



PARTS LIST FOR
BIO-20D-0M10 /BIO-20D-1M10
BIO-20D-0M30 /BIO-20D-1M30
WATER TREATMENT SYSTEM

Congratulations on the purchase of your new Mi-T-M water treatment system! This parts listing has been compiled for your benefit. You can be assured your Mi-T-M water treatment system was constructed and designed with quality and performance in mind. Each component has been rigorously tested to insure the highest level of acceptance.

The contents of this parts listing are based on the latest product information available at the time of publication. Mi-T-M reserves the right to make changes in price, color, materials, equipment, specifications or models at any time without notice.

WARNING

THIS IS A PROFESSIONAL WATER TREATMENT SYSTEM. CAUTION SHOULD BE OBSERVED WHEN USING OR REPAIRING THIS UNIT! READ AND FOLLOW THE SAFETY WARNINGS LISTED BELOW BEFORE ATTEMPTING ANY REPAIRS ON THIS WATER TREATMENT SYSTEM!

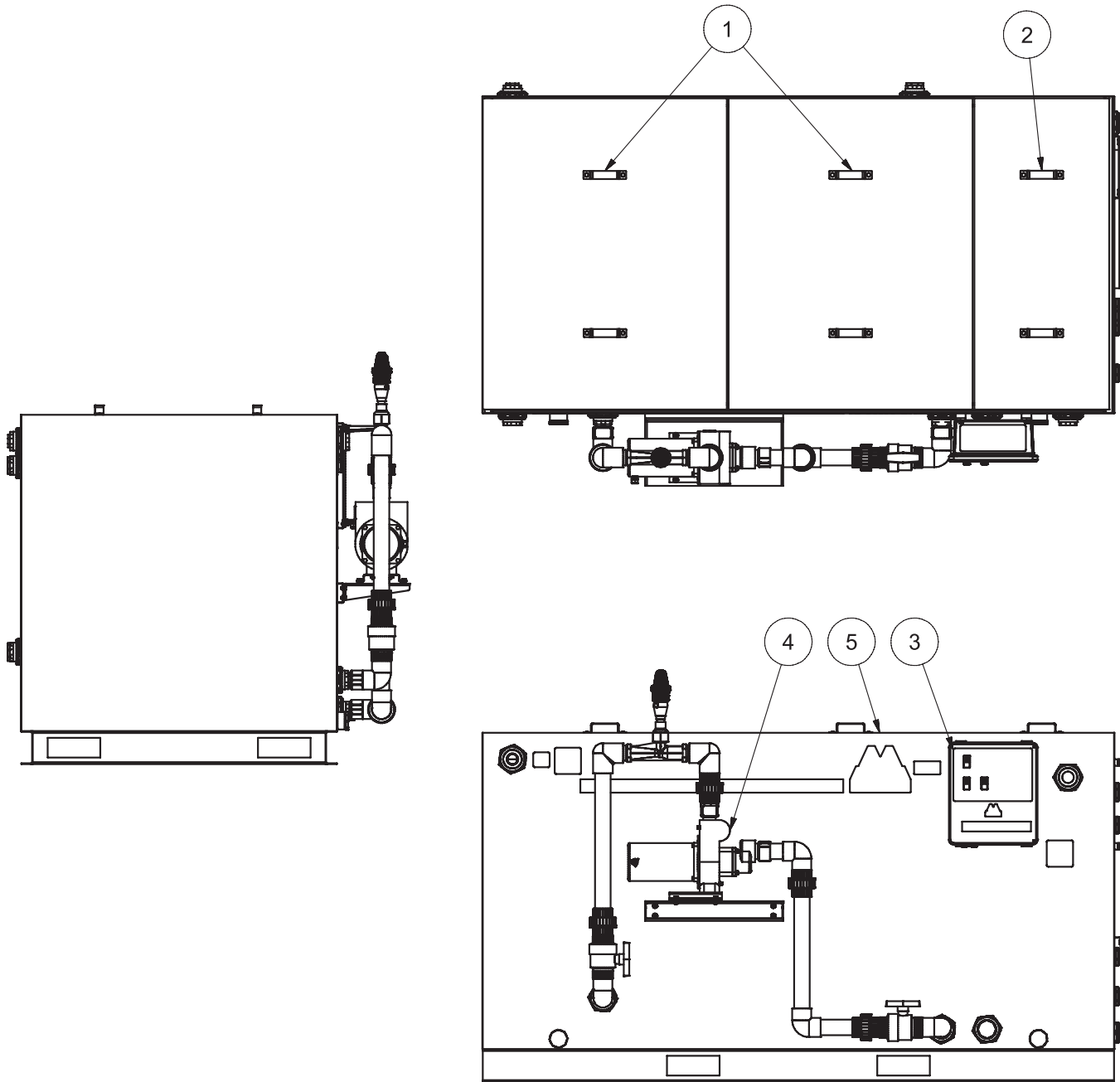
SAFETY WARNINGS

1. Serious injury or death could occur if the water treatment system is not properly grounded. Your water treatment system is powered by electricity and may cause electric shock or electrocution if not installed properly. Installation to this unit, including all electrical connections, must comply with all local, state and national codes. Any electrical wiring or repairs performed on this water treatment system should be done by Authorized Service Personnel in accordance with National and Local electrical codes.
2. NEVER alter or modify the equipment. Use only genuine Mi-T-M parts for repair of your water treatment system. Failure to do so can cause hazardous operating conditions and will VOID warranty.
3. Know how to stop and bleed pressures quickly. Be thoroughly familiar with controls. Do not operate without protective cover/guards. Follow the maintenance instructions specified in your operator's manual.
4. Before servicing, ALWAYS shut off the water and the unit. Allow the unit to cool down. NEVER assume the water treatment system is safe to work on just because it is not operating. It could restart at any time! ALWAYS disconnect from the power source. Service in a clean, dry flat area.
5. Be especially careful it properly dispose of any flammable materials. Consult Materials Safety Data Sheets for safe handling of chemicals used with your system, especially oxidizers and acids.

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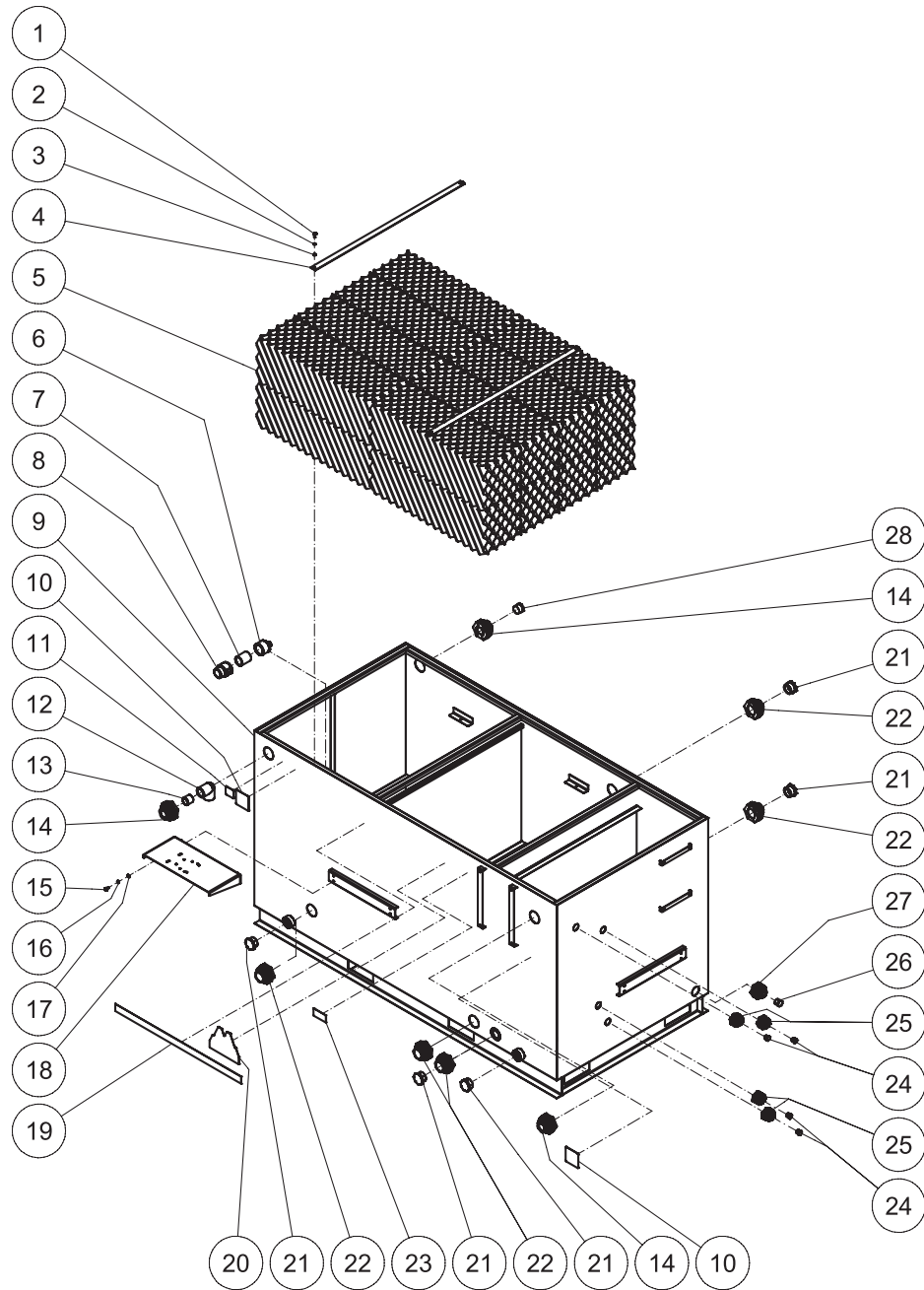
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MAIN ASSEMBLY



BIO-20D 011609-CAW			
MAIN ASSEMBLY			
ITEM	DESCRIPTION	PART #	QTY
1	LARGE LID BIO (DS) (RS)	DWG	2
2	SMALL LID BIO (DS)	DWG	1
3	CONTROL PANEL - BIO-20D	DWG	1
4	AERATOR PLUMBING	DWG	1
5	TANK ASSEMBLY - BIO-20D-1M10/1M30	DWG	1

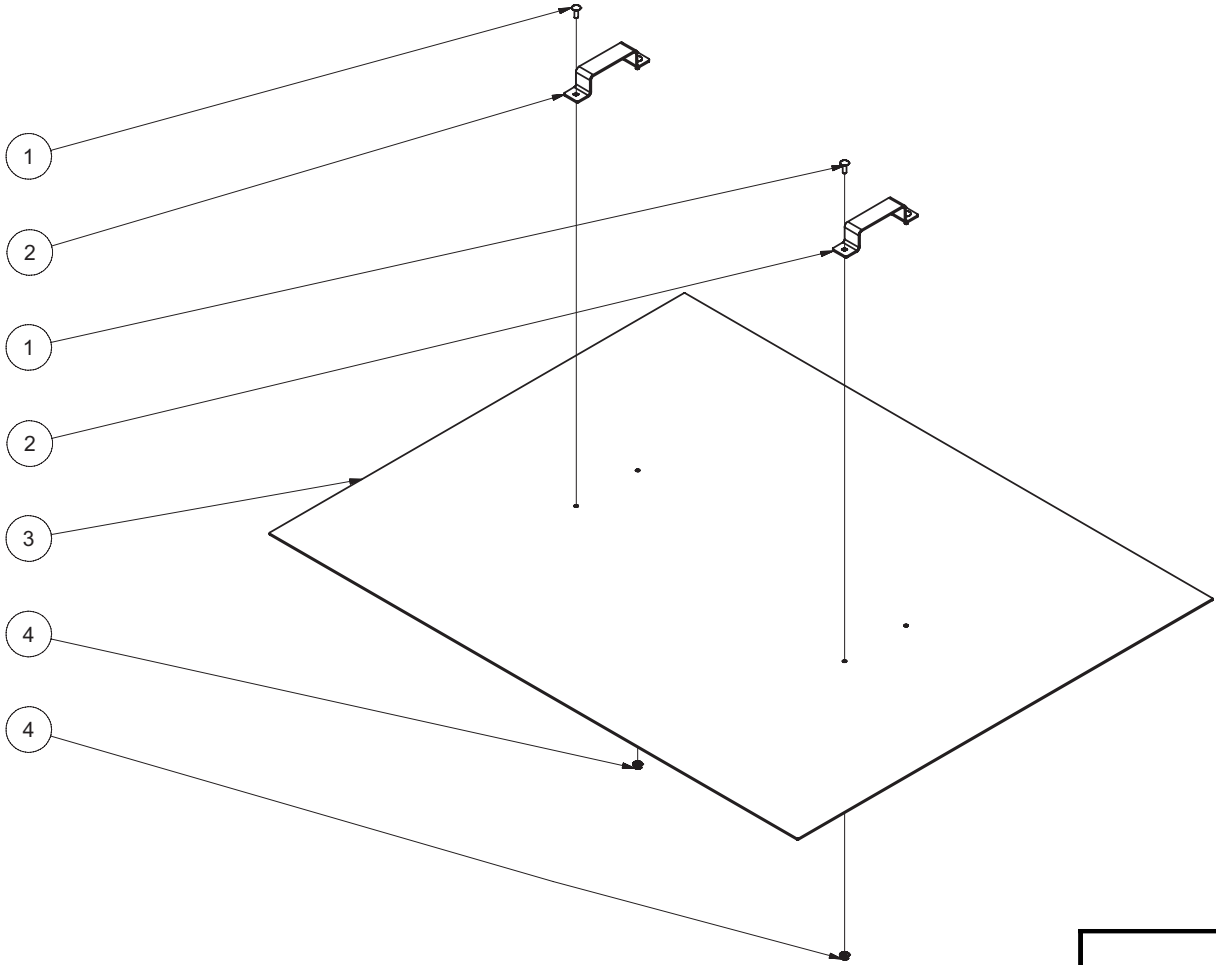
TANK ASSEMBLY



TANK ASSEMBLY BIO-20D 041409-PJH

TANK ASSEMBLY BIO-20D-041409-PJH			
TANK ASSEMBLY			
ITEM	DESCRIPTION	PART #	QTY
1	BOLT	27-5016	4
2	LOCKWASHER	29-1006	4
3	WASHER	28-0121	4
4	STRAP	12-013515	2
5	MEDIA	33-0337	16
6	REDUCER	55-1894	2
7	PIPE (ONE FOOT REQUIRED)	55-1800	2
8	ADAPTER	55-1822	2
9	TANK	12-9149	1
-	BIO-20D TANK ALUM.	12-0167	1
10	DECAL - NONPOTABLE WATER	34-0868	2
11	DECAL - INLET	34-0892	1
12	ELBOW	55-1610	1
13	NIPPLE	55-1674	1
14	BULKHEAD	55-1686	3
15	BOLT	27-5066	4
16	LOCKWASHER	29-1007	4
17	WASHER	28-0122	4
18	PUMP SHELF	12-014908	1
19	DECAL Mi-T-M STRIPE	34-2282	1
20	DECAL - #5M	34-2171	1
21	PLUG	55-1840	5
22	BULKHEAD	55-1886	5
23	DECAL- SILVER STICKER	N/A	1
24	PLUG	55-0840	4
25	BULKHEAD	55-0886	4
26	PLUG	55-1240	1
27	BULKHEAD	55-1286	1
28	PLUG	55-1640	1

LARGE TANK LID ASSEMBLY

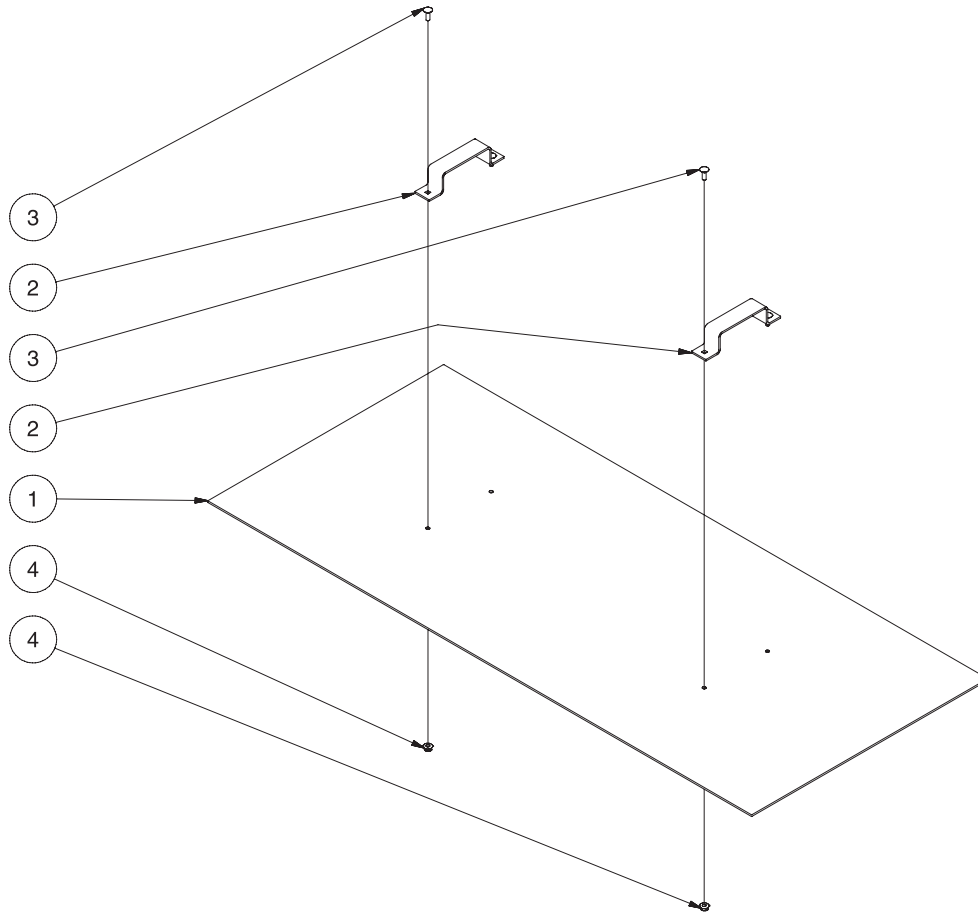


LARGE TANK LID 5'-113005-ASY

LARGE TANK LID ASSEMBLY			
REF. #	DESCRIPTION	PART#	QTY.
1	Bolt	31-5027	4
2	Handle	56-0040	2
3	Tank Lid	56-0043	1
4	Hex Nut	30-5202	4

LARGE LID BIO 092506 PJH

SMALL TANK LID ASSEMBLY

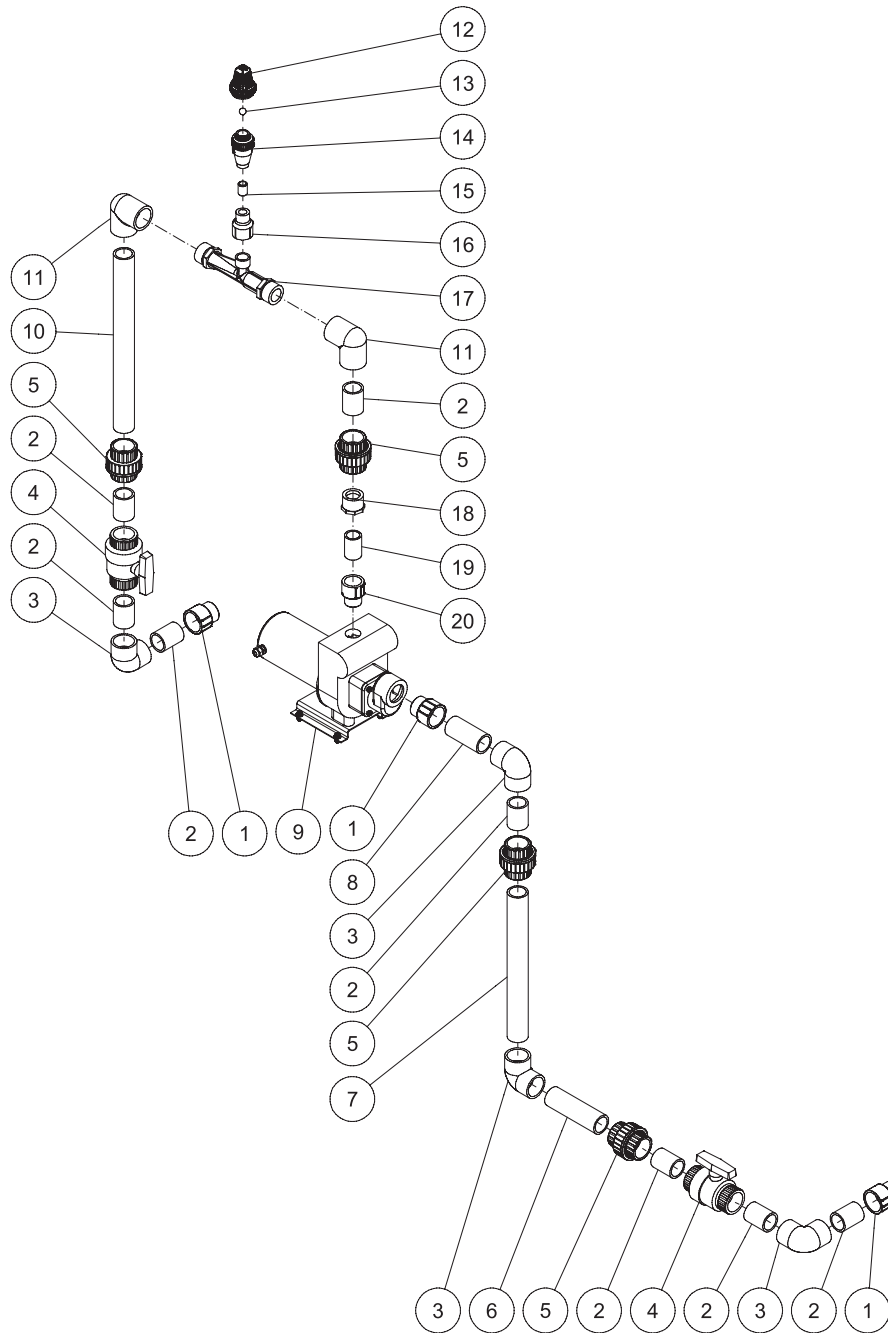


SMALL TANK LID-123003-ASY

SMALL TANK LID ASSEMBLY			
REF. #	DESCRIPTION	PART#	QTY.
1	Tank Lid	56-0043	1
2	Handle	56-0040	2
3	Bolt	31-5027	4
4	Hex Nut	30-5202	4

SMALL TANK LID-123003-ASY

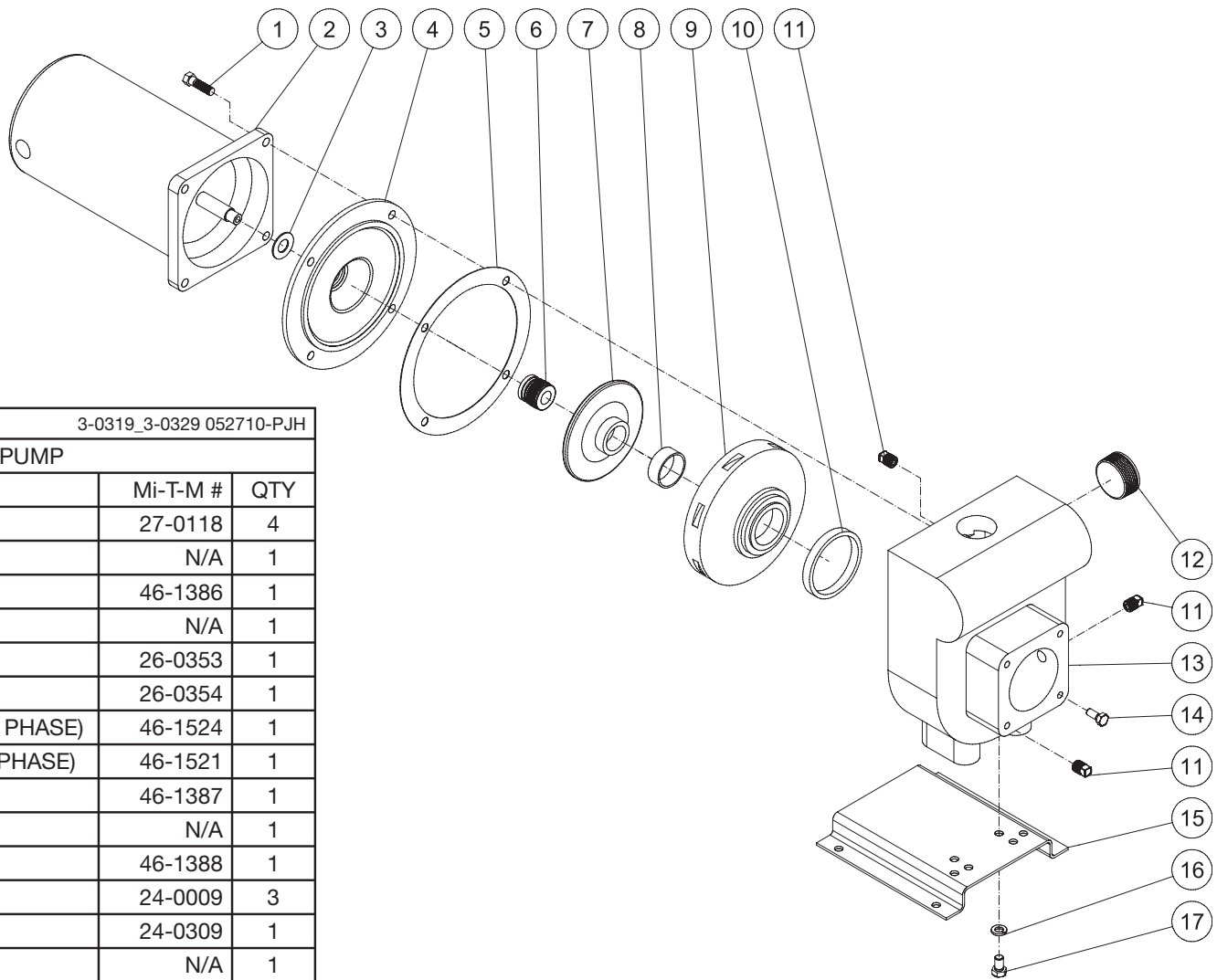
PLUMBING: AERATION



AERATION PLUMBING BIO-20D-082409-ASY

BIO-20D AERATOR PLUMBING 082409-PJH			
PLUMBING : AERATOR			
ITEM	DESCRIPTION	PART #	QTY
1	ADAPTER	55-1822	3
2	PIPE (ONE FOOT REQUIRED)	55-1800	8
3	ELBOW	55-1809	4
4	BALL VALVE	55-1855	2
5	UNION	55-1845	4
6	PIPE (TWO FEET REQUIRED)	55-1800	1
7	PIPE (THREE FEET REQUIRED)	55-1800	1
8	PIPE (ONE FOOT REQUIRED)	55-1800	1
9	AERATOR PUMP (SINGLE PHASE)	3-0329	1
-	AERATOR PUMP (THREE PHASE)	3-0319	1
10	PIPE (THREE FEET REQUIRED)	55-1800	1
11	ELBOW	55-1810	2
12	STRAINER KIT	55-0082	1
13	BALL	62-0172	1
14	CHECK VALVE	55-1053	1
15	NIPPLE	55-1074	1
16	COUPLER	55-1491	1
17	MAZZEI	55-0068	1
18	REDUCER	55-1823	1
19	PIPE (ONE FOOT REQUIRED)	55-1600	1
20	ADAPTER	55-1622	1

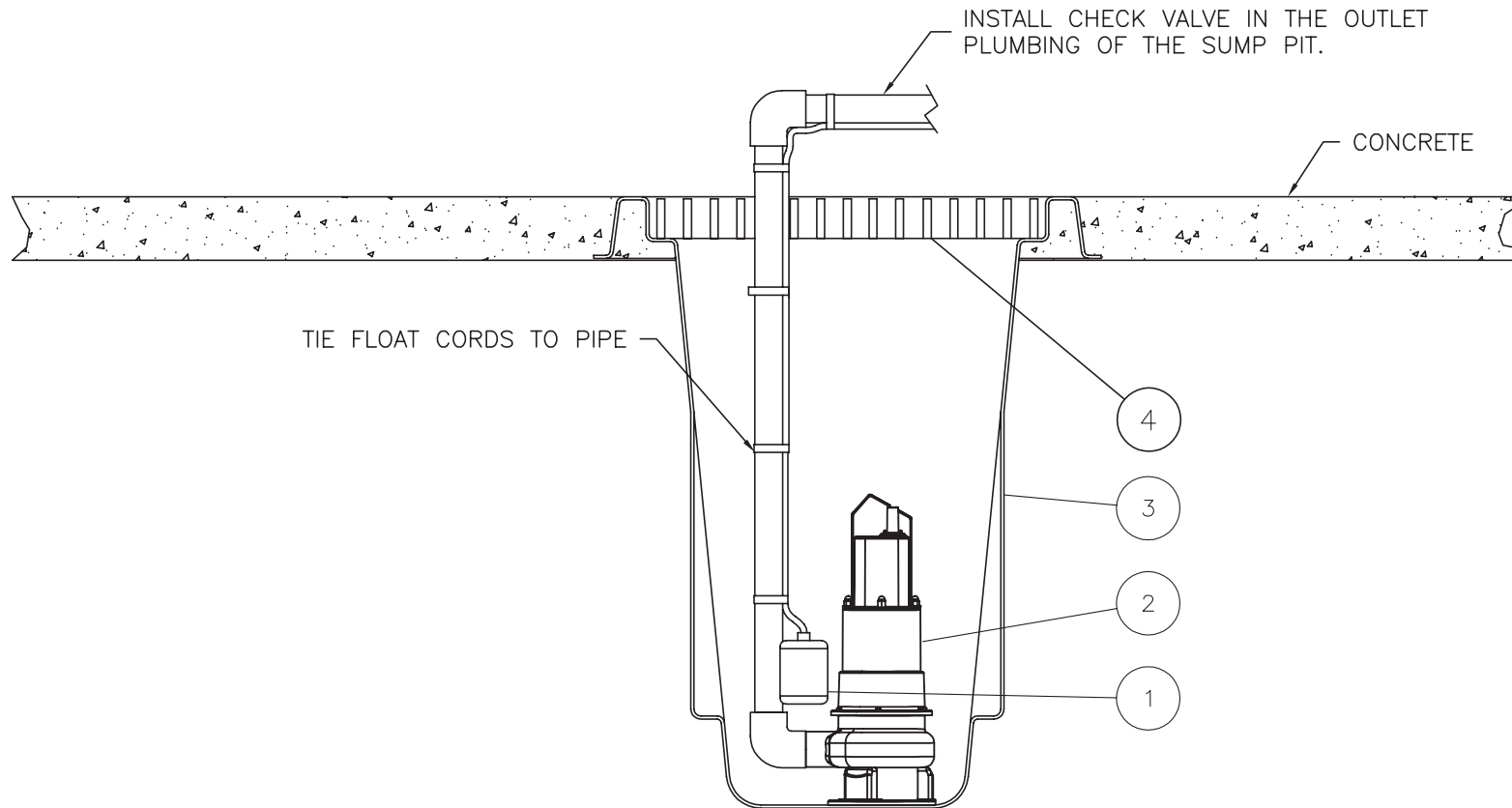
AERATION PUMP



3-0319_3-0329 052710-PJH			
AERATION PUMP			
ITEM	DESCRIPTION	Mi-T-M #	QTY
1	BOLT	27-0118	4
2	MOTOR	N/A	1
3	WATER SLINGER	46-1386	1
4	SEAL PLATE	N/A	1
5	GASKET	26-0353	1
6	SHAFT SEAL	26-0354	1
7	IMPELLER (3-0329 SINGLE PHASE)	46-1524	1
-	IMPELLER (3-0319 THREE PHASE)	46-1521	1
8	WEAR RING	46-1387	1
9	DIFFUSER	N/A	1
10	DIFFUSER RING	46-1388	1
11	PLUG	24-0009	3
12	PLUG	24-0309	1
13	PUMP BODY	N/A	1
14	BOLT	27-0066	4
15	BASE	N/A	1
16	LOCKWASHER	29-0008	2
17	BOLT	N/A	2
	COMPLETE PUMP (SINGLE PHASE)	3-0329	1
	COMPLETE PUMP (THREE PHASE)	3-0319	1

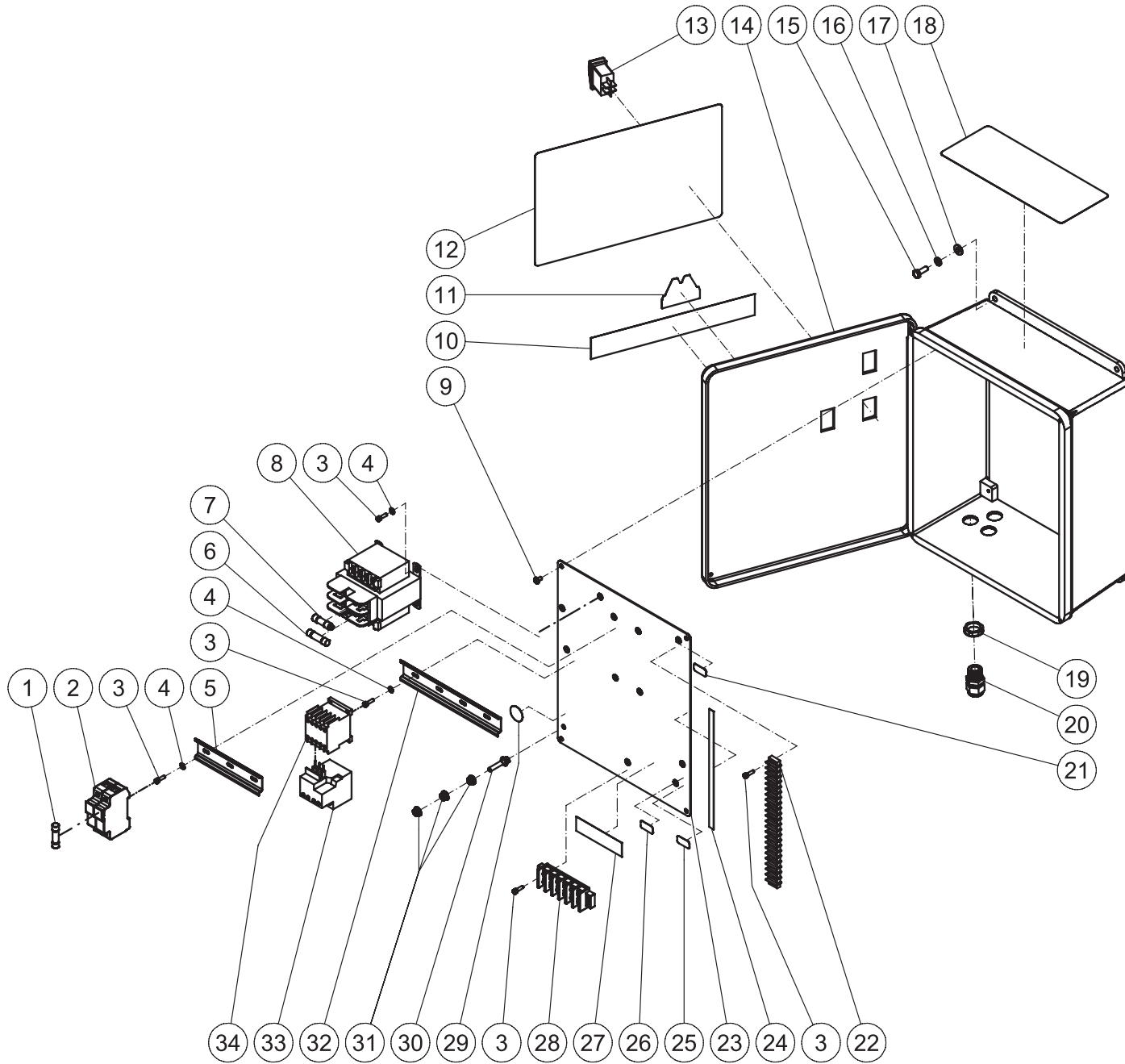
3-0319_3-0329-052710-PJH

SUMP PIT ASSEMBLY



SUMP PIT ASSY-010509-PJH			
SUMP PIT ASSEMBLY			
REF. #	DESCRIPTION	PART#	QTY.
1	Float	32-0528	1
2	Pump (Single Phase 230V)	3-0216	1
-	Pump (Three Phase 208-230V)	3-0325	1
-	Pump (Three Phase 460V)	3-0326	1
3	Pit	12-0071	1
4	Medium Grate	20-0480A01	1

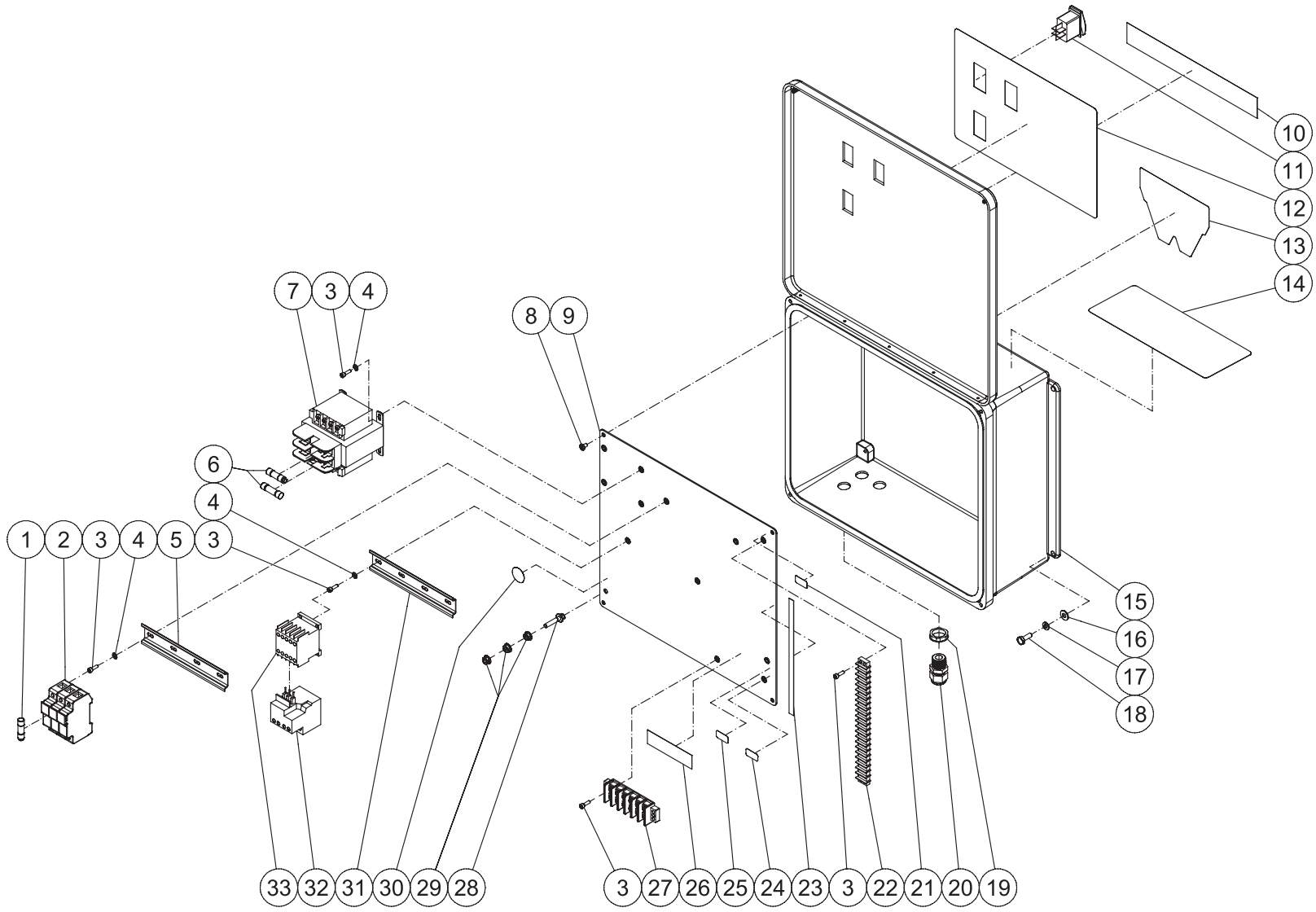
CONTROL PANEL (SINGLE PHASE)



CONTROL PANEL-041309-PJH

CONTROL PANEL-BIO-20D-0M10 (1M10) 041309-CAW			
CONTROL PANEL			
ITEM	DESCRIPTION	PART #	QTY
1	FUSE	32-1024	2
-	FUSE	32-1027	2
2	FUSE HOLDER	32-1006	2
3	SCREW	27-8835	10
4	STAR WASHER	28-1009	6
5	DIN RAIL (ONE FOOT REQUIRED)	32-0316	1
6	FUSE	32-1028	1
7	FUSE	32-0740	2
8	TRANSFORMER	32-0735	1
9	SCREW	27-8933	4
10	DECAL - 1.5" X 10.5" STRIPE	34-2267	1
11	DECAL - Mi-T-M	34-2167	1
12	DECAL - BIO ELECTRIC BOX	34-1306	1
13	ROCKER SWITCH	32-0669	3
14	ELECTRIC BOX	32-1030	1
15	BOLT	27-5016	4
16	LOCKWASHER	29-1006	4
17	WASHER	28-0121	4
18	DECAL - OPERATION	34-0984	1
19	ELECTRICAL LOCKNUT	32-0108	3
20	STRAIN RELIEF	32-0437	3
21	DECAL - 115 VOLT (SEE 34-1009)	N/A SEP.	1
22	TERMINAL STRIP	32-0463	1
23	ELECTRICAL PLATE	20-0520A06	1
24	DECAL-TERMINAL STRIP 1-22	34-1481	1
25	DECAL - 1 PHASE	34-0964	1
26	DECAL - 230 VOLT *(SEE 34-1009)	N/A SEP.	1
27	DECAL - TERMINAL STRIP 32-36	34-0990	1
28	TERMINAL BLOCK	32-0536	1
29	DECAL- GROUND PICTORAL *(SEE 34-1009)	N/A SEP.	1
30	BOLT	27-8898	1
31	NUT	30-3022	3
32	DIN RAIL (ONE FOOT REQUIRED)	32-0316	1
33	OVERLOAD	32-1015	1
-	OVERLOAD	32-1017	1
34	CONTACTOR	32-1009	2

CONTROL PANEL (THREE PHASE)



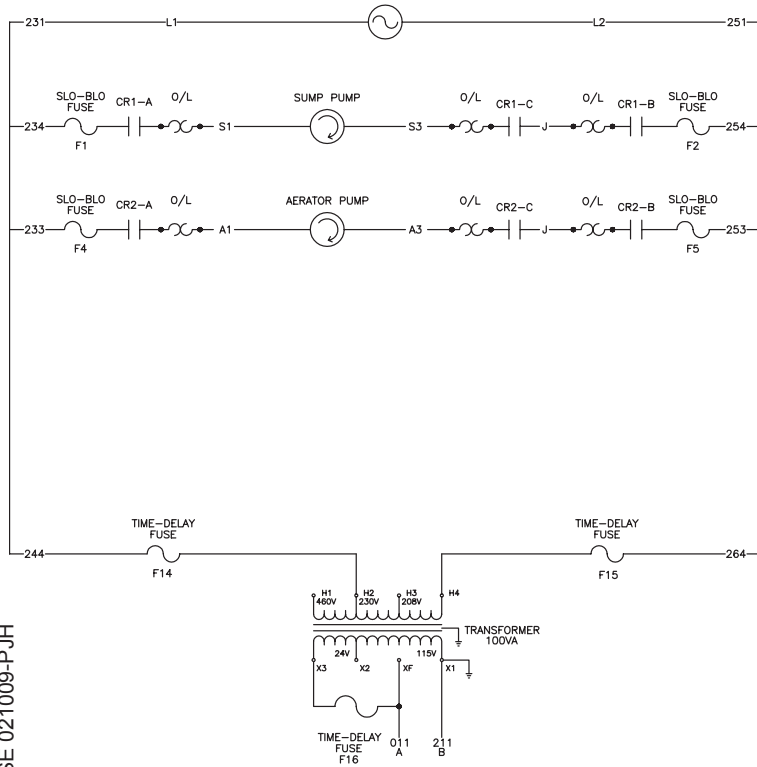
CONTROL PANEL-040709-PJH

CONTROL PANEL

ITEM	DESCRIPTION	Mi-T-M #	QTY	ITEM	DESCRIPTION	Mi-T-M #	QTY
1	FUSE (208V, 230V)	32-1024	3	17	LOCKWASHER	29-1006	4
-	FUSE (460V)	32-0741	3	18	BOLT	27-5016	4
-	FUSE (208V, 230V)	32-1025	3	19	ELECTRICAL LOCKNUT	32-0108	3
-	FUSE (460V)	32-0470	3	20	STRAIN RELIEF	32-0437	3
2	FUSE HOLDER	32-1007	2	21	DECAL - 115 VOLT (SEE 34-1009)	N/A SEP.	1
3	SCREW	27-8835	12	22	TERMINAL STRIP	32-0463	1
4	STAR WASHER	28-1009	8	23	DECAL-TERMINAL STRIP 1-22	34-1481	1
5	DIN RAIL (ONE FOOT REQUIRED)	32-0316	1	24	DECAL - 3 PHASE	34-0965	1
6	FUSE (208V, 230V)	32-0740	2	25	DECAL - 230 VOLT *(SEE 34-1009)	N/A SEP.	1
-	FUSE (460V)	32-0467	2	26	DECAL - TERMINAL STRIP 32-36	34-0990	1
-	FUSE (208V, 230V, 460V)	32-1028	1	27	TERMINAL BLOCK	32-0536	1
7	TRANSFORMER	32-0735	1	28	BOLT	27-8898	1
8	SCREW	27-8933	4	29	NUT	30-3022	3
9	ELECTRICAL PLATE	20-1065A06	1	30	DECAL- GROUND PICTORAL *(SEE 34-1009)	N/A SEP.	1
10	DECAL - 11" STRIPE	34-2186	1	31	DIN RAIL (ONE FOOT REQUIRED)	32-0316	1
11	ROCKER SWITCH	32-0669	3	32	OVERLOAD (208V 230V)	32-1013	1
12	DECAL - BIO ELECTRIC BOX	34-1306	1	-	OVERLOAD (460V)	32-1010	1
13	DECAL - Mi-T-M	34-2169	1	-	OVERLOAD (208V, 230V)	32-1015	1
14	DECAL - OPERATION	34-0984	1	-	OVERLOAD (460V)	32-1012	1
15	ELECTRIC BOX	32-1031	1	33	CONTACTOR	32-1009	2
16	WASHER	28-0121	4				

LADDER DIAGRAM (SINGLE PHASE)

230V 1Ø LADDER DIAGRAM



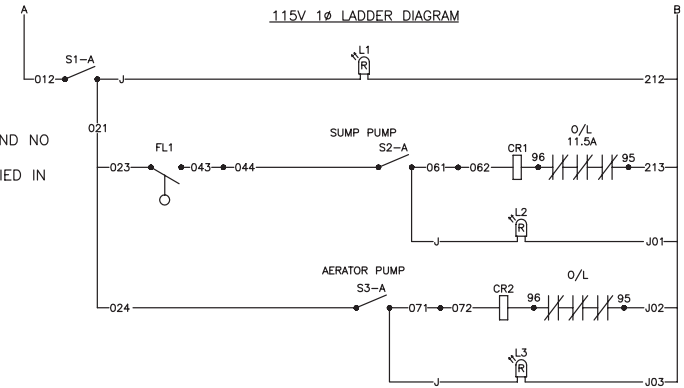
NOTES:

- 1) LADDER DIAGRAM SHOWN WITH POWER TO UNIT AND NO WATER IN PIT
- 2) ALL WIRES ARE 16GA UNLESS OTHERWISE SPECIFIED IN THE TABLE BELOW.

LEGEND

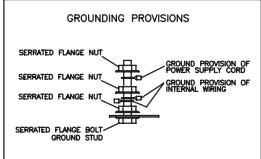
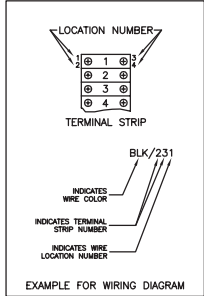
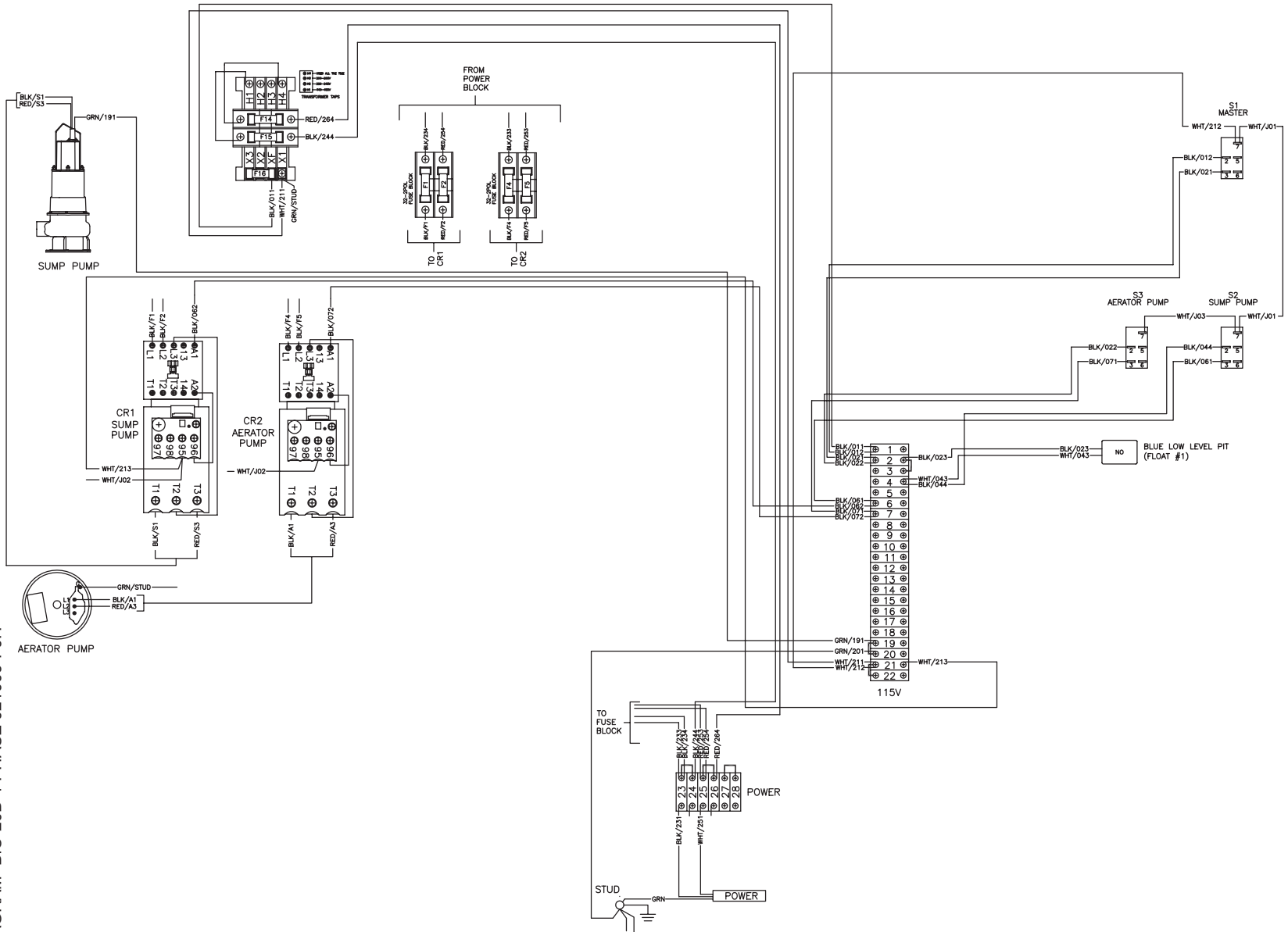
- CR1 = CONTROL RELAY, SUMP PUMP
- CR2 = CONTROL RELAY, AERATOR PUMP
- CR3 = CONTROL RELAY, TRANSFER PUMP
- CR4 = CONTROL RELAY, OZONE PUMP
- S1 = SWITCH, MASTER
- S2 = SWITCH, SUMP PUMP
- S3 = SWITCH, AERATOR PUMP
- S4 = SWITCH, TRANSFER PUMP
- S5 = SWITCH, OZONE SYSTEM
- S6 = SWITCH, PERISTALTIC METERING PUMP
- L1 = LIGHT, FOR S1
- L2 = LIGHT, FOR S2
- L3 = LIGHT, FOR S3
- L4 = LIGHT, FOR S4
- L5 = LIGHT, FOR S5
- L6 = LIGHT, FOR S6
- PS1 = PRESSURE SWITCH, 40-60 PSI (TRANSFER PUMP)
- FL1 = FLOAT, N.O. BLUE LOW LEVEL (SUMP PIT)
- FL2 = FLOAT, N.C. RED HIGH LEVEL (PRODUCT TANK)
- FL3 = FLOAT, N.O. BLUE LOW LEVEL (PRODUCT TANK)
- FL4 = FLOAT, N.O. RED LOW LEVEL FRESH WATER MAKEUP
- FL5 = FLOAT, N.C. BLUE HIGH LEVEL RAINWATER OVERFLOW
- SV1 = SOLENOID VALVE, FRESH WATER MAKEUP
- SV2 = SOLENOID VALVE, RAINWATER OVERFLOW

115V 1Ø LADDER DIAGRAM



LADDER DIAGRAM--BIO-20D 1 PHASE 021009-PJH

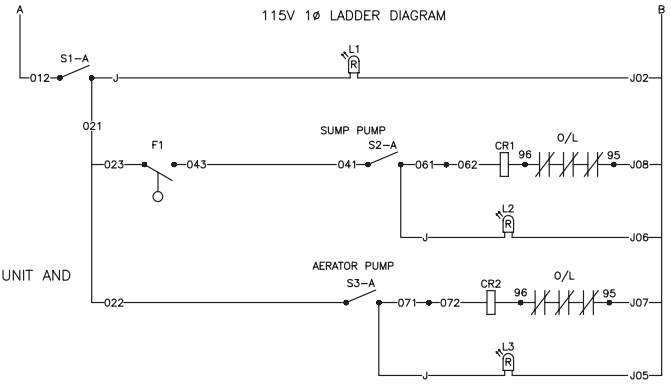
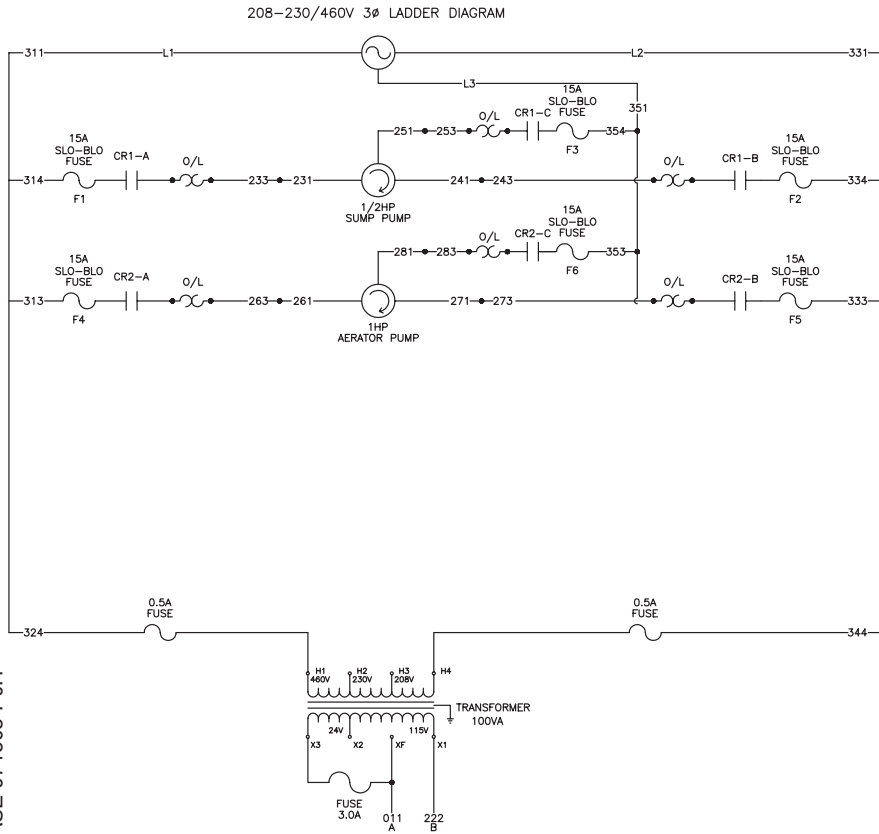
WIRE DIAGRAM (SINGLE PHASE)



NOTES:
 1) ALL WIRES ARE 16GA UNLESS OTHERWISE SPECIFIED IN THE TABLE ON THE LADDER DIAGRAM.
 2) FUSE SIZES ARE SHOWN IN THE TABLE ON THE LADDER DIAGRAM OR ON A STICKER INSIDE THE BOX.

WIRE DIAGRAM- BIO-20D-1 PHASE 021009-PJH

LADDER DIAGRAM (THREE PHASE)



NOTE:
LADDER DIAGRAM SHOWN WITH POWER TO UNIT AND
NO WATER IN PIT

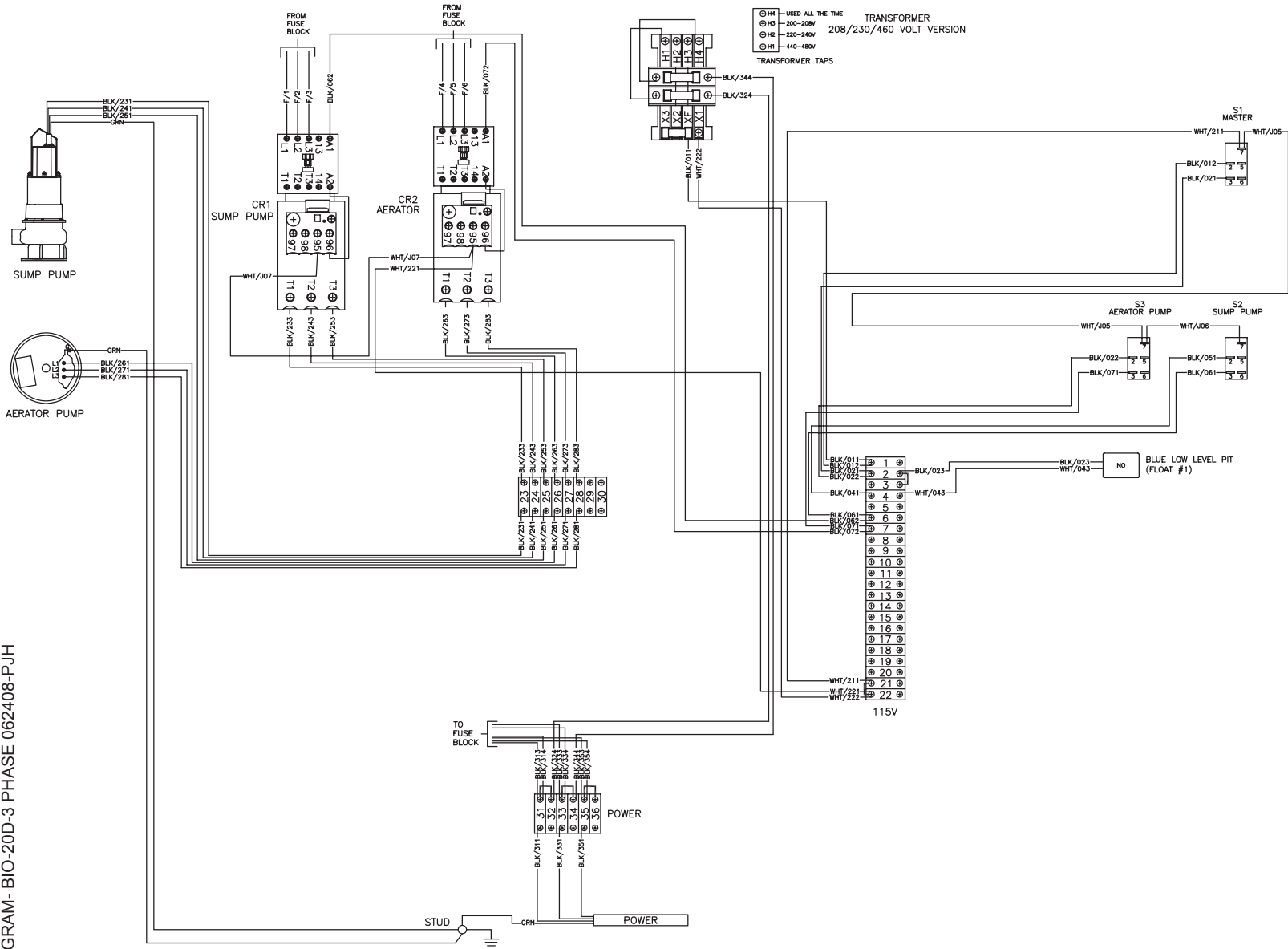
- LEGEND
- CR1 = CONTROL RELAY, SUMP PUMP
 - CR2 = CONTROL RELAY, AERATOR PUMP
 - S1 = SWITCH, MASTER
 - S2 = SWITCH, SUMP PUMP
 - S3 = SWITCH, AERATOR PUMP
 - L1 = LIGHT, FOR S1
 - L2 = LIGHT, FOR S2
 - L3 = LIGHT, FOR S3
 - F1 = FLOAT, N.O. BLUE LOW LEVEL (SUMP PIT)

SUMP PUMP								
OL SETTING	OVERLOAD (AMPS)	VOLTAGE	PHASE	PUMP	AMPS	HP	FUSE	MOTOR WIRE AWG
3.75	32-1013 (2.9-4.0)	208	3	3-0325	3.0	½	6	14
3.75	32-1013 (2.9-4.0)	230	3	3-0325	3.0	½	6	14
1.6	32-1010 (1.1-1.6)	460	3	3-0326	1.28	½	3	14

AERATION PUMP								
OL SETTING	OVERLOAD (AMPS)	VOLTAGE	PHASE	PUMP	AMPS	HP	FUSE	MOTOR WIRE AWG
5.88	32-1015 (4.5-6.3)	208	3	3-0319	4.7	1	6	14
5.88	32-1015 (4.5-6.3)	230	3	3-0319	4.7	1	6	14
2.94	32-1012 (2.3-3.2)	460	3	3-0319	2.35	1	3	14

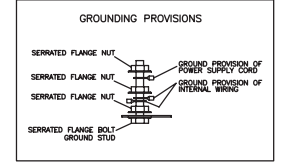
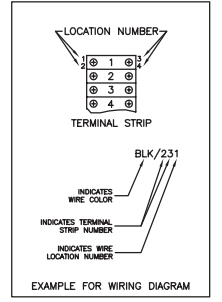
LADDER DIAGRAM--BIO-20D 3 PHASE 071508-PJH

WIRE DIAGRAM (THREE PHASE)

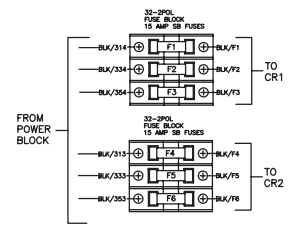


Ⓜ H4 — USED ALL THE TIME
 Ⓜ H3 — 200-208V
 Ⓜ H2 — 220-240V
 Ⓜ H1 — 440-480V

TRANSFORMER
 208/230/460 VOLT VERSION
 TRANSFORMER TAPS



NOTES:
 1) ALL WIRES ARE 16GA UNLESS OTHERWISE SPECIFIED



WIRE DIAGRAM- BIO-20D-3 PHASE 062408-PJH

Manufactured by Mi-T-M
8650 Enterprise Drive, Peosta IA 52068
563-556-7484/ Fax 563-556-1235