

## FORWARD

Blastrac is pleased that you have selected this Blast Cleaning System for your surface preparation requirements. This environmentally safe, closed-cycle, surface preparation machine has been designed and built for abrasive blast cleaning of horizontal surfaces.

This manual has been prepared to assist the operator and the maintenance personnel in understanding the machine so that it may be operated in the most efficient manner and maintained in the best condition. Therefore, it is necessary that all personnel responsible for the operation and maintenance of the machine read the manual thoroughly. By following the instructions in this manual, this system can be easily and effectively operated, serviced and maintained by personnel assisted by a brief period of familiarization and training from a Blastrac® technician.

Before attempting to operate, service, or maintain the machine, the personnel should thoroughly familiarize themselves with the physical makeup of the machine, be familiar with the major systems of the machine, and have an understanding of its operation.

The operating and maintenance personnel must obey all the warnings and safety precautions posted on the side of the machine and stated throughout this manual. Serious injury to personnel or severe damage to the equipment may result if the warnings and precautions are not followed, or through careless handling of this equipment.

Initial operation and maintenance must be done cautiously. Extreme care should be taken when activating any control devices until the response of the machine and its various components are clearly understood.

If you have any questions or problems in regard to the operation or capabilities of this Blastrac machine, please contact:

Blastrac  
13201 North Santa Fe  
Oklahoma City, OK 73114  
405/478-3440  
800/256-3440

or your nearest Service Center.

## **INTRODUCTION**

This manual has been prepared to assist the operator and maintenance personnel in understanding the machine so that it may be operated in the safest and most efficient manner and maintained in the best condition. Therefore, it is necessary that all personnel responsible for the operation and maintenance of the machine read and understand the manual.

Before attempting to operate service or maintain the machine, the personnel should thoroughly familiarize themselves with the physical make-up of the machine. They should be familiar with the major components of the machine and have a general understanding of overall operations.

The operating and maintenance personnel must obey all the warnings and safety precautions posted on the machine and stated throughout this manual. Serious injury to personnel or severe damage to the equipment may result if the warnings and precautions are not followed.

You will be notified of any changes that occur after this manual is printed. We will send you manual revisions that should be inserted in the manual in accordance with instructions that will be forwarded with them.

### **Receipt of Machine**

Examine the shipment carefully for possible damage that might have occurred while in transit. If any damage is noted, notify the transportation carrier immediately and advise Blastrac.

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## BLASTRAC WARRANTY POLICY

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This document is to be used as a guide in determining warranty policies and procedures for BLASTRAC® products. It is to be used in determining whether a warranty is justified and also as a procedural guide in completing a BLASTRAC Warranty Claim form.

### **Warranty Responsibility:**

The distributor or the end user **must** prepare a Machine Warranty Information Card when the machine is delivered. Failure to comply will make any and all warranties on this equipment null and void. Credit for warranty repairs will be given only after receipt of the WARRANTY CLAIM FORM, properly completed with all the required details. Submittal details are described later in this document.

### **Warranty Policy:**

1. Blastrac warrants its products against defects in material and workmanship under normal and proper use for a period of one hundred and eighty (180) days from the date of delivery; in the case of Rental Fleet Machines, date of assignment to Rental Fleet. Such warranty is extended only to the buyer who purchases the equipment directly from Blastrac or its authorized distributor. This warranty does not include expendable parts such as, but not limited to, blades, blast wheel, wear plates, liners and seals.
2. The obligation under this warranty is strictly limited to the replacement or repair, at Blastrac's option, of machines and does not include the cost of transportation, loss of operating time, or normal maintenance services.
3. This warranty does not apply to failure occurring as a result of abuse, misuse, negligence, corrosion, erosion, normal wear and tear, alterations or modifications made to the machine without express written consent of Blastrac.
4. Warranty request must be submitted in writing within thirty (30) days after failure.
5. Written authorization to return merchandise under warranty must first be obtained from Blastrac.

## **Warranty Policy (Continued)**

6. Blastrac reserves the right to inspect and make the final decision on any merchandise returned under warranty.
7. Blastrac offers no warranty with respect to accessories, including but not limited to, engines, motors, batteries, tires and any other parts not manufactured by us but which the original manufacturer warrants.
8. Blastrac reserves the right to make product changes or improvements without prior notice and without imposing any obligation upon itself to install the same on its products previously sold.
9. The above warranty conditions can only be altered by Blastrac. Blastrac must confirm alterations in writing for each specific transaction.
10. Blastrac reserves the right to establish specific warranty terms for used or demo machines on an individual transaction basis. Invoices covering such merchandise will clearly state the provisions of the applicable warranty for each specific transaction.
11. WE DO NOT AUTHORIZE ANY PERSON, REPRESENTATIVE OR SERVICE OR SALES OUTFIT TO MAKE ANY OTHER WARRANTY OR TO ASSUME FOR US ANY LIABILITY IN CONNECTION WITH THE SALE OF OUR PRODUCTS OTHER THAN THOSE CONTAINED HEREIN.
12. UNDER NO CIRCUMSTANCES SHALL BLASTRAC BE LIABLE TO CUSTOMER OR ANY OTHER PERSON FOR ANY DIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF ANY WARRANTY OR FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER, INCLUDING WITHOUT LIMITATIONS, DAMAGES FOR ANY LOSS OF GOODWILL, WORK STOPPAGE, OR ANY AND ALL OTHER COMMERCIAL DAMAGES OR LOSSES.
13. BLASTRAC MAKES NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE BLASTRAC PRODUCTS SOLD PURSUANT THERETO.



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## 1.0 Safety Instructions

Do Not operate or perform maintenance on this equipment without reading, understanding and complying with these Safety Instructions.

The Blastrac Operating Instructions have been specifically prepared for operating and maintenance personnel working with the 4-54II Dust Collector. The information in this manual is intended to provide an understanding of the equipment to minimize safety risks and maximize performance.

All operating and maintenance personnel must observe all warnings and precautions that are listed in this manual and posted on the 4-54II Dust Collector. **All safety and warning labels posted on the machine must be followed** as well as the safety program instituted by your individual management.

A thorough understanding of your Blastrac machine will help ensure that the machine can be operated efficiently with minimal safety risks. No instructions, written or verbal, can be effective without the use of sound judgment and good work practices in the operation and maintenance of the equipment. Listed below are some of the practices that should always be observed.

### **WARNING**

**Do Not operate or perform maintenance on this equipment without wearing appropriate respiratory protection.**

Wear appropriate respiratory protection when using or servicing the machine. Breathable (respirable) silica dust may be generated by use of this product and can cause severe and permanent lung damage, cancer, and other serious diseases. Do not breathe the dust. Do not rely on your sight or smell to determine if silica dust is in the air. Silica dust may be in the air without a visible dust cloud. If air monitoring equipment for silica is not provided by your employer at your worksite, consult your employer and OSHA regarding the appropriate respiratory protection or permissible alternate protection methods such as air monitoring and warning equipment.

**Do Not operate this machine without all guards in place.**

**Maintain all guards in place** - Blastrac machines are equipped with guards or coverings for parts that may be hazardous.

**Do Not operate this equipment without wearing appropriate personal protective equipment for your eyes, ears and feet.**

All personnel in the immediate work area **must wear OSHA approved safety glasses with side shields and OSHA approved hearing protection** whenever the dust collector and surface preparation equipment is running. Protective clothing is also recommended. Long sleeve shirts and safety shoes should be worn and loose clothing should be avoided.

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## 1.1 Safety – Mechanical

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**Do Not perform maintenance without following the Lock Out/Tag Out procedure to eliminate all energy sources.**

Before performing any type of maintenance on your Blastrac equipment, be sure that all moving parts have completely stopped. Rotating parts, for example, may continue to rotate for a period of time once it has been deactivated. Follow lock-out/tag-out procedures to be sure that the power has been disconnected and will remain disconnected until all maintenance has been completed.

- Assure every power source that can produce mechanical movement has been deactivated and locked in the off position.
- Assure all potential energy sources have been minimized. (Example: Move the machine to level ground before performing any maintenance so machine cannot move by gravitational force.)
- Assure loose or freely moveable parts of the machine have been secured against accidental movement.

All drive guards must be kept in place and in good condition except during maintenance or when repair work is being performed. Once maintenance or repair work is complete, be sure all guards are correctly remounted.

Stay clear of the blower outlet and never open the top lid of the dust collector unless the machine is locked and tagged out.

OSHA approved safety glasses with side shields and OSHA approved hearing protection must be worn when working with or near equipment in use. Gloves, where appropriate, can be worn for added protection.

Loose fitting clothing and gloves should not be worn when working near belts, chains, sprockets, shafts and other moveable components.

The surface preparation equipment and all areas around the machine should be kept clean.

**DO NOT operate equipment that has been damaged or is in any condition that may cause injury to personnel.**

**DO comply with all safety and danger signs posted on the machine and all information posted where the machine is being operated.**

**Do not operate Blastrac machinery in the rain or when heavy moisture is present.**

Sticky, tar-related and rubber surfaces should be avoided when using Blastrac machinery. Always empty the dust collector hopper before transporting the equipment.

## 1.2 Safety - Electrical

**DO NOT open enclosure doors before disconnecting all power.**

**CAUTION** - Line terminals may be alive when main switch is in "OFF" position. Disconnect all power before opening enclosure doors.

**WARNING** - **DO NOT** operate the equipment with the electrical panel door(s) open.

**WARNING** - The opening of any of the branch circuit protective devices may be an indication that a fault current has been interrupted. To ensure continued protection against fire or electric shock, current carrying parts and other components of the combination controller should be examined and replaced if damaged. If burnout of the current element of an overload relay occurs, the complete overload relay must be replaced.

Some overload devices in the control panel have an adjustable feature. Assure these settings comply with settings provided for each device in the electrical schematics.

**DO NOT bypass overcurrent devices provided in this equipment.**

Never use oversized fuses or bypass any fuses to operate the machinery. Always refer to the electrical drawings provided for the individual machines for proper size and type of overcurrent protection and fuses.



**DO NOT SUBSTITUTE ANY OF THE ELECTRICAL COMPONENTS.**

When replacing electrical components, care should be taken to use the exact component that was originally supplied with the machine. These parts are listed in the electrical section of this manual. The electrical components in these systems have been coordinated for optimum protection of personnel and equipment –

**DO NOT connect or disconnect power cables with voltage present or while under load.**

**Disconnect all power connections** and observe lock out/ tag out procedures before attempting maintenance or repair of any electrical or mechanical components.

Avoid all contact with rotating motor parts, drives or driven components.

Before energizing the equipment, check the condition of all power cables. While extra hard usage Type W cable is provided with this equipment, damage can occur during equipment transit. All cabling should be checked for cuts and worn condition prior to connection to the power source.

Cable strain relief devices are provided for all power cabling. Assure that these strain relief devices are secured to the frame of the equipment with the hardware provided prior to energizing the equipment.

**DO NOT start the equipment without first verifying it is connected to the proper power source for voltage, frequency and phase.**

While safeguards have been provided in this equipment to protect operating personnel and equipment, **ALWAYS CHECK** that the proper power source is connected (voltage, frequency and phase). Check the motors for proper rotation once the power source has been verified. Sustained improper motor rotation can damage machine components.

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## 1.4 Safety - Dust Hopper and Ventilation Tips

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**DO NOT operate collector with excessive dust in the hoppers.**

All Blastrac surface preparation equipment must be properly ventilated to be environmentally effective. This benefits the operator, machine efficiency and **contributes significantly to better wear and less maintenance.**

The level of dust in the dust hopper should be kept to a minimum. The importance of checking the dust level during normal working conditions cannot be over-stressed. Doing so keeps the surface preparation equipment internal components as clean as possible, thereby eliminating the greatest cause of wear to the internal components of the machine.

**Do determine if the dust being collected is hazardous and comply with all applicable local, state and federal regulations concerning protection against explosion, fire, respirable dust and any other risk factor related to the dust product being collected.**

**Cleaning the dust hopper at the end of each working day or shift is also very important. Many types of dust (dependent on the surface being cleaned) have the potential to easily ignite when left stored. The hazards of fires and explosions are minimized when the dust is removed as recommended.**

Wear appropriate respiratory protection when using or servicing the machine. Breathable (respirable) silica dust may be generated by use of this product and can cause severe and permanent lung damage, cancer, and other serious diseases. Do not breathe the dust. Do not rely on your sight or smell to determine if silica dust is in the air. Silica dust may be in the air without a visible dust cloud. If air monitoring equipment for silica is not provided by your employer at your worksite, consult your employer and OSHA regarding the appropriate respiratory protection or permissible alternate protection methods such as air monitoring and warning equipment.

## 2.0 Owner/Operator Responsibilities

1. The owner/operator shall provide site electrical power and observe operation ampere maximums according to the following chart.

3-Phase/60 Hertz Site Power Requirements		
Total FLA	LARGEST MOTOR FLA @ SUPPLY VOLTAGE	
12.3 AMPS	7.6 AMPS	208/230 V

2. The owner/operator shall only use personnel who have been trained by a Blastrac Technician for the operation and maintenance of Blastrac equipment.

3. The operator shall provide the necessary consumable components for the surface preparation equipment in accordance with the recommendations of a Blastrac technician so that the machine will operate at maximum efficiency.
4. The operator shall be responsible for the observance of all safety precautions expressed in this manual.
5. The operator shall perform all maintenance and basic repair functions as stated and described in this manual.
6. The operator shall dispose of all dust collector refuse in accordance with the appropriate state and federal regulations.
7. The operator shall provide the minimum following tools and accessories:

Hammer	Screwdrivers
Wrench Set	VOM (meter)
5/16" Allen Wrench	Magnetic Broom

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### 3.0 Description and Function - General

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The 4-54II Dust Collector is normally attached to the surface preparation equipment with 50 feet of 3-inch diameter flexible exhaust hose. This dust collector is designed to be able to fit through a 34-inch door opening and is mounted on a mobile chassis. During actual operation, the surface preparation equipment cleans in a radial area around the dust collector. Once an area is cleaned, the entire system is moved to an adjacent area to repeat the process. During some applications, the dust collector may be positioned in an adjacent room and connected with a longer hose. This procedure is usually done on steel surfaces where less dust and contaminants are being removed. Blastrac does not recommend using more than 50 feet of hose on concrete surfaces. Consult with your Blastrac representative if you have a particular application that requires a longer exhaust hose. The 4-54II Dust Collector is comprised of the following elements:

- Filter Chamber
- Dust Bin
- Blower
- Minihelic Gauge
- Pulse / Pressure System
- Chassis
- Electrical Control Panel

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### 3.1 Description and Function - Filter Chamber

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The central part of the dust collector is the filter chamber. Dust laden air enters the chamber from the surface preparation equipment through the exhaust hose and into the vent hose connection located at the bottom left from the control panel. The dirty air passes through a plenum and flows through an array of four vertically mounted, specially designed filter cartridges. Dust is captured on the surface of these filters allowing clean air to pass to the clean air portion of the dust collector where it exhausts to the open atmosphere.

The dust that was trapped on the external surface of the filters is periodically removed by pulsing the filters with an internally supplied burst of compressed air. This momentary pulse of air allows the dust to fall into a hopper at the bottom of the filter chamber. Two filters are pulsed (in sequence) at a time, determined by a timer board

located in the control panel. This timer board is usually set to pulse a two filter bank every ten seconds and allows the pressurized air reservoir to drop about 30 PSI during

### 3.1 Description and Function - Filter Chamber Cont'd

each pulse. The timer board determines the time between pulses and the length of each pulse. Venturi valves are located above each filter for maximum filter cleaning efficiency.

### 3.2 Description and Function - Dust Bin

Once the dust falls to the bottom of the chamber, it collects in a special disposal bin that can be removed. The dust collector must be turned off before removing the dust bin from the machine for dust disposal. **Care should be taken to ensure that the dust bin does not overflow. Filter damage can occur if the dust level exceeds the top of the dust bin.**

The dust bin is equipped with wheels and lifting handles to assist when disposing of the dust. To release the dust bin, pull down on the mechanism release bar. **Care should be taken when loosening the clamps. A full dust bin can hold approximately 154 pounds of material.**

### 3.3 Description and Function - Blower

The blower (exhaust fan) is mounted on top of the dust collector chassis and is powered by a two horsepower electric motor. The blower moves approximately 400 cubic feet of air per minute at peak efficiency.

### 3.4 Description and Function - Minihelic Gauge

A gauge is mounted on the electric control panel that measures the differential pressure across the filters. As the filters age and become saturated, the reading on this gauge will increase. During normal operation, this gauge should read between zero and four inches. A consistent reading between four and six inches signifies that the filters should

be changed soon. A reading of more than six indicates that the filters need to be changed immediately.

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### 3.5 Description and Function - Pulse Pressure System

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A direct driven, 3/4 horsepower air compressor with external pressure regulation is mounted beneath the control panel on the dust collector. The pressure of this system is determined by the setting of the unloader valve located on the pressure side of the compressor. Compressed air is delivered to an air reservoir located inside the dust collector's clean air compartment. Two Goyen (diaphragm) valves are located above the air reservoir and are activated by a timer board located inside the control panel. The timer board actuates one of two sequentially operated pilot solenoids located on the left side of the control enclosure.

These pilot solenoid valves in turn release the pressure held by the Goyen valves, allowing a pulse of air to be directed downward through the Venturi ports to pulse the filter cartridges. This air pulse cleans the filters sequentially as described in the filter chamber paragraph. The pressure setting on this system is set at a maximum pressure of 80 PSI. If the pressure goes above 125 PSI, an in-line pressure safety valve will open to protect the pressure components.

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### 3.6 Description and Function - Chassis

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The entire dust collector is mounted on a mobile chassis resting on four castors. Two swivel castors are mounted beneath the air inlet for ease in maneuverability and the opposite castors are rigid. The upper frame is equipped with one lifting eye and a bar handle to help raise and lower the machine for transportation.

NOTE: The dust collector is not designed for vehicle towing or movement on roads.

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### 3.7 Description and Function - Electrical Control Panel

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The control panel for the 4-54II Dust Collector is mounted on the front chassis. This panel was designed to safely operate in the range of 3 phase, 60 Hertz voltages (208 and 230) typically available in the U.S.

Operator interface elements on the control panel give an indication of "Proper Rotation" or "Improper Rotation". This circuitry will not allow the equipment to operate unless the rotation is correct.

### 3.7 Description and Function - Electrical Control Panel Cont'd

The control panel on the 4-54II Dust Collector is provided with the following controls, instruments and components that are needed to operate, monitor and safeguard the operator and the unit.

1. Main Disconnect Switch – Connects/disconnects power to both the dust collector and any surface preparation equipment connected in series to the dust collector.
2. Emergency Stop Switch – This is a "push to operate/pull to reset", red operator. It provides for an immediate shutdown of all elements of the dust collector system.
3. Improper Rotation Pilot Light – This red pilot light indicates the phase rotation is improper.
4. Proper Rotation Pilot Light – This green pilot light indicates the phase rotation is correct.
5. Phase Monitor – Provides phase sequence (rotation) and phase loss protection. Will not allow the system to start unless rotation is correct and all three phases are present.
6. Compressor ON / OFF Selector Switch – Allows the operator to start or stop the compressor.
7. Blower ON / OFF Selector Switch – Allows the operator to start or stop the blower. Also energizes the timer board and associated circuitry. The dust collector will not pulse unless the blower is running.
8. Elapsed Time Meter – Provides an indication of "run time" of the blower.
9. Fuseless Coordinated Motor and Circuit Protection – This control system was designed to comply with the National Electric Code as a "multi-motor and other loads" branch circuit. The control elements in this system have minimum withstand rating of 50K amp when the branch circuit providing power is protected with a listed fuse or breaker of equal or greater rating.

### 3.8 Description and Function - Ventilation System

A controlled flow of air must pass through the surface preparation equipment and the 4-54II Dust Collector during normal operation for the reasons listed below:

- Cools surface preparation equipment components.
- Helps remove dust from work surface.
- Transports dust and contaminants to dust collector.

Ventilation air must follow a designed path through the machine(s). Any irregularities in the path can affect the performance of the system. The air sequence follows:

1. Air enters the area around the seals of the surface preparation equipment at a high velocity and helps sweep dust from the work surface.
2. This air traverses up the through the equipment housing and exits through the outlet. The air movement through the equipment housing aids in keeping the equipment housing and internal components cool.
3. The hose delivers the contaminated air to the dust collector where the air is filtered and returned to the atmosphere.

The ventilation system should be monitored on a regular basis. Bad or improper ventilation can lead to poor component life and premature wear on a number of ventilation related items on the equipment. Some of the more important areas to monitor, relative to the ventilation system, are:

- The skirts around the blast housing should be kept in good repair.
- The seals around the separator lid should be checked regularly.
- The hose connections to the blast unit and the 4-54II Dust Collector should be tight and held in place with metal clamps.
- The hose should be kept in good repair. Flattened spots, holes and wear spots should be corrected immediately. Replace hose if necessary.
- Ventilation leaks on the blower assembly seal and especially the dust bin seal should be minimized. The dust bin seal can be checked by feeling for air leaks around the seal and evidence of dust leaks.



### 3.8 Description and Function - Ventilation System Cont'd

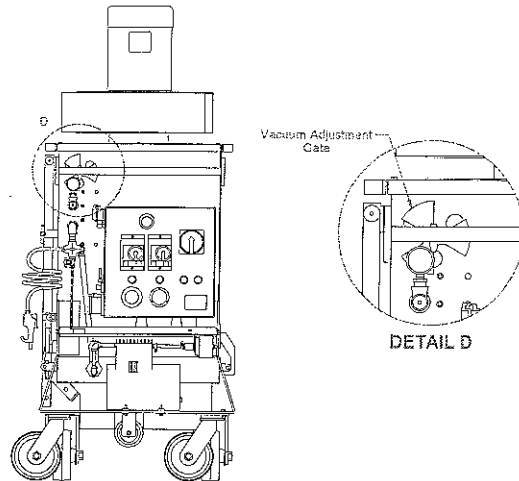
Any ventilation irregularities can have an adverse effect on the overall performance and efficiency of the system. Improper ventilation can cause increased wear on internal components of the surface preparation equipment. An important fact that is often ignored or misunderstood is:

**The dust and contaminants are the principal cause of component wear. A well-maintained ventilation system can remove contamination, which in turn, helps reduce operating costs and increase the overall efficiency of the surface preparation equipment.**

**DO handle and dispose of all dust in accordance with all applicable local, state and federal regulations for the specific composition of dust being collected.**

### 4.0 Equipment Calibration

1. **Dust Collector Pulse Timer** - Set for approximately 10 seconds for concrete cleaning; 15 seconds for steel cleaning.
2. **Compressor Pressure Setting** - 80 PSI max. The unloader adjustment determines pressure (30 PSI drop for Pulse).
3. **Pressure Drop Across Filters** - Mini-helic gauge should read between 1 and 4 inches. An indication above 4 indicates that the filters are dirty and should be replaced.
4. **Dust Bin Change Interval.** - Inspect at 1/2-hour intervals to estimate fill time. Do not allow dust bin to overfill.
5. **Vacuum Adjustment Gate** on the 4-54II Dust Collector is used to reduce or increase the suction through the hose between the dust collector and the surface preparation equipment. Closing the vent increases the suction.



Normal surface preparation will usually be accomplished with the vacuum adjustment gate partially open. A period of trial and error may be necessary for specific job applications. Generally speaking, the more dust generated by your surface preparation equipment, the greater the suction you will need from the dust collector to keep the abrasive as clean as possible.

## 5.0 Start-Up Procedures

### Note:

All operating and maintenance personnel assigned to this machinery should read and understand these Operating Instructions before attempting any operational or maintenance work on this equipment. Also, Blastrac highly recommends that all operating and maintenance personnel receive a thorough training regimen from an authorized Blastrac representative before attempting to operate or maintain this equipment.

1. Be sure all guards are correctly installed
2. Be sure filter cartridges are tight and secure
3. Be sure dust bust bin is tight against the filter chamber

4. Connect the hose to the cleaning system and filter chamber
5. Turn on Compressor
6. Turn on Blower
  - Before beginning work, listen to make sure the filter cartridges are being pulsed at regular 10 second intervals. Filter damage and poor machine performance will occur if the filters are not pulsed at regular intervals.

**DO NOT operate equipment with excessive hose length that may lead to the escape of hazardous dust due to insufficient suction.**

**For normal concrete surfaces, Blastrac does not recommend using more than the 50 feet of exhaust hose supplied with the dust collector.** Adding additional hose can cause insufficient suction which will allow unwanted dust and contaminants to accumulate, thereby causing premature wear to surface preparation equipment internal components. Additional hose can only be added when cleaning steel surfaces. Contact your Blastrac representative for your specific steel cleaning application.

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## 6.0 Dust Collector – Troubleshooting

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This unit has two inlet ports for hose attachment. It is designed to have one of them sealed off with the provided end cap while running with the blast unit. Failure to seal off this additional hose connection port can result in improper operation of the dust collector unit.

Note: Once the 4-54II Dust Collector has been in operation for several hours, a stable operating level will result. Sudden changes in operation can usually be traced to a malfunction.

Trouble	Probable Cause	Remedy
Contaminated abrasive - fines and contaminants not being removed from abrasive.	Very soft concrete removal. Excessive dust quantities entering system. (Will cause excessive component wear.) Insufficient air flow being delivered by exhaust fan.	Increase machine speed to reduce the amount of concrete removal or reduce abrasive flow to wheel.  Check fan rotation, check exhaust hose and connections. Check air control gate.
Visible dust discharge.	Torn, punctured or improperly installed filter cartridges.  Dust bin seal gasket torn or missing	Check filters (clean air section should show which filter is faulty). Replace or reinstall. (New machines will allow small amounts of dust through filters for about ½ hour until filters are broken in.)  Repair or replace gasket.

**6.0 Dust Collector – Troubleshooting Cont'd**

Trouble	Probable Cause	Remedy
High differential pressure.	<p>Clogged filters.</p> <p>Screen clogged/dirty.</p>	<p>Check filter pulsing rate and pressure. Pressure should be 80 PSI and drop about 30 PSI for each pulse occurring once every 10 - 11 seconds. Do not allow dust bin to overfill.</p> <p>Filters old and saturated – replace filters.</p> <p>Clean/replace screen located inside filter chamber.</p>
Pressure loss.	<p>Pressurized air leak.</p> <p>Goyen diaphragm stuck open.</p> <p>Unloader valve not holding pressure.</p> <p>Compressor not building air properly.</p> <p>Timer board malfunction.</p>	<p>Check all high pressure air connections.</p> <p>Check solenoid valves' operation. Replace if necessary. Check diaphragm(s). Clean or replace if necessary.</p> <p>Adjust or replace unloader valve.</p> <p>Repair or replace compressor. Check air hoses for leaks.</p> <p>Check "tell-tale" lights on timer board, replace if necessary.</p>
High differential pressure.	Clogged filters.	<p>Attach the provided end cap to the open port.</p> <p>See section 11 for electrical troubleshooting.</p>



**Operating Instructions**

**4-54 II 208/230v 3Ø 60HZ  
Dust Collector  
February 2004**



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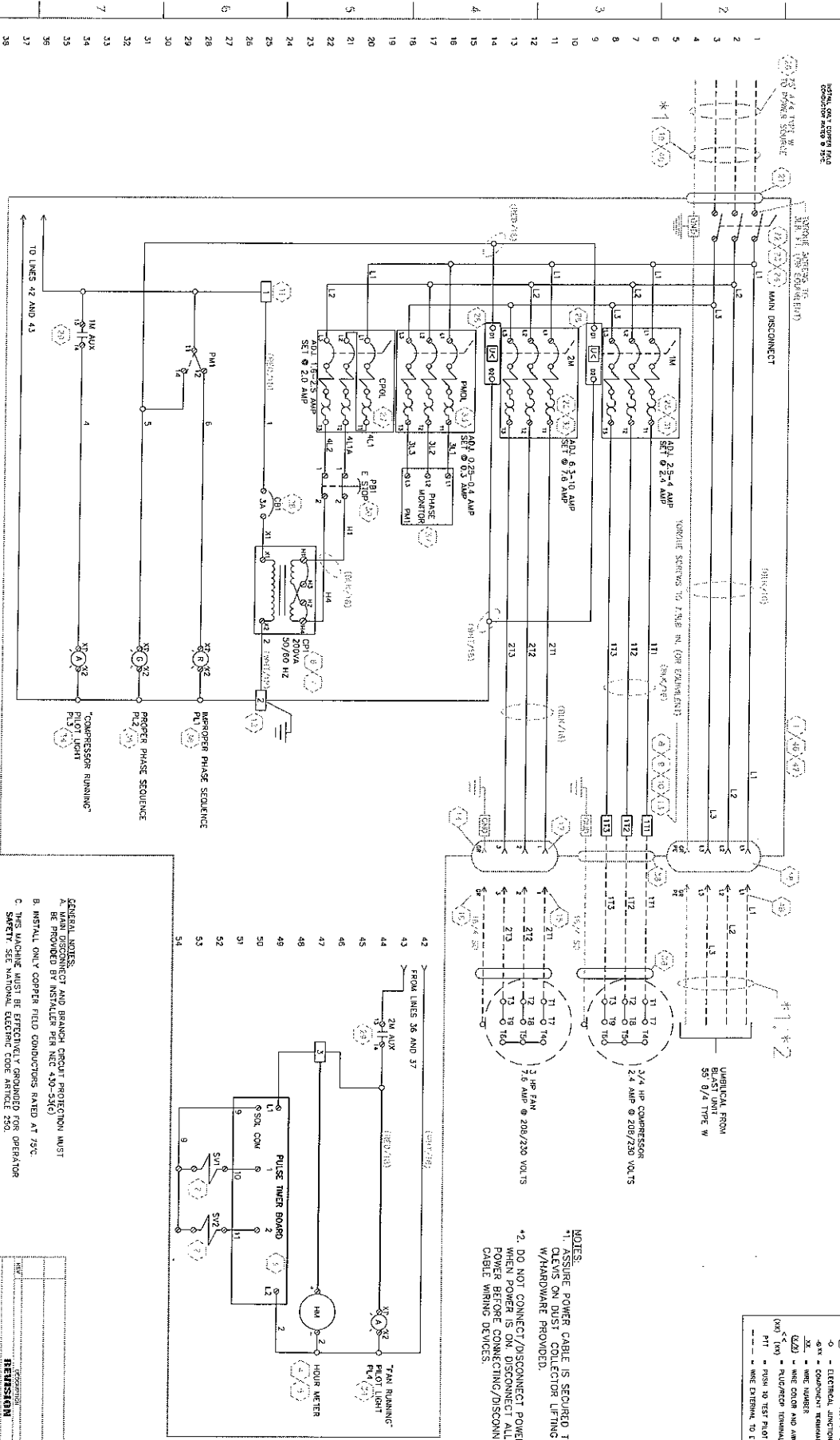
## **7.0 Prints and Schematics**

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INSTALLATION INSTRUCTIONS FOR BLASTAC 4-54  
 1.1 Line 208/230 VAC  
 1.2 Amps 25  
 1.3 Phase 3  
 1.4 Frequency 60 Hz  
 1.5 Weight 150 lbs  
 1.6 Dimensions 20" x 20" x 20"

BRANCH CIRCUIT PROTECTION FOR 3-27.7 AMPERE FUSE  
 MAXIMUM BRANCH CIRCUIT PROTECTION @ 208/230 VOLT  
 32 AMP FUSE OR DELTA FUSE  
 30 AMP FUSE OR DELTA FUSE  
 30 AMP FUSE OR DELTA FUSE

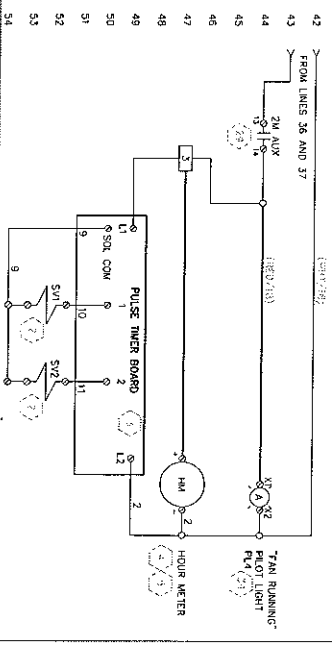
# BLASTAC 4-54 MIII-230 DUST COLLECTOR CONTROL PANEL FOR 208/230V, 3 PHASE, 60 HZ W/ PHASE ROTATION VERIFICATION



**SCHEMATIC SYMBOLS**

- ⊠ TERMINAL BLOCK
- ⊞ VOLTAGE SELECTOR SWITCH TERMINAL
- ⊚ ELECTRICAL JUNCTION
- ⊙ COMMON TERMINAL AND NUMBER
- ⊙ WIRE NUMBER
- ⊙ WIRE COLOR AND AMP
- ⊙ (L23) PULSED TERMINAL NUMBER
- ⊙ PTT PULL TO TEST PILOT LIGHT
- ⊙ WIRE EXTERNAL TO ENCLOSURE

- NOTES:**
- ASSURE POWER CABLE IS SECURED TO CLEVIS ON DUST COLLECTOR LIFTING EYE W/HARDWARE PROVIDED.
  - DO NOT CONNECT/DISCONNECT POWER CABLE WHEN POWER IS ON. DISCONNECT ALL POWER BEFORE CONNECTING/DISCONNECTING CABLE WIRING DEVICES.



**GENERAL NOTES:**

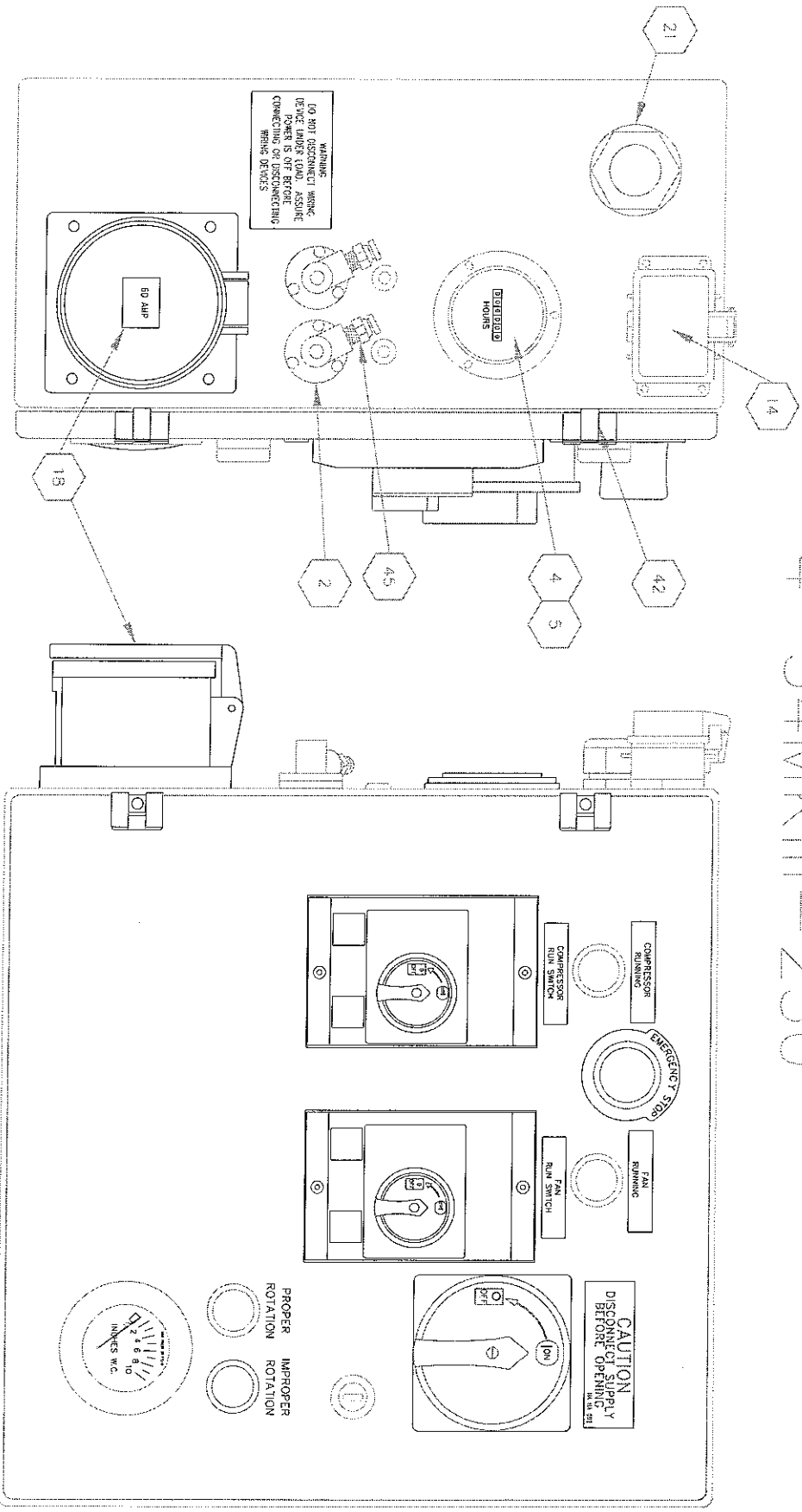
- CONDUCTOR AND BRANCH CIRCUIT PROTECTION MUST BE PROVIDED BY INSTALLER PER NEC 430-51(C).
- INSTALL ONLY COPPER FIELD CONDUCTORS RATED AT 75C.
- THIS MACHINE MUST BE EFFECTIVELY GROUNDING FOR OPERATOR SAFETY. SEE NATIONAL ELECTRIC CODE ARTICLE 250.

**HEWLETT PACKARD**

208/230 VOLT THREE PHASE GFI/A  
 520-0016  
 P003545

DATE: 1998  
 DRAWING NO: 520-0016  
 REV: 1

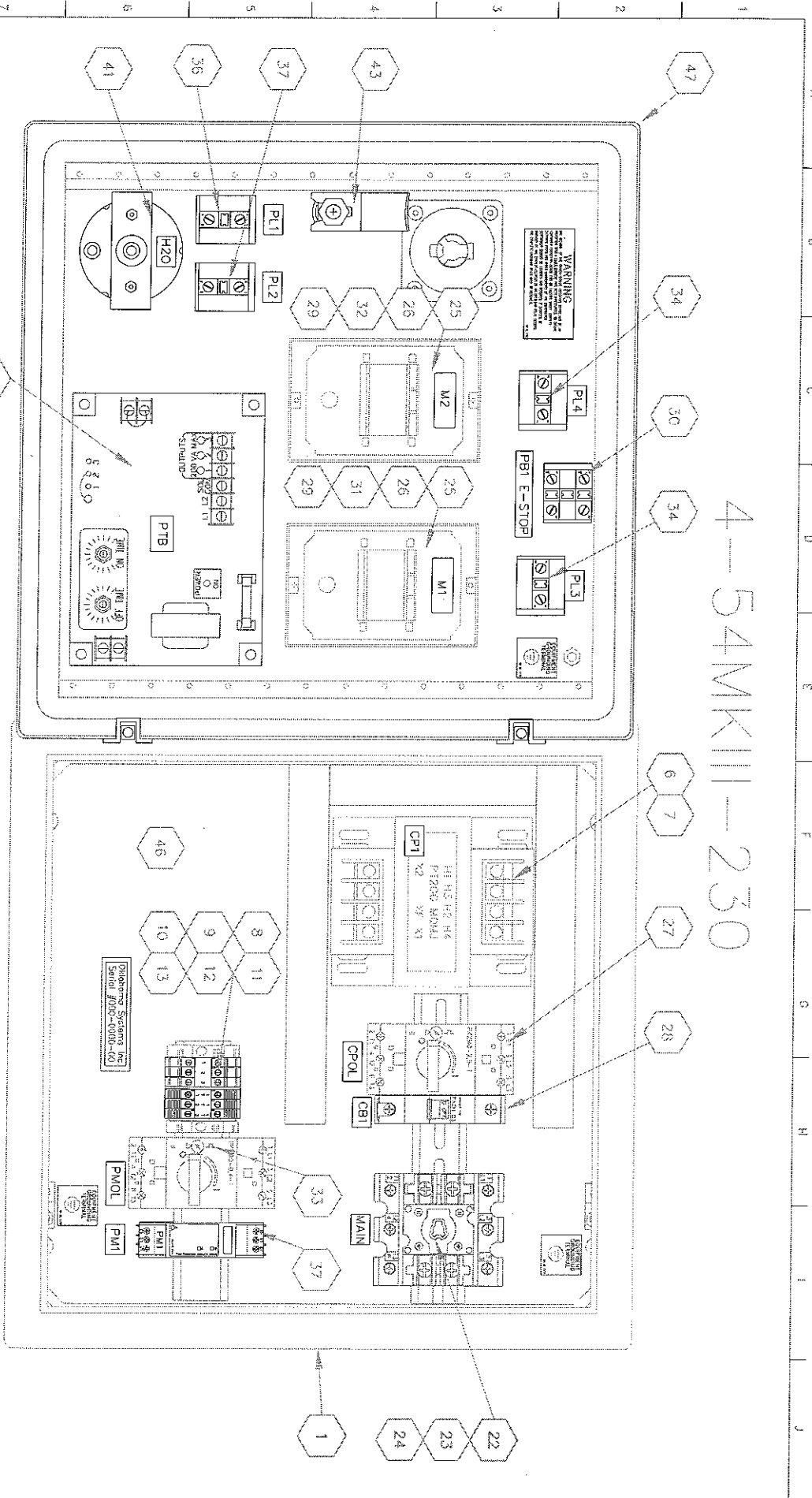
# 4-54MKIII-230



REV	DESCRIPTION	DATE
1	REVISION	
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DATE	5/20/00	BY
DESIGNED BY	520-0016	TRN
DRAWN BY	PO03545	
CHECKED BY		
APPROVED BY		
PROJECT NO.	4-54MKIII-230 DIST COLLECTOR	
DESCRIPTION	MAIN ENCLOSURE	
SCALE	AS SHOWN	
PLANT NO.	520-0016	
REVISED BY		
DATE		



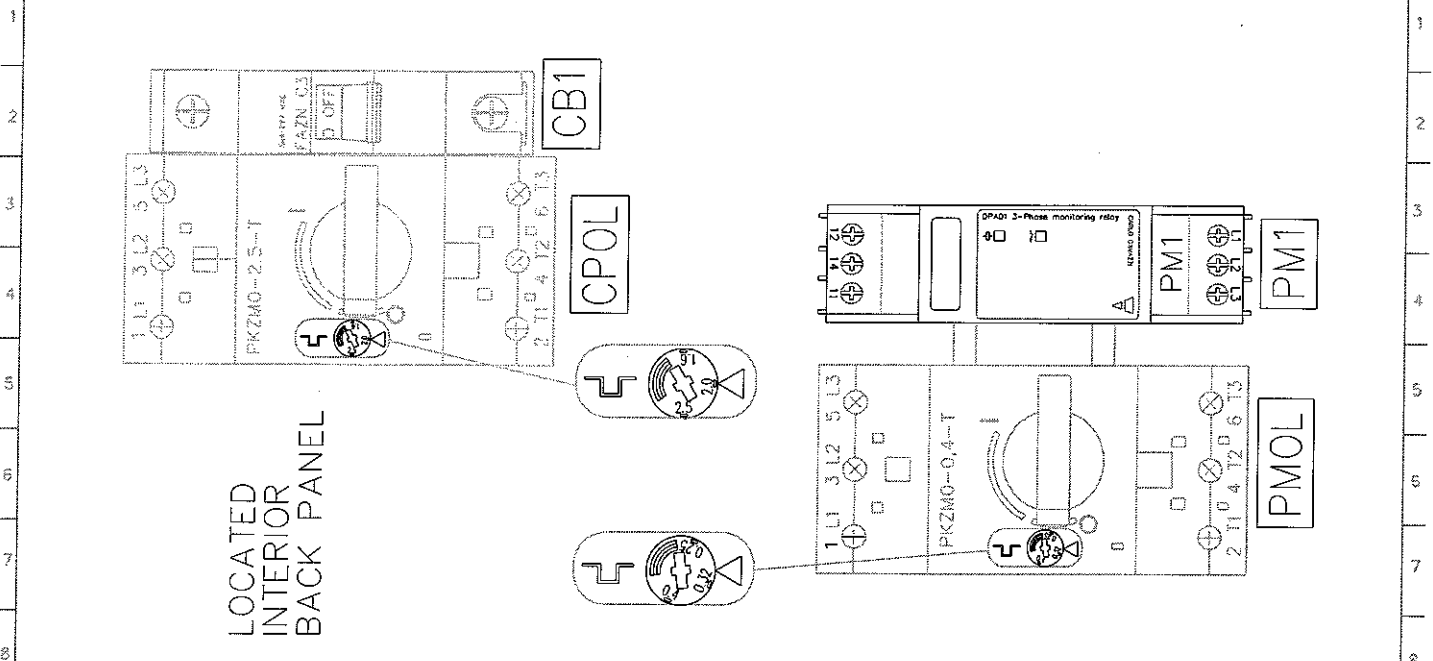
# 4-54MKIII-230



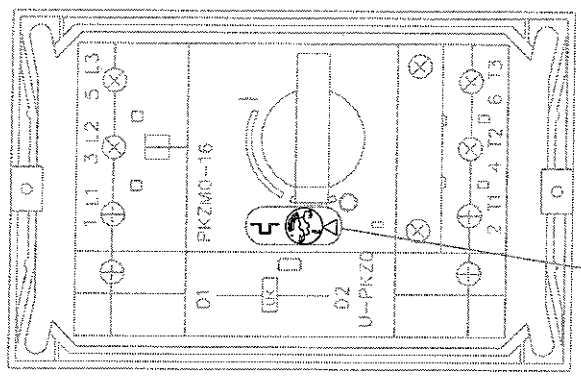
SEE SHEET 4 OF 4  
FOR DETAIL OF  
OVERLOAD DEVICE  
SETTINGS

REV	DATE	DESCRIPTION	BY	CHK
1	10/10/00	REVISION		
2	10/10/00	REVISION		
3	10/10/00	REVISION		
4	10/10/00	REVISION		
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520-0016

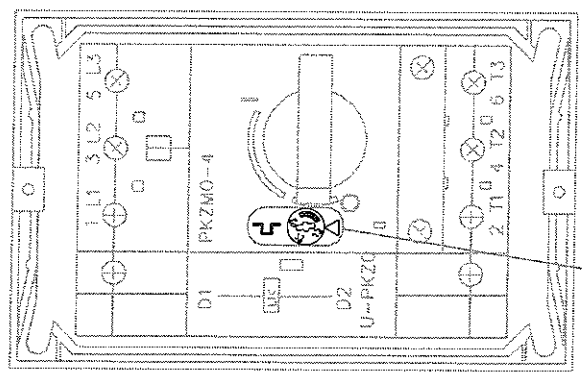


LOCATED  
INTERIOR  
BACK PANEL



2M

ON ENCLOSURE DOOR  
AS VIEWED WITH  
EXTERIOR OPERATOR  
COVER REMOVED



1M

REV	DESCRIPTION	DATE	BY

REVISION

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6215 ALUMA VALLEY DRIVE  
OKLAHOMA CITY, OK 73121  
U.S.A.

DATE 10/20/04 DWG. 520-0016 NO. P003545  
4-54 MKIII 230V 3 PHASE DUST COLLECTOR  
OVERLOAD DEVICE SETTINGS

SCALE NTS SHEET 4 OF 4  
DRWN OS  
520-0016

