MOD-U-BLAST®

ABR BLAST ROOM & MECHANICAL RECOVERY SYSTEM

OPERATION & MAINTENANCE MANUAL



SUPERIOR PERFORMANCE

And Quality In Blast Cleaning Equipment

WARNING

READ MANUAL

Failure to read, understand & follow all safety and operation procedures in this manual can cause injury or death. Manuals that are lost, incomplete, or damaged, must be replaced immediately.

Manual # ABR1606

Ph: (780) 425-5510 **Fax: (780) 425-5540**

Copyright© 2014 Mod-U-Blast®, All Rights Reserved

Table of Contents

Important Notice 3
Blast Room and Mechanical Recovery Components. 4
General Characteristics 5
How the Mechanical Reclaim System Works. 5
Technical Specifications 5
Recovery System Start-up Procedure 6
System Control Panel 6
Air Wash Separator Adjustments. 7
Recovery System Shut-Down Procedure 8
Blasting Operation. 8
General Maintenance 9
Bucket Elevator Maintenance 9
Air Wash Separator & Screen Maintenance 9
General Maintenance Schedule. 9
Bucket Elevator Belt Tightening 10
Troubleshooting. 11
Warranty. 12

Copyright© 2014 Mod-U-Blast®, All Rights Reserved

Important Notice

TO DISTRIBUTORS, PURCHASERS AND END USERS OF MOD-U-BLAST PRODUCTS
The information provided described and illustrated in this material is intended for experienced, knowledgeable users of abrasive blasting equipment and supplies(products).

The products described in this material may be combined as determined solely by the user in a variety of ways and purposes. However no representations are made as to intended use, performance standards, engineering suitability, safe practices or compliance with government regulations and laws that apply to these products, products of others, or a combination of various products chosen by the user or others. It is the responsibility of the users of these products, products of third parties, and a combination of various products, to exercise caution and familiarize themselves with all applicable laws, government regulations and safety requirements.

Nor are representations made or intended as to the useful life, maintenance cycles, efficiency or performance of the referenced products of any combination of products. This material must not be used for estimating purposes. Production rates, labour performance or surface finishes are the sole responsibility of the user based on the user's expertise, experience and knowledge of industry variables.

It is the responsibility of the user to insure that proper and comprehensive training of operators has been performed and all environmental and safety precautions observed.

Mod-U-Blast Inc. provides a variety of excellent products to the surface preparation industry, and we are confident that all proficient users, operators and contractors in this industry will continue to use our products in a safe and knowledgeable manner.

Before using this product, read all instructions, literature, labels, specifications and warnings sent with and affixed to the unit.

If operation of the unit is unclear after reading this manual, contact your supervisor for instructions. It is the responsibility of the employer to read the following instructions to users of this equipment. Periodic inspection at the work site should be made by supervisory personnel to ensure the blast machine is being properly used and maintained. A copy of this owner's manual must be kept with the blast machine and readily accessible to the blast machine operators at all times.

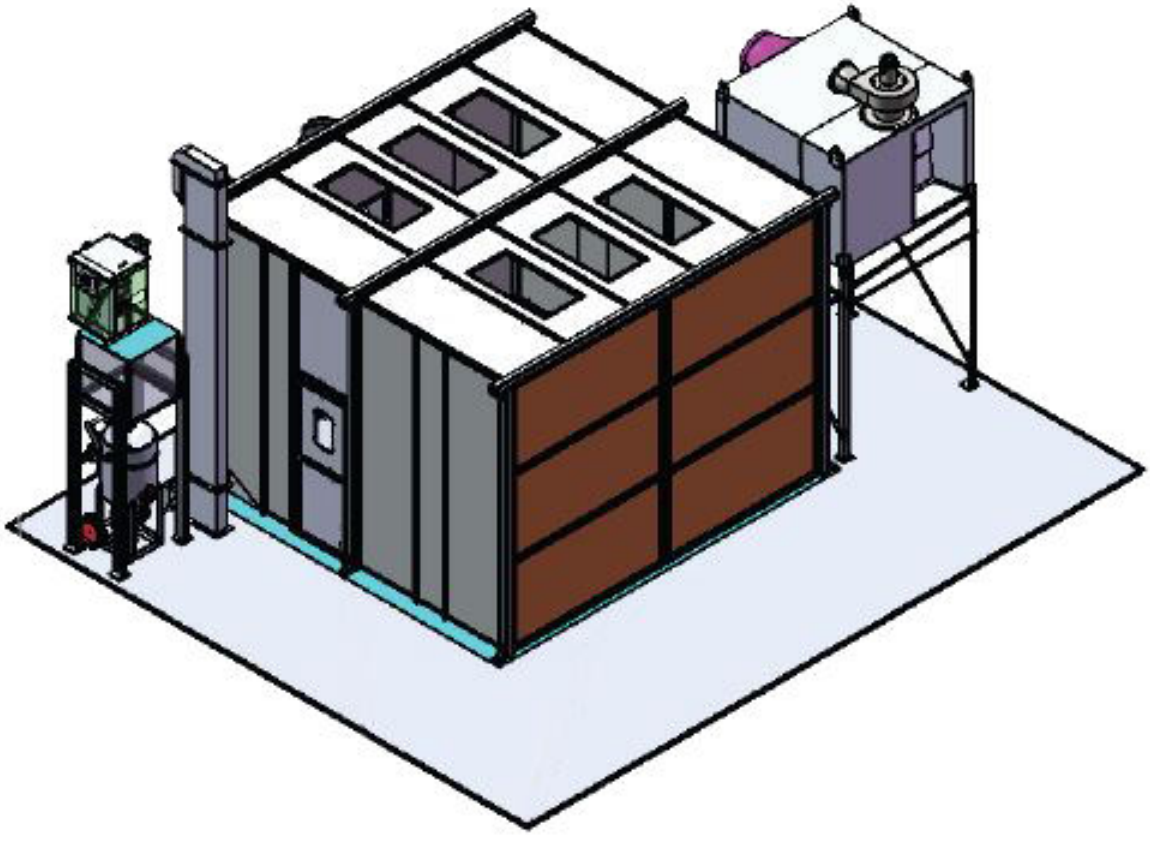
MOD-U-BLAST®

Copyright© 2014 Mod-U-Blast®, All Rights Reserved

Blast room & Mechanical Recovery Components

- Blastroom - powder coated white 10 ga. steel (various sizes)
- One bucket elevator with gear reduction motor
- One screw conveyor (auger) with gear reduction motor
- One air wash with gear reduction motor
- One 20 cu.ft. media hopper
- One electrical control panel
- Safety Interlock System
- One Dust Collector (if supplied)
- Blast Pot (MBM6.5-SRE) with Spider, Lid & Operators Manual
- Accessories Kit (i.e. blast hose, coveralls, helmet, breathing air etc.)
- Air Supply Tree and Hoses (additional costs)
- Blow Off Lance (optional)
- High Flow Regulator (optional)
- Dust Collector Muffler (optional)
- 45 Gallon Waste Drum for Dust Collector (optional)
- 5 Gallon Waste Pail (optional)

This system listed above is the most typical assembly blast pot model may vary.



Copyright© 2014 Mod-U-Blast®, All Rights Reserved

General Characteristics

This mechanical recovery blast room has been designed for blasting, cleaning & recycling of different types of media by using an auger, bucket elevator, air wash, storage hopper. (dust collector if supplied)

The efficiency of this system depends on the effectiveness of its components, which require a maintenance program. To that effect, this manual includes a description of the different components and a schedule for the minimum maintenance required.

ABSOLUTLEY NO MOISTURE CAN BE ALLOWED TO ENTER ANY COMPONENT OF THIS SYSTEM AT ANY TIME

How the Mechanical Reclaim System Works:
With the system running, the used media is shoveled into the auger and travels from there into the bucket elevator which lifts and unloads the media into the air wash classifier. Inside the air wash the used media passes through a screen and builds a curtain to allow air to pass through the used media taking the dust away to the dust collector leaving the good media to fall into the 20 cubic foot hopper and then loaded into a blast pot to reuse again.

Control Panel Voltage	See tag on bottom right corner
Hopper Capacity	20 cubic feet
Bucket Elevator Motor Power	1.5 HP
Screw Conveyor Motor Power	1.5 HP (2 HP on screws 16' or more)
Air Wash Motor Power	0.5 HP
Dust Collector (if supplied)	CFM (depends on size of room)

MOD-U-BLAST®

For Service Call:
1-800-661-3842

Copyright© 2014 Mod-U-Blast®, All Rights Reserved

Recovery System Start-up Procedure

ALL COMPONENTS IN THIS SYSTEM MUST BE ON BEFORE INSERTING USED MEDIA INTO THE SCREW CONVEYOR.

Startup Procedures:

1. Turn the main power switch to the on position - The power light will illuminate.
2. To start the system, push the green buttons for each component starting from top to bottom. (the control panel will only allow you go in this order).
3. The system is now ready to recycle the used media.

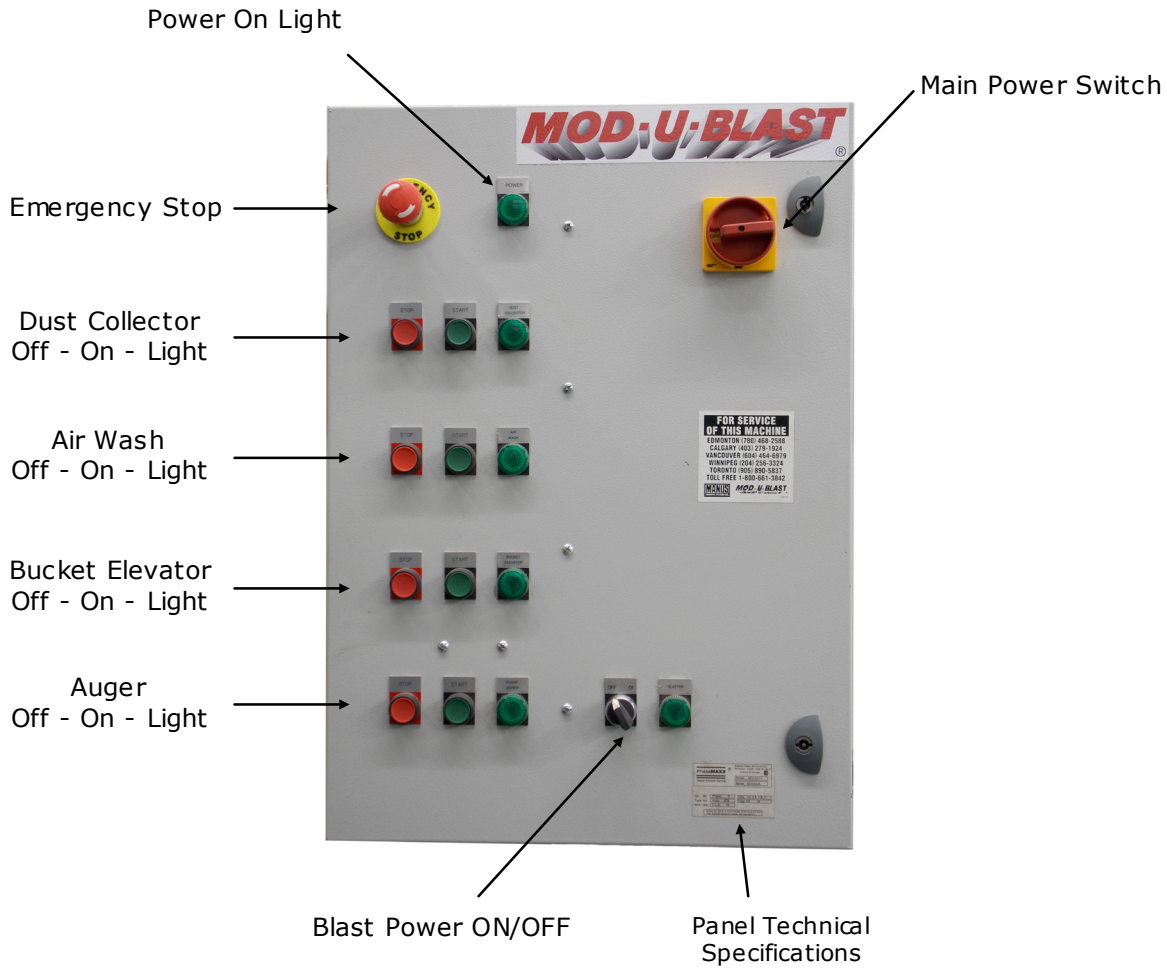
- Shovel the blast media into the auger. ***(see the following page for first time air wash & damper adjustment once the media starts to flow through the system)***

THE DUST COLLECTOR HOPPER WASTE VALVE MUST REMAIN CLOSED DURING THE RECYCLING PROCESS UNLESS THE SYSTEM IS SEALED INTO A WASTE COLLECTOR.

DO NOT USE THE EMERGENCY STOP BUTTON TO SHUT THE SYSTEM DOWN UNLESS THERE IS AN ACTUAL EMERGENCY.

System Control Panel

*This is a normal control panel for a Mod-U-Blast Mechanical Recovery Blastroom.



Copyright© 2014 Mod-U-Blast®, All Rights Reserved

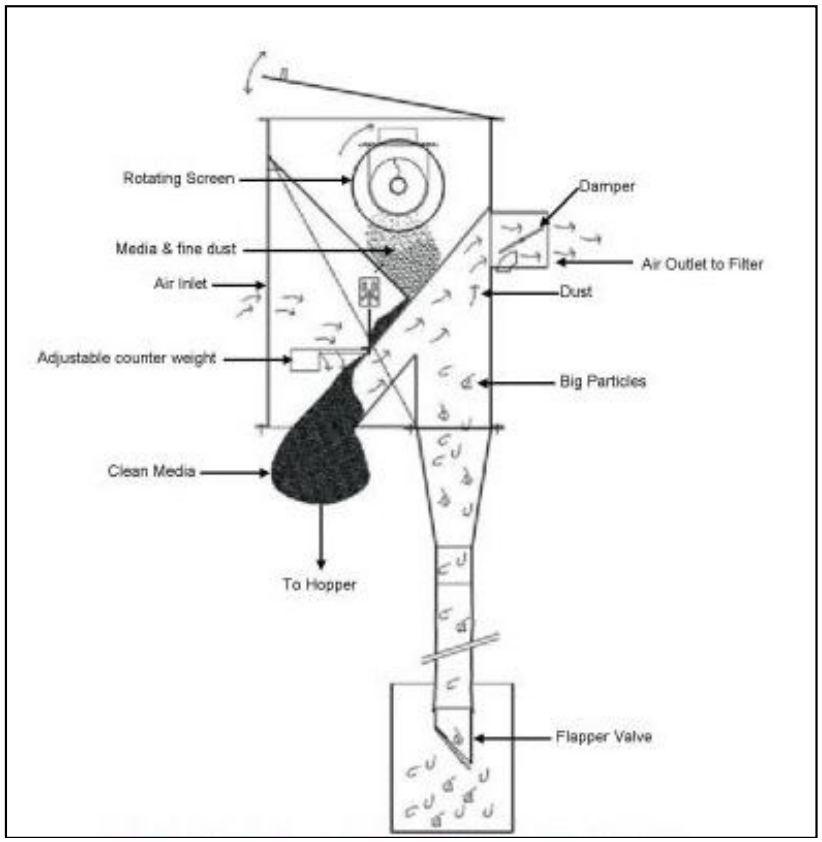
Air Wash Separator Adjustment

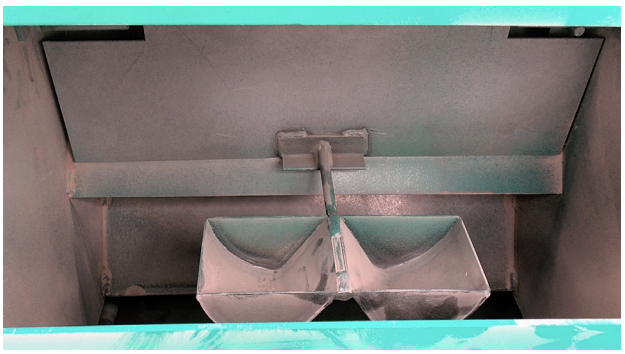
The bucket elevator carries the used media to the air wash separator to be cleaned of dust and big particles and return good media to the storage hopper.
ONCE THE MEDIA STARTS FLOWING THROUGH THE SYSTEM THE AIR WASH SEPARATOR CURTAIN NEEDS TO BE SET TO INSURE PROPER DUST REMOVAL.

Air Wash Setup:
Big particles are removed in the rotating screen and the media and dust fall through which produces a uniformed curtain. It is very important that the curtain created be the maximum width of the separator, so the slide gate is adjusted to a 1-1/2" gap (from the factory). Media must be added to the counter weights (Fig. 12) to achieve a full width curtain. (Approx. 1/3 full when cleaning Garnet) **NOTE: LOADING THE COUNTER-WEIGHT IN EXCESS PREVENTS THE ABRASIVE FROM FALLING FREELY.**

The air goes through the curtain and separates the dust form the good media.(The more even the curtain - the better the dust removal).
The 6" suction outlet to the dust collector (damper controlled) should be regulated so that the waste container under the dust collector only retains dust and a small quantity of abrasive. **(IF THE DAMPER IS OPEN TO FAR GOOD MEDIA WILL START TO POUR OUT OF THE 4" HOSE FOR THE BIG PARTICLES).**

How the Airwash Works:





Copyright© 2014 Mod-U-Blast®, All Rights Reserved

Recovery System Shut-down Procedure

See the control panel layout in (on page 6).

Shutdown Procedures:

After finishing recycling the used media let the system run for approx. 2 minutes to clear out the screw conveyor, bucket elevator and air wash.

To stop the Recovery System, push the red stop button for each component starting from bottom to the top. (the control panel will only allow you go in this order).

DO NOT USE THE EMERGENCY STOP BUTTON TO SHUT THE SYSTEM DOWN UNLESS THERE IS AN ACTUAL EMERGENCY

Blasting Operations

READ THE BLAST POT MANUAL FOR THE PERTINENT SAFETY AND OPERATION INSTRUCTIONS BEFORE BLASTING.

1. When blasting, only the blast room dust collector needs to be switched on. (The mechanical recovery equipment can remain off during blasting)
2. Turn the blast power switch to the on position to energize the deadman (see control panel page 6)
3. Both the man door and the large blast room doors need to be closed in order for the blast to work. The doors are equipped with safety interlocks that prevent the blasting from occurring should the doors be left open or opened during blasting.
4. Proper safety gear and breathing equipment must be used while blasting (see blast pot manual for all safety requirements
5. Follow 'Blasting Operations' as laid out in the blast pot manual.
6. When finished blasting blow excess media from the parts with the blow-off lance (if supplied)
7. Then exit from the blast room, close the door, and switch off the blast power keeping the dust collector on to clear out any excess dust that might still be airborne.
8. Once the dust has cleared then shut down the dust collector.
9. The equipment or parts that were blasted can now be safely removed.
10. More items can now be loaded for blasting or the complete mechanical recovery system can be activated to reclaim the used media. (Follow the steps for media recovery on page 6)

MOD-U-BLAST®

For Service Call:
1-800-661-3842

Copyright© 2014 Mod-U-Blast®, All Rights Reserved

General Maintenance



BEFORE ATTEMPTING ANY MAINTENANCE DISCONNECT & LOCK OUT THE POWER SUPPLY FIRST.

Remember that periodic and precise inspections are essential to the preventative maintenance needed for the correct functioning of this equipment. The preventative maintenance minimizes the cost of material and down time.

Bucket Elevator Maintenance

AFTER THE FIRST 10 HOURS OF OPERATION, the elevator belt tightness should be adjusted due to some initial stretching. (When the system is empty there should not be a noise coming from the buckets 'clanging' against the inside of the elevator - if there is, then the belt needs to be adjusted). (see next page for instructions)

It is a good rule to tighten the belt after every extra 50 working hours. To avoid damaging the belt do not tighten excessively; a moderate tightness is preferred.(The belt can be checked through the hatch on the front side of the elevator. Periodically inspect the belt and the condition of the buckets and the pulleys.

Air Wash Separator & Screen Maintenance:

Remove the waste from the container where the flapper valve discharges the large pieces. Make sure this container is not full of good media, if so then the outlet damper on the air wash will need to be closed more.

Verify the condition of the interior screen and remove any element which may block the air wash system.

General Maintenance Schedule

PREVENTATIVE MAINTENANCE	HOURLY PERIODS		
	50 HRS	100 HRS	200 HRS
CHECK TIGHTNESS OF ELEVATOR BELT **	√		
LUBRICATE ALL BEARINGS	√		
CHECK OIL LEVEL IN GEAR BOXES	√		
INSPECT ELEVATOR BUCKETS		√	
INSPECT UPPER PULLEY OF ELEVATOR			√
INSPECT LOWER PULLEY OF ELEVATOR			√

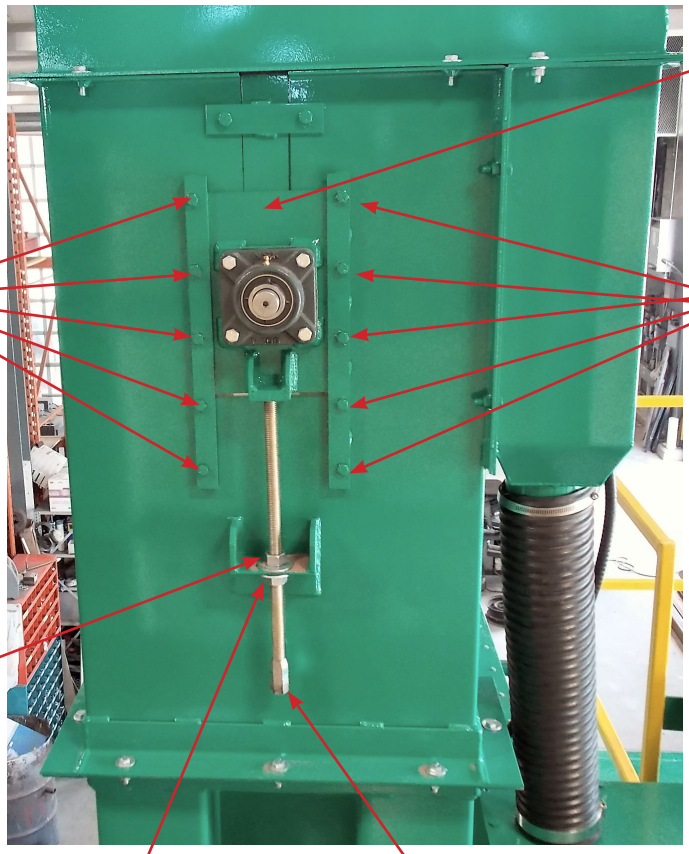
****MUST BE TIGHTENED AFTER THE FIRST 10 HOURS OF USE.**

Copyright© 2014 Mod-U-Blast®, All Rights Reserved

Adjusting the Bucket Elevator Belt:

This is the most difficult, time consuming and crucial part of the continued operation of the mechanical recovery system.

1. Disconnect the power supply.
2. Loosen the adjustment guide bolts (1.) on each side of the elevator (do not remove)
3. Loosen off the bottom locking nut (2.) on each side of the elevator.
4. While holding the top nut (3.) turn the adjustment bolt (4.) to move the slider upwards which will tighten the belt.(Exactly the same amount of turns must be done on both sides to insure proper belt tracking) **DO NOT OVER TIGHTEN THE BELT**
5. Once the belt has been adjusted then tighten the locking nut on the adjustment bolt and tighten the guide bolts.
6. When everything is tight then open the lid on top of the bucket elevator. Connect the power and start the system **- WHILE THE SYSTEM IS RUNNING SOMEONE NEEDS TO WATCH THE BELT TRACKING AT THE TOP OF THE BUCKET ELEVATOR.** The belt needs to run straight on the wheel - if it starts to wander to one side then shut the system down, loosen the adjustment guides and adjust the side that the belt is tracking towards up to the top and check again. When the belt tracks straight for 2 minutes then close the lid.
7. The system is ready to operate.

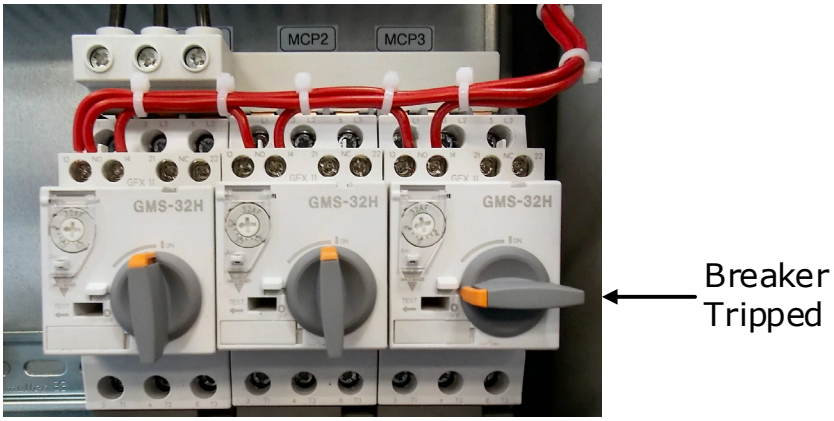




Copyright© 2014 Mod-U-Blast®, All Rights Reserved

Trouble Shooting

PROBLEM	POSSIBLE CAUSE	REMEDY
Control panel won't power up but power light is on	Emergency switch pushed in	Check emergency switch by twisting clockwise lightly
	Breaker tripped	Open control panel to see if a break has tripped (see picture below) - nothing will run if one is tripped and there may be a problem with the component controlled by that breaker - check that component - refer to the schematic inside the control panel door
Air wash media curtain not all the way across	Counter weights too light	Add media to the counter weights until an even curtain is achieved from side to side
Good media coming out of the junks hose	Damper on air wash open to far	Close damper enough to stop the media from the junks hose
Dust collector won't pull any air	Dust collector filters are plugged	Replace filters
Too much good media in dust collector	6" damper on the back of the air wash open to far	Close damper down enough to achieve mostly dust going to the dust collector



MOD-U-BLAST®

For Service Call:
1-800-661-3842

Copyright© 2014 Mod-U-Blast®, All Rights Reserved

Warranty

Mod-U-Blast equipment is covered by a one (1) year warranty against defects in material and workmanship starting from the purchase date. This covers the equipment as well as all major components.

This warranty does not apply to abnormal use of the equipment or parts. Parts considered consumables are not covered by warranty.

Claims will be honored only if the warranty card is returned within a period of two (2) months from the factory shipping date.

The card can be returned to your Mod-U-Blast salesperson or mailed to the address below.

In the event of failure of this equipment
please contact a Mod-U-Blast service centre
or call (780) 425-5510.

MOD-U-BLAST®

403 - 69 Avenue NW
Edmonton, Alberta
Canada
T6P 0C2
PH: (780) 425-5510 FAX: (780) 425-5540

Copyright© 2014 Mod-U-Blast®, All Rights Reserved