USER MANUAL

MODEL:

BLX-900S-GEN2

Compact Walkthrough Boot Scrubber

English (Original Instructions)
Updated: 10/19/21

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⚠ WARNING:

1. All personnel using this unit must be familiar with the information contained in this manual. Follow all installation and maintenance instructions.
2. Always wear appropriate footwear. Secure or remove loose items on footwear.
3. Ensure solid footing and use both hands when operating the unit.
4. Avoid contact of chemicals with skin and eyes. If contact occurs, see MSDS sheet for further first aid measures.
5. Follow safety instructions of chemical manufacturer (MSDS).
6. Always follow plant and OSHA guidelines about the use of equipment.
7. Disconnect power before servicing equipment.
8. Always follow safety precautions and obey warning labels. Failure to do so could result in injury or death.

Overview

The BLX-900S-GEN2 is a compact walkthrough, sole-only, footwear scrubbing unit built to accommodate 1 user at a time with the ability to put through 15-25 users per minute.

The included user manual contain installation, operation, and maintenance instructions for all ***BLX-900S-GEN2*** (115V, 230V, or 480V) Boot Scrubbers. The reference images and diagrams contained within will vary by model, but are subject to the same procedures as outlined.

For further support or information please contact your sanitation representative or Clean Logix technical support.

NOTE: Instructions and specifications are for standard units only. See page 26 for units equipped with Non-dilution kits (NDF).

Specifications

- Construction: 304L stainless steel, UHMW, Polypropylene
- Weight: 425 lb (192.78 kg)
- Dimensions: 62 7/8” x 45 3/8” x 54 3/4” (1,597 x 1,152.5 x 1,390.65 mm)
- Max grate load: 350 lbs. (158.7 kg.)
- Water Consumption: 0.75-1.5 GPM (2.8 - 3.8 L/m)
- Minimum Chemical Dilution Ratio: 1:230*

***NOTE:** Unit tested at 70°F using water with 30-50 psi injector inlet pressure and capillary-tube style injector metering tip.

⚠ WARNING:
DO NOT use flammable liquids (i.e. alcohol based solutions or similar) without dilution unless equipped with a non-dilution flojet kit (NDF model).

System Requirements

Water Supply

- Flow: 1.5 GPM (3.8 L/m) minimum*
- Pressure: 30-60 psi (207-414 kPa)**
- Temperature: 40-100°F (4-38°C)

Minimum 3/8" supply piping size recommended

⚠ WARNING:
DO NOT EXCEED maximum water temperature! Damage to brushes can result.

Minimum pressure must be maintained during specified water flow!

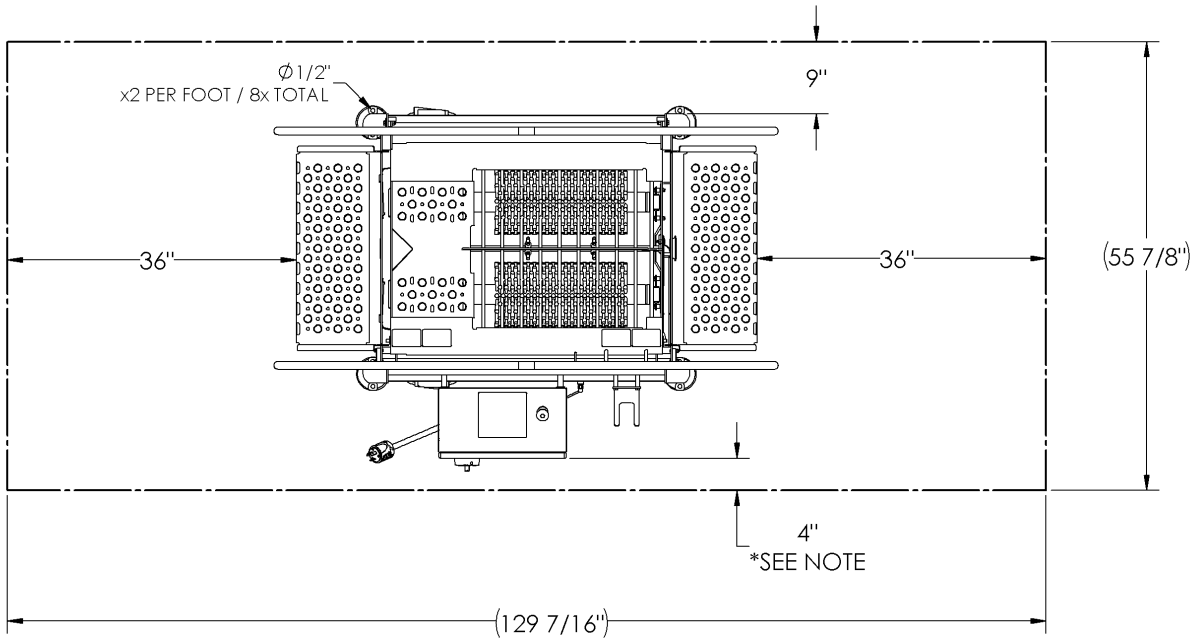
****For consistent operation of Venturi Injector and spray nozzles, a water pressure regulator and filter is recommended.***

NOTE: A back flow preventer must be installed in the water line to this unit. Check local codes to ensure proper installation.

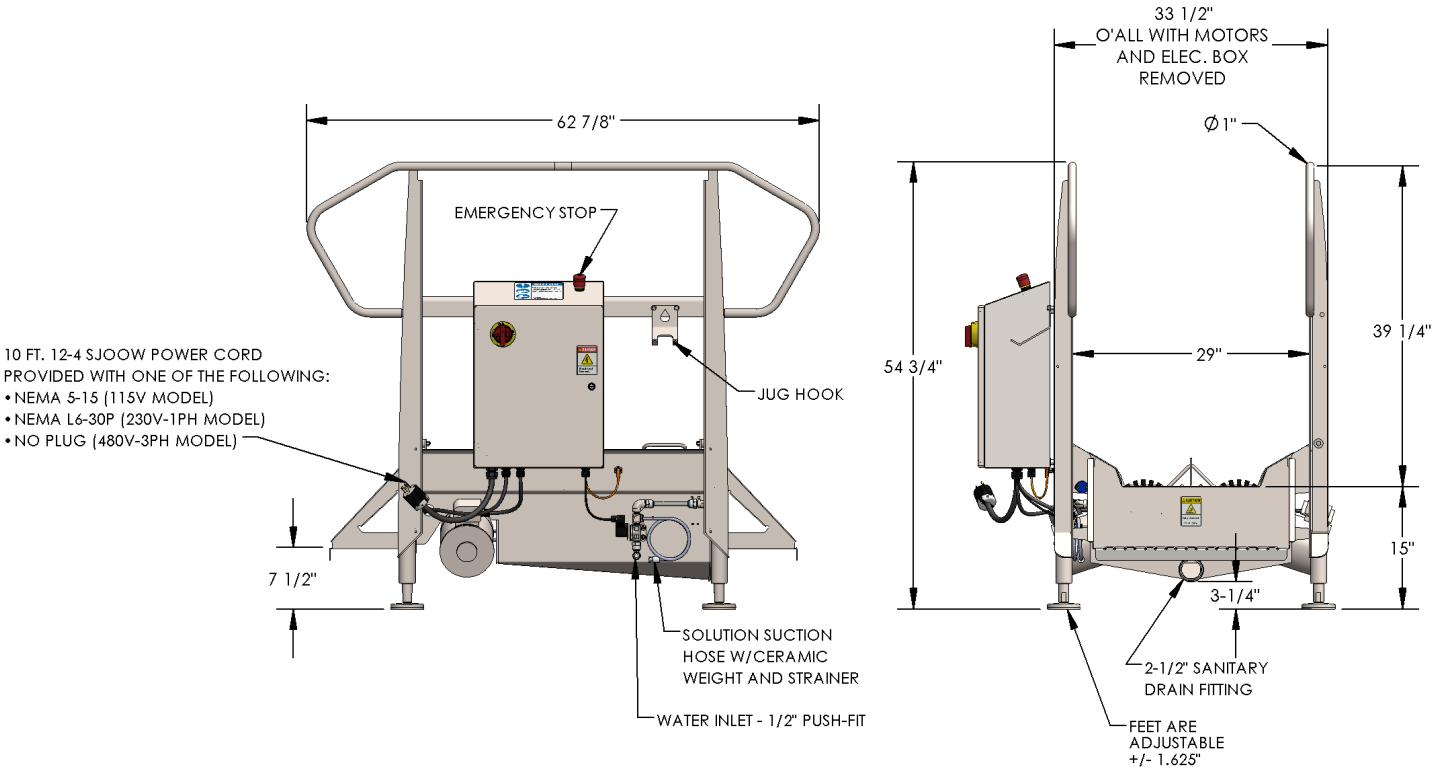
Electrical

- 115VAC, single phase, 60Hz, 19.1A *(BLX-900S-GEN2-115V)*
- 230VAC, single phase, 60Hz, 13.7A *(BLX-900S-GEN2-230V)*
- 480VAC, triple phase, 60Hz, 3.9A *(BLX-900S-GEN2-480V)*

Installation



NOTE: For fixed installations, area in front of electrical panel must have at least 36" of clearance.



Installation

Physical Set Up:

1. Set unit in desired location.
2. Aspects to consider when deciding on placement:
   - Clearance for entering and exiting
   - Location of drain
   - Emergency exit paths or egress in case of emergency
   - Head room for personnel while using the unit
   - Access to control box
   - Connections for water and electricity

NOTE: To move the unit use a pallet jack or a hi-lo to lift from the bottom or using the handrails. Pad the forks to protect the finish.

3. Use a level to make sure the unit is stable and leveled at each end of the tub [Figure 5.1].
4. Connect unit to electrical supply.

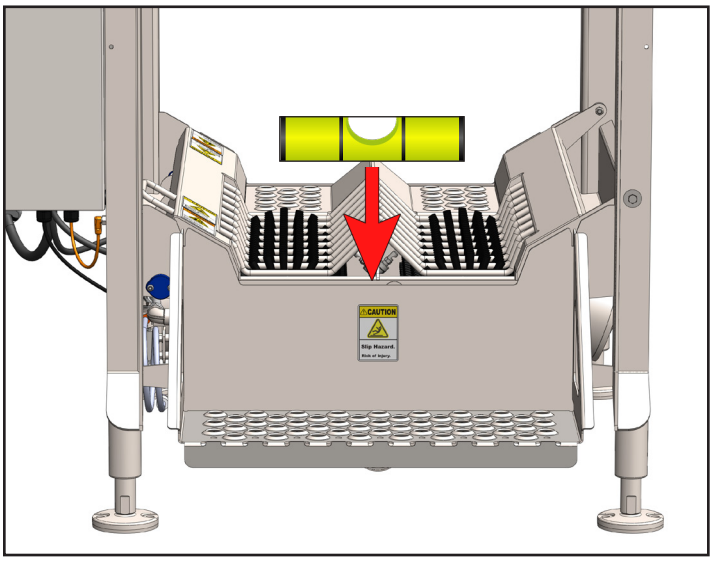


Fig. 5.1: Level and stabilize unit using level against end cap of tub

Plumbing Connections:

1. Connect water source to solenoid valve quick fitting inlet using 1/2" Polyethylene tubing or similar [Figure 5.2].
2. If necessary, adjust the dilution ratio by selecting an appropriate metering tip (included) and test.
   - The smallest metering tip is a yellow tip with a small tube attached [Figure 5.3].
   - This tube can be trimmed to alter the dilution ratio.
   - Full length capillary tube results in a dilution ratio of approximately **1:670** at 30-50 psi water inlet pressure.
3. With the metering tip installed, connect solution source to orange hose barb of the Venturi Injector (located above water inlet) using 1/4" clear PVC tubing (included) [Figure 5.2].

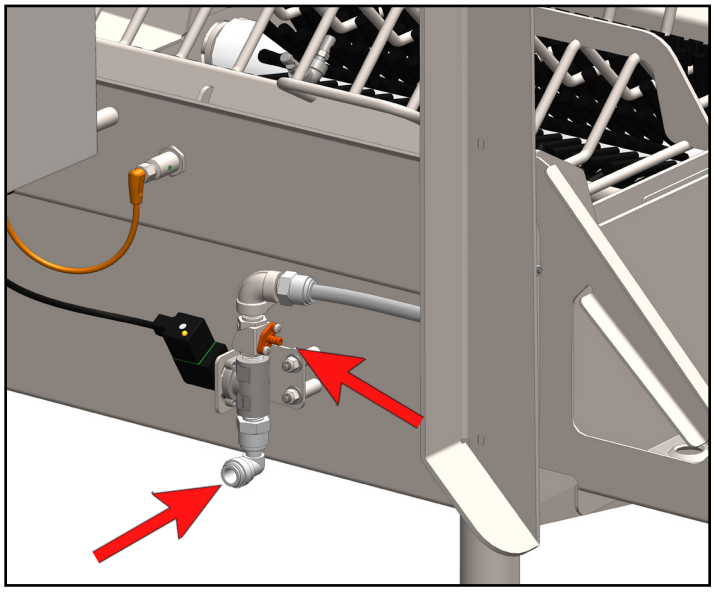


Fig. 5.2: Water and Venturi Injector (solution) inlets

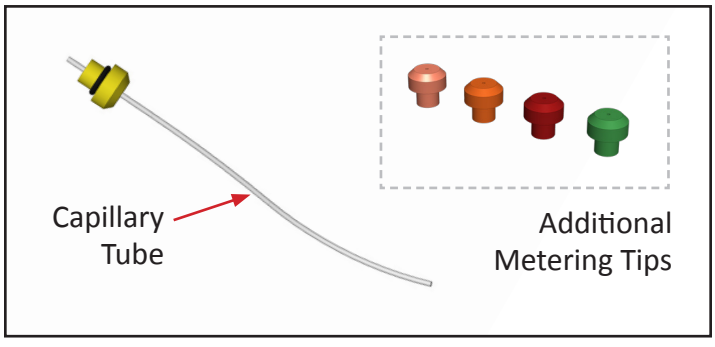


Fig. 5.3: Metering Tips and Capillary Tube

Installation (continued)

Motor Speed Adjustment

The speed of the motor(s) is controlled by the Variable Frequency Drive (VFD). To adjust the speed, turn the knob on the front of the VFD while the unit is under power and motor is running.

Default: 1750 RPM at 45 Hz

- ***Recommended speed:*** 45 Hz
- ***Minimum speed:*** 15 Hz
- ***Maxiumum Speed:*** 60 Hz

⚠ DANGER:
Do not open control box during wash down or cleaning. Only authorized personnel should open the control box.

Fig. 6.1: Delta MS300 (AD GS20) Variable Frequency Drive

To adjust the speed:

1. Open the control box.
2. Activate the sensor to turn on the motor.
3. As the motor is spinning, the unit will display the operating speed in Hz.
4. Turn the knob counter clockwise to decrease the speed, or clockwise to increase speed. [Figure 6.1]

Operation

Start Up

1. Verify installation has been completed:
   - Brushes are secure
   - Walkway grate is lowered
   - Unit is plugged in and receiving power
   - Water and solution have been plumbed and lines are open
2. Pull the E-STOP switches up and engage power, the E-STOP will illuminate red when the unit is receiving power [Figure 7.1].

NOTE: Prior to placing footwear into the unit, test that it is working properly by activating the sensor (put weight on the grate).

Use

1. Step onto the walkway grate.

⚠ CAUTION:
When operating: always ensure solid footing and use both handrails for stability.

2. The walkway grate will depress, activating a proximity sensor which starts the brush rotation and solution spray [Figure 7.2].
3. Walk through the unit, allowing the rotating brushes to clean by moving the boot to make contact with hard to reach areas.
4. One second after the user steps off of the walkway grate the brushes and sanitizer will stop.

Shut Down

- Press the red E-STOP button on the control box.
- Disconnect power and follow lockout-tagout procedures as necessary.

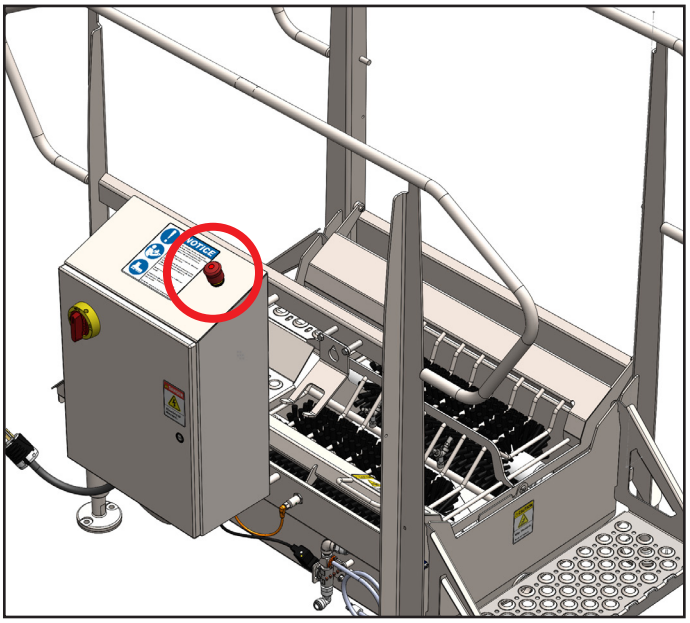


Fig. 7.1: E-STOP indicator light on control box

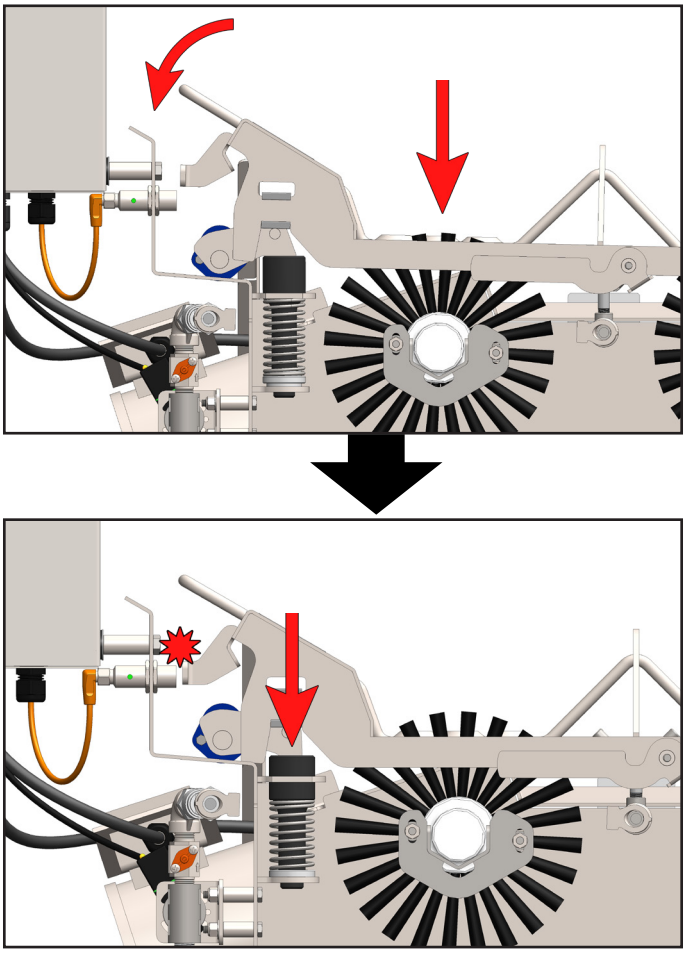


Fig. 7.2: Grate triggering Prox Switch (some components hidden for clarity)

Cleaning Procedures

Opening Grate

1. Shut down the unit (see pg. 5) and lift the grate up by its handle [Figure 8.1].
2. Swing the grate open completely
3. Latch into place against the pin attached to the corner rail [Figure 8.2].

⚠ CAUTION:
Failure to latch the grate properly could result in grate falling closed unexpectedly.

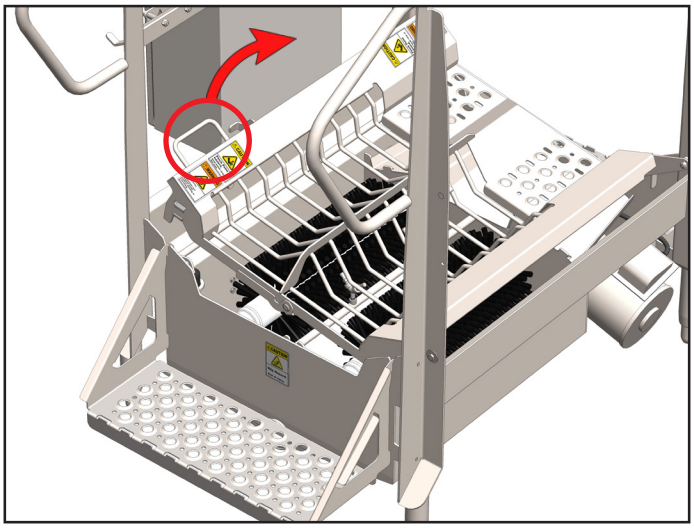


Fig. 8.1: Grate Lifting, shown on BLX-1000S

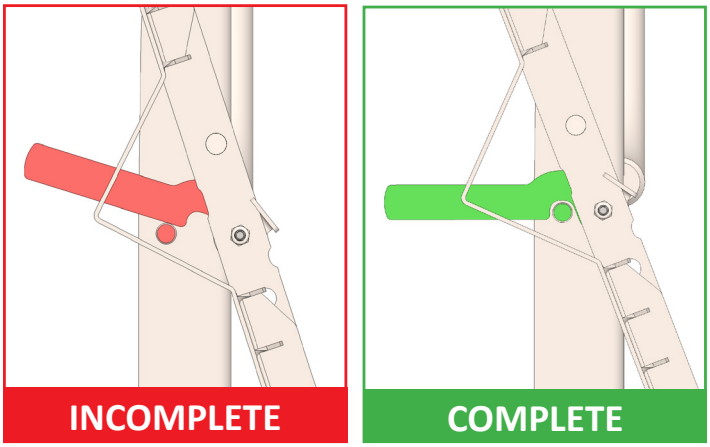


Fig. 8.2: Grate Latch Orientation

Removing & Replacing BrusheS

1. Shut down the unit and open the grate.
2. Lift each brush out of the tub by grabbing the open end and lifting up [Figure 8.3 - Arrow 1].
3. With the open end lifted, the brush can be detached from its anchor [Figure 8.3 - Arrow 2].
4. Repeat this process to remove the other brush.
5. Brushes can be washed individually in a COP tank or wash machine.

NOTE: It is *NOT* recommended to use hot water (over 120°F) to clean brushes.

6. The tub can be washed by conventional means.

⚠ CAUTION:
Use of high pressure (above 400 PSI) is not recommended on sensitive areas such as electrical components, motors, or gearboxes.

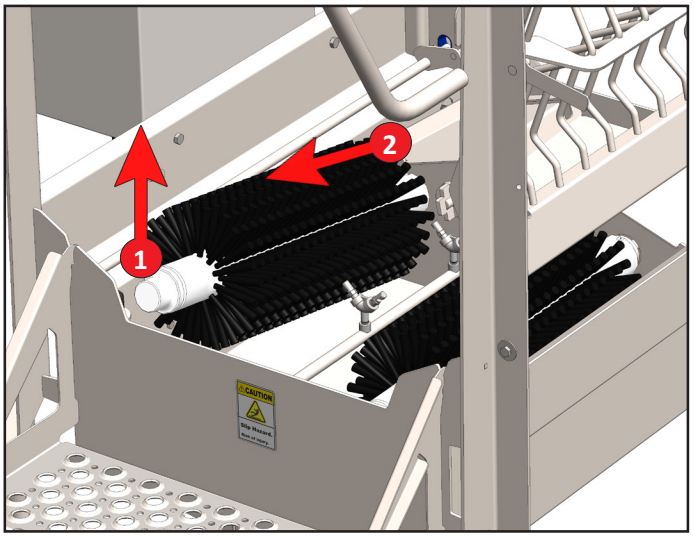


Fig. 8.3: Brush removal process

Cleaning Procedures (continued)

Removing Steps

1. Shut down the unit.
2. Grab either side of the step by the handles.
3. Lift up to remove from tub [Figure 10.1].
4. Steps can be washed individually in a COP tank or wash machine.
5. Replace steps before enabling power and/or use.

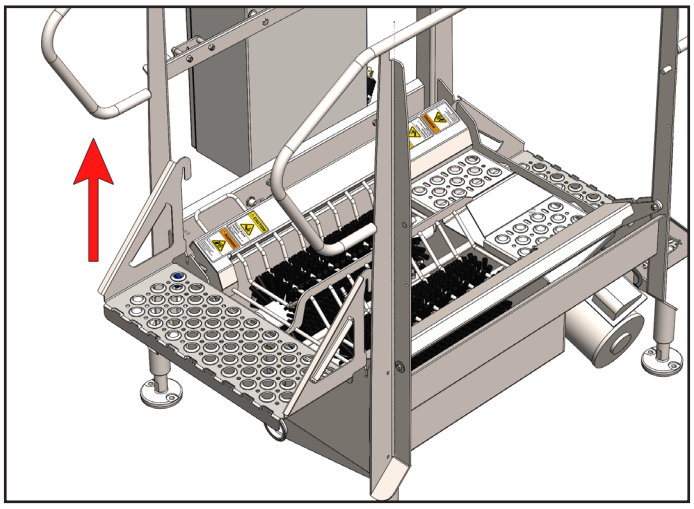


Fig. 10.1: Step removal

Removing Grate Springs & Balancer

1. Open the Grate.
2. Lift the end of the Spring Balancer into the upper section of its keyhole. [Figure 10.2 - Arrow 1]
3. Slide the Spring Balancer through the upper section of the keyhole to release its other end. [Figure 10.2 - Arrow 2]
4. Lift the free end up while sliding the Spring Balancer out the keyhole to remove from the tub. [Figure 10.2 - Arrow 3]
5. Slide each spring up to remove them from the tub [Figure 10.3].
6. Springs and Balancer Weldment can be washed individually in a COP tank or wash machine.
7. Once clean, re-install in reverse order.

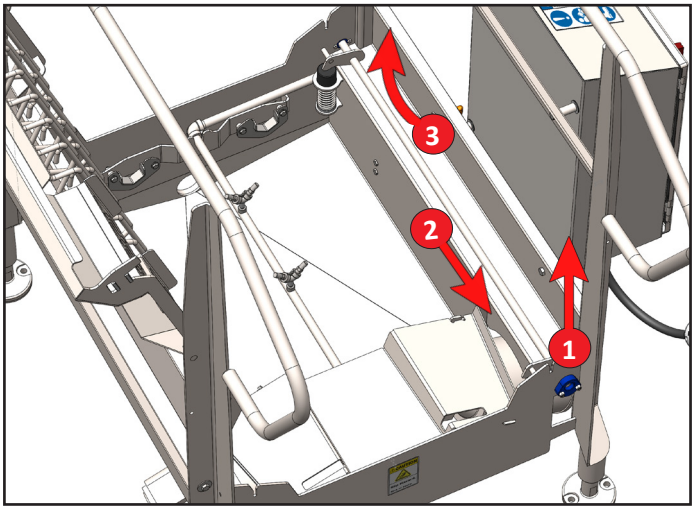
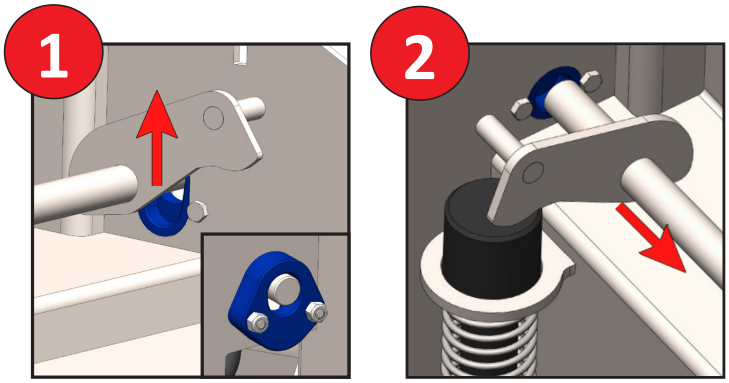


Fig. 10.2: Balancer Weldment removal procedure



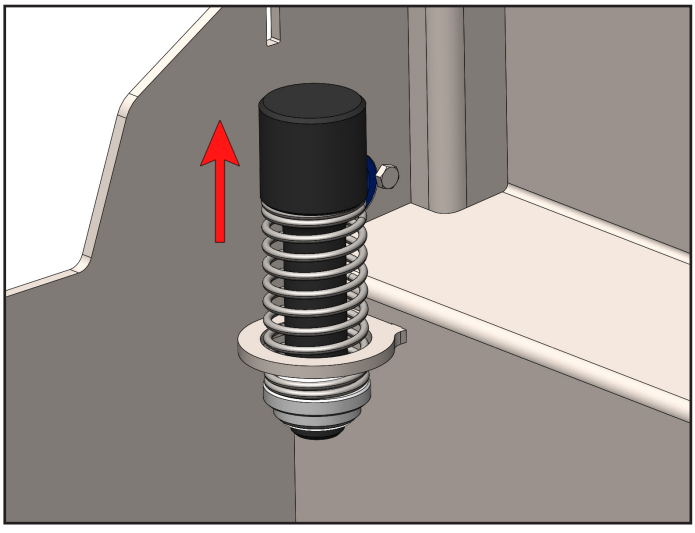


Fig. 10.3: Spring removal procedure

Advanced Configuration Options

Brush RPM Formula:

The formula for calculating Speed in RPM from Drive Frequency in Hertz is:

[Motor Nameplate RPM] x [Drive Frequency (Hz)] ÷ [Motor Nameplate Frequency (Hz)] ÷ [Gear Reduction]

Example:

- Motor Nameplate RPM = **1750**
- Motor Nameplate Frequency (Hz) = **60**
- Gear Reduction = **20**
- Drive Frequency (Hz) = **48**

1750 x 48 ÷ 60 ÷ 20 = **70 RPM**

The formula for calculating Drive Frequency in Hertz from Desired Speed in RPM is:

[Desired Speed RPM] x **[Gear Reduction]** x **[Motor Nameplate Frequency (Hz)]** ÷ **[Motor Nameplate RPM]**

Example:

- Desired Speed in RPM = **70**
- Gear Reduction = **20**
- Motor Nameplate Frequency (Hz) = **60**
- Motor Nameplate RPM = **1750**

70 x 20 x 60 ÷ 1750 = **48 Hz**

⚠ DANGER:
Do not open control box during wash down or cleaning. Only authorized personnel should open the control box.

Timing Relay Settings

Eaton TRL04

- Function: **R (Off Delay)**
- Time Range: **1-10 seconds**
- Setting: **1 second**

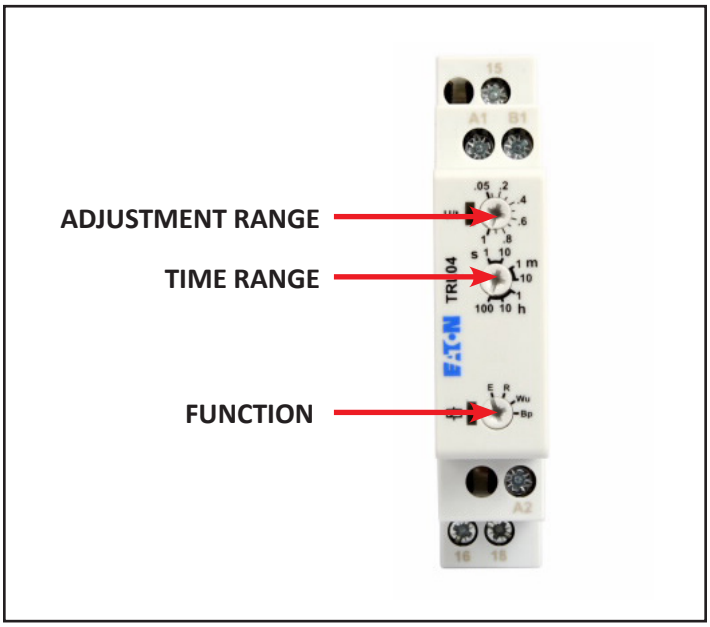


Fig. 12.2: Eaton TRL04 Setting Identification

Advanced Configuration Options (continued)

Drive Parameter Settings

Delta MS300 (AD GS20) Variable Frequency Drive

Review drive specifications for your system's specific power requirements (115V, 230V, or 480V).

PARAMETER NUMBER	DESCRIPTION	115V - 230V	480V	UNITS/DESC
P00.20	Source of Frequency	7	7	Digital Keypad Dial
P00.21	Source of Oper	1	1	External Terminals
P01.12	1st ACC Time	1	1	Seconds
P01.13	1st DEC Time	2	2	Seconds
P02.13	Multi Funct Relay	22	7	Overcurrent Stall Protection
P06.03	OCA Level	90	47	Percent
P06.04	OCN Level	90	47	Percent
P06.06	Over TQC1 Method	4	4	Stop After Overtorque
P06.07	Over TQC1 Level	90	47	Percent
P06.08	Over TQC1 Time	0.3	0.3	Seconds

⚠ DANGER:
Do not open control box during wash down or cleaning. Only authorized personnel should open the control box.

Fig. 12.1: Delta MS300 (AD GS20) Variable Frequency Drive

Preventative Maintenance

The following maintenance procedures are recommended for normal use. Units which see a high amount of daily use should be inspected more frequently as necessary.

> **NOTE:** Control box is equipped with a Lock-Out/Tag-Out switch for restricted power access when performing maintenance procedures.

Weekly:

- Check unit for proper sensor function and brush rotation.
- Ensure spring loaded grate (if applicable) is functioning properly.
- Inspect brushes for damage or wear. Check for missing or deformed bristles.
- Inspect electrical cords and plumbing for damage.
- Inspect and test function of emergency stop switches.

Monthly:

- Check all fasteners to ensure they are tight.
- Ensure warning labels and decals are present and in good condition.
- Inspect motors, gearboxes, and reducers for signs of oil leakage.
- Inspect electrical enclosure for signs of water intrusion.
- Inspect sensors for damage.
- Inspect moving parts for damage or wear.

Quarterly:

- Inspect structure for cracked welds or bent components.

Gear Reducer:

- The gear reducer is supplied filled to capacity with **Mobil Cibus SHC 634 NSF H1 Food Grade** or equal synthetic oil.
  - The synthetic lubrication provided is good for ambient temperatures -10°F - 105°F and is compatible with standard compounded oil.
- Oil should be changed every 2 years (or 6,000 operating hrs.)
- Designed with a bladder type vent system:
  - Consists of an internal bladder that seals the oil chamber from the outside environment at all times - as pressure builds, the bladder contracts keeping the internal pressure to a minimum.
  - Advantage: The internal oil chamber is completely sealed, ensuring oil is not released causing contamination in the application.

Motor:

- Inspect at regular intervals.
- Keep clean and ventilating openings (on TEFC motors) clear of any obstructions.
- Verify the mounting bolts and couplings to ensure that they are tight and properly adjusted.
- Motor bearings are sealed and not re-greasable.
- Bearings should be replaced approximately every 5 years for 8 hr./day service.

Troubleshooting

Unit will not operate:

- Follow the startup procedure (pg. 5)
- Verify the control box is closed and the power-disconnect switch is in the ON position.
- Verify that there is power going to the unit.
    - Verify the circuit breakers in the building have not been tripped.

Unit will not spray:

- Verify water pressure at the inlet to the water/solution solenoid (35 psi min.)
- Inspect spray nozzles for clogging.
- Verify that the orange LED light on the solenoid valve connector illuminates when the brushes are rotating.

Green START button is illuminated, but one or more brushes will not rotate when unit is activated:

- Power cycle the unit by turning the disconnect switch to OFF and then back to ON. Follow the start up procedure on Page 6.

OT1 Fault Code "Over-Torque 1" on Variable Frequency Drive:

The fault occurs when the torque load on any brush exceeds the value set in parameter P06.03 [OCA Level]. The solution will stop spraying when a fault occurs.

- Switch Disconnect to "OFF" or unplug the unit.
- Wait 20-30 seconds before re-applying power to cycle power and clear the fault.

Unit is leaking onto floor:

- Check to make sure all joints are sealed.
- Verify water and solution inlets are attached and firmly in place.

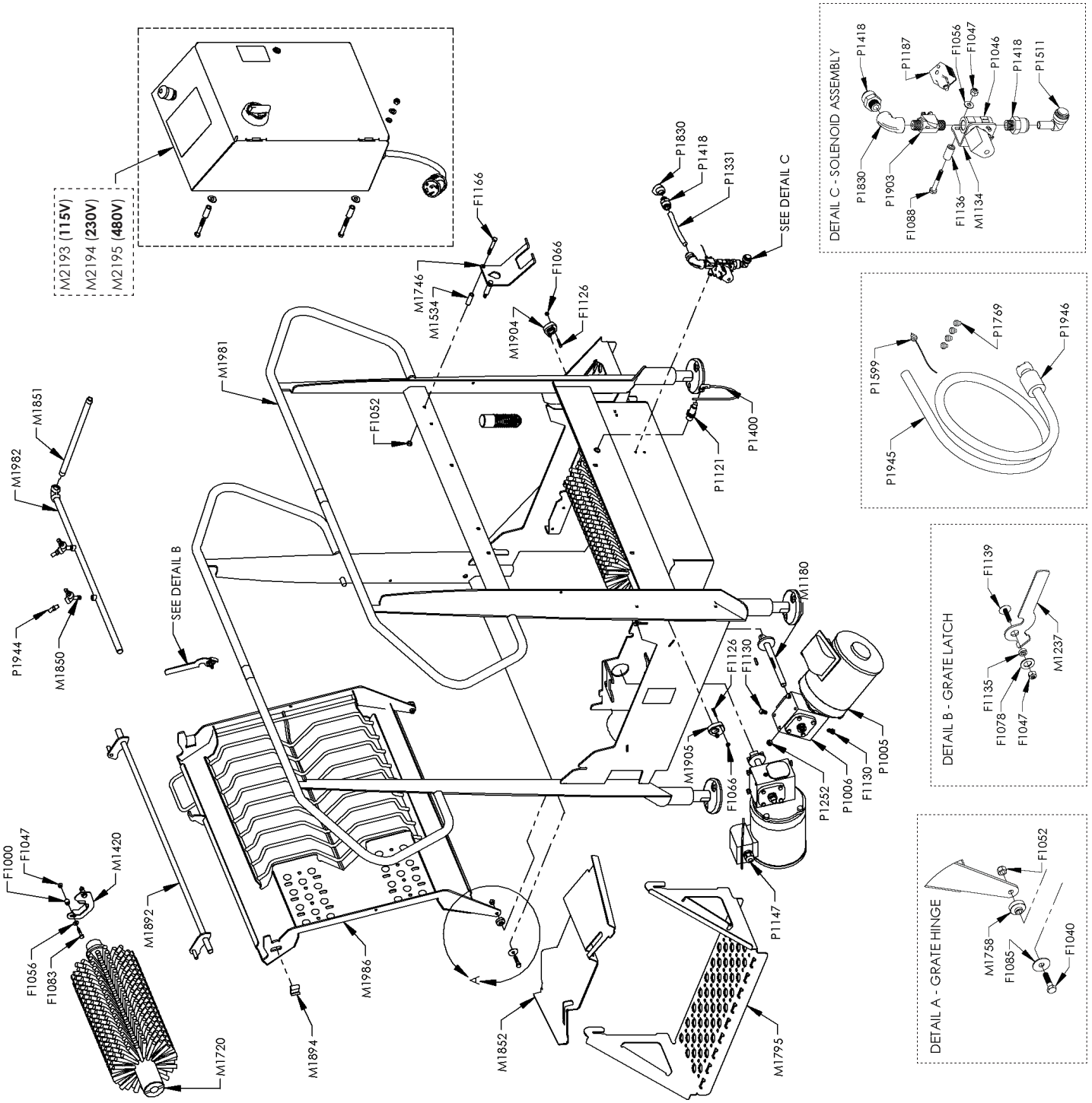
Leaner Dilution Ratios Required:

- Verify metering tip is installed in the injector chemical inlet hose barb
- Use the yellow “Capillary Tube” style metering tip (see pg. 4 for further information)
- If the desired dilution ratio still cannot be achieved pre-dilution of the chemical may be necessary.

Venturi will not draw Chemical Solution:

- Verify water supply is sustaining 30 psi at the injector inlet while unit is running
- Elevate the chemical jug above the injector (a jug hook is provided for this purpose)
- Verify spray nozzles are not clogged. The nozzles supplied with the equipment are rated at 0.2GPM @ 10psi (0.28GPM @ 20 psi)
- Ensure the suction filter is not clogged, kinked or obstructed in any way that would restrict flow.

Appendix A - Parts Callout (BLX-900-GEN2)

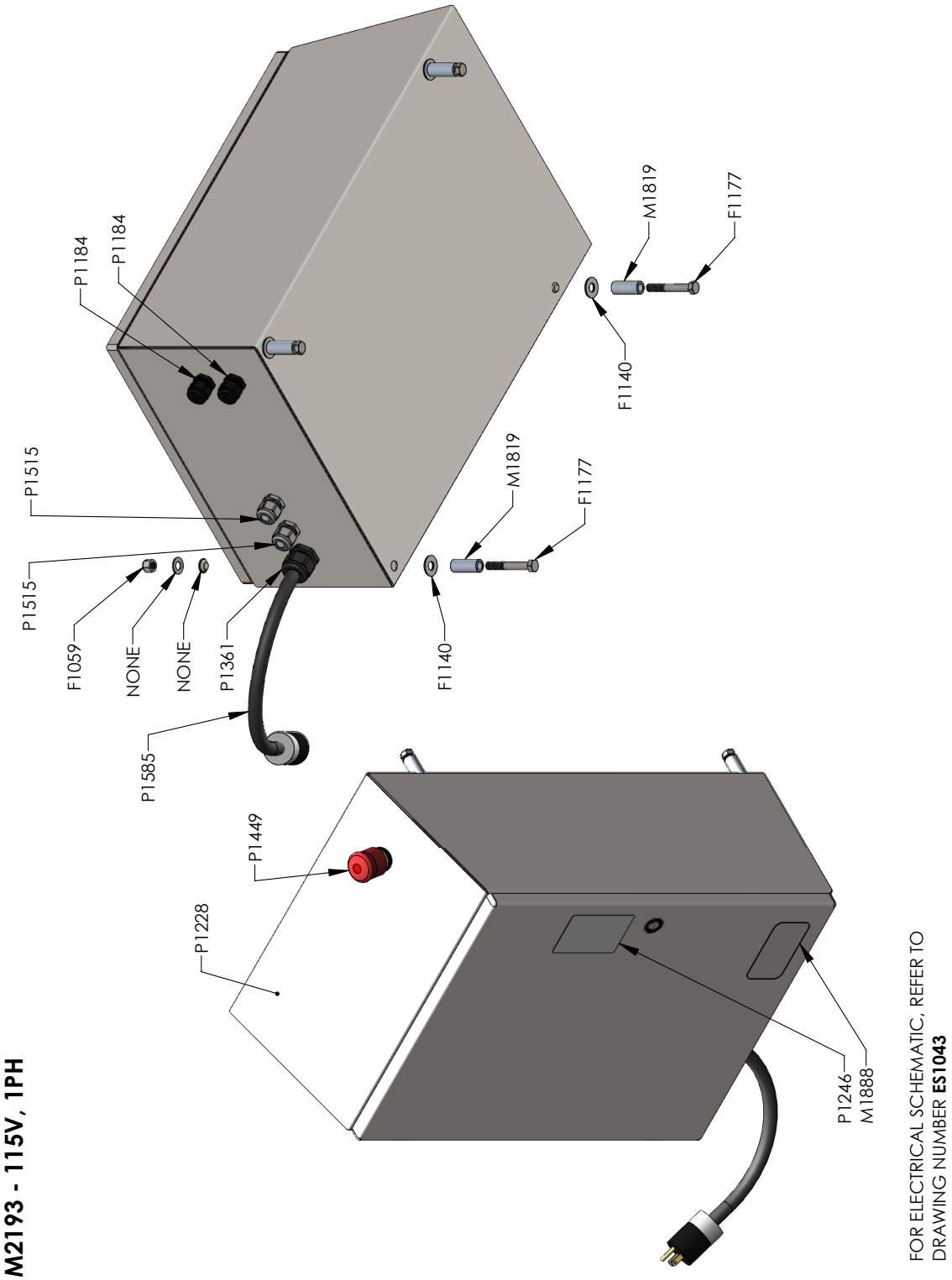


Appendix A - Parts Callout (BLX-900-GEN2)

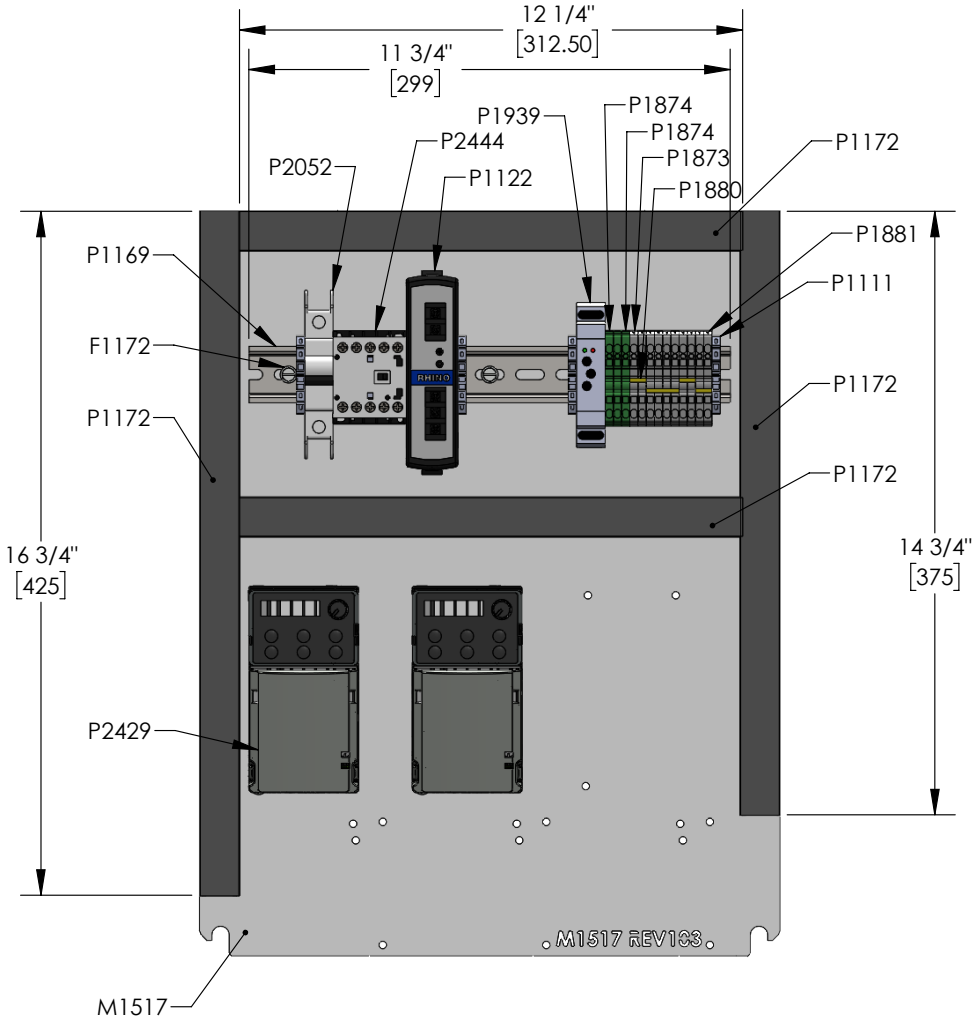
Part No.	Description
F1000	STANDOFF 1/4-20 x 1/2 x 1/2 SS
F1040	BOLT HHC 5/16-18 x 1-1/4 SS
F1047	NUT NYLOCK 1/4-20 SS
F1052	NUT NYLOCK 5/16-18 SS
F1056	WASHER 1/4 SS TYPE A
F1066	NUT NYLOCK 10-32 SS
F1078	WASHER .5 X .88 X .06 UHMW
F1083	BOLT HHC 1/4-20 x 1-1/4 SS
F1085	WASHER FENDER 5/16-18 SS
F1088	BOLT HHC 1/4-20 X 1-3/4 SS
F1126	BOLT HHC 10-32 X 1 SS
F1130	BOLT HHC 5/16-18 X 5/8' SS
F1135	STANDOFF 1/4 X 1/2 X 3/16 SS
F1136	STANDOFF 1/4 X 1/2 X 1 SS
F1139	BOLT SHUTTER 1/4-20 X 1 SS
F1166	BOLT HHC 5/16-18 X 2-1/4' SS
M1134	SOLENOID BRACKET
M1183	DRIVE SHAFT MOTOR-BRUSH WELDMENT
M1237	GRATE LATCH
M1420	BRUSH SUPPORT WELDMENT
M1534	SPACER .313 X .5 X 1.5
M1720	BRUSH BLX HORIZONTAL SOLE
M1746	BLX GEN2 JUG HOOK
M1758	BLX GEN2 GRATE STEPPED HINGE PIN
M1795	BLX FORMED STEP 24 INCH
M1850	BLX-1000 GEN2 SPRAY NOZZLE RISER WELDMENT
M1851	BLX-1000 GEN2 PIPE NIPPLE
M1852	BLX-1000 GEN2 MOTOR COVER
M1892	BLX-800 GEN2 SPRING BALANCER WELDMENT V3
M1894	BLX C-CHANNEL GRATE LIFT PIN GLIDE
M1896	BLX GEN2 GRATE SPRING ASSEMBLY
M1904	BLX GEN2 SPRING BALANCER BEARING ROUND
M1905	BLX GEN2 SPRING BALANCER BEARING SLOTTED
M1981	BLX-900 GEN2 TUB WELDMENT
M1982	BLX-900 GEN2 SPRAY MANIFOLD WELDMENT

Part No.	Description
M1986	BLX-900 GEN2 GRATE V3 WLDMNT
P1005	STERLING SS MOTOR 1/2HP, 1800 RPM, 230/460/3/60, TENV, 56C FOOTLESS
P1006	STERLING GEAR REDUCER 20:1, 56C
P1046	VALVE, SOLENOID, 3/8" SS 24VDC DIN COIL, DEMA 463PS.4D
P1121	Induce Proxy 18mm PP 8mm RN 4-Wire DC N.E./M.C. M12 IQ/D Shielded
P1147	CORD GRIP 1/2 NPT X .170-.450 BLK HEYCO M3231
P1148	CORD GRIP NUT 1/2' NPT BLACK - HEYCO 8463
P1187	SOLENOID CABLE 18MM DIN 24V LED 3M SC18-LS24-3
P1242	TERMINAL, 1/4" RING, 14-16 AWG INS
P1252	PIPE PLUG 1/4" NPT SOCKET HD SS
P1331	1/2" OD POLYETHYLENE TUBING - NATURAL
P1400	CABLE, M12, 4 POLE, 5m (16.48 ft), RT-ANG FEMALE/AXIAL MALE
P1418	QUICK FIT ADAPTER 3/8 NPT X 1/2 TUBE PP
P1511	QUICK FIT STEM ELBOW 1/2' X 1/2'
P1599	METERING TIP, CAPILLARY TUBE
P1769	METERING TIPS, ULTRA LEAN 100-15KU
P1828	WIRE, VFD-MOTOR, 14 AWG, 4-CONDUCTOR, SHIELDED, XLPE/PVC
P1830	PIPE ELBOW 3/8" x 90 304SS
P1903	VENTURI INJECTOR DEMA ROCKET, ORANGE, .070", 1.3GPM@100PSI, SINGLE BARB
P1934	GREASE, ELECTRIC INSULATING .17OZ ONE TIME USE PACK
P1944	NOZZLE, FAN SPRAY, 110 DEGREE, 1/8 MNPT, 304SS, FLOODJET TYPE K, 0.2 GPM @ 10 PSI (1/8KSS-2)
P1945	VENTURI INJECTOR 1/4" SUCTION LINE AND STRAINER
P1946	VENTURI INJECTOR SUCTION WEIGHT CERAMIC FOR 1/4" TUBE

Appendix A - Parts Callout (M2193 : 115V, 1PH)



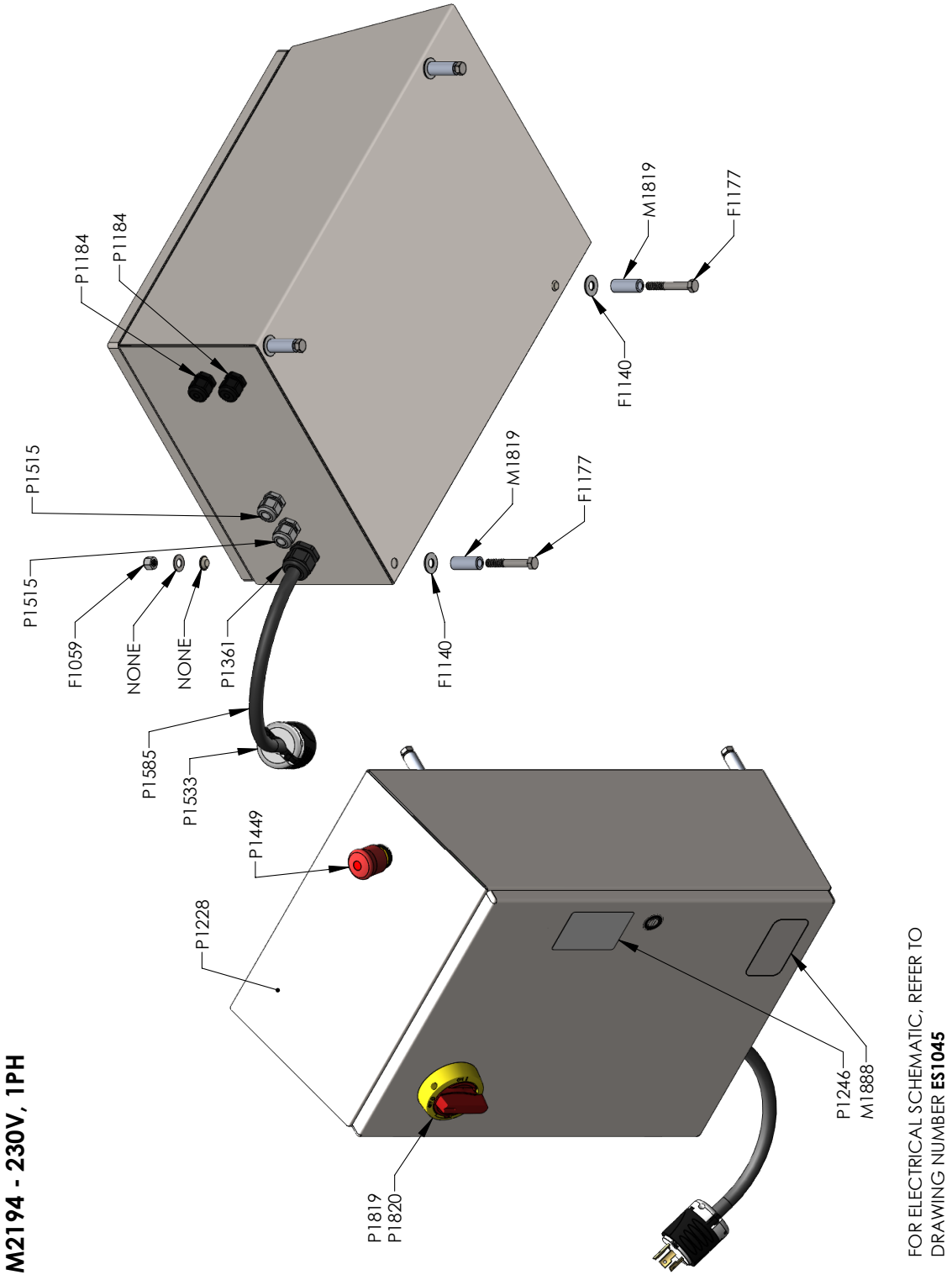
Appendix A - Parts Callout (M2193 : 115V, 1PH)



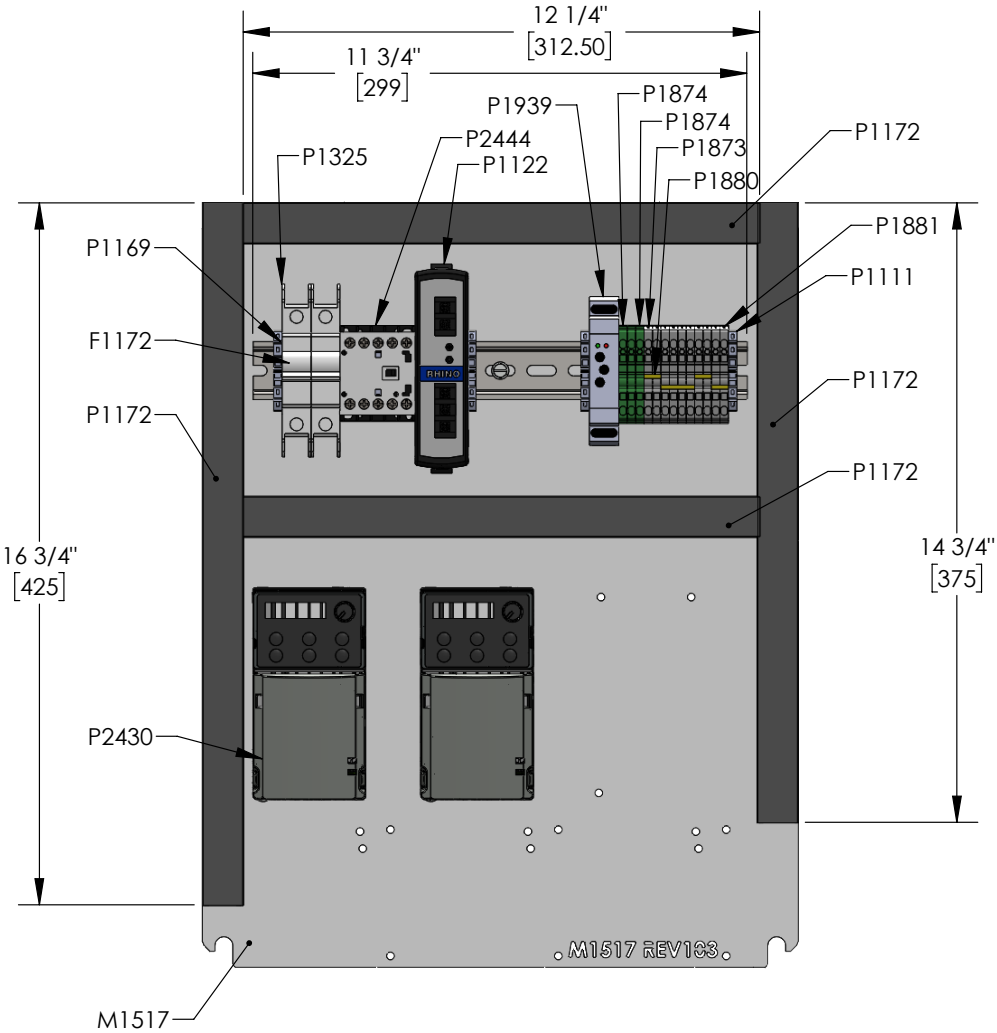
Part No.	Description
F1059	NUT NYLOCK 3/8-16 SS
F1140	WASHER SEALING 3/8 X 1 SS
F1172	SCREW THEAD FORMING 10-32 X 1/2 HEX WASHER HEAD ZINC
F1177	BOLT HHC 3/8-16 X 2-1/2 SS
M1819	SPACER 3/8" X 1-1/2" SS
P1111	END STOP TERMINAL BLOCK
P1122	POWER SUPPLY 24VDC 60W
P1148	CORD GRIP NUT 1/2 NPS NYL
P1169	DIN RAIL 35mm X 300mm LONG
P1172	WIRE DUCT 25X60 X 312mm LONG
P1172	WIRE DUCT 25X60 X 375mm LONG
P1172	WIRE DUCT 25X60 X 425mm LONG
P1184	CORD GRIP 1/2 NPT X .095-.260 BLK
P1200	PLUG NEMA 5-15P

Part No.	Description
P1228	ENCLOSURE HOFFMAN CONCEPT CSD20168SSST
P1246	LABEL DANGER ELECTRICAL
P1361	CORD GRIP 3/4 NPT X .435-.705 BLK
P1363	CORD GRIP NUT 3/4 NPT NYLON
P1449	E-STOP PUSH PULL ILLUMINATED 22mm 2NC
P1515	CORD GRIP PG16 X .260-.545 GREY W/NUT
P1585	WIRE SJOOW 12AWG 4 CONDUCTOR BLACK (0.650 OD) 600V 02726.41T.01
P1873	TERMINAL BLOCK SPRING CLAMP 5.1mm GRAY
P1874	TERMINAL BLOCK SPRING CLAMP 5.1mm GROUND
P1880	TERMINAL JUMPER 5.1mm
P1939	RELAY, TIMER, MULTIFUNCTION 24VDC
P2052	CIRCUIT BREAKER 20A, SINGLE POLE, D-CURVE
P2429	VARIABLE FREQUENCY DRIVE MS300 0.5HP 115-1PH
P2444	IEC CONTACTOR 3P 16A 24VDC 1 NO AUX CONTACTOR

Appendix A - Parts Callout (M2194 : 230V, 1PH)



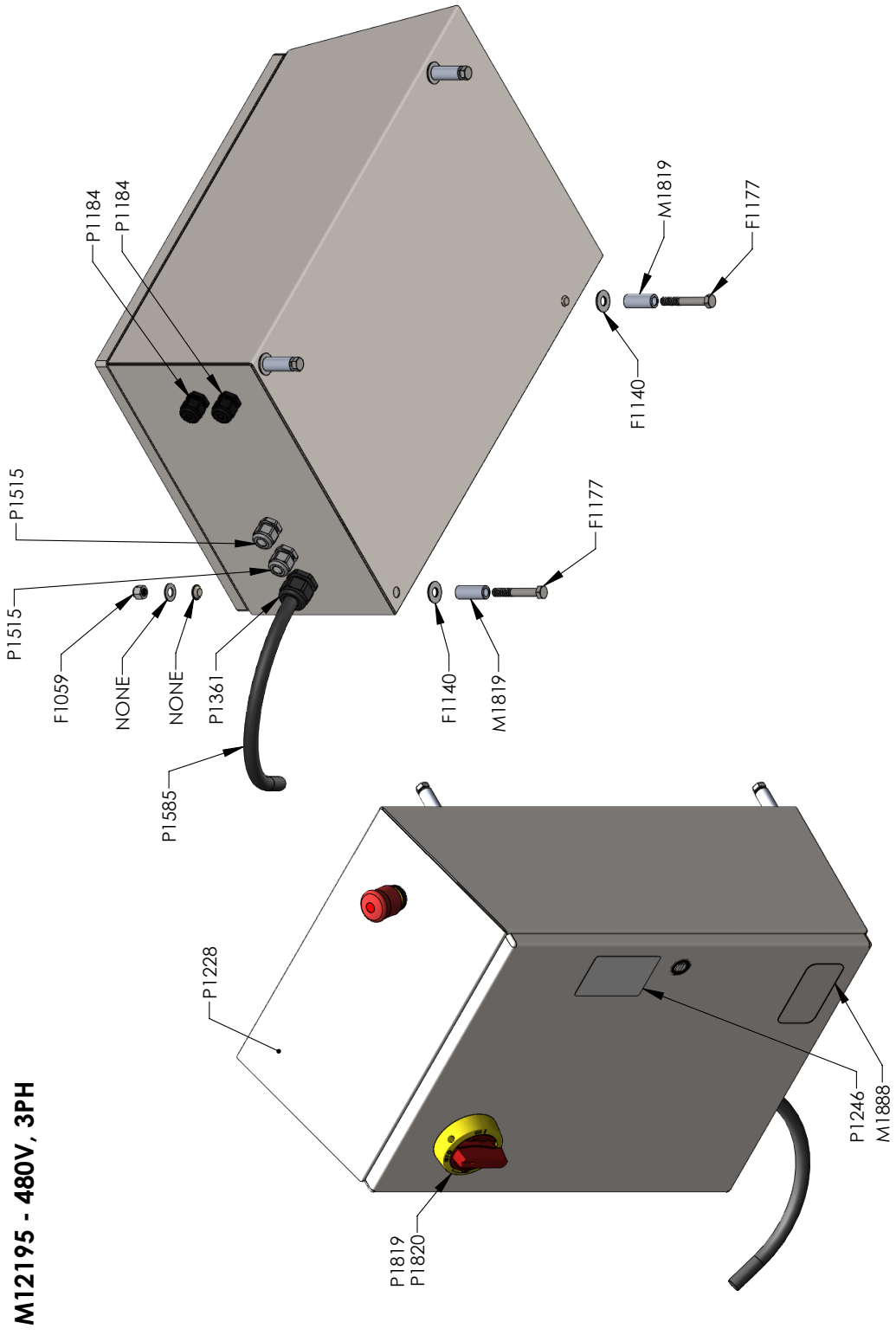
Appendix A - Parts Callout (M2194 : 230V, 1PH)



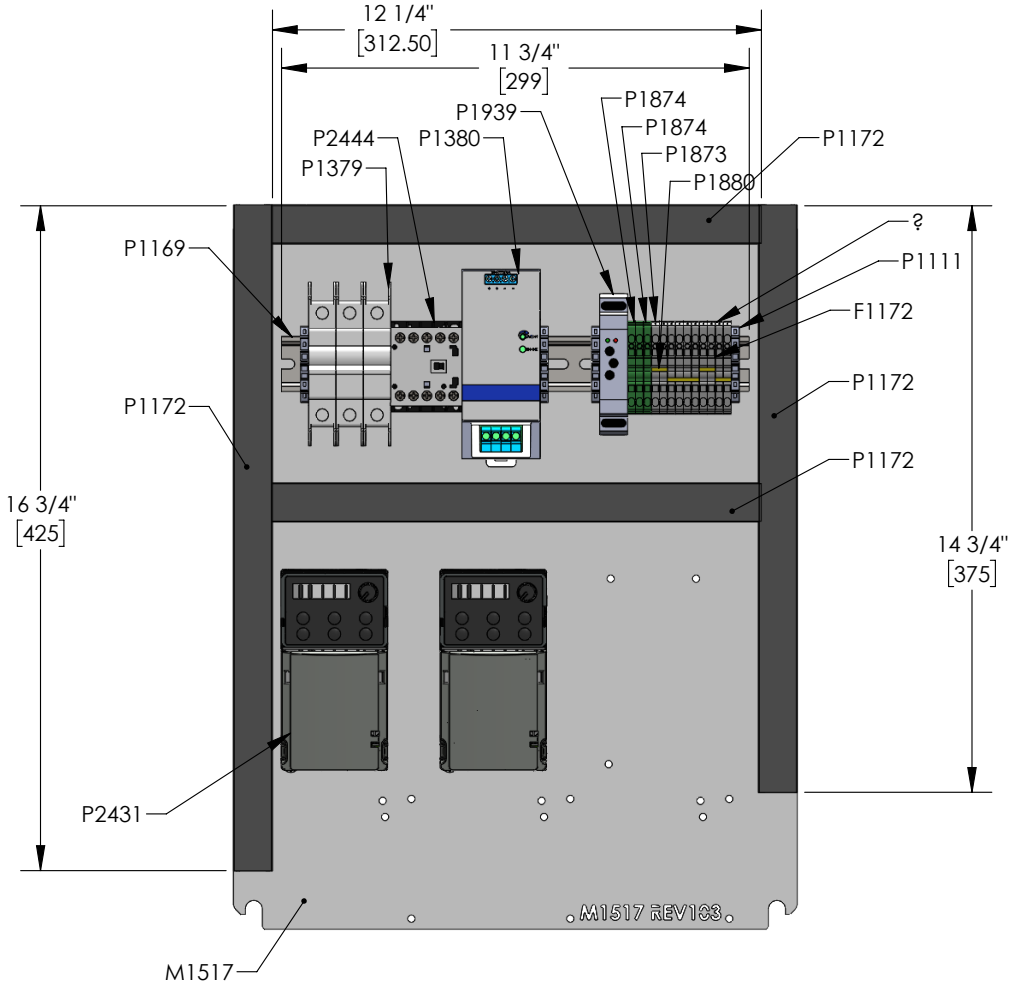
Part No.	Description
F1059	NUT NYLOCK 3/8-16 SS
F1140	WASHER SEALING 3/8 X 1 SS
F1172	SCREW THEAD FORMING 10-32 X 1/2 HEX WASHER HEAD ZINC
F1177	BOLT HHC 3/8-16 X 2-1/2 SS
M1819	SPACER 3/8" X 1-1/2" SS
P1111	END STOP TERMINAL BLOCK
P1122	POWER SUPPLY 24VDC 60W
P1148	CORD GRIP NUT 1/2 NPS NYL
P1169	DIN RAIL 35mm X 300mm LONG
P1172	WIRE DUCT 25X60
P1184	CORD GRIP 1/2 NPT X .095-.260 BLK
P1228	ENCLOSURE HOFFMAN CONCEPT CSD20168SSST
P1246	LABEL DANGER ELECTRICAL
P1325	CIRCUIT BREAKER 13A DOUBLE POLE
P1361	CORD GRIP 3/4 NPT X .435-.705 BLK

Part No.	Description
P1363	CORD GRIP NUT 3/4 NPT NYLON
P1449	E-STOP PUSH PULL ILLUMINATED 22mm 2NC
P1515	CORD GRIP PG16 X .260-.545 GREY W/NUT
P1533	250V 30A L6-30 MALE PLUG
P1585	WIRE SJOOW 12AWG 4 CONDUCTOR BLACK (0.650 OD) 600V 02726.41T.01
P1758	LABEL - UL508 PANEL
P1819	DISCONNECT SWITCH 25A 3-POLE
P1820	DISCONNECT HANDLE KIT RED/YELLOW FOR P1819
P1873	TERMINAL BLOCK SPRING CLAMP 5.1mm GRAY
P1874	TERMINAL BLOCK SPRING CLAMP 5.1mm GROUND
P1880	TERMINAL JUMPER 5.1mm - 10 POSITION CUT TO 2
P1939	RELAY, TIMER, MULTIFUNCTION 24VDC (REPLACES P1115)
P2430	VARIABLE FREQUENCY DRIVE MS300 0.5HP 230-1PH
P2444	IEC CONTACTOR 3P 16A 24VDC 1 NO AUX CONTACTOR

Appendix A - Parts Callout (M2195 : 480V, 3PH)



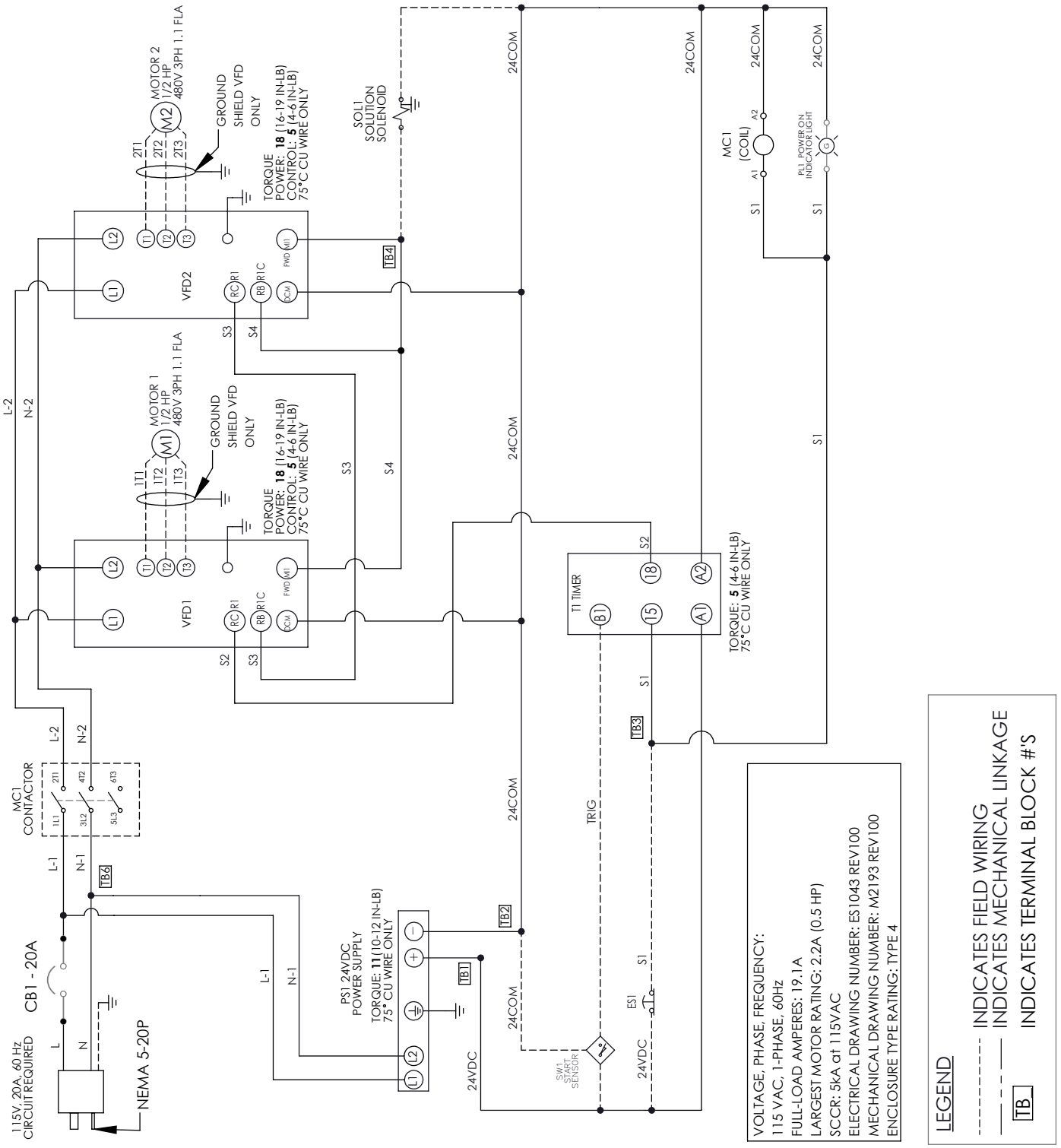
Appendix A - Parts Callout (M2195 : 480V, 3PH)



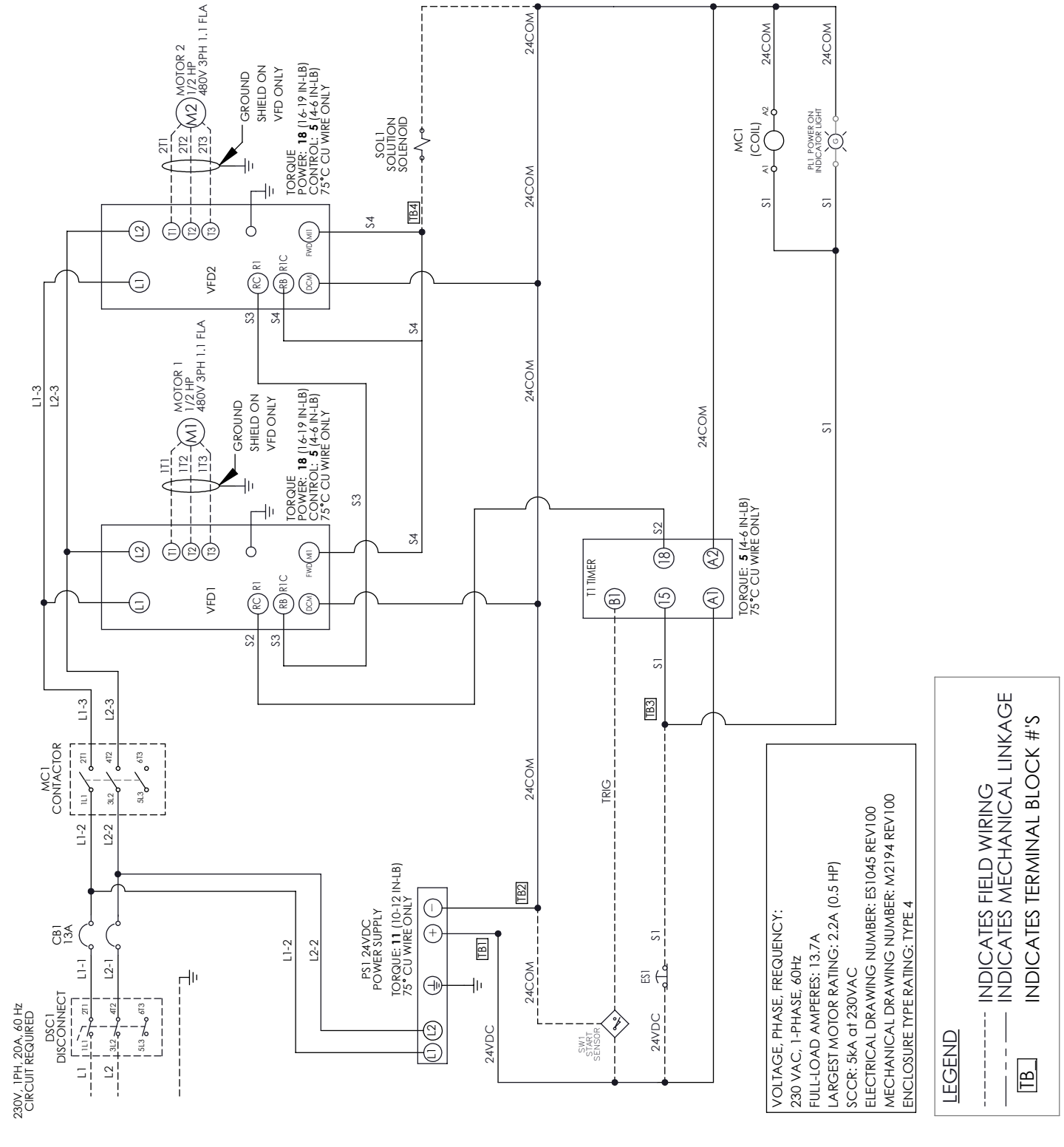
Part No.	Description
F1059	NUT NYLOCK 3/8-16 SS
F1140	WASHER SEALING 3/8 X 1 SS
F1172	SCREW THEAD FORMING 10-32 X 1/2 HEX WASHER HEAD ZINC
F1177	BOLT HHC 3/8-16 X 2-1/2 SS
M1517	BACK PANEL CP2016
M1819	SPACER 3/8" X 1-1/2" SS
P1111	END STOP TERMINAL BLOCK
P1148	CORD GRIP NUT 1/2 NPS NYL
P1169	DIN RAIL 35mm X 300mm LONG
P1172	WIRE DUCT 25X60 X 312mm LONG
P1184	CORD GRIP 1/2 NPT X .095-.260 BLK
P1228	ENCLOSURE HOFFMAN CONCEPT CSD20168SSST
P1246	LABEL DANGER ELECTRICAL
P1361	CORD GRIP 3/4 NPT X .435-.705 BLK

Part No.	Description
P1363	CORD GRIP NUT 3/4 NPT NYLON
P1379	CIRCUIT BREAKER 4A 3 POLE
P1380	POWER SUPPLY 24V, 60W, 480-3PH
P1449	E-STOP PUSH PULL ILLUMINATED 22mm 2NC
P1515	CORD GRIP PG16 X .260-.545 GREY W/NUT
P1585	WIRE SJOOW 12AWG 4 CONDUCTOR BLACK (0.650 OD) 600V 02726.41T.01
P1819	DISCONNECT SWITCH 25A 3-POLE
P1820	DISCONNECT HANDLE KIT RED/YELLOW FOR P1819
P1873	TERMINAL BLOCK SPRING CLAMP 5.1mm GRAY
P1874	TERMINAL BLOCK SPRING CLAMP 5.1mm GROUND
P1880	TERMINAL JUMPER 5.1mm
P1939	RELAY, TIMER, MULTIFUNCTION 24VDC
P2431	VARIABLE FREQUENCY DRIVE MS300 0.5HP 480-3PH
P2444	IEC CONTACTOR 3P 16A 24VDC 1 NO AUX CONTACTOR

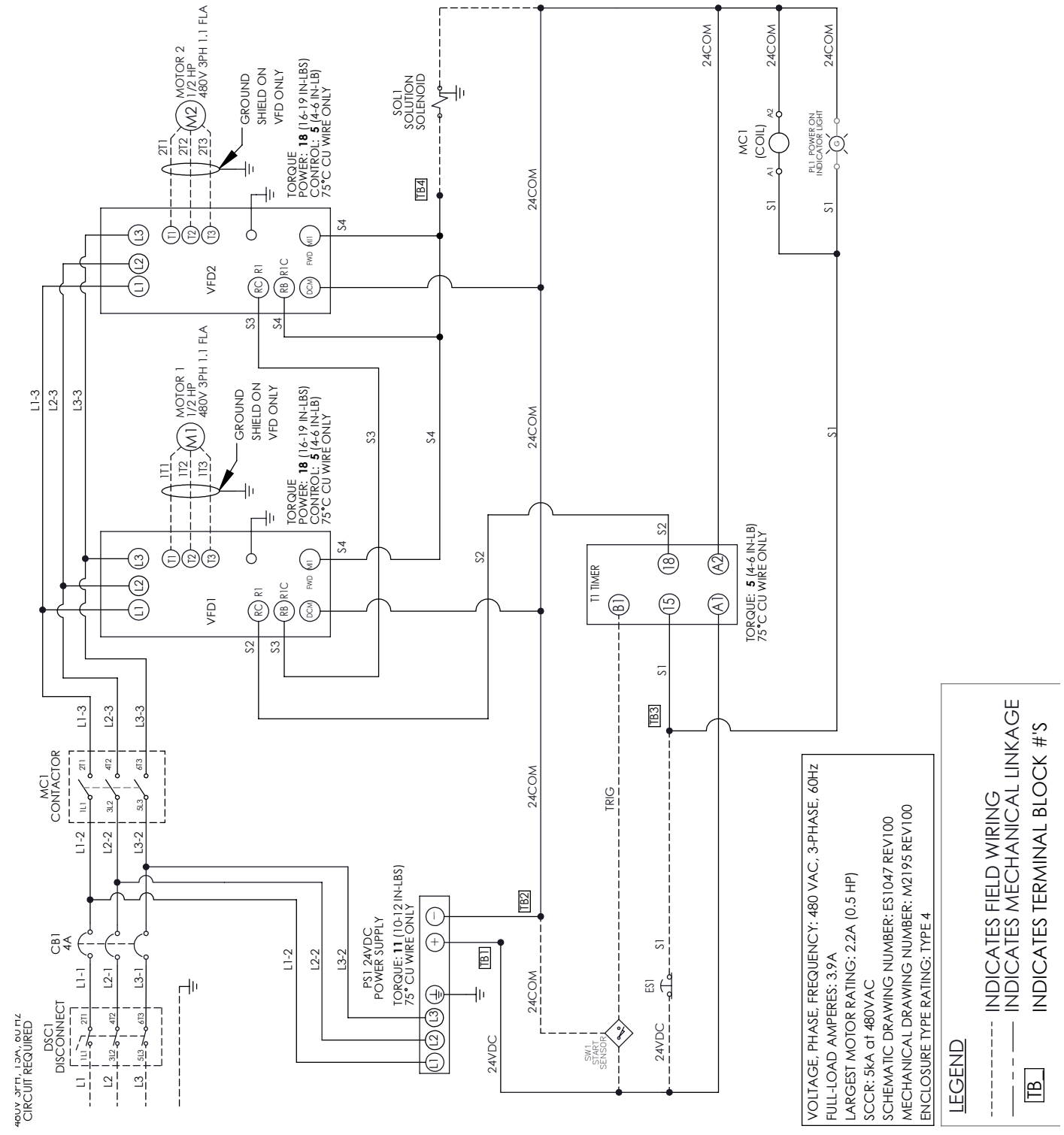
Appendix B - Electrical Schematic (M2193 : 115V, 1PH)



Appendix B - Electrical Schematic (M2194 : 230V, 1PH)



Appendix B - Electrical Schematic (M2195 : 480V, 3PH)



Notes:

Appendix C - Non-Dilution Flojet

The following instructions overview installation, set-up, and general use for BLX boot scrubbers equipped with a Non-Dilution Flojet kit, for use with sanitizer solutions that do not require dilution. Follow standard instructions for other sections (i.e. cleaning, brush removal, motor adjustments, etc.)

Physical Set Up:

1. Set unit in desired location.

   NOTE: To move the unit use a pallet jack or a hi-lo to lift from the bottom or using the handrails. Pad the forks to protect the finish.

2. Aspects to consider when deciding on placement:
   - Clearance for entering and exiting
   - Location of drain
   - Emergency exit paths or egress in case of emergency
   - Head room for personnel while using the unit
   - Access to control box
   - Connections for air and electricity
3. Use a level to make sure the unit is stable and leveled at each end of the tub [Figure 26.1].
4. Connect unit to electrical supply.

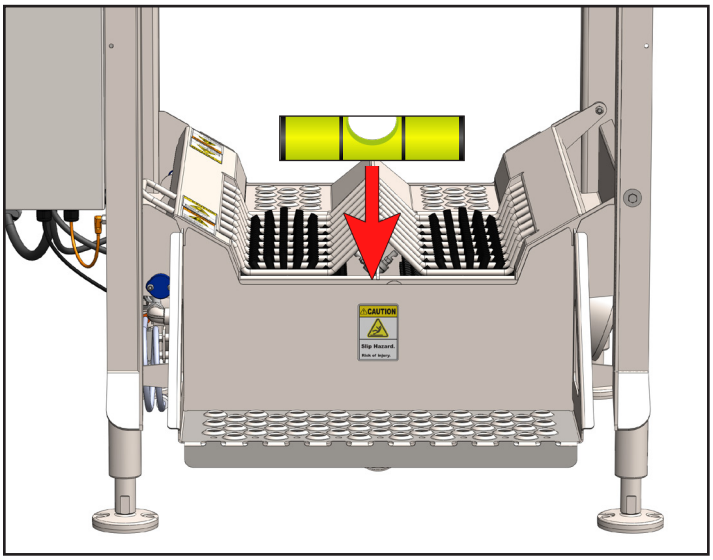


Fig. 26.1: Level and stabilize unit using level

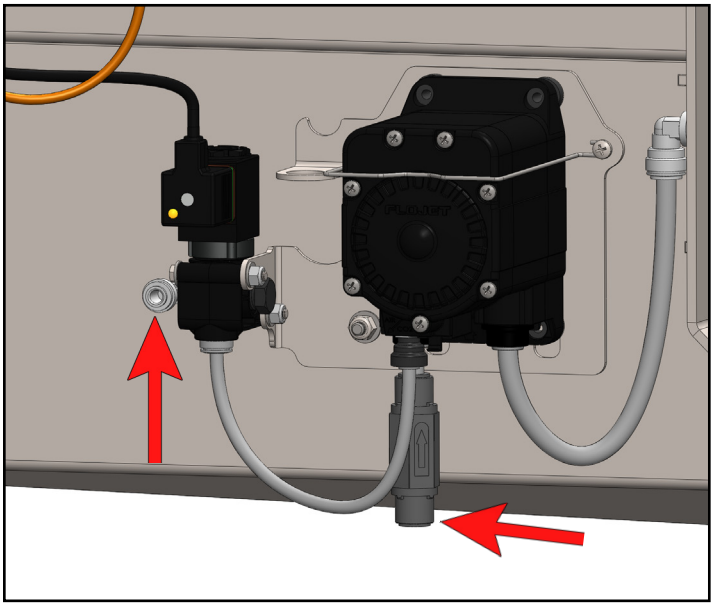


Fig. 26.2: Air and solution inlets

Plumbing Connections:

1. Connect compressed air (40 psi min.) to solenoid valve quick fitting inlet using 3/8" LDPE tubing or similar [Figure 26.2].

   NOTE: Compressed air should be regulated at 40 psi. A stand-alone air regulator is included with NDF kits for this purpose.

2. Connect solution source to check valve of pump inlet using 3/8" clear LDPE tubing (included) [Figure 26.2].

Appendix C - Non-Dilution Flojet

General Use

1. Step onto the walkway grate.
2. The walkway grate will depress, activating a proximity sensor which starts the brush rotation and triggers the solenoid to activate the pump.

   NOTE: The pump will spray solution for a specified amount of time and will stop.

3. Walk through the unit, allowing the rotating brushes to clean by moving the boot to make contact with hard to reach areas.
4. One second after the user steps off of the walkway grate the brushes will stop.

Altering Spray Amount

1. Power down the unit and open the electrical enclosure.

   ⚠ DANGER:
   Only authorized personnel should open the control box.

2. Locate the timer relay for the solenoid valve (see electrical schematic) and adjust the value as necessary
   - **Default Function:** Wu (Single Shot)
   - **Defaul Time Range:** 1 sec.

Air Pressure	Spray Time	Consumption
40 psi	1.0/s	0.66/oz
40 psi	0.8/s	0.61/oz
40 psi	0.6/s	0.48/oz

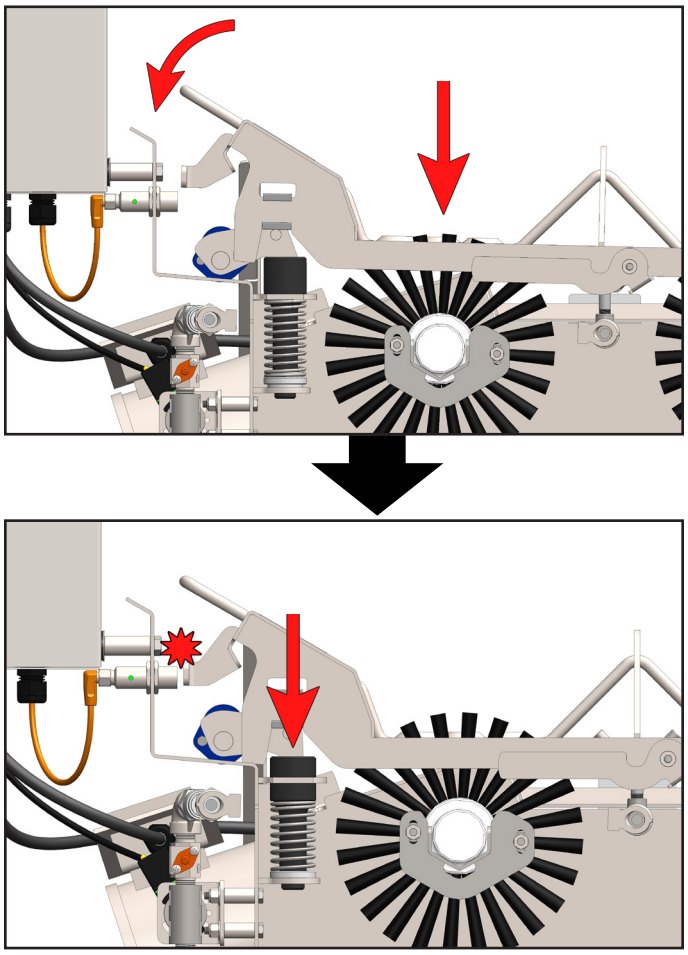


Fig. 27.1: Grate triggering Prox Switch (some components hidden for clarity)

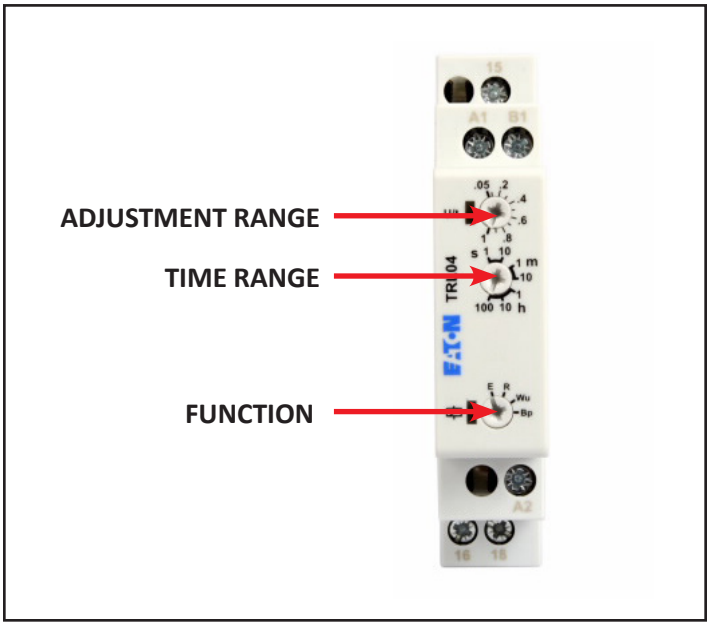
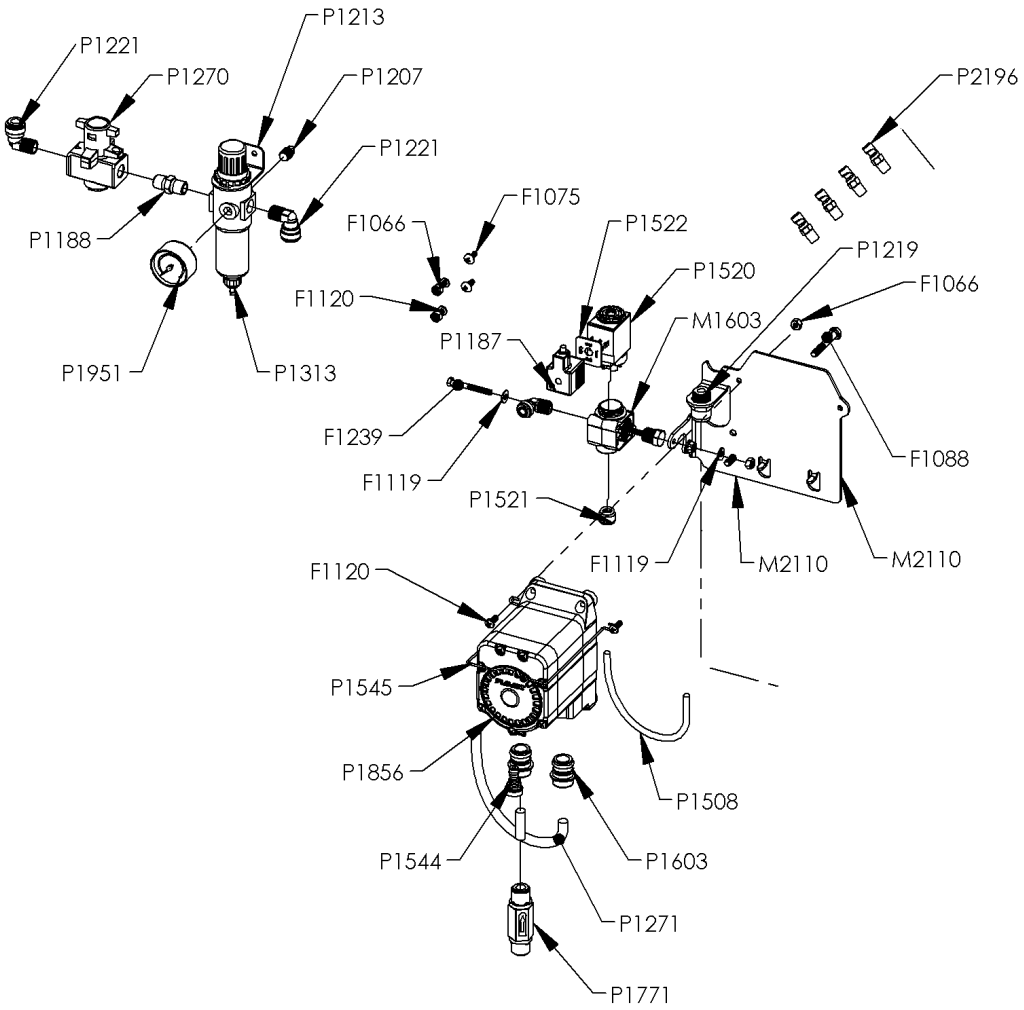
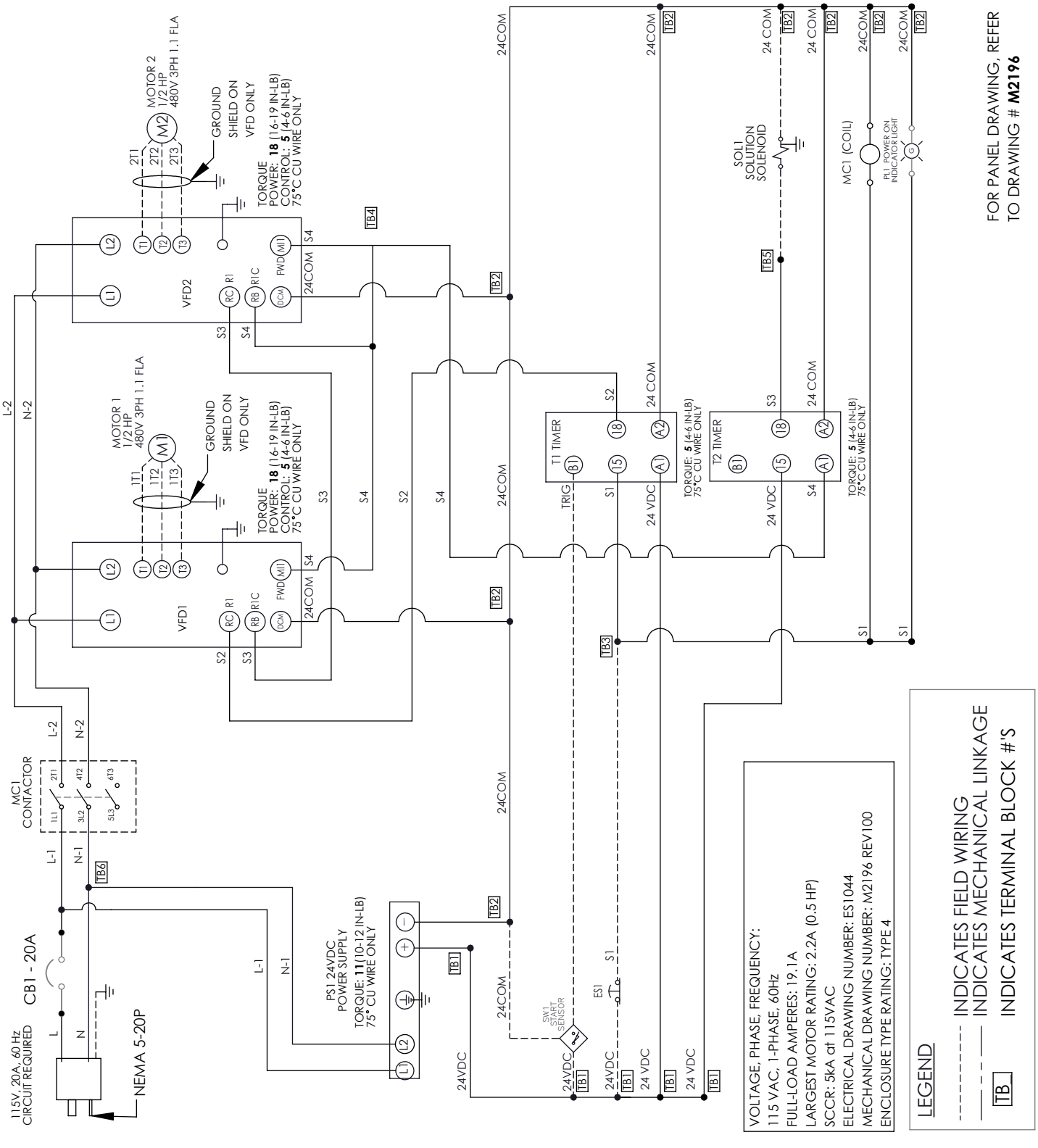


Fig. 27.2: Eaton TRL04 Setting Identification

Appendix D - Non-Dilution Flojet (Parts Callout)



Part No.	Description
F1066	NUT NYLOCK 10-32 SS
F1075	SCREW SELF TAP 10-16 X 1/2 SS
F1088	BOLT HHC 1/4-20 X 1-3/4 SS
F1119	WASHER #10 SS TYPE A
F1120	SCREW MACHINE 10-32 X 1/2 SS PHILLIPS PAN HD
F1239	BOLT HHC 10-32 x 1-3/4" SS
M1603	VALVE BODY 3-WAY
M2110	BLX 800-900-1000 NDF BRACKET SS
P1187	SOLENOID CABLE 18mm DIN 24V
P1188	PIPE HEX NIPPLE 1/4 SS
P1207	PIPE PLUG 1/8 SQUARE SS
P1213	MOUNTING BRACKET A33-82
P1219	QUICK FIT 3/8 NPT X 3/8 TUBE
P1270	SHUTOFF/LOCKOUT VALVE 1/4 NPT
P1271	3/8" OD POLYETHYLENE TUBING - NATURAL
P1313	REGULATOR 1/4"
P1360	QUICK FIT ELBOW 1/4 NPT X 1/4" TUBE

Part No.	Description
P1494	PIPE PLUG 1/4" HEX PP
P1508	1/4" OD POLYETHYLENE TUBING - NATURAL
P1520	VALVE COMPONENT KIT 3-WAY 3mm
P1521	PUSH CONNECT CARTRIDGE 3/8" PP2812W
P1522	GASKET DIN COIL FORM A EPDM
P1544	QUICK FIT AIR INLET 1/4" FLOWJET P56
P1545	CLIP P56 PUMP
P1603	QUICK DISCONNECT INLET/OUTLET FOR FLOJET PUMPS 3/8"
P1771	CHECK VALVE, 3/8 QUICK FIT X 3/8 QUICK FIT
P1856	FLOJET P56 PUMP SANTO
P1951	GAUGE, PRESSURE, 1-1/2" 0-100psi 1/8 NPT SS CENTER BACK MOUNT
P2196	NOZZLE, FAN SPRAY, 110 DEGREE, 1/8 MNPT, 304SS, FLOODJET TYPE K, 0.03 GPM

Appendix D - Non-Dilution Flojet (Electrical Schematic)