

TRUMIX VORTEX BLENDER OPERATING AND SERVICE MANUAL



MECHANICAL TIMER AND DIGITAL PANEL MODELS

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ultrablend
by **HERO**



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SECTION 1: OVERVIEW

1-1: INTRODUCTION

This manual provides general operating procedures for your **TruMix™** vortex blenders. Before operating the unit or starting any service procedure, carefully read through the procedure steps and corresponding diagrams. Please contact HERO's Customer Service Department at 1-800-494-4376 for assistance if needed.

1-2: FEATURES

TruMix vortex blenders come standard with either a mechanical timer or a durable, spill resistant digital panel that provides a user-friendly operator interface. The digital panel comes in two optional configurations:

Time Select



The Time Select option allows the operator to select mixing time increments and offers maximum flexibility for experienced operators.

Preset Time



The Preset Time option offers one-touch operation of two pre-selected mix times to simplify mixing jobs.

Physical Specifications

Model:	TruMix 1	TruMix 5	TruMix XHD	TruMix Ergo 5
Height:	23.5"	36"	42"	42 1/2"
Width:	14.6"	24"	30"	28"
Depth:	20.8"	30"	36.5"	33"
Weight:	90 lbs.	200 lbs.	425 lbs.	400 lbs.

Interlock – In models with the interlock option, the door will not open until the bucket stops spinning and the display shows a solid 00:00.

Standard Electrical Requirements

115 Volts, 60 Hz.

TruMix 1: 6 Amps

TruMix 5/XHD: 12 Amps

TruMix Ergo 5: 3.5 Amps

Maximum recommended weight limit

The maximum recommended weight is 20 pounds for all TruMix 1 models.

The maximum recommended weight is 80 pounds for all TruMix 5 models.

The maximum recommended weight is 80 pounds for all TruMix XHD models.

The maximum recommended weight is 80 pounds for all TruMix Ergo 5 models

Container Accommodation Size

TruMix 1

1 gallon can

1 gallon square can (with use of a square bucket)

1 quart can (with use of adapter)

1 pint can (with use of adapter)

TruMix 5 / XHD

5 gallon can

2 gallon can (with use of adapter)

1 gallon can (with use of adapter)

1 gallon square can (with use of adapter)

1 quart can (with use of two adapters)

1 pint can (with use of two adapters)

TruMix Ergo 5

5 gallon can

1-3: SETUP

Unpacking

1. When the package arrives, cut the banding material around the box.
2. Lift and remove the box covering the mixer.
3. Cut the banding material around the blender.
4. Carefully cut through or unwrap the shrink-wrap and the edge boards.
5. Remove the protective bag covering the mixer.
6. Carefully cut or unwrap the next layer of shrink-wrap.

TruMix 1: Remove from the shipping tray, lifting the unit straight up and out of the bottom part of the packing box. **Do not lift the machine using the door as a handle.**

TruMix 5 / XHD / Ergo 5: Using a forklift, remove the mixer from the pallet.

The power cords for the TruMix 5, TruMix XHD and TruMix Ergo 5 will be found underneath the machines. The power cord for the TruMix 1 will be seen as the mixer is being unpacked.

7. Cut off the tie wrap around the power cord.
8. Position the blender in a designated location.
9. Level the blender. See Section 5-2-3
10. Plug the power-cord into a 115 VAC properly grounded receptacle on a 15 A circuit. Make sure the power cord is routed in a way that it is protected from damage and is not underneath anything causing it to be crimped or twisted.

NOTE: Do not use an extension cord to plug the mixer into an outlet.

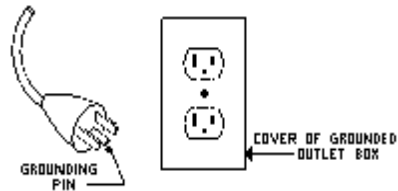
Your **TruMix™ vortex blender** is now ready for operation. Section 2 details the operating instructions.

SECTION 2: OPERATING INSTRUCTIONS

2-1: WARNINGS

Grounding Instructions

1. This product should be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This product is equipped with a cord having a grounding wire with an appropriate grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.
2. **WARNING** - Improper installation of the grounding plug can result in a risk of electric shock. When repair or replacement of the cord or plug is necessary, do not connect the grounding wire to either flat blade terminal. The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire.
3. Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the product is properly grounded. Do not modify the plug provided; if it will not fit the outlet, have the proper outlet installed by a qualified electrician.
4. This product is for use on a nominal 115-volt circuit, and has a grounding plug similar to the plug illustrated. Only connect the product to an outlet having the same configuration as the plug. Do not use an adapter with this product.



Unplug the machine before performing any service operations.

Do not use in environments with solvent vapors. This machine is not designed to be used in environments with solvent vapors.

Do not use in hazardous locations

This machine is not designed to be used in hazardous locations (Class I Division I).

Do Not Slam the door up or down with excessive force. This could damage the interlock switch and the limit switch.

Do Not Slam the container into the receiving bucket.

Do Not Load or attempt to blend **containers** that are **improperly or partially sealed** as the container may spill inside the machine. Build-up of spilled materials could affect the drive mechanism.

Do not mix partially filled containers since the motion of the liquid inside may destabilize the machine.

Do not open the door before the motion has ceased.

Wait at least 8 seconds after the motor stopped before opening the door since the bucket may still be spinning.

When not in use for extended periods of time, ensure that the machine, including its power cord, is properly stored in a way that it is protected from damage.

Clean-up Tips

Your new TruMix™ paint blender has a protective finish. If spills or spatters occur, they can be easily removed while still wet. A mild detergent in warm water will remove these types of stains. For more severe build-up, HERO recommends the newer water-based paint cleaners. Remember to always unplug the blender from the outlet prior to cleaning. **Never use flammable solvents when cleaning spills or spatters. Please follow these guidelines since your HERO Warranty does not protect you from improper, negligent, or abusive operation.**

2-2 GENERAL OPERATING INSTRUCTIONS

2-2-1 LOADING

1. Make sure that the container is full and properly sealed.
2. Lift the front-loading cabinet door.
3. To load the container
 - **TruMix 1, TruMix 5 and TruMix XHD.**
 - i. Rotate the receiving bucket until its opening is at the front.
 - ii. Carefully load container into the receiving bucket.
 - iii. In the TruMix 1, slide the can bail into the side clip-slots of the bucket.
 - iv. In the TruMix 5 and TruMix XHD, secure the bail with the bail-cord.

- **Ergo 5**

Refer to Figure 2-2-A

2-2-2 OPERATION

1. Close the TruMix cabinet door. **DO NOT SLAM OR DROP THE DOOR.**
2. Set the desired blending time. **Section 2-3** details instructions for operating the mixer based on the model.
3. Once the blend cycle is complete, **WAIT 8 SECONDS** and lift the cabinet loading door to the open position.

Note: The models with solenoid locks will remain locked different times according to their settings.

2-2-3 UNLOADING

Rotate bucket to proper position as when loading and reverse the actions you went through when loading.

- **TruMix 1, TruMix 5 and TruMix XHD**
 - i. Rotate bucket so that its opening faces the front of the machine.
 - ii. In the TruMix 5 and TruMix XHD, release the bail –cord so the bail is free.
 - iii. Remove the container pulling upward and towards you, from the bail.

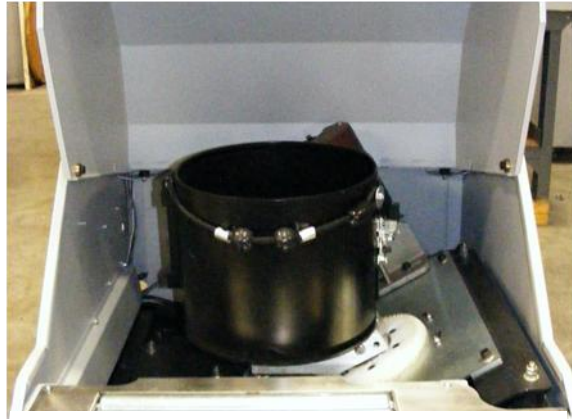
- **Ergo 5**

Refer to Figure 2-2-B

Figure 2-2-A

ERGO 5 LOADING PROCEDURE

LOADING



1. Ensure the bucket latch is on your right and hinge on your left - door opens from right to left.



2. If not, close the door and press the green Jog button on the right hand side of the blender. This will turn the bucket ½ turn to the correct position.



3. Pull the black handle on the latch away from the bucket to release the gate. Open the gate.



4. Slide the container into the bucket.



5. Close the bucket gate and ensure it is securely latched. Try to pull it open it to be sure.



6. Secure the bail handle with the bail cord.

Figure 2-2-B

ERGO 5 UNLOADING PROCEDURE

UNLOADING



1. The bucket should stop with the latch on your right and the hinge on your left.



2. If not, close the door and press the green Jog button on the right hand side of the blender. This will turn the bucket ½ turn to the correct position. Open door when stopped.



3. Release the bail cord from the bail handle.



4. Pull the black handle on the latch away from the bucket to release the gate. .



5. Open the gate.



6. Slide the container out of the bucket

2-3 TRUMIX MODELS

The TruMix vortex mixers may be equipped with either a mechanical timer or one of the following electronic control models.

Time Select



Preset Time



In order to operate these TruMix models correctly, please follow these instructions after loading the container according to instructions in 2-2:

2-3-1 MECHANICAL TIMER MODEL

1. Close the mixer's door.
2. Turn the timer to the desired mixing time.
3. Wait until the blending cycle ends.
4. Wait until the bucket stops spinning (approximately 8 seconds after the blending cycle ends).
5. Open the door.
6. Remove the container according to instructions in 2-2.


2-3-2 TIME SELECT DIGITAL PANEL MODEL

1. Close the mixer's door.
2. Select the mixing time by pressing the UP and DOWN buttons, one or several times, until the desired time appears in the display (the time changes by discrete amounts).
3. Press the RUN button.
4. Wait until the blending cycle ends.
5. Wait until the bucket stops spinning (approximately 8 seconds after the blending cycle ends).
6. Open the door.
7. Remove the container according to instructions in 2-2.

2-3-3 PRESET TIME DIGITAL PANEL MODEL

1. Close the mixer's door.
2. Press the appropriate button (Light or Dark).
3. Wait until the cycle ends.
4. Wait until the bucket stops spinning (approximately 8 seconds after the blending cycle ends).
5. Open the door.
6. Remove the container according to instructions in 2-2.

Digital Panel Information

NOTE: Press the  button to view the number of cycles, the total time and the average mixing time per cycle (Preset Time model). Press the Up and Down buttons simultaneously to display the number of cycles, the total time and the average mixing time per cycle (Time Select model). This information will scroll across the digital display.

2-3-4 MODELS WITH LOCKING MECHANISM

Either one of the digital panel models may have a door locking mechanism.

If the mixer is equipped with a solenoid locking mechanism, the lock remains active for eight seconds after the cycle ends, to allow the bucket to stop spinning. If the red stop button is used to stop the cycle, the locking mechanism may remain active for a longer time, depending on the mixer model. The display will read “STOP” while the system is locked and revert to 00:00 when the lock is deactivated.

SECTION 3: MAINTENANCE

3-1 MAINTENANCE OVERVIEW

The vortex blenders are designed for maintenance-free operation. If any adjustments are necessary, contact HERO's Customer Service Department at 1-800-494-4376 for assistance.

If paint is spilled on or inside the mixer, follow the instructions below to clean the spill immediately.

1. Unplug the machine and apply lockout- tag-out to the blenders power supply.
2. Secure the area of the paint spill with wet paint warning signs.
3. Cleanup the paint around the machine or put some absorbent material on the spill. Make sure the surface where the spill resides is thoroughly cleaned.
4. Open the door and remove the paint can from the bucket, placing the can in a larger container.
5. Remove the paint bucket by removing the 3 fasteners.
6. Remove the back panel screws and the back panel.
7. Remove all the wet paint from the drive and cover assembly.
8. Do not use flammable liquid solvents in cleaning up any spills. Use only water-based cleaners.
9. After complete cleanup, allow for parts to dry up.
10. Reinstall the parts disassembled. Plug the mixer into the power receptacle.
11. Remove the lockout/ tag-out tag and the wet paint signs when appropriate.

SECTION 4: TROUBLESHOOTING

4-1: IDENTIFYING PROBLEMS

4-1-1: THE MIXER DISPLAY IS BLANK

On power up the display should show 00:00 or STOP. If the display is blank, then one of the following items may be the cause:

1. The circuit breaker has tripped.

Check that the circuit breaker on the right hand side of the machine has not tripped. The circuit breaker is tripped when the center section is projecting from the device and a white plastic stem is exposed. If the circuit breaker is extended, then push fully in. The circuit breaker tripping is usually caused by heat or torque overload. The motor or bucket may be physically locked in place. Check that it is free to move, and that there are no foreign materials around or in the gears.

2. The machine is not properly plugged into the receptacle.

Plug the mixer into the receptacle.

3. The outlet is not live or operational.

Test the outlet with a Volt meter or standard appliance to make sure the outlet is operational.

4. The power cord is damaged.

Replace the power cord as described in Section 5-3-4.

5. A fuse has blown or is disconnected.

Check that the fuse is installed properly. Follow the procedure in Section 5-3-2.

6. There is a wiring fault on the internal wiring / electronics.

To determine this proceed as follows:

- **Unplug the paint blender.**
- Remove the back cover (Refer to Section 5-1 for cabinet removal instructions).
- Check that the power cord is connected into the Molex connector going into the main power junction box (TruMix 1/5/XHD) or directly to the terminal blocks (Ergo 5). Refer to Appendix 4-2-A/B/D detailed wiring information.

Note: There are two Molex connectors going into this box. One supplies power to the unit, the other goes to the motor. If the power cord is plugged into the motor connector, the motor will begin to turn immediately, indicating the wrong connector. If this occurs, plug in the other Molex connector.

- Check that the cable from the power junction box is connected into the display circuit board. This is terminated onto terminal J1.
- Check that the cable from the keypad is connected into the display circuit board. This is terminated onto terminal JP4.

4-1-2: THE MIXER DISPLAYS THE MESSAGE “STOP”

When the stop button is pressed during a mix cycle this alarm is displayed until it is safe to open the door. If the message remains for more than 60 seconds then proceed as follows:

- **Unplug the paint blender.**
- Remove the back cover (Refer to Section 5-1 for cabinet removal instructions).
- Refer to Appendix 4-2A/B/D detailed wiring information and proceed as follows:
 - Ensure that the stop switch has the two wires connected to the switch terminals.
 - Check that the two wires coming from the switch are connected into the display circuit board at terminal JP2.
 - If the message does not disappear, the circuit board may need to be replaced. Call HERO’s Customer Service Department at 1-800-494-4376 to further troubleshoot this problem.

4-1-3: THE MIXER DISPLAYS THE MESSAGE “dL”

If the door is open when the mix cycle is initiated or opened during the mixing cycle, the dL alarm will be displayed on the digital panel (This is normal). If the door is closed and the dL message remains, proceed as follows:

- **Unplug the paint blender.**
- Remove the back cover (Refer to Section 5-1 for cabinet removal instructions).
- Check that, when the door is closed, the switch actuation magnet is directly under the magnetic switch, and that it is securely fastened to the door. This applies to both magnetic switches for the Ergo 5
- Refer to Appendix 4-2A/B/D for detailed wiring information and proceed as follows:
- Check that the two wires coming from the magnetic switch (for the Ergo 5, switch closest to the display circuit board) are connected into the display circuit board at terminal JP3.
- Check that the switch is working properly by disconnecting the switch plug from the display circuit board at terminal JP3 and testing it for continuity using a multi-meter. With the door closed (magnet under the switch) the switch should be closed (continuity). With the door open (magnet away from the switch) the switch should be open (no continuity).
- Upon reconnection of power, if the dL message does not disappear then the display circuit board may need to be replaced. Contact HERO’s Customer Service Department at 1-800-494-4376 to further troubleshoot this problem.

4-1-4: THE MIXER MOVES ON THE FLOOR

- Check that the can is full and fully pushed down into the can holder.
- Level the machine using the adjustable feet (Refer to section 5-2-3).

4-1-5: THE MIXER DISPLAY COUNTS DOWN BUT DOES NOT MIX

- **Unplug the paint blender.**
- Remove the back cover (Refer to Section 5-1 for cabinet removal instructions).
- Check that the mechanical drive system is intact. Turning the can holder by hand and observing that the motor shaft is turning can do this.
- Make sure the motor power cord is connected to the connector cord coming out of the power junction box (TruMix 1/5/XHD) or directly to the terminal blocks (Ergo 5). Refer to Appendix 4-2A/B/C/D for detailed wiring information.

If the problem persists contact HERO's Customer Service Department at 1-800-494-4376 to further troubleshoot this problem.

4-1-6: THE DOOR WILL NOT OPEN

This situation can occur only in models with the interlock option.

When there is no power applied to the machine, the interlock solenoid de-energizes and the door locks. When power is applied to the machine, the solenoid energizes and the door unlocks. When the mix cycle commences, the solenoid is de-energized (locked). At the completion of a cycle (i.e. display counted down to zero) the door remains locked for a short period to allow the motor to come to a rest. If the mix cycle is prematurely stopped with the stop button, the solenoid is energized for some period depending on the mixer settings.

If the door lock is not operating as above and remains locked for a long time, then proceed as follows:

- **Unplug the paint blender.**
- Remove the back cover (Refer to Section 5-1 for cabinet removal instructions).
- **With the machine unplugged**, check that the solenoid is free to move up and down by hand.
- Re-connect power and visually check that when the power is applied the solenoid plunger pulls up out of the way of the door.

If the problem persists contact HERO's Customer Service Department at 1-800-494-4376 to further troubleshoot this problem.

4-1-7: MIXER DISPLAY COUNTS DOWN, MIXING STOPS EARLY

There is a fault with the control or power wiring.

Refer to Appendix 4-2-A/B for detailed wiring information for the TruMix 1/5/XHD and to Appendix 4-2-D for the Ergo 5 and proceed as follows:

- **Unplug the paint blender.**
- Remove the back panel.
- Inspect all the cable ends and intermediary connectors, looking for loose wires or signs of paint ingress or corrosion. Make sure all plugs and sockets are firmly engaged

Digital Panel - TM 1/5/XHD

- Check to see that the power cable which runs from the control panel to the power box has not come loose from either the circuit board terminal JP1 or from the connector itself.
- Loosen the 4 screws from the power box and remove the cover. Check the same gray cable that comes from JP1 and make sure that the 4 wires connected are not loose or broken.
- Make sure the connector has not come loose from its terminal JP3 Inside the control box.
- Check that neither the motor cable connections to the motor J7 and from the power cord J1 have come loose. Make sure all 3 wires (Black White and Green) are firmly snapped into the terminals on both ends of the MotorCables and the power cables.

Ergo 5

- Remove the Stainless Steel cover and roller assembly and the front panel.
- Inspect all wire terminations within the control box. Make sure the relays are firmly in place in their sockets.

CAUTION, HIGH VOLTAGE present - Following to be performed by qualified personnel only

- With the panels removed and the door open, re-energize the paint blender
- Under normal conditions, the door lock should unlatch within few seconds of the power coming back on.
- Both the Yellow and Green LED's on the left side of the Variable Frequency Drive (VFD) should be illuminated.
- Check the Red LED indicator on the grey fuse block. If it is illuminated it indicates a blown fuse - determine the cause before replacement

- Test the motor disconnect relay by closing and opening the door. Under normal conditions the Green LED indicator will be illuminated, indicating the relay is energized, when the door is closed.
- There may be a high pitched whine when the VFD is energized. This is normal

If the problem persists contact HERO's Customer Service Department at 1-800-494-4376 to further troubleshoot this problem.

4-1-8: THE MIXER IS MAKING EXCESSIVE NOISE

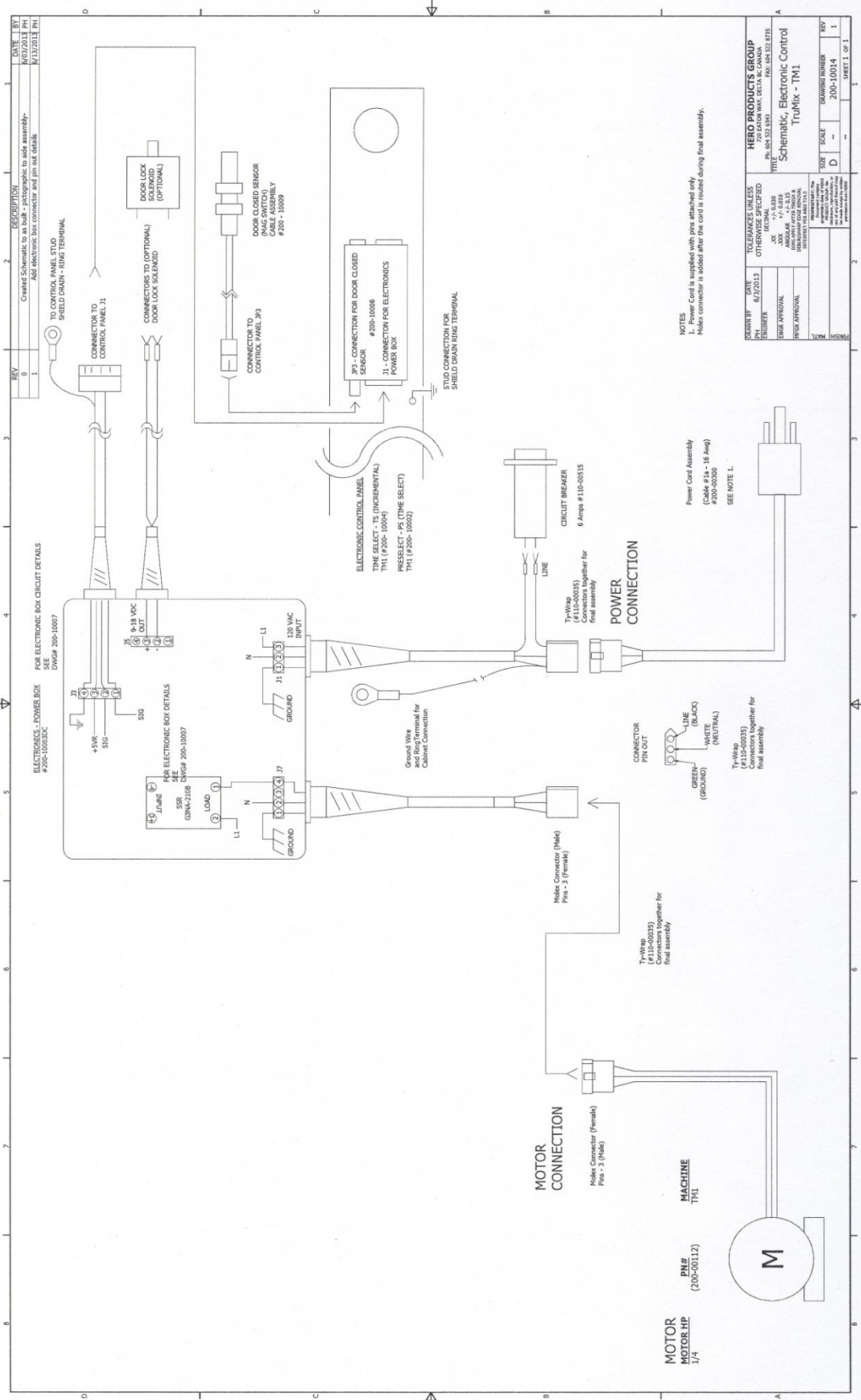
If the noise is a grinding drive-related noise, check the condition of the upper and the lower gears. They may have foreign matter or be broken or worn out. In this case they may need to be replaced.

If the noise is a rattling noise, check that all cover and back panel screws are tight. If not, tighten with a medium Phillips screwdriver.

In some models equipped with a solenoid there might be a light buzzing sound, which is normal.

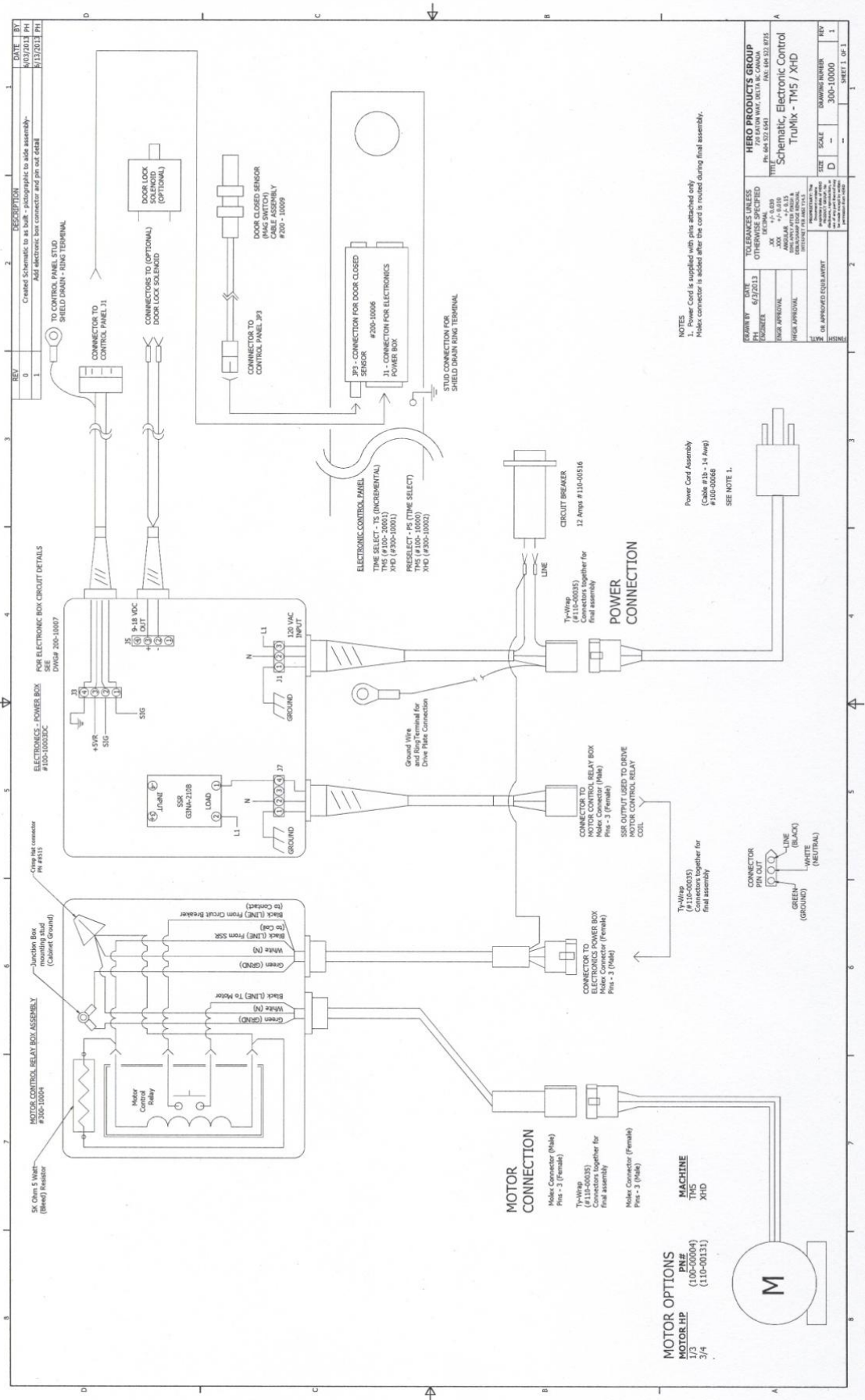
Appendix 4-2-A

Digital Panel - TM 1



Appendix 4-2-B

Digital Panel - TM 5 / TM XHD

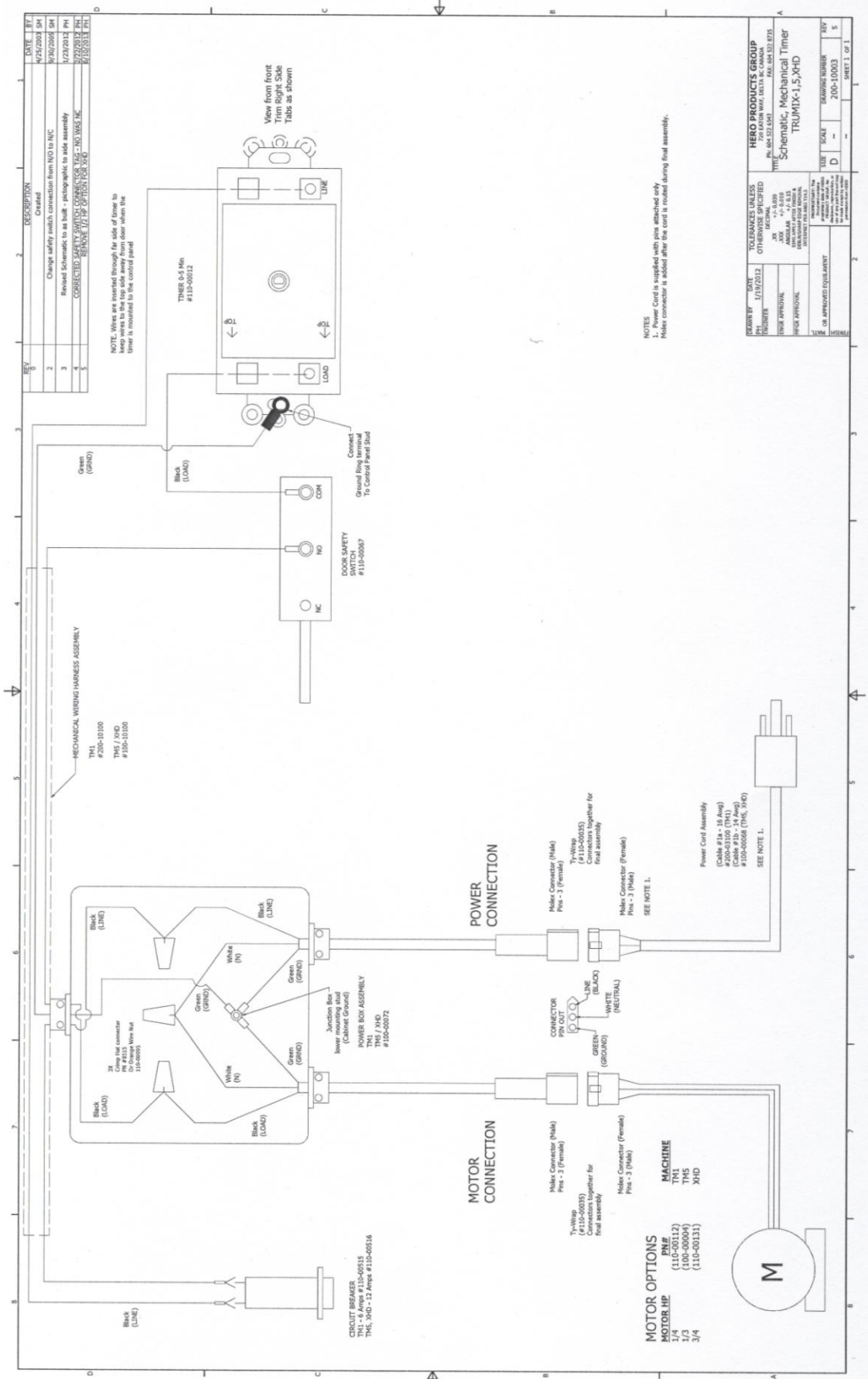


NOTES
 1. Power Cord is supplied with pins attached only.
 Pinless connector is added after the cord is routed during final assembly.

DESIGNED BY	DATE	TOLERANCES UNLESS OTHERWISE SPECIFIED	HERO PRODUCTS GROUP FOR LA JOLLA, CALIFORNIA 3800 LA JOLLA VILLAGE DRIVE LA JOLLA, CALIFORNIA 92037 TEL: (619) 592-6841 FAX: (619) 592-8755
PH	6/27/2013	XX DECIMALS	
DESIGNED BY	DATE	XX DECIMALS	
PH	6/27/2013	XX DECIMALS	
APPROVED BY	DATE	XX DECIMALS	HERO PRODUCTS GROUP TruMix - TMS / XHD
PH	6/27/2013	XX DECIMALS	
APPROVED BY	DATE	XX DECIMALS	SIZE SCALE 300-10000 SHEET 1 OF 1

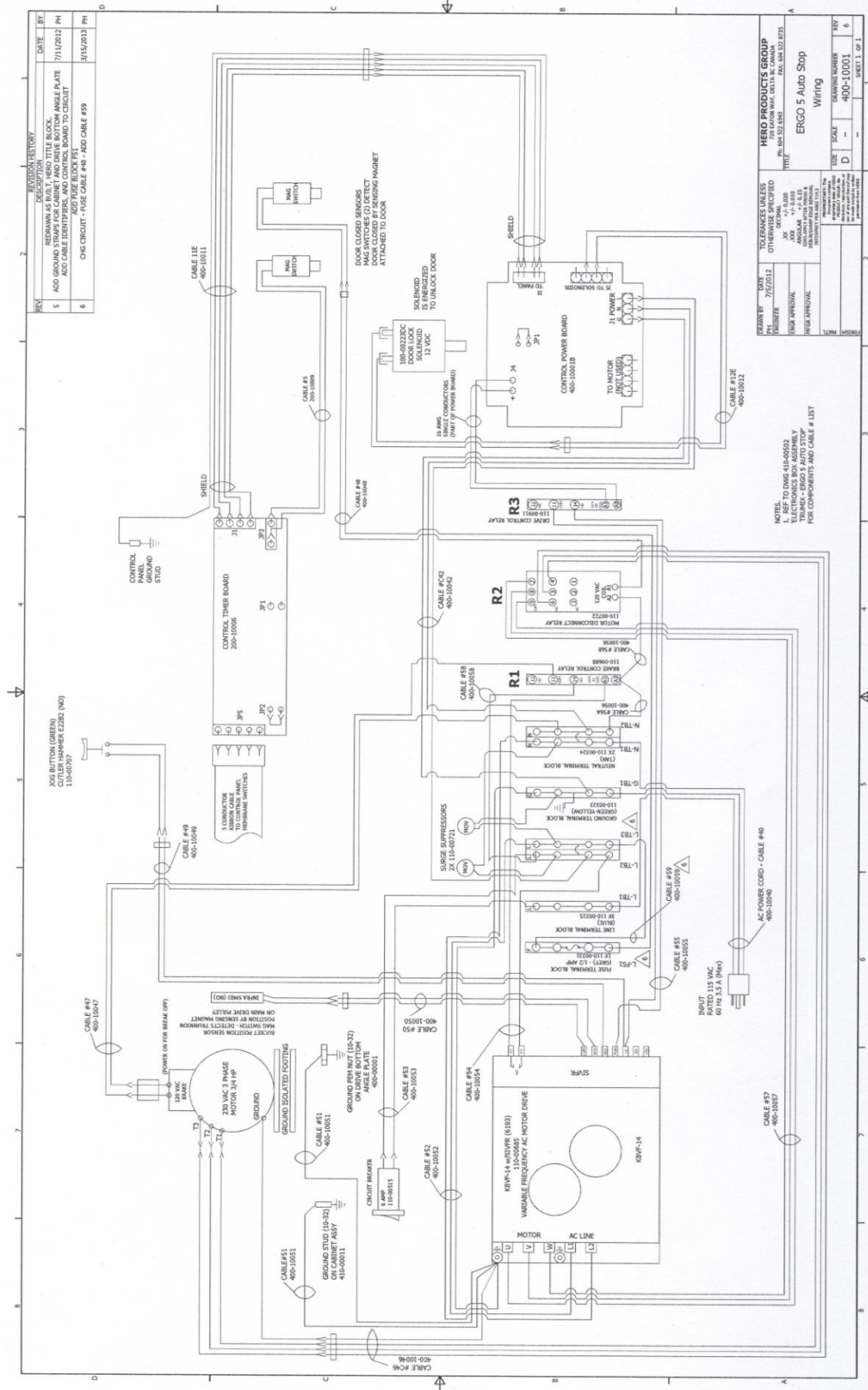
Appendix 4-2-C

Mechanical Timer - TM1 / TM5 / TM XHD



Appendix 4-2-D

Ergo 5



REV.	DESCRIPTION	DATE	BY
1	REWORK AS BUILT HERO TITLE BLOCK, ADD GROUND SYMBOLS, AND ANGLE PLATE ADD CABLE IDENTIFIERS, AND CONTROL BOARD TO CIRCUIT	7/11/2012	PH
2	CHG CIRCUIT - FUSE CABLE #40 - ADD CABLE #59	3/15/2013	PH

POWER BY	DATE	TOLERANCES UNLESS OTHERWISE SPECIFIED	HERO PRODUCTS GROUP
DESIGNER	7/12/2012	XX ±0.000	700 LAVIN WAY, DULUTH, GA 30096
FORM APPROVAL		XX ±0.000	TEL: 404.392.6201 FAX: 404.392.6775
FIELD APPROVAL		XX ±0.000	
		XX ±0.000	
		XX ±0.000	
		XX ±0.000	

PROJECT	SCALE	DRAWING NUMBER	REV.
ERGO 5 Auto Stop	D	400-10001	6
Wiring			

NOTES:
 1. REF TO DWG 410-0002 ELECTRONICS BOX ASSEMBLY FOR COMPONENTS AND CABLE # LIST

SHEET 1 OF 1
 6
 400-10046
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SECTION 5: SERVICE

5-1 CABINET REMOVAL / REPLACEMENT

Note: The TruMix Ergo 5 cabinet may only be removed by a qualified service technician.

5-1-1 REMOVE TRUMIX 1 CABINET

1. Unplug the paint blender.
2. Using a Phillips medium screwdriver, remove the (4) screws and lock washers shown in Item #1 (Figure 5-1A) that hold the rear panel to the cabinet.

FIGURE 5-1A

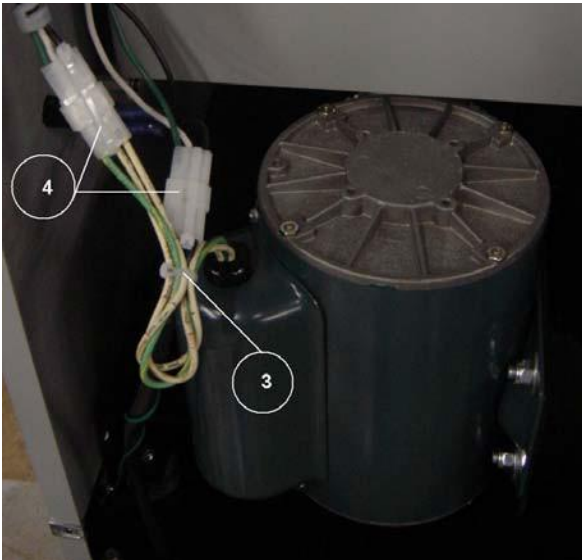


FIGURE 5-1B



3. Remove the (4) screws and lock washers shown in Item #2 (Figure 5-1B) that hold the cabinet to the base (two are located on each side).

FIGURE 5-1C



4. Carefully cut the tie wraps shown in Item #3 (Figure 5-1C) holding the cords together.
5. Disconnect the (2) sets of cable connectors shown in Item #4 (FIGURE 5-1C).
6. Lift cabinet and remove it from the base pan.

5-1-2 REPLACE TRUMIX 1 CABINET

1. Replace the cabinet over drive mechanism and place it onto the base pan.
2. Replace the (4) screws and lock washers shown in Item #2 (FIGURE 5-1B) that hold the cabinet to the base.
3. Re-connect the (2) sets of cable connectors shown in Item #4 (FIGURE 5-1C). Plug (1) connector into the motor cable; plug the other connector into the power cord connector.
4. Use tie wraps to fasten the Molex connectors together as shown in Item #3 (FIGURE 5-1C).
5. Replace the rear panel, replace screws and lock washers shown in Item #1 (FIGURE 5-1A) and secure.
6. Plug in the blender.

5-1-3 REMOVE TRUMIX 5 / XHD CABINET

1. **Unplug the paint blender.**
2. Using a Phillips medium screwdriver, remove the (6) screws and lock washers, Item #1, (TruMix 5), ((5) screws and lock washers on TruMix XHD) that hold rear-panel to cabinet.
3. Remove the screws / lock washers, Item #2, that hold cabinet to base
4. Disconnect the (2) cable connectors, Item #3 and, for the Ergo 5, disconnect the magnetic switch furthest from the display circuit board (See Appendix 4-2D).
5. Carefully cut tie wraps holding cords together, Item #4.
6. **XHD and Ergo 5:** Remove bucket per Section 5-2-1.
7. Lift cabinet and remove it from base pan.

Figure 5-1D

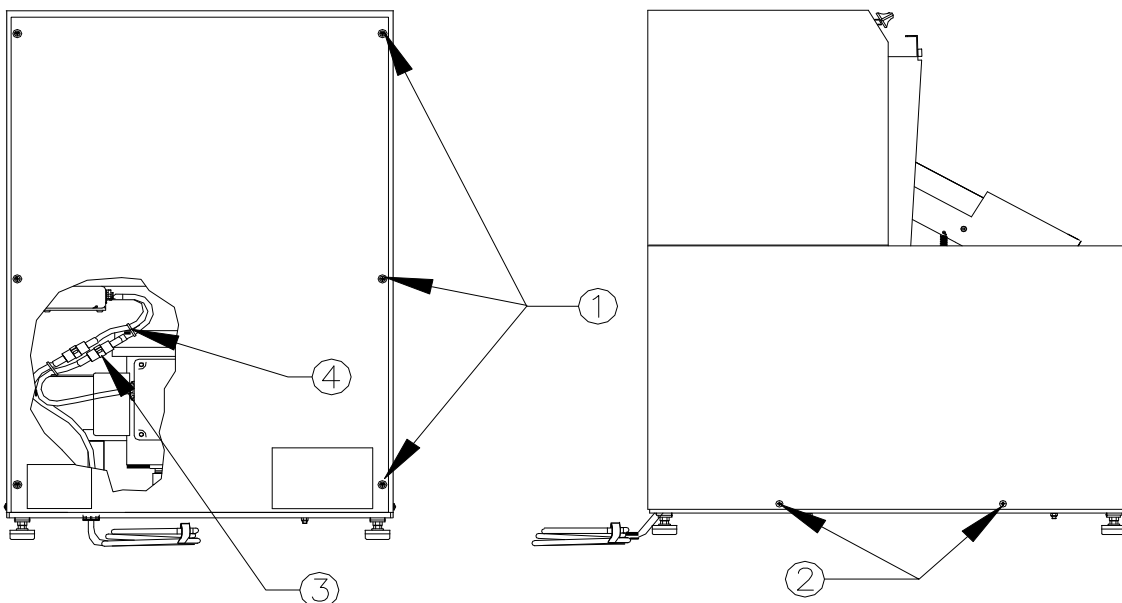
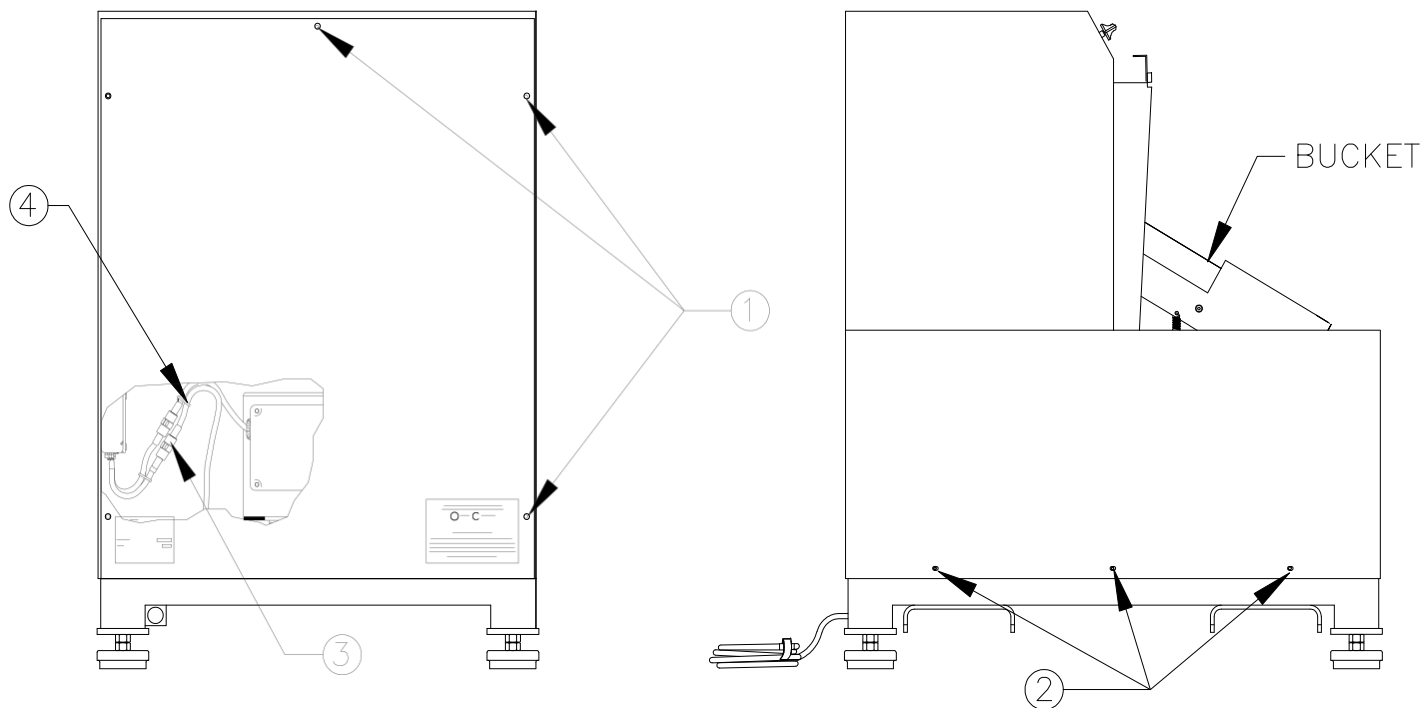


Figure 5-1E



5-1-4 REPLACE TRUMIX 5 / XHD CABINET

1. Replace cabinet over drive-mechanism and place onto base pan.
2. **XHD and Ergo 5:** Replace bucket per Section 5-2-1.
3. Refasten the screws/ lock washers, Item #2, that hold cabinet to base. ((4) on TruMix 5, (6) on TruMix -XHD).
4. Re-connect the (2) cable connectors, Item #3. Plug (1) connector into the motor cable, plug the other connector into the power cord connector. For Ergo 5, reconnect the magnetic switch furthest from the display circuit board.
5. Replace back-cover, replace screws / lock washers, Item #1, securing rear-panel.
6. Plug in the blender.

5-2 Mechanical Drive Assembly

5-2-1 BUCKET REMOVAL & REPLACEMENT

1. Unplug the paint blender.
2. Using a Phillips medium screwdriver, remove the (3) screws and lock washers shown in Item #5 in FIGURE 5-2A, at the bottom of the bucket.

Figure 5-2A

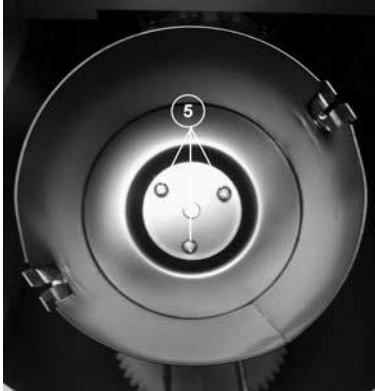
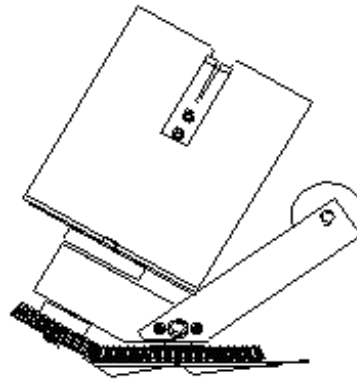


Figure 5-2B



3. Lift the bucket up off the flange-plate post.
4. To replace the bucket, place on the flange-plate post, and align the screw holes.
5. Replace (3) screws with lock washers shown in Item #5 (FIGURE 5-2A) and use Loctite #242 to secure.
6. Plug in the blender.

5-2-2 BUCKET CLIP REPLACEMENT (TruMix 1 only)

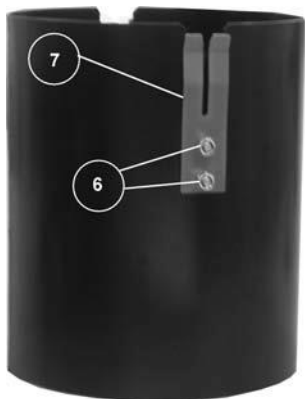


Figure 5-2C

1. Unplug the paint blender.
2. Using a 3/8" wrench, remove (2) lock nuts shown in Item #6 (FIGURE 5-2C) holding the clip to the bucket on the two sides.
3. Remove the clip, Item #7.
4. Place new clip on studs. Center the clip slot with the midpoint of the bucket. The center of the bucket should be lined up with the center of the bucket clip as shown in FIGURE 5-2C.
5. Replace the lock nuts, Item #6, and secure.
6. Plug in the blender.

5-2-3 CABINET LEVELING

TRUMIX 5; XHD & ERGO 5 MODELS

Cabinet Leveling

Leveling Pads: Your blender has four (4) leveling pads or jacking screws at each corner of the base assembly (Refer to Figure 5-2D).

1. **Unplug the paint blender.**
2. **TruMix 5:** Using a 9/16" open-end wrench, loosen the locking nut on the (4) leveling pads
TruMix XHD/Ergo 5: Using a 3/4" open-end wrench loosen the locking nut on the (4) leveling Pads.
3. **TruMix 5:** Grasp cabinet and move it to see if it rocks. If it does not rock, it is level.
If the cabinet does rock, adjust the pertinent levelers up or down to eliminate the rocking.
TruMix XHD/Ergo 5: Ensure all four pads are fully seated on the floor.
4. Once the cabinet is level, lock the leveler pads by re-tightening the lock nuts.
5. Plug in the blender.

Leveling Pad Replacement

1. **Unplug the paint blender.**
2. **TruMix 5:** Using a 9/16" open-end wrench loosen the locking nut on the leveling pad.
TruMix XHD & Ergo 5: Using a 3/4" open-end wrench loosen the locking nut on the leveling pad. Remove leveling pad.
3. Thread new leveling pad into place. Adjust to prevent cabinet rocking and secure locking nut (Refer to Figure 5-2D).
4. Plug in the blender.

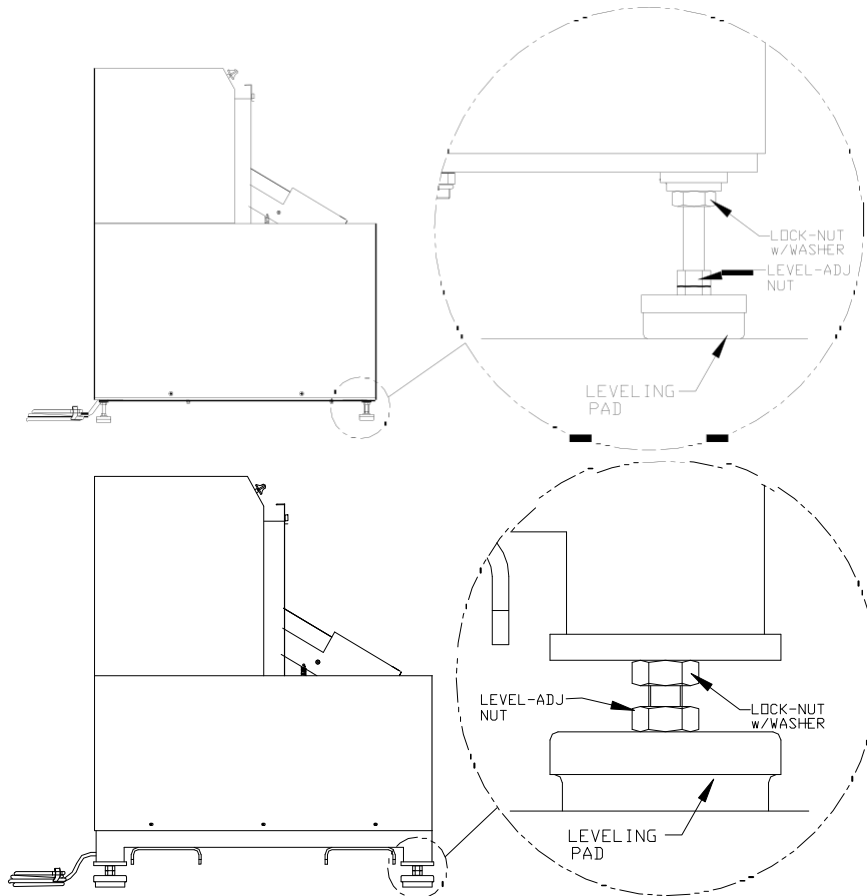
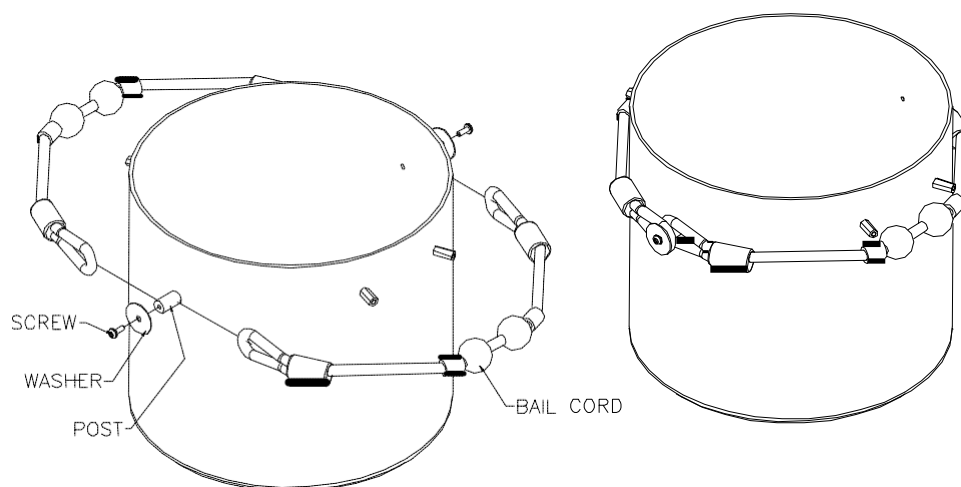


FIGURE 5-2D

5-2-4 BAIL CORD REPLACEMENT TRUMIX 5, XHD & ERGO 5 MODELS

1. **Unplug the paint blender.**
2. Using a medium Phillips screwdriver remove two screws and washers holding bail cords to bucket.
3. Remove old bail cords from bucket.
4. Place loops of new bail cords over posts as shown.
The bail cords should be stretched after assembly.
5. Apply 4 drops of Loctite 242 to tapped holes in posts.
6. Using a Phillips screwdriver replace the two screws and washers to hold the bail cords in place.
7. Plug in the blender.

Figure 5-2E



5-3 ELECTRICAL ASSEMBLY

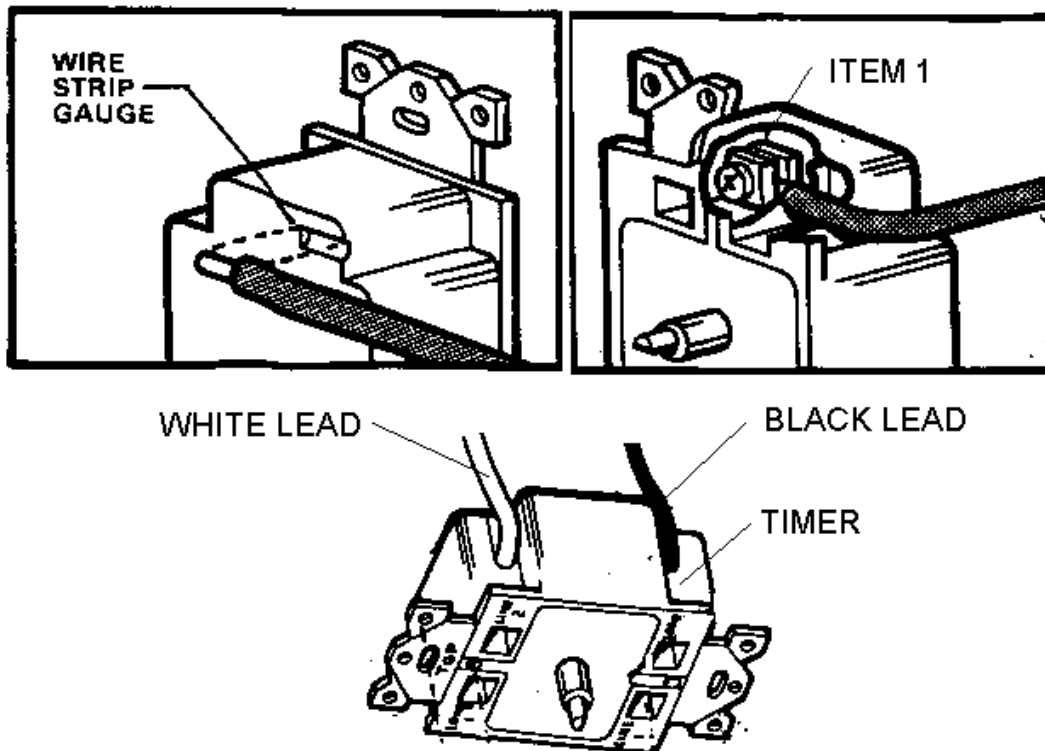
5-3-1 MECHANICAL TIMER REPLACEMENT

1. **Unplug the paint blender.**
2. Remove the cabinet rear-panel using the instructions from Section 5-1.
3. Mounted inside of the upper cabinet are both the timer and a safety limit-switch.
4. Remove the black timer knob from front of blender.
5. Using 5/16" nut driver remove (2) locknuts on each side of the timer.
6. Disconnect cable:

Old timer: Using Phillips screwdriver remove (2) pan-head screws retaining wires.

New timer: Using a Phillips screwdriver remove the screws with terminal pressure plates, Item 1.

FIGURE 5-3A



7. Remove the timer.
8. Reconnect the cable:
Black & White lead ends, should be stripped 3/8", use gauge on timer. Insert stripped end of leads into timer as shown, black lead connects to side marked "load", white lead attaches to side marked "line". Fasten screws with terminal pressure plates (provided in plastic bag), item 1, and screw down tightly.
9. Place the new timer onto the cabinet studs and refasten with (2) locknuts.
10. Replace the black timer knob.
11. Replace the cabinet rear-panel per Section 5-1.
12. Plug in the blender and test for proper operation

5-3-2 FUSE REPLACEMENT

Digital Panel - TruMix 1/5/XHD

1. **Unplug the paint blender.**
2. Using a Phillips head screwdriver, remove the screws from the back panel of the machine. Set the screws aside for reuse.
3. The fuse is located in the gray power junction box. Depending on model this could be located on the right side or under the dividing shelf. The power junction box can be located using Appendix 4-2A/B.
4. After locating the power box, using the #2 Phillips screwdriver, remove the four screws holding the cover, set the screws aside for reuse. It is not necessary to remove the box from the machine.
5. The fuse is located in the center on the printed circuit board next to the large relay (Refer to Figure 5-3B for the location of the fuse).
6. Remove the terminal cover from the relay and, using a Phillips screwdriver, remove the black and white wires above the fuse from the relay.
7. Using the fuse puller pull the fuse straight out from the board.
8. Before replacing the fuse check the voltage and amp rating imprinted on the fuse and be sure the replacement is the same as the faulty one.
9. Using the fuse puller, push the new fuse into the holder firmly.
10. Re-attach the black and white wires to the terminals on the relay - black to terminal 1 and white to terminal 2. Ensure the connections are tight. Re-install the terminal cover on the relay.
10. Replace the cover on the power box and attach using the four screws.
11. Replace the back cover and test the machine for proper operation.

FIGURE 5-3B



Ergo 5

1. **Unplug the paint blender.**
2. Remove the Stainless Steel cover / roller assembly and the front panel to expose the control enclosure.
3. There are two fuses inside the control enclosure: one in the fuse block mounted on the DIN rail just to the right of the Variable Frequency Drive, the other on the circuit board just to the left of the larger transformer. (Refer to Figure 5-3-C).
4. Before replacing a fuse check the voltage and amp rating imprinted on the fuse and be sure the replacement is the same as the faulty one.
5. For the fuse in the fuse block, open the block by pulling the tab at the top front of the fuse block out and down. Replace the fuse and push the tab back into place.
6. For the fuse on the circuit board, use a fuse puller to pull the fuse straight out from the board and to push the new fuse into the holder firmly.
7. Replace front cover and Stainless Steel cover/ roller assembly.
8. Test the machine for proper operation.

FIGURE 5-3C



FUSE BLOCK

FUSE

5-3-3 CIRCUIT BREAKER REPLACEMENT

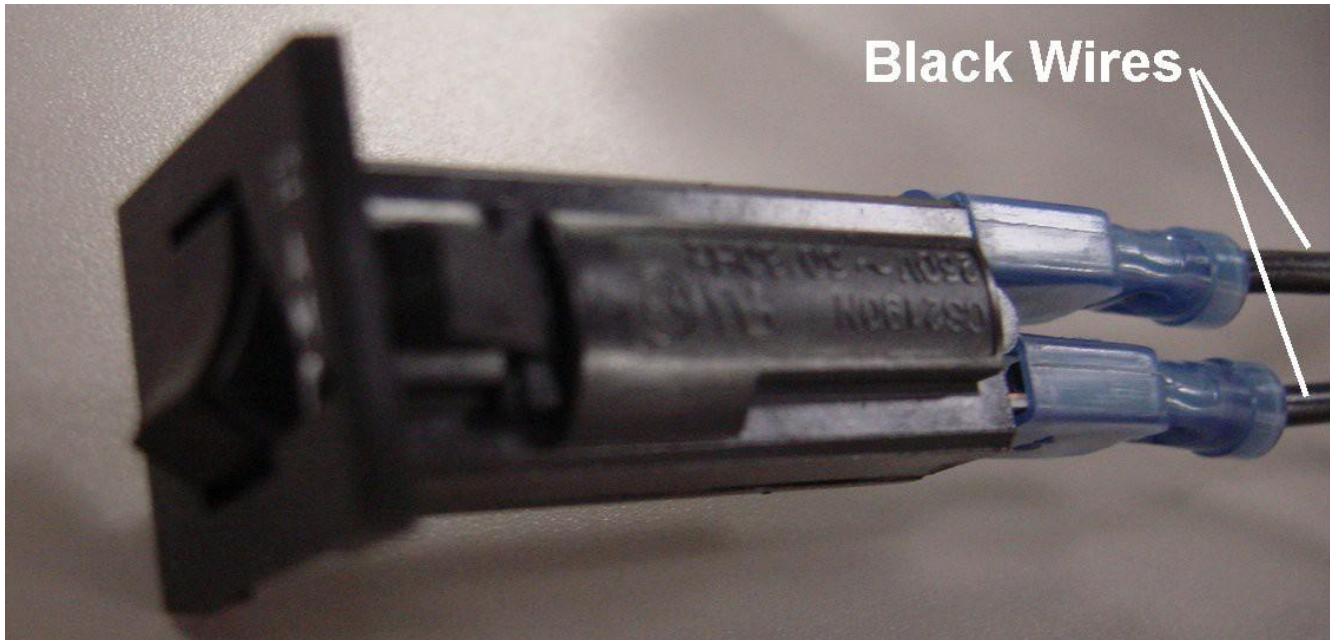
1. **Unplug the paint blender.**
2. Remove the cabinet rear-panel per Section 5-1.
3. Carefully slide the two black wires and connectors from the blade terminals on the circuit breaker. It may be necessary to unplug the main power input wires from the power box connector to ease the removal of these two wires.
4. The circuit breaker is held in place by two compression fittings, one on each side of the breaker. Carefully compress these fittings by hand to allow the circuit breaker to slide out the side of the machine.

WARNING

Before installing the new circuit breaker, ensure the amperage rating marked on the front is the same rating as the one removed.

5. Install the new circuit breaker by sliding the breaker into the mounting hole from the outside of the machine putting the terminal blades in first until the compression fittings clamp the breaker into place. It may be necessary to gently push the breaker from side to side to seat the breaker.
6. Carefully but firmly push the two connectors removed back onto the blades. It may be necessary to hold the circuit breaker while inserting these connectors.
7. If the main power input connector was unplugged, plug it back into the power box connector.
8. Ensure any tie wraps removed during this removal process are replaced.
9. Replace cabinet rear-panel per Section 5-1.
10. Plug in the blender.

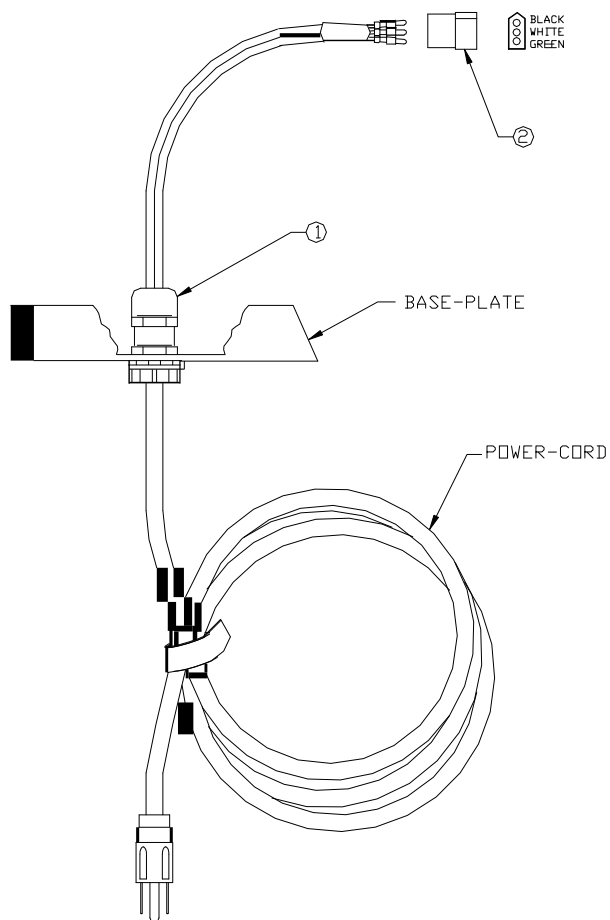
FIGURE 5-3D



5-3-4 POWER CORD REPLACEMENT

1. Unplug the paint blender.
2. Remove the cabinet rear-panel per Section 5-1.
3. Cut the tie wraps that hold the motor and power cords together.
4. Disconnect the power-cord connector.
5. Loosen the gray strain relief, Item #1, that tightens around the power-cord where it passes through the base plate.
6. Cut the white plastic connector to remove the power cord.
7. Slip the new cord up through the gray strain, Item #1, approx. 12 inches of cord length in the cabinet
8. Push the new white connector, Item #2, onto the metal terminals of the power-cord.
- Note: the black wire is located closest to the pointed end of the connector, the white in the middle, and the green on the flat side of the connector.**
9. Tighten the strain-relief, Item #1, and tie wrap the cords.
10. Reconnect the power-cord connector.
11. Replace cabinet rear-panel per Section 5-1.
12. Plug in the blender.

FIGURE 5-3E



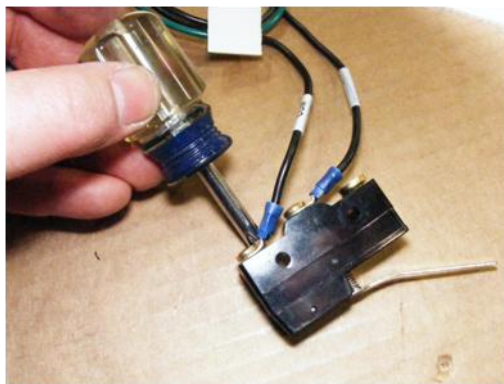
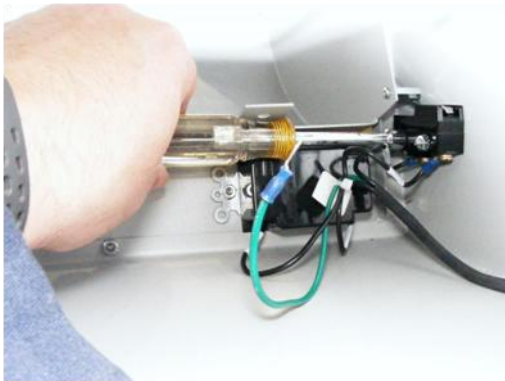
5-3-5 LIMIT SWITCH / MAGNETIC SWITCH REPLACEMENT

- **Unplug the paint blender.**
- Remove cabinet rear-panel per Section 5-1. Mounted inside of the upper cabinet there is a safety switch to ensure the blender cannot run with the door open. In blenders equipped with a mechanical timer the switch is a mechanical limit switch. In the blenders equipped with a digital panel the switch is a magnetic switch. In the Ergo 5 there is a second magnetic switch.

Mechanical Limit Switch

1. Using 5/16" nut driver remove (2) locknuts holding switch to the cabinet for the TruMix 1, or for the TruMix 5/TruMix XHD, the locknuts holding the switch bracket to the cabinet and the locknuts holding the switch to the bracket.
2. Using Phillips screwdrivers remove (2) pan-head screws connecting the wires to the switch.
3. Discard old switch. On new switch, using pan-head screws, re-attach the white cable wire to terminal marked "normally open" and re-attach the jumper wire (white) to terminal marked "common".
4. For the TruMix 1, loosely attach the switch to the cabinet studs. For the TruMix 5/TruMix XHD, loosely attach the switch to the switch bracket and the switch bracket to the inside of the upper section of the cabinet.
5. Note wand position in relation to cabinet door, adjust if needed then secure locknuts.
6. Replace cabinet rear-panel per Section 5-1.
7. Plug in the blender.

FIGURE 5-3F



Magnetic Switch

1. Disconnect the magnetic switch plug from the circuit board. For the Ergo 5, also disconnect the connector for the right hand switch in the rear of the machine (extended cable running from the switch to the rear of the machine).
2. Noting the position of the switch in the mounting bracket for future installation, loosen the jam nuts on the threaded body of the switch, using a $\frac{1}{2}$ " wrench.
3. Unthread the lower jam nut completely from the switch and slide the switch body upward and out of its mounting slot.
4. Reverse the procedure for installation.
5. Adjust the jam nuts to locate the switch in approximately the same position it was in prior to removal, aligned with the magnet when the door is closed.
6. Carefully tighten the jam nuts on the switch body - DO NOT OVER TIGHTEN (Maximum torque 4 in-lb (0.5 N-m)).

FIGURE 5-3G

