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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 6-54 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 6-54 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.

1.1 Safety – Mechanical

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 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.

1.3 Safety - Dust Hopper and Ventilation Tips

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

3.0 Description and Function - General

The 6-54 Dust Collector is normally attached to the surface preparation equipment with 50 feet of 5-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 6-54 Dust Collector is comprised of the following elements:

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

3.1 Description and Function - Filter Chamber

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.

3.5 Description and Function - Pulse Pressure System

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.

3.6 Description and Function - Chassis

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.

3.7 Description and Function - Electrical Control Panel

The control panel for the 6-54 Dust Collector is mounted on the front chassis. This panel was designed to safely operate in the range of 3 phase, 60 Hertz voltages (208-230 and 460-480) 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

After proper rotation is established, the operator has only to operate the "Voltage Selector" switch to the "Low" or "High" position as indicated to start the equipment. This "Voltage Setup" switch connects the windings of the motor(s) and control power transformer for "High" or "Low" voltage. The AVS circuit will prevent a wrong setting of the "Voltage Selector" switch either prior to startup or during operation. A wrong setting prior to startup will not allow the system to energize. If switched during operation, the system will simply "turn off". This "High" or "Low" voltage switch is for the 654 dust collector only.

The control panel on the 6-54 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 the blast unit.
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. Voltage Selector Switch – Connects the control transformer and motor leads for the "Low" or "High" voltage being used.
4. Improper Rotation Pilot Light – This red pilot light indicates the phase rotation is improper.
5. Proper Rotation Pilot Light – This green pilot light indicates the phase rotation is correct.
6. Control Power Pilot Light – This green pilot light indicates the phase rotation is correct, the "Voltage Select" switch position is proper and the AVS circuit is satisfied. The machine is electrically set up and ready to run.
7. Digital Voltmeter – Provides voltage readout and evaluates the voltage level being presented to the dust collector unit. Provides information to internal circuitry that protects the system from being inadvertently connected to the wrong voltage.
8. 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.

9. Compressor Start / Stop Buttons – Allows the operator to start or stop the compressor with 120 volt control voltage circuitry.

3.7 Description and Function - Electrical Control Panel Cont'd

10. Blower Start / Stop Buttons – Allows the operator to start or stop the blower with 120 volt control voltage circuitry. Also energizes the timer board and associated circuitry. The dust collector will not pulse unless the blower is running.

11. Elapsed Time Meter – Provides an indication of “run time” of the blower.



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 50 kA 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 6-54 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 6-54 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** - Minihelic 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 6-54 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.



Vacuum Adjustment Gate

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 and functioning properly
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.

6.0 Dust Collector – Troubleshooting

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 6-54 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>

6.1 Vacuum Adjustment – Operating Tips

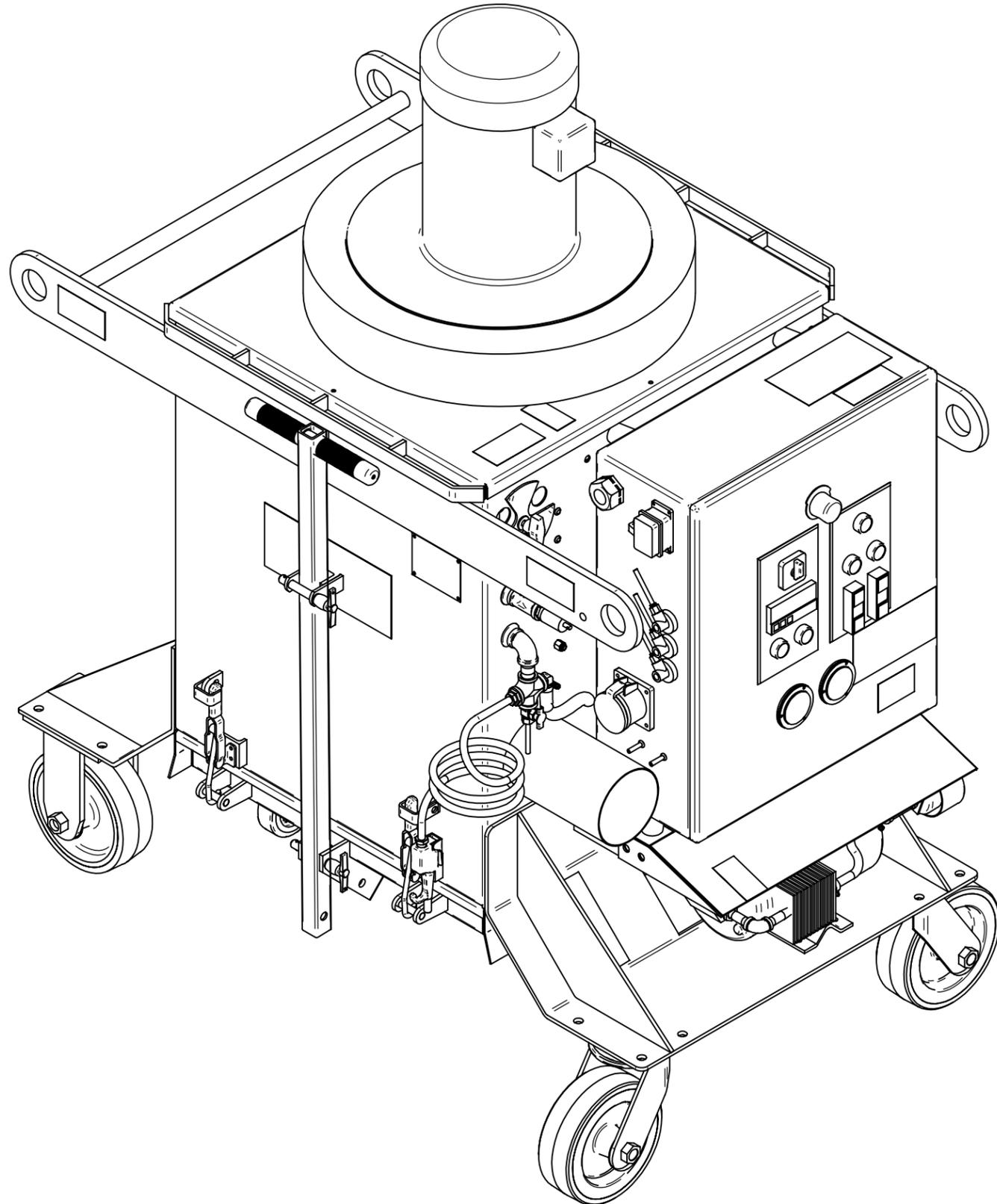
The vacuum adjustment gate on the 6-54 Dust Collector is used to reduce or increase the suction through the hose between the dust collector and the blast machine. Closing the vent increases the suction.

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

Normal shot blasting with the blast unit will usually be accomplished with the vacuum adjustment gate partially open. Too much suction will sometimes allow abrasive to be pulled from the blast unit and deposited into the dustpan. This is particularly true when using small sizes of abrasive such as S - 170 and S - 230.

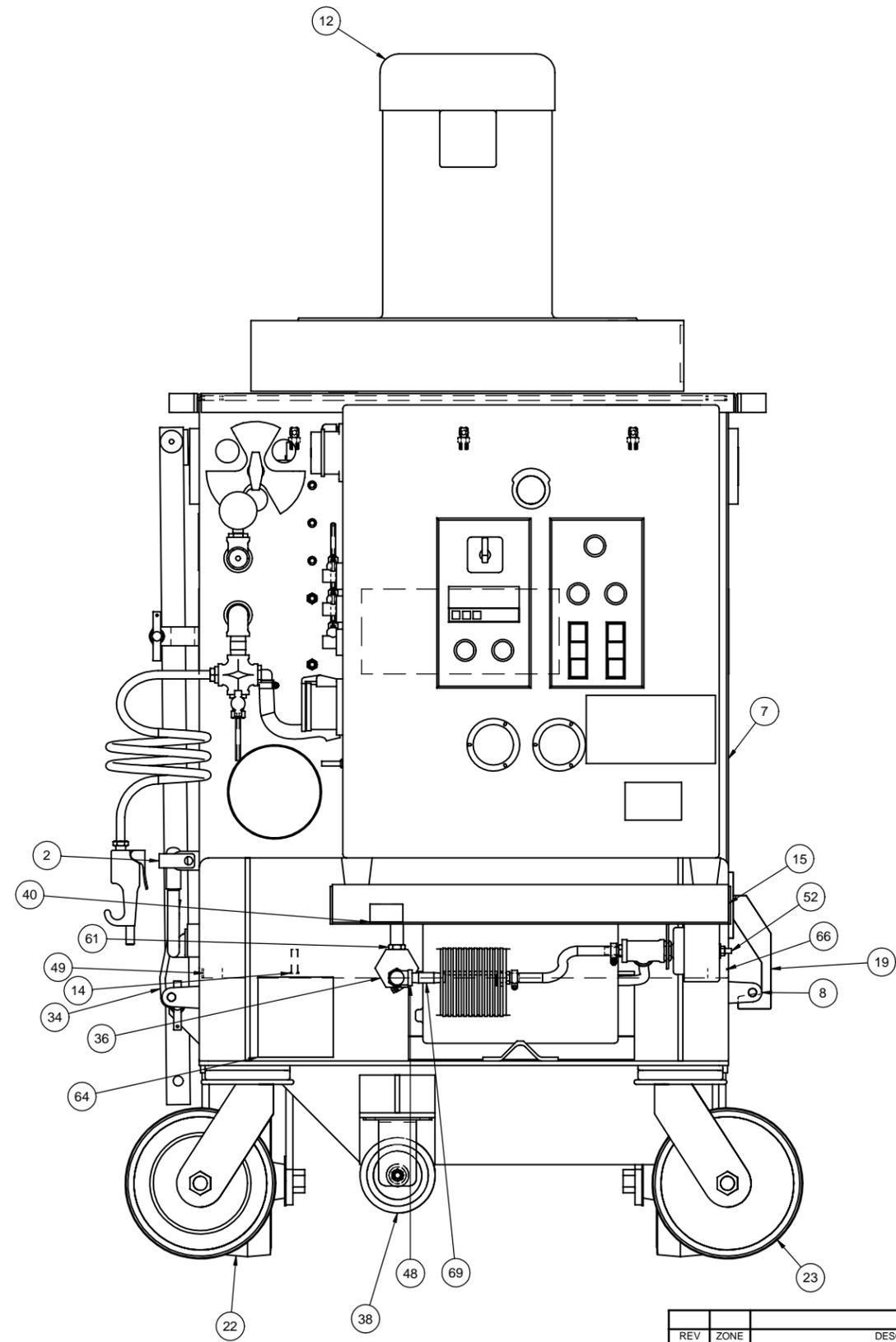
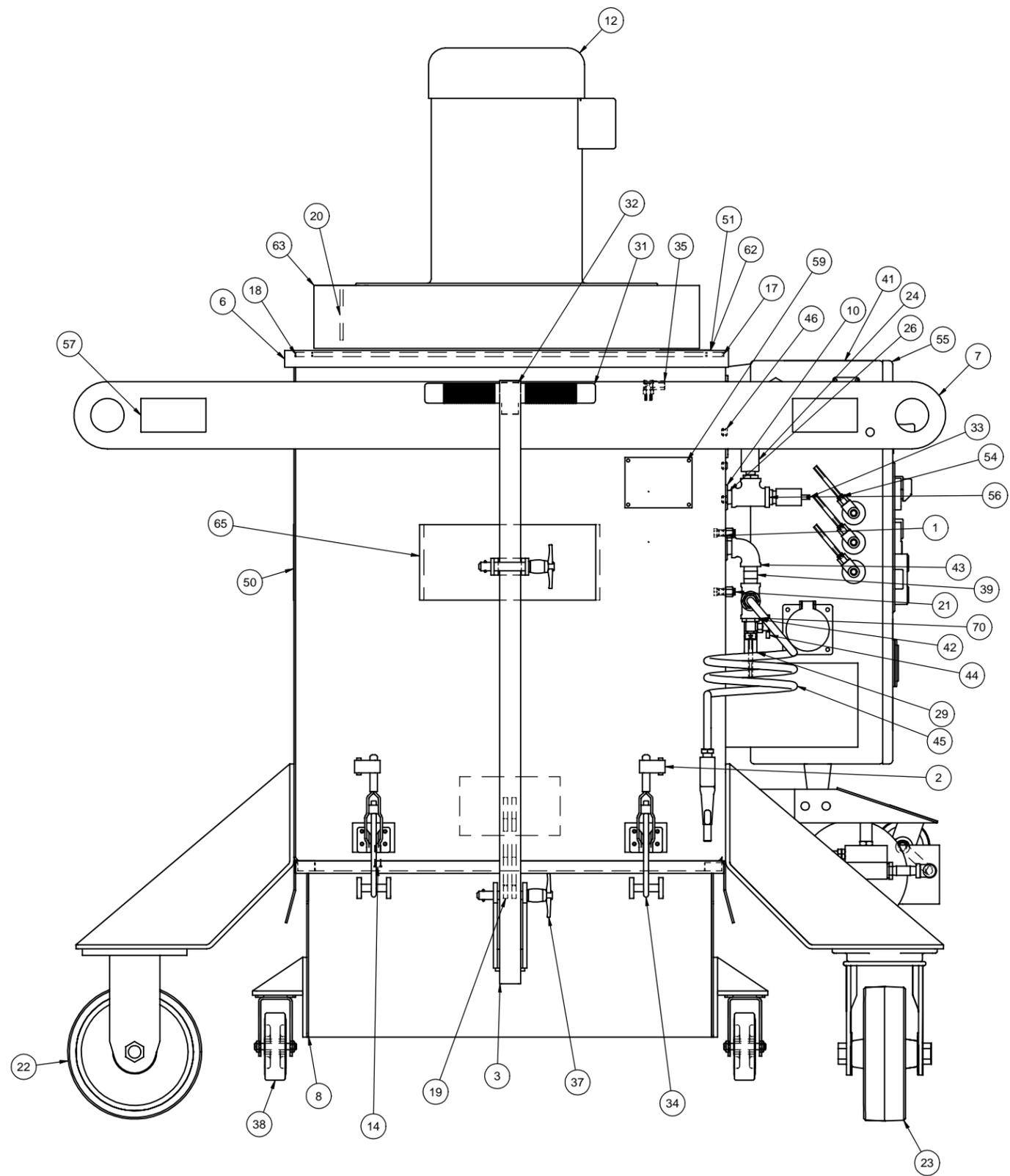
When using the 6-54 Dust Collector with the 1-15DMKIII or 1-15DSMKIII, the vacuum adjustment gate should be fully closed for maximum suction. The 1-15DMKIII and 1-15DSMKIII cleans a wider area and generates more dust, which necessitates the maximum possible suction.

A period of trial and error may be necessary for specific job applications. Generally speaking, the more dust generated by your shot blasting unit, the greater the suction you will need from the dust collector to keep the abrasive as clean as possible.

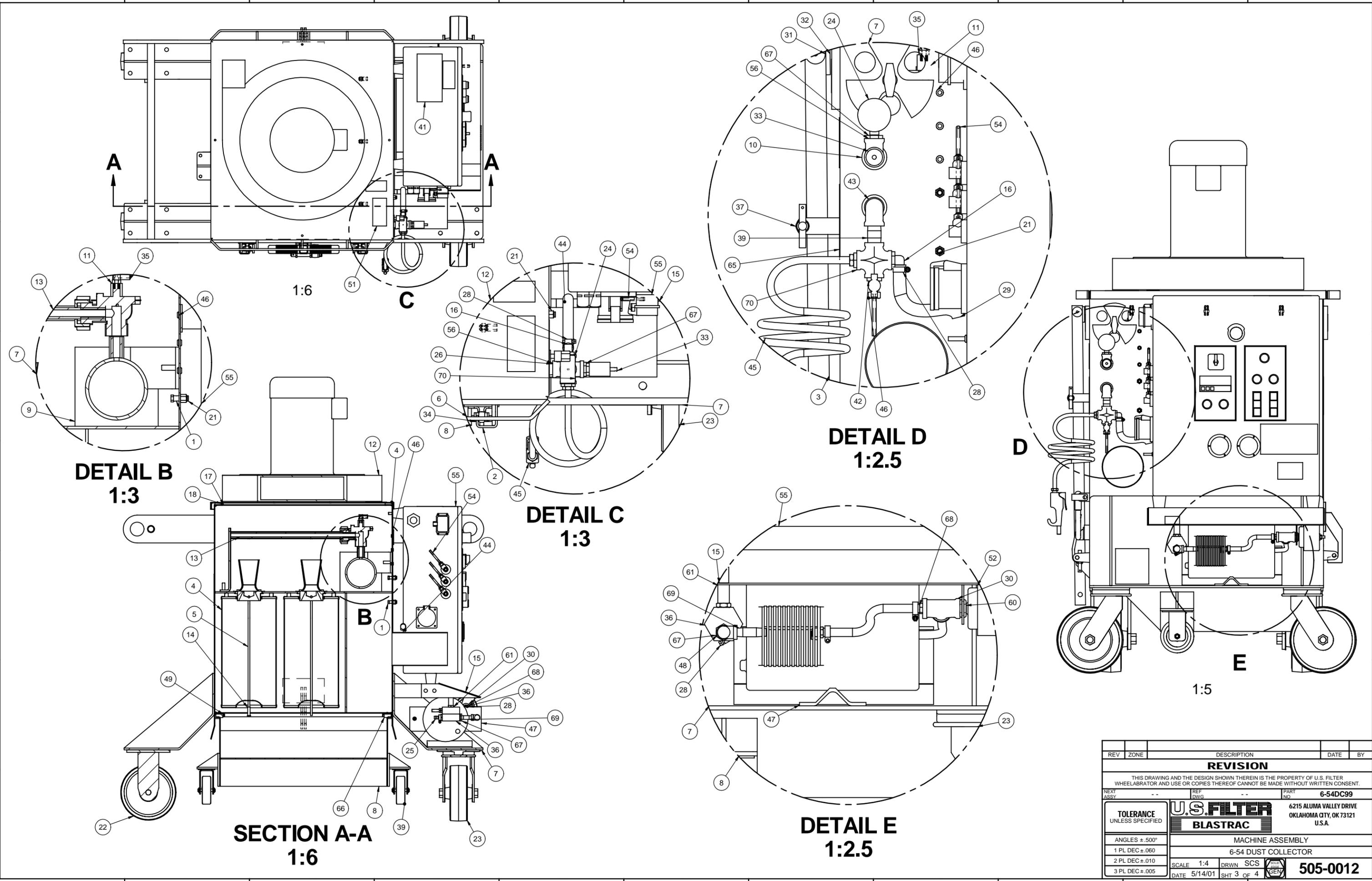


ITEM	QUANTITY	CATALOG NUMBER	DRAWING NUMBER	DESCRIPTION	ITEM	QUANTITY	CATALOG NUMBER	DRAWING NUMBER	DESCRIPTION
38	2	490696		CASTER 4.00" DIA.	1	2	441378	--	VENT/BREATHER 1/8"NPT X 7/16"HEX 40-MICRON
39	1	500350	--	NIPPLE / PIPE 1/2"NPT X 2.00"	2	2	4645480	78A0284	LATCH/HANDLE
40	1	494149	83A0431	DECAL/CAUTION-EQUIP DAMAGE/MOTOR ROT	3	1	4900970	82B0898	HANDLE/DUST HOPPER
41	1	494150	83B0510	DECAL/DANGER - LOCK OUT POWER	4	6	493206		ELEMENT/FILTER - 54 SQ. FT.
42	1	500537	--	BUSHING/REDUCING 1/2"NPT - TO 1/8"NPT	5	6	4984990		HANGER/ROD TORIT #6MM 1884600
43	1	500552	--	ELBOW/PIPE 1/2"NPT X 90DEG.	6	1	6760640	88C0174	LID/BAGHOUSE
44	1	674906	--	VALVE/NEEDLE SHUT-OFF 1/8"NPT X 1/4" TUBE	7	1	6760660	90D0187	BAGHOUSE/WELDMENT
45	1	676118	--	BLOWGUN/RECOILING HOSE	8	1	6760680	88C0164	HOPPER/DUST
46	3	676551	--	GROMMET/RUBBER 1/4"ID	9	1	6765500	88C0230	TANK/AIR
47	1	6765540	--	COMPRESSOR / AIR - 3/4 HP 208/230 V 3-P	10	2	676552	--	GROMMET/RUBBER 3/4"ID
48	1	500551	--	ELBOW/PIPE 1/4"NPT X 90DEG.	11	3	6765530		VALVE/ DIAPHRAGM
49	2	6782140	--	SEAL/RUBBER 1" ABRAS. RESIS. DURO 15-20	12	1	6765550	--	BLOWER/CINCINNATI 18 1/2" DIA. CCW ROT
50	3	P000027		DECAL / 6-54 DC US FILTER / BLASTRAC	13	3	676558	88C0236	HEADER/BLOW DOWN
51	1	6801810	90B0178	DECAL / SAFETY WARNING	14	6	6770020	--	CAPLUG/PROTECTIVE CLOSURE 1/4" ID X 1 3/4"
52	1	6823550	--	FILTER / SOLBFRG	15	1	6775970	89D0219	SHIELD/COMPRESSOR
53*	1	6921470	--	HOSE / AIR .375" 300 P.S.I.	16	1	677736	--	ELBOW/ 1/2"HOSE BARB X 3/8"NPT X 90 DEG.
54	4	6861660	--	TUBING/POLYURETHANE BLU.25" OD X .17" ID	17	2	6782140	--	SEAL/RUBBER
55	1	P000185	505-0004	PANEL/ELEC. CONTROL	18	2	6782150	--	SEAL/RUBBER
56	1	500517	--	TEE/PIPE 1/2"NPT	19	1	678885	89B0440	LATCH / DUST BIN
57	4	6769850	89B0022	SIGN/CAUTION - LIFT HERE	20	1	6831040	--	KEY/PARALLEL
58*	1	X000236	--	RUBBER/SPONGE .25" X 1.00" DURO 15-20	21	2	699194	--	FITTING/PRESTOLOK MALE 1/4" TUBE X 1/8" NPT
59	1	P000818	520-0017	PLATE/SERIAL NUMBER - USF/BLASTRAC	22	2	6765570		CASTER/RIGID 8.00" DIA X 2.50" W
60	2	695959	--	GROMMET/RUBBER 1/2" ID X 1-1/16" OD	23	2	4906970		CASTER/SWIVEL 8.00" DIA X 2.50" W
61	1	255861	--	MUFFLER/EXHAUST 3/8"NPT	24	1	126814	--	GAUGE/AIR PRESSURE 2" X 1/4"NPT 0-160PSI
62	1	P000775	505-0005	DECAL / VACUUM ADJUSTMENT	25	1	1462800	--	INSERT/HOSE 1/2" NPT MALE BARBED
63	1	6854010	92B0193	DECAL / GUARD REMOVAL	26	2	500352	--	NIPPLE/PIPE 1/2"NPT X 4.50"
64	1	495567	84B0112	DECAL/CAUTION - COMPRESSOR/CART. DAMA	27*	1	6921470		HOSE / AIR 3/8" 3 00 P.S.I.
65	1	P000572	505-0011	NAMEPLATE ARRANGEMENT / 6-54 DC US FILTER / BLASTRAC	28	5	2051120	--	CLAMP/HOSE ADJ - 9/16" - 1- 1/16" SS
66	2	6782150		SEAL/RUBBER 1" ABRAS. RESIS. DURO 15-20	29	1	2554770		HOSE RH27 0.50" ID X 0.75" OD
67	5	500538	--	BUSHING/REDUCING 1/2"NPT - TO 1/4"NPT	30	1	500516	--	TEE/PIPE 3/8"NPT
68	4	6830450	--	INSERT/HOSE 3/8" NPT - 3/8" MALE BARBED	31	2	453290	--	GRIP/HANDLE 1.00" I.D. RUBBER
69	2	500340	--	NIPPLE/PIPE 1/4"NPT X 2.00"	32	1	X000236	--	RUBBER/SPONGE .25" X 1.00" DURO 15-20
70	1	5025550	--	CROSS/PIPE 1/2" NPT	33	1	483468	--	VALVE/SAFETY - AIR
					34	2	4835510	--	CLAMP/DE-STA-CO #351
					35	3	4838640	--	ELBOW / 90 DEG. 1/8" MNPT
					36	1	490691	--	UNLOADER/AIR ADJUSTABLE 40-120PSI
					37	2	4906940	--	T-HANDLE PIN / BALL LOCK 1/2" X 2 - 1/2"

REV	ZONE	DESCRIPTION	DATE	BY
REVISION				
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NEXT ASSY	--	REF ID: 6-54DC99	PART NO.	6-54DC99
TOLERANCE UNLESS SPECIFIED		U.S. FILTER BLASTRAC		
ANGLES ± .500°		6215 ALUMA VALLEY DRIVE OKLAHOMA CITY, OK 73121 U.S.A.		
1 PL DEC ± .060		MACHINE ASSEMBLY		
2 PL DEC ± .010		6-54 DUST COLLECTOR		
3 PL DEC ± .005		SCALE 1:4	DRWN SCS	505-0012
DATE 5/14/01		SHT 1 OF 4		



REV	ZONE	DESCRIPTION	DATE	BY
REVISION				
<small>THIS DRAWING AND THE DESIGN SHOWN THEREIN IS THE PROPERTY OF U.S. FILTER WHEELABRATOR AND USE OR COPIES THEREOF CANNOT BE MADE WITHOUT WRITTEN CONSENT.</small>				
NEXT ASSY	--	REF. DWG	--	PART NO. 6-54DC99
TOLERANCE UNLESS SPECIFIED		U.S. FILTER		
ANGLES ± .500°		6215 ALUMA VALLEY DRIVE		
1 PL DEC ± .060		OKLAHOMA CITY, OK 73121		
2 PL DEC ± .010		U.S.A.		
3 PL DEC ± .005		BLASTRAC		
MACHINE ASSEMBLY				
6-54 DUST COLLECTOR				
SCALE	1:4	DRWN	SCS	505-0012
DATE	5/14/01	SHT	2 OF 4	



DETAIL B
1:3

DETAIL C
1:3

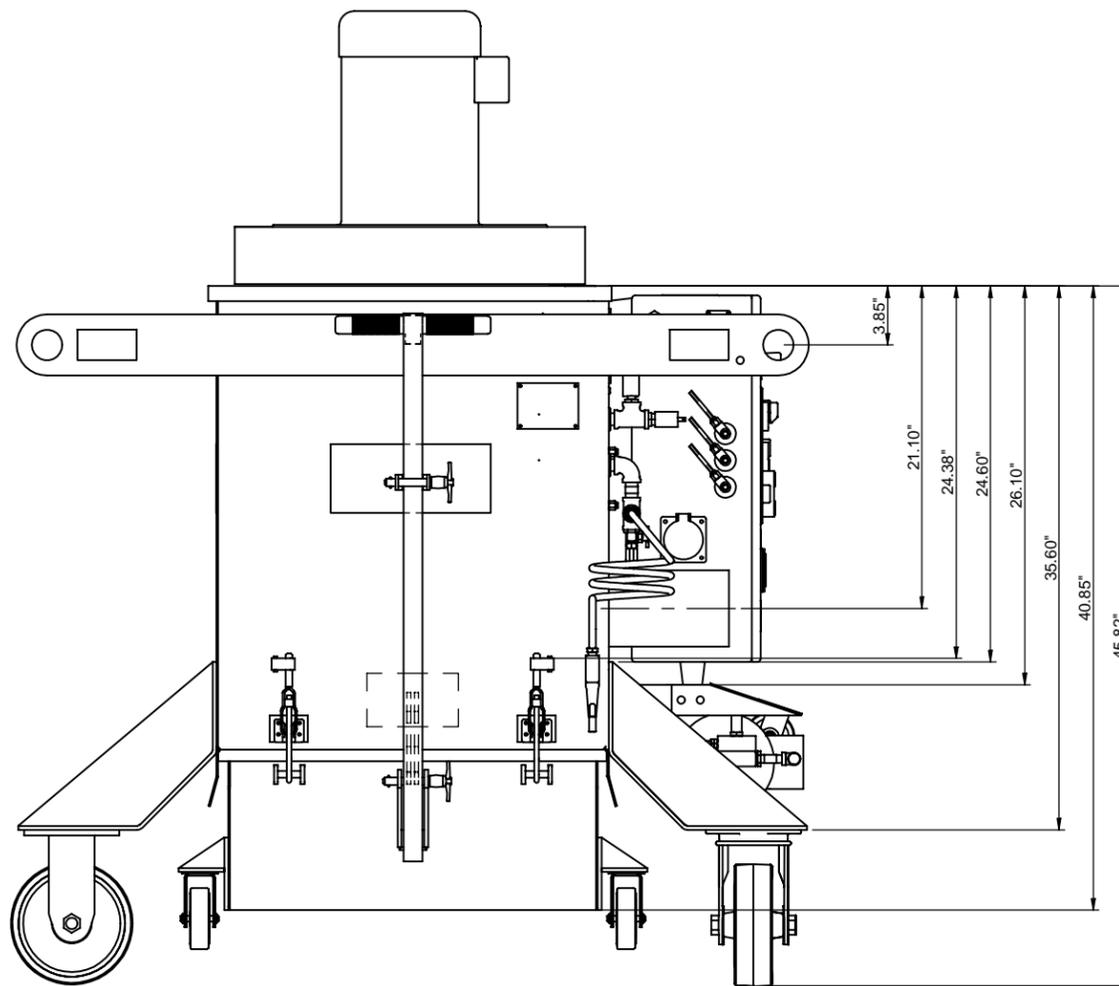
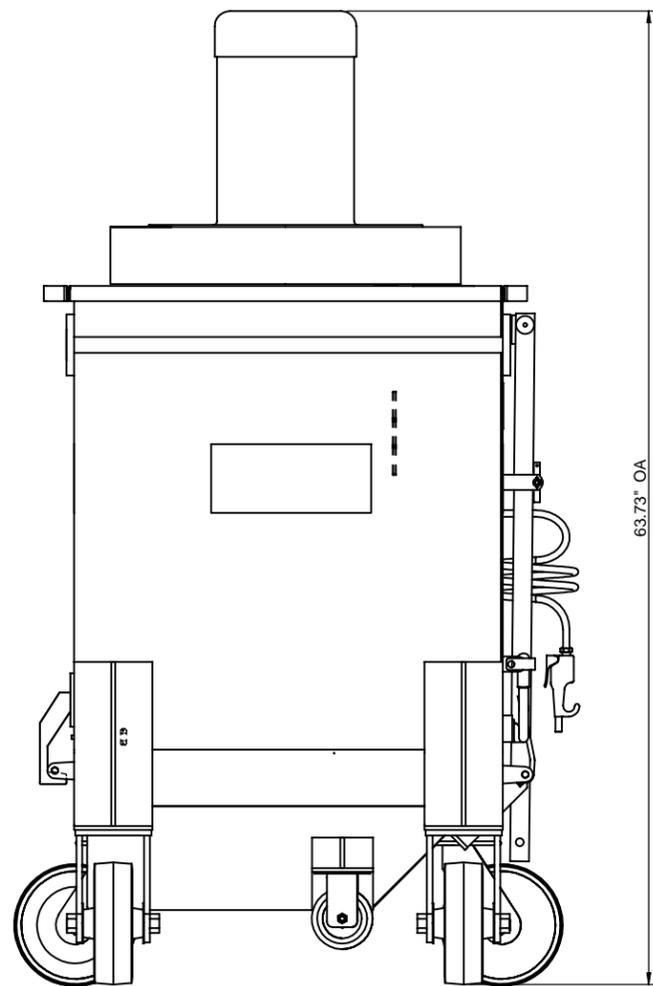
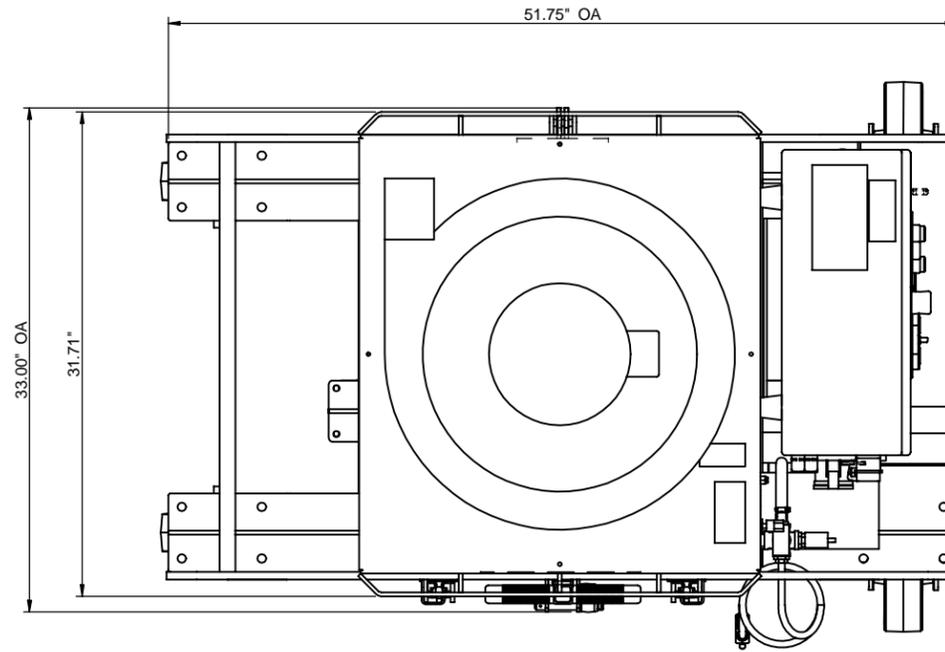
DETAIL D
1:2.5

DETAIL E
1:2.5

SECTION A-A
1:6

1:5

REV	ZONE	DESCRIPTION	DATE	BY
REVISION				
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NEXT ASSY	--	REF. DWG	--	PART NO. 6-54DC99
TOLERANCE UNLESS SPECIFIED		U.S. FILTER BLASTRAC		
ANGLES ± .500°		6215 ALUMA VALLEY DRIVE OKLAHOMA CITY, OK 73121 U.S.A.		
1 PL DEC ± .060		MACHINE ASSEMBLY		
2 PL DEC ± .010		6-54 DUST COLLECTOR		
3 PL DEC ± .005		SCALE 1:4	DRWN SCS	505-0012
		DATE 5/14/01	SHT 3 OF 4	



1:6

REV	ZONE	DESCRIPTION	DATE	BY
REVISION				
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NEXT ASSY	--	REF. DRWG	--	PART NO. 6-54DC99
TOLERANCE UNLESS SPECIFIED		U.S. FILTER BLASTRAC		
ANGLES ± .500°		6215 ALUMA VALLEY DRIVE OKLAHOMA CITY, OK 73121 U.S.A.		
1 PL DEC ± .060		MACHINE ASSEMBLY		
2 PL DEC ± .010		6-54 DUST COLLECTOR		
3 PL DEC ± .005		SCALE 1:4	DRWN SCS	505-0012
		DATE 5/14/01	SHT 4 OF 4	

Adam

9 pages

505-0004 6-54DC99 DUST COLLECTOR
208/480V, 3 PHASE, 60 HZ

ITEM NO.	QTY	USF PN	DESCRIPTION
1	9	717053	TERMINAL BLOCK, BLACK
2	7	717051	TERMINAL BLOCK, RED
3	1	717052	TERMINAL BLOCK, WHITE
4	1	717048	TERMINAL BLOCK, END BARRIER, KBL6-10 TERMINAL BLOCK
5	1	717049	TERMINAL BLOCK, ISOLATION PARTITION
6	2	717045	TERMINAL BLOCK, END ANCHOR, TERMINAL BLOCK, 35 MM
7	1	P000161	DIN RAIL, 35MM
8	1	P000190	VOLTMETER, DIGITAL, 600V, 48VDC PS, DUAL RELAY
9	1	P000145	GASKET FOR HOUR METER (HM)
10	1	P000144	HOUR METER, 120V, 50/60 HZ (HM)
11	1	716842	RECEPTACLE, 60 AMP, 600 V, 4 WIRE, 3 POLE, PANEL MOUNT
12	2	P000394	LAMP, T3 1/4, 28V (PL1 & PL2)
13	3	P000393	LAMP, T3 1/4, 120V (PL3, PL4 & PL5)
14	1	P000150	PILOT LIGHT, GREEN, LESS LAMP (CONTROL POWER) (PL3)
15	1	P000323	SHACKLE/ SCREW PIN, 3/8"
16	3	493410	VALVE, SOLENOID, 120 VAC, 50/60 HZ (SV1, SV2 & SV3)
17	1	P000195	XFMR, 480 V PRI x 240 V SEC, 100 VA, 60 HZ (CP2)
18	4	P000147	XFMR, TERMINAL COVER (2-CP1 & 2-CP2)
19	1	P000196	XFMR, 240/480-120 SECONDARY, 500VA, 60 HZ (CP1)
20	1	P000140	CONNECTOR, BULKHEAD HOUSING (600V) w/COVER
21	1	P000141	CONNECTOR, HOOD (600V), SIDE ENTRY
22	1	P000142	CONNECTOR, MALE INSERT, 10 PIN, (600V), W/ CAGE CLAMP TERM
23	1	P000143	CONNECTOR, FEMALE INSERT, 10 PIN, (600V), W/ CAGE CLAMP TERM
24	1	P000197	POWER SUPPLY, 24 VDC, 15 W (PS) ← use P003721 ← int
25	2	P000198	AUX CONTACT, 2NO, TOP MOUNTED (CRH & CRL)
26	1	716820	SWITCH, DISCONNECT EXTENSION (MAIN) ✗
27	1	P000158	BUS FEEDER CONNECTOR, 3 PHASE
28	1	P000199	CONTACTOR (COMPRESSOR) 120 VOLT, 50/60 HZ (1M)
29	1	P000200	CONTACTOR (FAN) 120 VOLT, 50/60 HZ (2M)
30	2	P000201	RELAY/ FOR SENSING "VOLT SELECT", 4PNO (CRH, CRL)
31	1	P000202	CIRCUIT BREAKER/ POWER SUPPLY SECONDARY, 0.5 AMP (CB3)
32	1	P000203	CIRCUIT BREAKER/ 2:1 XFMR SECONDARY, 1.0 AMP (CB2)
33	1	716814	CIRCUIT BREAKER/ CPT SECONDARY, 6.0 AMP (CB1)
34	1	716819	SWITCH/ DISCONNECT, HANDLE (MAIN) ✗
35	1	P000204	RELAY, MECHANICAL INTERLOCK (BETWEEN CRH & CRL)
36	1	716818	SWITCH/DISCONNECT, 160AMP (MAIN) ✗
37	4	716826	2MLV) # N HI-11- PKZMO
38	1	P000209	MCP FOR FAN (2MLV)
39	2	716824	MCP FOR COMPRESSOR AND CPT PRIMARY (1MLV & CPOL)
40	1	P000207	MCP FOR PHASE MONITOR (PMOL)
41	1	P000208	MCP FOR COMPRESSOR (1MHV) PKZMO-1.6
42	1	716821	MCP FOR FAN (2MHV)
43	2	P000155	SWITCH, PUSH BUTTON, DUAL, FOR START/STOP (PB2A&B, PB3A&B) (Jan)
44	2	P000341	PILOT LIGHT, AMBER, LESS LAMP (MOTOR RUNNING) (PL4 & PL5)
45	1	P000210	PILOT LIGHT, GREEN, LESS LAMP (PROPER PHASE) (PL2)
46	1	P000211	PILOT LIGHT, RED, LESS LAMP (IMPROPER PHASE) (PL1)
47	1	P000212	SWITCH, E STOP, LATCHING, PULL TO RELEASE, 2 NC (PB1 E-STOP)
48	1	P000213	SWITCH, SELECTOR, MOTOR/CPT VOLTAGE "HIGH-OFF-LOW" (VS) knob (R)
49	1	487270	TIMER, DC PULSE, 120V, 50/60 HZ, ON - 50-500 MS, OFF - 1.5 - 30 SEC (PTB)
50	1	691949	STRAIN RELIEF, DOUBLE EYELET, 1-1.25" (DC END POWER CORD)
51	1	P000156	CORD GRIP, 0.86"-1.26", 11/2" NPT, (INPUT POWER)
52	1	P000221	RELAY, PHASE SEQUENCE/LOSS, SELF POWERED, 200/480 V, 50/60 HZ (PM)

4 7100150 Out: Vibration Shock Mts.

505-0004 6-54DC99 DUST COLLECTOR
208/480V, 3 PHASE, 60 HZ

53	1	P000315	SOCKET, RELAY FOR PHASE SEQUENCE MONITOR (PM)
54	2	P000319	CONNECTOR, SEALTITE, 1/2" 45 DEG (COMPRESSOR)
55	2	P000326	SEALTITE, 1/2", FLEXIBLE (2)
56	1	P000320	CONNECTOR, SEALTITE, 3/4" 45 DEG (FAN)
57	1	P000316	CONNECTOR, SEALTITE, 3/4" X PG21, 90 DEG
58	4	P000177	SEALTITE, 3/4", FLEXIBLE (4)
59	1	P000148	ENCLOSURE, 19.7 W X 23.6 H X 7.9 D
60	1	P000149	ENCLOSURE, BACKPANEL FOR AM 0605020 ENCLOSURE
61	40	P000330	WIRE, 600V, 14 AWG
62	30	P000331	WIRE, 600V, 16 AWG
63	75	P000332	WIRE, CABLE, 4 AWG, 4 CONDUCTOR, TYPE W
64	1	876556	WATER GAGE, DIFFERENTIAL PRESURE GAGE 1-10 INCHES W.C.

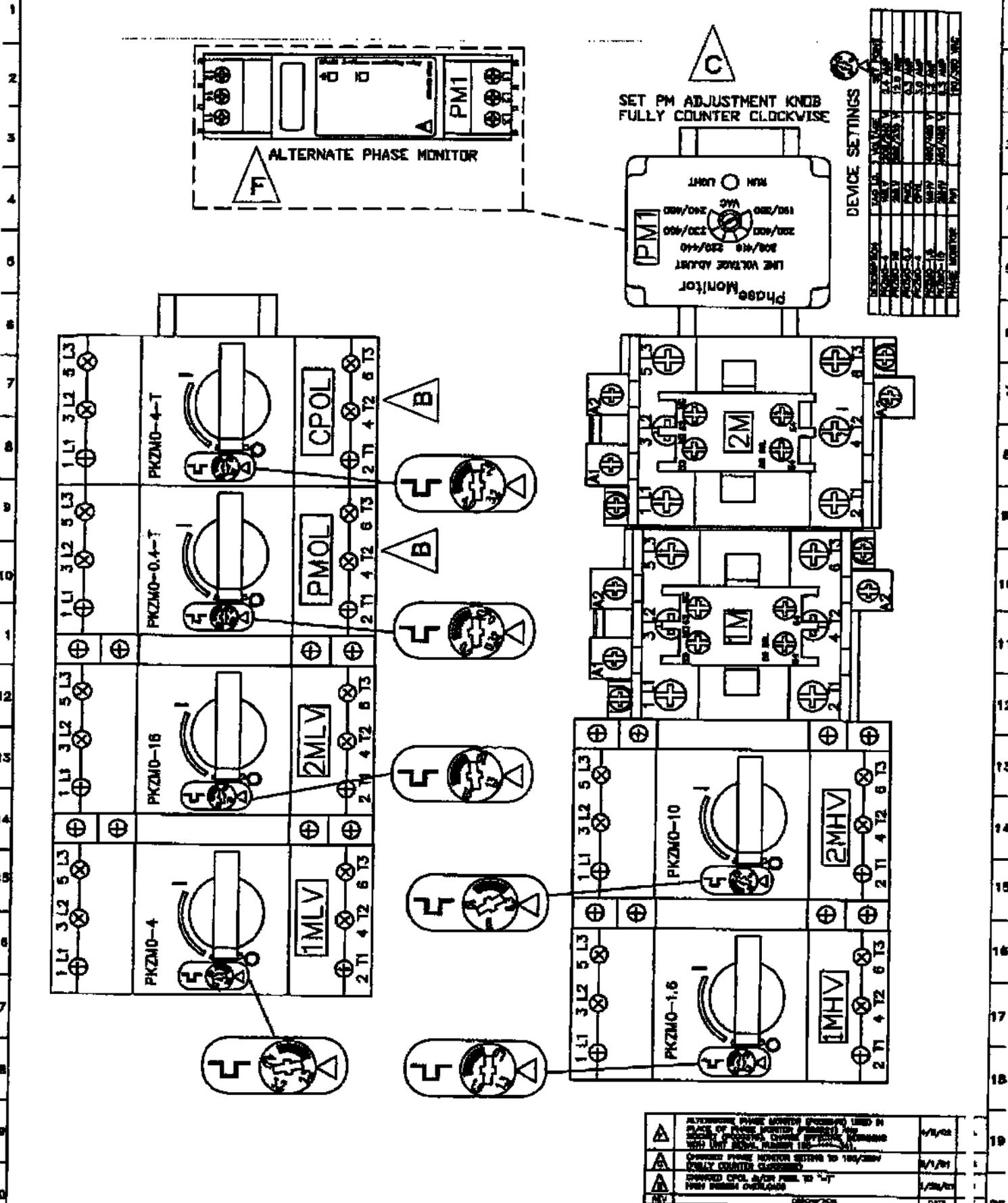
2 P002018 Enclosure / Hinge Kit

Wiring harness from compressor to panel
6-54 no plug cost Oscar 4/19/02

Fan Plug - into panel end of wiring harness
(plug for fan) male insert plug P000142
Metal Hsg Hood P000141

50Hz - left off + kit - Fuse FRS-R-1000600V pin P000092

A B C D E F G H I J K L M N O



REVISION	
1	ALTERNATE PHASE MONITOR PROVIDED USED IN PLACE OF PHASE MONITOR PROVIDED. THIS UNIT IS USED TO MONITOR PHASE MONITOR. (FITZALL)
2	CHANGE PHASE MONITOR SETTING TO 100/200V FULLY COUNTER CLOCKWISE.
3	CHANGED CPOL &/OR PHAS TO "T" FROM NORMAL OVERLOAD.
REV	DESCRIPTION
	DATE

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U.S. FILTER OKLAHOMA CITY, DATE 08/19/98 DWG. 505-0004 NO. P000185 SCALE NTS DRAWN OC
BLASTRAC OK 73121 U.S.A. 6-54D/C98 (FITZALL) SHEET 4 OF 4 **505-000**

OVERLOAD DEVICE SETTINGS

A B C D E F G H I J K L M N O

A

B

C

D

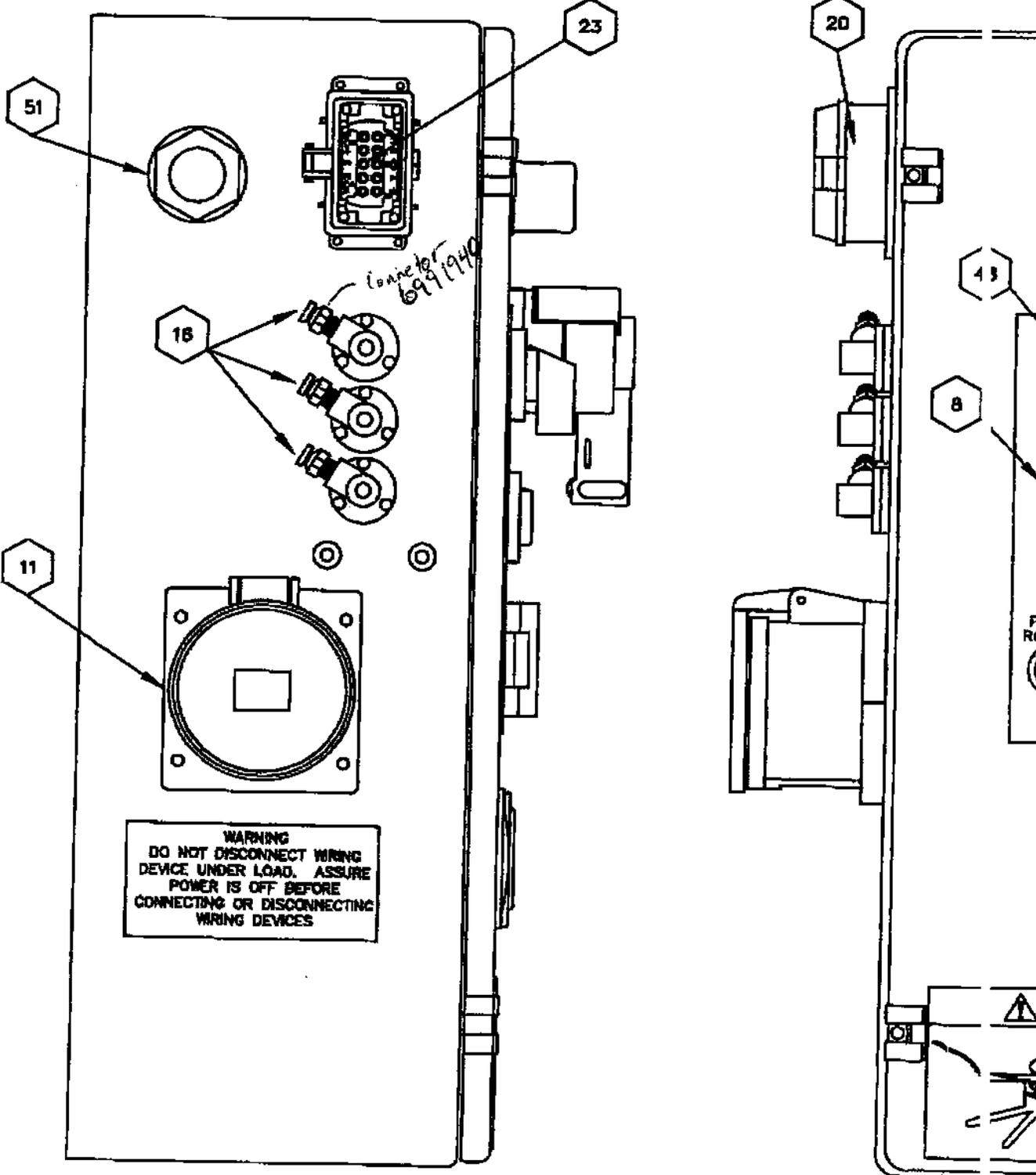
E

Left B

"DETAIL AA"

BRANCH CIRCUIT PROTECTION MUST BE PROVIDED BY INSTALLER PER NEC 430-53C)

SITE AND EQUIPMENT ELECTRICAL REQUIREMENTS	DUST COLLECTOR/BLAST UNIT COMBINATION			
	8-54/1-100	8-54/1-100 SUPER	8-54/1-150	6-5 7-150 PER
MIN. AMPERE CIRCUIT @ 208/230V	50 AMP	80 AMP	80 AMP	8 AMP
MAX. AMPERE CIRCUIT @ 208/230V	100 AMP	100 AMP	100 AMP	10 AMP
MIN. AMPERE CIRCUIT @ 480/480V	50 AMP	40 AMP	40 AMP	5 AMP
MAX. AMPERE CIRCUIT @ 480/480V	100 AMP	100 AMP	100 AMP	10 AMP
MIN. GENERATOR SIZE	30 KW	40 KW	40 KW	6 KW
MAX. BLAST FLA @ 208/230V	25.0 AMP	33.0 AMP	33.0 AMP	4.9 AMP
MAX. BLAST FLA @ 480/480V	12.5 AMP	16.5 AMP	16.5 AMP	2.2 AMP



A

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P RC

F

G

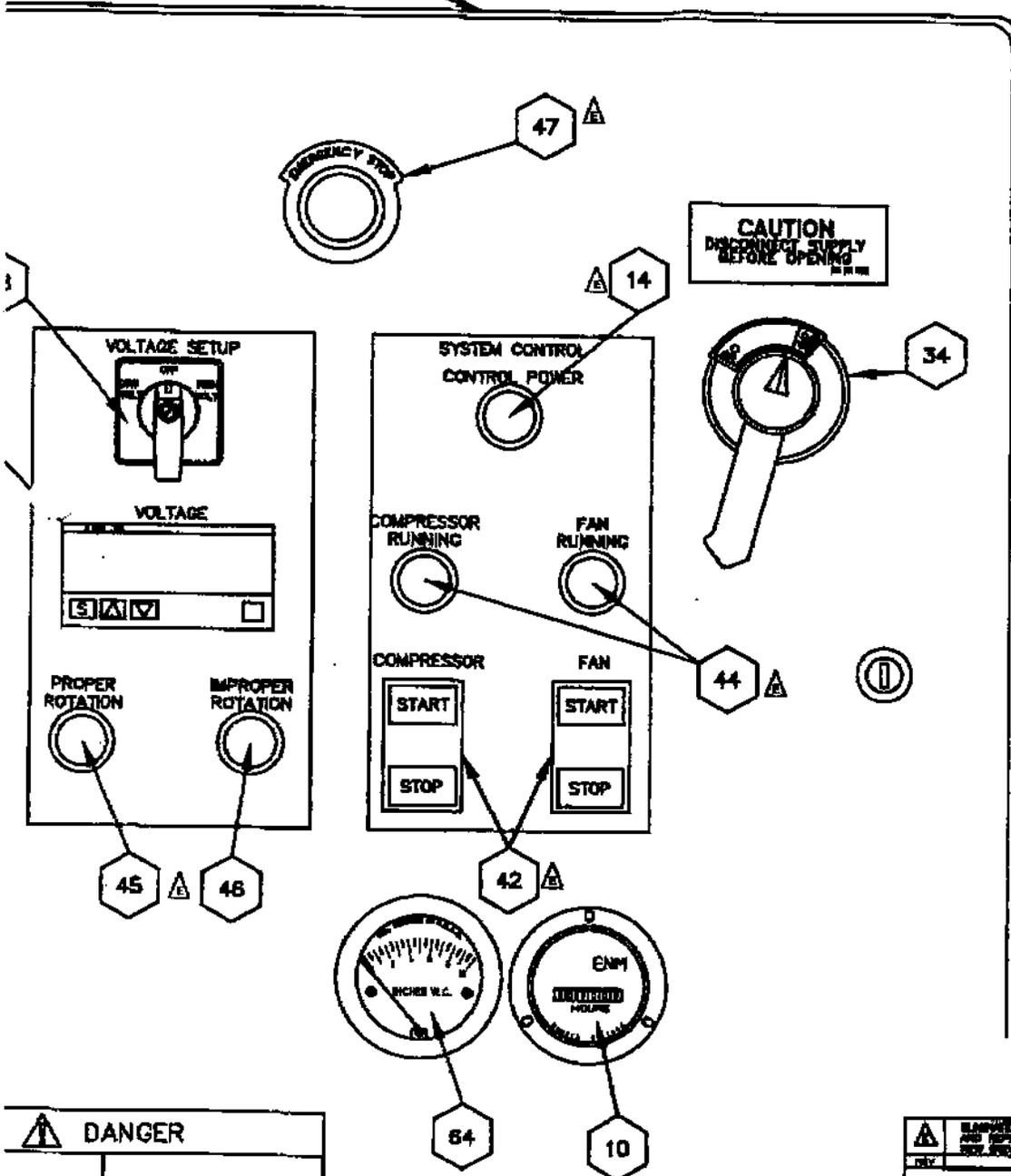
H

J

Right
B

- 7E
- PER
- AMP
- AMP
- AMP
- AMP
- XV
- AMP
- AMP

LOCATED TOP OF ENCLOSURE



CAUTION
DISCONNECT SUPPLY
BEFORE OPENING

⚠ DANGER

THIS MACHINE MUST BE EFFECTIVELY GROUNDED FOR OPERATOR SAFETY. SEE NATIONAL ELECTRIC CODE ARTICLE 250

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<p>U.S. FILTER</p> <p>BLASTING</p>	<p>REV: ALIMA VALLEY DRIVE OKLAHOMA CITY, OK 73121 U.S.A.</p>
<p>8-540C69 (FITZALL)</p> <p>OPERATOR PANEL</p>	<p>505-0004</p>
<p>SCALE: 1/8" = 1"</p> <p>PROJECTION: 1ST</p> <p>3 PL. DIM. ± .005</p>	<p>SCALE: 1/8" = 1"</p> <p>DATE: 05/21/07</p> <p>REV: 2 OF 4</p>

A

B

C

D

E

wbc

1

2

3

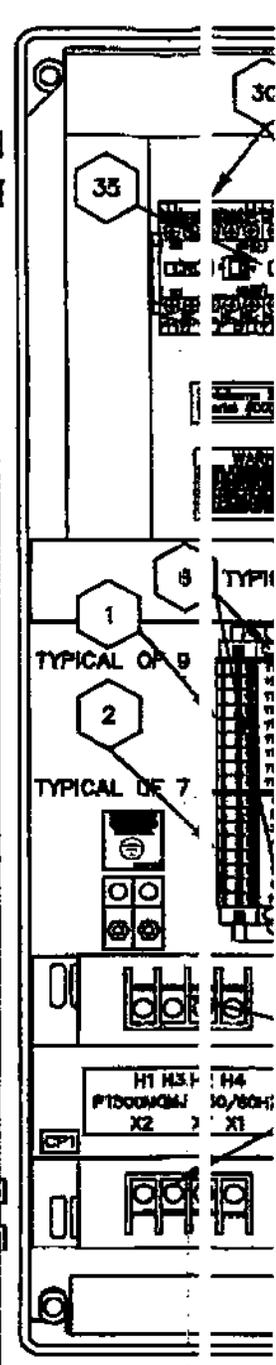
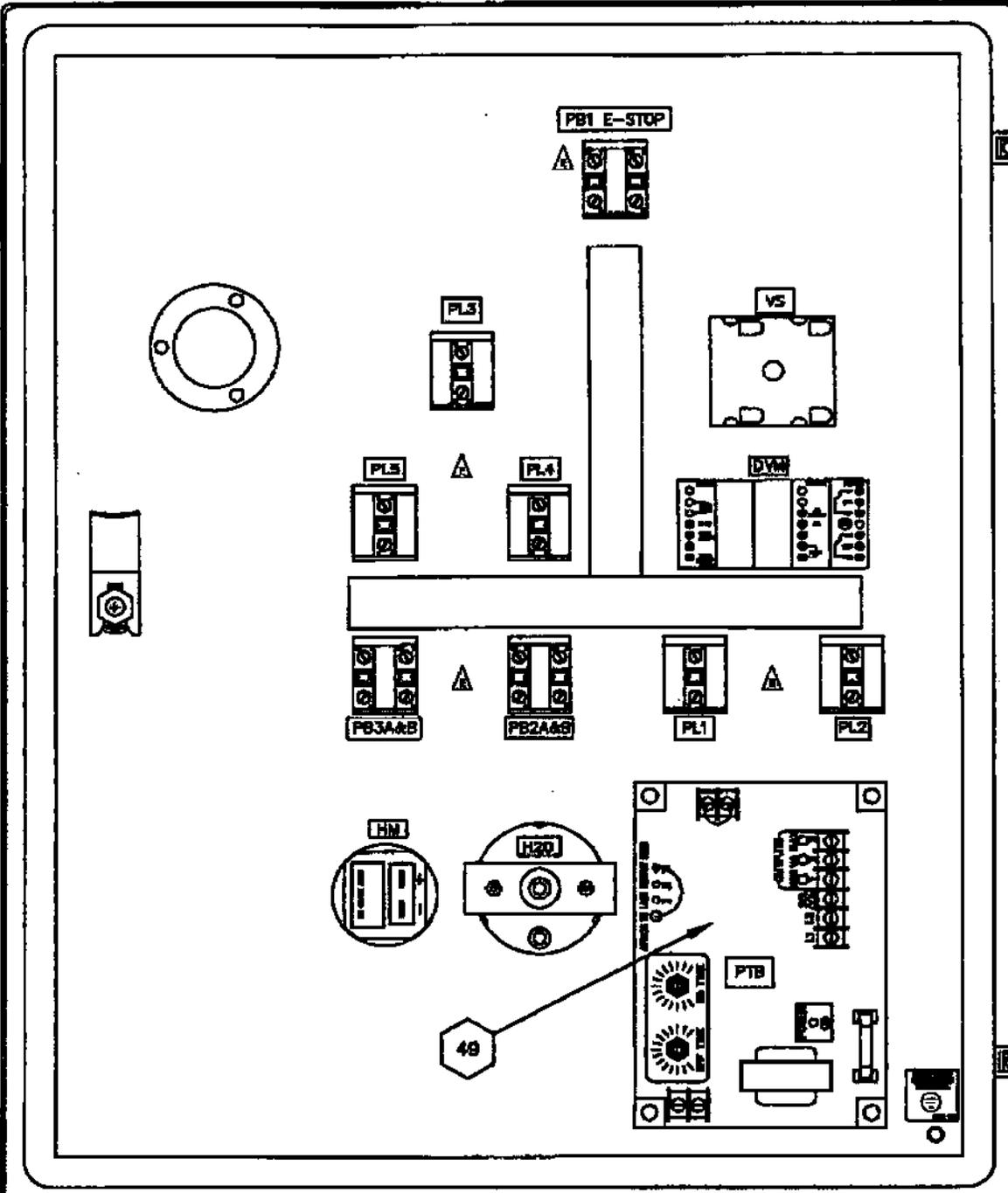
4

5

6

7

8



SEE SHEET FOR DETAILED OVERLOAD SETTINGS

A

B

C

D

E

