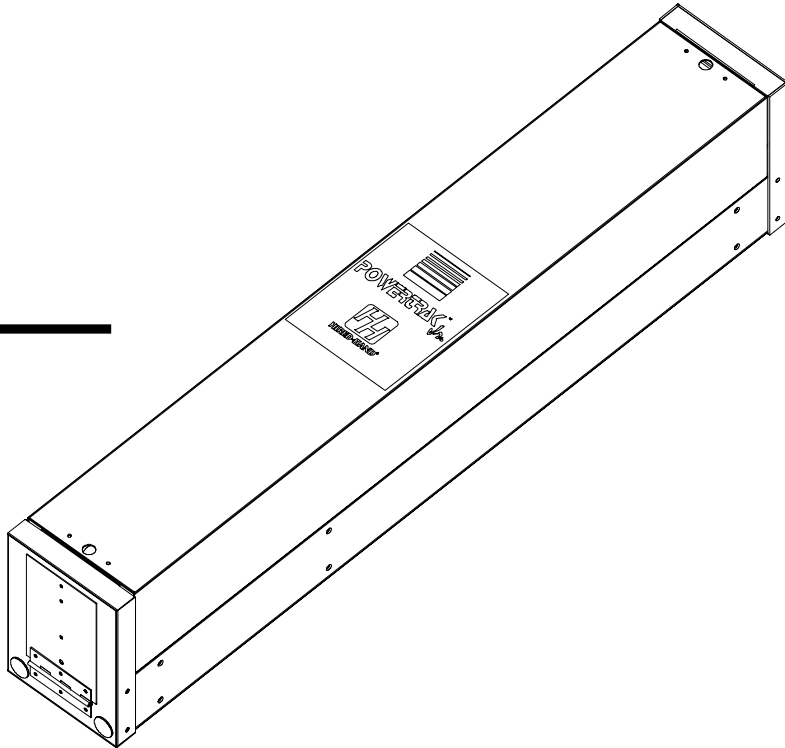




HIRED-HAND®



PowerTrak Jr

**Hired Hand, Inc.
1733 Co Rd 68
PO Box 99
Bremen, AL 35033**

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1. Ratings and specifications

Motor Options	Duty Rating	Load
115 VAC, 60 Hz	Maximum Duty 25%	700 Lbs. (317.5 kg) Maximum
230 VAC, 50/60 Hz, Single Phase		

Important!

All wiring must be in accordance with National Electric Code or other local codes.

2. Warnings

Warning!

High voltage present inside the machine. Disconnect power to the machine before reaching inside unit.

Warning!

Dangerous Rotating Machinery.
Keep hands, clothing, etc. clear when operating.

3. Limited Warranty

All products are warranted to be free from defects in material and workmanship for a period of one year from the date of purchase if installed and used in strict accordance with the installation instructions. Liability is limited to the sale price of any products proved to be defective or, at manufacturers option, to the replacement of such products upon their return. No products are to be returned to the manufacturer, until there is an inspection and/or a return-goods authorization (RGA) number is issued.

All complaints should be directed first to the authorized distributor who sold the product. If satisfaction is not obtained or the name of the distributor is not known, write the manufacturer that appears below, directed to the attention of Customer Service Manager.

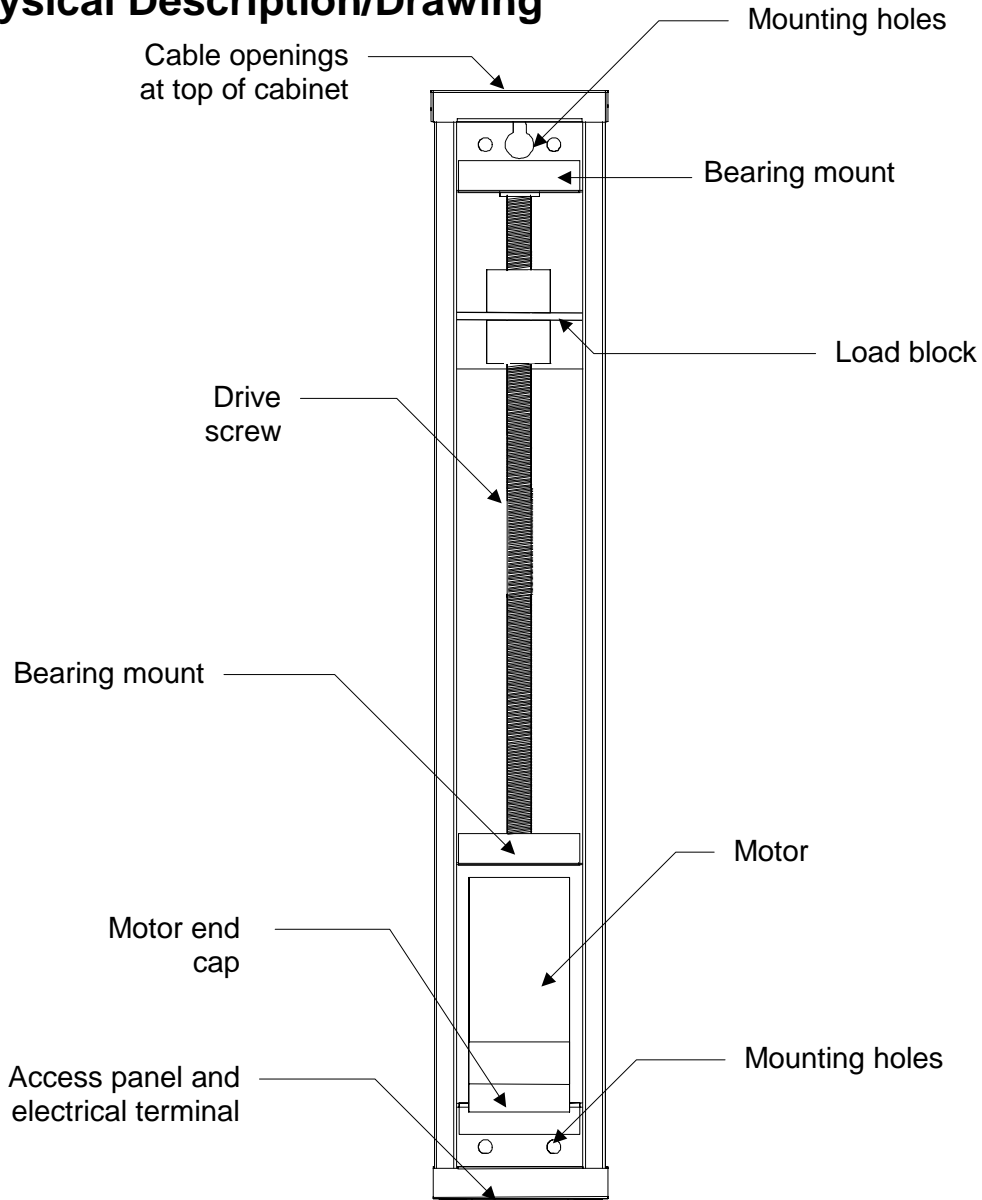
This limited warranty is expressly in lieu of any and all representations and warranties expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose. The remedy set forth in this limited warranty shall be the exclusive remedy available to any person. No person has authority to bind the manufacturer to any representation or warranty other than this limited warranty. The manufacturer shall not be liable for any consequential damages resulting from the use of our products or caused by any defect, failure or malfunction of our products. (Some areas do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.)

This warranty gives you specific legal rights and you may also have other rights that vary from area to area.

Warrantor:

Hired-Hand, Inc.
1733 Co. Rd. 68
PO Box 99
Bremen, AL 35033

4. Physical Description/Drawing



Drive Assembly

The drive assembly includes the motor assembly, Acme drive screw, and the load block assembly.

Wiring Harness

The PowerTrak Jr. is wired through a supplied terminal block on access panel. See Section "Wiring Diagram, Schematics, etc." for detailed wiring instructions.

Limit Switches

The limit switches for the PowerTrak Jr. are part of the motor. End cap of motor must be removed to set limit switches. See Section "Setting Limit Switches".

5. Use of Equipment

The PowerTrak Jr. is used for power control of small vents, curtains, or doors by means of a cable pulley system. Some typical installations follow in the Section "Cabling Options".

6. Installation

6.1 Tools Required

7/16 in. (11.1 mm) Socket	9/16 in. (14.3 mm) Socket	3/8 in. (9.5 mm)
Cable Cutters	Small screwdriver	Ratchet & extensions
3/16 in. (4.7 mm)	1/4 in. (6.3 mm)	Wire strippers
T-20 Driver	Nut Driver	
Flat Head Screwdriver	Phillips head screwdriver	

6.2 Instructions

Warning!

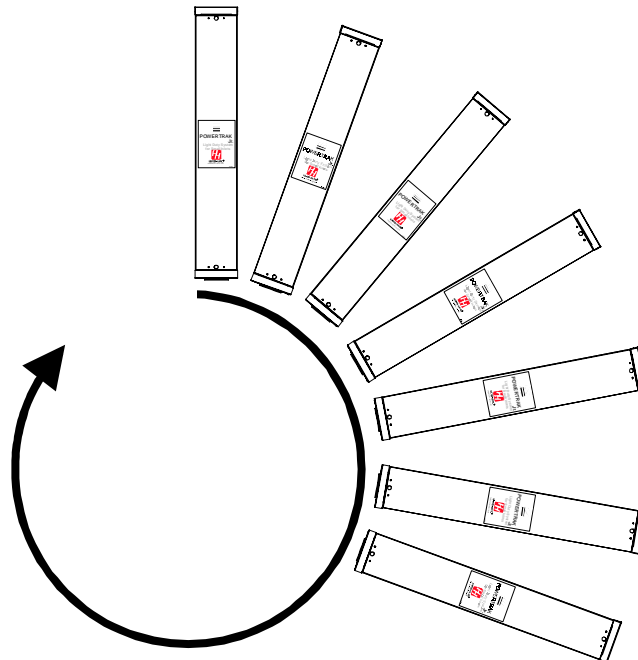
Do Not Connect Electrical Power Until Machine Is Securely Mounted And Installation Is Complete.

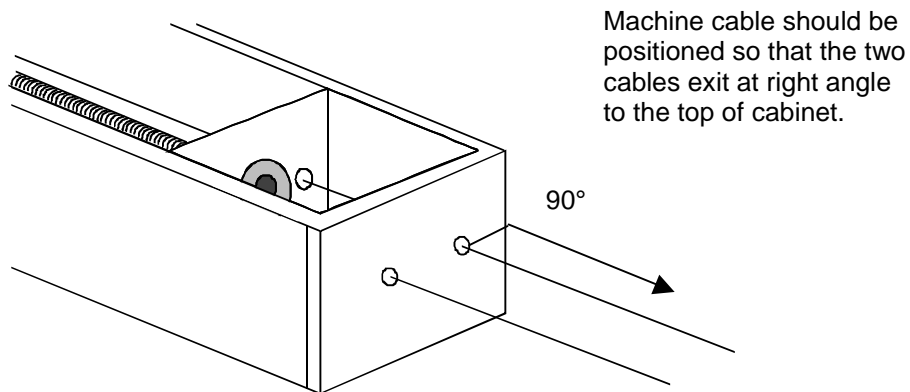
Warning!

The 3/8" lag bolt is used for hanging the machine during installation. Do not attempt to operate the machine until machine is securely mounted.

6.2.1 Unpacking machine

1. Unpack the PowerTrak Jr. and check the machine for any physical defects.
2. Select a mounting configuration. The PowerTrak Jr. will operate in any position, however it is important to mount the PowerTrak Jr. so that the cabling does not wear during operation.





Important!

Always Keep Cable Direction Perpendicular To Top Of Cabinet To Prevent Excessive Cable Wear.

6.2.2 Mounting Machine

1. Remove cabinet cover. Locate slotted mounting hole in top of rear panel between the two round mounting holes (see 1 in **Figure 1**). Position machine in the desired mounting location. Mark the position of the slotted mounting hole.
2. Refer to **Figure 1**. At the marked location, drive one 3/8" lag bolt through the wall of the building, or into a mounting board. Leave about 1/4" between the bolt head and wall.
3. Hang machine onto lag bolt through the slotted top hole.
4. Use the remaining four 3/8" lag bolts provided to secure the PowerTrak Jr. into position. There are two mounting holes near the top and two mounting holes near the bottom of the rear panel of machine (see 2 in **Figure 1**). Install the bolts through these four mounting holes in the rear panel of the PowerTrak Jr. Tighten bolts securely.

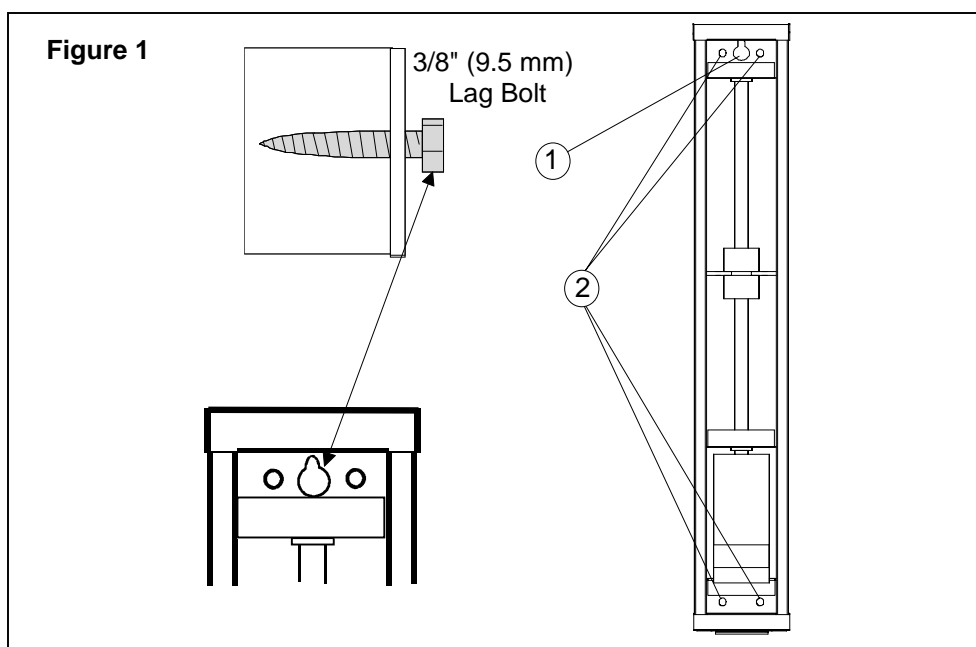
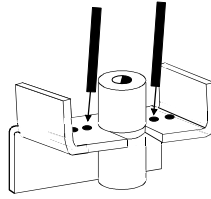


Figure 2

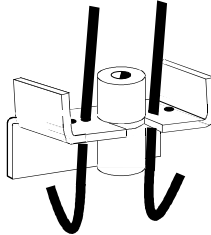
Note: The cabinet housing and drive screw are not shown for clarity. Load block tilted for better view.

Step 1



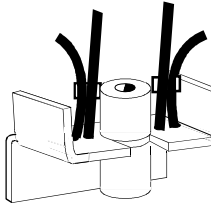
Bring ends of cables through two holes nearest the center of the load block.

Step 2



Loop ends of cable and insert them back up through the outer holes of load block.

Step 3



Securely fasten ends of cables with cable clamps.

Important!

Evenly distribute weight on each cable to ensure that the load block will operate properly.

6.2.3 Installation Of Load Block Cable

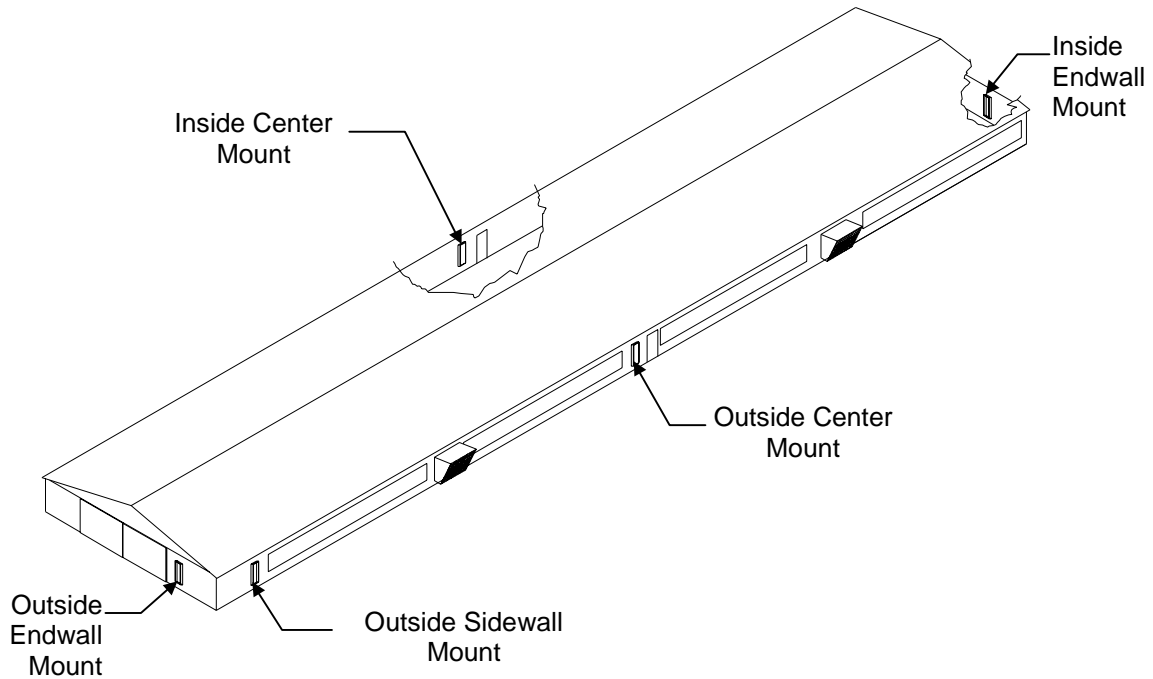
1. With the PowerTrak Jr. securely mounted, install load block cable. Run ends of cable through the holes in the top of the cabinet to the load block as in **Figure 2**. From the top of the load block insert the cables through the two holes nearest the center of the load block as shown in **Figure 2**. Loop the cables and insert the ends upward through the outside holes of the load block.
2. Attach cable clamps to fasten ends of cables as shown in step 3 of **Figure 2**. Securely tighten the cable clamps.
3. Hook up electrical wiring and controller wiring as shown in Section "Wiring Diagrams, Schematics". All wiring must comply with all National and Local Electric Codes.
4. Close access door to the unit.
5. Replace cabinet cover.
6. This completes mounting of machine.

7. Mounting Machine On Structure

Important!

Maximum Load Is 700 Lbs. (317.5 kilograms). Do Not Overload Machine!

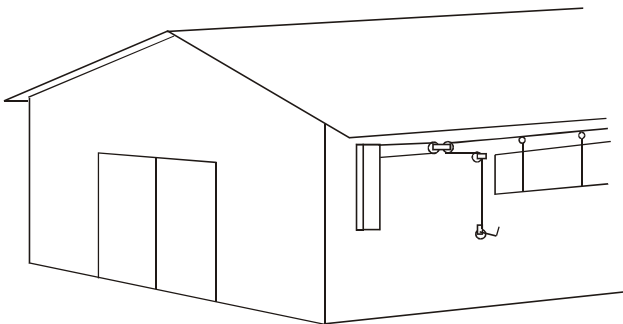
Select mounting configuration which best fits your needs. Refer to cabling setups in Section 8. Use a separate machine on each side of a structure.



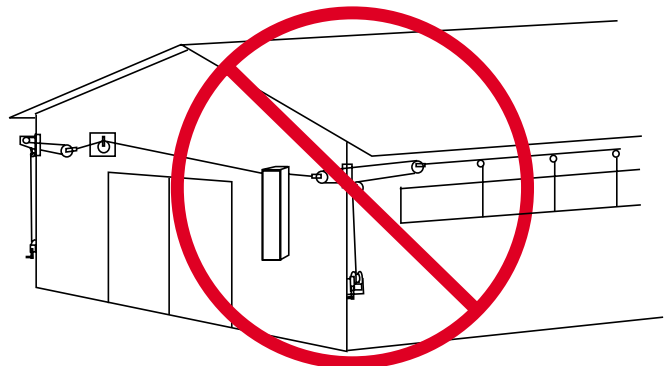
Warning!

NEVER Connect This Machine To Cables On More Than One Side Of Structure!
Damage Or Injury May Result!

CORRECT



INCORRECT



8. Cabling Options

8.1 General Description

Important!

Make Sure That The Load On Machine Is Within The Specified Ratings.

Cabling will vary depending on your application. All cable segments to vents or curtains should be installed before connecting PowerTrak Jr. The following examples show how to set up some typical cabling schemes. In this manual, 'open' refers to open vents or raised curtains. 'Closed' refers to closed vents or lowered curtains. In these examples, the open position corresponds to the *upper limit* setting of the machine. The closed position corresponds to the *lower limit* setting of the machine. Upper and lower limit settings are described in the section "Limit Switches".

Sheaves (pulleys) are recommended for installation of cabling. Some typical examples are shown in Section "Cabling examples". Construct cabling as required for your particular application. Be careful not to overload the machine.

8.2 Cabling Examples

PowerTrak Jr. operates with highest efficiency if cabling is connected straight to unit without bending cables. Such a set up is shown in **Figure 3** where a machine is mounted horizontally and connected to a row of vents. The mechanical advantage of the cabling in **Figure 3** set up is 1 to 1/2. Figures 4 and 5 show alternative cabling schemes.

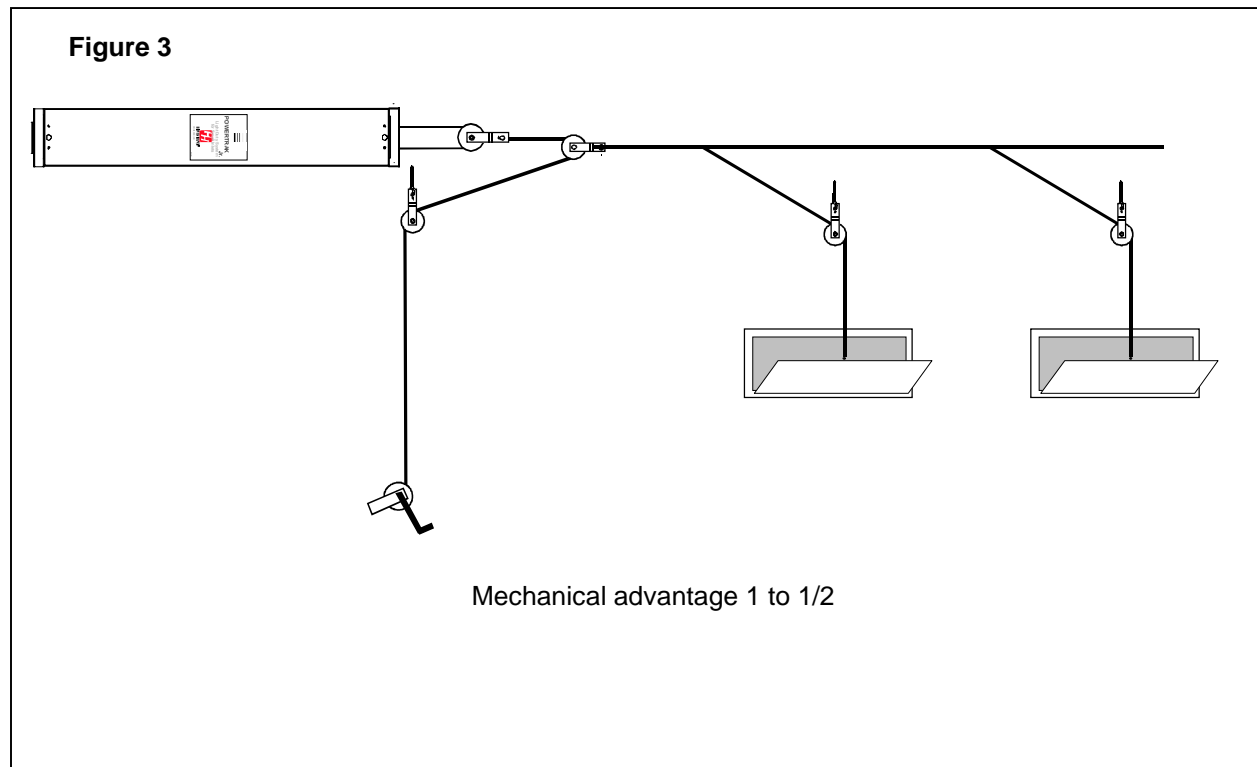
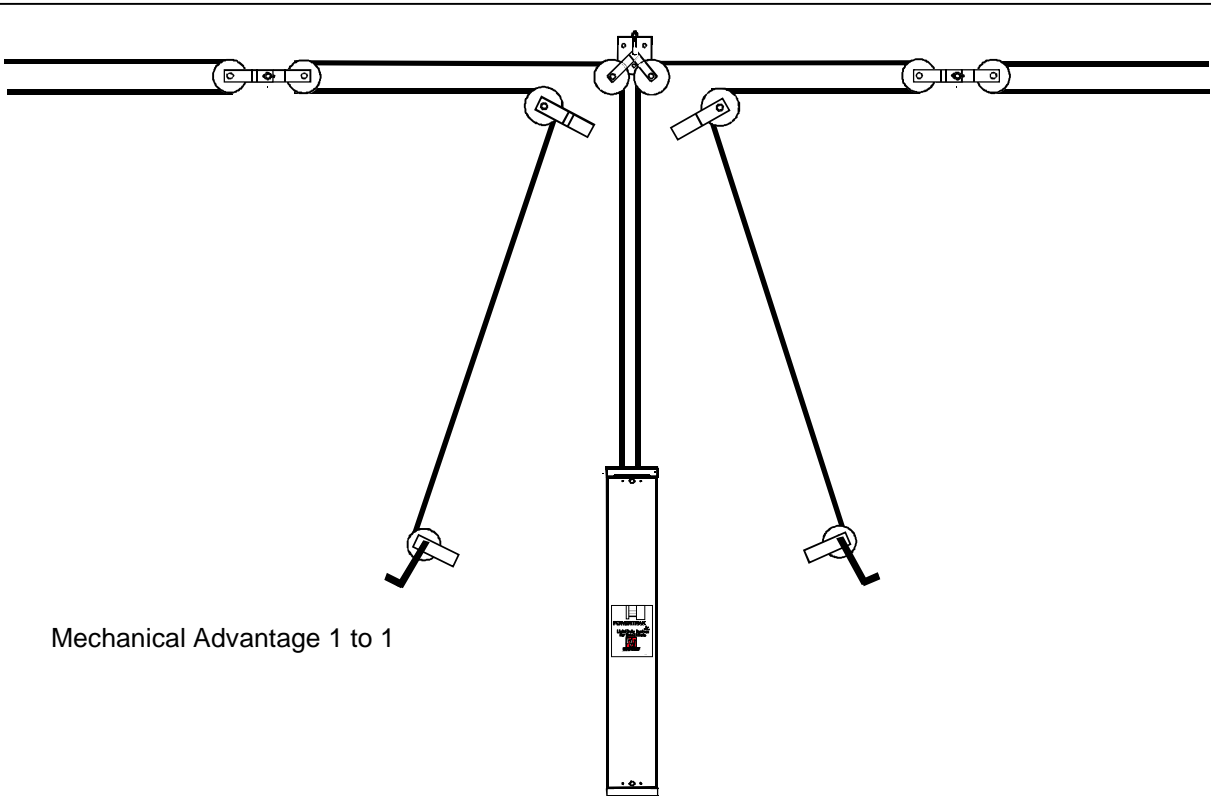
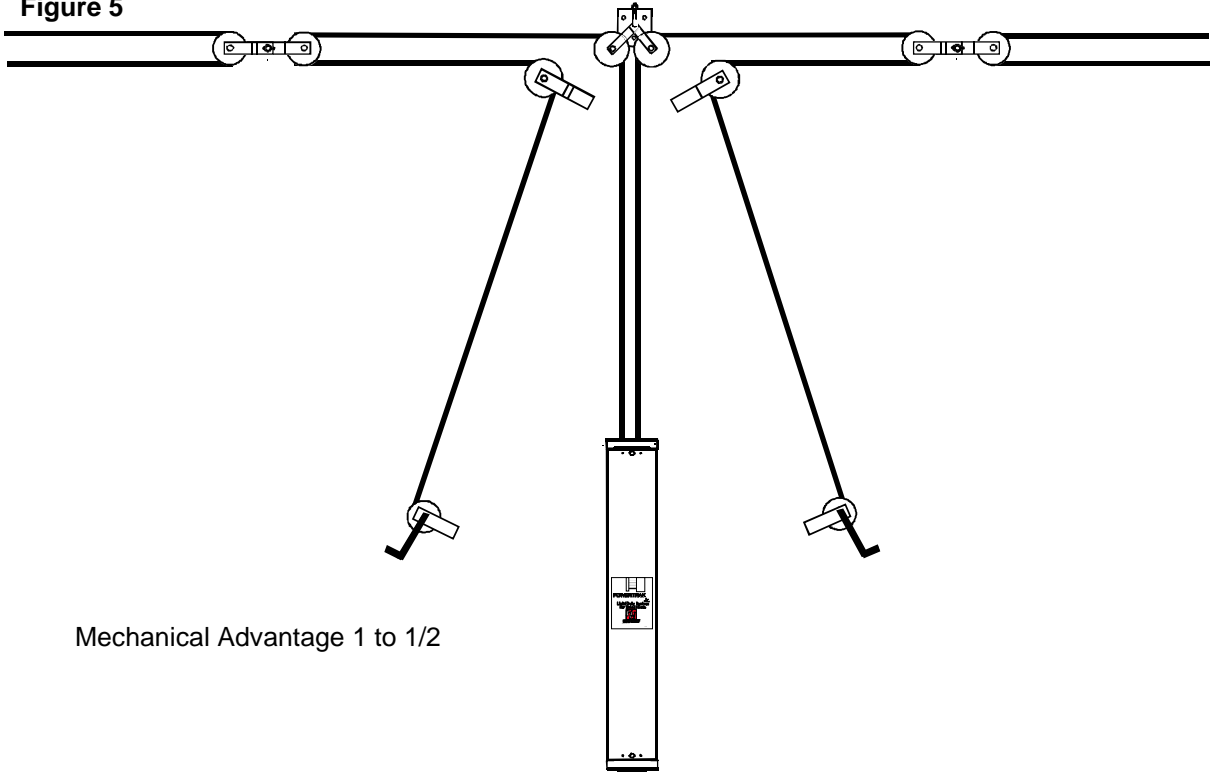


Figure 5



9. Maintenance

Warning!

Never spray internals with water unless power is completely disconnected from the unit.

The PowerTrak Jr is designed to operate with a minimum of maintenance. Keep debris out of the enclosure. The door on the unit should be sufficient, but it is still recommended that you do a visual inspection and clean out any wasp nests, etc. It is acceptable to blow debris out of the unit with pressurized air, but never spray the internals with water unless power is completely disconnected from the unit.

Important: Do not use WD-40™ or other similar products for lubrication or cleaning of this machine.

Inspect cables periodically, especially at the onset of cold weather. Damaged cables can break, and the risk is higher in colder temperature. Replace any badly frayed or excessively worn cables.

10. Limit Switches

The Limit Switches are located underneath the motor end cap (**Figure 6**). There are two types of limit switches used in these machines: Limit switches with set screws or Limit switches without set screws. Carefully follow instructions to set the limit switches for your particular machine.

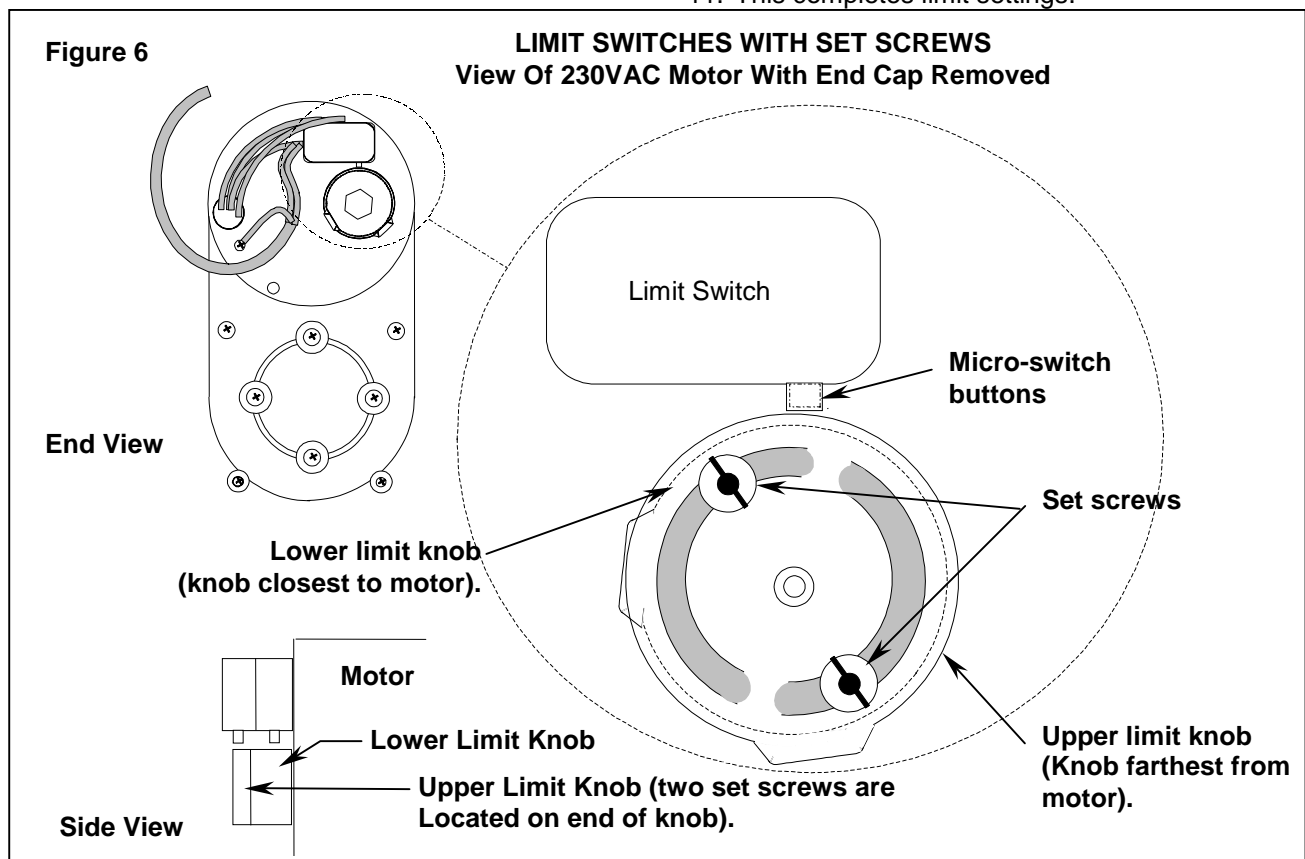
Warning!

To Avoid Shock, Disconnect Electrical Power Before Opening Machine.

1. Switch off electrical power to machine.
2. Remove cover from machine cabinet.
3. On bottom of cabinet unscrew Phillips head or Flat head screw to open access door.
4. Unscrew the screw from end cap. Remove end cap from motor.
5. On the end of the motor there are two concentric knobs that are used to set limits. If there are two set screws visible on the end knob, follow instructions in section 10.1. If the knob does not have set screws, follow instructions in section 10.2.

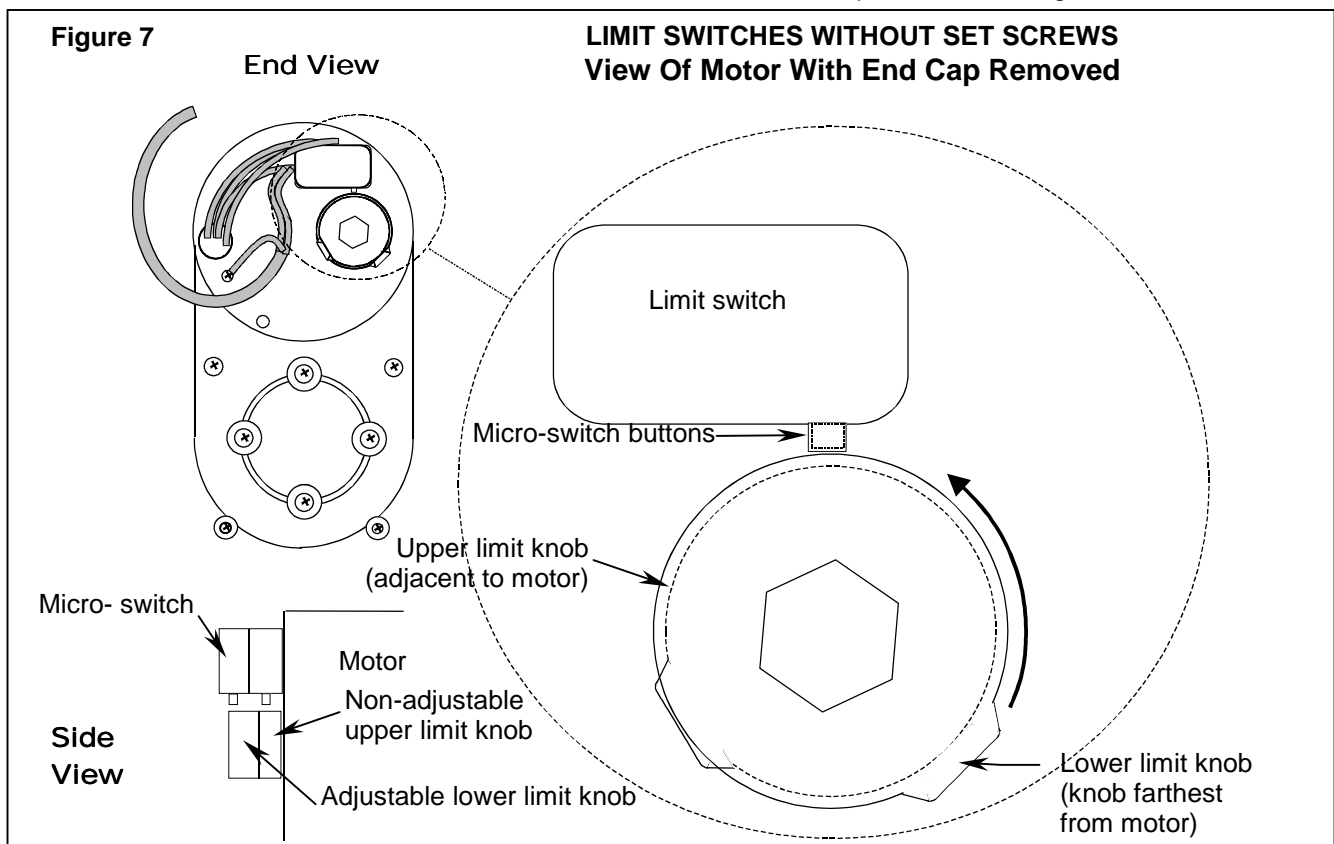
10.1 Limit Switches With Set Screws (230 VAC)

1. Refer to Fig. 6. Identify the knob assembly and micro-switches on the end of the motor. NOTE: The knob assembly consists of two concentric knobs. Knob closest to the motor sets the lower limit. Knob farthest from the motor sets the upper limit. Lower limit knob limits the maximum downward travel distance of the load block along the drive screw. Upper limit knob sets the maximum upward travel distance of the load block along the drive screw. **Machine is shipped with load block preset to lower limit. Do not attempt to rotate the lower limit knob as this will damage the knob assembly and render the limit mechanism useless.**
2. With vents fully closed, attach cables from vent cabling system to machine. Refer to section "Cabling Options". Attach vent cables with a 'balance' pulley to load block cables of machine. Take up any loose tension on cabling with hand winch.
3. Turn on electrical power to your machine. **WARNING: To prevent electrical shock, avoid touching motor wiring while electrical power is on!**
4. Run the load block upward until vents are fully open. NOTE: If the motor stops before the vents are fully open, turn off power and rotate the upper limit knob clockwise (Fig. 6). Then turn on power and continue opening vents.
5. Turn off electrical power to machine.
6. Loosen the two set screws on the upper limit knob (Fig. 6). Carefully rotate the upper limit knob counterclockwise until the cam (raised edge) of the knob just depresses micro-switch. Tighten the set screws.
7. TEST - Turn on electrical power and run the load block downward about one inch. Run the load block upward to test that the upper limit knob is set correctly. If adjustment is required, turn off electrical power. Rotate the upper limit knob as required, and repeat test. Repeat this procedure until the upper limit knob is set at the desired position.
8. Operate machine to test limit settings. Make any required adjustments.
9. Replace end cap.
10. Close access door and replace cabinet cover.
11. This completes limit settings.



10.2 Limit Switches Without Set Screws (115 VAC)

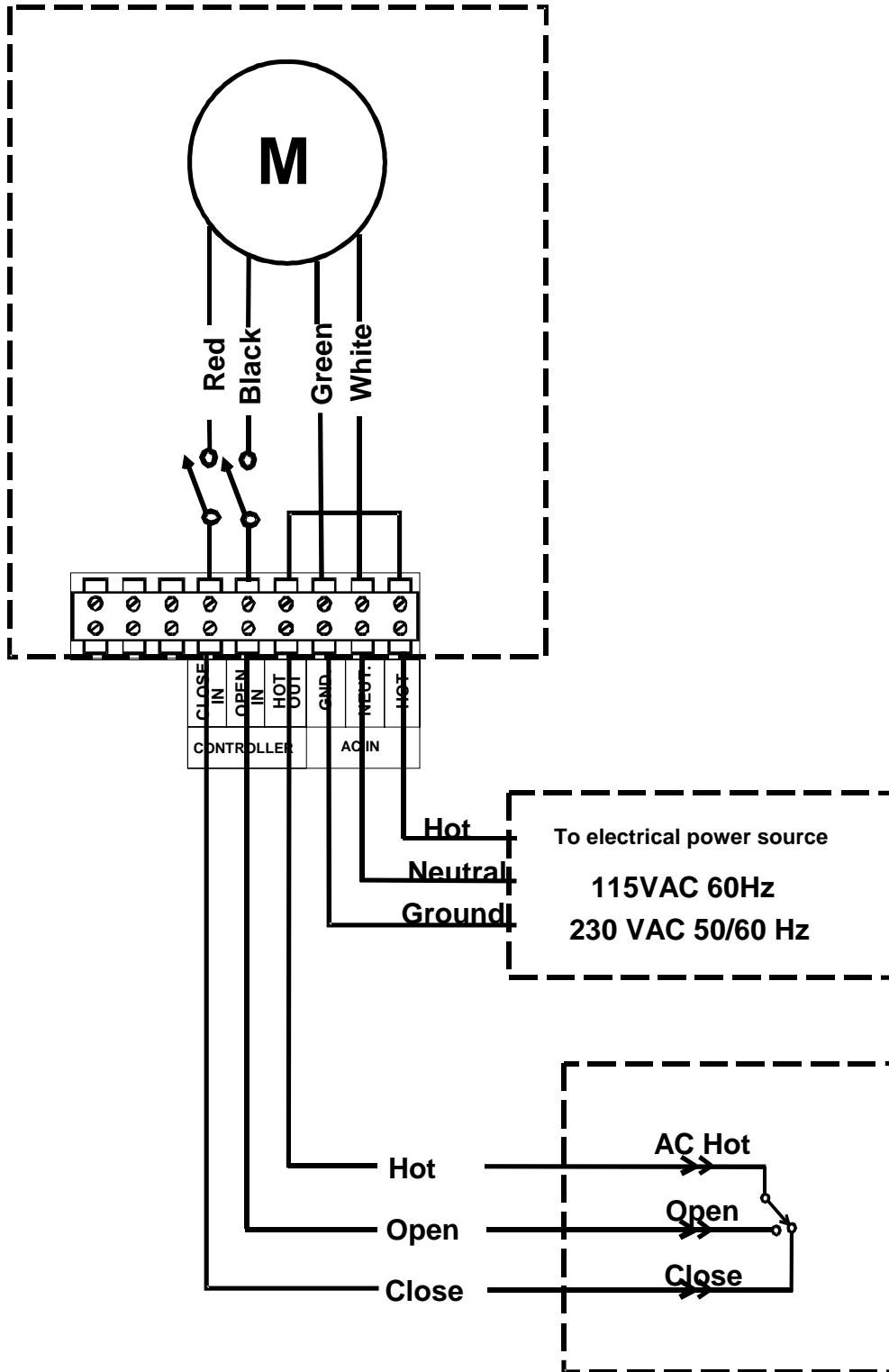
1. Refer to **Figure 7**. Identify plastic knob assembly and micro-switches on the end of the motor.
NOTE: The knob assembly consists of two concentric knobs. Knob adjacent to the motor determines the upper limit setting. Knob farthest from the motor is used to set the lower limit. The upper limit knob limits the maximum upward travel distance of the load block along the drive screw. **The machine is shipped with the upper limit knob already adjusted. Do not attempt to rotate the upper limit knob as this will damage the knob assembly and render the limit mechanism useless.** The lower limit knob can be adjusted by turning as in step 6.
2. With vents fully open, attach cables from vent cabling system to load block cable. Attach cables to machine with a 'balance' pulley. Refer to section "Cabling Options". Take up any loose tension on the cabling with the hand winch.
3. Turn on electrical power to machine.
4. Run the load block downward until the vents reach their fully closed position. **Note: If the motor stops before the vents are fully closed, turn off power and rotate the lower limit knob counterclockwise (Fig. 7). Then turn on power and continue closing vents.**
5. Turn off electrical power to machine.
6. See **Fig. 7** to identify lower limit knob. Carefully rotate the lower limit knob clockwise until the cam (raised edge) of the knob just depresses micro-switch. This action sets the lower limit of travel of the load block. **Note: The lower limit knob may be stiff and will require a firm grip to turn. Caution! Do not allow the upper limit knob to rotate during this procedure.**
7. Test - Turn on electrical power and run the load block upward about one inch, then downward to test that the lower limit switch is set correctly. If adjustment is required, turn off electrical power, rotate the lower limit knob as required, and repeat test. Repeat this procedure until the lower limit knob is set at the desired position.
8. Operate machine to test limit settings. Make any required adjustments.
9. Replace end cap.
10. Close access door and replace cabinet cover.
11. This completes limit settings.



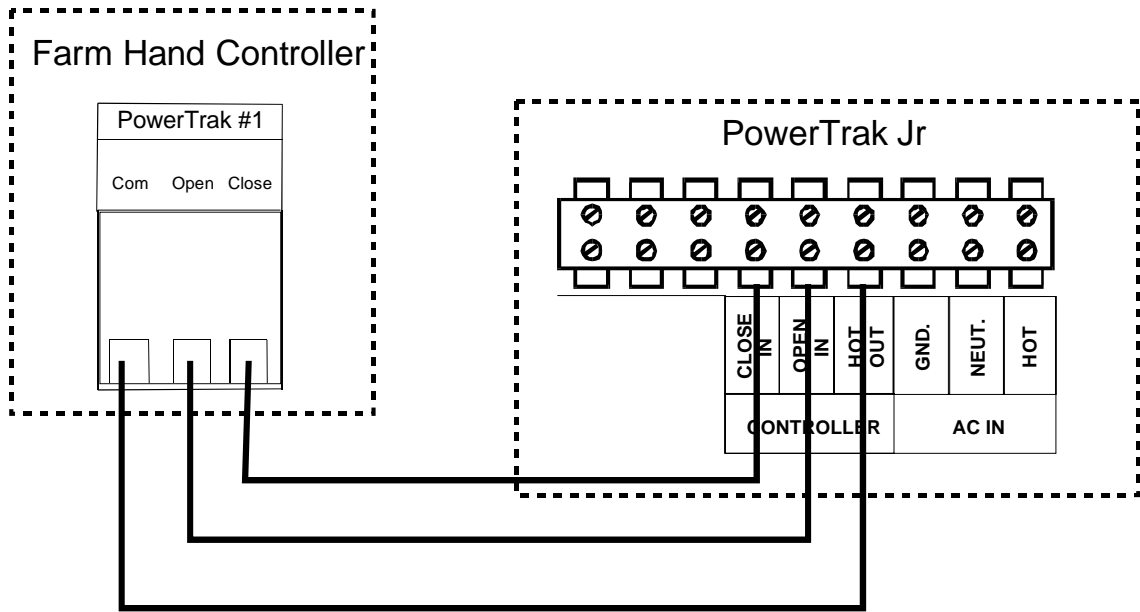
11. Wiring Diagrams, Schematics, etc.

11.1 Electrical Wiring Diagram

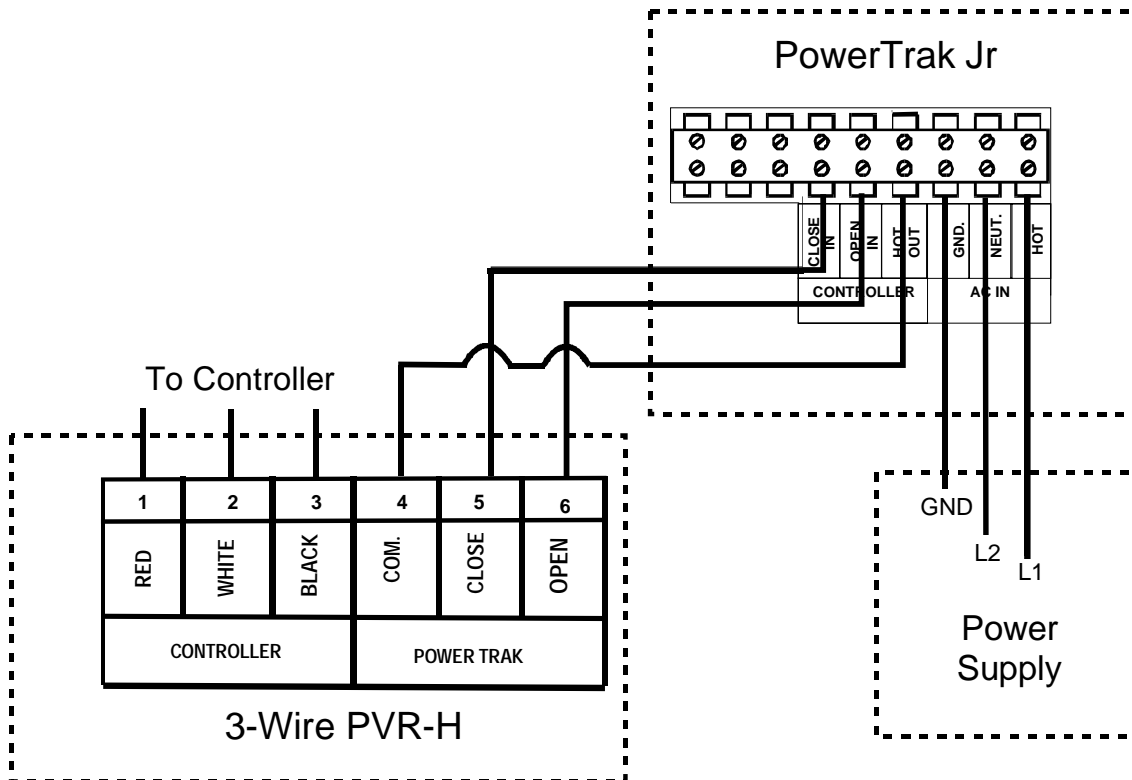
115VAC, 60 Hz
230VAC, 50/60 Hz



11.2 Wiring PT Jr. To Farm Hand Controller



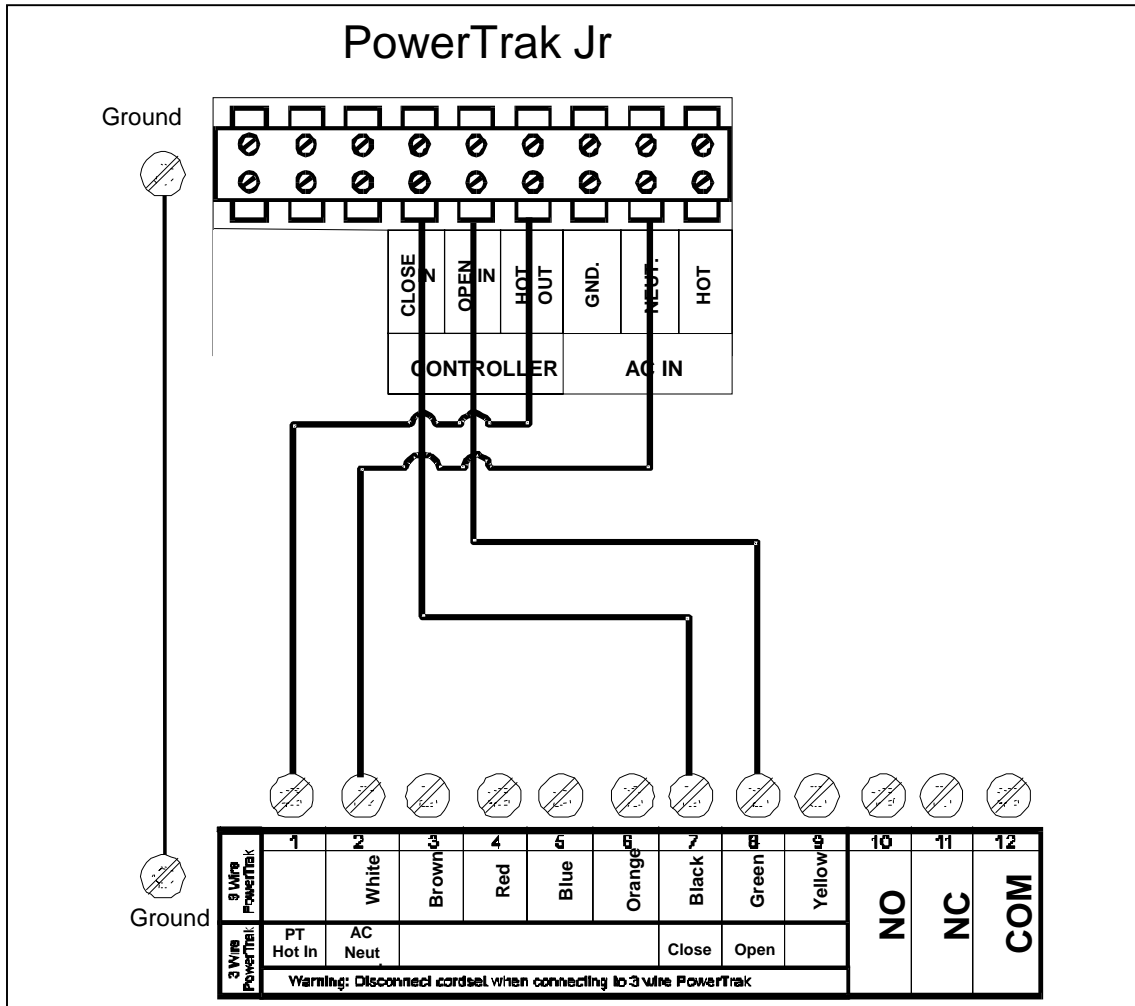
11.3 Wiring PT Jr. To System 500, System 1000, and System 2000 Controllers



11.4 Wiring PT Jr. To Electro-Mechanical Controllers

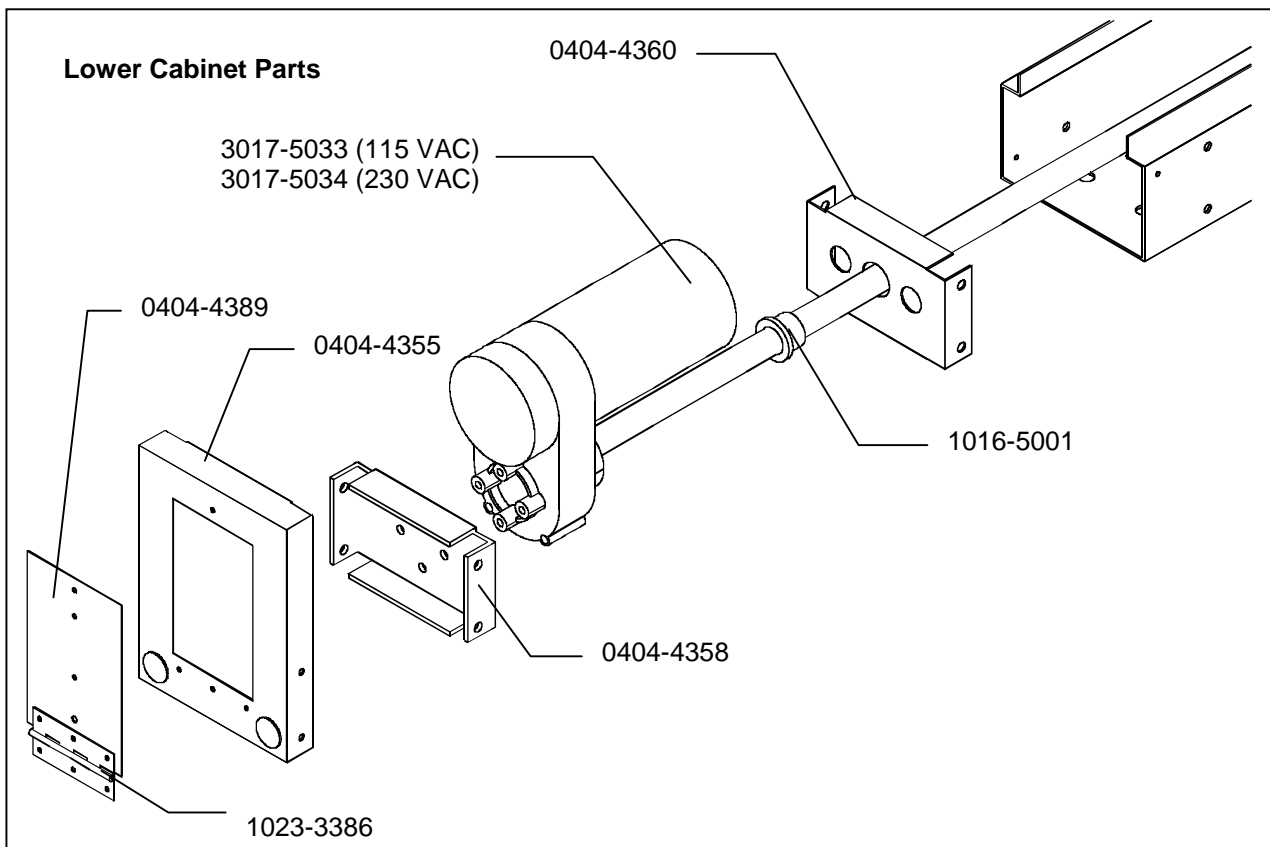
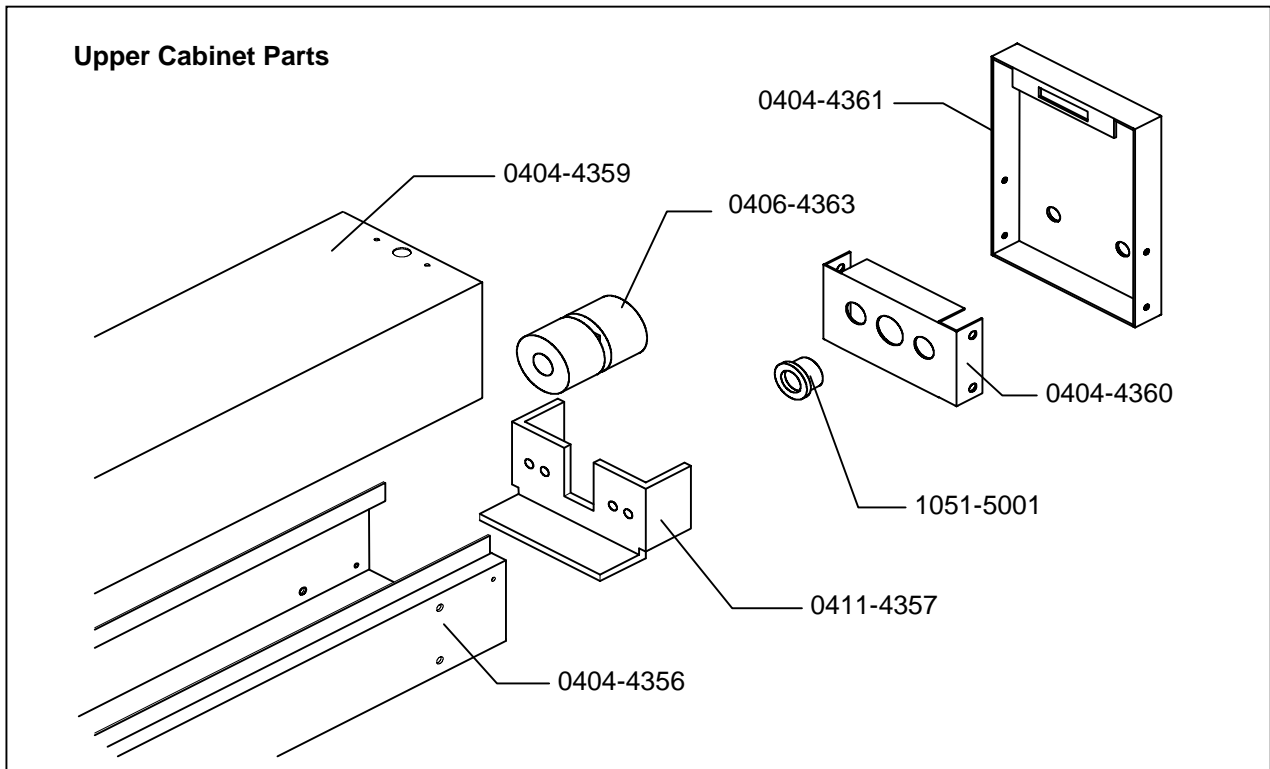
If you own a PC-OC, PC-SS, PC-D3, PC-DB, PC-LP, PC-OD, PV-TIR, or PC-PH. Your controller wiring diagram may not match the label inside the controller. The only thing different is the label. The internal wiring of these controllers did not change.

The picture below is the label you will see for your terminal block.



Remove the cord set from the control and remove the fuse wire from the #1 terminal inside the controller. Connect the two units together using 5 wires. positions 1, 2, 7, 8 and GROUND. (PT Jr HOT IN connects to HOT OUT(PT Jr), AC NEUT connects to NEUT(PT Jr), CLOSE connects to CLOSE IN(PT Jr), OPEN connects to OPEN IN(PT Jr), connect ground from GROUND LUG of PowerTrak Jr to metal plate inside control.)

12. Exploded View Diagram



13. Parts List

Part No.	Description
0404-4359	GS Pnl Door
0406-4363	PL Load Nut
0404-4360	GS Brkt Bearing Mount
0404-4357	Loadblock Plate
0411-4356	Cabinet/Frame Panel
0404-4361	GS Pnl Cover Top
1016-5001	BRNG plastic w/ flng 0.750"
3017-5033	Motor 115VAC, 60 Hz
3017-5034	Motor 230VAC, 50/60 Hz, single phase
0404-4358	GS Brkt Mount Motor
0404-4355	GS Brkt Bottom PT Jr
1023-3386	Hinge Piano ½ knuckle 3" long
0404-4389	GS Door PT Jr Bottom