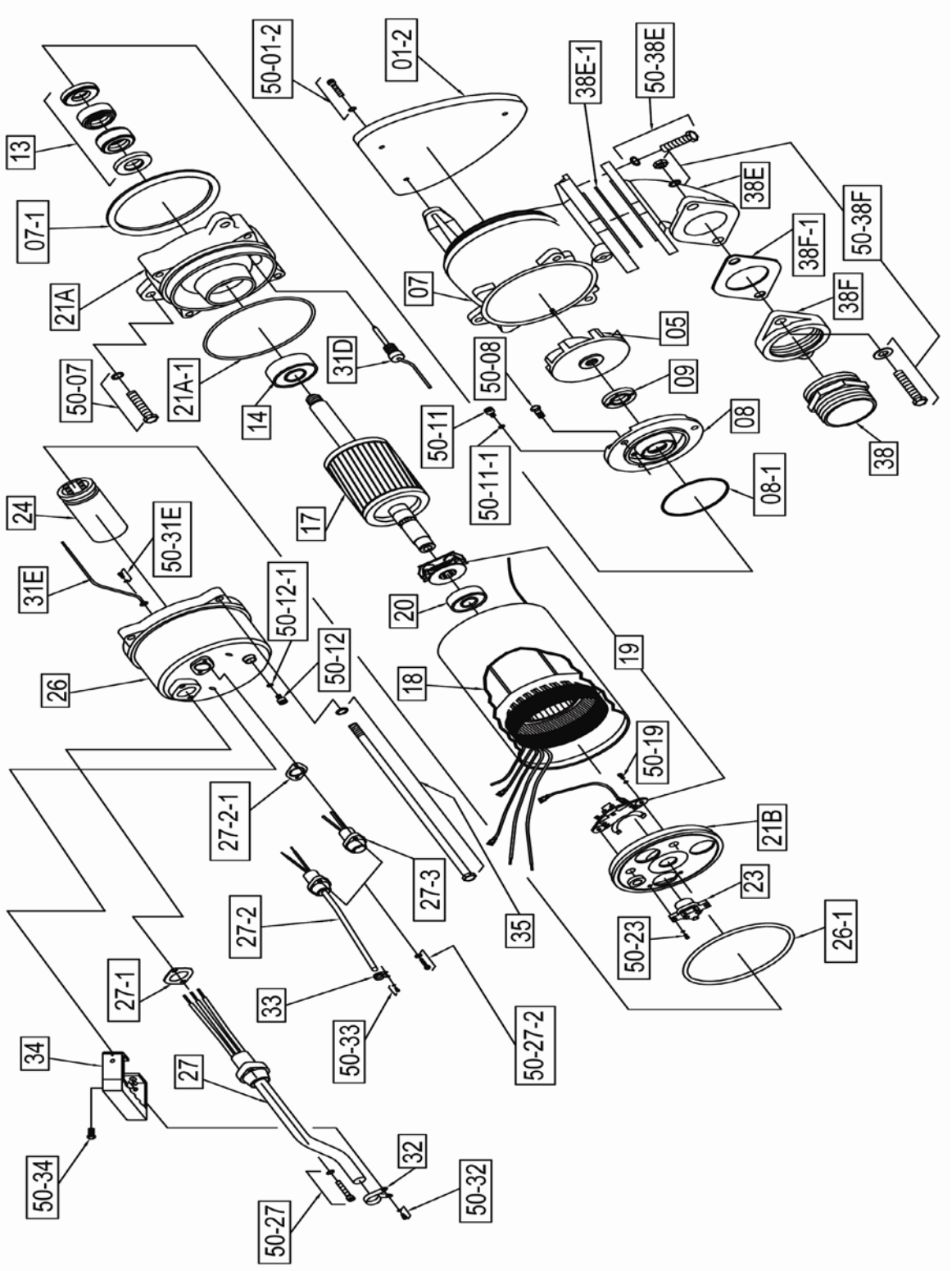
EXPLODED VIEW OF SV400



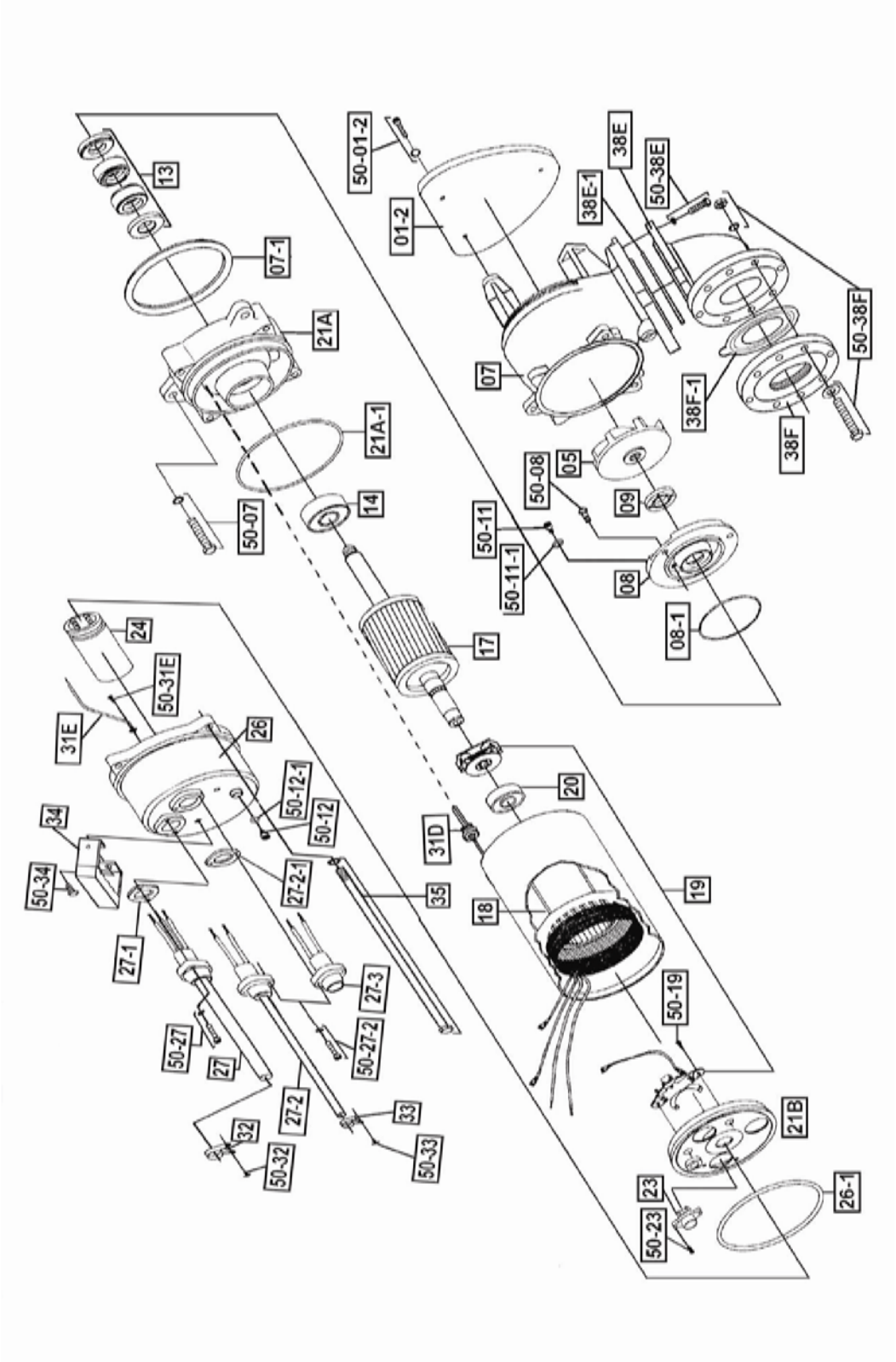
EXPLODED VIEW OF SV750



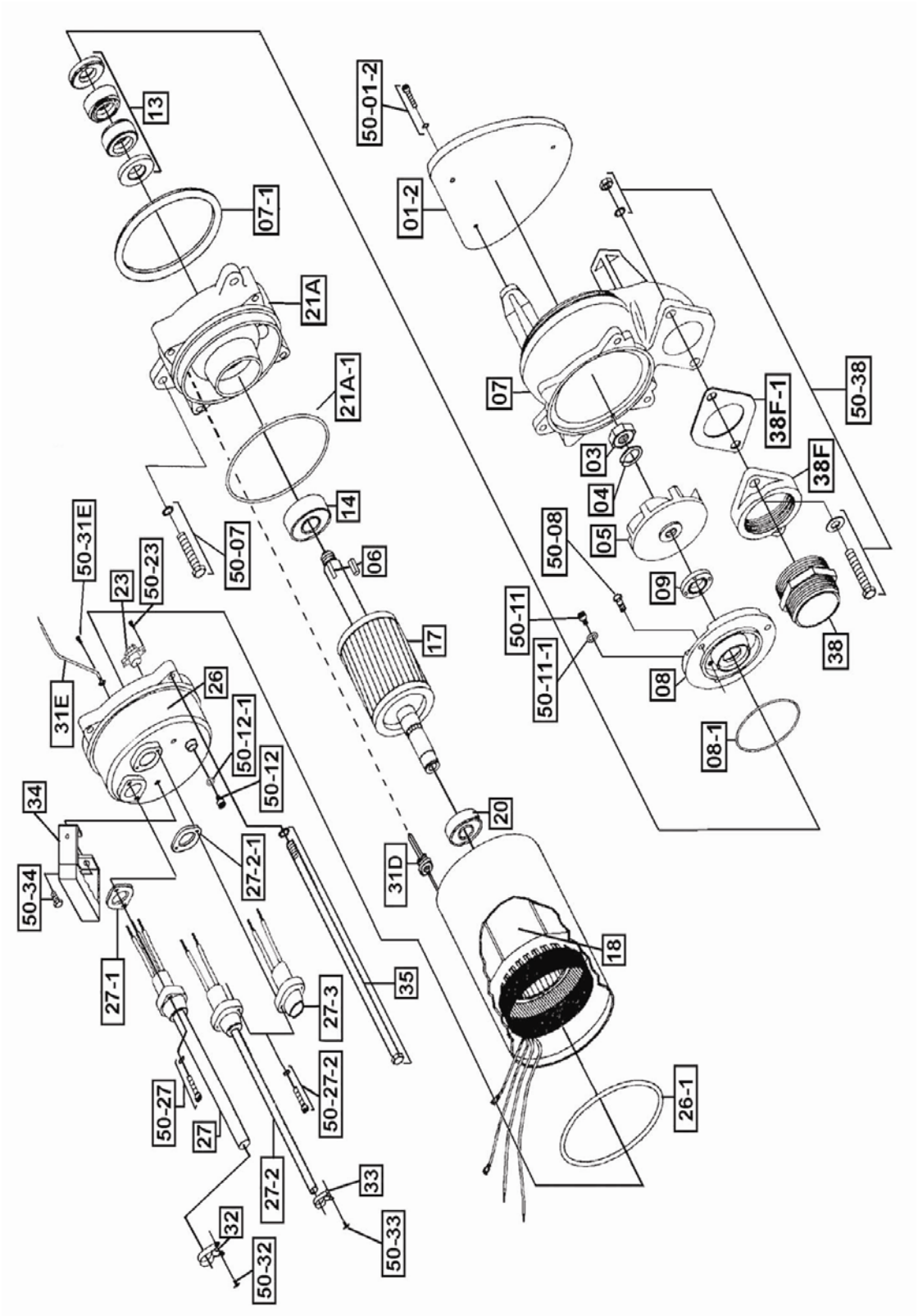
EXPLODED VIEW OF SV750C



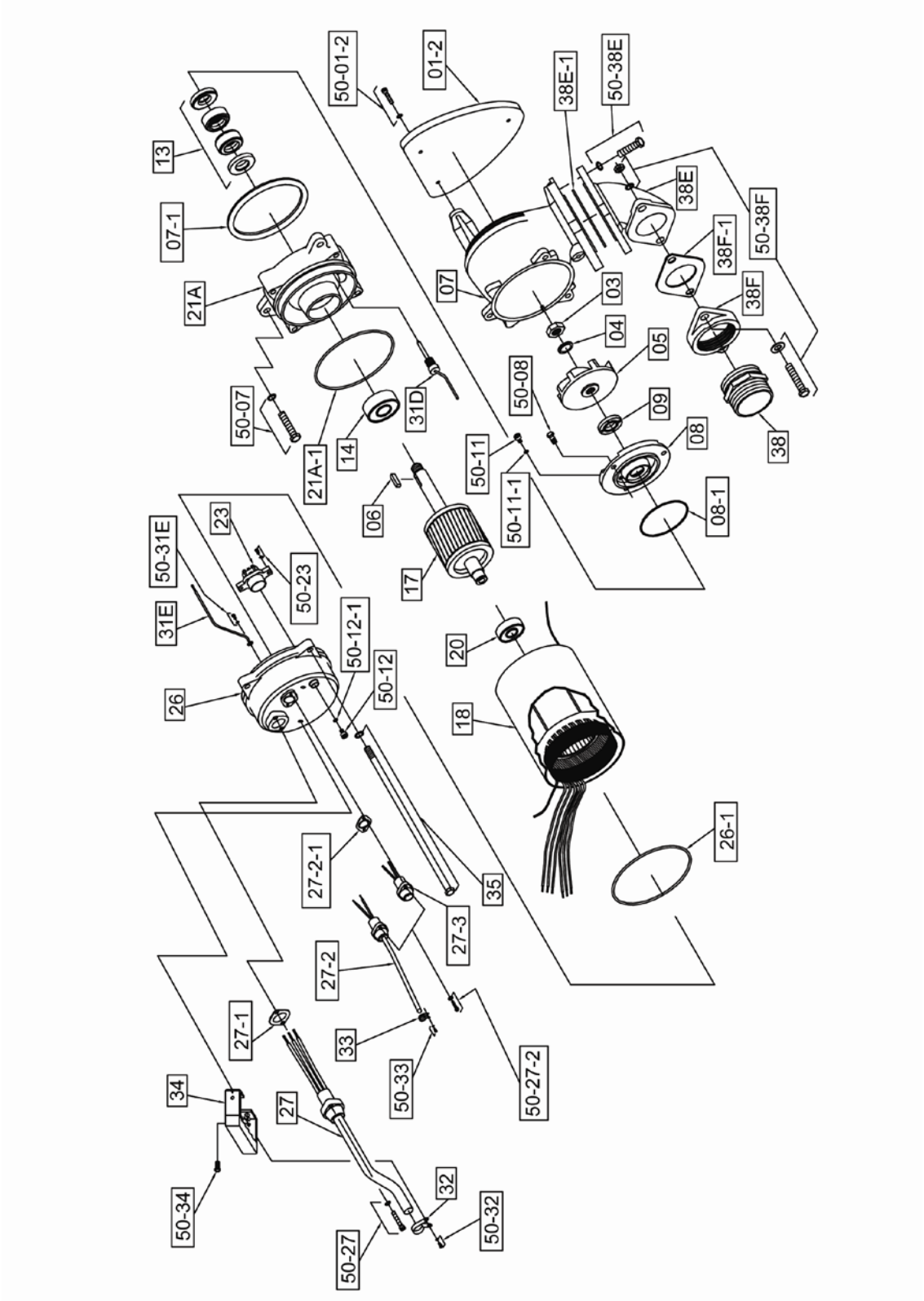
EXPLODED VIEW OF SV1500



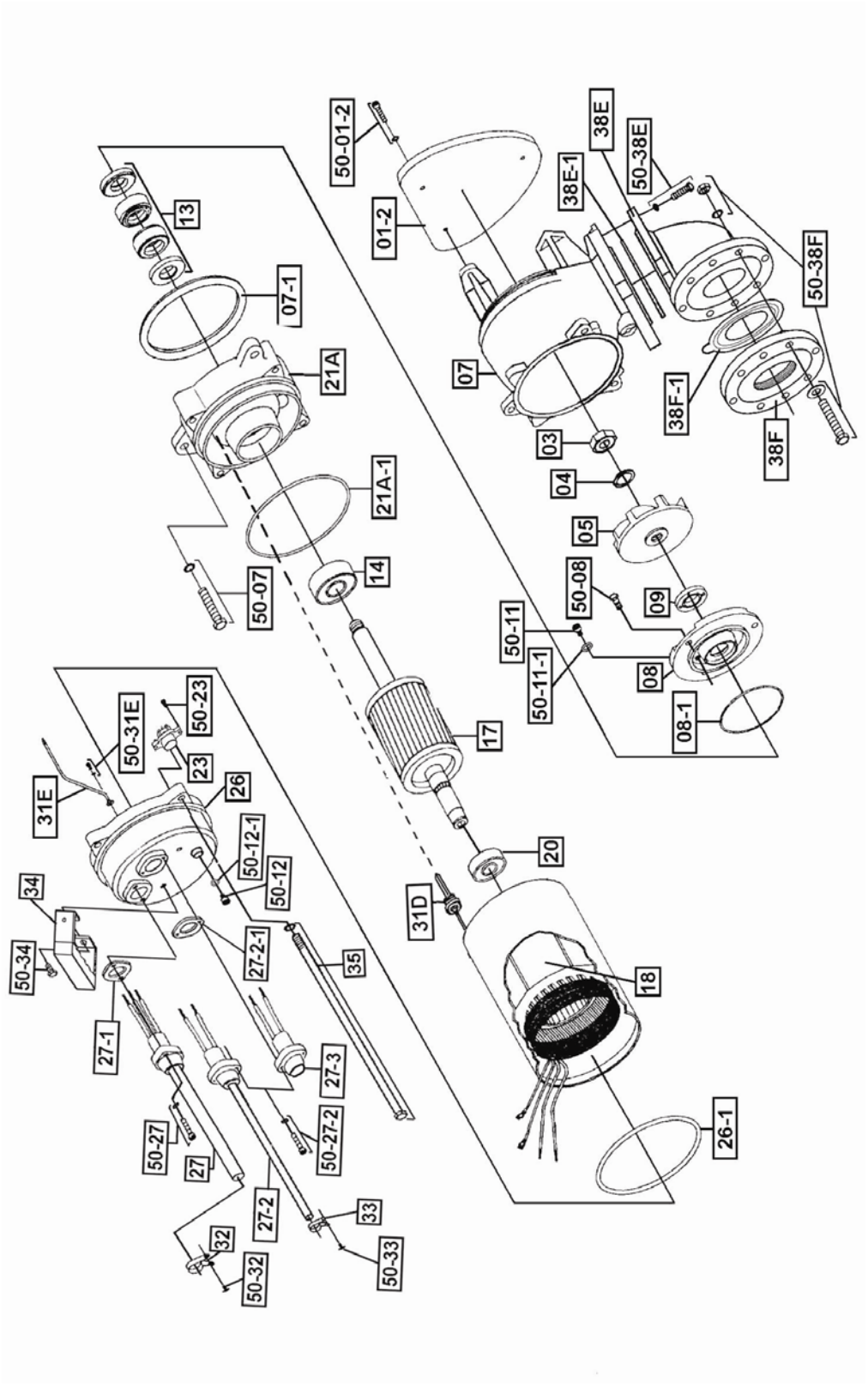
EXPLODED VIEW OF SV08



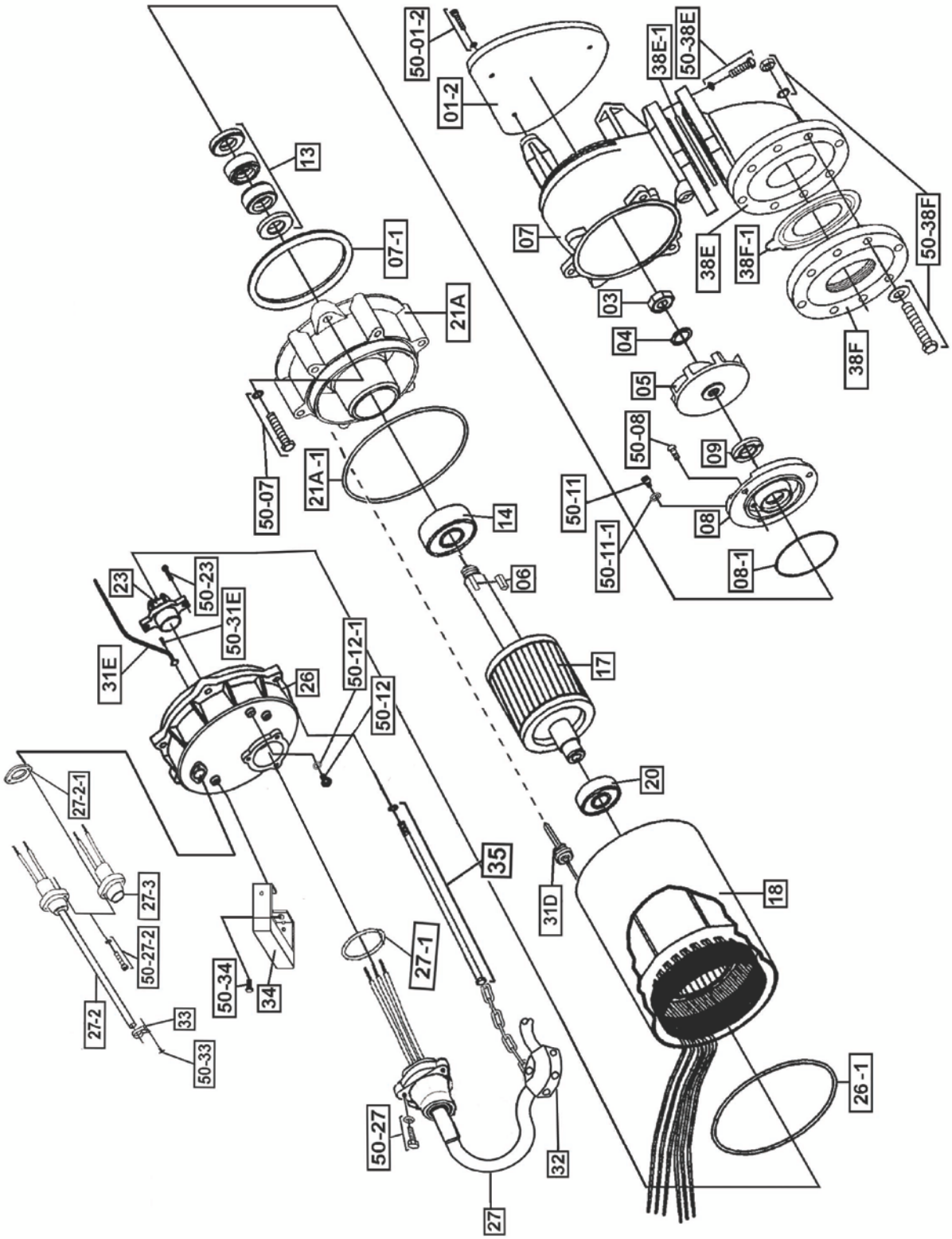
EXPLODED VIEW OF SV08C



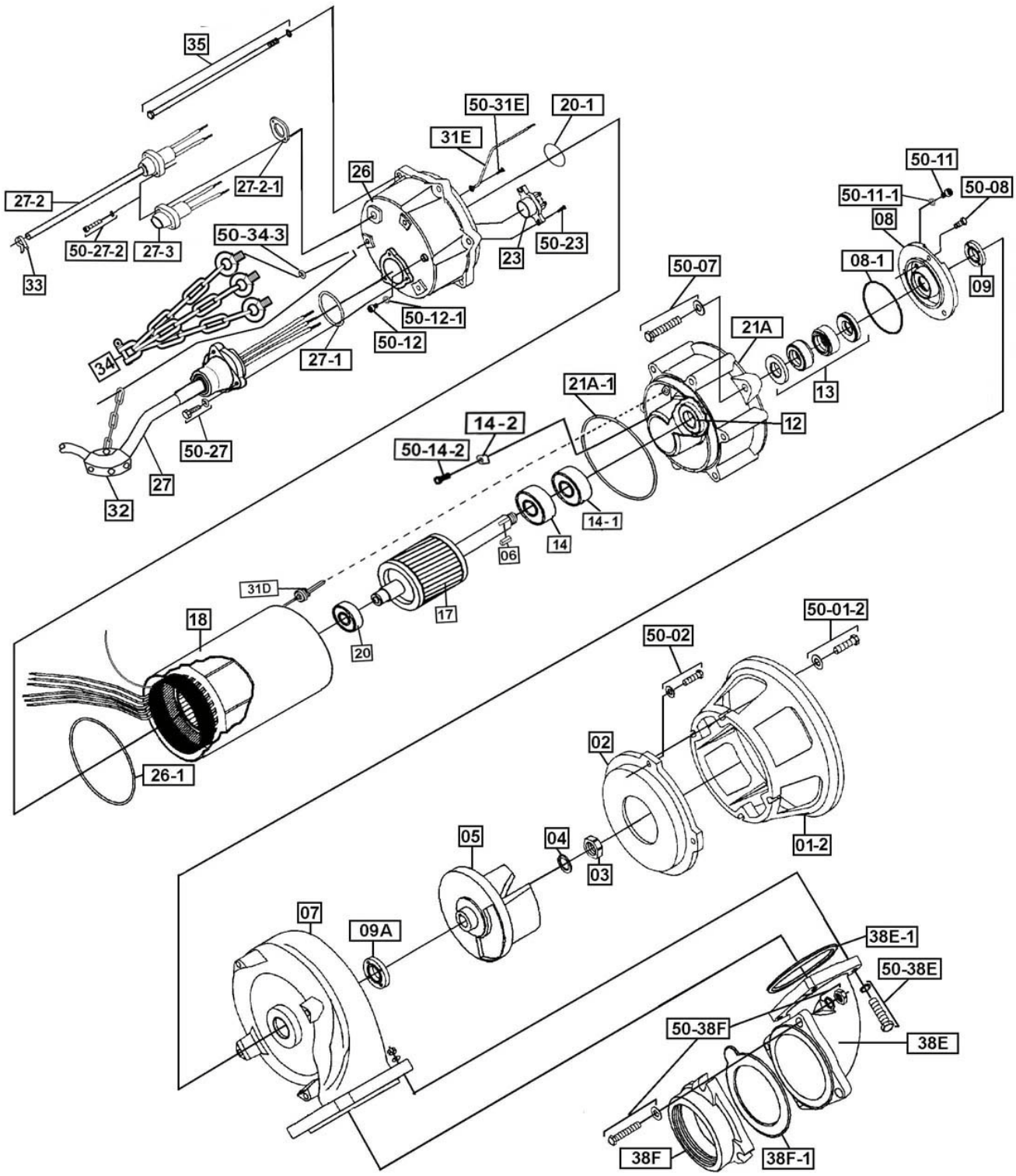
EXPLODED VIEW OF SV15



EXPLODED VIEW OF SV22, SV37



EXPLODED VIEW OF SV55, SV75

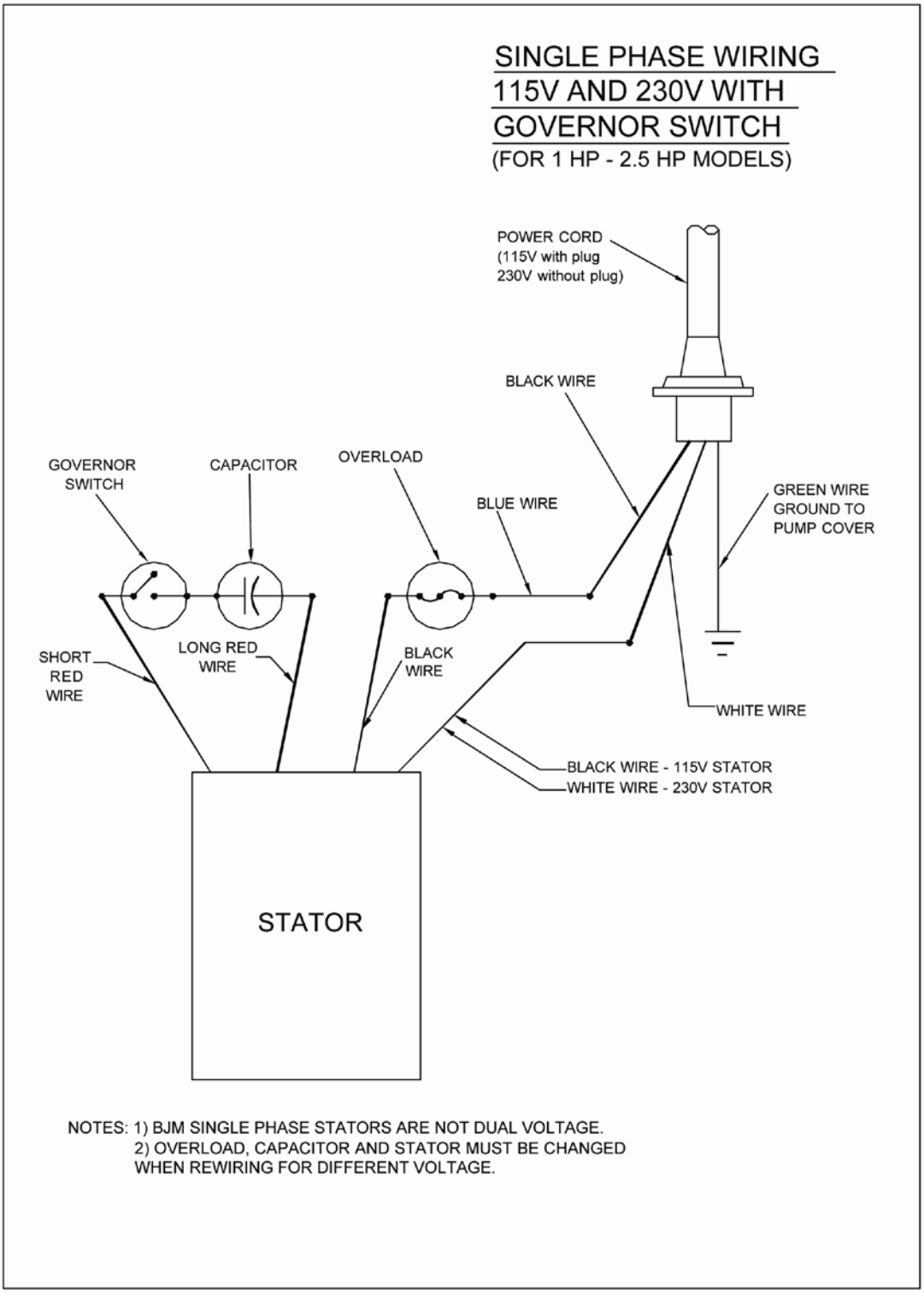


SV SERIES PARTS LIST

	Pump Model	SV250	SV400	SV750	SV750C	SV1500	SV08	SV08C	SV15	SV22	SV37	SV55	SV75
Pos. No.	Part Description	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #
01-2	Bottom Plate	151	151	154	154	152	154	154	152	152	152	153	153
03	Impeller Nut	301	-	-	-	-	305	305	305	305	305	306C	306C
04	Washer	-	-	-	-	-	405C	405C	405C	405C	405C	403C	403C
05	Impeller Vortex	509	565	566	566	567	570	570	571	572	573	580	581
06	Impeller Key	-	-	-	-	-	602	602	602	602	602	603	603
07	Pump Housing w/ Bottom Plate	730	730	733	733-2	734	733	733-2	734	735	735	744	744
07-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	-	-
08	Oil Chamber Cover	800	800	810	813	810	810	813	810	822	822	824	824
08-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
09	Lip Seal Buna-N	900	900	902	902	902	902	902	902	920	920	911	911
10	Shaft Sleeve	1001	1001	-	-	-	-	-	-	-	-	-	-
12	Lip Seal Buna-N	-	-	-	-	-	-	-	-	-	-	907C	907C
13	Mechanical Seal Buna-N	1306	1306	200215	200215	200215	200215	200215	200215	200302	200302	200305	200305
14	Lower Ball Bearing	1400	1400	1401	1401	1401	1401	1401	1401	1402	1402	1405C	1405C
14-1	Lower Ball Bearing	-	-	-	-	-	-	-	-	-	-	1405C	1405C
14-2	Lower Bearing Retainer	-	-	-	-	-	-	-	-	-	-	1453	1453
17	Rotor w/ Shaft 115/ 230V, 1 PH	1707	1704	1705	1705	-	-	-	-	-	-	-	-
17	Rotor w/ Shaft 230V, 1 PH	-	-	-	-	1706	-	-	-	-	-	-	-
17	Rotor w/ Shaft, 3PH	-	-	-	-	-	1708	1708	1709	1712	1713	1732	1733
18	Stator Coil w/ Casing 115V, 1PH	1810	200509	200511	200511	-	-	-	-	-	-	-	-
18	Stator Coil w/ Casing 230V, 1PH	200646	200521	200570	200570	200514	-	-	-	-	-	-	-
18	Stator w/ Casing 208V, 3PH	-	-	-	-	-	200524	200524	200528	200540	200542	200544	-
18	Stator w/ Casing 230/460V, 3PH	-	-	-	-	-	200546	200546	200550	200614	200620	200651	200653
18	Stator w/ Casing 575V, 3PH	-	-	-	-	-	200588	200588	200592	200647	200649	200655	200657
19	Governor Switch w/ Switch Plate	-	1901	1904	1904	1904	-	-	-	-	-	-	-
20	Upper Ball Bearing	1400	1400	2002	2002	2002	2002	2002	2002	2004	2004	2005	2005
20-1	O-Ring (Kit Only)	-		-	-	-	-	-	-	-	-	Kit	Kit
21A	Oil Chamber Housing	708	708	736	736C	737	736	736C	737	738	738	739	739
21A-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
21B	Motor Cover Upper	2101	2102	2104	2104	2104	-	-	-	-	-	-	-
22	Motor Cover Plate	-	2200	-	-	-	-	-	-	-	-	-	-
23	Overload Protector 115V,1PH	-	-	2306	2306	-	-	-	-	-	-	-	-
23	Overload Protector 230V, 1PH	-	-	2314	2314	2306	-	-	-	-	-	-	-
23	Overload Protector 208V, 3PH	-	-	-	-	-	2308A	2308A	2310A	2311A	2312A	2313	-
23	Overload Protector 230V, 3PH	-	-	-	-	-	2308A	2308A	2310A	2311A	2312A	2313	2315
23	Overload Protector 460V, 3PH	-	-	-	-	-	2309	2309	2308B	2310B	2311B	2312B	2313
23	Overload Protector 575V, 3PH	-	-	-	-	-	2317	2317	2309	2308B	2310B	2311B	2312B
24	Capacitor 115V	2401	2440	2450	2450	-	-	-	-	-	-	-	-
24	Capacitor 230V	2402	2441	2451	2451	2469	-	-	-	-	-	-	-
26	Pump Top Cover	2640	2640	2651B	2651B	2651B	2670B	2670B	2670B	2681B	2681B	2672B	2672B
26-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
27	Power Cable w/ Gland-115V,1PH	2710	2710	2713	2713	-	-	-	-	-	-	-	-
27	Power Cable w/ Gland-230V, 1PH, No Plug	2710B	2710B	2713B	2713B	2713B	-	-	-	-	-	-	-

	Pump Model	SV250	SV400	SV750	SV750C	SV1500	SV08	SV08C	SV15	SV22	SV37	SV55	SV75
Pos. No.	Part Description	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #
27	Power Cable w/ Gland- 3PH	-	-	-	-	-	2722	2722	2722	2725	2726	2731	2731
27-1	O-Ring (Kit Only)	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
27-2	Oil Sensor Cable	-	-	2736	2736	2736	2736	2736	2736	2736	2736	2736	2736
27-2-1	O-Ring (Kit Only)	-	-	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit	Kit
27-3	Oil Sensor Cap	-	-	2738	2738	2738	2738	2738	2738	2738	2738	2738	2738
31D	Oil Sensor w/Wire	-	-	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	2776
32	Power Cord Line Clip	3200	3200	3200	3200	3200	3200	3200	3200	3208	3208	3208	3208
33	Oil Sensor Cord Line Clip	-	-	3203	3203	3203	3203	3203	3203	3203	3203	3203	3203
34	Handle	3420	3420	3420	3420	3420	3420	3420	3420	3420	3420	3422	3422
35	Rods Bolts	4111	4101	4103	4103	4104	4105	4105	4106	4107	4108	4109	4110
38	Discharge Nipple 2"	-	3802	3802	3802	-	3802	3802	-	-	-	-	-
38	Discharge Nipple 3"	-	-	3804	3804	3804	3804	3804	3804	3804	3804	-	-
38E	Discharge Elbow	-	-	-	3820C	3819	-	3820C	3819	3819	3819	3833	3833
38E-1	Gasket, Disch. Elbow, Buna-N	-	-	-	4072	4072	-	4072	4072	4072	4072	4073	4073
38F	Discharge Flange 2", 45°	3828	3828	-	-	-	-	-	-	-	-	-	-
38F	Discharge Flange 2"	-	3822	3809A	3809A	-	3809A	3809A	-	-	-	-	-
38F	Discharge Flange 3"	-	-	3810	3810	3851	3810	3810	3851	3851	3851	-	-
38F	Discharge Flange 4"	-	-	-	-	3852	-	-	3852	3852	3852	3835	3835
38F	Discharge Connection, 4" FNPT	-	-	3816C	3816C	-	3816C	3816C	-	-	-	-	-
38F-1	Gasket, Disch. Flange, Buna-N	4070	4070	4071	4071	4072	4071	4071	4072	4072	4072	4074	4074
50-01-2	Screw for Bottom Plate	5004	5004	5004	5004	5004	5004	5004	5004	5010	5010	5010	5010
50-07	Screw for Pump Housing	5024	5024	5076	5076	5076	5076	5076	5076	5014	5014	5014	5014
50-08	Screw for Oil Chamber Cover	5003	5003	5009	5009	5009	5009	5009	5009	5009	5009	5010	5010
50-11	Screw for Oil Fill	5008	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	Kit
50-12	Screw for Pressure Check	5008	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	Kit
50-14-2	Screw Bearing Retainer	-	-	-	-	-	-	-	-	-	-	5009	5009
50-19	Screw for Gov. Switch	-	5002	5002	5002	5002	-	-	-	-	-	-	-
50-19B	Screw for Gov. Switch Plate	-	5003	-	-	-	-	-	-	-	-	-	-
50-22	Screw for Cover Plate	-	5001	-	-	-	-	-	-	-	-	-	-
50-23	Screw for Overload	-	-	5028	5028	5028	5028	5028	5028	5028	5028	5028	5028
50-27	Screw for Power Cord	5095	5095	5004	5004	5004	5004	5004	5004	5010	5010	5010	5010
50-27-2	Screw	-	-	5004	5004	5004	5004	5004	5004	5004	5004	5004	5004
50-31E	Screw for Ground Wire	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000
50-32	Screw for Line Clip	5001	5001	5001	5001	5001	5001	5001	5001	-	-	-	-
50-33	Screw for Line Clip	-	-	5001	5001	5001	5001	5001	5001	5001	5001	-	-
50-34	Bolt for Handle	5009	5009	5009	5009	5009	5009	5009	5009	5009	5009	-	-
50-34-1	Bolt for Handle w/ Cable Chain	-	-	-	-	-	-	-	-	-	-	5013	5013
50-34-2	Bolt for Handle	-	-	-	-	-	-	-	-	-	-	5082	5082
50-34-3	Lock Washer	-	-	-	-	-	-	-	-	-	-	402	402
50-38E	Bolt for Discharge Elbow	-	-	-	5057	5057	-	5057	5057	5057	5057	5079	5079
50-38F	Bolt for Discharge Flange	5015	5015	5041	5041	5067	5041	5041	5067	5067	5067	5067	5067
	O-Ring Kit - Buna N	4004	4004	4040	4040	4040	4005	4005	4005	4006	4006	4048	4048

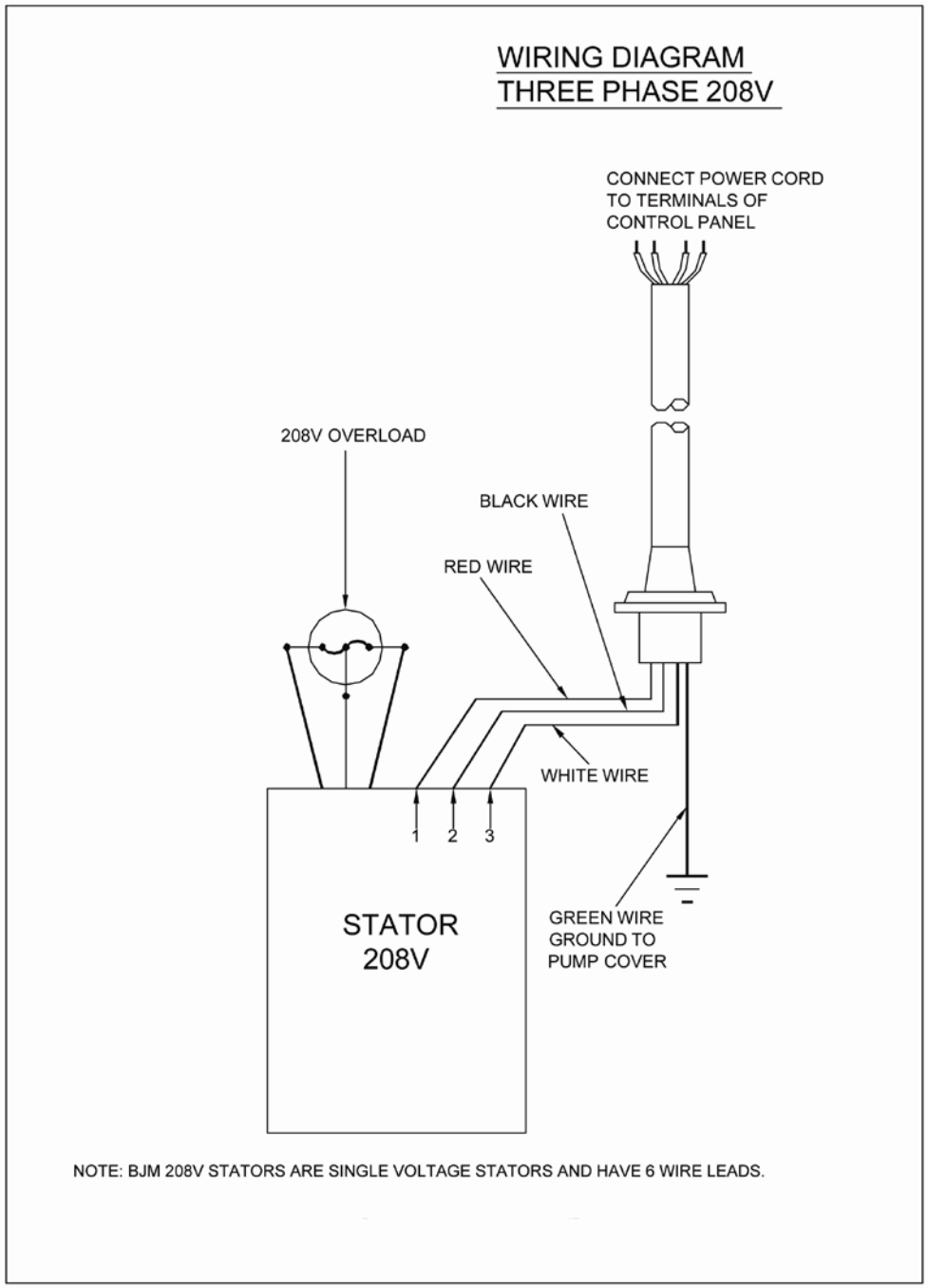
SINGLE PHASE WIRING DIAGRAM 115V & 230V W/GOVERNOR SWITCH



MODELS SV400, SV750, SV750C, SV1500

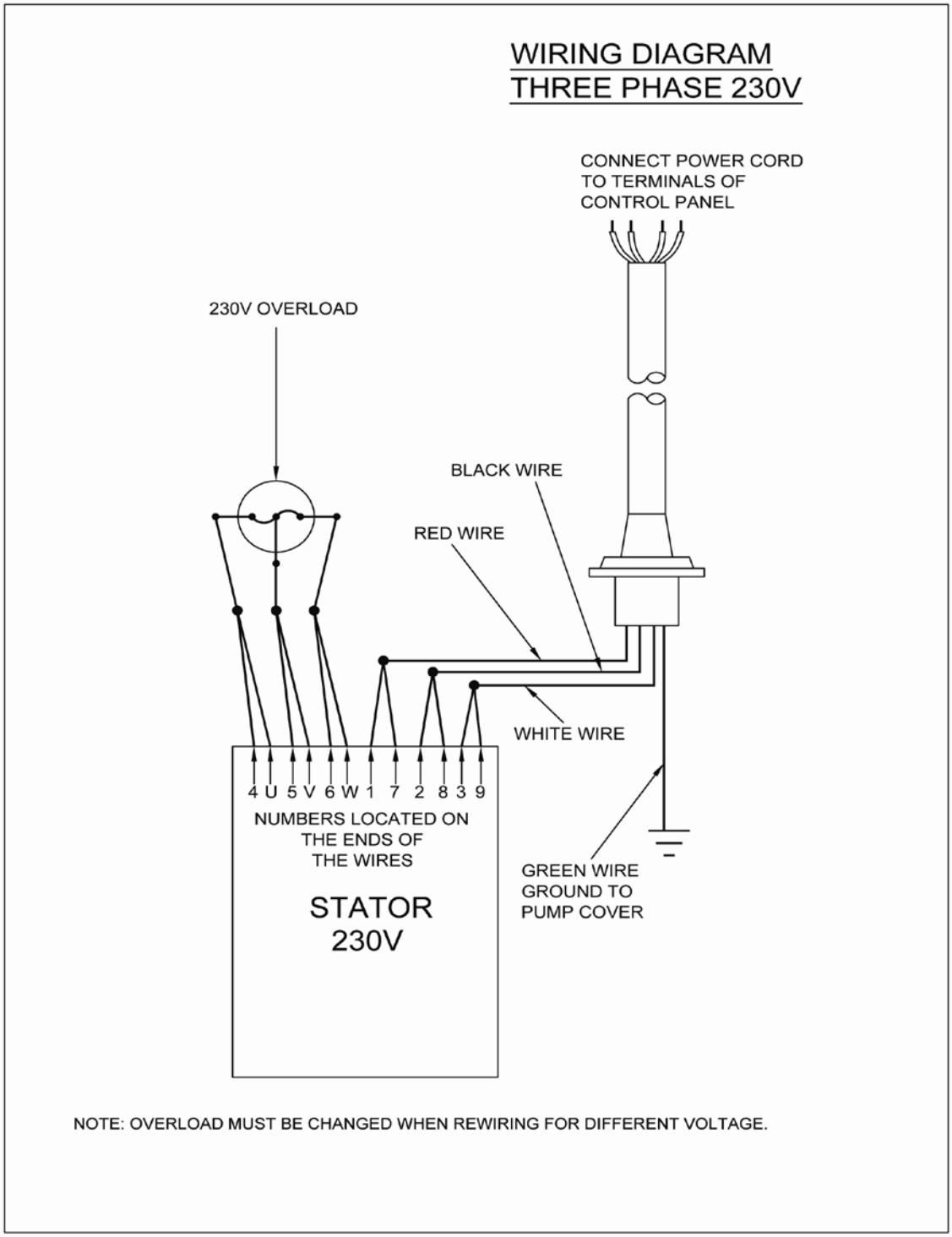
THREE PHASE WIRING DIAGRAMS

208V



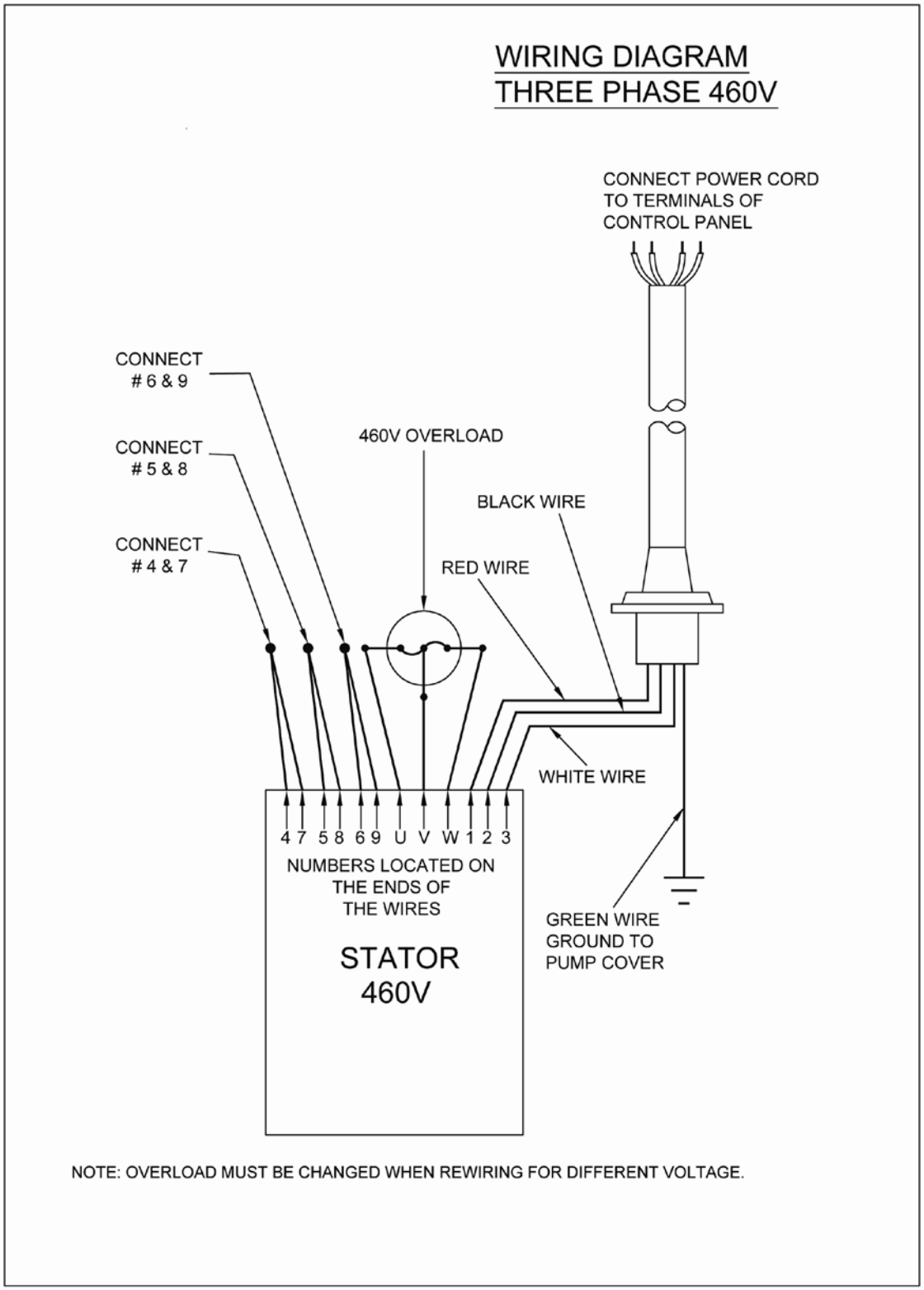
MODELS SV08, SV08C, SV15, SV22, SV37, SV55

230V

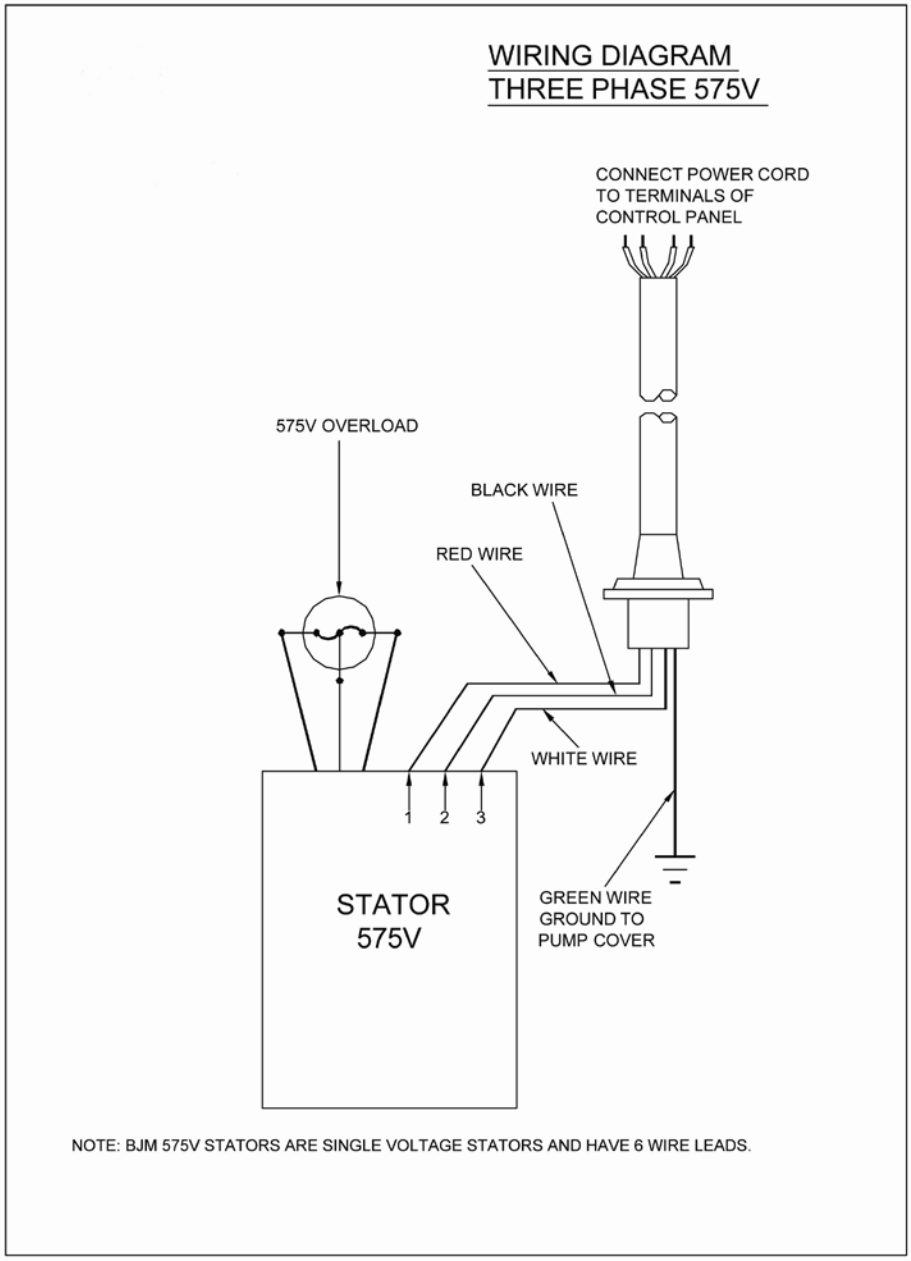


MODELS SV08, SV08C, SV15, SV22, SV37, SV55, SV75

460V


WIRING DIAGRAM
THREE PHASE 460V
CONNECT POWER CORD
TO TERMINALS OF
CONTROL PANEL
CONNECT
6 & 9
CONNECT
5 & 8
CONNECT
4 & 7
460V OVERLOAD
BLACK WIRE
RED WIRE
WHITE WIRE
4 7 5 8 6 9 U V W 1 2 3
NUMBERS LOCATED ON
THE ENDS OF
THE WIRES
STATOR
460V
GREEN WIRE
GROUND TO
PUMP COVER
NOTE: OVERLOAD MUST BE CHANGED WHEN REWIRING FOR DIFFERENT VOLTAGE.

575V



MODELS SV08, SV08C, SV15, SV22, SV37, SV55, SV75

Seal Minder™ INFORMATION

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™ 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 connected to a control panel, can help indicate seal failure. The Seal Minder™ requires a seal fail circuit 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 fail relay or a stand alone seal fail panel. Please contact BJM for more information on Seal Minder™ alarm boxes & control panels, or visit www.bjmpumps.com.

The Seal Minder™ cord only has 2 leads (1=black, 1=white). The power cord is much larger in diameter & has 3, 4, or 5 leads depending on model pump, voltage & phase.
The black lead on the Seal Minder™ cord should be connected to the panel "terminal" going to the relay ground. (NOTE: Do not connect the black wire to the panel ground screw). The white lead on the Seal Minder™ cord should be connected to the panel "terminal" going to the probe. For proper wiring, please see detailed panel information.

Panel manufacturers can incorporate Seal Minder™ option. BJM has a stand alone, Seal Minder™ panel for both simplex(P/N MSP8350A) and duplex(P/N MSP8350B) systems. For more information contact BJM Pumps, LLC or visit us online at www.bjmpumps.com.

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

If the operator does not use the Seal Minder™:

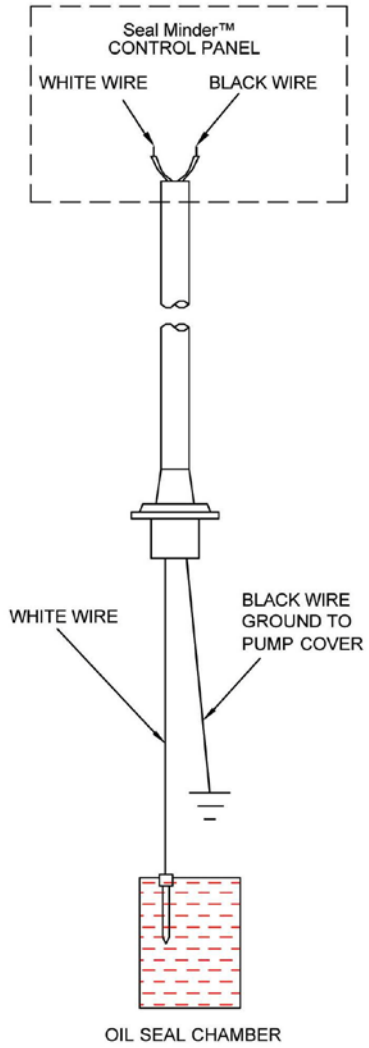
1) The recommended procedure is to take the Seal Minder™ cord off the pump and seal with a BJM Seal Minder™ cap (part# M02738) & gasket (part# M05121 for Buna, part# M05121V for Viton). This should be done by an authorized BJM service center or distributor as not to void warranty. Detailed instruction 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 & out of the liquid.(See next page for detailed drawing)

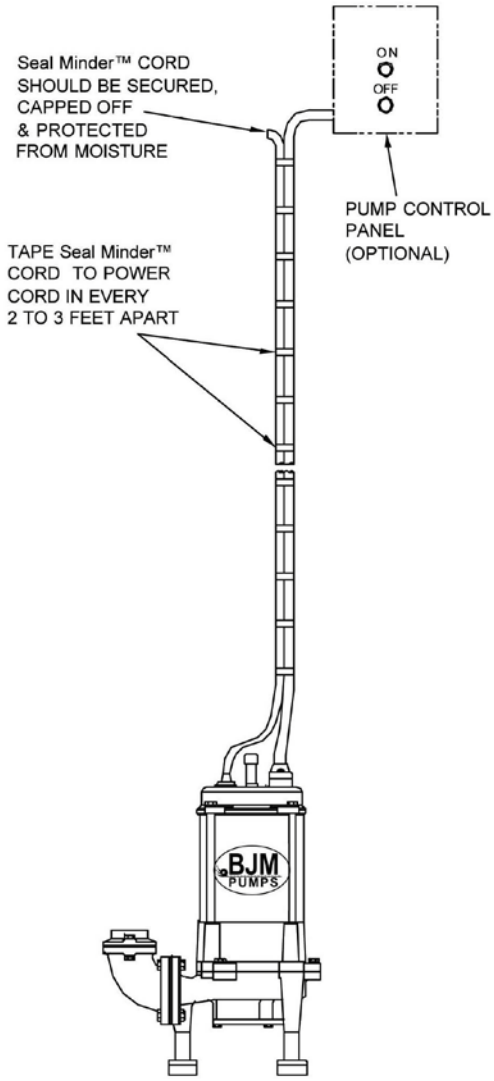
BJM Pumps, LLC - 123 SPENCER PLAIN ROAD, OLD SAYBROOK, CT 06475 - PHONE: 860-399-5937 - FAX: 860-399-7784

Seal Minder™ DIAGRAM

(Seal Minder™ REQUIRES A SEAL FAIL CIRCUIT IN CONTROL PANEL FOR WARNING SIGNAL)



ALTERNATE METHOD OF SECURING Seal Minder™ IF NOT USED



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

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	Date of Installation:
Dealer	Dealer Phone ( )
Date of Purchase	
Model	Serial No
Voltage Phase	Hertz HP
Does impeller turn freely by hand?	☐ Yes ☐ No
Condition of Equipment	☐ New ☐ Good ☐ Fair ☐ Poor
Condition of Cable Jacket	☐ New ☐ Good ☐ Fair ☐ Poor
Rotation: Direction of Impeller Rotation (viewed from bottom) (Use C/W for clockwise, CC/W for counterclockwise): _____	
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	
MEG OHM CHECK OF INSULATION Red to ground_____ White to ground_____ Black to ground_____	
Condition of location at start-up	☐ Dry ☐ Wet ☐ Muddy
Was equipment stored If YES, length of storage:	☐ Yes ☐ No.
Liquid being pump	
Debris in bottom of station?	☐ Yes ☐ No

START-UP REPORT FORM

Are guide rails vertical?	☐ Yes	☐ No
Is base elbow installed level?	☐ Yes	☐ No
Liquid level controls: Model_____		
Is control installed away from turbulence?	☐ Yes	☐ No

Float Operation Check

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).

☐ Check here if using manual on/off only.

Does liquid level ever drop below volute top?	☐ Yes	☐ No
Control Panel MFG & model no.		
Number of pumps operated by control panel		

NOTE: At no time should hole be made in top of control panel, unless proper sealing devices are utilized.

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?	☐ Yes	☐ No
Are all pump connections tight?	☐ Yes	☐ No
Is the interior of the panel dry?	☐ Yes ☐ No If No, correct moisture problem.	

Electrical readings

SINGLE PHASE

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

THREE PHASE

Voltage supply at panel line connection, pump off

L1-L2	L2-L3	L3-L1

Voltage supply at panel line connection, pump on

START-UP REPORT FORM

L1-L2	L2-L3	L3-L1
Amperage load connection, pump on		
L1	L2	L3

FINAL CHECK		
Is pump secured properly?	☐ Yes	☐ No
Was pump checked for leaks?	☐ Yes	☐ No
Do check valves operate properly?	☐ Yes	☐ No
Flow: Do pumps appear to operate at proper rate?	☐ Yes	☐ No
Noise level:	Acceptable ☐	Unacceptable ☐

Comments:

Installed by:

Company:

Person:

Date:

NOTES:

123 Spencer Plain Road • PO Box 1138 • Old Saybrook, CT 06475, USA
• Phone: (860) 399-5937 • Fax: (860) 399-7784
Email: sales@bjmpumps.com • Web Site: www.bjmpumps.com