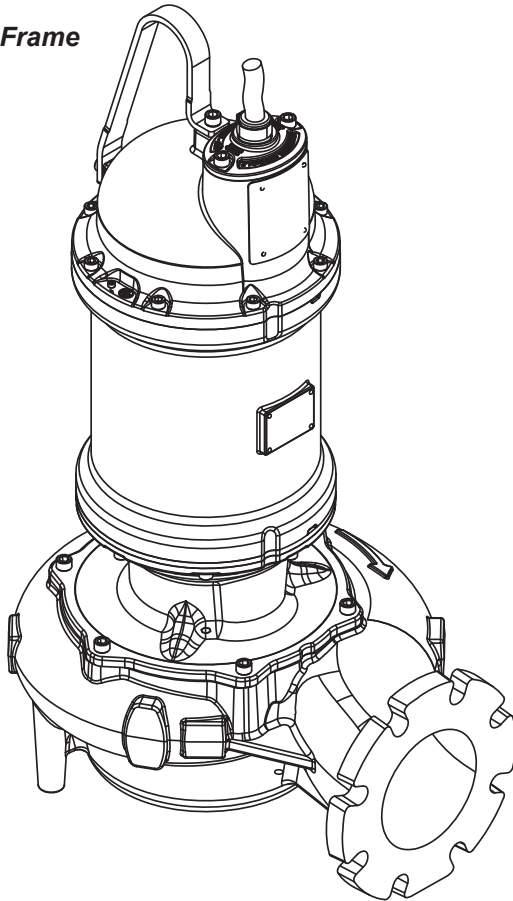


# DEMING®

## INSTALLATION and OPERATION MANUAL X-Pruf® Demersible Chopper Pump

#3 Frame



**4M**  
Monovane Pumps  
7.5HP, 1750RPM

**4ML**  
Monovane Pumps  
7.5 - 15HP, 1750RPM

**4MM**  
Monovane Pumps  
15 - 30HP, 1750RPM  
7.5 - 15HP, 1150RPM

**4MB**  
Monovane Pumps  
15 - 30HP, 1750RPM

**4MH**  
Monovane Pumps  
30HP, 1750RPM  
15 - 20HP, 1150RPM

**4MHA**  
Monovane Pumps  
10 - 20HP, 1150RPM

**4D**  
Dual Vane Pumps  
7.5HP, 1750RPM

**4DM**  
Dual Vane Pumps  
7.5 - 20HP, 1750RPM  
7.5HP, 1150RPM

**4DH**  
Dual Vane Pumps  
15 - 30HP, 1750RPM  
7.5 - 20HP, 1150RPM

**6ML**  
Monovane Pumps  
20 - 30HP, 1750RPM  
7.5 - 10HP, 1150RPM

**6MM**  
Monovane Pumps  
30HP, 1750RPM  
7.5 - 20HP, 1150RPM

**6MH**  
Monovane Pumps  
15 - 20HP, 1150RPM

**6DL**  
Dual Vane Pumps  
15 - 30HP, 1750RPM  
7.5 - 10HP, 1150RPM

**6D**  
Dual Vane Pumps  
25 - 30HP, 1750RPM  
7.5 - 20HP, 1150RPM

**8D**  
Dual Vane Pumps  
25 - 30HP, 1750RPM  
10 - 20HP, 1150RPM

This product may be covered by one or more of the following patents and other patent(s) pending: US Patent 7,931,473, NZ DSN NO. 424412, NZ DSN NO. 424413, AUS DSN NO. 201812608, AUS DSN NO. 201812609, EU Design Reg. 005293040-0001

These pumps are classified as a Class I Division 1 Groups C&D T4 Explosion-Proof by CSA to NEC and CEC specifications. Opening the motor, including maintenance of the upper mechanical seal, must be performed by CP&S to maintain the certification. Internal maintenance performed by non-certified personnel will void the explosion-proof rating

**IMPORTANT!**

*Read all instructions in this manual before operating pump.  
As a result of Crane Pumps & Systems, Inc., constant product improvement program,  
product changes may occur. As such Crane Pumps & Systems reserves the right to  
change product without prior written notification.*

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**HYDRAULIC INSTITUTE**  
PROUD MEMBER

**SWPA**  
MEMBER

Form No. 133602S-Rev. H

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# SAFETY FIRST!

Please Read This Before Installing Or Operating Pump.  
This information is provided for **SAFETY and to PREVENT EQUIPMENT PROBLEMS**. To help recognize this information, observe the following symbols:



**IMPORTANT!** Warns about hazards that can result in personal injury or Indicates factors concerned with assembly, installation, operation, or maintenance which could result in damage to the machine or equipment if ignored.

**CAUTION !** Warns about hazards that can or will cause minor personal injury or property damage if ignored. Used with symbols below.

**WARNING !** Warns about hazards that can or will cause serious personal injury, death, or major property damage if ignored. Used with symbols below.



*Hazardous fluids can cause fire or explosions, burns or death could result.*



*Extremely hot - Severe burnes can occur on contact.*



*Biohazard can cause serious personal injury.*



*Hazardous fluids can Hazardous pressure, eruptions or explosions could cause personal injury or property damage.*



*Rotating machinery Amputation or severe laceration can result.*



*Hazardous voltage can shock, burn or cause death.*

Only qualified personnel should install, operate and repair pump. Any wiring of pumps should be performed by a qualified electrician.



**WARNING !** - To reduce risk of electrical shock, pumps and control panels must be properly grounded in accordance with the National Electric Code (NEC) or the Canadian Electrical Code (CEC) and all applicable state, province, local codes and ordinances.

**WARNING!** - To reduce risk of electrical shock, always disconnect the pump from the power source before handling or servicing. Lock out power and tag.



**WARNING!** Operation against a closed discharge valve will cause premature bearing and seal failure on any pump, and on end suction and

self priming pump the heat build may cause the generation of steam with resulting dangerous pressures. It is recommended that a high case temperature switch or pressure relief valve be installed on the pump body.



**CAUTION!** Pumps build up heat and pressure during operation-allow time for pumps to cool before handling or servicing.



**WARNING!** - **DO NOT** pump hazardous materials (flammable, caustic, etc.) unless the pump is specifically designed and designated to handle them.



Do not block or restrict discharge hose, as discharge hose may whip under pressure.



**WARNING!** - **DO NOT** wear loose clothing that may become entangled in the impeller or other moving parts.

**WARNING!** - Keep clear of suction and discharge openings. **DO NOT** insert fingers in pump with power connected.



Always wear eye protection when working on pumps.



Make sure lifting handles are securely fastened each time before lifting. **DO NOT** operate pump without safety devices in place. Always replace safety devices that have been removed during service or repair. Secure the pump in its operating position so it can not tip over, fall or slide.

**DO NOT** exceed manufacturers recommendation for maximum performance, as this could cause the motor to overheat.

**DO NOT** remove cord and strain relief. Do not connect conduit to pump.



**WARNING!** Cable should be protected at all times to avoid punctures, cut, bruises and abrasions - inspect frequently. Never handle connected power cords with wet hands.

**WARNING!** To reduce risk of electrical shock, all wiring and junction connections should be made per the NEC or CEC and applicable state or province and local codes. Requirements may vary depending on usage and location.

**WARNING!** Submersible Pumps are not approved for use in swimming pools, recreational water installations, decorative fountains or any installation where human contact with the pumped fluid is common.



**WARNING!** Products Returned Must Be Cleaned, Sanitized, Or Decontaminated As Necessary Prior To Shipment, To Insure That Employees Will Not Be Exposed To Health Hazards In Handling Said Material. All Applicable Laws And Regulations Shall Apply.



**IMPORTANT!** - Crane Pumps & Systems, Inc. is not responsible for losses, injury, or death resulting from a failure to observe these safety precautions, misuse or abuse of pumps or equipment.

## SECTION A: GENERAL INFORMATION

### A-1) To the Purchaser:

Congratulations! You are the owner of one of the finest pumps on the market today. CP&S pumps are products engineered and manufactured of high quality components. Over one hundred years of pump building experience along with a continuing quality assurance program combine to produce a pump which will stand up to the toughest applications. This manual will provide helpful information concerning installation, maintenance, and proper service guidelines.

### A-2) Receiving:

Upon receiving the pump, it should be inspected for damage or shortages. If damage has occurred, file a claim immediately with the company that delivered the pump. **MAKE CERTAIN TO RETAIN THIS MANUAL!**

### A-3) Storage:

**Short Term-** CP&S Pumps are manufactured for efficient performance following short inoperative periods in storage. For best results, pumps can be retained in storage, as factory assembled, in a dry atmosphere with constant temperatures for up to six (6) months.

**Long Term -** Any length of time exceeding six (6) months, but not more than twenty-four (24) months. The unit should be stored in a temperature controlled area, a roofed over walled enclosure that provides protection from the elements (rain, snow, wind-blown dust, etc.), and whose temperature can be maintained between +40 deg. F and +120 deg. F. (4.4 - 49°C). Pump should be stored in its original shipping container. On initial start up, rotate impeller by hand to assure seal and impeller rotate freely. If it is required that the pump be installed and tested before the long term storage begins, such installation will be allowed provided:

- 1.) The pump is not installed under water for more than one (1) month.
- 2.) Immediately upon satisfactory completion of the test, the pump is removed, thoroughly dried, repacked in the original shipping container, and placed in a temperature controlled storage area.

### A-4) Service Centers:

For the location of the nearest Deming Service Center, contact Crane Pumps & Systems, Inc., Service Department in Piqua, Ohio, telephone (937) 778-8947 or Crane Pumps & Systems Canada, in Brampton, Ontario, (905) 457-6223.

## SECTION B: INSTALLATION

### B-1) Location:

These self-contained pumping units have motors that are Underwriters Laboratory Listed for Class I Division 1, Groups C & D T4, locations and are recommended for use in a sump, lift stations or basin. This pump is designed for submerged continuous duty (15 minutes duty in air at nameplate horsepower), pumping sewage, effluent, wastewater or other non explosive or non corrosive liquids not above 104°F (40°C). never install the pump in a trench, ditch or hole with a dirt bottom; the legs will sink into the dirt and the suction will become plugged.

### B-1.1) Submergence:

It is recommended that the pump be operated in the Continuous Duty Submergence condition and the sump liquid level should never be less than the Minimum Submergence Level (See Fig. 1). The time required to draw the well down from top of motor to the minimum submergence level should not be greater than 15 minutes.

**NOTE:** Outer shaft seal must be in liquid when motor is operated, whether motor is submerged or in air.

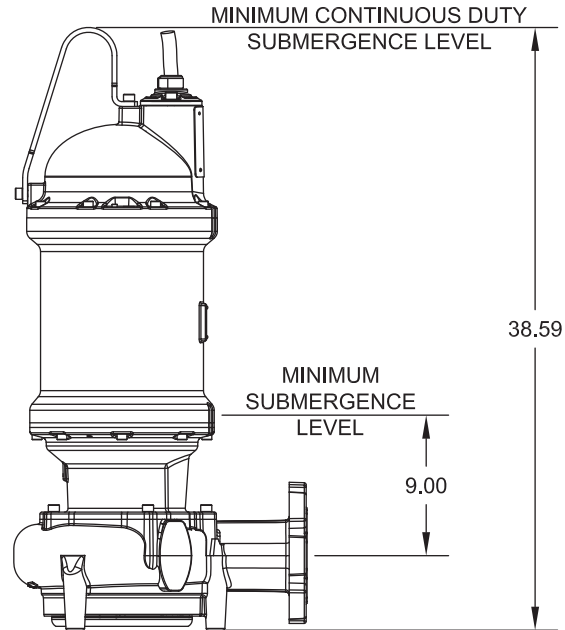


FIGURE 1

### B-2) Discharge:

Discharge piping should be as short as possible. Both a check valve and a shut-off valve are recommended for each pump being used. The check valve is used to prevent backflow into the sump. Excessive backflow can cause flooding and/or damage to the pump. The shut-off valve is used to stop system flow during pump or check valve servicing.



**WARNING!** These pumps are suitable for application in Class I, Division 1, Groups C & D T4, HAZARDOUS LOCATIONS and require a non-sparking break away fitting. Failure to use the non-sparking BAF voids warranty.

Deming Pumps manufactures a break away fitting discharge system designed to allow the submersible wastewater pump to be installed or removed without requiring personnel to enter the wet well. Place the Break Away Fitting (BAF) in position. Temporarily secure the guide rails in the upper mounting brackets and locate the base elbow on the bottom of the wet well. Level the base elbow with grout and/or shims. Install the intermediate support brackets, if required. Make sure the rails are in a true vertical position so the pump will clear the access opening and will slide freely down the rails into place on the discharge base elbow. Once the rails are in proper alignment, bolt the base elbow into the floor of the station and connect the discharge pipe to

the elbow. Connect the movable portion and other supplied fittings of the BAF onto the pump and lower into wet well. See the Break Away Fitting manual for more information.

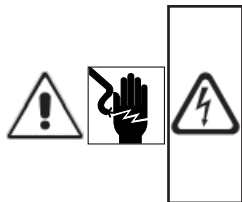


**WARNING!** Level control used within the hazardous location, must be in an intrinsically safe control circuit suitable for use in Class I, Division 1, Groups C & D T4, Hazardous Locations.

**B-3) Liquid Level Controls:**

It is recommended to use a liquid level control system that allows the on and off point to be separated by at least twelve inches. An additional set point (lag point) should be incorporated with an alternator switching system for a duplex (two pump) station. A high level alarm may be required to alert maintenance personnel that there is a high water situation in the wet well should the output of the pump station drop below the inflow rate. A low level cut off may be installed to provide system shutdown if the main level control system malfunctions. The off point should be positioned so that the liquid level never drops below the minimum continuous duty point for the pump shown in figure 1.

**B-4.1) Electrical Connections:**

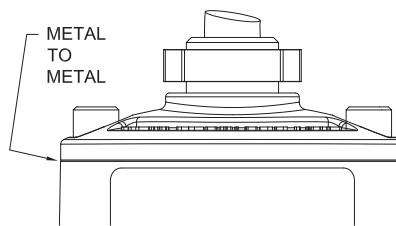


**WARNING!** - All model pumps and control panels must be properly grounded per the NATIONAL ELECTRIC CODE or CANADIAN ELECTRIC CODE, State, Province and local codes. Improper grounding voids warranty.

**B-4) Power/Control Cord:**

The power/control cord used with pump has a patented “quick disconnect” feature that allows the cord to be easily attached and disconnected at the pump. The maximum amperage rating for the cord is cast in the top of the cast stainless mounting plate. The voltage connection for the motor is determined by the cord assembly used. Low voltage cords (208 & 230 Volt) utilize a molded quick connect plug that is colored black. High voltage cords (460 & 575 Volt) utilize a molded quick connect cord that is colored orange. **It is important to verify that the cord being used is rated for the nameplate voltage and amperage rating shown on the pump nameplate. Refer to Chart on page 7.** No internal wiring adjustments are necessary for dual and tri-voltage pumps. All jumper connections to set the proper voltage are made by the cord plug itself.

A flat alignment mark is molded into the plug and mating socket on the pump. These should be used as a visual indication as to the correct orientation of the plug. Insert the plug into the pump and install the two 12 mm socket head cap screws into the clamping plate. Slowly tighten the two screws alternating back and forth until the clamping plate is drawn down flush to the top of the cord boss on the pump. The two screws should be torqued until the plate is down to a point where metal to metal contact is made between the stainless steel plate and pump housing. (See Figure 2)



**FIGURE 2a**

The cord assembly mounted to the pump must not be modified in any way except for shortening to a specific application. Any splice between the pump and the control panel must be made in accordance with all applicable electric codes. It is recommended that a junction box with seal fittings (if used) be mounted outside the sump or be of at least Nema 7 explosion proof construction if located within the wet well. A listed water and vapor tight seal fitting **MUST** be used in conduit leaving the wet well to prevent moisture and gases from reaching the control panel. Prior to installation, the pump power cable should be inspected for nicks or damage. If damaged, the cord should be replaced before installation.

**CORD CLAMPING PLATE SHOULD BE DRAWN METAL TO METAL (50 FT/LBS BOLT TORQUE). IF A GAP EXISTS CONTINUE TO TIGHTEN BOLTS. DO NOT USE ANY TYPE OF SEALANT OR GREASE ON THE CORD ENTRY.**

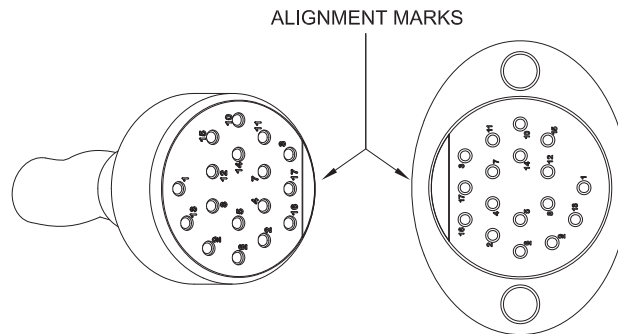
**DO NOT USE THE POWER CORD TO LIFT PUMP.**

**B-4.1) Electrical Connections:**

When the electrical connections are made, the lead wires from the power cable should be stripped so that the ground wire is at least two inches longer than the power leads. This will ensure that if the cable is inadvertently pulled out of the connection point, the ground wire will be the last lead to break the circuit.

**B-4.2) Wire Size:**

If additional cable is required consult a qualified electrician for proper wire size. Voltage drop due to wire resistance between the pump and power connection point should be limited to 3% when additional cable is added.



**FIGURE 2b**

MODEL NO.	SIZE	IMP. DIA. INCHES (MM)	HP	VOLT	PH	HZ	RPM	NEMA START CODE	FULL LOAD AMPS	SERVICE FACTOR	SERVICE FACTOR AMPS	LOCKED ROTOR AMPS	DRIVER FRAME	CORD P/N ▲	CORD SIZE	CORD O.D.	WINDING RESISTANCE	
7366-410-1K-32N	4ML	9.25 (235)	15	208	3	60	1750	E	51.8	1.2	59.0	206.6	3	125498	8/4 - 18/4	1.12 ±.02	.187 - .748	
			230	46.9					54.3	3	125498	8/4 - 18/4						1.12 ±.02
			460	23.4					27.2	3	125497	12/4 - 18/4						.87 ±.02
7366-410-75-32N	4ML	9.25 (235)	15	575	3	60	1750	E	18.7	1.2	21.7	82.6	3	125497	12/4 - 18/4	.87 ±.02	1.16	
7366-411-1K-32N	4MM	9.45 (240)	15	208	3	60	1750	E	51.8	1.2	59.0	206.6	3	125498	8/4 - 18/4	1.12 ±.02	.084 - .337	
			230	46.9					54.3	3	125498	8/4 - 18/4						1.12 ±.02
			460	23.4					27.2	3	125497	12/4 - 18/4						.87 ±.02
7366-411-75-32N	4MM	9.45 (240)	15	575	3	60	1750	E	18.7	1.2	21.7	82.6	3	125497	12/4 - 18/4	.87 ±.02	.510	
7366-411-1L-32N	4MM	10.43 (265)	20	230	3	60	1750	J	53.7	1.2	59.0	383.9	3	125498	8/4 - 18/4	1.12 ±.02	.084 - .337	
				460					26.9	1.2	29.9		3	125497	12/4 - 18/4	.87 ±.02		
7366-411-76-32N	4MM	10.43 (265)	20	575	3	60	1750	J	21.5	1.2	23.9	153.5	3	125497	12/4 - 18/4	.87 ±.02	.510	
7366-411-62-32N	4MM	10.83 (275)	25	460	3	60	1750	G	33.2	1.2	38.9	191.9	3	125499	8/4 - 18/4	1.12 ±.02	.337	
7366-411-77-32N	4MM	10.83 (275)	25	575	3	60	1750	G	26.6	1.2	31.1	153.5	3	125497	12/4 - 18/4	.87 ±.02	.510	
7366-411-63-32N	4MM	11.42 (290)	30	460	3	60	1750	F	38.9	1.2	45.9	191.9	3	125499	8/4 - 18/4	1.12 ±.02	.337	
7366-411-78-32N	4MM	11.42 (290)	30	575	3	60	1750	F	31.1	1.2	36.7	153.5	3	125499	8/4 - 18/4	1.12 ±.02	.510	
7366-446-1H-32N	4MM	10.63 (270)	7.5	208	3	60	1150	J	24.9	1.2	29.6	137.6	3	125496	12/4 - 18/4	.87 ±.02	.329	
			230	24.0					27.6	3	125496	12/4 - 18/4						.87 ±.02
			460	12.0					13.8	3	125497	12/4 - 18/4						.87 ±.02
7366-446-73-32N	4MM	10.63 (270)	7.5	575	3	60	1150	J	9.6	1.2	11.0	55.0	3	125497	12/4 - 18/4	.87 ±.02	1.960	
7366-446-1J-32N	4MM	11.22 (285)	10	208	3	60	1150	F	32.9	1.2	41.0	137.6	3	125498	8/4 - 18/4	1.12 ±.02	.329	
			230	30.2					35.8	3	125498	8/4 - 18/4						1.12 ±.02
			460	15.1					17.9	3	125497	12/4 - 18/4						.87 ±.02
7366-446-74-32N	4MM	11.22 (285)	10	575	3	60	1150	F	12.1	1.2	14.3	55.0	3	125497	12/4 - 18/4	.87 ±.02	1.960	
7366-446-1K-32N	4MM	11.61 (295)	15	208	3	60	1150	H	47.0	1.2	56.8	248.6	3	125498	8/4 - 18/4	1.12 ±.02	.151	
			230	44.1					51.4	3	125498	8/4 - 18/4						1.12 ±.02
			460	22.0					25.7	3	125497	12/4 - 18/4						.87 ±.02
7366-446-75-32N	4MM	11.61 (295)	15	575	3	60	1150	H	17.6	1.2	20.6	99.4	3	125497	12/4 - 18/4	.87 ±.02	.934	

▲ CORD SOLD SEPARATELY.

**IMPORTANT !**

- 1.) MOISTURE AND TEMPERATURE SENSORS **MUST** BE CONNECTED TO VALIDATE THE CSA LISTING.
- 2.) A SPECIAL MOISTURE SENSOR RELAY IS REQUIRED IN THE CONTROL PANEL FOR PROPER OPERATION OF THE MOISTURE SENSORS. CONTACT CP&S FOR INFORMATION CONCERNING MOISTURE SENSING RELAYS FOR CUSTOMER SUPPLIED CONTROL PANELS.
- 3.) THESE PUMPS ARE CSA LISTED FOR PUMPING WATER AND WASTEWATER. **DO NOT USE TO PUMP FLAMMABLE LIQUIDS.** NOT SUITABLE FOR ENVIRONMENTS CONTAINING GASOLINE OR HEXANE.
- 4.) INSTALLATIONS SUCH AS DECORATIVE FOUNTAINS OR WATER FEATURES PROVIDED FOR VISUAL ENJOYMENT MUST BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE ANSI/NFPA 70 AND/OR THE AUTHORITY HAVING JURISDICTION. THIS PUMP IS NOT INTENDED FOR USE IN SWIMMING POOLS, RECREATIONAL WATER PARKS, OR INSTALLATIONS IN WHICH HUMAN CONTACT WITH PUMPED MEDIA IS A COMMON OCCURRENCE.
- 5.) A **NON-SPARKING** BREAKAWAY FITTING MUST BE USED TO VALIDATE THE EXPLOSION PROOF LISTING.
- 6.) WINDING RESISTANCE ± 7.5%. WINDING RESISTANCE MEASURED IN OHMS @ 25°C (BETWEEN LINES) AT MOTOR LEADS.
- 7.) PUMP RATED FOR OPERATION AT ± 10% VOLTAGE AT MOTOR.
- 8.) CORD SUFFIX: XF - 50 FEET, XJ - 75 FEET, OR XL - 100 FEET. CORD SOLD SEPARATELY.
- 9.) ALL EXPLOSION PROOF PUMPS AND MOTORS ARE CSA EXPLOSION-PROOF TO CLASS I DIVISION 1 GROUPS C&D T4 RATING

CHART 'A'

MODEL NO.	SIZE	IMP. DIA. INCHES (MM)	HP	VOLT	PH	HZ	RPM	NEMA START CODE	FULL LOAD AMPS	SERVICE FACTOR	SERVICE FACTOR AMPS	LOCKED ROTOR AMPS	DRIVER FRAME	CORD P/N ▲	CORD SIZE	CORD O.D.	WINDING RESISTANCE
7366-466-1K-30N	4MB	8.47 (215)	15	208	3	60	1750	F	51.8	1.2	59.0	206.6/ 103.3	3	125498	8/4 - 18/4	1.12 ± .02	.084/.337
				230					46.9	54.3							
				460					23.4	27.2							
7366-466-75-30N	4MB	8.47 (215)	15	575	3	60	1750	E	18.7	1.2	21.7	82.6	3	125497	12/4 - 18/4	0.87 ± .02	0.084
				230					53.7	59	383.8/ 191.9						
				460					26.9	29.9							
7366-466-1L-30N	4MB	9.84 (250)	20	575	3	60	1750	J	21.5	1.2	23.9	153.5	3	125497	12/4 - 18/4	0.87 ± .02	0.084
				230					33.2	38.9	191.9						
				460					26.6	31.1	153.5						
7366-466-62-30N	4MB	10.24 (260)	25	575	3	60	1750	G	31.1	1.2	45.9	191.9	3	125499	8/4 - 18/4	1.12 ± .02	0.337
				230					31.1	31.1	153.5						
				460					31.1	31.1	153.5						
7366-466-77-30N	4MB	10.24 (260)	25	575	3	60	1750	G	31.1	1.2	45.9	191.9	3	125499	8/4 - 18/4	1.12 ± .02	0.337
				230					31.1	31.1	153.5						
				460					31.1	31.1	153.5						
7366-466-63-30N	4MB	10.83 (275)	30	575	3	60	1750	F	31.1	1.2	36.7	153.5	3	125499	8/4 - 18/4	1.12 ± .02	0.337
				230					31.1	36.7	153.5						
				460					31.1	36.7	153.5						
7366-466-78-30N	4MB	10.83 (275)	30	575	3	60	1750	F	31.1	1.2	36.7	153.5	3	125499	8/4 - 18/4	1.12 ± .02	0.337
				230					31.1	36.7	153.5						
				460					31.1	36.7	153.5						
7366-412-63-32N	4MH	11.42 (290)	30	460	3	60	1750	F	38.9	1.2	45.9	191.9	3	125499	8/4 - 18/4	1.12 ± .02	.337
				230					31.1	36.7	153.5						
				460					31.1	36.7	153.5						
7366-412-78-32N	4MH	11.42 (290)	30	575	3	60	1750	F	31.1	1.2	36.7	153.5	3	125499	8/4 - 18/4	1.12 ± .02	.510
				230					31.1	36.7	153.5						
				460					31.1	36.7	153.5						
7366-447-1K-32N	4MH	13.19 (335)	15	208	3	60	1150	H	47.0	1.2	56.8	248.6	3	125498	8/4 - 18/4	1.12 ± .02	.151
				230					44.1	51.4	248.6						
				460					22.0	25.7	124.3						
7366-447-75-32N	4MH	13.19 (335)	15	575	3	60	1150	H	17.6	1.2	20.6	99.4	3	125497	12/4 - 18/4	.87 ± .02	.603
				230					17.6	20.6	99.4						
				460					17.6	20.6	99.4						
7366-447-61-32N	4MH	14.57 (370)	20	575	3	60	1150	E	28.6	1.2	34.9	124.3	3	125499	8/4 - 18/4	1.12 ± .02	.603
				230					22.9	27.9	99.4						
				460					22.9	27.9	99.4						
7366-447-76-32N	4MH	14.57 (370)	20	575	3	60	1150	E	22.9	1.2	27.9	99.4	3	125497	12/4 - 18/4	.87 ± .02	.934
				230					32.9	41.0	137.6						
				460					30.2	35.8	68.8						
7366-437-1J-32N	4MHA	12.21 (310)	10	208	3	60	1150	F	15.1	1.2	17.9	55.0	3	125497	12/4 - 18/4	.87 ± .02	1.315
				230					12.1	14.3	55.0						
				460					12.1	14.3	55.0						
7366-437-74-32N	4MHA	12.21 (310)	10	575	3	60	1150	F	47.0	1.2	56.8	248.6	3	125498	8/4 - 18/4	1.12 ± .02	.151
				230					44.1	51.4	248.6						
				460					22.0	25.7	124.3						
7366-437-1K-32N	4MHA	13.19 (335)	15	208	3	60	1150	H	17.6	1.2	20.6	99.4	3	125497	12/4 - 18/4	.87 ± .02	.603
				230					17.6	20.6	99.4						
				460					17.6	20.6	99.4						
7366-437-75-32N	4MHA	13.19 (335)	15	575	3	60	1150	H	28.6	1.2	34.9	124.3	3	125499	8/4 - 18/4	1.12 ± .02	.603
				230					28.6	34.9	124.3						
				460					28.6	34.9	124.3						
7366-437-61-32N	4MHA	14.17 (360)	20	575	3	60	1150	E	22.9	1.2	27.9	99.4	3	125497	12/4 - 18/4	.87 ± .02	.934
				230					22.9	27.9	99.4						
				460					22.9	27.9	99.4						
7366-437-76-32N	4MHA	14.17 (360)	20	575	3	60	1150	E	22.9	1.2	27.9	99.4	3	125497	12/4 - 18/4	.87 ± .02	.934
				230					22.9	27.9	99.4						
				460					22.9	27.9	99.4						

▲ CORD SOLD SEPARATELY.

**IMPORTANT !**

- 1.) MOISTURE AND TEMPERATURE SENSORS **MUST** BE CONNECTED TO VALIDATE THE CSA LISTING.
- 2.) A SPECIAL MOISTURE SENSOR RELAY IS REQUIRED IN THE CONTROL PANEL FOR PROPER OPERATION OF THE MOISTURE SENSORS. CONTACT CP&S FOR INFORMATION CONCERNING MOISTURE SENSING RELAYS FOR CUSTOMER SUPPLIED CONTROL PANELS.
- 3.) THESE PUMPS ARE CSA LISTED FOR PUMPING WATER AND WASTEWATER. **DO NOT USE TO PUMP FLAMMABLE LIQUIDS.** NOT SUITABLE FOR ENVIRONMENTS CONTAINING GASOLINE OR HEXANE.
- 4.) INSTALLATIONS SUCH AS DECORATIVE FOUNTAINS OR WATER FEATURES PROVIDED FOR VISUAL ENJOYMENT **MUST** BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE ANSI/NFPA 70 AND/OR THE AUTHORITY HAVING JURISDICTION. THIS PUMP IS NOT INTENDED FOR USE IN SWIMMING POOLS, RECREATIONAL WATER PARKS, OR INSTALLATIONS IN WHICH HUMAN CONTACT WITH PUMPED MEDIA IS A COMMON OCCURRENCE.
- 5.) A **NON-SPARKING** BREAKAWAY FITTING **MUST** BE USED TO VALIDATE THE EXPLOSION PROOF LISTING.
- 6.) WINDING RESISTANCE ± 7.5%. WINDING RESISTANCE MEASURED IN OHMS @ 25°C (BETWEEN LINES) AT MOTOR LEADS.
- 7.) PUMP RATED FOR OPERATION AT ± 10% VOLTAGE AT MOTOR.
- 8.) CORD SUFFIX: XF - 50 FEET, XJ - 75 FEET, OR XL - 100 FEET. CORD SOLD SEPARATELY.
- 9.) ALL EXPLOSION PROOF PUMPS AND MOTORS ARE CSA EXPLOSION-PROOF TO CLASS I DIVISION 1 GROUPS C&D T4 RATING

**CHART 'B'**

MODEL NO.	SIZE	IMP. DIA. INCHES (MM)	HP	VOLT	PH	HZ	RPM	NEMA START CODE	FULL LOAD AMPS	SERVICE FACTOR	SERVICE FACTOR AMPS	LOCKED ROTOR AMPS	DRIVER FRAME	CORD P/N ▲	CORD SIZE	CORD O.D.	WINDING RESISTANCE
7366-425-1H-32N	4D	7.28 (185)	7.5	208	3	60	1750	M	35.9	1.2	38.5	206.6 / 103.3	3	125498	8/4 - 18/4	1.12 ±.02	.187 - .748
				230					34.8								
				460					17.4								
7366-425-73-32N	4D	7.28 (185)	7.5	575	3	60	1750	M	13.0	1.2	13.9	82.6	3	125497	12/4 - 18/4	.87 ±.02	1.16
7366-413-1H-32N	4DM	7.28 (185)	7.5	208	3	60	1750	M	35.9	1.2	38.5	206.6 / 103.3	3	125498	8/4 - 18/4	1.12 ±.02	.187 - .748
				230					34.8								
				460					17.4								
7366-413-73-32N	4DM	7.28 (185)	7.5	575	3	60	1750	M	13.0	1.2	13.9	82.6	3	125497	12/4 - 18/4	.87 ±.02	1.16
7366-413-1J-32N	4DM	7.87 (200)	10	208	3	60	1750	K	40.4	1.2	44.6	206.6 / 103.3	3	125498	8/4 - 18/4	1.12 ±.02	.187 - .748
				230					40.3								
				460					20.2								
7366-413-74-32N	4DM	7.87 (200)	10	575	3	60	1750	K	14.6	1.2	16.1	82.6	3	125497	12/4 - 18/4	.87 ±.02	1.16
7366-413-1K-32N	4DM	8.86 (225)	15	208	3	60	1750	E	51.8	1.2	59.0	206.6	3	125498	8/4 - 18/4	1.12 ±.02	.084 - .337
				230					54.3								
				460					27.2								
7366-413-75-32N	4DM	8.86 (225)	15	575	3	60	1750	E	18.7	1.2	21.7	82.6	3	125497	12/4 - 18/4	.87 ±.02	.510
7366-413-1L-32N	4DM	9.25 (235)	20	230	3	60	1750	J	53.7	1.2	59.0	383.9	3	125498	8/4 - 18/4	1.12 ±.02	.084 - .337
				460					29.9								
				26.9					23.9								
7366-413-76-32N	4DM	9.25 (235)	20	575	3	60	1750	J	21.5	1.2	23.9	153.5	3	125497	12/4 - 18/4	.87 ±.02	.510
7366-448-1H-32N	4DM	9.25 (235)	7.5	208	3	60	1150	J	24.9	1.2	29.6	137.6	3	125496	12/4 - 18/4	.87 ±.02	.329
				230					27.6								
				460					13.8								
7366-448-73-32N	4DM	9.25 (235)	7.5	575	3	60	1150	J	9.6	1.2	11.0	55.0	3	125497	12/4 - 18/4	.87 ±.02	1.960

▲ CORD SOLD SEPARATELY.

**IMPORTANT !**

- 1.) MOISTURE AND TEMPERATURE SENSORS **MUST** BE CONNECTED TO VALIDATE THE CSA LISTING.
- 2.) A SPECIAL MOISTURE SENSOR RELAY IS REQUIRED IN THE CONTROL PANEL FOR PROPER OPERATION OF THE MOISTURE SENSORS. CONTACT CP&S FOR INFORMATION CONCERNING MOISTURE SENSING RELAYS FOR CUSTOMER SUPPLIED CONTROL PANELS.
- 3.) THESE PUMPS ARE CSA LISTED FOR PUMPING WATER AND WASTEWATER. **DO NOT USE TO PUMP FLAMMABLE LIQUIDS.** NOT SUITABLE FOR ENVIRONMENTS CONTAINING GASOLINE OR HEXANE.
- 4.) INSTALLATIONS SUCH AS DECORATIVE FOUNTAINS OR WATER FEATURES PROVIDED FOR VISUAL ENJOYMENT MUST BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE ANSI/NFPA 70 AND/OR THE AUTHORITY HAVING JURISDICTION. THIS PUMP IS NOT INTENDED FOR USE IN SWIMMING POOLS, RECREATIONAL WATER PARKS, OR INSTALLATIONS IN WHICH HUMAN CONTACT WITH PUMPED MEDIA IS A COMMON OCCURRENCE.
- 5.) A **NON-SPARKING** BREAKAWAY FITTING MUST BE USED TO VALIDATE THE EXPLOSION PROOF LISTING.
- 6.) WINDING RESISTANCE ± 7.5%. WINDING RESISTANCE MEASURED IN OHMS @ 25°C (BETWEEN LINES) AT MOTOR LEADS.
- 7.) PUMP RATED FOR OPERATION AT ± 10% VOLTAGE AT MOTOR.
- 8.) CORD SUFFIX: XF - 50 FEET, XJ - 75 FEET, OR XL - 100 FEET. CORD SOLD SEPARATELY.
- 9.) ALL EXPLOSION PROOF PUMPS AND MOTORS ARE CSA EXPLOSION-PROOF TO CLASS I DIVISION 1 GROUPS C&D T4 RATING

CHART 'C'



MODEL NO.	SIZE	IMP. DIA. INCHES (MM)	HP	VOLT	PH	HZ	RPM	NEMA START CODE	FULL LOAD AMPS	SERVICE FACTOR	SERVICE FACTOR AMPS	LOCKED ROTOR AMPS	DRIVER FRAME	CORD P/N ▲	CORD SIZE	CORD O.D.	WINDING RESISTANCE
7366-414-1K-32N	4DH	**	15	208	3	60	1750	E	51.8	1.2	59.0	206.6	3	125498	8/4 - 18/4	1.12 ±.02	.084 - .337
				230					54.3								
				460					27.2								
7366-414-75-32N	4DH	**	15	575	3	60	1750	E	18.7	1.2	21.7	82.6	3	125497	12/4 - 18/4	.87 ±.02	.510
				230					59.0								
				460					29.9								
7366-414-1L-32N	4DH	9.25 (235)	20	575	3	60	1750	J	21.5	1.2	23.9	153.5	3	125497	12/4 - 18/4	.87 ±.02	.510
				460					29.9								
				383.9													
7366-414-76-32N	4DH	9.25 (235)	20	575	3	60	1750	J	21.5	1.2	23.9	153.5	3	125497	12/4 - 18/4	.87 ±.02	.510
				460					29.9								
				383.9													
7366-414-62-32N	4DH	9.84 (250)	25	460	3	60	1750	G	33.2	1.2	38.9	191.9	3	125499	8/4 - 18/4	1.12 ±.02	.337
				575					31.1								
				460					45.9								
7366-414-77-32N	4DH	9.84 (250)	25	575	3	60	1750	G	26.6	1.2	31.1	153.5	3	125497	12/4 - 18/4	.87 ±.02	.510
				460					45.9								
				38.9					191.9								
7366-414-63-32N	4DH	10.43 (265)	30	460	3	60	1750	F	38.9	1.2	45.9	191.9	3	125499	8/4 - 18/4	1.12 ±.02	.337
				575					36.7								
				31.1					153.5								
7366-414-78-32N	4DH	10.43 (265)	30	575	3	60	1750	F	31.1	1.2	36.7	153.5	3	125499	8/4 - 18/4	1.12 ±.02	.510
				208					29.6								
				24.9					29.6								
7366-449-1H-32N	4DH	9.25 (235)	7.5	208	3	60	1150	J	24.9	1.2	29.6	137.6	3	125496	12/4 - 18/4	.87 ±.02	.329
				230					27.6								
				460					13.8								
7366-449-73-32N	4DH	9.25 (235)	7.5	575	3	60	1150	J	9.6	1.2	11.0	55.0	3	125497	12/4 - 18/4	.87 ±.02	1.960
				208					41.0								
				230					35.8								
7366-449-1J-32N	4DH	10.24 (260)	10	460	3	60	1150	F	15.1	1.2	17.9	68.8	3	125497	12/4 - 18/4	.87 ±.02	1.315
				208					14.3								
				230					56.8								
7366-449-74-32N	4DH	10.24 (260)	10	575	3	60	1150	F	12.1	1.2	14.3	55.0	3	125497	12/4 - 18/4	.87 ±.02	1.960
				208					51.4								
				230					248.6								
7366-449-1K-32N	4DH	11.81 (300)	15	460	3	60	1150	H	22.0	1.2	25.7	124.3	3	125497	12/4 - 18/4	.87 ±.02	.603
				208					20.6								
				230					99.4								
7366-449-75-32N	4DH	11.81 (300)	15	575	3	60	1150	H	17.6	1.2	20.6	99.4	3	125497	12/4 - 18/4	.87 ±.02	.934
				460					124.3								
				28.6					124.3								
7366-449-61-32N	4DH	13.00 (330)	20	460	3	60	1150	E	28.6	1.2	34.9	124.3	3	125499	8/4 - 18/4	1.12 ±.02	.603
				575					27.9								
				22.9					99.4								
7366-449-76-32N	4DH	13.00 (330)	20	575	3	60	1150	E	22.9	1.2	27.9	99.4	3	125497	12/4 - 18/4	.87 ±.02	.934
				208					29.6								
				24.9					29.6								

▲ CORD SOLD SEPARATELY.

**IMPORTANT !**

- 1.) MOISTURE AND TEMPERATURE SENSORS **MUST** BE CONNECTED TO VALIDATE THE CSA LISTING.
- 2.) A SPECIAL MOISTURE SENSOR RELAY IS REQUIRED IN THE CONTROL PANEL FOR PROPER OPERATION OF THE MOISTURE SENSORS. CONTACT CP&S FOR INFORMATION CONCERNING MOISTURE SENSING RELAYS FOR CUSTOMER SUPPLIED CONTROL PANELS.
- 3.) THESE PUMPS ARE CSA LISTED FOR PUMPING WATER AND WASTEWATER. **DO NOT USE TO PUMP FLAMMABLE LIQUIDS.** NOT SUITABLE FOR ENVIRONMENTS CONTAINING GASOLINE OR HEXANE.
- 4.) INSTALLATIONS SUCH AS DECORATIVE FOUNTAINS OR WATER FEATURES PROVIDED FOR VISUAL ENJOYMENT MUST BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE ANSI/NFPA 70 AND/OR THE AUTHORITY HAVING JURISDICTION. THIS PUMP IS NOT INTENDED FOR USE IN SWIMMING POOLS, RECREATIONAL WATER PARKS, OR INSTALLATIONS IN WHICH HUMAN CONTACT WITH PUMPED MEDIA IS A COMMON OCCURRENCE.
- 5.) A **NON-SPARKING** BREAKAWAY FITTING MUST BE USED TO VALIDATE THE EXPLOSION PROOF LISTING.
- 6.) WINDING RESISTANCE ± 7.5%. WINDING RESISTANCE MEASURED IN OHMS @ 25°C (BETWEEN LINES) AT MOTOR LEADS.
- 7.) PUMP RATED FOR OPERATION AT ± 10% VOLTAGE AT MOTOR.
- 8.) CORD SUFFIX: XF - 50 FEET, XJ - 75 FEET, OR XL - 100 FEET. CORD SOLD SEPARATELY.
- 9.) ALL EXPLOSION PROOF PUMPS AND MOTORS ARE CSA EXPLOSION-PROOF TO CLASS I DIVISION 1 GROUPS C&D T4 RATING

\*\* CUSTOMER TO SPECIFY IMPELLER DIAMETER WHEN ORDERING.

CHART 'D'

MODEL NO.	SIZE	IMP. DIA. INCHES (MM)	HP	VOLT	PH	HZ	RPM	NEMA START CODE	FULL LOAD AMPS	SERVICE FACTOR	SERVICE FACTOR AMPS	LOCKED ROTOR AMPS	DRIVER FRAME	CORD P/N ▲	CORD SIZE	CORD O.D.	WINDING RESISTANCE
7366-615-1L-32N	6ML	9.25 (235)	20	230 460	3	60	1750	J	53.7 26.9	1.2 1.2	59.0 29.9	383.9	3 3	125498 125497	8/4 - 18/4 12/4 - 18/4	1.12 ±.02 .87 ±.02	.084 - .337
7366-615-76-32N	6ML	9.25 (235)	20	575	3	60	1750	J	21.5	1.2	23.9	153.5	3	125497	12/4 - 18/4	.87 ±.02	.510
7366-615-62-32N	6ML	9.84 (250)	25	460	3	60	1750	G	33.2	1.2	38.9	191.9	3	125499	8/4 - 18/4	1.12 ±.02	.337
7366-615-77-32N	6ML	9.84 (250)	25	575	3	60	1750	G	26.6	1.2	31.1	153.5	3	125497	12/4 - 18/4	.87 ±.02	.510
7366-615-63-32N	6ML	10.24 (260)	30	460	3	60	1750	F	38.9	1.2	45.9	191.9	3	125499	8/4 - 18/4	1.12 ±.02	.337
7366-615-78-32N	6ML	10.24 (260)	30	575	3	60	1750	F	31.1	1.2	36.7	153.5	3	125499	8/4 - 18/4	1.12 ±.02	.510
7366-619-1H-32N	6ML	9.84 (250)	7.5	208 230 460	3	60	1150	J	24.9 24.0	1.2 1.2	29.6 27.6	137.6	3 3	125496 125496	12/4 - 18/4 12/4 - 18/4	.87 ±.02 .87 ±.02	.329
7366-619-73-32N	6ML	9.84 (250)	7.5	575	3	60	1150	J	9.6	1.2	11.0	55.0	3	125497	12/4 - 18/4	.87 ±.02	1.315
7366-619-1J-32N	6ML	10.24 (260)	10	208 230 460	3	60	1150	F	32.9 30.2	1.2 1.2	41.0 35.8	137.6	3 3	125498 125498	8/4 - 18/4 8/4 - 18/4	1.12 ±.02 1.12 ±.02	.329
7366-619-74-32N	6ML	10.24 (260)	10	575	3	60	1150	F	15.1	1.2	17.9	68.8	3	125497	12/4 - 18/4	.87 ±.02	1.315
									12.1	1.2	14.3	55.0	3	125497	12/4 - 18/4	.87 ±.02	1.960

▲ CORD SOLD SEPARATELY.

**IMPORTANT !**

- 1.) MOISTURE AND TEMPERATURE SENSORS **MUST** BE CONNECTED TO VALIDATE THE CSA LISTING.
- 2.) A SPECIAL MOISTURE SENSOR RELAY IS REQUIRED IN THE CONTROL PANEL FOR PROPER OPERATION OF THE MOISTURE SENSORS. CONTACT CP&S FOR INFORMATION CONCERNING MOISTURE SENSING RELAYS FOR CUSTOMER SUPPLIED CONTROL PANELS.
- 3.) THESE PUMPS ARE CSA LISTED FOR PUMPING WATER AND WASTEWATER. **DO NOT USE TO PUMP FLAMMABLE LIQUIDS.** NOT SUITABLE FOR ENVIRONMENTS CONTAINING GASOLINE OR HEXANE.
- 4.) INSTALLATIONS SUCH AS DECORATIVE FOUNTAINS OR WATER FEATURES PROVIDED FOR VISUAL ENJOYMENT **MUST** BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE ANSI/NFPA 70 AND/OR THE AUTHORITY HAVING JURISDICTION. THIS PUMP IS NOT INTENDED FOR USE IN SWIMMING POOLS, RECREATIONAL WATER PARKS, OR INSTALLATIONS IN WHICH HUMAN CONTACT WITH PUMPED MEDIA IS A COMMON OCCURRENCE.
- 5.) A **NON-SPARKING** BREAKAWAY FITTING **MUST** BE USED TO VALIDATE THE EXPLOSION PROOF LISTING.
- 6.) WINDING RESISTANCE ± 7.5%. WINDING RESISTANCE MEASURED IN OHMS @ 25°C (BETWEEN LINES) AT MOTOR LEADS.
- 7.) PUMP RATED FOR OPERATION AT ± 10% VOLTAGE AT MOTOR.
- 8.) CORD SUFFIX: XF - 50 FEET, XJ - 75 FEET, OR XL - 100 FEET. CORD SOLD SEPARATELY.
- 9.) ALL EXPLOSION PROOF PUMPS AND MOTORS ARE CSA EXPLOSION-PROOF TO CLASS I DIVISION 1 GROUPS C&D T4 RATING

CHART 'E'

MODEL NO.	SIZE	IMP. DIA. INCHES (MM)	HP	VOLT	PH	HZ	RPM	NEMA START CODE	FULL LOAD AMPS	SERVICE FACTOR	SERVICE FACTOR AMPS	LOCKED ROTOR AMPS	DRIVER FRAME	CORD P/N ▲	CORD SIZE	CORD O.D.	WINDING RESISTANCE
7366-616-63-32N	6MM	10.83 (275)	30	460	3	60	1750	F	38.9	1.2	45.9	191.9	3	125499	8/4 - 18/4	1.12 ±.02	.337
7366-616-78-32N	6MM	10.83 (275)	30	575	3	60	1750	F	31.1	1.2	36.7	153.5	3	125499	8/4 - 18/4	1.12 ±.02	.510
7366-620-1H-32N	6MM	10.63 (270)	7.5	208	3	60	1150	J	24.9	1.2	29.6	137.6	3	125496	12/4 - 18/4	.87 ±.02	.329
				230					24.0	27.6							
				460					12.0	13.8							
7366-620-73-32N	6MM	10.63 (270)	7.5	575	3	60	1150	J	9.6	1.2	11.0	55.0	3	125497	12/4 - 18/4	.87 ±.02	1.960
				208					32.9	41.0							
				230					30.2	35.8							
7366-620-29-32N	6MM	11.22 (285)	10	460	3	60	1150	F	15.1	1.2	17.9	68.8	3	125497	12/4 - 18/4	.87 ±.02	1.315
				575					12.1	14.3							
				208					47.0	56.8							
7366-620-1K-32N	6MM	11.81 (300)	15	230	3	60	1150	H	44.1	1.2	51.4	248.6	3	125498	8/4 - 18/4	1.12 ±.02	.151
				460					22.0	25.7							
				575					17.6	20.6							
7366-620-75-32N	6MM	11.81 (300)	15	575	3	60	1150	H	28.6	1.2	34.9	124.3	3	125497	12/4 - 18/4	.87 ±.02	.603
				230					44.1	51.4							
				460					22.0	25.7							
7366-620-61-32N	6MM	12.40 (315)	20	460	3	60	1150	E	22.9	1.2	27.9	99.4	3	125497	12/4 - 18/4	.87 ±.02	.934
				575					12.1	14.3							
				208					47.0	56.8							
7366-620-76-32N	6MM	12.40 (315)	20	575	3	60	1150	E	47.0	1.2	56.8	248.6	3	125498	8/4 - 18/4	1.12 ±.02	.151
				230					44.1	51.4							
				460					22.0	25.7							
7366-621-75-32N	6MH	12.60 (320)	15	575	3	60	1150	H	28.6	1.2	34.9	124.3	3	125497	12/4 - 18/4	.87 ±.02	.934
				460					22.0	25.7							
				575					17.6	20.6							
7366-621-61-32N	6MH	13.58 (345)	20	460	3	60	1150	E	28.6	1.2	34.9	124.3	3	125499	8/4 - 18/4	1.12 ±.02	.603
				575					22.9	27.9							
				208					47.0	56.8							
7366-621-76-32N	6MH	13.58 (345)	20	575	3	60	1150	E	22.9	1.2	27.9	99.4	3	125497	12/4 - 18/4	.87 ±.02	.934
				230					44.1	51.4							
				460					22.0	25.7							

▲ CORD SOLD SEPARATELY.

**IMPORTANT !**

- 1.) MOISTURE AND TEMPERATURE SENSORS **MUST** BE CONNECTED TO VALIDATE THE CSA LISTING.
- 2.) A SPECIAL MOISTURE SENSOR RELAY IS REQUIRED IN THE CONTROL PANEL FOR PROPER OPERATION OF THE MOISTURE SENSORS. CONTACT CP&S FOR INFORMATION CONCERNING MOISTURE SENSING RELAYS FOR CUSTOMER SUPPLIED CONTROL PANELS.
- 3.) THESE PUMPS ARE CSA LISTED FOR PUMPING WATER AND WASTEWATER. **DO NOT USE TO PUMP FLAMMABLE LIQUIDS.** NOT SUITABLE FOR ENVIRONMENTS CONTAINING GASOLINE OR HEXANE.
- 4.) INSTALLATIONS SUCH AS DECORATIVE FOUNTAINS OR WATER FEATURES PROVIDED FOR VISUAL ENJOYMENT MUST BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE ANSI/NFPA 70 AND/OR THE AUTHORITY HAVING JURISDICTION. THIS PUMP IS NOT INTENDED FOR USE IN SWIMMING POOLS, RECREATIONAL WATER PARKS, OR INSTALLATIONS IN WHICH HUMAN CONTACT WITH PUMPED MEDIA IS A COMMON OCCURRENCE.
- 5.) A **NON-SPARKING** BREAKAWAY FITTING MUST BE USED TO VALIDATE THE EXPLOSION PROOF LISTING.
- 6.) WINDING RESISTANCE ± 7.5%. WINDING RESISTANCE MEASURED IN OHMS @ 25°C (BETWEEN LINES) AT MOTOR LEADS.
- 7.) PUMP RATED FOR OPERATION AT ± 10% VOLTAGE AT MOTOR.
- 8.) CORD SUFFIX: XF - 50 FEET, XJ - 75 FEET, OR XL - 100 FEET. CORD SOLD SEPARATELY.
- 9.) ALL EXPLOSION PROOF PUMPS AND MOTORS ARE CSA EXPLOSION-PROOF TO CLASS I DIVISION 1 GROUPS C&D T4 RATING

CHART 'F'

MODEL NO.	SIZE	IMP. DIA. INCHES (MM)	HP	VOLT	PH	HZ	RPM	NEMA START CODE	FULL LOAD AMPS	SERVICE FACTOR	SERVICE FACTOR AMPS	LOCKED ROTOR AMPS	DRIVER FRAME	CORD P/N ▲	CORD SIZE	CORD O.D.	WINDING RESISTANCE
7366-663-1K-32N	6DL	8.07 (205)	15	208	3	60	1750	E	51.8	1.2	59.0	206.6	3	125498	8/4 - 18/4	1.12 ±.02	.084 - .337
				230					54.3								
				460					27.2								
7366-663-75-32N	6DL	8.07 (205)	15	575	3	60	1750	E	18.7	1.2	21.7	82.6	3	125497	12/4 - 18/4	.87 ±.02	.510
				230					59.0								
7366-663-1L-32N	6DL	8.47 (215)	20	460	3	60	1750	J	26.9	1.2	29.9	383.9	3	125497	12/4 - 18/4	.87 ±.02	.084 - .337
				575					23.9								
7366-663-76-32N	6DL	8.47 (215)	20	575	3	60	1750	J	21.5	1.2	23.9	153.5	3	125497	12/4 - 18/4	.87 ±.02	.510
				460					38.9								
7366-663-62-32N	6DL	8.66 (220)	25	460	3	60	1750	G	33.2	1.2	38.9	191.9	3	125499	8/4 - 18/4	1.12 ±.02	.337
				575					31.1								
7366-663-77-32N	6DL	8.66 (220)	25	575	3	60	1750	G	26.6	1.2	31.1	153.5	3	125497	12/4 - 18/4	.87 ±.02	.510
				460					45.9								
7366-663-63-32N	6DL	8.86 (225)	30	460	3	60	1750	F	38.9	1.2	45.9	191.9	3	125499	8/4 - 18/4	1.12 ±.02	.337
				575					36.7								
7366-663-78-32N	6DL	8.86 (225)	30	575	3	60	1750	F	31.1	1.2	36.7	153.5	3	125499	8/4 - 18/4	1.12 ±.02	.510
7366-664-1H-32N	6DL	8.66 (220)	7.5	208	3	60	1150	J	24.9	1.2	29.6	137.6	3	125496	12/4 - 18/4	.87 ±.02	.329
				230					27.6								
				460					13.8								
7366-664-73-32N	6DL	8.66 (220)	7.5	575	3	60	1150	J	9.6	1.2	11.0	55.0	3	125497	12/4 - 18/4	.87 ±.02	1.960
				208					41.0								
7366-664-1J-32N	6DL	8.86 (225)	10	230	3	60	1150	F	30.2	1.2	35.8	137.6	3	125498	8/4 - 18/4	1.12 ±.02	.329
				460					17.9								
				575					14.3								
7366-664-74-32N	6DL	8.86 (225)	10	575	3	60	1150	F	12.1	1.2	14.3	55.0	3	125497	12/4 - 18/4	.87 ±.02	1.960

▲ CORD SOLD SEPARATELY.

**IMPORTANT !**

- 1.) MOISTURE AND TEMPERATURE SENSORS **MUST** BE CONNECTED TO VALIDATE THE CSA LISTING.
- 2.) A SPECIAL MOISTURE SENSOR RELAY IS REQUIRED IN THE CONTROL PANEL FOR PROPER OPERATION OF THE MOISTURE SENSORS. CONTACT CP&S FOR INFORMATION CONCERNING MOISTURE SENSING RELAYS FOR CUSTOMER SUPPLIED CONTROL PANELS.
- 3.) THESE PUMPS ARE CSA LISTED FOR PUMPING WATER AND WASTEWATER. **DO NOT USE TO PUMP FLAMMABLE LIQUIDS.** NOT SUITABLE FOR ENVIRONMENTS CONTAINING GASOLINE OR HEXANE.
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- 5.) A **NON-SPARKING** BREAKAWAY FITTING MUST BE USED TO VALIDATE THE EXPLOSION PROOF LISTING.
- 6.) WINDING RESISTANCE ± 7.5%. WINDING RESISTANCE MEASURED IN OHMS @ 25°C (BETWEEN LINES) AT MOTOR LEADS.
- 7.) PUMP RATED FOR OPERATION AT ± 10% VOLTAGE AT MOTOR.
- 8.) CORD SUFFIX: XF - 50 FEET, XJ - 75 FEET, OR XL - 100 FEET. CORD SOLD SEPARATELY.
- 9.) ALL EXPLOSION PROOF PUMPS AND MOTORS ARE CSA EXPLOSION-PROOF TO CLASS I DIVISION 1 GROUPS C&D T4 RATING

CHART 'G'

MODEL NO.	SIZE	IMP. DIA. INCHES (MM)	HP	VOLT	PH	HZ	RPM	NEMA START CODE	FULL LOAD AMPS	SERVICE FACTOR	SERVICE FACTOR AMPS	LOCKED ROTOR AMPS	DRIVER FRAME	CORD P/N ▲	CORD SIZE	CORD O.D.	WINDING RESISTANCE
7366-618-62-32N	6D	9.25 (235)	25	460	3	60	1750	G	33.2	1.2	38.9	191.9	3	125499	8/4 - 18/4	1.12 ±.02	.337
7366-618-77-32N	6D	9.25 (235)	25	575	3	60	1750	G	26.6	1.2	31.1	153.5	3	125497	12/4 - 18/4	.87 ±.02	.510
7366-618-63-32N	6D	9.84 (250)	30	460	3	60	1750	F	38.9	1.2	45.9	191.9	3	125499	8/4 - 18/4	1.12 ±.02	.337
7366-618-78-32N	6D	9.84 (250)	30	575	3	60	1750	F	31.1	1.2	36.7	153.5	3	125499	8/4 - 18/4	1.12 ±.02	.510
7366-622-1H-32N	6D	9.25 (235)	7.5	208 230 460	3	60	1150	J	24.9 24.0 12.0	1.2 1.2 1.2	29.6 27.6 13.8	137.6 68.8	3 3 3	125496 125496 125497	12/4 - 18/4 12/4 - 18/4 12/4 - 18/4	.87 ±.02 .87 ±.02 .87 ±.02	.329 1.315
7366-622-73-32N	6D	9.25 (235)	7.5	575	3	60	1150	J	9.6	1.2	11.0	55.0	3	125497	12/4 - 18/4	.87 ±.02	1.960
7366-622-1J-32N	6D	9.84 (250)	10	208 230 460	3	60	1150	F	32.9 30.2 15.1	1.2 1.2 1.2	41.0 35.8 17.9	137.6 68.8	3 3 3	125498 125498 125497	8/4 - 18/4 8/4 - 18/4 12/4 - 18/4	1.12 ±.02 1.12 ±.02 .87 ±.02	.329 1.315
7366-622-74-32N	6D	9.84 (250)	10	575	3	60	1150	F	12.1	1.2	14.3	55.0	3	125497	12/4 - 18/4	.87 ±.02	1.960
7366-622-1K-32N	6D	11.42 (290)	15	208 230 460	3	60	1150	H	47.0 44.1 22.0	1.2 1.2 1.2	56.8 51.4 25.7	248.6 124.3	3 3 3	125498 125498 125497	8/4 - 18/4 8/4 - 18/4 12/4 - 18/4	1.12 ±.02 1.12 ±.02 .87 ±.02	.151 603
7366-622-75-32N	6D	11.42 (290)	15	575	3	60	1150	H	17.6	1.2	20.6	99.4	3	125497	12/4 - 18/4	.87 ±.02	.934
7366-622-61-32N	6D	12.80 (325)	20	460	3	60	1150	E	28.6	1.2	34.9	124.3	3	125499	8/4 - 18/4	1.12 ±.02	.603
7366-622-76-32N	6D	12.80 (325)	20	575	3	60	1150	E	22.9	1.2	27.9	99.4	3	125497	12/4 - 18/4	.87 ±.02	.934

▲ CORD SOLD SEPARATELY.

**IMPORTANT !**

- 1.) MOISTURE AND TEMPERATURE SENSORS **MUST** BE CONNECTED TO VALIDATE THE CSA LISTING.
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- 7.) PUMP RATED FOR OPERATION AT ± 10% VOLTAGE AT MOTOR.
- 8.) CORD SUFFIX: XF - 50 FEET, XJ - 75 FEET, OR XL - 100 FEET. CORD SOLD SEPARATELY.
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CHART 'H'

MODEL NO.	SIZE	IMP. DIA. INCHES (MM)	HP	VOLT	PH	HZ	RPM	NEMA START CODE	FULL LOAD AMPS	SERVICE FACTOR	SERVICE FACTOR AMPS	LOCKED ROTOR AMPS	DRIVER FRAME	CORD P/N ▲	CORD SIZE	CORD O.D.	WINDING RESISTANCE
7366-860-62-32N	8D	9.45 (240)	25	460	3	60	1750	G	33.2	1.2	38.9	191.9	3	125499	8/4 - 18/4	1.12 ± .02	.337
7366-860-77-32N	8D	9.45 (240)	25	575	3	60	1750	G	26.6	1.2	31.1	153.5	3	125497	12/4 - 18/4	.87 ± .02	.510
7366-860-63-32N	8D	9.84 (250)	30	460	3	60	1750	F	38.9	1.2	45.9	191.9	3	125499	8/4 - 18/4	1.12 ± .02	.337
7366-860-78-32N	8D	9.84 (250)	30	575	3	60	1750	F	31.1	1.2	36.7	153.5	3	125499	8/4 - 18/4	1.12 ± .02	.510
				208					24.9	1.2	29.6	137.6	3	125496	12/4 - 18/4	.87 ± .02	.329
7366-861-1H-32N	8D	**	7.5	230	3	60	1150	J	24	1.2	27.6		3	125497	12/4 - 18/4	.87 ± .02	1.315
				460					12	1.2	13.8	68.8	3	125497	12/4 - 18/4	.87 ± .02	1.960
7366-861-73-32N	8D	**	7.5	575	3	60	1150	J	9.6	1.2	11.0	55.0	3	125497	12/4 - 18/4	.87 ± .02	1.960
				208					32.9	1.2	41	137.6	3	125498	8/4 - 18/4	1.12 ± .02	.329
7366-861-1J-32N	8D	9.45 (240)	10	230	3	60	1150	F	30.2	1.2	35.8		3	125497	12/4 - 18/4	.87 ± .02	1.315
				460					15.1	1.2	17.9	68.8	3	125497	12/4 - 18/4	.87 ± .02	1.960
7366-861-74-32N	8D	9.45 (240)	10	575	3	60	1150	F	12.1	1.2	14.3	55	3	125497	12/4 - 18/4	.87 ± .02	1.960
				208					47.0	1.2	56.8	248.6	3	125498	8/4 - 18/4	1.12 ± .02	.151
7366-861-1K-32N	8D	10.63 (270)	15	230	3	60	1150	H	44.1	1.2	51.4		3	125497	12/4 - 18/4	.87 ± .02	.603
				460					22.0	1.2	25.7	124.3	3	125497	12/4 - 18/4	.87 ± .02	.603
7366-861-75-32N	8D	10.63 (270)	15	575	3	60	1150	H	17.6	1.2	20.6	99.4	3	125497	12/4 - 18/4	.87 ± .02	.934
7366-861-61-32N	8D	11.42 (290)	20	460	3	60	1150	E	28.6	1.2	34.9	124.3	3	125499	8/4 - 18/4	1.12 ± .02	.603
7366-861-76-32N	8D	11.42 (290)	20	575	3	60	1150	E	22.9	1.2	27.9	99.4	3	125497	12/4 - 18/4	.87 ± .02	.934
7366-823-61-32N	8T	**	20	460	3	60	1150	E	28.6	1.2	34.9	124.3	3	125499	8/4 - 18/4	1.12 ± .02	.603
7366-823-76-32N	8T	**	20	575	3	60	1150	E	22.9	1.2	27.9	99.4	3	125497	12/4 - 18/4	.87 ± .02	.934

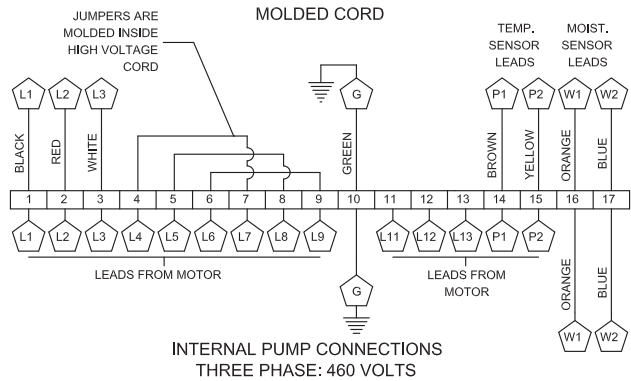
▲ CORD SOLD SEPARATELY.

**IMPORTANT !**

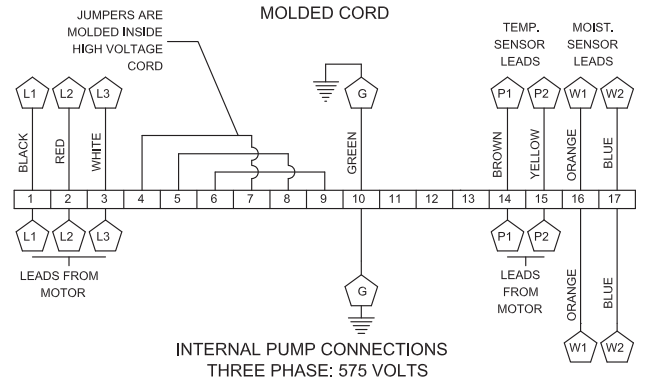
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- 5.) WINDING RESISTANCE ± 7.5%. WINDING RESISTANCE MEASURED IN OHMS @ 25°C (BETWEEN LINES) AT MOTOR LEADS.
- 6.) PUMP RATED FOR OPERATION AT ± 10% VOLTAGE AT MOTOR.
- 7.) CORD SUFFIX: XF - 50 FEET, XJ - 75 FEET, OR XL - 100 FEET. CORD SOLD SEPARATELY.

CHART 'I'

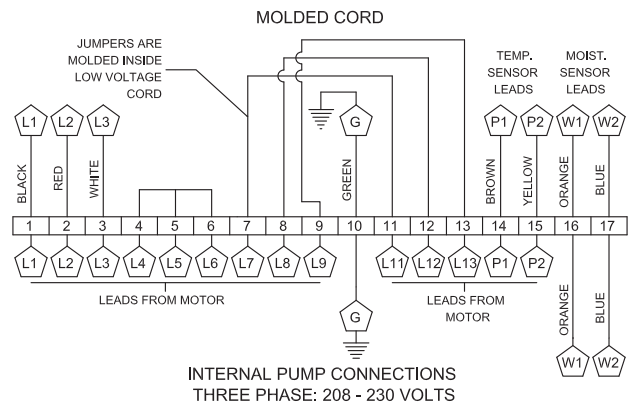
THREE PHASE 460-575 VOLT AC (orange molded plug)	
Power Cable	Motor Lead ID
Green (Ground)	Green
Black	1
Red	2
White	3
Jumpered Inside Cord Automatically (No user jumpering required)	T4 & T7 Together
	T5 & T8 Together
	T6 & T9 Together



MOISTURE AND TEMPERATURE SENSORS	
Control Cable	Lead ID
Green (Ground)	Green
Brown	P1 (Temperature Sensor)
Yellow	P2 (Temperature Sensor)
Orange	W1 (Moisture Sensor)
Blue	W2 (Moisture Sensor)



THREE PHASE 208-230 VOLT AC (black molded plug)	
Power Cable	Motor Lead ID
Green (Ground)	Green
Black	1
Red	2
White	3
Jumpered Inside Cord Automatically (No user jumpering required)	T4, T5 & T6 Together
	T11 & T7 Together
	T13 & T9 Together
	T12 & T8 Together



**FIGURE 3**

**External Ground Note:**

(Grd symbol) An external ground screw is provided on the side of the motor cap which can be used for supplemental bonding connection where local codes permit or require such connection.

## TYPICAL THERMAL PROTECTION WIRING DIAGRAM

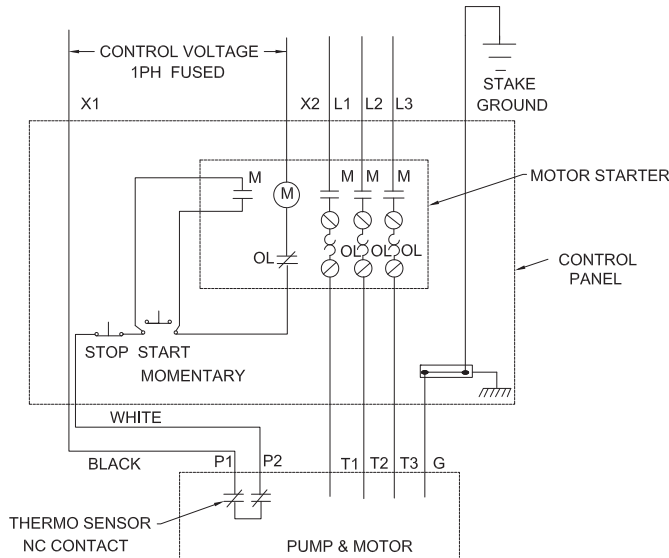


FIGURE 4

### WARRANTY NOTE:

Both the temperature sensor and moisture detection system must be connected to the motor circuitry such that the motor will be de-energized or sound alarm if excessive motor temperatures are reached and/or if water is detected in the seal chamber and/or motor chamber. Failure to have the above mentioned systems installed and operative, nullifies warranty.



### B-4.3) Overload Protection:

Current sensing overloads must be provided in the pump control panel and should be properly sized for the full load current of the pump. Three normally closed (N/C) thermal sensors wired in series (one per phase) are embedded in the motor windings and will detect excessive heat in the event an overload condition occurs which will then trip and stop the pump when wired in series with the pump contactor control circuit. The thermal sensor leads marked P1 and P2 **MUST** be connected in series with the stop button of the pilot circuit of the magnetic motor controller located in the control panel so that the thermostat will open the circuit before dangerous temperatures are reached. A manual momentary start switch is required to prevent the automatic restarting of the motor when the thermostat resets. For a typical wiring diagram, refer to Figure 4.

In the event of an over temperature condition, the source of this condition should be determined and rectified before the pump is put back into normal operation. **DO NOT LET THE PUMP CYCLE OR RUN IF AN OVER TEMPERATURE CONDITION OCCURS!**

If current through the temperature sensor exceeds the values listed, an intermediate control circuit relay must be used to reduce the current or the sensor will not work properly.

### TEMPERATURE SENSOR ELECTRICAL RATINGS

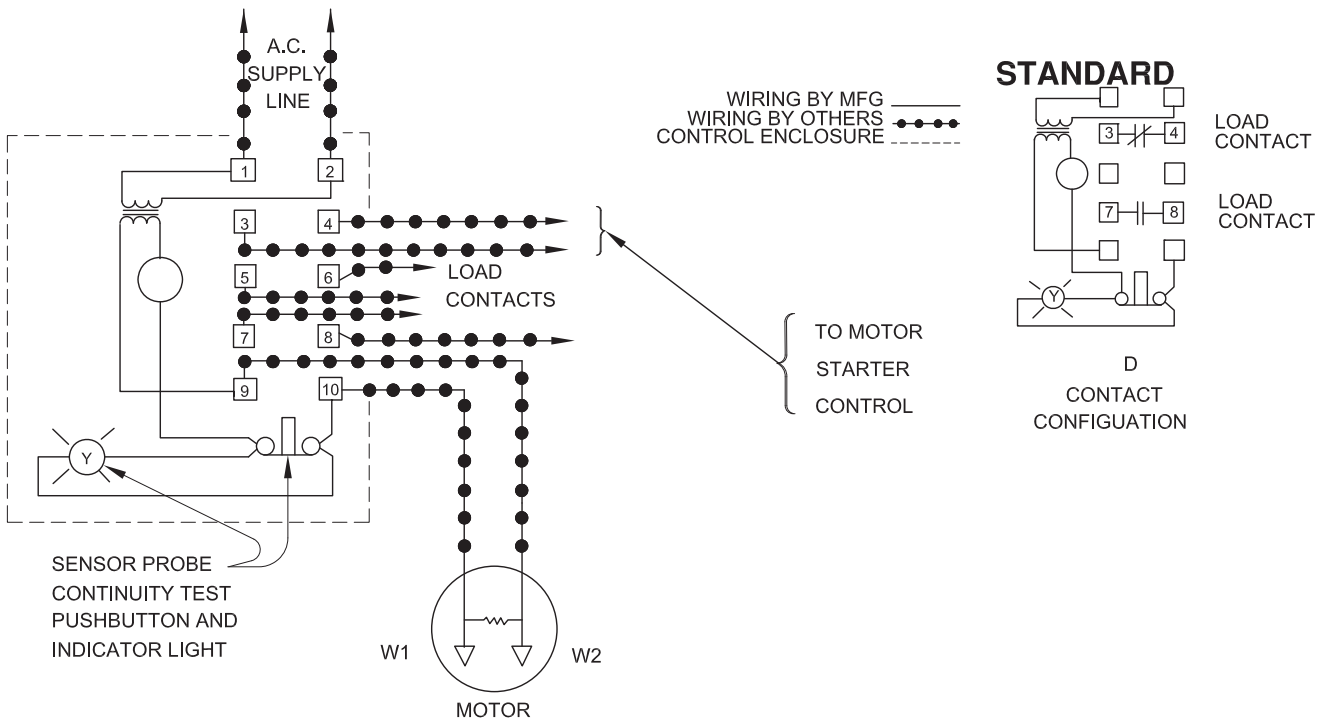
Volts	Continuous Amperes	Inrush Amperes
110-120	3.00	30.0
220-240	1.50	15.0
440-480	0.75	7.5

### B-4.4) Moisture Sensors:

A normally open (N/O) detector is installed in the pump seal chamber, which will detect any moisture present, and a continuity test resistor built into the motor. The test resistor is rated 1 watt at 330K ohms. The moisture sensors **MUST** be connected to an intrinsically safe moisture detector control in the control panel which includes a continuity test circuit, see Figure 4 for typical wiring diagram. The normally closed (N/C) contact of the moisture detector **MUST** be connected in series with the stop button of the pilot circuit of the magnetic motor controller. Wiring must be provided from the moisture detector sensor probe leads of the motor designated W1 and W2 to terminals 9 and 10 of the 2800-XXX control. Terminal pair 1-2 must be continuously energized from an A-C supply line of electrical characteristics shown on the data table. In the event of moisture detection, the pump should be pulled and the source of the failure located and repaired. **IF MOISTURE DETECTION HAS OCCURRED, SCHEDULE MAINTENANCE AS SOON AS POSSIBLE !**



## TYPICAL WIRING DIAGRAM FOR MOISTURE SENSOR RELAY



**FIGURE 5**

### B-4.5) Control Panel and Electrical System:

The control panel and the electrical system **MUST** be properly designed and wired to include at least, but not limited to the following;

- Proper grounding per NEC.
- A temperature sensing circuit (see Fig. 4)
- A moisture detection circuit with continuity test circuit (see Figure 5)
- A level control system.
- A main power manual disconnect and lock out.
- A motor starter and overload system.
- An intrinsically safe level control system. It is advisable that all three phase control panels be purchased from the factory.

### B-5) When Used with a Variable Speed Drive:

Maximum turndown should not exceed 2:1. Drive should be set to operate in constant torque mode.

## SECTION: C START-UP OPERATION

### C-1) Check Voltage and Phase:

Before operating pump, compare the voltage and phase information stamped on the pump's identification plate to the available power.

### C-2) Check Pump Rotation:

Before putting pump into service for the first time, the motor

rotation must be checked. Improper motor rotation can result in poor pump performance and can damage the motor and/or pump. To check the rotation, suspend the pump freely, momentarily apply power and observe the "kickback".

"Kickback" should always be in a counter-clockwise direction as viewed from the top of the pump motor housing and will always be in the opposite direction of the rotation arrows cast in the pump volute.

### C-2.1) Incorrect Rotation for Three-Phase Pumps:

In the event that the rotation is incorrect for a three-phase installation, interchange any two power cable leads at the control box. Recheck the "kickback" rotation again by momentarily applying power.

### C-2.2) Test Procedure For Moisture Sensor Control:

With a moisture detection control, a normally closed push button and neon indicating lamp is typically provided as a means of checking the moisture sensing components. When the push button is depressed, the indicating lamp will be illuminated to indicate (A) power is supplied to the control, (B) the control is operative, and (C) wiring to the moisture sensing probes in the motor is intact. This procedure should be performed periodically to confirm integrity of the circuit.

**C-3) Start-Up Report:**

Included at the end of this manual is one start-up report sheet, this sheet is to be completed as applicable. Return a copy to Deming and store the second in the control panel or with the pump manual. It is important to record this data at initial start-up since it will be useful to refer to should servicing the pump be required in the future.

**C-3.1) Identification Plate:**

Record the numbers from the pump's identification plate on the START-UP REPORT provided at the end of the manual for future reference.

**C-3.2) Insulation Test:**

Before the pump is put into service, an insulation (megger) test should be performed on the motor. The resistance values (ohms) as well as the voltage (volts) and current (amps) should be recorded on the start-up report. Pumps/systems with an insulation value of less than 5 M-Ohms should be investigated for moisture or damaged cables before proceeding.

**C-3.3) Pump-Down Test:**

After the pump has been properly wired and lowered into the basin, sump or lift station, it is advisable to check the system by filling with liquid and allowing the pump to operate through it's pumping cycle. The time needed to empty the system, or pump-down time along with the volume of water, should be recorded on the start-up report.

**IMPORTANT! THE MAXIMUM ALLOWABLE STARTS PER HOUR IS 15, EVENLY SPACED.**

**SECTION D: PREVENTATIVE MAINTENANCE**

As the motor and seal chamber are oil-filled, no lubrication or other maintenance is required, and generally Deming Pumps will give very reliable service and can be expected to operate for years of normal sewage pumping without failing. However, as with any mechanical piece of equipment a preventive maintenance program is recommended and suggested to include the following checks:

- 1) Test moisture detector control "Test Switch" for continuity of circuit. Water in the seal chamber will energize a seal leak warning light at the control panel. This is a warning light only and does not stop the motor. It indicates the seal has leaked and must be repaired. This should be done within 2 or 3 weeks to prevent further damage. See section C-2.2.
- 2) Inspect impeller and body for excessive build-up or clogging and repair as required per section E-2.
- 3) Inspect outer shaft seal and replace as required per section E-3.
- 4) Check motor for ground leakage and proper amp draw.

**SECTION E: SERVICE AND REPAIR**

NOTE: All item numbers in ( ) refer to Figures 9 & 10.



**WARNING ! - Electrical power to the pump motors must be disconnected and locked out to prevent any dangerous electrical hazards or personnel danger before any service work is done to the pump.**



**CAUTION ! - Operating pump builds up heat and pressure; allow time for pump to cool to room temperature before handling or servicing.**

**E-1) Lubrication**

**E-1.1) Checking Oil**

1. Place pump on it's side, and drain oil into a clean, dry container.
2. Check oil for contamination using an oil tester with a range to 30Kilovolts breakdown.
3. If oil is found to be clean and uncontaminated (measure above 15 KV. breakdown), refill the seal chamber as per section E-1.2.
4. If oil is found to be dirty or contaminated (or measures below 15 KV. breakdown), the pump must be carefully inspected for leaks at the shaft seal (4), before refilling with oil. To locate the leak, perform a pressure test as per section E-1.3. After leak is repaired, refill with new oil as per section E-1.2.

**E-1.2) Replacing Oil:**

Seal Chamber - Drain all oil from seal chamber and dispose of properly. Refill with (see parts list for amount) new cooling oil as per Table 1. An air space must remain to compensate for oil expansion (see fig. 9). Set unit on side and fill.



**IMPORTANT! - Do not overfill oil. Overfilling of seal chamber with oil can create excessive and dangerous hydraulic pressure which can destroy the pump and create a hazard. Overfilling oil voids warranty.**

**E-1.3) Pressure Test:**

Seal Chamber - Before checking the pump for leaks around the shaft seal, the oil level should be full. Remove pipe plug. Apply pipe sealant to pressure gauge assembly and tighten into pipe plug hole. Pressurize motor housing to 10 P.S.I. Use a soap solution around the sealed area and inspect joints for "air bubbles". If, after five minutes, the pressure is still holding constant, and no "bubbles" are observed, slowly bleed the pressure and remove the gauge assembly. Replace the pipe plug using a sealant. If the pressure does not hold, then the leak must be located.



**CAUTION! - Pressure builds up extremely fast, increase pressure by "tapping" air nozzle. Too much pressure will damage seal. Do Not exceed 10 P.S.I. in seal chamber.**

TABLE 1 - COOLING OIL - Dielectric	
SUPPLIER	GRADE
BP	Enerpar SE100
Conoco	Pale Paraffin 22
Mobil	D.T.E. Oil Light
G & G Oil	Circulating 22
Imperial Oil	Voltesso-35
Shell Canada	Transformer-10
Texaco	Diala-Oil-AX
Woco	Premium 100

**E-2) Impeller and Volute Service:**

**E-2.1) Disassembly and Inspection:**

To clean out the volute (11), or clean out or replace impeller (6), disconnect power, remove cap screws (2) then vertically lift motor assembly from the pump body (11). Clean out the volute, if necessary, clean and examine impeller (6) for pitting or wear, replace if required. To remove Impeller (6), remove cap screw (8) and washer (8A). The impeller is keyed onto the shaft with a square key (7) and to remove, pull impeller straight off the shaft using a wheel puller if required. Inspect o-ring (9) and replace if cut or damaged. Before reinstallation, check the motor shaft and impeller bore for damage.

**WARNING!** These motors are listed for application in Class I, Division 1, Groups C & D T4, EXPLOSION PROOF environments. All repairs, other than lead reconnects and outer seal replacement, shall be performed by an authorized Crane Pumps & Systems Service Facility. Any other repairs performed by the customer or Non-Authorized Crane Pumps & Systems Service facilities negates the listing and motor warranty.

**E-2.2) Reassembly:**

To install impeller (6), apply a thin film of oil to motor shaft and slide impeller straight onto shaft, keeping keyways lined up. Drive key (7) into keyway. Thread cap screw (8) and washer (8A) into shaft and torque to 45 ft. lbs. Rotate impeller to check for binding. Place o-ring (9) on seal plate pilot diameter lining up holes and install impeller and motor assembly onto volute (11). Loctite cap screws (2), insert into volute and motor assembly and torque to 35 ft. lbs. Check for free rotation of motor and impeller.

**E-3) Outer Shaft Seal Service:**

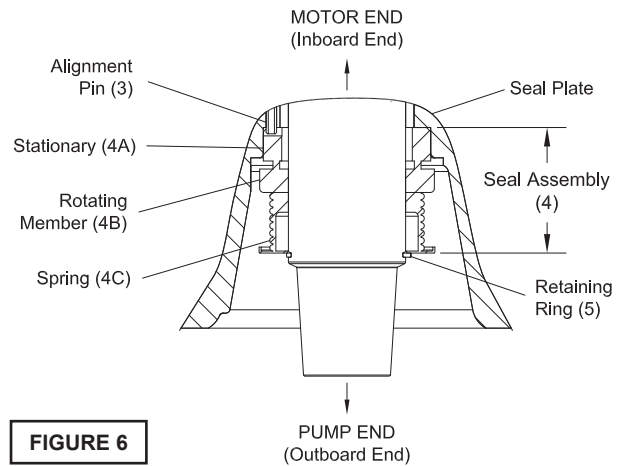
**CAUTION!** - Handle seal parts with extreme care. DO NOT scratch or mar lapped surfaces.

**E-3.1) Disassembly and Inspection:**

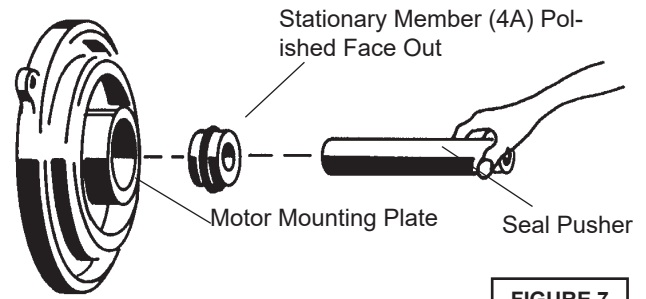
To expose outer shaft seal (4) for examination, remove Impeller and Volute per Section E-2.1. Set motor assembly (1) in the inverted position to prevent loss of oil. Remove snap ring from motor shaft, then retaining ring (5), spring (4C) and rotating member (4B) from shaft, See Figure 6. Examine all seal parts and especially contact faces. Inspect seal for signs of wear such as uneven wear pattern on stationary members, chips and scratches on either seal face. **DO NOT** interchange seal components, replace the entire shaft seal (4). If replacing seal, remove stationary (4A) from mounting plate by prying out with flat screw driver.

**E-3.2) Reassembly:**

Lightly oil (**DO NOT use grease**) outer surface of stationary member (4A). Press stationary member (4A) firmly into mounting plate using a seal pusher aligning seal with pin, nothing but the seal pusher is to come in contact with seal face (see Figure 7).

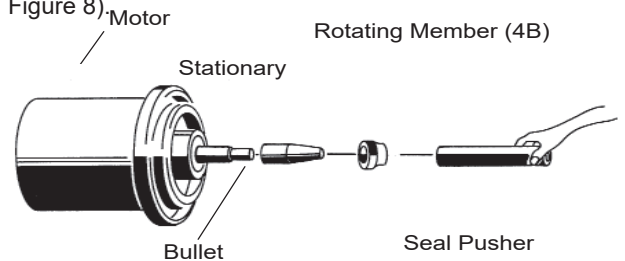


**FIGURE 6**



**FIGURE 7**

Make sure the stationary member is in straight and that the rubber ring is not out of it's groove. Lightly oil (**DO NOT use grease**) shaft and inner surface of bellows on rotating member (4B) see Figure 8. With lapped surface of rotating member (4B) facing inward toward stationary member (4A), slide rotating member (4B) onto shaft using a seal pusher, until lapped faces of (4A) and (4B) are together. (see Figure 8)



**FIGURE 8**

**IMPORTANT!** - It is extremely important to keep seal faces clean during assembly. dirt particles lodged between these faces will cause the seal to leak.

Place spring (4C) over shaft and in place on rotating member (4B), making sure it is seated on retainer and not cocked or resting on bellows tail. Slide retaining ring (5) over shaft and let rest on spring (4C). Replace snap ring onto motor shaft. Inspect gasket (9) and replace if cut or damaged. Assemble impeller and volute as outlined in paragraph E-2.2.

**SECTION: F REPLACEMENT PARTS**

**F-1 ORDERING REPLACEMENT PARTS:**

When ordering replacement parts, ALWAYS furnish the following information:

1. Pump serial number and date code. (Paragraph F-4)
2. Pump model number. (Paragraph F-3)
3. Pump part number. (Paragraph F-2)
4. Part description.
5. Item part number.
6. Quantity required.
7. Shipping instructions.
8. Billing Instructions.

<b>CRANE</b>		<small>PUMPS &amp; SYSTEMS</small>		<b>DEMING</b>	
Power		Ph.	RPM	Volts	
Hz.	FLA.	SFA		SF	
Ambient 0-40°C	Duty CONT.	Code	Weight	Part No.	
Model No.		Serial No.		Imp. Dia.	

- THERMALLY PROTECTED - CONNECT THERMAL CONTACTS  
 - SUBMERSIBLE TO 66 FT - SUBMERSIBLE SEWAGE PUMP - INSUL. CL.: F  
 - CLASS I DIV.1 GROUP C AND D HAZARDOUS LOCATIONS - TEMP CODE: T4

**WARNING**

1. A.) SEE INSTRUCTION MANUAL FOR: PROPER INSTALLATION, CORD REPLACEMENT, MOISTURE SENSOR AND THERMAL CUTOFF WIRING REQUIREMENTS. B.) PUMP MUST BE PROPERLY GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND ALL LOCAL CODES. C.) DISCONNECT THE PUMP FROM THE POWER SOURCE BEFORE HANDLING OR SERVICING. D.) INSTALLATION AND SERVICE SHALL BE CONDUCTED BY A QUALIFIED PERSON.
2. USE WITH APPROVED MOTOR CONTROL THAT MATCHES MOTOR INPUT IN FULL LOAD AMPERES WITH OVERLOAD ELEMENT(S) SELECTED OR ADJUSTED IN ACCORDANCE WITH CONTROL INSTRUCTIONS. (UTILISER UN DÉMARREUR APPROUVÉ CONVENANT AU COURANT À PLEINE CHARGE DU MOTEUR ET DONT LES ÉLÉMENTS THERMIQUES SONT RÉGLÉS OU CHOISIS CONFORMÉMENT AUX INSTRUCTION QUI L'ACCOMPAGNENT).
3. KEEP CLEAR OF SUCTION AND DISCHARGE OPENING AT ALL TIMES WHEN POWER IS CONNECTED.
4. MOTOR HOUSING WILL CONTAIN HOT OIL UNDER PRESSURE, ALLOW MOTOR TO COOL BEFORE OPENING.
5. THIS PUMP IS NOT INTENDED FOR USE IN SWIMMING POOLS, DECORATIVE FOUNTAINS OR INSTALLATIONS IN WHICH HUMAN CONTACT WITH THE PUMPED MEDIA IS A COMMON OCCURRENCE.

6. DO NOT REMOVE CORD AND STRAIN RELIEF.      CSA 108  
 7. DO NOT CONNECT CONDUIT TO PUMP.              LR16667  
 8. DO NOT PUMP FLAMMABLE LIQUIDS  
 9. NOT SUITABLE FOR ENVIRONMENTS CONTAINING GASOLINE OR HEXANE.

127265A

**F-2 PART NUMBER:**

This number is used for ordering and obtaining information.

**F-3 MODEL NUMBER:**

This designation consists of numbers and letters which represent the discharge size, series, horsepower, motor phase and voltage, speed and pump design. This number is used for ordering and obtaining information.

**F-4 SERIAL NUMBER:**

The serial number block will consist of a six digit number, which is specific to each pump and may be preceded by an alpha character, which indicates the plant location. This number will also be suffixed with a four digit number, which indicates the date the unit was built (Date Code). **EXAMPLE: A012345 0490.**

Reference the six digit portion (Serial Number) of this number when referring to the product.

## TROUBLE SHOOTING

**CAUTION !** Always disconnect the pump from the electrical power source before handling.  
 If the system fails to operate properly, carefully read instructions and perform maintenance recommendations.  
 If operating problems persist, the following chart may be of assistance in identifying and correcting them:  
**MATCH "CAUSE" NUMBER WITH CORRELATING "CORRECTION" NUMBER.**

**NOTE:** Not all problems and corrections will apply to each pump model.

PROBLEM	CAUSE	CORRECTION
Pump will not run	1. Poor electrical connection, blown fuse, tripped breaker or other interruption of power, improper power supply. 2. Motor or switch inoperative (to isolate cause, go to manual operation of pump). 2a. Float movement restricted. 2b. Switch will not activate pump or is defective. 2c. Defective motor 3. Insufficient liquid level.	1. Check all electrical connections for security. Have electrician measure current in motor leads, if current is within $\pm 20\%$ of locked rotor Amps, impeller is probably locked. If current is 0, overload may be tripped. Remove power, allow pump to cool, then recheck current. 2a. Reposition pump or clean basin as required to provide adequate clearance for float.
Pump will not turn off	2a. Float movement restricted. 2b. Switch will not activate pump or is defective. 4. Excessive inflow or pump not properly sized for application. 9. Pump may be airlocked 14. H-O-A switch on panel is in "HAND" position	2b. Disconnect level control. Set ohmmeter for a low range, such as 100 ohms full scale and connect to level control leads. Actuate level control manually and check to see that ohmmeter shows zero ohms for closed switch and full scale for open switch. (Float Switch). 2c. Check winding insulation (Megger Test) and winding resistance. If check is outside of range, dry and recheck. If still defective, replace per service instructions.
Pump hums but does not run	1. Incorrect voltage 8. Impeller jammed or loose on shaft, worn or damaged, impeller cavity or inlet plugged.	2c. Check winding insulation (Megger Test) and winding resistance. If check is outside of range, dry and recheck. If still defective, replace per service instructions.
Pump delivers insufficient capacity	1. Incorrect voltage. 4. Excessive inflow or pump not properly sized for application. 5. Discharge restricted. 6. Check valve stuck closed or installed backwards. 7. Shut-off valve closed. 8. Impeller jammed or loose on shaft, worn or damaged, impeller cavity or inlet plugged. 9. Pump may be airlocked. 10. Pump running backwards	3. Make sure liquid level is at least equal to suggested turn-on point. 4. Recheck all sizing calculations to determine proper pump size. 5. Check discharge line for restrictions, including ice if line passes through or into cold areas. 6. Remove and examine check valve for proper installation and freedom of operation. 7. Open valve.
Pump cycles too frequently or runs periodically when fixtures are not in use	6. Check valve stuck closed or installed backwards. 11. Fixtures are leaking. 15. Ground water entering basin.	8. Check impeller for freedom of operation, security and condition. Clean impeller and inlet of any obstruction. 9. Loosen union slightly to allow trapped air to escape. Verify that turn-off level of switch is set so that the suction is always flooded. Clean vent hole.
Pump shuts off and turns on independent of switch, (trips thermal overload protector). <b>CAUTION!</b> Pump may start unexpectedly. Disconnect power supply.	1. Incorrect voltage. 4. Excessive inflow or pump not properly sized for application. 8. Impeller jammed, loose on shaft, worn or damaged, impeller cavity or inlet plugged. 12. Excessive water temperature. (internal protection only)	10. Check rotation. If power supply is three phase, reverse any two of three power supply leads to ensure proper impeller rotation.. 11. Repair fixtures as required to eliminate leakage.
Pump operates noisily or vibrates excessively	2c. Worn bearings, motor shaft bent. 5. Debris in impeller cavity or broken impeller 10. Pump running backwards 13. Piping attachments to building structure too rigid or too loose.	12. Check pump temperature limits & fluid temperature. 13. Replace portion of discharge pipe with flexible connector. 14. Turn to automatic position. 15. Check for leaks around basin inlet and outlets.

# Cross Section



**IMPORTANT!** - Service is limited to the following components because of the explosion proof rating: impeller, lower mechanical seal, volute and power cord. Service to any other components WILL VOID the warranty and explosion proof certification. Any further work required contact Crane Pumps & Systems.

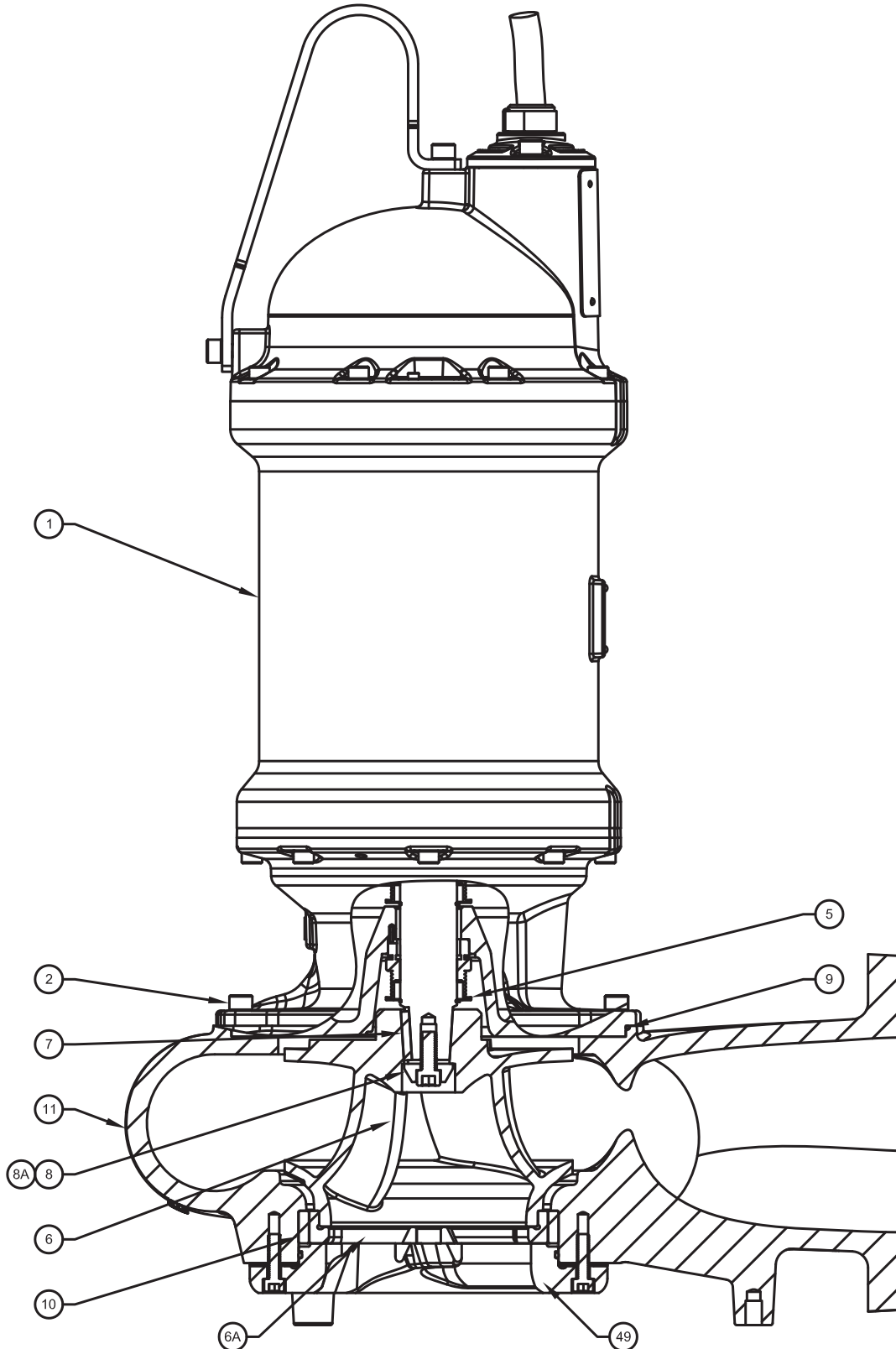


FIGURE 9

# Exploded View

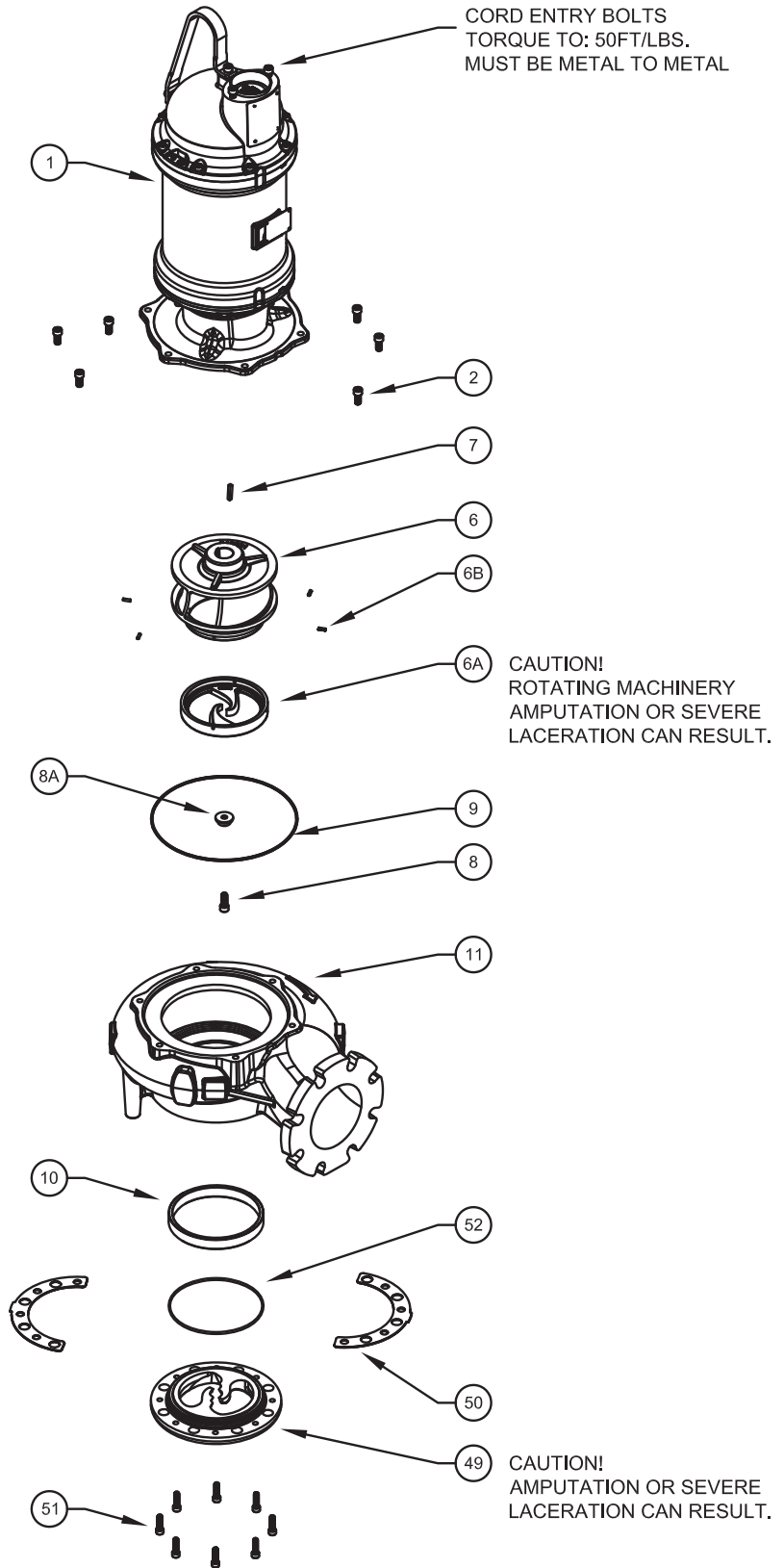


FIGURE 10

# PARTS LIST

Seal Kit .....	See Table on Page 35	(+) 5, 9, 53
O-Ring Kit.....	138581-XP	(☼) 5, 9
Hardware Kit .....	138616-D	(◆) 7, 8, 8A
Volute Kit .....	See Table on Page 26	(■) 10, 11, 46
Slicer Blade Attachment Kit .....	See Table on Page 36	(○) 7, 8, 8A
Cord Attachment Kit.....	140152-21	(π) 26
Lifting Handle Kit.....	125458D-KIT	(>) 23, 26
Leg Kit .....	See Table on Page 35	
Slicer Blade Kit .....	See Table on Page 29	(∂) 6, 6A, 6B
Shim Kit.....	See Table on Page 27	(Δ) 50
Striker Plate Kit.....	See Table on Page 27	(Σ) 49, 50, 51, 52
Striker Shell Kit.....	See Table on Page 27	(△) 10, 11, 46, 49, 50, 51, 52
Striker Hardware Kit.....	See Table on Page 27	(∩) 51, 52
Striker O-Ring Stock Kit.....	p/n 142635D	(▲) 52

ITEM	QTY	PART NO.		DESCRIPTION	MATERIAL
1	1	See Table	No Resale	Driver Assembly	
2	12	127223		Screw, SHCS, M12 x 1.75 x 25	18-8 SS
5	3	129381	+☼	Ring, Retaining, EXT, 5100-177-H-SS	420 SS
6	1	See Table	∂	Impeller	Ductile Iron
6A	1	See Table	∂	Slicer Blade	Stainless 440C
6B	4	See Table	∂	Slicer Pins	Stainless 400
7	1	Q21-20-J8	◆ ○	Key, ¼ x ¼ x 1½"	303 SS
8	1	136284	◆ ○	Screw, SHCS, M12 x 1.75 x 30	18-8 SS
8A	1	136233	◆ ○	Washer, Impeller, .50 x 1.50	18-8 SS
9		See Table	+☼	O-Ring	
10		See Table	■ △	Wear Ring (Volute)	Bronze
11		See Table	■ △	Volute	Cast Iron
23	1	125458	>	Handle, Lifting, 210FR, SS	304 Stainless Steel
26	9	127223	π>	Screw, SHCS, M12 x 1.75 x 25, SS	18-8 Stainless Steel
46	5	088932	■ △	Paint	
49	1	See Table	Σ△	Striker Plate	Stainless 440C
50	*	See Table	ΔΣ△	Shims	
51	**	131147	Σ△∩	Striker Plate Screw, SHCS, M10 x 1.5 x 35	18-8 Stainless Steel
52	1	See Table	Σ△∩▲	Striker, O-Ring, Buna-N, 70 Duro	Buna-N
53		See Table	+	Seal, Mechanical, Lower	

**NOTES:**

\* Quantity dependent on Blade clearance, nominal is 0.09 Shim Stack, with 0.003 gap between Blade and Plate.

\*\* See table for quantity.



<b>Power Cable Chart</b>					
<b>Part No.</b>	<b>Length (feet)</b>	<b>Volt</b>	<b>Max. Amps</b>	<b>Cord Size</b>	<b>Cord O.D. +/- .02in (.5mm)</b>
125497XF	50	400-600	31.7	12/4 - 18/4	0.86in (22.0mm)
125497XJ	75	400-600	31.7	12/4 - 18/4	0.86in (22.0mm)
125497XL	100	400-600	31.7	12/4 - 18/4	0.86in (22.0mm)
125498XF	50	208-240	59.0	8/4 - 18/4	1.12in (28.4mm)
125498XJ	75	208-240	59.0	8/4 - 18/4	1.12in (28.4mm)
125498XL	100	208-240	59.0	8/4 - 18/4	1.12in (28.4mm)
125499XF	50	400-600	59.0	8/4 - 18/4	1.12in (28.4mm)
125499XJ	75	400-600	59.0	8/4 - 18/4	1.12in (28.4mm)
125499XL	100	400-600	59.0	8/4 - 18/4	1.12in (28.4mm)

- Note: 1 - Standard Motor includes, Moisture & Temperature Sensors  
and Carbon/Ceramic/Buna-N Inner & Silicon Carbide/Silicon Carbide/ Buna-N Outer Shift Seals.
- Note: 2 - Item 4 is for Outer seal replacement **ONLY**.

<b>Volute Pilot Diameter (AFTER JAN.-2019)</b>					
<b>Model</b>	<b>Seal Plate Size</b>	<b>Volute P/N</b>	<b>Volute Kit</b>	<b>Wear Ring P/N</b>	<b>Volute O-Ring P/N</b>
3MA	Not Available in 3 Frame				
4M					
4D					
4ML	240mm	129994S4	129994S4K-4D-KIT	141582	125857-235
4MM	305mm	129995S	129995SK-D-KIT	141582	125857-295
4MB	370mm	127254S	127254SK-D-KIT	141581	125857-360
4MH	370mm	127254S	127254SK-D-KIT	141581	125857-360
4MHA	370mm	137226S	137226SK-D-KIT	141582	125857-360
4DM	240mm	129994S5	129994S5K-5D-KIT	141602	125857-235
4DH	370mm	143624S	143264SK-D-KIT	142102	125857-360
6ML	370mm	130830S	130830SK-1D-KIT	142102	125857-360
6MM	370mm	130830S	130830SK-1D-KIT	142102	125857-360
6MH	370mm	130830S	130830SK-1D-KIT	142102	125857-360
6DL	305mm	138110S	138110SK-D-KIT	141586	125857-295
6D	370mm	143338S	143338SK-D-KIT	143475	125857-360
8D	305mm	143415S	143415SK-D-KIT	143438	125857-295
<b>Volute Pilot Diameter (BEFORE FEB.-2019)</b>					
4DH	370mm	127254S	127254SK-KIT	141581	125857-360
6D	370mm	130830S	130830SK-2-KIT	142134	125857-360

Striker Kits (AFTER JAN.-2019)										
Model	Plate Flange Size	Striker Shell Kit	Striker Plate Kit	Shim Kit	Striker Hardware Kit	Kit Component Info (Ref. ONLY)			Striker Plate Screw Qty.	
						Striker Plate	Striker Plate O-Ring	Striker Plate Shims		
3MA	3 INCH						Not Available in 3 Frame			
4M	4 INCH						Not Available in 3 Frame			
4D	4 INCH						Not Available in 3 Frame			
4ML	4 INCH	129994SK4D-ASSY-KIT			142633-4D-KIT					
4MM	4 INCH	129995SK-D-ASSY-KIT								
4MB	4 INCH	127254SK-D-ASSY-KIT	142125D-ASSY-KIT	142157D-KIT	142633-4D-KIT	142125	142174-259	142157-002 (RED) 142157-004 (TAN) 142157-010 (BROWN) 142157-025 (WHITE) 142157-060 (CLEAR)		
4MH	4 INCH	127254SK-D-ASSY-KIT								
4MHA	4 INCH	137226SK-D-ASSY-KIT								
4DM	5 INCH	129994SK5D-ASSY-KIT	141601D-ASSY-KIT	141579D-KIT	142633-5D-KIT	141601	142174-260	141579-002 (RED) 141579-004 (TAN) 141579-010 (BROWN) 141579-025 (WHITE) 141579-060 (CLEAR)"		8
4DH	6 INCH	143264SK-D-ASSY-KIT	143265D-ASSY-KIT			143265		142158-002 (RED) 142158-004 (TAN)		
6ML	6 INCH									
6MM	6 INCH	130830SK1D-ASSY-KIT	141585D-ASSY-KIT	142158D-KIT	142633-6D-KIT	141585	142174-265	142158-010 (BROWN) 142158-025 (WHITE) 142158-060 (CLEAR)		
6MH	6 INCH									
6DL	6 INCH	138110SK-D-ASSY-KIT								
6D	8 INCH	143338SK-D-ASSY-KIT	143339D-ASSY-KIT	143551D-KIT	142633-8D-KIT	143339	142174-371	143551-002 (RED) 143551-004 (TAN) 143551-010 (BROWN) 143551-025 (WHITE) 143551-060 (CLEAR)		
8D	10 INCH	143415SK-D-ASSY-KIT	143411D-ASSY-KIT	143465D-KIT	142633-10D-KIT	143411	142174-378	143465-002 (RED) 143465-004 (TAN) 143465-010 (BROWN) 143465-025 (WHITE) 143465-060 (CLEAR)		12
Striker Kits (BEFORE FEB.-2019)										
4DH	4 INCH	127254SK-D-ASSY-KIT	142125D-ASSY-KIT	142157D-KIT	142633-4D-KIT	142125	142174-259	142157-002 (RED) 142157-004 (TAN) 142157-010 (BROWN) 142157-025 (WHITE) 142157-060 (CLEAR)		8
6D	6 INCH	130830SK2D-ASSY-KIT	141585D-ASSY-KIT	142158D-KIT	142633-6D-KIT	141585	142174-265	142158-002 (RED) 142158-004 (TAN) 142158-010 (BROWN) 142158-025 (WHITE) 142158-060 (CLEAR)		

CURRENT DESIGN (AFTER JAN.-2019)				
Model	Striker Plate Flange Size	Striker O-ring Stock Kit	Shim Stock Kit	Spacing Kit
3MA	3 INCH	142635D	142157D-STK-KIT 141579D-STK-KIT 142158D-STK-KIT 143551D-STK-KIT 143465D-STK-KIT	142634
4M	4 INCH			
4D	4 INCH			
4ML	4 INCH			
4MM	4 INCH			
4MB	4 INCH			
4MH	4 INCH			
4MHA	4 INCH			
4M	4 INCH			
4DM	5 INCH			
4DH	6 INCH			
6ML	6 INCH			
6MM	6 INCH			
6MH	6 INCH			
6DL	6 INCH			
6D	8 INCH			
8D	10 INCH			
PREVIOUS DESIGN (BEFORE FEB.-2019)				
4DH	4 INCH	142635D	142157D-STK-KIT	142634
6D	6 INCH		142158D-STK-KIT	

Striker Plate Kit includes:
<ul style="list-style-type: none"> <li>• Striker Plate</li> <li>• O-ring (Plate)</li> <li>• M10 Bolts (qty. per table)</li> <li>• Shim Kit</li> </ul>

Striker Shell Kit includes:
<ul style="list-style-type: none"> <li>• Striker Plate Kit</li> <li>• Volute Kit</li> </ul>

Striker Hardware Kit includes:
<ul style="list-style-type: none"> <li>• M10 Bolts (qty. per table)</li> <li>• O-ring (Plate)</li> </ul>

Spacing Kit includes:
<ul style="list-style-type: none"> <li>• Level 4 Cut Proof Gloves</li> <li>• Spacer Gage</li> </ul>

Striker O-ring Stock Kit includes:
<ul style="list-style-type: none"> <li>• Small O-ring (4 inch Plate)(qty. 4)</li> <li>• Medium O-ring (5 inch Plate)(qty. 2)</li> <li>• Large O-ring (6 inch Plate)(qty. 4)</li> <li>• XLarge O-ring (8 inch Plate) (qty. 2)</li> <li>• XX-Large O-ring (10 inch Plate)(qty. 4)</li> <li>• XXX-Large O-ring (12 inch Plate)(qty. 4)</li> </ul>

Shim Kit includes:
<ul style="list-style-type: none"> <li>• 0.002" Shims (4)</li> <li>• 0.004" Shims (4)</li> <li>• 0.010" Shims (4)</li> <li>• 0.025" Shims (2)</li> <li>• 0.060" Shims (2)</li> <li>• Level 4 Cut Proof Gloves</li> <li>• Spacer Gage</li> </ul>

Shim Stock Kit includes:
<ul style="list-style-type: none"> <li>• 0.002" Shims (12)</li> <li>• 0.004" Shims (12)</li> <li>• 0.010" Shims (12)</li> <li>• 0.025" Shims (8)</li> <li>• 0.060" Shims (6)</li> </ul>

"4ML = C" Impeller						
Trim Dia. mm (in)	Ductile Iron Slicer Blade Kit	Nihard Slicer Blade Kit	Kit Component Info (Ref. ONLY)			
			Ductile Iron Part No.	Nihard Part No.	Blade	Pin
235mm (9.25in)	127263-ASSY-KIT	143276-ASSY-KIT	127263-C	143276-C	142124	142133-0750
230mm (9.06in)	127263TA-ASSY-KIT	143276TA-ASSY-KIT	127263TA-C	143276TA-C	142124	142133-0750
225mm (8.86in)	127263TB-ASSY-KIT	143276TB-ASSY-KIT	127263TB-C	143276TB-C	142124	142133-0750
220mm (8.66in)	127263TC-ASSY-KIT	143276TC-ASSY-KIT	127263TC-C	143276TC-C	142124	142133-0750
215mm (8.47in)	127263TD-ASSY-KIT	143276TD-ASSY-KIT	127263TD-C	143276TD-C	142124	142133-0750
210mm (8.27in)	127263TE-ASSY-KIT	143276TE-ASSY-KIT	127263TE-C	143276TE-C	142124	142133-0750
205mm (8.07in)	127263TF-ASSY-KIT	143276TF-ASSY-KIT	127263TF-C	143276TF-C	142124	142133-0750
200mm (7.87in)	127263TG-ASSY-KIT	143276TG-ASSY-KIT	127263TG-C	143276TG-C	142124	142133-0750
195mm (7.68in)	127263TH-ASSY-KIT	143276TH-ASSY-KIT	127263TH-C	143276TH-C	142124	142133-0750
190mm (7.48in)	127263TJ-ASSY-KIT	143276TJ-ASSY-KIT	127263TJ-C	143276TJ-C	142124	142133-0750
185mm (7.28in)	127263TK-ASSY-KIT	143276TK-ASSY-KIT	127263TK-C	143276TK-C	142124	142133-0750

"4MM = D" Impeller						
Trim Dia. mm (in)	Ductile Iron Slicer Blade Kit	Nihard Slicer Blade Kit	Kit Component Info (Ref. ONLY)			
			Ductile Iron Part No.	Nihard Part No.	Blade	Pin
295mm (11.61in)	127262-ASSY-KIT	143275-ASSY-KIT	127262-C	143275-C	142124	142133-0750
290mm (11.42in)	127262TA-ASSY-KIT	143275TA-ASSY-KIT	127262TA-C	143275TA-C	142124	142133-0750
285mm (11.22in)	127262TB-ASSY-KIT	143275TB-ASSY-KIT	127262TB-C	143275TB-C	142124	142133-0750
280mm (11.02in)	127262TC-ASSY-KIT	143275TC-ASSY-KIT	127262TC-C	143275TC-C	142124	142133-0750
275mm (10.83in)	127262TD-ASSY-KIT	143275TD-ASSY-KIT	127262TD-C	143275TD-C	142124	142133-0750
270mm (10.63in)	127262TE-ASSY-KIT	143275TE-ASSY-KIT	127262TE-C	143275TE-C	142124	142133-0750
265mm (10.43in)	127262TF-ASSY-KIT	143275TF-ASSY-KIT	127262TF-C	143275TF-C	142124	142133-0750
260mm (10.24in)	127262TG-ASSY-KIT	143275TG-ASSY-KIT	127262TG-C	143275TG-C	142124	142133-0750
255mm (10.04in)	127262TH-ASSY-KIT	143275TJ-ASSY-KIT	127262TH-C	143275TJ-C	142124	142133-0750
250mm (9.84in)	127262TJ-ASSY-KIT	143275TH-ASSY-KIT	127262TJ-C	143275TH-C	142124	142133-0750
245mm (9.65in)	127262TK-ASSY-KIT	143275TK-ASSY-KIT	127262TK-C	143275TK-C	142124	142133-0750
240mm (9.45in)	127262TL-ASSY-KIT	143275TL-ASSY-KIT	127262TL-C	143275TL-C	142124	142133-0750
235mm (9.25in)	127262TM-ASSY-KIT	143275TM-ASSY-KIT	127262TM-C	143275TM-C	142124	142133-0750
230mm (9.06in)	127262TN-ASSY-KIT	143275TN-ASSY-KIT	127262TN-C	143275TN-C	142124	142133-0750
225mm (8.86in)	127262TP-ASSY-KIT	143275TP-ASSY-KIT	127262TP-C	143275TP-C	142124	142133-0750

"4MH = E" Impeller						
Trim Dia. mm (in)	Ductile Iron Slicer Blade Kit	Nihard Slicer Blade Kit	Kit Component Info (Ref. ONLY)			
			Ductile Iron Part No.	Nihard Part No.	Blade	Pin
370mm (14.57in)	127261-ASSY-KIT	143274-ASSY-KIT	127261-C	143274-C	142124	142133-0750
365mm (14.37in)	127261TA-ASSY-KIT	143274TA-ASSY-KIT	127261TA-C	143274TA-C	142124	142133-0750
360mm (14.17in)	127261TB-ASSY-KIT	143274TB-ASSY-KIT	127261TB-C	143274TB-C	142124	142133-0750
355mm (13.98in)	127261TC-ASSY-KIT	143274TC-ASSY-KIT	127261TC-C	143274TC-C	142124	142133-0750
350mm (13.78in)	127261TD-ASSY-KIT	143274TD-ASSY-KIT	127261TD-C	143274TD-C	142124	142133-0750
345mm (13.58in)	127261TE-ASSY-KIT	143274TE-ASSY-KIT	127261TE-C	143274TE-C	142124	142133-0750
340mm (13.39in)	127261TF-ASSY-KIT	143274TF-ASSY-KIT	127261TF-C	143274TF-C	142124	142133-0750
335mm (13.19in)	127261TG-ASSY-KIT	143274TG-ASSY-KIT	127261TG-C	143274TG-C	142124	142133-0750
330mm (12.99in)	127261TH-ASSY-KIT	143274TH-ASSY-KIT	127261TH-C	143274TH-C	142124	142133-0750
325mm (12.80in)	127261TJ-ASSY-KIT	143274TJ-ASSY-KIT	127261TJ-C	143274TJ-C	142124	142133-0750
320mm (12.60in)	127261TK-ASSY-KIT	143274TK-ASSY-KIT	127261TK-C	143274TK-C	142124	142133-0750
315mm (12.40in)	127261TL-ASSY-KIT	143274TL-ASSY-KIT	127261TL-C	143274TL-C	142124	142133-0750
310mm (12.21in)	127261TM-ASSY-KIT	143274TM-ASSY-KIT	127261TM-C	143274TM-C	142124	142133-0750
305mm (12.01in)	127261TN-ASSY-KIT	143274TN-ASSY-KIT	127261TN-C	143274TN-C	142124	142133-0750
300mm (11.81in)	127261TP-ASSY-KIT	143274TP-ASSY-KIT	127261TP-C	143274TP-C	142124	142133-0750
295mm (11.61in)	127261TR-ASSY-KIT	143274TR-ASSY-KIT	127261TR-C	143274TR-C	142124	142133-0750
290mm (11.42in)	127261TS-ASSY-KIT	143274TS-ASSY-KIT	127261TS-C	143274TS-C	142124	142133-0750

"4DM = G" Impeller						
Trim Dia. mm (in)	Ductile Iron Slicer Blade Kit	Nihard Slicer Blade Kit	Kit Component Info (Ref. ONLY)			
			Ductile Iron Part No.	Nihard Part No.	Blade	Pin
235mm (9.25in)	129991-ASSY-KIT	143204-ASSY-KIT	129991-C	143204-C	142131	142133-0562
230mm (9.06in)	129991TA-ASSY-KIT	143204TA-ASSY-KIT	129991TA-C	143204TA-C	142131	142133-0562
225mm (8.86in)	129991TB-ASSY-KIT	143204TB-ASSY-KIT	129991TB-C	143204TB-C	142131	142133-0562
220mm (8.66in)	129991TC-ASSY-KIT	143204TC-ASSY-KIT	129991TC-C	143204TC-C	142131	142133-0562
215mm (8.47in)	129991TD-ASSY-KIT	143204TD-ASSY-KIT	129991TD-C	143204TD-C	142131	142133-0562
210mm (8.27in)	129991TE-ASSY-KIT	143204TE-ASSY-KIT	129991TE-C	143204TE-C	142131	142133-0562
205mm (8.07in)	129991TF-ASSY-KIT	143204TF-ASSY-KIT	129991TF-C	143204TF-C	142131	142133-0562
200mm (7.87in)	129991TG-ASSY-KIT	143204TG-ASSY-KIT	129991TG-C	143204TG-C	142131	142133-0562
195mm (7.68in)	129991TH-ASSY-KIT	143204TH-ASSY-KIT	129991TH-C	143204TH-C	142131	142133-0562
190mm (7.48in)	129991TJ-ASSY-KIT	143204TJ-ASSY-KIT	129991TJ-C	143204TJ-C	142131	142133-0562
185mm (7.28in)	129991TK-ASSY-KIT	143204TK-ASSY-KIT	129991TK-C	143204TK-C	142131	142133-0562
180mm (7.09in)	129991TL-ASSY-KIT	143204TL-ASSY-KIT	129991TL-C	143204TL-C	142131	142133-0562
175mm (6.89in)	129991TM-ASSY-KIT	143204TM-ASSY-KIT	129991TM-C	143204TM-C	142131	142133-0562
170mm (6.69in)	129991TN-ASSY-KIT	143204TN-ASSY-KIT	129991TN-C	143204TN-C	142131	142133-0562
165mm (6.50in)	129991TP-ASSY-KIT	143204TP-ASSY-KIT	129991TP-C	143204TP-C	142131	142133-0562

"6MM = H" Impeller						
Trim Dia. mm (in)	Ductile Iron Slicer Blade Kit	Nihard Slicer Blade Kit	Kit Component Info (Ref. ONLY)			
			Ductile Iron Part No.	Nihard Part No.	Blade	Pin
315mm (12.40in)	130826A-ASSY-KIT	143280-ASSY-KIT	130826A-C	143280-C	142128	142141-0625
310mm (12.21in)	130826ATA-ASSY-KIT	143280TA-ASSY-KIT	130826ATA-C	143280TA-C	142128	142141-0625
305mm (12.01in)	130826ATB-ASSY-KIT	143280TB-ASSY-KIT	130826ATB-C	143280TB-C	142128	142141-0625
300mm (11.81in)	130826ATC-ASSY-KIT	143280TC-ASSY-KIT	130826ATC-C	143280TC-C	142128	142141-0625
295mm (11.61in)	130826ATD-ASSY-KIT	143280TD-ASSY-KIT	130826ATD-C	143280TD-C	142128	142141-0625
290mm (11.42in)	130826ATE-ASSY-KIT	143280TE-ASSY-KIT	130826ATE-C	143280TE-C	142128	142141-0625
285mm (11.22in)	130826ATF-ASSY-KIT	143280TF-ASSY-KIT	130826ATF-C	143280TF-C	142128	142141-0625
280mm (11.02in)	130826ATG-ASSY-KIT	143280TG-ASSY-KIT	130826ATG-C	143280TG-C	142128	142141-0625
275mm (10.83in)	130826ATH-ASSY-KIT	143280TH-ASSY-KIT	130826ATH-C	143280TH-C	142128	142141-0625
270mm (10.63in)	130826ATJ-ASSY-KIT	143280TJ-ASSY-KIT	130826ATJ-C	143280TJ-C	142128	142141-0625
265mm (10.43in)	130826ATK-ASSY-KIT	143280TK-ASSY-KIT	130826ATK-C	143280TK-C	142128	142141-0625
260mm (10.24in)	130826ATL-ASSY-KIT	143280TL-ASSY-KIT	130826ATL-C	143280TL-C	142128	142141-0625
255mm (10.04in)	130826ATM-ASSY-KIT	143280TM-ASSY-KIT	130826ATM-C	143280TM-C	142128	142141-0625

"6MH = J" Impeller						
Trim Dia. mm (in)	Ductile Iron Slicer Blade Kit	Nihard Slicer Blade Kit	Kit Component Info (Ref. ONLY)			
			Ductile Iron Part No.	Nihard Part No.	Blade	Pin
370mm (14.57in)	130826-ASSY-KIT	143279-ASSY-KIT	130826-C	143279-C	142128	142141-0625
365mm (14.37in)	130826TA-ASSY-KIT	143279TA-ASSY-KIT	130826TA-C	143279TA-C	142128	142141-0625
360mm (14.17in)	130826TB-ASSY-KIT	143279TB-ASSY-KIT	130826TB-C	143279TB-C	142128	142141-0625
355mm (13.98in)	130826TC-ASSY-KIT	143279TC-ASSY-KIT	130826TC-C	143279TC-C	142128	142141-0625
350mm (13.78in)	130826TD-ASSY-KIT	143279TD-ASSY-KIT	130826TD-C	143279TD-C	142128	142141-0625
345mm (13.58in)	130826TE-ASSY-KIT	143279TE-ASSY-KIT	130826TE-C	143279TE-C	142128	142141-0625
340mm (13.39in)	130826TF-ASSY-KIT	143279TF-ASSY-KIT	130826TF-C	143279TF-C	142128	142141-0625
335mm (13.19in)	130826TG-ASSY-KIT	143279TG-ASSY-KIT	130826TG-C	143279TG-C	142128	142141-0625
330mm (12.99in)	130826TH-ASSY-KIT	143279TH-ASSY-KIT	130826TH-C	143279TH-C	142128	142141-0625
325mm (12.80in)	130826TJ-ASSY-KIT	143279TJ-ASSY-KIT	130826TJ-C	143279TJ-C	142128	142141-0625
320mm (12.60in)	130826TK-ASSY-KIT	143279TK-ASSY-KIT	130826TK-C	143279TK-C	142128	142141-0625
315mm (12.40in)	130826TL-ASSY-KIT	143279TL-ASSY-KIT	130826TL-C	143279TL-C	142128	142141-0625
310mm (12.21in)	130826TM-ASSY-KIT	143279TM-ASSY-KIT	130826TM-C	143279TM-C	142128	142141-0625

"4DH = I" Impeller (AFTER JAN.-2019)						
Trim Dia. mm (in)	Ductile Iron Slicer Blade Kit	Nihard Slicer Blade Kit	Kit Component Info (Ref. ONLY)			
			Ductile Iron Part No.	Nihard Part No.	Blade	Pin
370mm (14.57in)	144218-ASSY-KIT	144219-ASSY-KIT	144218-C	144219-C	143266	142141-1000
365mm (14.37in)	144218TA-ASSY-KIT	144219TA-ASSY-KIT	144218TA-C	144219TA-C	143266	142141-1000
360mm (14.17in)	144218TB-ASSY-KIT	144219TB-ASSY-KIT	144218TB-C	144219TB-C	143266	142141-1000
355mm (13.98in)	144218TC-ASSY-KIT	144219TC-ASSY-KIT	144218TC-C	144219TC-C	143266	142141-1000
350mm (13.78in)	144218TD-ASSY-KIT	144219TD-ASSY-KIT	144218TD-C	144219TD-C	143266	142141-1000
345mm (13.58in)	144218TE-ASSY-KIT	144219TE-ASSY-KIT	144218TE-C	144219TE-C	143266	142141-1000
340mm (13.39in)	144218TF-ASSY-KIT	144219TF-ASSY-KIT	144218TF-C	144219TF-C	143266	142141-1000
335mm (13.19in)	144218TG-ASSY-KIT	144219TG-ASSY-KIT	144218TG-C	144219TG-C	143266	142141-1000
330mm (12.99in)	144218TH-ASSY-KIT	144219TH-ASSY-KIT	144218TH-C	144219TH-C	143266	142141-1000
325mm (12.80in)	144218TJ-ASSY-KIT	144219TJ-ASSY-KIT	144218TJ-C	144219TJ-C	143266	142141-1000
320mm (12.60in)	144218TK-ASSY-KIT	144219TK-ASSY-KIT	144218TK-C	144219TK-C	143266	142141-1000
315mm (12.40in)	144218TL-ASSY-KIT	144219TL-ASSY-KIT	144218TL-C	144219TL-C	143266	142141-1000
310mm (12.21in)	144218TM-ASSY-KIT	144219TM-ASSY-KIT	144218TM-C	144219TM-C	143266	142141-1000
305mm (12.01in)	144218TN-ASSY-KIT	144219TN-ASSY-KIT	144218TN-C	144219TN-C	143266	142141-1000
300mm (11.81in)	144218TP-ASSY-KIT	144219TP-ASSY-KIT	144218TP-C	144219TP-C	143266	142141-1000
295mm (11.61in)	144218TR-ASSY-KIT	144219TR-ASSY-KIT	144218TR-C	144219TR-C	143266	142141-1000
290mm (11.42in)	144218TS-ASSY-KIT	144219TS-ASSY-KIT	144218TS-C	144219TS-C	143266	142141-1000
285mm (11.22in)	144218TT-ASSY-KIT	144219TT-ASSY-KIT	144218TT-C	144219TT-C	143266	142141-1000
280mm (11.02in)	144218TU-ASSY-KIT	144219TU-ASSY-KIT	144218TU-C	144219TU-C	143266	142141-1000
275mm (10.83in)	144218TV-ASSY-KIT	144219TV-ASSY-KIT	144218TV-C	144219TV-C	143266	142141-1000
270mm (10.63in)	144218TW-ASSY-KIT	144219TW-ASSY-KIT	144218TW-C	144219TW-C	143266	142141-1000
265mm (10.43in)	144218TX-ASSY-KIT	144219TX-ASSY-KIT	144218TX-C	144219TX-C	143266	142141-1000
260mm (10.24in)	144218TY-ASSY-KIT	144219TY-ASSY-KIT	144218TY-C	144219TY-C	143266	142141-1000
255mm (10.04in)	144218TZ-ASSY-KIT	144219TZ-ASSY-KIT	144218TZ-C	144219TZ-C	143266	142141-1000
250mm (9.84in)	144218TAA-ASSY-KIT	144219TAA-ASSY-KIT	144218TAA-C	144219TAA-C	143266	142141-1000
245mm (9.65in)	144218TAB-ASSY-KIT	144219TAB-ASSY-KIT	144218TAB-C	144219TAB-C	143266	142141-1000
240mm (9.45in)	144218TAC-ASSY-KIT	144219TAC-ASSY-KIT	144218TAC-C	144219TAC-C	143266	142141-1000
235mm (9.25in)	144218TAD-ASSY-KIT	144219TAD-ASSY-KIT	144218TAD-C	144219TAD-C	143266	142141-1000
230mm (9.06in)	144218TAE-ASSY-KIT	144219TAE-ASSY-KIT	144218TAE-C	144219TAE-C	143266	142141-1000
"4DH = I" Impeller (BEFORE FEB.-2019)						
370mm (14.57in)	129993-ASSY-KIT	143278-ASSY-KIT	129993-C	143278-C	142126	142133-0688
365mm (14.37in)	129993TA-ASSY-KIT	143278TA-ASSY-KIT	129993TA-C	143278TA-C	142126	142133-0688
360mm (14.17in)	129993TB-ASSY-KIT	143278TB-ASSY-KIT	129993TB-C	143278TB-C	142126	142133-0688
355mm (13.98in)	129993TC-ASSY-KIT	143278TC-ASSY-KIT	129993TC-C	143278TC-C	142126	142133-0688
350mm (13.78in)	129993TD-ASSY-KIT	143278TD-ASSY-KIT	129993TD-C	143278TD-C	142126	142133-0688
345mm (13.58in)	129993TE-ASSY-KIT	143278TE-ASSY-KIT	129993TE-C	143278TE-C	142126	142133-0688
340mm (13.39in)	129993TF-ASSY-KIT	143278TF-ASSY-KIT	129993TF-C	143278TF-C	142126	142133-0688
335mm (13.19in)	129993TG-ASSY-KIT	143278TG-ASSY-KIT	129993TG-C	143278TG-C	142126	142133-0688
330mm (12.99in)	129993TH-ASSY-KIT	143278TH-ASSY-KIT	129993TH-C	143278TH-C	142126	142133-0688
325mm (12.80in)	129993TJ-ASSY-KIT	143278TJ-ASSY-KIT	129993TJ-C	143278TJ-C	142126	142133-0688
320mm (12.60in)	129993TK-ASSY-KIT	143278TK-ASSY-KIT	129993TK-C	143278TK-C	142126	142133-0688
315mm (12.40in)	129993TL-ASSY-KIT	143278TL-ASSY-KIT	129993TL-C	143278TL-C	142126	142133-0688
310mm (12.21in)	129993TM-ASSY-KIT	143278TM-ASSY-KIT	129993TM-C	143278TM-C	142126	142133-0688
305mm (12.01in)	129993TN-ASSY-KIT	143278TN-ASSY-KIT	129993TN-C	143278TN-C	142126	142133-0688
300mm (11.81in)	129993TP-ASSY-KIT	143278TP-ASSY-KIT	129993TP-C	143278TP-C	142126	142133-0688
295mm (11.61in)	129993TR-ASSY-KIT	143278TR-ASSY-KIT	129993TR-C	143278TR-C	142126	142133-0688
290mm (11.42in)	129993TS-ASSY-KIT	143278TS-ASSY-KIT	129993TS-C	143278TS-C	142126	142133-0688
285mm (11.22in)	129993TT-ASSY-KIT	143278TT-ASSY-KIT	129993TT-C	143278TT-C	142126	142133-0688
280mm (11.02in)	129993TU-ASSY-KIT	143278TU-ASSY-KIT	129993TU-C	143278TU-C	142126	142133-0688
275mm (10.83in)	129993TV-ASSY-KIT	143278TV-ASSY-KIT	129993TV-C	143278TV-C	142126	142133-0688
270mm (10.63in)	129993TW-ASSY-KIT	143278TW-ASSY-KIT	129993TW-C	143278TW-C	142126	142133-0688
265mm (10.43in)	129993TX-ASSY-KIT	143278TX-ASSY-KIT	129993TX-C	143278TX-C	142126	142133-0688
260mm (10.24in)	129993TY-ASSY-KIT	143278TY-ASSY-KIT	129993TY-C	143278TY-C	142126	142133-0688
255mm (10.04in)	129993TZ-ASSY-KIT	143278TZ-ASSY-KIT	129993TZ-C	143278TZ-C	142126	142133-0688
250mm (9.84in)	129993TAA-ASSY-KIT	143278TAA-ASSY-KIT	129993TAA-C	143278TAA-C	142126	142133-0688
245mm (9.65in)	129993TAB-ASSY-KIT	143278TAB-ASSY-KIT	129993TAB-C	143278TAB-C	142126	142133-0688
240mm (9.45in)	129993TAC-ASSY-KIT	143278TAC-ASSY-KIT	129993TAC-C	143278TAC-C	142126	142133-0688
235mm (9.25in)	129993TAD-ASSY-KIT	143278TAD-ASSY-KIT	129993TAD-C	143278TAD-C	142126	142133-0688
230mm (9.06in)	129993TAE-ASSY-KIT	143278TAE-ASSY-KIT	129993TAE-C	143278TAE-C	142126	142133-0688

"6D = K" Impeller (AFTER JAN.-2019)						
Trim Dia. mm (in)	Ductile Iron Slicer Blade Kit	Nihard Slicer Blade Kit	Kit Component Info (Ref. ONLY)			
			Ductile Iron Part No.	Nihard Part No.	Blade	Pin
370mm (14.57in)	144216-ASSY-KIT	144217-ASSY-KIT	144216-C	144217-C	143340	143491-1125
365mm (14.37in)	144216TA-ASSY-KIT	144217TA-ASSY-KIT	144216TA-C	144217TA-C	143340	143491-1125
360mm (14.17in)	144216TB-ASSY-KIT	144217TB-ASSY-KIT	144216TB-C	144217TB-C	143340	143491-1125
355mm (13.98in)	144216TC-ASSY-KIT	144217TC-ASSY-KIT	144216TC-C	144217TC-C	143340	143491-1125
350mm (13.78in)	144216TD-ASSY-KIT	144217TD-ASSY-KIT	144216TD-C	144217TD-C	143340	143491-1125
345mm (13.58in)	144216TE-ASSY-KIT	144217TE-ASSY-KIT	144216TE-C	144217TE-C	143340	143491-1125
340mm (13.39in)	144216TF-ASSY-KIT	144217TF-ASSY-KIT	144216TF-C	144217TF-C	143340	143491-1125
330mm (12.99in)	144216TH-ASSY-KIT	144217TG-ASSY-KIT	144216TH-C	144217TG-C	143340	143491-1125
325mm (12.80in)	144216TJ-ASSY-KIT	144217TH-ASSY-KIT	144216TJ-C	144217TH-C	143340	143491-1125
320mm (12.60in)	144216TK-ASSY-KIT	144217TJ-ASSY-KIT	144216TK-C	144217TJ-C	143340	143491-1125
315mm (12.40in)	144216TL-ASSY-KIT	144217TK-ASSY-KIT	144216TL-C	144217TK-C	143340	143491-1125
310mm (12.21in)	144216TM-ASSY-KIT	144217TL-ASSY-KIT	144216TM-C	144217TL-C	143340	143491-1125
305mm (12.01in)	144216TN-ASSY-KIT	144217TM-ASSY-KIT	144216TN-C	144217TM-C	143340	143491-1125
300mm (11.81in)	144216TP-ASSY-KIT	144217TN-ASSY-KIT	144216TP-C	144217TN-C	143340	143491-1125
295mm (11.61in)	144216TQ-ASSY-KIT	144217TP-ASSY-KIT	144216TQ-C	144217TP-C	143340	143491-1125
290mm (11.42in)	144216TR-ASSY-KIT	144217TQ-ASSY-KIT	144216TR-C	144217TQ-C	143340	143491-1125
285mm (11.22in)	144216TS-ASSY-KIT	144217TR-ASSY-KIT	144216TS-C	144217TR-C	143340	143491-1125
280mm (11.02in)	144216TT-ASSY-KIT	144217TS-ASSY-KIT	144216TT-C	144217TS-C	143340	143491-1125
275mm (10.83in)	144216TU-ASSY-KIT	144217TT-ASSY-KIT	144216TU-C	144217TT-C	143340	143491-1125
270mm (10.63in)	144216TV-ASSY-KIT	144217TU-ASSY-KIT	144216TV-C	144217TU-C	143340	143491-1125
265mm (10.43in)	144216TW-ASSY-KIT	144217TV-ASSY-KIT	144216TW-C	144217TV-C	143340	143491-1125
260mm (10.24in)	144216TX-ASSY-KIT	144217TW-ASSY-KIT	144216TX-C	144217TW-C	143340	143491-1125
255mm (10.04in)	144216TY-ASSY-KIT	144217TX-ASSY-KIT	144216TY-C	144217TX-C	143340	143491-1125
250mm (9.84in)	144216TZ-ASSY-KIT	144217TY-ASSY-KIT	144216TZ-C	144217TY-C	143340	143491-1125
245mm (9.65in)	144216UA-ASSY-KIT	144217TZ-ASSY-KIT	144216UA-C	144217TZ-C	143340	143491-1125
240mm (9.45in)	144216UB-ASSY-KIT	144217UA-ASSY-KIT	144216UB-C	144217UA-C	143340	143491-1125
235mm (9.25in)	144216UC-ASSY-KIT	144217UB-ASSY-KIT	144216UC-C	144217UB-C	143340	143491-1125
230mm (9.05in)	144216UD-ASSY-KIT	144217UC-ASSY-KIT	144216UD-C	144217UC-C	143340	143491-1125
"6D = K" Impeller (BEFORE FEB.-2019)						
370mm (14.57in)	130827-ASSY-KIT	143282-ASSY-KIT	130827-C	143282-C	142132	142141-1125
365mm (14.37in)	130827TA-ASSY-KIT	143282TA-ASSY-KIT	130827TA-C	143282TA-C	142132	142141-1125
360mm (14.17in)	130827TB-ASSY-KIT	143282TB-ASSY-KIT	130827TB-C	143282TB-C	142132	142141-1125
355mm (13.98in)	130827TC-ASSY-KIT	143282TC-ASSY-KIT	130827TC-C	143282TC-C	142132	142141-1125
350mm (13.78in)	130827TD-ASSY-KIT	143282TD-ASSY-KIT	130827TD-C	143282TD-C	142132	142141-1125
345mm (13.58in)	130827TE-ASSY-KIT	143282TE-ASSY-KIT	130827TE-C	143282TE-C	142132	142141-1125
340mm (13.39in)	130827TF-ASSY-KIT	143282TF-ASSY-KIT	130827TF-C	143282TF-C	142132	142141-1125
330mm (12.99in)	130827TH-ASSY-KIT	143282TG-ASSY-KIT	130827TH-C	143282TG-C	142132	142141-1125
325mm (12.80in)	130827TJ-ASSY-KIT	143282TH-ASSY-KIT	130827TJ-C	143282TH-C	142132	142141-1125
320mm (12.60in)	130827TK-ASSY-KIT	143282TJ-ASSY-KIT	130827TK-C	143282TJ-C	142132	142141-1125
315mm (12.40in)	130827TL-ASSY-KIT	143282TK-ASSY-KIT	130827TL-C	143282TK-C	142132	142141-1125
310mm (12.21in)	130827TM-ASSY-KIT	143282TL-ASSY-KIT	130827TM-C	143282TL-C	142132	142141-1125
305mm (12.01in)	130827TN-ASSY-KIT	143282TM-ASSY-KIT	130827TN-C	143282TM-C	142132	142141-1125
300mm (11.81in)	130827TP-ASSY-KIT	143282TN-ASSY-KIT	130827TP-C	143282TN-C	142132	142141-1125
295mm (11.61in)	130827TQ-ASSY-KIT	143282TP-ASSY-KIT	130827TQ-C	143282TP-C	142132	142141-1125
290mm (11.42in)	130827TR-ASSY-KIT	143282TQ-ASSY-KIT	130827TR-C	143282TQ-C	142132	142141-1125
285mm (11.22in)	130827TS-ASSY-KIT	143282TR-ASSY-KIT	130827TS-C	143282TR-C	142132	142141-1125
280mm (11.02in)	130827TT-ASSY-KIT	143282TS-ASSY-KIT	130827TT-C	143282TS-C	142132	142141-1125
275mm (10.83in)	130827TU-ASSY-KIT	143282TT-ASSY-KIT	130827TU-C	143282TT-C	142132	142141-1125
270mm (10.63in)	130827TV-ASSY-KIT	143282TU-ASSY-KIT	130827TV-C	143282TU-C	142132	142141-1125
265mm (10.43in)	130827TW-ASSY-KIT	143282TV-ASSY-KIT	130827TW-C	143282TV-C	142132	142141-1125
260mm (10.24in)	130827TX-ASSY-KIT	143282TW-ASSY-KIT	130827TX-C	143282TW-C	142132	142141-1125
255mm (10.04in)	130827TY-ASSY-KIT	143282TX-ASSY-KIT	130827TY-C	143282TX-C	142132	142141-1125
250mm (9.84in)	130827TZ-ASSY-KIT	143282TY-ASSY-KIT	130827TZ-C	143282TY-C	142132	142141-1125
245mm (9.65in)	130827UA-ASSY-KIT	143282TZ-ASSY-KIT	130827UA-C	143282TZ-C	142132	142141-1125
240mm (9.45in)	130827UB-ASSY-KIT	143282UA-ASSY-KIT	130827UB-C	143282UA-C	142132	142141-1125
235mm (9.25in)	130827UC-ASSY-KIT	143282UB-ASSY-KIT	130827UC-C	143282UB-C	142132	142141-1125
230mm (9.05in)	130827UD-ASSY-KIT	143282UC-ASSY-KIT	130827UD-C	143282UC-C	142132	142141-1125

"6ML = N" Impeller						
Trim Dia. mm (in)	Ductile Iron Slicer Blade Kit	Nihard Slicer Blade Kit	Kit Component Info (Ref. ONLY)			
			Ductile Iron Part No.	Nihard Part No.	Blade	Pin
260mm (10.24in)	130826B-ASSY-KIT	143281-ASSY-KIT	130826B-C	143281-C	142128	142141-0625
255mm (10.04in)	130826BTA-ASSY-KIT	143281TA-ASSY-KIT	130826BTA-C	143281TA-C	142128	142141-0625
250mm (9.84in)	130826BTB-ASSY-KIT	143281TB-ASSY-KIT	130826BTB-C	143281TB-C	142128	142141-0625
245mm (9.65in)	130826BTC-ASSY-KIT	143281TC-ASSY-KIT	130826BTC-C	143281TC-C	142128	142141-0625
240mm (9.45in)	130826BTD-ASSY-KIT	143281TD-ASSY-KIT	130826BTD-C	143281TD-C	142128	142141-0625
235mm (9.25in)	130826BTE-ASSY-KIT	143281TE-ASSY-KIT	130826BTE-C	143281TE-C	142128	142141-0625
230mm (9.06in)	130826BTF-ASSY-KIT	143281TF-ASSY-KIT	130826BTF-C	143281TF-C	142128	142141-0625
225mm (8.86in)	130826BTG-ASSY-KIT	143281TG-ASSY-KIT	130826BTG-C	143281TG-C	142128	142141-0625
220mm (8.66in)	130826BTH-ASSY-KIT	143281TH-ASSY-KIT	130826BTH-C	143281TH-C	142128	142141-0625
215mm (8.47in)	130826BTJ-ASSY-KIT	143281TJ-ASSY-KIT	130826BTJ-C	143281TJ-C	142128	142141-0625
210mm (8.27in)	130826BTK-ASSY-KIT	143281TK-ASSY-KIT	130826BTK-C	143281TK-C	142128	142141-0625
205mm (8.07in)	130826BTL-ASSY-KIT	143281TL-ASSY-KIT	130826BTL-C	143281TL-C	142128	142141-0625
200mm (7.87in)	130826BTM-ASSY-KIT	143281TM-ASSY-KIT	130826BTM-C	143281TM-C	142128	142141-0625

"6DL = O" Impeller						
Trim Dia. mm (in)	Ductile Iron Slicer Blade Kit	Nihard Slicer Blade Kit	Kit Component Info (Ref. ONLY)			
			Ductile Iron Part No.	Nihard Part No.	Blade	Pin
225mm (8.86in)	138104S-ASSY-KIT	143292S-ASSY-KIT	138104S-C	143292S-C	141584	142141-0625
220mm (8.66in)	138104STA-ASSY-KIT	143292STA-ASSY-KIT	138104STA-C	143292STA-C	141584	142141-0625
215mm (8.47in)	138104STB-ASSY-KIT	143292STB-ASSY-KIT	138104STB-C	143292STB-C	141584	142141-0625
210mm (8.27in)	138104STC-ASSY-KIT	143292STC-ASSY-KIT	138104STC-C	143292STC-C	141584	142141-0625
205mm (8.07in)	138104STD-ASSY-KIT	143292STD-ASSY-KIT	138104STD-C	143292STD-C	141584	142141-0625
200mm (7.87in)	138104STE-ASSY-KIT	143292STE-ASSY-KIT	138104STE-C	143292STE-C	141584	142141-0625
195mm (7.68in)	138104STF-ASSY-KIT	143292STF-ASSY-KIT	138104STF-C	143292STF-C	141584	142141-0625
190mm (7.48in)	138104STG-ASSY-KIT	143292STG-ASSY-KIT	138104STG-C	143292STG-C	141584	142141-0625
185mm (7.28in)	138104STH-ASSY-KIT	143292STH-ASSY-KIT	138104STH-C	143292STH-C	141584	142141-0625
180mm (7.09in)	138104STJ-ASSY-KIT	143292STJ-ASSY-KIT	138104STJ-C	143292STJ-C	141584	142141-0625

"8D = U" Impeller						
Trim Dia. mm (in)	Ductile Iron Slicer Blade Kit	Nihard Slicer Blade Kit	Kit Component Info (Ref. ONLY)			
			Ductile Iron Part No.	Nihard Part No.	Blade	Pin
305mm (12.00in)	138102S-ASSY-KIT	143293S-ASSY-KIT	138102S-C	143293S-C	143413	143491-1125
300mm (11.81in)	138102STA-ASSY-KIT	143293STA-ASSY-KIT	138102STA-C	143293STA-C	143413	143491-1125
295mm (11.61in)	138102STB-ASSY-KIT	143293STB-ASSY-KIT	138102STB-C	143293STB-C	143413	143491-1125
290mm (11.42in)	138102STC-ASSY-KIT	143293STC-ASSY-KIT	138102STC-C	143293STC-C	143413	143491-1125
285mm (11.22in)	138102STD-ASSY-KIT	143293STD-ASSY-KIT	138102STD-C	143293STD-C	143413	143491-1125
280mm (11.02in)	138102STE-ASSY-KIT	143293STE-ASSY-KIT	138102STE-C	143293STE-C	143413	143491-1125
275mm (10.82in)	138102STF-ASSY-KIT	143293STF-ASSY-KIT	138102STF-C	143293STF-C	143413	143491-1125
270mm (10.63in)	138102STG-ASSY-KIT	143293STG-ASSY-KIT	138102STG-C	143293STG-C	143413	143491-1125
265mm (10.43in)	138102STH-ASSY-KIT	143293STH-ASSY-KIT	138102STH-C	143293STH-C	143413	143491-1125
260mm (10.24in)	138102STJ-ASSY-KIT	143293STJ-ASSY-KIT	138102STJ-C	143293STJ-C	143413	143491-1125
255mm (10.04in)	138102STK-ASSY-KIT	143293STK-ASSY-KIT	138102STK-C	143293STK-C	143413	143491-1125
250mm (9.84in)	138102STL-ASSY-KIT	143293STL-ASSY-KIT	138102STL-C	143293STL-C	143413	143491-1125
245mm (9.64in)	138102STM-ASSY-KIT	143293STM-ASSY-KIT	138102STM-C	143293STM-C	143413	143491-1125
240mm (9.45in)	138102STN-ASSY-KIT	143293STN-ASSY-KIT	138102STN-C	143293STN-C	143413	143491-1125
235mm (9.25in)	138102STP-ASSY-KIT	143293STP-ASSY-KIT	138102STP-C	143293STP-C	143413	143491-1125
230mm (9.05in)	138102STQ-ASSY-KIT	143293STQ-ASSY-KIT	138102STQ-C	143293STQ-C	143413	143491-1125



"4MHA = EA" Impeller						
Trim Dia. mm (in)	Ductile Iron Slicer Blade Kit	Nihard Slicer Blade Kit	Kit Component Info (Ref. ONLY)			
			Ductile Iron Part No.	Nihard Part No.	Blade	Pin
370mm (14.57in)	137225-ASSY-KIT	143289-ASSY-KIT	137225-C	143289-C	142126	142133-0750
365mm (14.37in)	137225TA-ASSY-KIT	143289TA-ASSY-KIT	137225TA-C	143289TA-C	142126	142133-0750
360mm (14.17in)	137225TB-ASSY-KIT	143289TB-ASSY-KIT	137225TB-C	143289TB-C	142126	142133-0750
355mm (13.98in)	137225TC-ASSY-KIT	143289TC-ASSY-KIT	137225TC-C	143289TC-C	142126	142133-0750
350mm (13.78in)	137225TD-ASSY-KIT	143289TD-ASSY-KIT	137225TD-C	143289TD-C	142126	142133-0750
345mm (13.58in)	137225TE-ASSY-KIT	143289TE-ASSY-KIT	137225TE-C	143289TE-C	142126	142133-0750
340mm (13.39in)	137225TF-ASSY-KIT	143289TF-ASSY-KIT	137225TF-C	143289TF-C	142126	142133-0750
335mm (13.19in)	137225TG-ASSY-KIT	143289TG-ASSY-KIT	137225TG-C	143289TG-C	142126	142133-0750
330mm (13.00in)	137225TH-ASSY-KIT	143289TH-ASSY-KIT	137225TH-C	143289TH-C	142126	142133-0750
325mm (12.80in)	137225TJ-ASSY-KIT	143289TJ-ASSY-KIT	137225TJ-C	143289TJ-C	142126	142133-0750
320mm (12.60in)	137225TK-ASSY-KIT	143289TK-ASSY-KIT	137225TK-C	143289TK-C	142126	142133-0750
315mm (12.40in)	137225TL-ASSY-KIT	143289TL-ASSY-KIT	137225TL-C	143289TL-C	142126	142133-0750
310mm (12.20in)	137225TM-ASSY-KIT	143289TM-ASSY-KIT	137225TM-C	143289TM-C	142126	142133-0750
305mm (12.01in)	137225TN-ASSY-KIT	143289TN-ASSY-KIT	137225TN-C	143289TN-C	142126	142133-0750
300mm (11.81in)	137225TP-ASSY-KIT	143289TP-ASSY-KIT	137225TP-C	143289TP-C	142126	142133-0750
295mm (11.61in)	137225TR-ASSY-KIT	143289TR-ASSY-KIT	137225TR-C	143289TR-C	142126	142133-0750
290mm (11.42in)	137225TS-ASSY-KIT	143289TS-ASSY-KIT	137225TS-C	143289TS-C	142126	142133-0750

"4MB = BA" Impeller						
Trim Dia. mm (in)	Ductile Iron Slicer Blade Kit	Nihard Slicer Blade Kit	Kit Component Info (Ref. ONLY)			
			Ductile Iron Part No.	Nihard Part No.	Blade	Pin
320mm (12.60in)	143593-ASSY-KIT	143594-ASSY-KIT	143593-ASSY	143594-ASSY	142124	142133-0688
315mm (12.40in)	143593TA-ASSY-KIT	143594TA-ASSY-KIT	143593TA-ASSY	143594TA-ASSY	142124	142133-0688
310mm (12.21in)	143593TB-ASSY-KIT	143594TB-ASSY-KIT	143593TB-ASSY	143594TB-ASSY	142124	142133-0688
305mm (12.01in)	143593TC-ASSY-KIT	143594TC-ASSY-KIT	143593TC-ASSY	143594TC-ASSY	142124	142133-0688
300mm (11.81in)	143593TD-ASSY-KIT	143594TD-ASSY-KIT	143593TD-ASSY	143594TD-ASSY	142124	142133-0688
295mm (11.61in)	143593TE-ASSY-KIT	143594TE-ASSY-KIT	143593TE-ASSY	143594TE-ASSY	142124	142133-0688
290mm (11.42in)	143593TF-ASSY-KIT	143594TF-ASSY-KIT	143593TF-ASSY	143594TF-ASSY	142124	142133-0688
285mm (11.22in)	143593TG-ASSY-KIT	143594TG-ASSY-KIT	143593TG-ASSY	143594TG-ASSY	142124	142133-0688
280mm (11.02in)	143593TH-ASSY-KIT	143594TH-ASSY-KIT	143593TH-ASSY	143594TH-ASSY	142124	142133-0688
275mm (10.82in)	143593TJ-ASSY-KIT	143594TJ-ASSY-KIT	143593TJ-ASSY	143594TJ-ASSY	142124	142133-0688
270mm (10.63in)	143593TK-ASSY-KIT	143594TK-ASSY-KIT	143593TK-ASSY	143594TK-ASSY	142124	142133-0688
265mm (10.43in)	143593TL-ASSY-KIT	143594TL-ASSY-KIT	143593TL-ASSY	143594TL-ASSY	142124	142133-0688
260mm (10.24in)	143593TM-ASSY-KIT	143594TM-ASSY-KIT	143593TM-ASSY	143594TM-ASSY	142124	142133-0688
255mm (10.04in)	143593TN-ASSY-KIT	143594TN-ASSY-KIT	143593TN-ASSY	143594TN-ASSY	142124	142133-0688
250mm (9.84in)	143593TP-ASSY-KIT	143594TP-ASSY-KIT	143593TP-ASSY	143594TP-ASSY	142124	142133-0688
245mm (9.64in)	143593TQ-ASSY-KIT	143594TQ-ASSY-KIT	143593TQ-ASSY	143594TQ-ASSY	142124	142133-0688
240mm (9.45in)	143593TR-ASSY-KIT	143594TR-ASSY-KIT	143593TR-ASSY	143594TR-ASSY	142124	142133-0688
235mm (9.25in)	143593TS-ASSY-KIT	143594TS-ASSY-KIT	143593TS-ASSY	143594TS-ASSY	142124	142133-0688
230mm (9.05in)	143593TT-ASSY-KIT	143594TT-ASSY-KIT	143593TT-ASSY	143594TT-ASSY	142124	142133-0688
225mm (8.86in)	143593TU-ASSY-KIT	143594TU-ASSY-KIT	143593TU-ASSY	143594TU-ASSY	142124	142133-0688
220mm (8.66in)	143593TV-ASSY-KIT	143594TV-ASSY-KIT	143593TV-ASSY	143594TV-ASSY	142124	142133-0688
215mm (8.47in)	143593TW-ASSY-KIT	143594TW-ASSY-KIT	143593TW-ASSY	143594TW-ASSY	142124	142133-0688
210mm (8.27in)	143593TX-ASSY-KIT	143594TX-ASSY-KIT	143593TX-ASSY	143594TX-ASSY	142124	142133-0688

<p><b>Slicer Blade Kit includes:</b></p> <ul style="list-style-type: none"> <li>• Impeller (Balanced, trimmed)</li> <li>• Blade (Pressed)</li> <li>• Attachment Pins (Pressed)</li> </ul> <p><i>(Components are Fully Assembled)</i></p>
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<p><b>Slicer Blade Attachment Kit includes:</b></p> <ul style="list-style-type: none"> <li>• Impeller Washer</li> <li>• Impeller Bolt</li> <li>• Impeller Key</li> </ul>
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Seal Kits		
Seal Kit Part No.	Seal Part No.	Seal Material
138581-DX-CC	125852	Carbon / Ceramic
<b>138581-DX-SD (STD)</b>	125852SD	Silicon Carbide / Silicon Carbide
138581-DX-TC	125852SB	Tungsten Carbide / Tungsten Carbide

Seal Kit includes:
<ul style="list-style-type: none"> <li>• Volute O-Ring (option 1)</li> <li>• Volute O-Ring (option 2)</li> <li>• Volute O-Ring (option 3)</li> <li>• Volute O-Ring (option 4)</li> <li>• External Retaining Ring</li> <li>• Lower Mechanical Seal</li> </ul>

**NOTE:** Kit contains hardware your pump may not require.

Hardware Kit includes:
<ul style="list-style-type: none"> <li>• Impeller key</li> <li>• Volute attachment screws</li> <li>• Impeller attachment screws</li> </ul>

O-Ring Kit includes:
<ul style="list-style-type: none"> <li>• Volute O-Ring (option 1)</li> <li>• Volute O-Ring (option 2)</li> <li>• Volute O-Ring (option 3)</li> <li>• Volute O-Ring (option 4)</li> </ul>

Cord Attachment Kit includes:
<ul style="list-style-type: none"> <li>• Attachment screws</li> </ul>

Volute Kit includes:
<ul style="list-style-type: none"> <li>• Wear Ring (PRESSED)</li> <li>• Volute (painted)</li> </ul> <p><i>(Components are Fully Assembled)</i></p>

**NOTE:**  
Kits contain hardware your pump may not require.

Lifting Handle Kit includes:
<ul style="list-style-type: none"> <li>• Lifting Handle</li> <li>• Attachment hardware</li> </ul>

Additional Components			
Component	Part No.	Single Sale	Kit
Impeller	See Table	No	Slicer Blade Kit (see table)
Wear Ring	See Table	No	Volute Kit, Shell Kit
Lifting Handle	125458	No	125458D-KIT
Nameplate		No Resale	
Nameplate/Model Plate Rivets	001628	No Resale	Rivet Kit (p/n 139398D)

Leg Kits		
Model	Leg Kit Part No.	Leg Kit Height Inches (mm)
3MA	125506	3.15 (80)
4M	125506	3.15 (80)
4D	125506	3.15 (80)
4ML	125506	3.15 (80)
4DM	125506	3.15 (80)
4MM	125506B	6.50 (165)
6DL	125506B	6.50 (165)
4MB	125506B	6.50 (165)
4MH	125506B	6.50 (165)
4MHA	125506B	6.50 (165)
4DH	125506B	6.50 (165)
6ML	125506B	6.50 (165)
6MM	125506B	6.50 (165)
6MH	125506B	6.50 (165)
6D	125506B	6.50 (165)
8D	125506B	6.50 (165)

Leg Kit includes:
<ul style="list-style-type: none"> <li>• 3 Legs (painted)</li> <li>• attachment hardware</li> </ul>

Model	Seal Kit	O-Ring Kit	Hardware Kit	Volute Kit	Slicer Blade Attachment Kit	Cord Attachment Kit	Lifting Handle Kit	Slicer Blade Kit	Leg Kit	Shim Kit	Striker Plate Kit	Striker Shell Kit	Striker Hardware Kit
7366-410-1K-32N	138581-DX-SD 138581-DX-CC 138581-DX-TC	138581-XP	138616-D	12999AS4K-4D-KIT	138614D	140152-21	125458D-KIT	127263-ASSY-KIT	125506	142157D-KIT	142125-ASSY-KIT	129994SK-4-ASSY-KIT	142633-4D-KIT
7366-410-75-32N			138616-D	12999AS4K-4D-KIT	138614D	140152-21	125458D-KIT	127263-ASSY-KIT	125506	142157D-KIT	142125-ASSY-KIT	129994SK-4-ASSY-KIT	142633-4D-KIT
7366-411-1K-32N			138616-D	129995SK-D-KIT	138614D	140152-21	125458D-KIT	127262TL-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	129995SK-ASSY-KIT	142633-4D-KIT
7366-411-75-32N			138616-D	129995SK-D-KIT	138614D	140152-21	125458D-KIT	127262TL-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	129995SK-ASSY-KIT	142633-4D-KIT
7366-411-1L-32N			138616-D	129995SK-D-KIT	138614D	140152-21	125458D-KIT	127262TF-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	129995SK-ASSY-KIT	142633-4D-KIT
7366-411-76-32N	138581-DX-SD 138581-DX-CC 138581-DX-TC	138581-XP	138616-D	129995SK-D-KIT	138614D	140152-21	125458D-KIT	127262TF-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	129995SK-ASSY-KIT	142633-4D-KIT
7366-411-62-32N			138616-D	129995SK-D-KIT	138614D	140152-21	125458D-KIT	127262TD-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	129995SK-ASSY-KIT	142633-4D-KIT
7366-411-77-32N			138616-D	129995SK-D-KIT	138614D	140152-21	125458D-KIT	127262TD-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	129995SK-ASSY-KIT	142633-4D-KIT
7366-411-63-32N			138616-D	129995SK-D-KIT	138614D	140152-21	125458D-KIT	127262TA-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	129995SK-ASSY-KIT	142633-4D-KIT
7366-411-78-32N			138616-D	129995SK-D-KIT	138614D	140152-21	125458D-KIT	127262TA-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	129995SK-ASSY-KIT	142633-4D-KIT
7366-446-1H-32N			138616-D	129995SK-D-KIT	138614D	140152-21	125458D-KIT	127262TE-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	129995SK-ASSY-KIT	142633-4D-KIT
7366-446-73-32N			138616-D	129995SK-D-KIT	138614D	140152-21	125458D-KIT	127262TE-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	129995SK-ASSY-KIT	142633-4D-KIT
7366-446-1J-32N	138581-DX-SD 138581-DX-CC 138581-DX-TC	138581-XP	138616-D	129995SK-D-KIT	138614D	140152-21	125458D-KIT	127262TB-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	129995SK-ASSY-KIT	142633-4D-KIT
7366-446-74-32N			138616-D	129995SK-D-KIT	138614D	140152-21	125458D-KIT	127262TB-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	129995SK-ASSY-KIT	142633-4D-KIT
7366-446-1K-32N			138616-D	129995SK-D-KIT	138614D	140152-21	125458D-KIT	127262AS-SY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	129995SK-ASSY-KIT	142633-4D-KIT
7366-446-75-32N			138616-D	129995SK-D-KIT	138614D	140152-21	125458D-KIT	127262AS-SY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	129995SK-ASSY-KIT	142633-4D-KIT

Model	Seal Kit	O-Ring Kit	Hardware Kit	Volute Kit	Slicer Blade Attachment Kit	Cord Attachment Kit	Lifting Handle Kit	Slicer Blade Kit	Leg Kit	Shim Kit	Striker Plate Kit	Striker Shell Kit	Striker Hardware Kit
7366-466-1K-30N		138581-XP	138616-D	127254SK-D-KIT	138614D	140152-21	125458D-KIT	143593TW-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4D-KIT
7366-466-75-30N		138581-XP	138616-D	127254SK-D-KIT	138614D	140152-21	125458D-KIT	143593TW-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4D-KIT
7366-466-1L-30N		138581-XP	138616-D	127254SK-D-KIT	138614D	140152-21	125458D-KIT	143593TR-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4D-KIT
7366-466-76-30N	138581-DX-SD 138581-DX-CC 138581-DX-TC	138581-XP	138616-D	127254SK-D-KIT	138614D	140152-21	125458D-KIT	143593TR-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4D-KIT
7366-466-62-30N		138581-XP	138616-D	127254SK-D-KIT	138614D	140152-21	125458D-KIT	143593TM-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4D-KIT
7366-466-77-30N		138581-XP	138616-D	127254SK-D-KIT	138614D	140152-21	125458D-KIT	143593TM-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4D-KIT
7366-466-63-30N		138581-XP	138616-D	127254SK-D-KIT	138614D	140152-21	125458D-KIT	143593TJ-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4D-KIT
7366-466-78-30N		138581-XP	138616-D	127254SK-D-KIT	138614D	140152-21	125458D-KIT	143593TJ-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4D-KIT
7366-412-63-32N	138581-DX-SD 138581-DX-CC 138581-DX-TC	138581-XP	138616-D	127254SK-D-KIT	138614D	140152-21	125458D-KIT	127261TS-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4D-KIT
7366-412-78-32N		138581-XP	138616-D	127254SK-D-KIT	138614D	140152-21	125458D-KIT	127261TS-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4D-KIT
7366-447-1K-32N			138616-D	127254SK-D-KIT	138614D	140152-21	125458D-KIT	127261TG-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4D-KIT
7366-447-75-32N	138581-DX-SD 138581-DX-CC 138581-DX-TC	138581-XP	138616-D	127254SK-D-KIT	138614D	140152-21	125458D-KIT	127261TG-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4D-KIT
7366-447-61-32N			138616-D	127254SK-D-KIT	138614D	140152-21	125458D-KIT	127261TG-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4D-KIT
7366-447-76-32N			138616-D	127254SK-D-KIT	138614D	140152-21	125458D-KIT	127261TG-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4D-KIT
7366-437-1J-32N			138616-D	137226SK-D-KIT	138614D	140152-21	125458D-KIT	137225TM-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	137226SK-ASSY-KIT	142633-4D-KIT
7366-437-74-32N			138616-D	137226SK-D-KIT	138614D	140152-21	125458D-KIT	137225TM-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	137226SK-ASSY-KIT	142633-4D-KIT
7366-437-1K-32N	138581-DX-SD 138581-DX-CC 138581-DX-TC	138581-XP	138616-D	137226SK-D-KIT	138614D	140152-21	125458D-KIT	137225TG-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	137226SK-ASSY-KIT	142633-4D-KIT
7366-437-75-32N			138616-D	137226SK-D-KIT	138614D	140152-21	125458D-KIT	137225TG-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	137226SK-ASSY-KIT	142633-4D-KIT
7366-437-61-32N			138616-D	137226SK-D-KIT	138614D	140152-21	125458D-KIT	137225TB-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	137226SK-ASSY-KIT	142633-4D-KIT
7366-437-76-32N			138616-D	137226SK-D-KIT	138614D	140152-21	125458D-KIT	137225TB-ASSY-KIT	125506B	142157D-KIT	142125-AS-SY-KIT	137226SK-ASSY-KIT	142633-4D-KIT

Model	Seal Kit	O-Ring Kit	Hardware Kit	Volute Kit	Slicer Blade Attachment Kit	Cord Attachment Kit	Lifting Handle Kit	Slicer Blade Kit	Leg Kit	Shim Kit	Striker Plate Kit	Striker Shell Kit	Striker Hardware Kit
7366-413-1K-32N			138616-D	129994S5K-5D-KIT	138614D	140152-21	125458D-KIT	129991TB-ASSY-KIT	125506	141579D-KIT	141601-AS-SY-KIT	129994SK-5-ASSY-KIT	142633-5D-KIT
7366-413-75-32N	138581-DX-SD 138581-DX-CC 138581-DX-TC	138581-XP	138616-D	129994S5K-5D-KIT	138614D	140152-21	125458D-KIT	129991TB-ASSY-KIT	125506	141579D-KIT	141601-AS-SY-KIT	129994SK-5-ASSY-KIT	142633-5D-KIT
7366-413-1L-32N			138616-D	129994S5K-5D-KIT	138614D	140152-21	125458D-KIT	129991-AS-SY-KIT	125506	141579D-KIT	141601-AS-SY-KIT	129994SK-5-ASSY-KIT	142633-5D-KIT
7366-413-76-32N			138616-D	129994S5K-5D-KIT	138614D	140152-21	125458D-KIT	129991-AS-SY-KIT	125506	141579D-KIT	141601-AS-SY-KIT	129994SK-5-ASSY-KIT	142633-5D-KIT
7366-448-1H-32N	138581-DX-SD 138581-DX-CC 138581-DX-TC	138581-XP	138616-D	129994S5K-5D-KIT	138614D	140152-21	125458D-KIT	129991-AS-SY-KIT	125506	141579D-KIT	141601-AS-SY-KIT	129994SK-5-ASSY-KIT	142633-5D-KIT
7366-448-73-32N			138616-D	129994S5K-5D-KIT	138614D	140152-21	125458D-KIT	129991-AS-SY-KIT	125506	141579D-KIT	141601-AS-SY-KIT	129994SK-5-ASSY-KIT	142633-5D-KIT

KIT PART NUMBERS (AFTER FEB.-2019)													
Model	Seal Kit	O-Ring Kit	Hardware Kit	Volute Kit	Slicer Blade Attachment Kit	Cord Attachment Kit	Lifting Handle Kit	Slicer Blade Kit	Leg Kit	Shim Kit	Striker Plate Kit	Striker Shell Kit	Striker Hardware Kit
7366-414-1K-32N			138616-D	143264SK-D-KIT	138614D	140152-21	125458D-KIT	144218TAE-ASSY-KIT	125506B	143265D-ASSY-KIT	143265D-ASSY-KIT	143264SK-D-ASSY-KIT	142633-6D-KIT
7366-414-75-32N			138616-D	143264SK-D-KIT	138614D	140152-21	125458D-KIT	144218TAE-ASSY-KIT	125506B	143265D-ASSY-KIT	143265D-ASSY-KIT	143264SK-D-ASSY-KIT	142633-6D-KIT
7366-414-1L-32N			138616-D	143264SK-D-KIT	138614D	140152-21	125458D-KIT	144218TAD-ASSY-KIT	125506B	143265D-ASSY-KIT	143265D-ASSY-KIT	143264SK-D-ASSY-KIT	142633-6D-KIT
7366-414-76-32N	138581-DX-SD		138616-D	143264SK-D-KIT	138614D	140152-21	125458D-KIT	144218TAD-ASSY-KIT	125506B	143265D-ASSY-KIT	143265D-ASSY-KIT	143264SK-D-ASSY-KIT	142633-6D-KIT
7366-414-62-32N	138581-DX-CC	138581-XP	138616-D	143264SK-D-KIT	138614D	140152-21	125458D-KIT	144218TAA-ASSY-KIT	125506B	143265D-ASSY-KIT	143265D-ASSY-KIT	143264SK-D-ASSY-KIT	142633-6D-KIT
7366-414-77-32N	138581-DX-TC		138616-D	143264SK-D-KIT	138614D	140152-21	125458D-KIT	144218TAA-ASSY-KIT	125506B	143265D-ASSY-KIT	143265D-ASSY-KIT	143264SK-D-ASSY-KIT	142633-6D-KIT
7366-414-63-32N			138616-D	143264SK-D-KIT	138614D	140152-21	125458D-KIT	144218TX-ASSY-KIT	125506B	143265D-ASSY-KIT	143265D-ASSY-KIT	143264SK-D-ASSY-KIT	142633-6D-KIT
7366-414-78-32N			138616-D	143264SK-D-KIT	138614D	140152-21	125458D-KIT	144218TX-ASSY-KIT	125506B	143265D-ASSY-KIT	143265D-ASSY-KIT	143264SK-D-ASSY-KIT	142633-6D-KIT

KIT PART NUMBERS (BEFORE FEB.-2019)							
Model	Volute Kit	Slicer Blade Kit	Shim Kit	Striker Plate Kit	Striker Shell Kit	Striker Hardware Kit	
7366-414-1K-32N	127254SK-KIT	129993AE-ASSY-KIT	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4-KIT	
7366-414-75-32N	127254SK-KIT	129993AE-ASSY-KIT	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4-KIT	
7366-414-1L-32N	127254SK-KIT	129993AA-ASSY-KIT	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4-KIT	
7366-414-76-32N	127254SK-KIT	129993AA-ASSY-KIT	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4-KIT	
7366-414-62-32N	127254SK-KIT	129993TX-ASSY-KIT	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4-KIT	
7366-414-77-32N	127254SK-KIT	129993TX-ASSY-KIT	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4-KIT	
7366-414-63-32N	127254SK-KIT	129993TU-ASSY-KIT	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4-KIT	
7366-414-78-32N	127254SK-KIT	129993TU-ASSY-KIT	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4-KIT	

**NOTE:**

For NIHARD impeller info, start on page 28.

\* Standard part number. For more information see page 35.

KIT PART NUMBERS (AFTER FEB.-2019)													
Model	Seal Kit	O-Ring Kit	Hardware Kit	Volute Kit	Slicer Blade Attachment Kit	Cord Attachment Kit	Lifting Handle Kit	Slicer Blade Kit	Leg Kit	Shim Kit	Striker Plate Kit	Striker Shell Kit	Striker Hardware Kit
7366-449-1H-32N			138616-D	143264SK-D-KIT	138614D	140152-21	125458D-KIT	144218TAD-ASSY-KIT	125506B	143265D-ASSY-KIT	143265D-ASSY-KIT	143264SK-D-ASSY-KIT	142633-6D-KIT
7366-449-73-32N			138616-D	143264SK-D-KIT	138614D	140152-21	125458D-KIT	144218TAD-ASSY-KIT	125506B	143265D-ASSY-KIT	143265D-ASSY-KIT	143264SK-D-ASSY-KIT	142633-6D-KIT
7366-449-1J-32N			138616-D	143264SK-D-KIT	138614D	140152-21	125458D-KIT	144218TY-ASSY-KIT	125506B	143265D-ASSY-KIT	143265D-ASSY-KIT	143264SK-D-ASSY-KIT	142633-6D-KIT
7366-449-74-32N	138581-DX-SD	138581-XP	138616-D	143264SK-D-KIT	138614D	140152-21	125458D-KIT	144218TY-ASSY-KIT	125506B	143265D-ASSY-KIT	143265D-ASSY-KIT	143264SK-D-ASSY-KIT	142633-6D-KIT
7366-449-1K-32N	138581-DX-CC		138616-D	143264SK-D-KIT	138614D	140152-21	125458D-KIT	144218TP-ASSY-KIT	125506B	143265D-ASSY-KIT	143265D-ASSY-KIT	143264SK-D-ASSY-KIT	142633-6D-KIT
7366-449-75-32N	138581-DX-TC		138616-D	143264SK-D-KIT	138614D	140152-21	125458D-KIT	144218TP-ASSY-KIT	125506B	143265D-ASSY-KIT	143265D-ASSY-KIT	143264SK-D-ASSY-KIT	142633-6D-KIT
7366-449-61-32N			138616-D	143264SK-D-KIT	138614D	140152-21	125458D-KIT	144218TH-ASSY-KIT	125506B	143265D-ASSY-KIT	143265D-ASSY-KIT	143264SK-D-ASSY-KIT	142633-6D-KIT
7366-449-76-32N			138616-D	143264SK-D-KIT	138614D	140152-21	125458D-KIT	144218TH-ASSY-KIT	125506B	143265D-ASSY-KIT	143265D-ASSY-KIT	143264SK-D-ASSY-KIT	142633-6D-KIT

KIT PART NUMBERS (BEFORE FEB.-2019)										
Model	Volute Kit	Slicer Blade Kit	Shim Kit	Striker Plate Kit	Striker Shell Kit	Striker Hardware Kit				
7366-449-1H-32N	127254SK-KIT	129993TY-ASSY-KIT	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4-KIT				
7366-449-73-32N	127254SK-KIT	129993TY-ASSY-KIT	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4-KIT				
7366-449-1J-32N	127254SK-KIT	129993TU-ASSY-KIT	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4-KIT				
7366-449-74-32N	127254SK-KIT	129993TU-ASSY-KIT	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4-KIT				
7366-449-1K-32N	127254SK-KIT	129993TL-ASSY-KIT	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4-KIT				
7366-449-75-32N	127254SK-KIT	129993TL-ASSY-KIT	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4-KIT				
7366-449-61-32N	127254SK-KIT	129993TF-ASSY-KIT	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4-KIT				
7366-449-76-32N	127254SK-KIT	129993TF-ASSY-KIT	142157D-KIT	142125-AS-SY-KIT	127254SK-ASSY-KIT	142633-4-KIT				

**NOTE:**

For NIHARD impeller info, start on page 28.

\* Standard part number. For more information see page 35.

Model	Seal Kit	O-Ring Kit	Hardware Kit	Volute Kit	Slicer Blade Attachment Kit	Cord Attachment Kit	Lifting Handle Kit	Slicer Blade Kit	Leg Kit	Shim Kit	Striker Plate Kit	Striker Shell Kit	Striker Hardware Kit
7366-615-1L-32N			138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	1308268TB-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-615-76-32N			138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	1308268TB-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-615-62-32N	138581-DX-SD	138581-XP	138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	1308268TB-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-615-77-32N	138581-DX-CC		138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	1308268TB-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-615-63-32N	138581-DX-TC		138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	1308268TB-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-615-78-32N			138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	1308268TB-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-619-1H-32N			138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	1308268TB-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-619-73-32N	138581-DX-SD	138581-XP	138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	1308268TB-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-619-1J-32N	138581-DX-CC		138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	1308268TB-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-619-74-32N	138581-DX-TC		138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	1308268TB-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT



Model	Seal Kit	O-Ring Kit	Hardware Kit	Volute Kit	Slicer Blade Attachment Kit	Cord Attachment Kit	Lifting Handle Kit	Slicer Blade Kit	Leg Kit	Shim Kit	Striker Plate Kit	Striker Shell Kit	Striker Hardware Kit
7366-616-63-32N	138581-DX-SD 138581-DX-CC 138581-DX-TC	138581-XP	138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	130826ATH-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-616-78-32N			138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	130826ATH-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-620-1H-32N			138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	130826ATJ-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-620-73-32N			138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	130826ATJ-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-620-29-32N			138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	130826ATF-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-620-74-32N	138581-DX-SD 138581-DX-CC 138581-DX-TC	138581-XP	138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	130826ATF-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-620-1K-32N			138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	130826ATC-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-620-75-32N			138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	130826ATC-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-620-61-32N			138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	130826A-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-620-76-32N			138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	130826A-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-621-1K-32N			138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	130826TK-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-621-75-32N	138581-DX-SD 138581-DX-CC 138581-DX-TC	138581-XP	138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	130826TK-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-621-61-32N			138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	130826TE-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT
7366-621-76-32N			138616-D	130830SK-1D-KIT	138614D	140152-21	125458D-KIT	130826TE-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	130830SK-1-ASSY-KIT	142633-6D-KIT

Model	Seal Kit	O-Ring Kit	Hardware Kit	Volute Kit	Slicer Blade Attachment Kit	Cord Attachment Kit	Lifting Handle Kit	Slicer Blade Kit	Leg Kit	Shim Kit	Striker Plate Kit	Striker Shell Kit	Striker Hardware Kit
7366-663-1K-32N			138616-D	138110SK-D-KIT	138614D	140152-21	125458D-KIT	138104STD-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	138110SK-ASSY-KIT	142633-6D-KIT
7366-663-75-32N			138616-D	138110SK-D-KIT	138614D	140152-21	125458D-KIT	138104STD-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	138110SK-ASSY-KIT	142633-6D-KIT
7366-663-1L-32N			138616-D	138110SK-D-KIT	138614D	140152-21	125458D-KIT	138104STB-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	138110SK-ASSY-KIT	142633-6D-KIT
7366-663-76-32N	138581-DX-SD 138581-DX-CC 138581-DX-TC	138581-XP	138616-D	138110SK-D-KIT	138614D	140152-21	125458D-KIT	138104STB-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	138110SK-ASSY-KIT	142633-6D-KIT
7366-663-62-32N			138616-D	138110SK-D-KIT	138614D	140152-21	125458D-KIT	138104STA-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	138110SK-ASSY-KIT	142633-6D-KIT
7366-663-77-32N			138616-D	138110SK-D-KIT	138614D	140152-21	125458D-KIT	138104STA-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	138110SK-ASSY-KIT	142633-6D-KIT
7366-663-63-32N			138616-D	138110SK-D-KIT	138614D	140152-21	125458D-KIT	138104S-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	138110SK-ASSY-KIT	142633-6D-KIT
7366-663-78-32N			138616-D	138110SK-D-KIT	138614D	140152-21	125458D-KIT	138104S-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	138110SK-ASSY-KIT	142633-6D-KIT
7366-664-1H-32N			138616-D	138110SK-D-KIT	138614D	140152-21	125458D-KIT	138104STA-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	138110SK-ASSY-KIT	142633-6D-KIT
7366-664-73-32N	138581-DX-SD 138581-DX-CC 138581-DX-TC	138581-XP	138616-D	138110SK-D-KIT	138614D	140152-21	125458D-KIT	138104STA-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	138110SK-ASSY-KIT	142633-6D-KIT
7366-664-1J-32N			138616-D	138110SK-D-KIT	138614D	140152-21	125458D-KIT	138104S-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	138110SK-ASSY-KIT	142633-6D-KIT
7366-664-74-32N			138616-D	138110SK-D-KIT	138614D	140152-21	125458D-KIT	138104S-ASSY-KIT	125506B	142158D-KIT	141585-AS-SY-KIT	138110SK-ASSY-KIT	142633-6D-KIT

KIT PART NUMBERS (AFTER FEB.-2019)													
Model	Seal Kit	O-Ring Kit	Hardware Kit	Volute Kit	Slicer Blade Attachment Kit	Cord Attachment Kit	Lifting Handle Kit	Slicer Blade Kit	Leg Kit	Shim Kit	Striker Plate Kit	Striker Shell Kit	Striker Hardware Kit
7366-618-62-32N			138616-D	143338SK-D-KIT	138614D	140152-21	125458D-KIT	144216UC-ASSY-KIT	125506B	143551D-KIT	143339D-ASSY-KIT	143338SKD-ASSY-KIT	142633-8D-KIT
7366-618-77-32N	138581-DX-SD 138581-DX-CC 138581-DX-TC	138581-XP	138616-D	143338SK-D-KIT	138614D	140152-21	125458D-KIT	144216UC-ASSY-KIT	125506B	143551D-KIT	143339D-ASSY-KIT	143338SKD-ASSY-KIT	142633-8D-KIT
7366-618-63-32N			138616-D	143338SK-D-KIT	138614D	140152-21	125458D-KIT	144216TZ-ASSY-KIT	125506B	143551D-KIT	143339D-ASSY-KIT	143338SKD-ASSY-KIT	142633-8D-KIT
7366-618-78-32N			138616-D	143338SK-D-KIT	138614D	140152-21	125458D-KIT	144216TZ-ASSY-KIT	125506B	143551D-KIT	143339D-ASSY-KIT	143338SKD-ASSY-KIT	142633-8D-KIT

KIT PART NUMBERS (BEFORE FEB.-2019)							
Model	Volute Kit	Slicer Blade Kit	Shim Kit	Striker Plate Kit	Striker Shell Kit	Striker Hardware Kit	
7366-618-62-32N	130830SK-2-KIT	130827UA-ASSY-KIT	142158D-KIT	141585-AS-SY-KIT	130830SK-2-ASSY-KIT	142633-6-KIT	
7366-618-77-32N	130830SK-2-KIT	130827UA-ASSY-KIT	142158D-KIT	141585-AS-SY-KIT	130830SK-2-ASSY-KIT	142633-6-KIT	
7366-618-63-32N	130830SK-2-KIT	130827TX-ASSY-KIT	142158D-KIT	141585-AS-SY-KIT	130830SK-2-ASSY-KIT	142633-6-KIT	
7366-618-78-32N	130830SK-2-KIT	130827TX-ASSY-KIT	142158D-KIT	141585-AS-SY-KIT	130830SK-2-ASSY-KIT	142633-6-KIT	

**NOTE:**

For NIHARD impeller info, start on page 28.

\* Standard part number. For more information see page 35.

KIT PART NUMBERS (AFTER FEB.-2019)													
Model	Seal Kit	O-Ring Kit	Hardware Kit	Volute Kit	Slicer Blade Attachment Kit	Cord Attachment Kit	Lifting Handle Kit	Slicer Blade Kit	Leg Kit	Shim Kit	Striker Plate Kit	Striker Shell Kit	Striker Hardware Kit
7366-622-1H-32N			138616-D	143338SK-D-KIT	138614D	140152-21	125458D-KIT	144216UC-ASSY-KIT	125506B	143551D-KIT	143339D-ASSY-KIT	143338SKD-ASSY-KIT	142633-8D-KIT
7366-622-73-32N			138616-D	143338SK-D-KIT	138614D	140152-21	125458D-KIT	144216UC-ASSY-KIT	125506B	143551D-KIT	143339D-ASSY-KIT	143338SKD-ASSY-KIT	142633-8D-KIT
7366-622-1J-32N			138616-D	143338SK-D-KIT	138614D	140152-21	125458D-KIT	144216TZ-ASSY-KIT	125506B	143551D-KIT	143339D-ASSY-KIT	143338SKD-ASSY-KIT	142633-8D-KIT
7366-622-74-32N	138581-DX-SD	138581-XP	138616-D	143338SK-D-KIT	138614D	140152-21	125458D-KIT	144216TR-ASSY-KIT	125506B	143551D-KIT	143339D-ASSY-KIT	143338SKD-ASSY-KIT	142633-8D-KIT
7366-622-1K-32N	138581-DX-CC		138616-D	143338SK-D-KIT	138614D	140152-21	125458D-KIT	144216TR-ASSY-KIT	125506B	143551D-KIT	143339D-ASSY-KIT	143338SKD-ASSY-KIT	142633-8D-KIT
7366-622-75-32N	138581-DX-TC		138616-D	143338SK-D-KIT	138614D	140152-21	125458D-KIT	144216TR-ASSY-KIT	125506B	143551D-KIT	143339D-ASSY-KIT	143338SKD-ASSY-KIT	142633-8D-KIT
7366-622-61-32N			138616-D	143338SK-D-KIT	138614D	140152-21	125458D-KIT	144216TJ-ASSY-KIT	125506B	143551D-KIT	143339D-ASSY-KIT	143338SKD-ASSY-KIT	142633-8D-KIT
7366-622-76-32N			138616-D	143338SK-D-KIT	138614D	140152-21	125458D-KIT	144216TJ-ASSY-KIT	125506B	143551D-KIT	143339D-ASSY-KIT	143338SKD-ASSY-KIT	142633-8D-KIT

KIT PART NUMBERS (BEFORE FEB.-2019)											
Model	Volute Kit	Slicer Blade Kit	Shim Kit	Striker Plate Kit	Striker Shell Kit	Striker Hardware Kit					
7366-622-1H-32N	130830SK-2-KIT	130827UB-ASSY-KIT	142158D-KIT	141585-AS-SY-KIT	130830SK-2-ASSY-KIT	142633-6-KIT					
7366-622-73-32N	130830SK-2-KIT	130827UB-ASSY-KIT	142158D-KIT	141585-AS-SY-KIT	130830SK-2-ASSY-KIT	142633-6-KIT					
7366-622-1J-32N	130830SK-2-KIT	130827TW-ASSY-KIT	142158D-KIT	141585-AS-SY-KIT	130830SK-2-ASSY-KIT	142633-6-KIT					
7366-622-74-32N	130830SK-2-KIT	130827TW-ASSY-KIT	142158D-KIT	141585-AS-SY-KIT	130830SK-2-ASSY-KIT	142633-6-KIT					
7366-622-1K-32N	130830SK-2-KIT	130827TQ-ASSY-KIT	142158D-KIT	141585-AS-SY-KIT	130830SK-2-ASSY-KIT	142633-6-KIT					
7366-622-75-32N	130830SK-2-KIT	130827TQ-ASSY-KIT	142158D-KIT	141585-AS-SY-KIT	130830SK-2-ASSY-KIT	142633-6-KIT					
7366-622-61-32N	130830SK-2-KIT	130827TH-ASSY-KIT	142158D-KIT	141585-AS-SY-KIT	130830SK-2-ASSY-KIT	142633-6-KIT					
7366-622-76-32N	130830SK-2-KIT	130827TH-ASSY-KIT	142158D-KIT	141585-AS-SY-KIT	130830SK-2-ASSY-KIT	142633-6-KIT					

**NOTE:**

For NIHARD impeller info, start on page 28.

\* Standard part number. For more information see page 35.

Model	Seal Kit	O-Ring Kit	Hardware Kit	Volute Kit	Slicer Blade Attachment Kit	Cord Attachment Kit	Lifting Handle Kit	Slicer Blade Kit	Leg Kit	Shim Kit	Striker Plate Kit	Striker Shell Kit	Striker Hardware Kit
7366-860-62-32N			138616-D	143415SK-D-KIT	143617D	140152-21	125458-KIT	138102STN-ASSY-KIT	125506B	143465D-KIT	143411D-ASSY-KIT	143415SKD-ASSY-KIT	142633-10D-KIT
7366-860-77-32N	138581-DX-SD 138581-DX-CC 138581-DX-TC	138581-XP	138616-D	143415SK-D-KIT	143617D	140152-21	125458-KIT	138102STN-ASSY-KIT	125506B	143465D-KIT	143411D-ASSY-KIT	143415SKD-ASSY-KIT	142633-10D-KIT
7366-860-63-32N			138616-D	143415SK-D-KIT	143617D	140152-21	125458-KIT	138102STL-ASSY-KIT	125506B	143465D-KIT	143411D-ASSY-KIT	143415SKD-ASSY-KIT	142633-10D-KIT
7366-860-78-32N			138616-D	143415SK-D-KIT	143617D	140152-21	125458-KIT	138102STL-ASSY-KIT	125506B	143465D-KIT	143411D-ASSY-KIT	143415SKD-ASSY-KIT	142633-10D-KIT
7366N-861-1H-32N			138616-D	143415SK-D-KIT	143617D	140152-21	125458-KIT	138102STQ-ASSY-KIT	125506B	143465D-KIT	143411D-ASSY-KIT	143415SKD-ASSY-KIT	142633-10D-KIT
7366N-861-73-32N			138616-D	143415SK-D-KIT	143617D	140152-21	125458-KIT	138102STQ-ASSY-KIT	125506B	143465D-KIT	143411D-ASSY-KIT	143415SKD-ASSY-KIT	142633-10D-KIT
7366-861-1J-32N			138616-D	143415SK-D-KIT	143617D	140152-21	125458-KIT	138102STN-ASSY-KIT	125506B	143465D-KIT	143411D-ASSY-KIT	143415SKD-ASSY-KIT	142633-10D-KIT
7366-861-74-32N	138581-DX-SD 138581-DX-CC 138581-DX-TC	138581-XP	138616-D	143415SK-D-KIT	143617D	140152-21	125458-KIT	138102STN-ASSY-KIT	125506B	143465D-KIT	143411D-ASSY-KIT	143415SKD-ASSY-KIT	142633-10D-KIT
7366-861-1K-32N			138616-D	143415SK-D-KIT	143617D	140152-21	125458-KIT	138102STG-ASSY-KIT	125506B	143465D-KIT	143411D-ASSY-KIT	143415SKD-ASSY-KIT	142633-10D-KIT
7366-861-75-32N			138616-D	143415SK-D-KIT	143617D	140152-21	125458-KIT	138102STG-ASSY-KIT	125506B	143465D-KIT	143411D-ASSY-KIT	143415SKD-ASSY-KIT	142633-10D-KIT
7366-861-61-32N			138616-D	143415SK-D-KIT	143617D	140152-21	125458-KIT	138102STC-ASSY-KIT	125506B	143465D-KIT	143411D-ASSY-KIT	143415SKD-ASSY-KIT	142633-10D-KIT
7366-861-76-32N			138616-D	143415SK-D-KIT	143617D	140152-21	125458-KIT	138102STC-ASSY-KIT	125506B	143465D-KIT	143411D-ASSY-KIT	143415SKD-ASSY-KIT	142633-10D-KIT
7366N-823-61-32N	COMING SOON!												
7366N-823-76-32N													



**BARNES®**



**burks®**

**WEINMAN®**

**DEMING®**

**PROSSER®**

## Limited 24 Month Warranty

Crane Pumps & Systems warrants that products of our manufacture will be free of defects in material and workmanship under normal use and service for twenty-four (24) months after manufacture date, when installed and maintained in accordance with our instructions. This warranty gives you specific legal rights, and there may also be other rights which vary from state to state. In the event the product is covered by the Federal Consumer Product Warranties Law (1) the duration of any implied warranties associated with the product by virtue of said law is limited to the same duration as stated herein, (2) this warranty is a LIMITED WARRANTY, and (3) no claims of any nature whatsoever shall be made against us, until the ultimate consumer, his successor, or assigns, notifies us in writing of the defect, and delivers the product and/or defective part(s) freight prepaid to our factory or nearest authorized service station. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply. **THE SOLE AND EXCLUSIVE REMEDY FOR BREACH OF ANY AND ALL WARRANTIES WITH RESPECT TO ANY PRODUCT SHALL BE TO REPLACE OR REPAIR AT OUR ELECTION, F.O.B. POINT OF MANUFACTURE OR AUTHORIZED REPAIR STATION, SUCH PRODUCTS AND/OR PARTS AS PROVEN DEFECTIVE. THERE SHALL BE NO FURTHER LIABILITY, WHETHER BASED ON WARRANTY, NEGLIGENCE OR OTHERWISE.** Unless expressly stated otherwise, guarantees in the nature of performance specifications furnished in addition to the foregoing material and workmanship warranties on a product manufactured by us, if any, are subject to laboratory tests corrected for field performance. Any additional guarantees, in the nature of performance specifications must be in writing and such writing must be signed by our authorized representative. Due to inaccuracies in field testing if a conflict arises between the results of field testing conducted by or for user, and laboratory tests corrected for field performance, the latter shall control. **RECOMMENDATIONS FOR SPECIAL APPLICATIONS OR THOSE RESULTING FROM SYSTEMS ANALYSES AND EVALUATIONS WE CONDUCT WILL BE BASED ON OUR BEST AVAILABLE EXPERIENCE AND PUBLISHED INDUSTRY INFORMATION. SUCH RECOMMENDATIONS DO NOT CONSTITUTE A WARRANTY OF SATISFACTORY PERFORMANCE AND NO SUCH WARRANTY IS GIVEN.**

This warranty shall not apply when damage is caused by (a) improper installation, (b) improper voltage (c) lightning (d) excessive sand or other abrasive material (e) scale or corrosion build-up due to excessive chemical content. Any modification of the original equipment will also void the warranty. We will not be responsible for loss, damage or labor cost due to interruption of service caused by defective parts. Neither will we accept charges incurred by others without our prior written approval.

This warranty is void if our inspection reveals the product was used in a manner inconsistent with normal industry practice and/or our specific recommendations. The purchaser is responsible for communication of all necessary information regarding the application and use of the product. **UNDER NO CIRCUMSTANCES WILL WE BE RESPONSIBLE FOR ANY OTHER DIRECT OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO TRAVEL EXPENSES, RENTED EQUIPMENT, OUTSIDE CONTRACTOR FEES, UNAUTHORIZED REPAIR SHOP EXPENSES, LOST PROFITS, LOST INCOME, LABOR CHARGES, DELAYS IN PRODUCTION, IDLE PRODUCTION, WHICH DAMAGES ARE CAUSED BY ANY DEFECTS IN MATERIAL AND/OR WORKMANSHIP AND/OR DAMAGE OR DELAYS IN SHIPMENT. THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER EXPRESS OR IMPLIED WARRANTY, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

No rights extended under this warranty shall be assigned to any other person, whether by operation of law or otherwise, without our prior written approval.



**PUMPS & SYSTEMS**

A Crane Co. Company

420 Third Street  
Piqua, Ohio 45356  
(937) 778-8947  
Fax (937) 773-7157  
[www.cranepumps.com](http://www.cranepumps.com)

83 West Drive  
Brampton, Ont. Canada L6T 2J6  
(905) 457-6223  
Fax (905) 457-2650

**IMPORTANT!  
WARRANTY INFORMATION**

Warranty will be voided if the product  
is serviced by any  
Unauthorized Service Center.

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**IMPORTANT!  
WARRANTY REGISTRATION**

Your product is covered by the enclosed Warranty.  
To complete the Warranty Registration Form go to:

<http://www.cranepumps.com/ProductRegistration/>

If you have a claim under the provision of the warranty, contact your local  
Crane Pumps & Systems, Inc. Distributor.

**RETURNED GOODS**

**RETURN OF MERCHANDISE REQUIRES A "RETURNED GOODS AUTHORIZATION".  
CONTACT YOUR LOCAL CRANE PUMPS & SYSTEMS, INC. DISTRIBUTOR.**



**Products Returned Must Be Cleaned, Sanitized,  
Or Decontaminated As Necessary Prior To Shipment,  
To Insure That Employees Will Not Be Exposed To Health  
Hazards In Handling Said Material. All Applicable Laws  
And Regulations Shall Apply.**





A Crane Co. Company

# PUMPS & SYSTEMS

## START-UP REPORT

### General Information

Pump Owner's Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Location of Installation: \_\_\_\_\_  
 Contact Person: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Purchased From: \_\_\_\_\_

### Nameplate Data

Pump Model #: \_\_\_\_\_ Serial #: \_\_\_\_\_  
 Part #: \_\_\_\_\_ Impeller Diameter: \_\_\_\_\_  
 Voltage: \_\_\_\_\_ Phase: \_\_\_\_\_ Ø Hertz: \_\_\_\_\_ Horsepower: \_\_\_\_\_  
 Full Load Amps: \_\_\_\_\_ Service Factor Amps: \_\_\_\_\_  
 Motor Manufacturer: \_\_\_\_\_

### Controls

Control panel manufacturer: \_\_\_\_\_  
 Model/Part number: \_\_\_\_\_  
 Number of pumps operated by control panel: \_\_\_\_\_  
 Short circuit protection? YES\_\_\_ NO\_\_\_ Type: \_\_\_\_\_  
 Number and size of short circuit device(s): \_\_\_\_\_ Amp rating: \_\_\_\_\_  
 Overload Type: \_\_\_\_\_ Size: \_\_\_\_\_ Amp rating: \_\_\_\_\_  
 Do protection devices comply with pump and motor Amp rating? YES\_\_\_ NO\_\_\_  
 Are all electrical and panel entry connections tight? YES\_\_\_ NO\_\_\_  
 Is the interior of the panel dry? YES\_\_\_ NO\_\_\_  
 Liquid level Control Brand and Model: \_\_\_\_\_

### Pre-Startup

#### All Pumps

Type of equipment: NEW\_\_\_ REBUILT\_\_\_ USED\_\_\_  
 Condition of equipment at Start-Up: DRY\_\_\_ WET\_\_\_ MUDDY\_\_\_  
 Was Equipment Stored? YES\_\_\_ NO\_\_\_ Length of Storage: \_\_\_\_\_  
 Liquid being pumped: \_\_\_\_\_ Liquid Temperature: \_\_\_\_\_  
 Supply Voltage/Phase/Frequency matches nameplate? YES\_\_\_ NO\_\_\_  
 Shaft turns freely? YES\_\_\_ NO\_\_\_  
 Direction of rotation verified for 3Ø motors? YES\_\_\_ NO\_\_\_  
 Debris in piping or wet well? YES\_\_\_ NO\_\_\_  
 Debris removed in your presence? YES\_\_\_ NO\_\_\_  
 Pump case/wet well filled with liquid before startup? YES\_\_\_ NO\_\_\_  
 Is piping properly supported? YES\_\_\_ NO\_\_\_

#### Non-Submersible Pumps

Is base plate properly installed / grouted? YES\_\_\_ NO\_\_\_ N/A\_\_\_  
 Coupling Alignment Verified per I&O Manual? YES\_\_\_ NO\_\_\_ N/A\_\_\_  
 Grease Cup/Oil Reservoir Level checked? YES\_\_\_ NO\_\_\_ N/A\_\_\_

**Submersible Pumps**

Resistance of cable and pump motor (measured at pump control):

Red-Black: \_\_\_\_\_ Ohms(Ω) Red-White: \_\_\_\_\_ Ohms(Ω) White-Black: \_\_\_\_\_ Ohms(Ω)

Resistance of Ground Circuit between Control Panel and outside of pump: \_\_\_\_\_ Ohms(Ω)

MEG Ohms check of insulation:

Red to Ground: \_\_\_\_\_ White to Ground: \_\_\_\_\_ Black to Ground: \_\_\_\_\_

**Operational Checks**

Is there noise or vibration present? YES \_\_\_ NO \_\_\_ Source of noise/vibration: \_\_\_\_\_

Does check valve operate properly? YES \_\_\_ NO \_\_\_ N/A \_\_\_

Is system free of leaks? YES \_\_\_ NO \_\_\_ Leaks at: \_\_\_\_\_

Does system appear to operate at design flow rate? YES \_\_\_ NO \_\_\_

Nominal Voltage: \_\_\_\_\_ Phase: 1Ø 3Ø (select one)

Voltage Reading at panel connection, Pump OFF: L1, L2 \_\_\_\_\_ L2, L3 \_\_\_\_\_ L1, L3 \_\_\_\_\_

Voltage Reading at panel connection, Pump ON: L1, L2 \_\_\_\_\_ L2, L3 \_\_\_\_\_ L1, L3 \_\_\_\_\_

Amperage Draw, Pump ON: L1 \_\_\_\_\_ L2 \_\_\_\_\_ L3 \_\_\_\_\_

**Submersible Pumps**

Are BAF and guide rails level / plumb? YES \_\_\_ NO \_\_\_

Is pump seated on discharge properly? YES \_\_\_ NO \_\_\_

Are level controls installed away from turbulence? YES \_\_\_ NO \_\_\_

Is level control operating properly? YES \_\_\_ NO \_\_\_

Is pump fully submerged during operation? YES \_\_\_ NO \_\_\_

**Follow up/Corrective Action Required**

YES \_\_\_ NO \_\_\_

**Additional Comments:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Startup performed by: \_\_\_\_\_ Date: \_\_\_\_\_

**Present at Start-Up**

( ) Engineer: \_\_\_\_\_ ( ) Operator: \_\_\_\_\_

( ) Contactor: \_\_\_\_\_ ( ) Other: \_\_\_\_\_

**All parties should retain a copy of this report for future trouble shooting/reference**



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