

	BLAST-IT-ALL® LEADING THE INDUSTRY IN SURFACE PREPARATION EQUIPMENT	HESS MANUFACTURING, INC. 185 Piper Ln. Salisbury, NC 28147 (800) 535-2612 LIVE CHAT- www.blast-it-all.com
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MANUAL NUMBER: MM-583

SHOT PEENER MACHINES



**** WARNING ****

DO NOT USE SAND. SAND WILL CAUSE SILICA DUST, WHICH IS THE CAUSE OF SILICOSIS DISEASE, A CONDITION OF MASSIVE FIBROSIS OF THE LUNGS. THIS STATEMENT INDICATES A POTENTIAL PERSONNEL HAZARD. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY.

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1-1 INTRODUCTION

1-2 PURPOSE AND SCOPE

This publication contains operation and maintenance instructions, with illustrated parts breakdown, for the ABC Abrasive Dry Blast Cabinet.

1-3 GENERAL INFORMATION

This machine is designed primarily for the cleaning and peening process with heavy media; for shot peening or when cutting action is required. The gun pressure and media is determined by the application. Additionally, the blast cleaning and peening machine has following applications:

- A. Increase tensile strength and relieve stress by microscopic bombardment.
- B. Remove burrs following machining or grinding operation, subminiature space age, or large castings.
- C. Products a metallurgical clean surface for plating, painting and other processes.
- D. Increase tool life by blending minute surface imperfections.
- E. Improve releasing characteristics of molds and dies which process glass, rubber, and plastic parts.
- F. Enhance lubrication by imparting a microscopically controlled dimpled surface.
- G. Retain critical dimensions while producing above results.
- H. Reclaim and recondition parts by removing paint, rust, corrosion, etc. This process is also used on rubber, fiberglass, and plastics. The Blast Cleaning and Peening Machine is of the enclosed type. Parts for processing are loaded into the cabinet through doors on the right or left sides of the unit. The operator's hands are inserted into a pair of gloves connected to the unit. The gloves serve both to protect the operator and to retain the media in the enclosure. Observation of the parts in process is through a glass window in the cabinet front. The unit contains a sealed, two tube, fluorescent light which illuminates the work area when electric power is on. The media for abrasive blast cleaning or bead peening is propelled by externally supplied air pressure. The air pressure is routed through a moisture separator, pressure regulator, and control valves to the blast nozzle.

1-4 COMPRESSED AIR REQUIREMENTS

Table #1-1

<u>Orifice</u>	<u>CFM Volume</u>	<u>PSIG</u>
No. 4	80	80
No. 5	120	80

EQUIPMENT DESCRIPTION AND FUNCTIONS

BLAST GENERATOR

The 100-lb. capacity, 1.0 cubic foot blast generator, or pressure pot is ASME coded and should not be field modified. It's semi-automatic controls' function in response to the foot treadle. When the foot valve is depressed, the pot is pressurized with supply air to allow blasting. When the foot treadle is released, air supply to the blast generator is shut off. This allows the pot to discharge; thus depressurizing the pot and allowing a new charge of media to enter the vessel.

TROUBLE SHOOTING

MACHINE:

1. The media and debris are not conveyed through the screen drawer to the pressure tank.
 - A. Screen drawer blocked
2. Failure to accumulate media in reservoir above blast generator
 - A. Excessive carry-over into dust collector. Adjust on dust collector.
 - B. Trash screen below hopper blocked.
 - C. Moisture or oil in lines has contaminated media, and media will not flow.
3. Air blast but no media flow.
 - A. Pot is empty.
 - B. Media is wet and will not flow.
 - C. Media metering valve is plugged or closed.
4. Reduced pressure at nozzle, with or without media flow.
 - A. Insufficient air compressor
 - B. Media flow valve open too far.
 - C. Pop-up valve in pressure pot not sealing.
 - D. Poor sealing in blow-down valve.
 - E. Choke valve closed too far.
 - F. Inspect air hose connection and fittings for leaks.
 - G. Check air filter for water accumulation and foreign material
Build up on filter.

WARNING

DO NOT WELD ON BLAST MACHINE. THIS VOIDS NATIONAL BOARD APPROVAL AND CERTIFICATION.

FAULT ISOLATION

Symptom	Probable Cause	Solution
Fogging Cabinet	1. Dirty Dust Bag. 2. Fan Rotation wrong.	Clean or Replace Bag Check
Abnormal Media Consumption	1. Improper Exhaust hook-up.	Check connection Between dust separator And dust bag.
Reduction of Cleaning	1. Low media level. 2. Reduced Air Pressure. 3. Media Hose Clogged. 4. Dirty exhaust bag. 5. Wet media 6. Worn blast nozzle.	Fill as required Check Air System Pressure. Inspect hose for work places or soft spots. Clean or replace bags. Purge system and refill. Inspect and replace or adjust as required.

SAFETY SUMMARY

The following are general safety precautions that personnel must understand and apply during the operation and maintenance to ensure personnel safety and health. Portions of this information may be included in certain sections of this manual for emphasis. Specific precautions may be included in the text potentially hazardous operations in the form of warning or caution statements.

KEEP AWAY FROM LIVE CIRCUITS.

Operating personnel must at all times observe safety regulations. Do not replace components with the voltage supply turned on. To avoid injuries, always remove power and ground a circuit before touching it.

DO NOT WEAR JEWELRY.

Remove rings, watches, and other metallic objects that may cause shock or burn hazards.

DO NOT SERVICE OR ADJUST ALONE.

Do not attempt internal service or adjustment unless another person capable of rendering aid and resuscitation is present.

MAINTENANCE

1 Before Each Use:

- A. Check moisture trap and drain if needed
- B. Visually inspect machine for any unsafe condition
- C. Turn on compressed air supply
- D. Turn on electricity

2 After Each Use:

- A. Turn off blower fan
- B. Activate shaker valve on dust collector
- C. Turn off electricity
- D. Turn off compressed air supply
- E. Drain moisture trap

3 Daily Inspection:

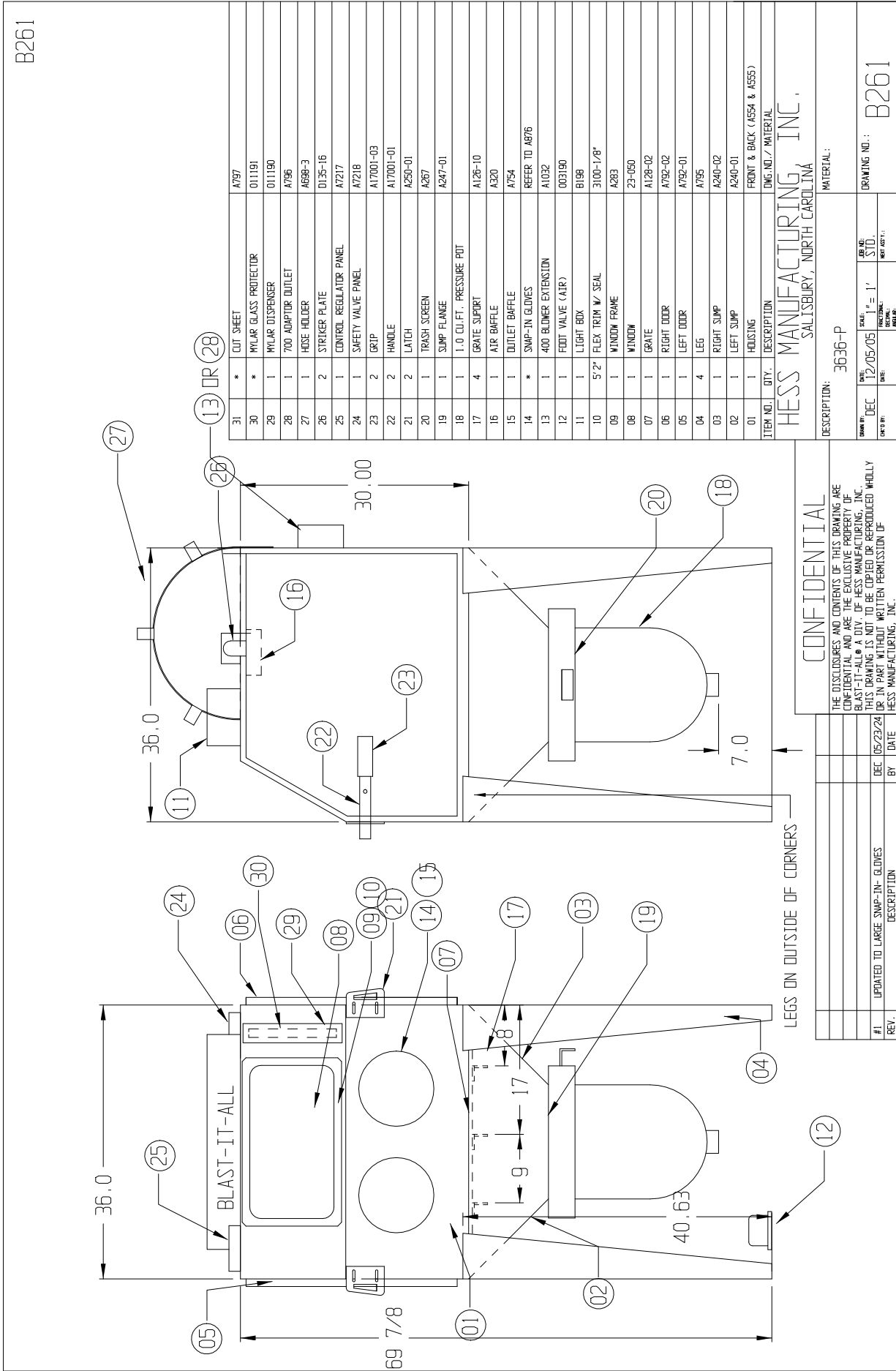
- A. Clean trash screen and empty.
- B. Empty dust bag or dust collector

4 Weekly Inspection:

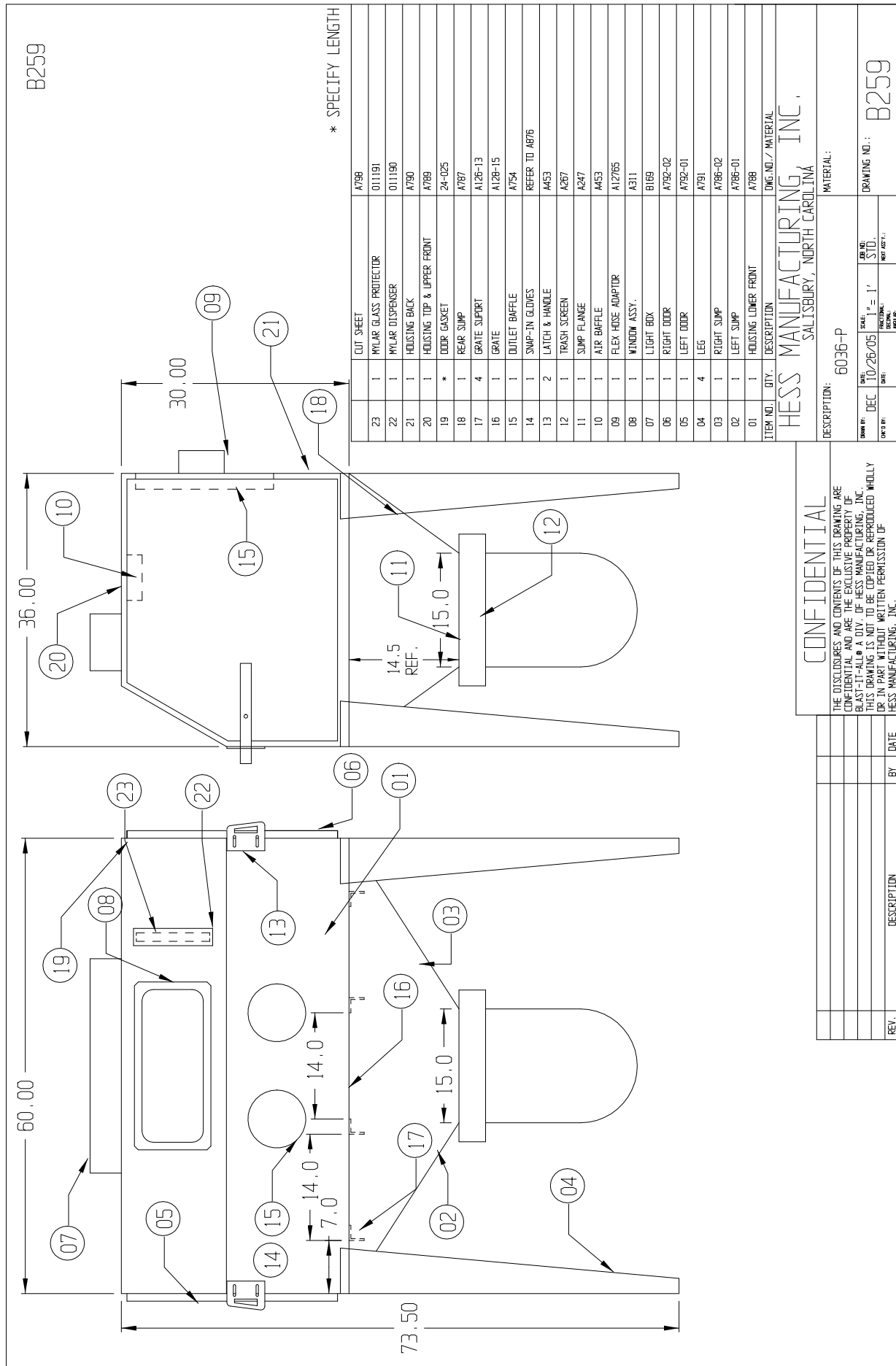
- A. Dust bags in dust collector
- B. Blast nozzle for wear
- C. Machine door gaskets
- D. Reclaimer door gasket
- E. Air hoses for leaks and loose clamps
- F. Blast hose for holes or soft spots

5 As Needed:

- A. Add media
- B. Replace bags
- C. Replace worn gloves
- D. Replace window
- F. Replace any worn or defective blast parts
- G. Replace gaskets
- H. Replace hoses







4

3

2

1

861BWB198--

MODIFICATIONS:

ZONE:	REV:	DESCRIPTION:	DATE:	BY :
	A	INITIAL RELEASE	9/16/2024	MTS

1

BLAST-IT-ALL

2

LITTLE BLASTER

3

MAGNUM

4

5

6

7

8

9

9	1	LIGHT BOX WNDW FRM	A506
8	1	PROTECTOR, LIGHT	23-058
7	1	GASKET	23-059
6	2	24 IN LED TUBE	13-533-LED-TB
5	1	24 IN LED FIXTURE (NO TUBE)	13-533-LED-WT
4	*	PLATE, BODY, BLANK * 18G HRPO	B198A-01-BLK
3	*	PLATE, BODY, MAGNUM * 18G HRPO	B198A-01-MAG
2	*	PLATE, BODY, LITTLE BLASTER * 18G HRPO	B198A-01-LIT
1	*	PLATE, BODY, BLAST-IT-ALL * 18G HRPO	B198A-01-BIA
#:	QTY:	DESC/ MAT:	PRT#:

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HESS MANUFACTURING, INC.

185 PIPER LANE, SALISBURY, NC 28147-7949

P: 1.800.535.2612 ■ F: 1.704.638.9311 ■ WWW.BLAST-IT-ALL.COM

TITLE / DESC:	LIGHT BOX ASSY	SIZE:	B
	STD		
		DWG#	--SWMB198
		DREV:	01
		PART#	SWMB198
		XXXX:	A
DWG BY:	T.SHUE	DATE:	9/16/2024
MAT:	PER DRAWING	SHT#:	1 OF 1
		SCALE:	1:8
		DWG TYPE:	

4

3

2

1

861BWB198--

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	STD		
		DWG#	--SWMB198
		DREV:	01
		PART#	SWMB198
		XXXX:	A
DWG BY:	T.SHUE	DATE:	9/16/2024
MAT:	PER DRAWING	SHT#:	1 OF 1
		SCALE:	1:8
		DWG TYPE:	

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MM583 v01 of 01 10/03/23

Page 10

HESS MANUFACTURING, INC.

DESCRIPTION

STANDARD MACHINE REPLACEMENT PARTS

DATE
05/09/06

ENGINEER
DEC

DWG. NO.
M157

Diagram showing exploded view of machine components with callouts 01 through 12. Components include window frame, viewing window, gasket, door strikers, door cam, door cam rubber grip, door gasket, Mylar glass protector, Mylar holder, safety valve panel, control regulator panel, and safety door control arm.

ITEM NO.	PART NO.	DESCRIPTION
1	23-053	WINDOW FRAME
2	23-050	WINDOW, VIEWING
3	24-059	WINDOW GASKET (SPECIFY LENGTH)
4	15-730	DOOR STRIKER (EITHER SIDE)
5	15-719	DOOR CAM (EITHER SIDE)
6	15-720	DOOR CAM RUBBER GRIP
7	-----	DOOR GASKET (REFER TO CHART #1)
8	011191	MYLAR GLASS PROTECTOR
9	011190	MYLAR HOLDER
10	A117	SAFETY VALVE PANEL
11	A7170	CONTROL REGULATOR PANEL
12	A237	SAFETY DOOR CONTROL ARM

CHART #1

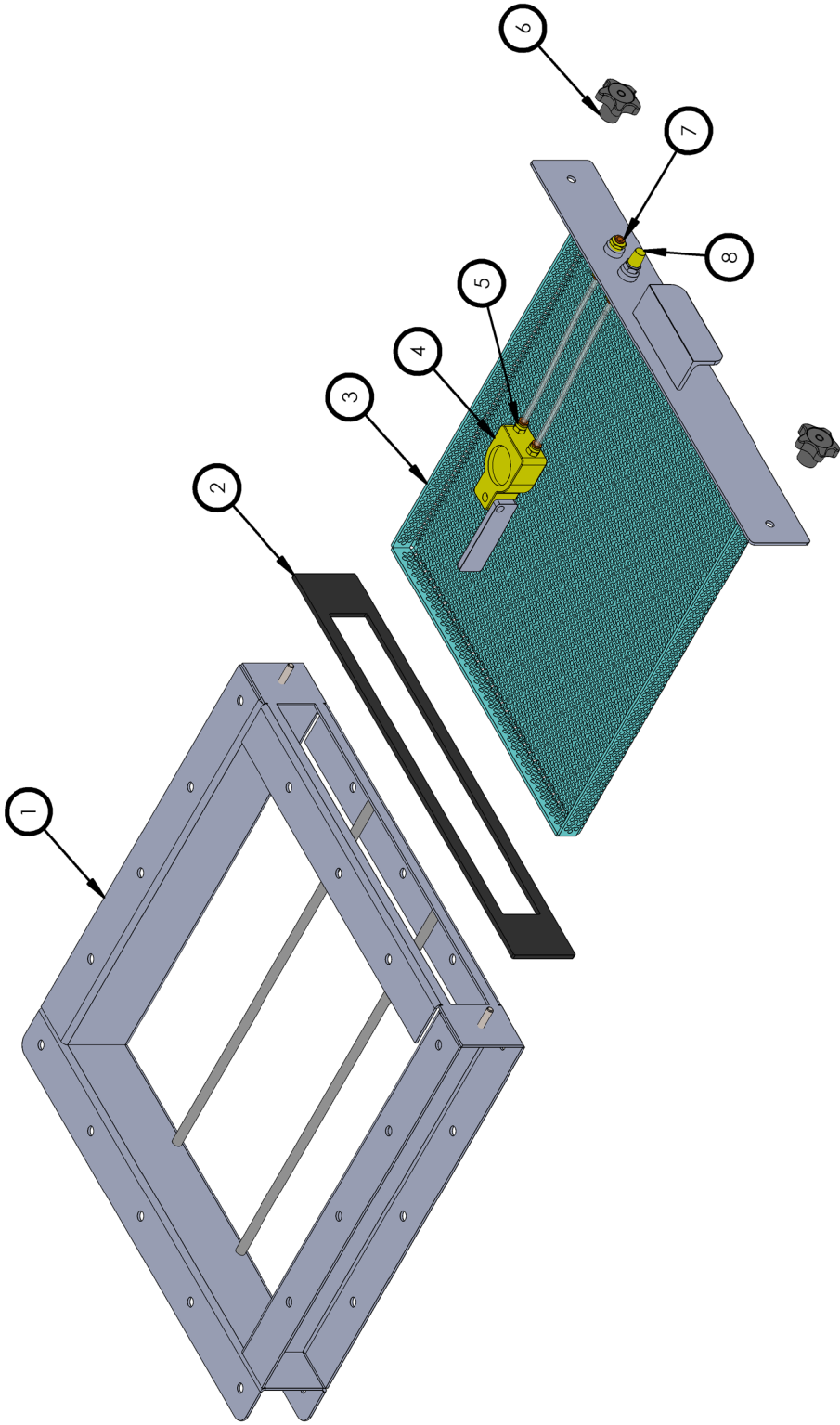
MACHINE MODEL	DOOR GASKET NO.
3636	24-025-12'
4836	24-025-13'
6036	24-025-13'

* EACH DOOR

[illegible]

C:\Users\Todd Shue\Documents\TODD\SW_PARTS\SWA267 - TRASH SCREEN ASSY
LAST SAVED: Wednesday, June 11, 2025 2:44:13 PM

--A267-M



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TITLE / TRASH SCREEN ASSY 010580
DESC: STD

SIZE: B

DWG #
DREV: 01

SIZE: B

PART #
A267-M

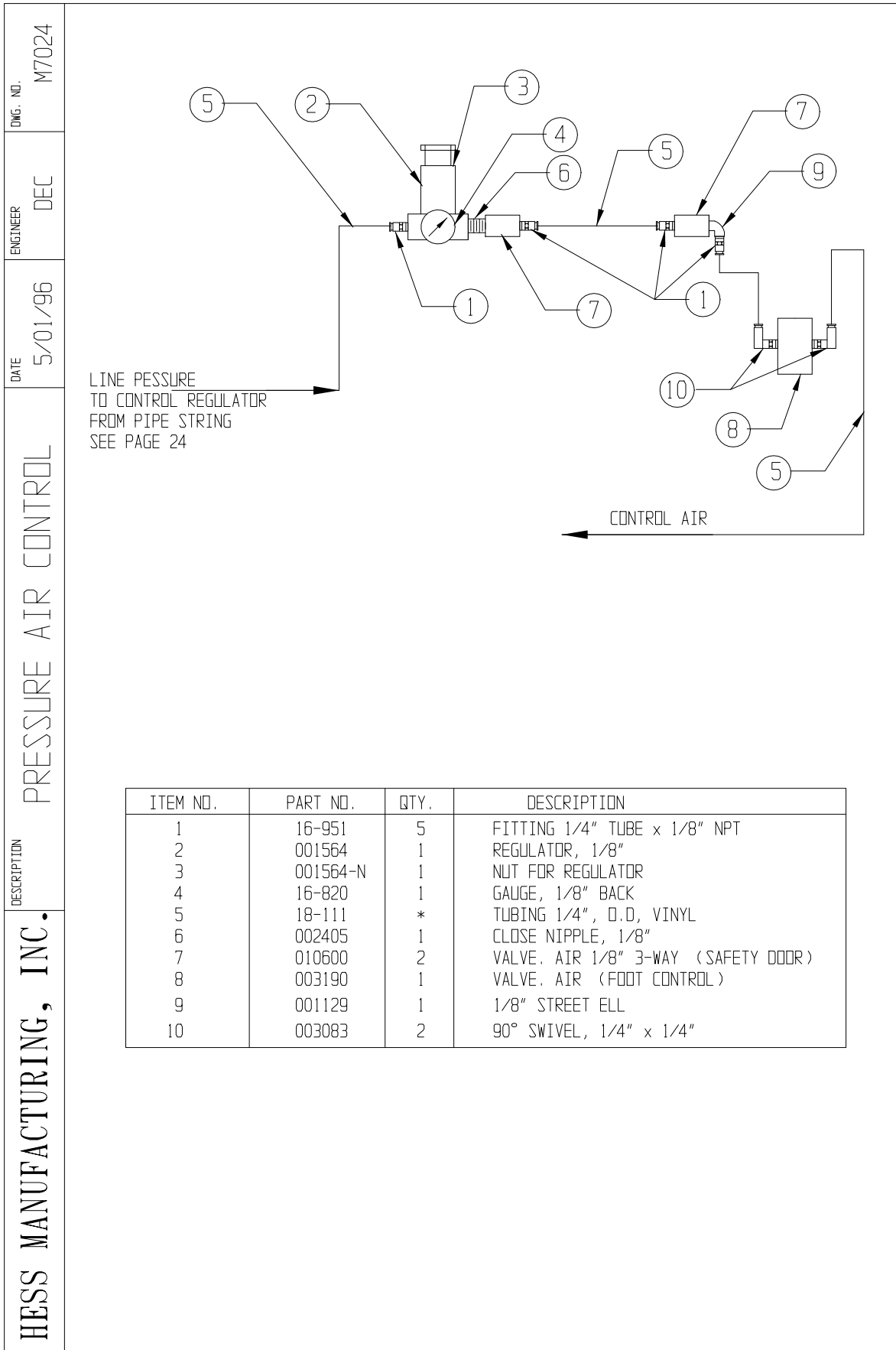
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DWG BY: T.SHUE
DATE: 6/11/2025
SCALE: 1:6

MAT: PER DRAWING
SHT#: 1 OF 1
DWG TYPE:

MODIFICATIONS:

ZONE:	REV:	DESCRIPTION:	DATE:	BY :
	A	RE-DRAWN IN SW	6/11/2025	MTS



A 3D wireframe cube is shown, oriented diagonally. The word "OPTIONAL" is written in a large, bold, serif font, slanted to follow the diagonal of the cube's faces. The letters are black and appear to be floating within or attached to the cube's structure.

HESS MANUFACTURING, INC.
SALISBURY, NORTH CAROLINA

DESCRIPTION. (BIA 6036-P)

DESCRIPTION:	MATERIAL:
(BIA 6036-P)	

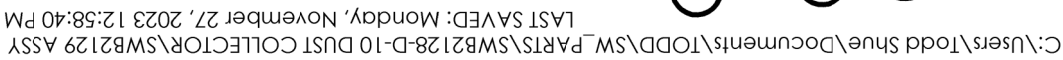
12 GA. x 28 x 41 1/2

DRAWING NO.: A807

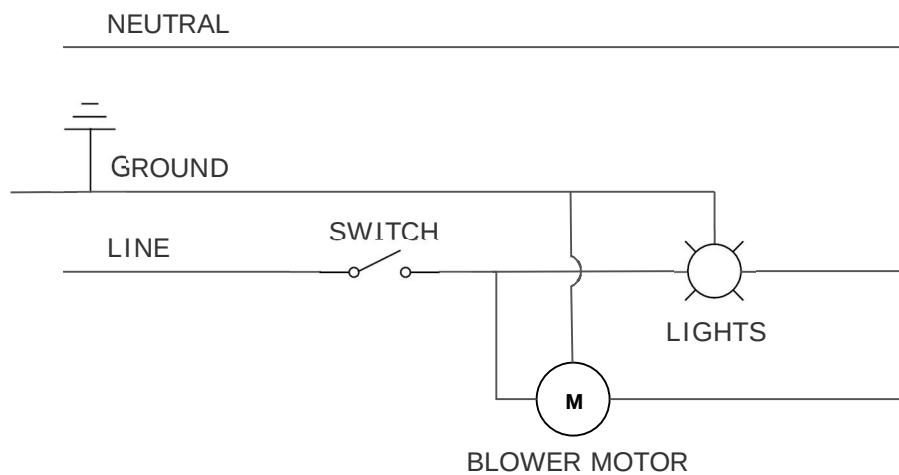
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REV.	DESCRIPTION	BY	DATE			

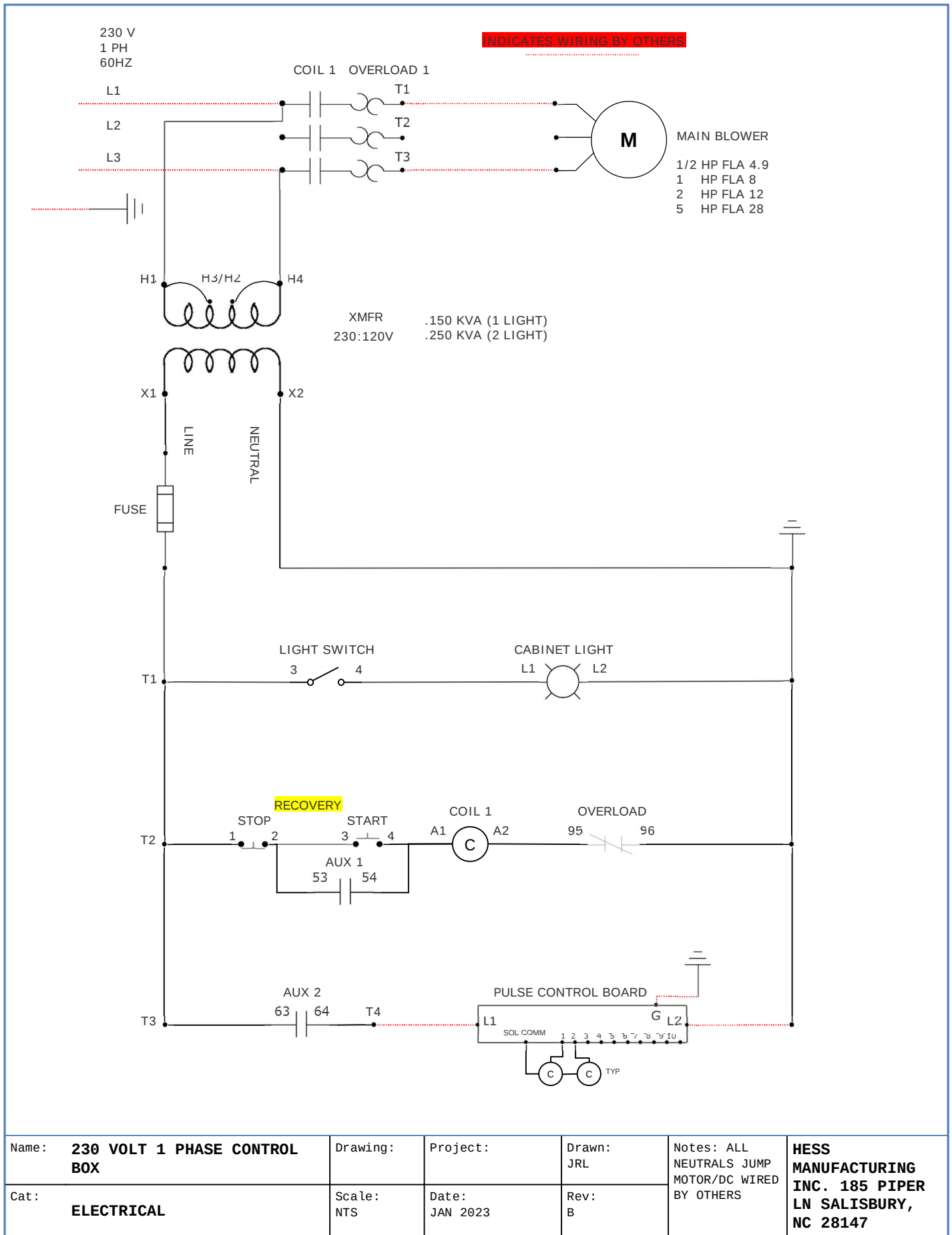


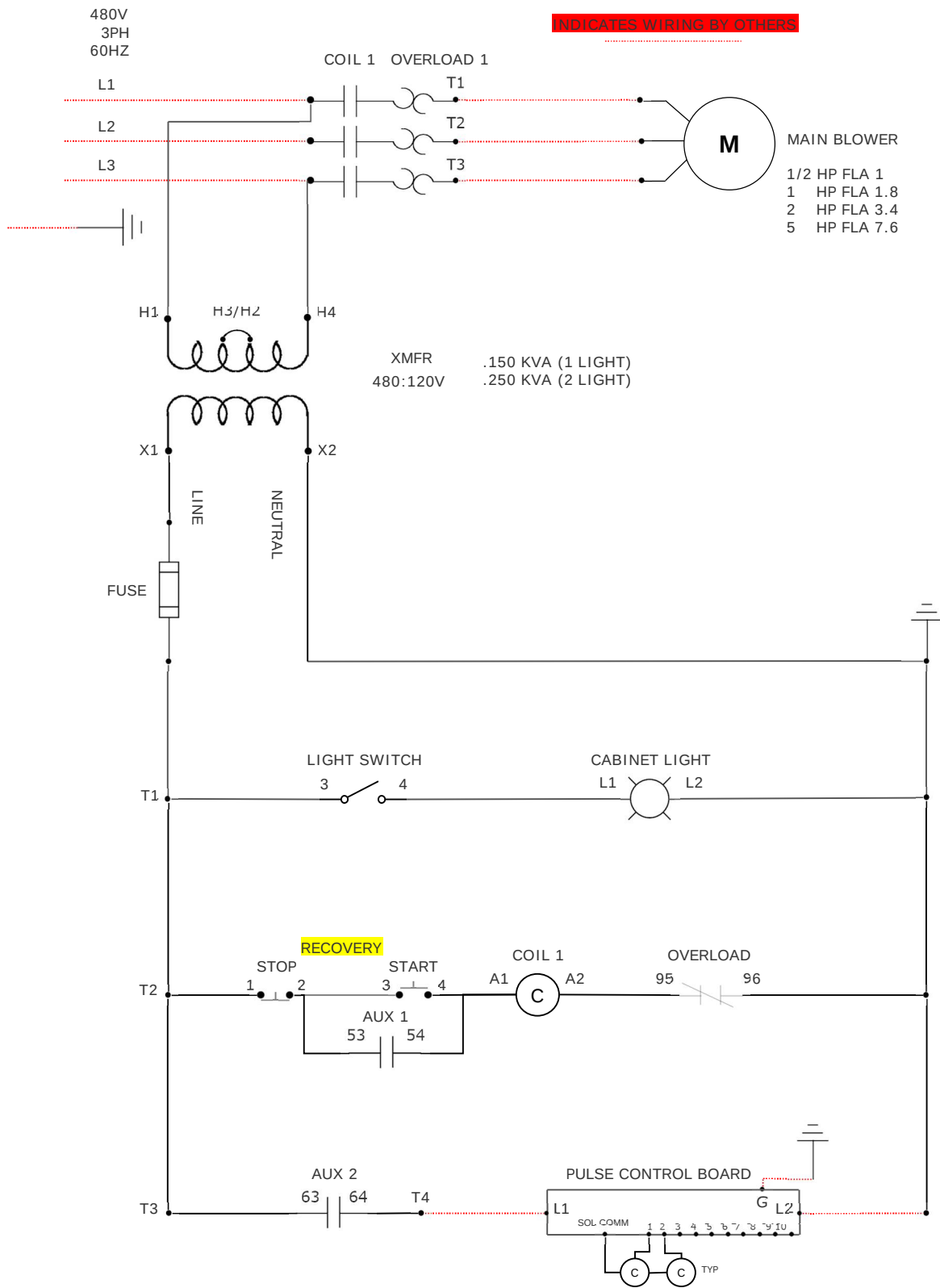




PART	PART NUMBER
SWITCH	13-655
LIGHT FIXTURE	13-533-LED
MOTOR 1 HP	13-700TEFC
MOTOR 1/2 HP	13-400TEFC

Name: 120 VOLT ELECTRICAL	Drawing:	Project: UPDATE	Drawn: JRL	Notes:	HESS MANUFACTURING INC. 185 PIPER LN SALISBURY, NC 28147
Cat: ELECTRICAL	Scale: NTS	Date: SEP 2025	Rev: A		





Name:	480 VOLT 3 PHASE CONTROL BOX	Drawing:	Project:	Drawn:	Notes: ALL NEUTRALS JUMP MOTOR/DC WIRED BY OTHERS	HESS MANUFACTURING INC. 185 PIPER LN SALISBURY, NC 28147
Cat:	ELECTRICAL	Scale:	Date:	Rev:		
		NTS	JAN 2023	B		



BLAST-IT-ALL®

A Division of Hess Manufacturing Inc.
185 Piper Lane Salisbury, NC 28147
P O Box 1615 Salisbury, NC 28145
Toll Free 800-535-2612
Fax 704-638-9311



Hess Manufacturing Inc. Warrants to the original purchaser of the merchandise sold, to be free from defects in material or workmanship under normal use and service for a period of (5) years. **This warranty does not cover typical wear items.** Upon prompt notification by the purchaser, to HM, components that are determined by HM to be defective will be repaired or replaced at no additional charge F.O.B. our factory.

This warranty requires the following:

- 1) **A completed and returned Warranty Registration card.**
- 2) **Use of Genuine Blast-it-all® OEM replacement parts purchased through Hess Manufacturing Inc. Blast-it-all® to include common wear items. For the entire period of the warranty.**
- 3) **Failures to provide proof of the purchase of Blast-it-all® OEM wear Items voids warranty.**

Manufacturer shall have the right to inspect prior replacing all merchandise in question.

Manufacturer shall not be required to pay any removal or installation charges whatsoever

Manufacturer shall not be held liable for prospective profits, special or consequential damages, nor shall any recovery of any kind against manufacturer be greater in amount the cost of the repairs of defects in workmanship

This warranty does not apply to damage caused by accidents, damage occurring during transit, alterations by unauthorized personnel, abuse or damage by flood, fire or acts of God, nor by artificially generated electric currents or any other cause whatsoever except defects in material or factory workmanship.

In ALL cases, defective parts must be returned to Hess Manufacturing Inc. before credit is issued.

This warranty is in lieu of all other warranties expressed, written or implied and releases Hess Manufacturing Inc. of all other obligations and liabilities whatsoever. This warranty neither assumes nor authorizes any person any obligation other than those specified by this warranty.



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