POWERLIFT DUMBWAITERS CORPORATION
SINCE 1972
www.dumbwaiters.com

# Residential Owner's Manual

## READ THIS MANUAL BEFORE OPERATING THE DUMBWAITER

**It is important that you read and understand this manual prior to operating the dumbwaiter. If there is anything in this manual that you do not clearly understand, contact Powerlift Dumbwaiters for clarification prior to operating the dumbwaiter. Improper use could result in property damage and/or serious bodily injury, or death!**

## ASSUMPTION OF RISK

**All persons who use this dumbwaiter bear the responsibility for the proper and safe use of this product.**
**Misuse, deliberate or otherwise, voids all warranties, expressed or implied. Powerlift Dumbwaiters, Inc. is not responsible for any damage, injury or death resulting from improper installation, misuse, product modification, additions or other changes which take place after the product has left the manufacturer's plant.**

# NO RIDERS

**2444 Georgia Slide Road, Georgetown, CA 95634**
**800-409-5438 • 530-333-1953**
**Fax: 530-333-1055**

**www.dumbwaiters.com**

2018-08-08-12:07:17

Congratulations and thank you for purchasing a Powerlift Dumbwaiter!
We are a family owned company, in business for over 40 years, with a commitment to excellence and our customers. Should you have questions or concerns, please do not hesitate to contact us on our toll-free number in the USA or 1-530-333-1953 for international customers. We offer free technical support for your dumbwaiter and our staff will be happy to help you.

This owner's manual includes information for operating and maintaining most configurations of the Powerlift residential dumbwaiter and therefore not all information included will apply to your dumbwaiter. If you are unclear what configuration you have, please call us.

**Serial # _____**

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# Important Information You Should Know

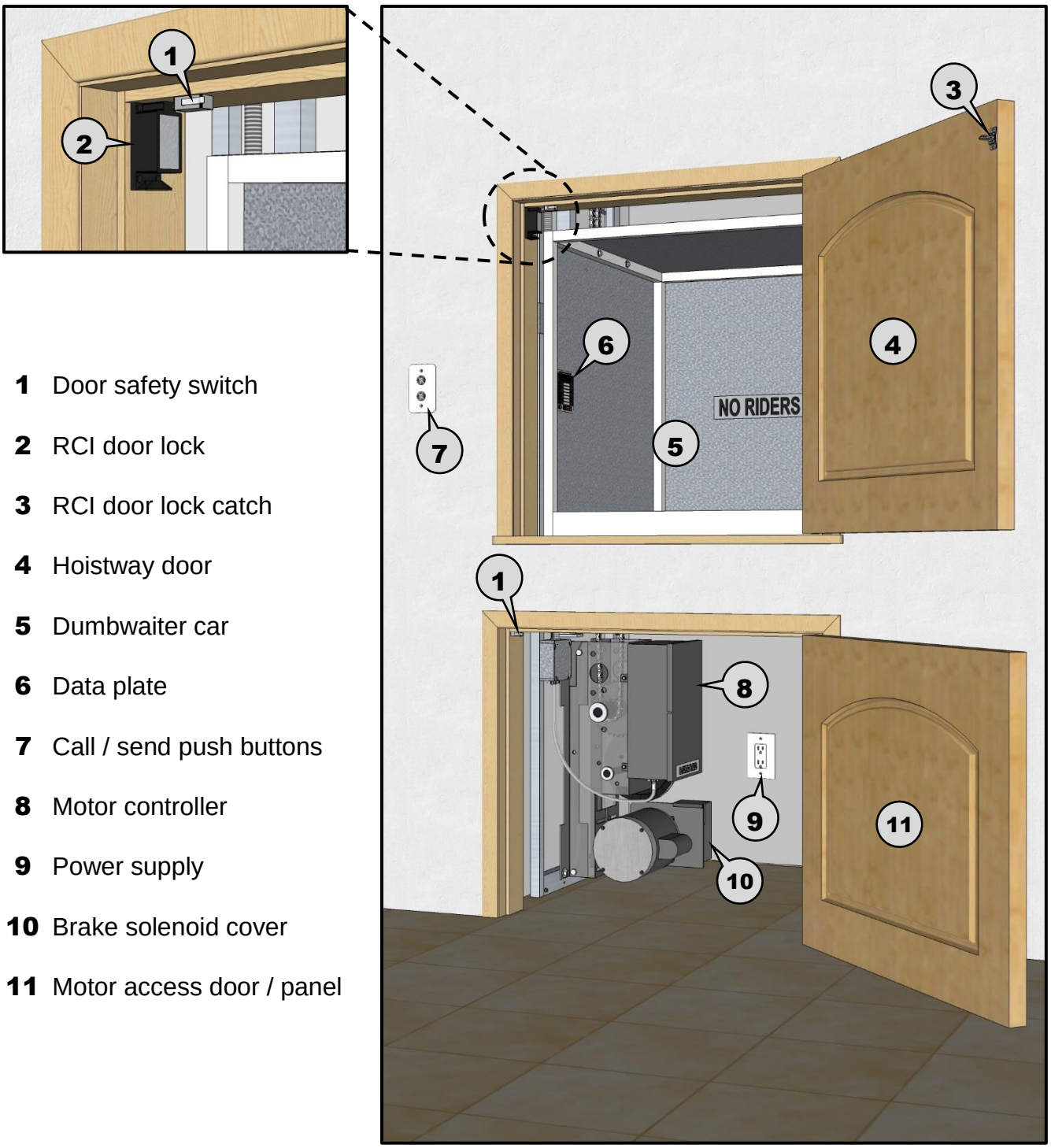
## Please Read

1. Anyone planning to use this dumbwaiter should read the Owner's Manual prior to operating. If you do not have an Owner's Manual, please visit our website to download a copy or call us to have one sent to you.
2. **DO NOT allow children to use the dumbwaiter without adult supervision!**
3. **DO NOT operate dumbwaiter if you are under the influence of any drugs, alcohol or medication that could affect your ability to use the dumbwaiter properly.**
4. **NEVER OPERATE DUMBWAITER if door safety switches are not working properly.** Every dumbwaiter includes door safety switches, which prevent the dumbwaiter from operating if any door is not properly closed. The switches will also stop the dumbwaiter if any door is opened while the dumbwaiter is in operation. If your door safety switches are not working properly, immediately unplug the dumbwaiter and call Powerlift Dumbwaiters, Inc. to request replacement door safety switches, free of charge for the life of the dumbwaiter. Ensure that the switches are replaced by a qualified technician.
5. **NEVER OPERATE DUMBWAITER if door locks are not working properly.** Every dumbwaiter includes door locks, which prevent the doors from being opened while the dumbwaiter is in operation. If your door locks are not working properly, immediately unplug the dumbwaiter and call Powerlift Dumbwaiters, Inc. to request replacement door locks. Ensure that the door locks are replaced by a qualified technician.
6. **NEVER USE THE DUMBWAITER if it is not operating properly.** Call your service technician, installation contractor, or Powerlift Dumbwaiters, Inc.
7. **NEVER USE THE DUMBWAITER when smoke and/or fire is present.**
8. **DO NOT REMOVE, BYPASS, OR ALTER any switches, controls, and/or restraining devices.** These are mandated by national and local codes and safety regulations. Any tampering will void your warranty and could result in serious injury and/or death.
9. **NEVER EXTEND YOUR HANDS, ARMS, LEGS, FEET, HEAD, OR BODY INTO OPEN HOISTWAY!** Doing so could cause serious injury and/or death! Never extend foreign objects of any kind into open hoistway. Doing so can cause damage to your dumbwaiter and/or serious injury to you!
10. **NO RIDING IN DUMBWAITER CAR!** Your dumbwaiter car is not intended to transport people and/or animals. Doing so could cause serious injury and/or death!
11. **NEVER OVERLOAD YOUR DUMBWAITER CAR!** Your dumbwaiter is rated for a certain capacity. Please see data plate in car.
12. Your dumbwaiter is not designed for continuous operation. Too many "starts" and "stops" could overheat the motor and trip the breaker.
13. The dumbwaiter should be on a dedicated circuit. Too many appliances operating from the same power source reduces the available amperage and may cause the dumbwaiter to malfunction. If your dumbwaiter does not seem to be operating at its optimum, stop using it until it can be inspected by a qualified technician.
14. To prevent unauthorized use, a keyed on/off switch can be obtained from Powerlift Dumbwaiters, Inc.
15. Observe, read, and obey the warning labels, tags, and symbols, as they are provided by the manufacturer for your safety and protection.
16. **DO NOT ATTEMPT TO REPAIR the dumbwaiter yourself.** Immediately stop use, disconnect power supply and call Powerlift Dumbwaiters, Inc. to determine whether you need to contact your service technician or installation contractor.
17. **Check your local fire code.** Swing Hoistway doors may be required to be fire rated and have self closing hinges.

# Identifying Parts of the Dumbwaiter

## P-100 & P-200

## Motor on Bottom Configuration




**1** Door safety switch

**2** RCI door lock

**3** RCI door lock catch

**4** Hoistway door

**5** Dumbwaiter car

**6** Data plate

**7** Call / send push buttons

**8** Motor controller

**9** Power supply

**10** Brake solenoid cover

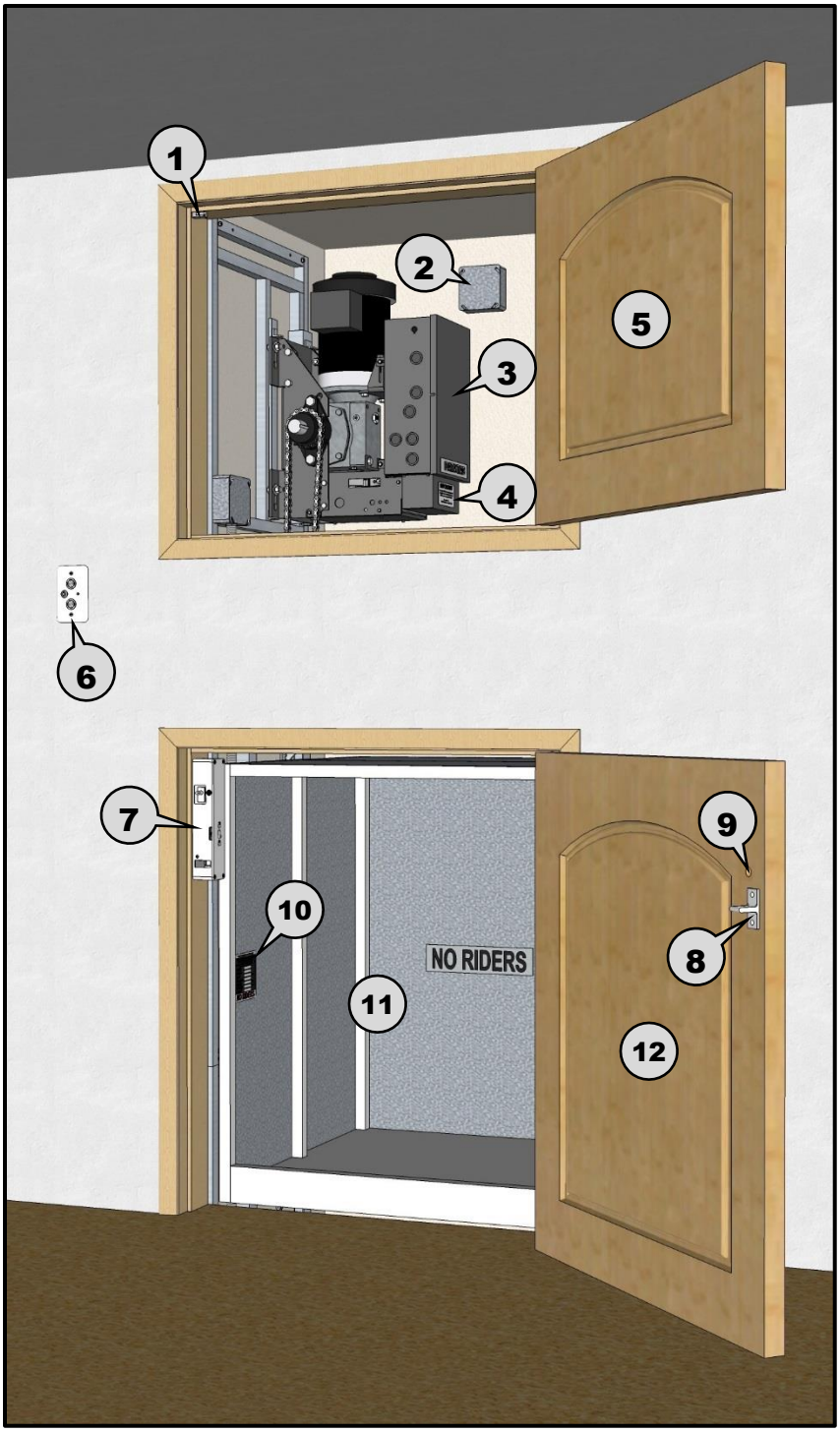
**11** Motor access door / panel

Figure 1

# Identifying Parts of the Dumbwaiter

## P-300 & MJ-500

## Motor on Top Configuration



**1** Door safety switch **(see detail above)**

**2** Power supply

**3** Motor controller

**4** Brake solenoid cover

**5** Motor access door / panel

**6** Call / send push buttons

**7** RDI door interlock

**8** RDI door interlock catch

**9** Hole to access emergency override switch

**10** Data plate

**11** Dumbwaiter car

**12** Hoistway door

**Figure 2**

# Basic Operation of Dumbwaiter

## Please Read

**⚠ WARNING ⚠**

**NEVER EXTEND YOUR HANDS, ARMS, LEGS, FEET, HEAD OR BODY INTO THE OPEN HOISTWAY. DOING SO COULD DAMAGE THE DUMBWAITER AND/OR CAUSE SERIOUS BODILY INJURY, LOSS OF LIMB, OR DEATH!**

1. Press the call/send button that corresponds with the floor you are standing on to call the dumbwaiter car to you. **(see Figure 3)**

   **If you have a "keyed on/off lock" you have to unlock it or the dumbwaiter will not operate. (see Figure 4)**

2. Do not try to open the hoistway door until the dumbwaiter car has arrived.

3. When the dumbwaiter car has arrived, the hoistway door will automatically unlock and you can now open the hoistway door.

   **If you have a "car here light" you will see the light turn on when the car arrives and the door unlocks. (see Figure 4)**

4. Load or unload the dumbwaiter car and close the hoistway door completely.

   **If the hoistway door is not completely closed the dumbwaiter will not operate.**

5. Press the call/send button that corresponds with the floor you want to send the dumbwaiter car to.

6. Once the dumbwaiter car stops at the specified floor, the hoistway door will automatically unlock.

7. Load or unload the dumbwaiter car and close the hoistway door completely.

   **If the hoistway door is not completely closed the dumbwaiter will not operate.**

8. The dumbwaiter is now ready to be called or sent to another floor.

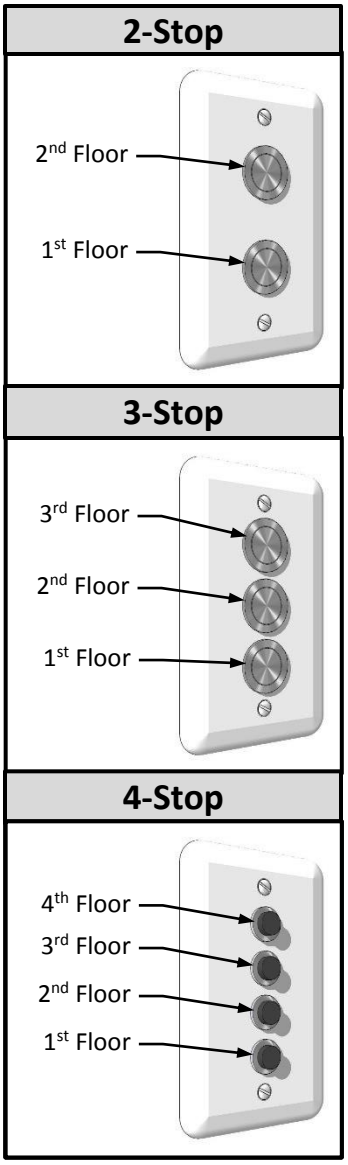



**Figure 3**

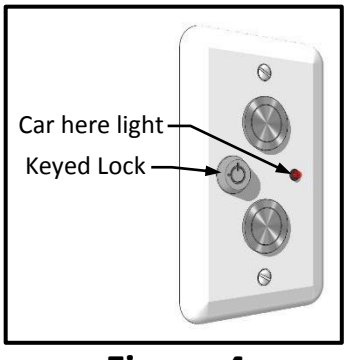



**Figure 4**

# Recommended Maintenance Schedule

## Please Read

**⚠ WARNING ⚠**

**MAKE SURE A.C. POWER IS DISCONNECTED FROM DUMBWAITER WHILE SERVICING!! FAILURE TO DO SO COULD DAMAGE THE DUMBWAITER AND/OR CAUSE SERIOUS BODILY INJURY, LOSS OF LIMB, OR DEATH!**

| Description of Required Maintenance | Model | | | | Light Use | Heavy Use |
|---|---|---|---|---|---|---|
| | 100 | 200 | 300 | 500 | (0-49 times per week) | (50 or more times per week) |
| Lubricate idler pulley with light oil. **(see Figure 5)** | Yes | No | No | No | Every 6 months | Every 3 months |
| Grease pillow blocks with heavy duty bearing grease. **(see Figure 6)** | No | Yes | Yes | Yes | Every 6 months | Every 3 months |
| Lubricate brake solenoid with a lightweight lubricant. **(see Page 12 for P-100 & P-200)** **(see Page 13 for P-300 & MJ-500)** | Yes | Yes | Yes | Yes | Every 12 months | Every 6 months |
| Check chain tension and tighten as needed. **(see Pages 10 & 11)** | Yes | Yes | Yes | Yes | Every 12 months | Every 6 months |

**Lubricating the idler pulley:**

Place a few drops of lightweight oil on the shaft next to the pulley on each side. **(see Figure 5)**

**DO NOT USE WD-40!**

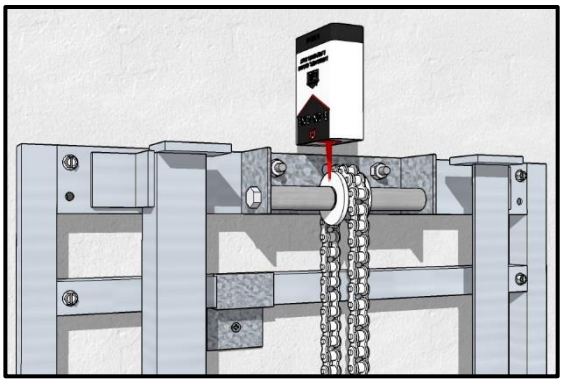


Figure 5

The pillow block assembly is located at the end of the track & rail opposite the motor. Where the motor is at the bottom, the pillow block assembly is just above the top floor opening. Where the motor is at the top, the pillow block assembly is just above the bottom floor.

**Lubricating the pillow block assembly:**

Using a grease gun, apply a few pumps of heavy duty bearing grease to both lube points on the pillow block assembly. **(see Figure 6)**

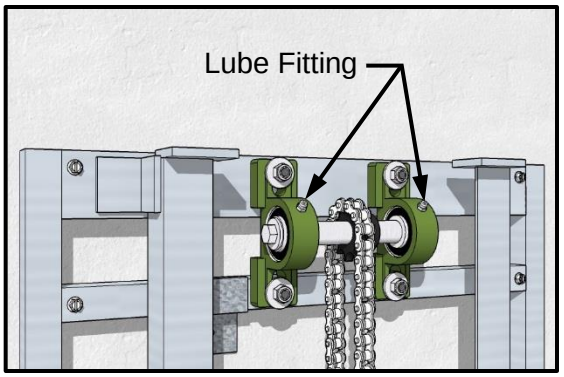



Figure 6

# Maintenance

## Checking & Adjusting Chain Tension

## Motor on the Bottom Models

**⚠ WARNING ⚠**

**MAKE SURE A.C. POWER IS DISCONNECTED FROM DUMBWAITER WHILE SERVICING!! YOU MUST ACCESS THE CONTROLLER THROUGH THE MOTOR ACCESS PANEL/DOOR!! FAILURE TO DO SO COULD DAMAGE THE DUMBWAITER AND/OR CAUSE SERIOUS BODILY INJURY, LOSS OF LIMB, OR**

1. From the first floor, open the hoistway door and motor access panel / door. **(see Figure 7)**
2. Through the motor access panel / door open the controller and use the "Up" contactor to move the dumbwaiter car up until the bottom of the car is approximately 6 feet above the floor. **(see Figures 7, 9 & 10)** **(see Page 14 for Contactor Operation)**
3. Disconnect A.C. power from dumbwaiter.
4. Verify that both the front and back chains are taught at chest height. **(see Figure 7)** If there is any slop in the chain continue on to the next step. If the chains are both taught go on to **Step 6**.
5. Using two 9/16" wrenches (15/16" for MJ-500 model), back lock nut off and then tighten down adjustment nut until chain is taught. Once chain is taught use a blade screwdriver or needle nose pliers to hold the chain from twisting and tighten lock nut up to adjustment nut securely. **(see Figure 8)**

   **NOTE: Do not overtighten the chain. If the chain slaps during operation of the dumbwaiter, the chain is too tight.**
6. Reconnect A.C. power to the dumbwaiter.
7. Close hoistway door and motor access and use the push buttons to send the dumbwaiter car to a floor.

**If you have any questions, concerns, or problems please do not hesitate to call us.**

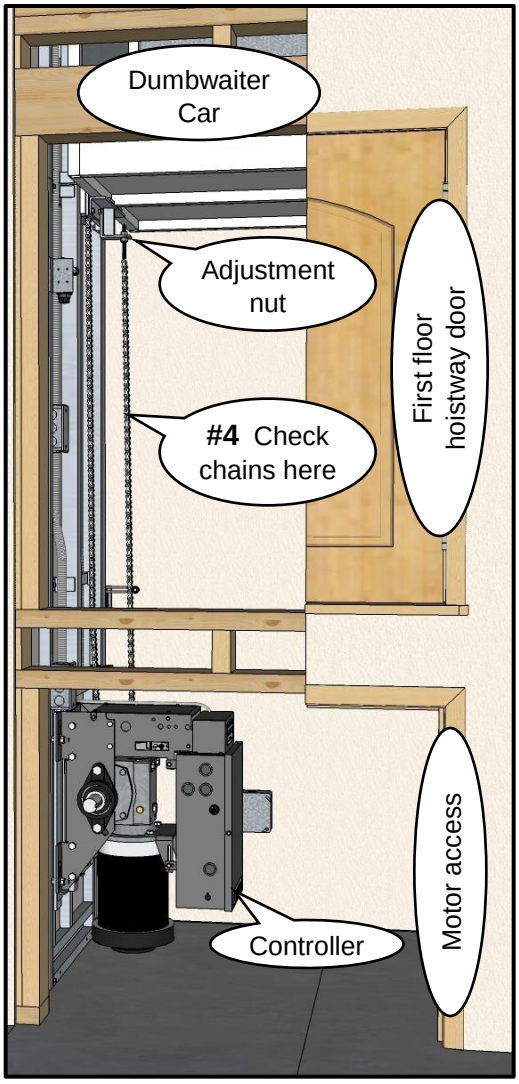



**Figure 7**

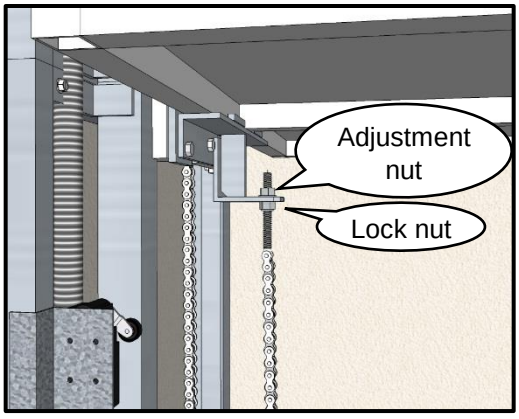



**Figure 8**

**Dynamic Brake Contactor**

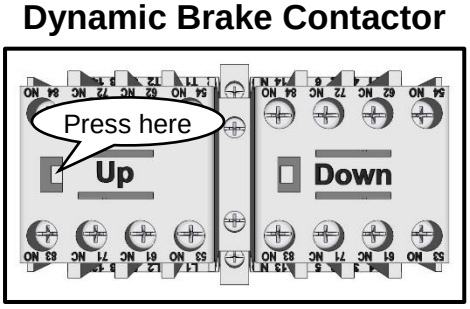



**Figure 10**

**Standard Contactor**

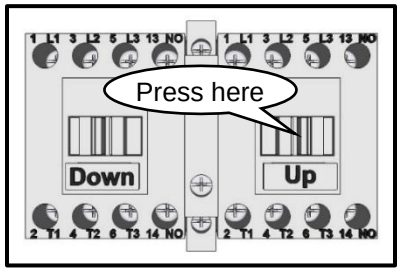



**Figure 9**

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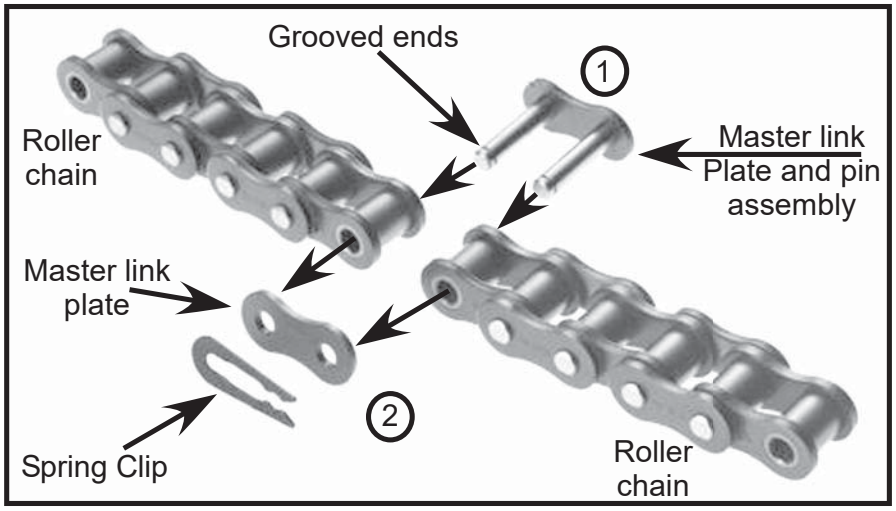
# HOW TO INSTALL A CHAIN MASTER LINK

## ⚠ WARNING ⚠

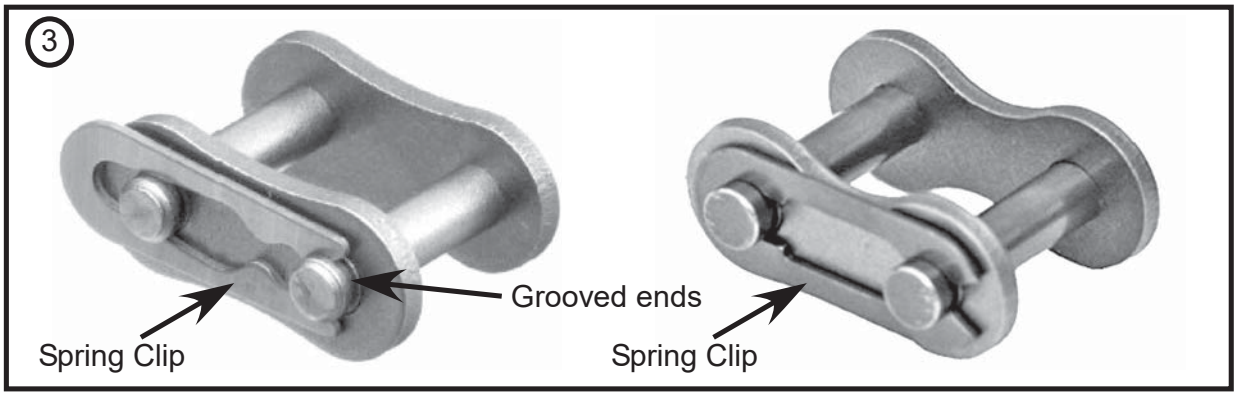
MAKE SURE THAT THE MASTER LINK IS FASTENED SECURELY! FAILURE TO DO SO COULD DAMAGE THE DUMBWAITER AND/OR CAUSE SERIOUS BODILY INJURY, LOSS OF LIMB, OR DEATH.




1. Install the master link plate and pin assembly. Push the master link plate and pin assembly through both ends of the roller chain. Install the master link plate and pin assembly so the grooved ends of the pins face outward.

2. Install the master link plate. The master link plate will go on the outside of the master link assembly.

3. Install the spring clip. Place the spring clip over the grooves in the pins, then use a flat head screwdriver to push the clip into place. You will hear a click when it snaps into place.

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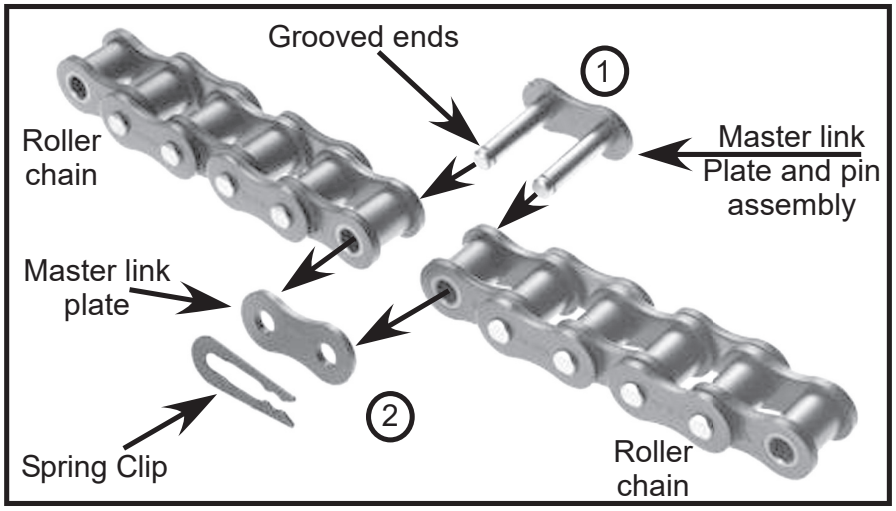
# HOW TO INSTALL A CHAIN MASTER LINK

## ⚠ WARNING ⚠

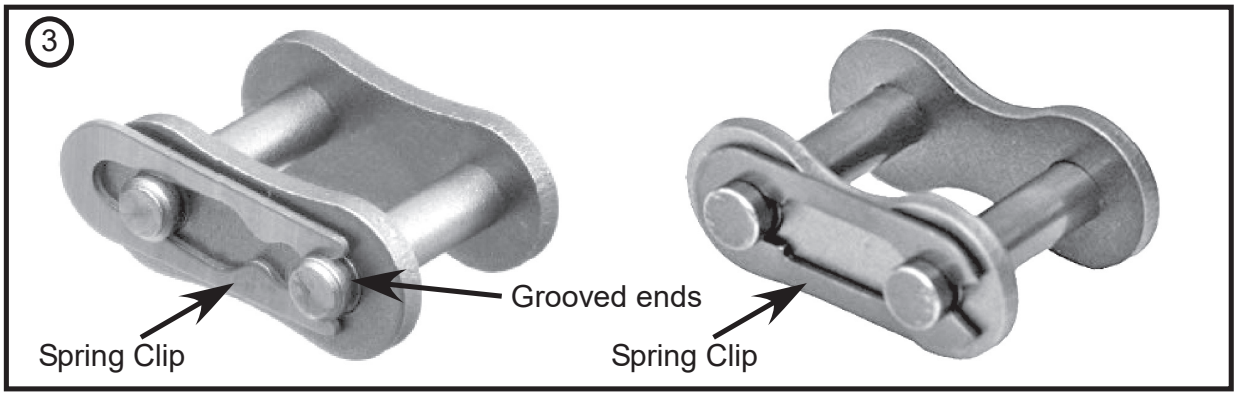
MAKE SURE THAT THE MASTER LINK IS FASTENED SECURELY! FAILURE TO DO SO COULD DAMAGE THE DUMBWAITER AND/OR CAUSE SERIOUS BODILY INJURY, LOSS OF LIMB, OR DEATH.




1. Install the master link plate and pin assembly. Push the master link plate and pin assembly through both ends of the roller chain. Install the master link plate and pin assembly so the grooved ends of the pins face outward.

2. Install the master link plate. The master link plate will go on the outside of the master link assembly.

3. Install the spring clip. Place the spring clip over the grooves in the pins, then use a flat head screwdriver to push the clip into place. You will hear a click when it snaps into place.

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# Maintenance

## Checking & Adjusting Chain Tension

## Motor on the Top Models

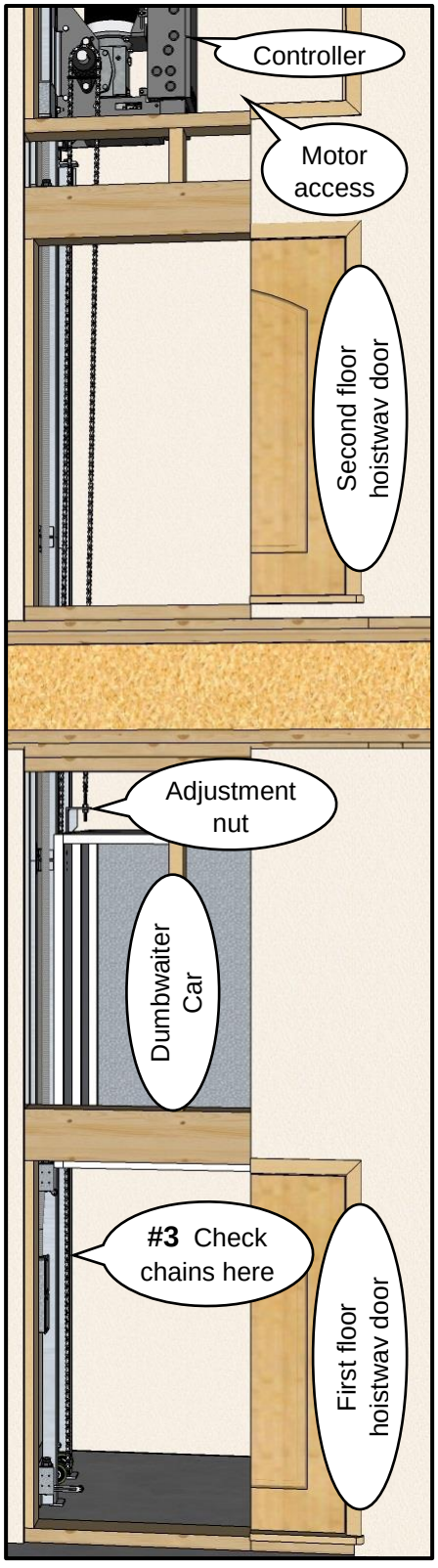



Figure 11

**⚠ WARNING ⚠**

**MAKE SURE A.C. POWER IS DISCONNECTED FROM DUMBWAITER WHILE SERVICING!! YOU MUST ACCESS THE CONTROLLER THROUGH THE MOTOR ACCESS PANEL/DOOR!! FAILURE TO DO SO COULD DAMAGE THE DUMBWAITER AND/OR CAUSE SERIOUS BODILY INJURY, LOSS OF LIMB, OR DEATH!**

**To check & adjust chain tension requires two people, one person will be at the top floor and one at the bottom floor.**

1. With the dumbwaiter car at the bottom floor open the hoistway door and have the person at the top floor open the motor access panel / door.
2. Through the motor access panel / door open the controller and use the "Up" contactor to move the dumbwaiter car up until the bottom of the car is 3-6 feet above the floor. **(see Figures 10, 11 & 13) (see Page 14 for Contactor Operation)**
3. Verify that both the front and back chains are taught. **(see Figure 11)** If there is any slop in the chain continue on to the next step. If the chains are both taught go on to **Step 7**.
4. Close the bottom floor hoistway door and motor access panel / door and use the push buttons to send the dumbwaiter car up to the top floor and open the top floor hoistway door and motor access panel / door.
5. Through the motor access panel / door open the controller and use the "Down" contactor to move the dumbwaiter car down until the top of the car is lined up with the bottom of the top hoistway door. **(see Figures 10, 11 & 13)**
6. Using two 9/16" wrenches (15/16" for MJ-500 model), back lock nut off and then tighten down adjustment nut two revolutions and tighten lock nut up to adjustment nut securely using a blade screwdriver or needle nose pliers to hold the chain from twisting and then go back to **Step 1** to verify chain tension. **(see Figure 12)**

   **NOTE: Do not overtighten the chain. If the chain slaps during operation of the dumbwaiter, the chain is too tight.**
7. Close hoistway doors and motor access then use the push buttons to send the dumbwaiter car to a floor.

**If you have any questions, concerns, or problems please do not hesitate to call us.**

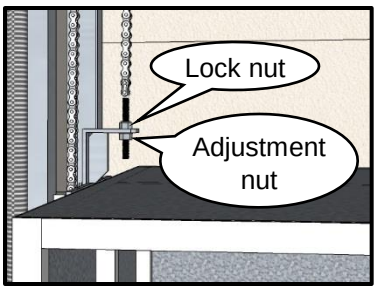



Figure 12

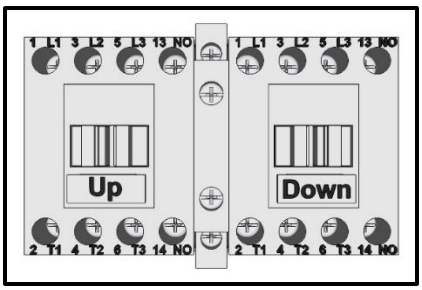



Figure 13

# Maintenance

## Lubricating Brake Solenoid

## P-100 & P-200

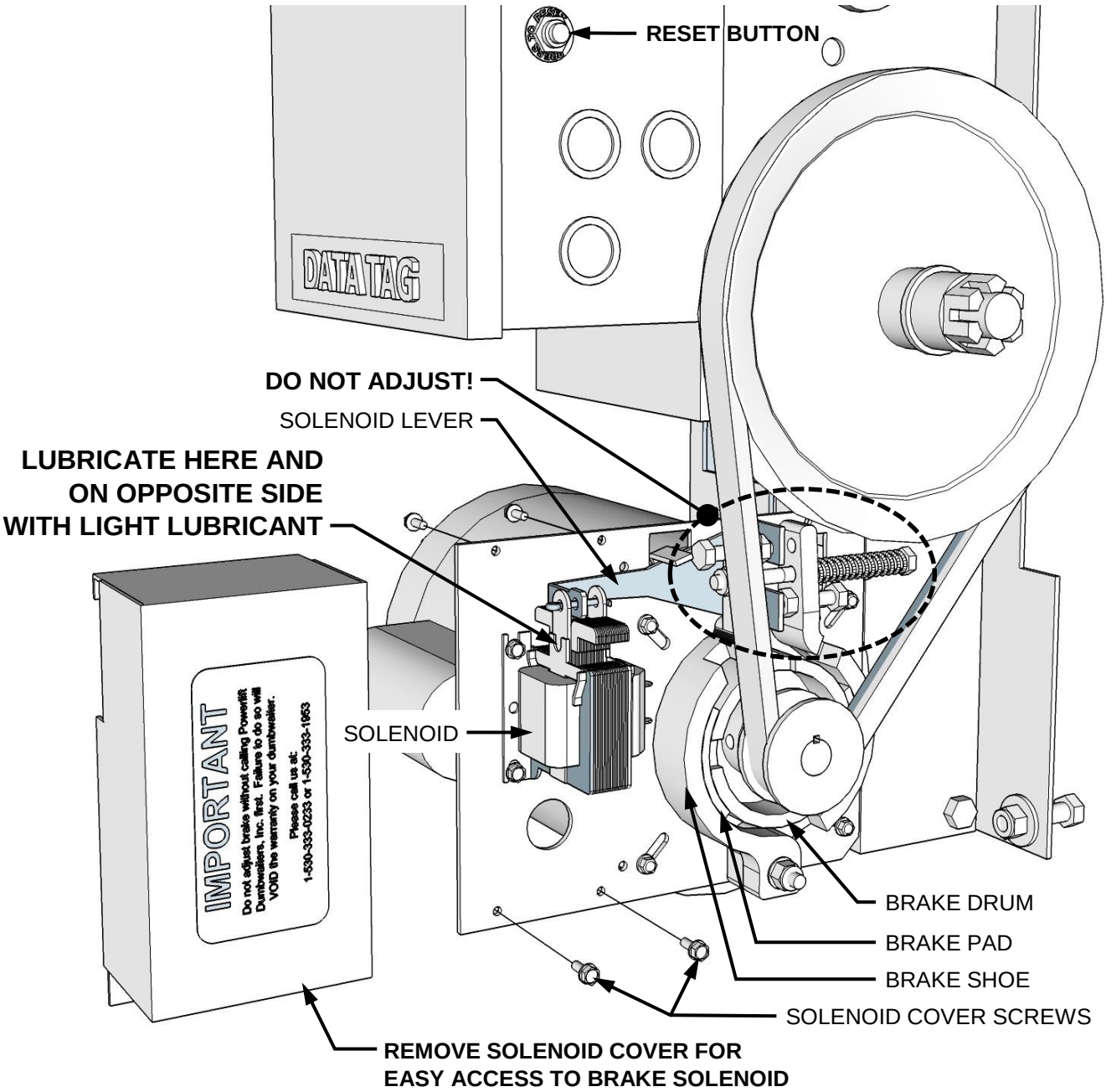
**⚠ WARNING ⚠**

**YOU MUST ACCESS THE BRAKE SOLENOID THROUGH THE MOTOR ACCESS PANEL/DOOR!! FAILURE TO DO SO COULD DAMAGE THE DUMBWAITER AND/OR CAUSE SERIOUS BODILY INJURY, LOSS OF LIMB, OR DEATH!**

Acceptable types of lubricant for use on the brake solenoid:

Spray silicone, spray graphite, garage door lubricant, lightweight oils such as olive oil or machine oil.

**DO NOT USE WD-40!**



# Maintenance

## Lubricating Brake Solenoid

## P-300 & MJ-500

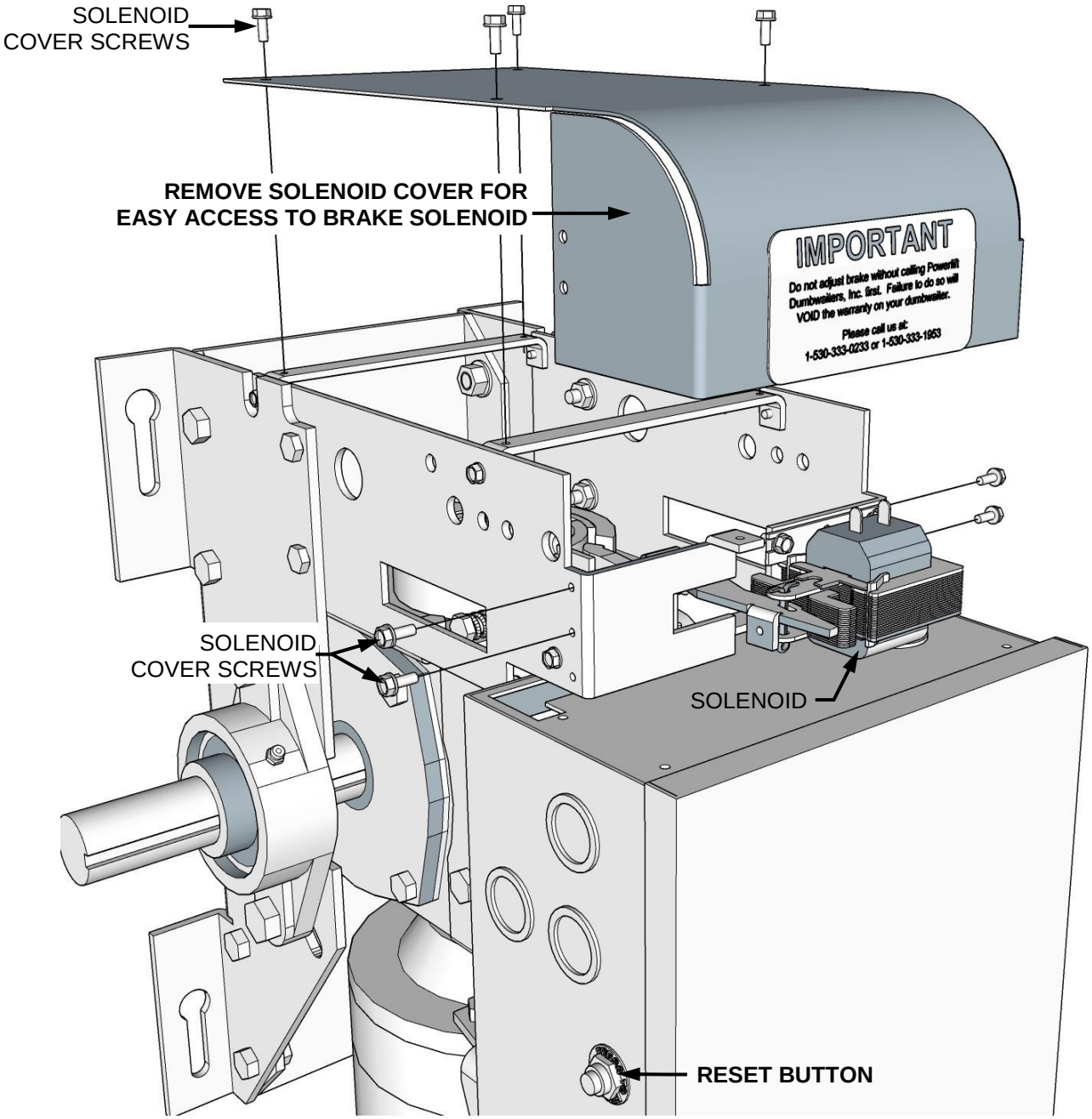
**⚠ WARNING ⚠**

**YOU MUST ACCESS THE BRAKE SOLENOID THROUGH THE MOTOR ACCESS PANEL/DOOR!! FAILURE TO DO SO COULD DAMAGE THE DUMBWAITER AND/OR CAUSE SERIOUS BODILY INJURY, LOSS OF LIMB, OR DEATH!**

Acceptable types of lubricant for use on the brake solenoid:

Spray silicone, spray graphite, garage door lubricant, lightweight oils such as olive oil or machine oil.

**DO NOT USE WD-40!**



# Troubleshooting

## All Models

### The following instructions refer to the wiring diagrams on:


**Page 15 -- for 2-stop single phase machines**
**Page 16 -- for 2-stop three phase machines**
**Page 19 -- for 3-stop single phase machines**
**Page 20 -- for 3-stop three phase machines**
**Page 21 -- for 4-stop single phase machines**
**Page 22 -- for 4-stop three phase machines**


**1** **Verify that the dumbwaiter has a.c. power.**

**A.** Check the circuit breaker to see if it has been tripped and reset breaker.

**B.** Check the overload "Reset" button, on the side of the controller box, to see if it has popped out and reset it, if necessary, by pushing it back in.
**(for "Reset" location on P-100 & 200 see Page 12)**
**(for "Reset" location on single phase P-300 & 500 see Page 13)**
**(the "Reset" on three phase P-300 & 500 is inside the controller)**

**2** **Check for 24 volts a.c. in control box.**

**A.** Use a volt meter to test the low voltage side of the transformer. Connecting volt meter leads to the brown and yellow wires should show at least 24V a.c.

**B.** Check lighted relays 1 & 2 to see if both relays are lit.

I. If relay 2 is lit and relay 1 is not, go on to step 3.

II. If both are out, check the 2 amp fuse mounted inside the control box on the side. It is best to remove the fuse and check for burn marks. Replace if blown.

**3** **Test the safety circuit.**

**A.** On terminal bar, for 2 stop machines, short out terminals 6 and 7. For 3 and 4 stop machines, short out terminals 1 and 2.

I. If relay 1 clicks, the safety circuit is not complete, go on to step 4.

II. If relay 1 is lit and does not click, check the connections to the push buttons.

**4** **Manually moving dumbwaiter car.**

**A.** Verify all doors are closed and dumbwaiter car is not lower than the bottom floor opening or higher than the top floor opening.

I. If dumbwaiter car is not vertically out of alignment and still does not function, please call Powerlift Dumbwaiters, Inc.

II. If dumbwaiter car is vertically out of alignment, use the "UP" contactor to adjust the car up or use the "DOWN" contactor to adjust the car down.

**⚠ WARNING ⚠**

**USING THE CONTACTORS TO MOVE THE DUMBWAITER CAR BYPASSES THE ENTIRE SAFETY CIRCUIT. HOLDING THE CONTACTOR IN COULD DAMAGE THE DUMBWAITER AND/OR CAUSE SERIOUS BODILY INJURY, LOSS OF LIMB, OR DEATH!**

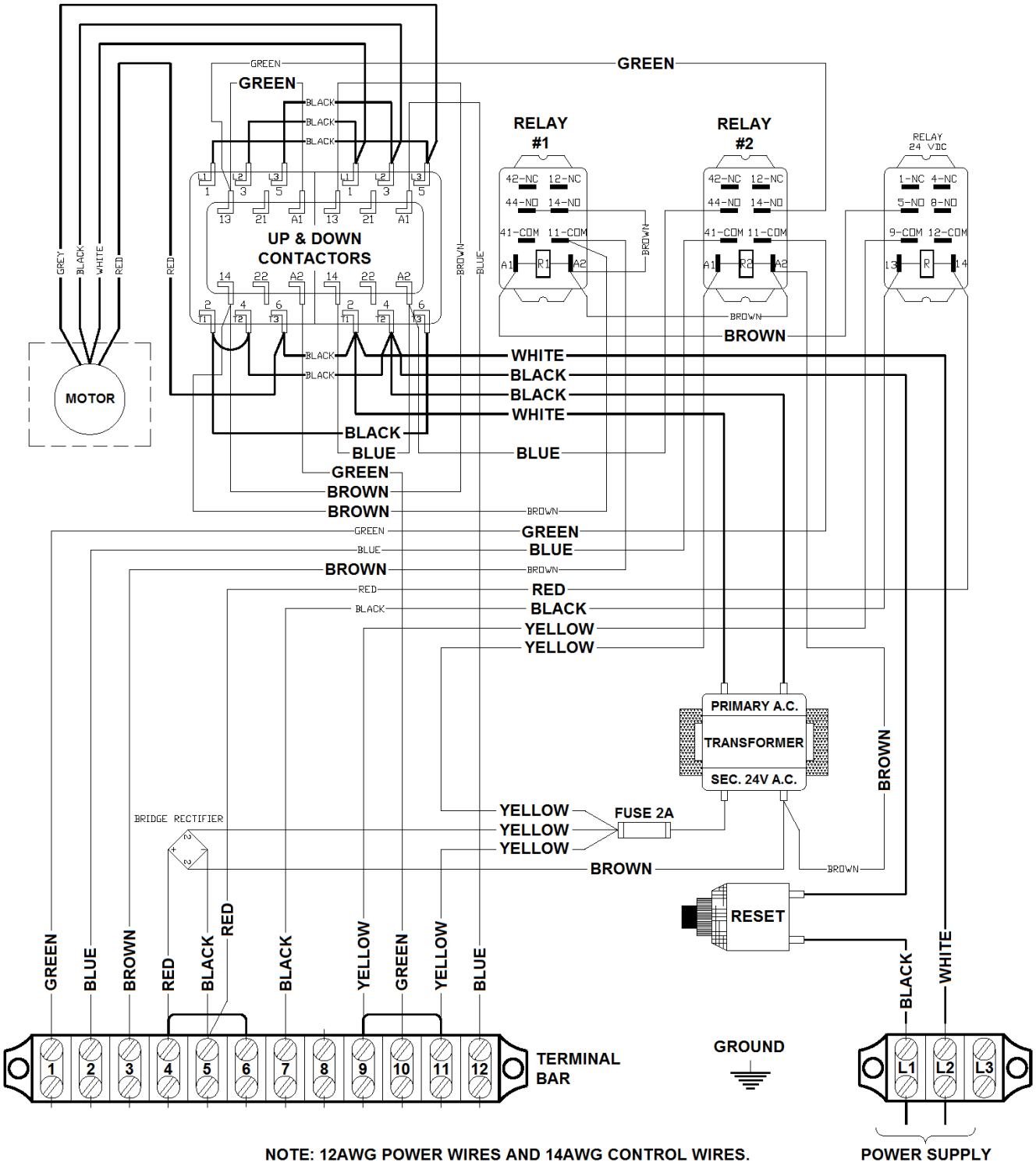
**Contactor operation**

- With 2 stop machines, the contactor will stay in when pressed and the dumbwaiter car will automatically go to the nearest floor when working properly. If the contactor does not stay in, there is a low voltage problem. Please call Powerlift Dumbwaiters, Inc.
- With 3 & 4 stop machines, the contactor will never stay in. If power is lost while the dumbwaiter car is between stops, the contactors will work like a momentary contact switch, and may be used to bump the car up or down to the nearest floor. Once the car is aligned with an opening, the pc board will be reset and the dumbwaiter should function properly.

# Troubleshooting

## Controller Wiring Diagram

## 2-Stop / Single Phase

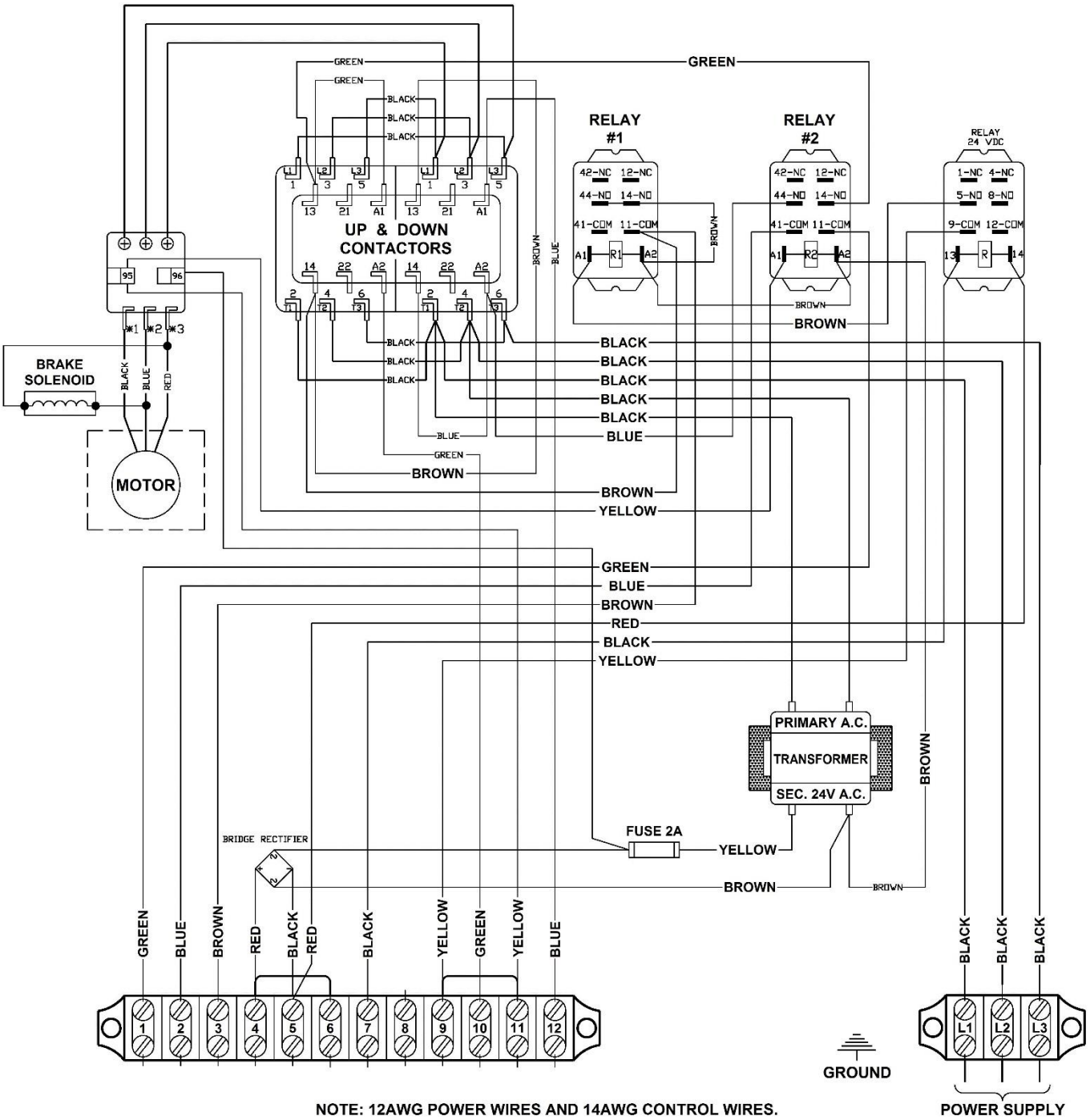



NOTE: 12AWG POWER WIRES AND 14AWG CONTROL WIRES.

# Troubleshooting

## Controller Wiring Diagram

## 2-Stop / Three Phase




NOTE: 12AWG POWER WIRES AND 14AWG CONTROL WIRES.



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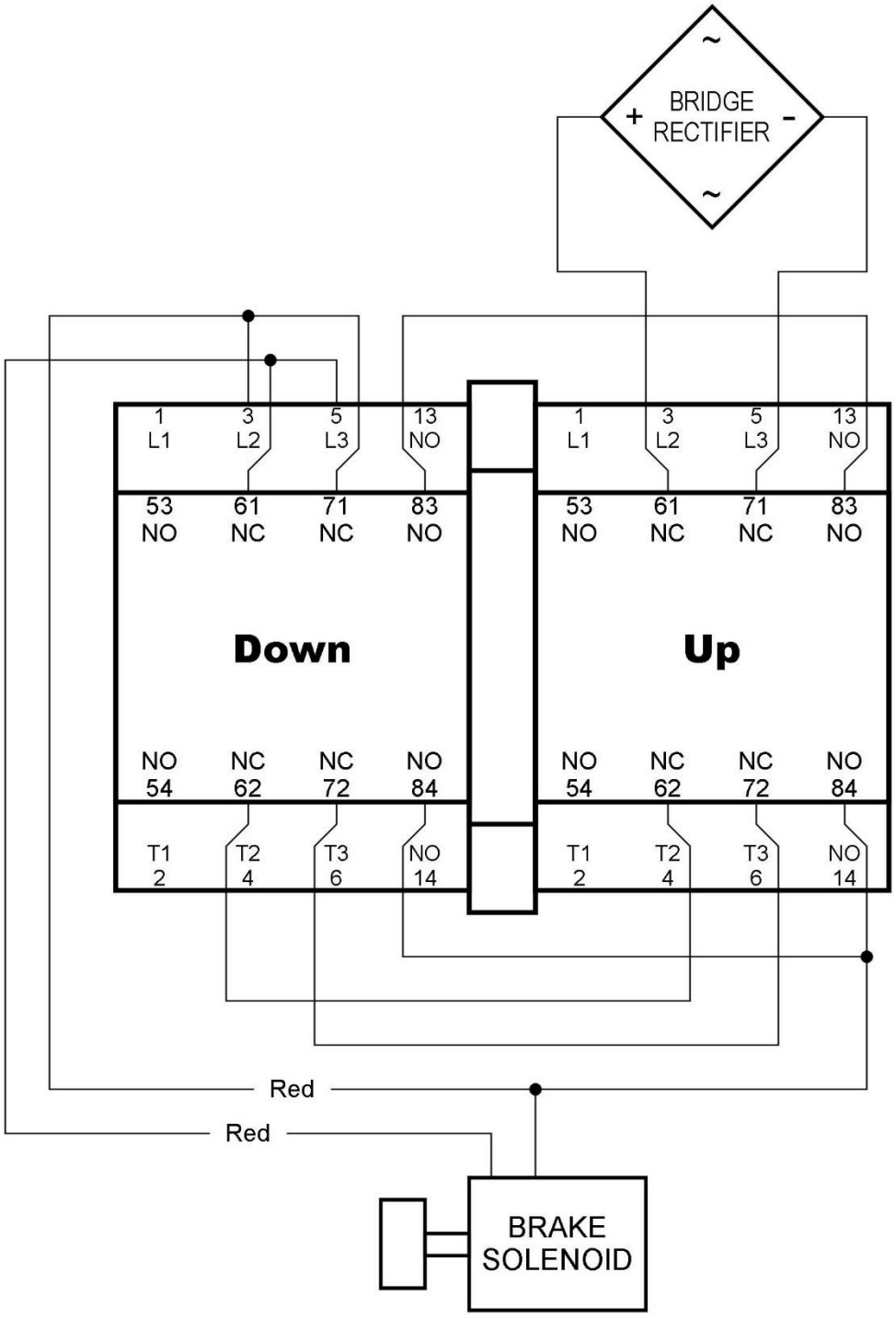
# Troubleshooting

## Dynamic Brake Wiring Diagram

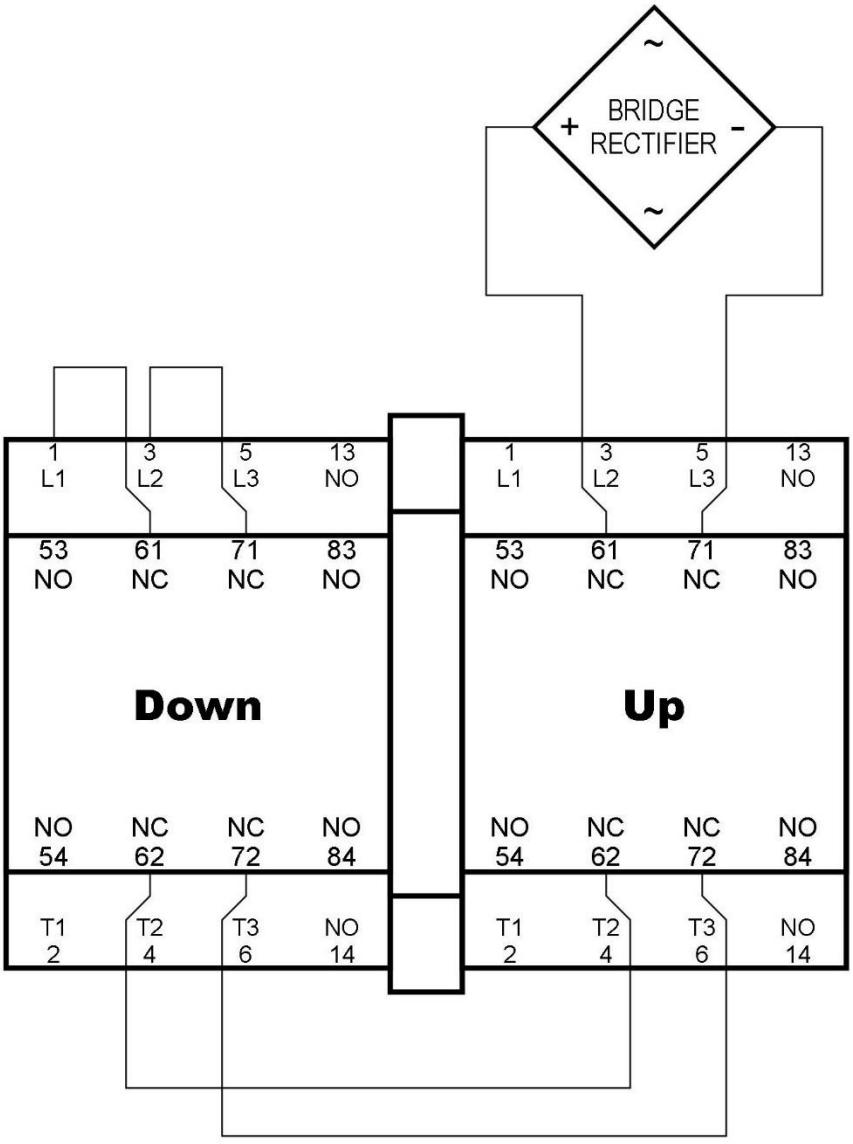
## Single Phase



# Troubleshooting

## Dynamic Brake Wiring Diagram

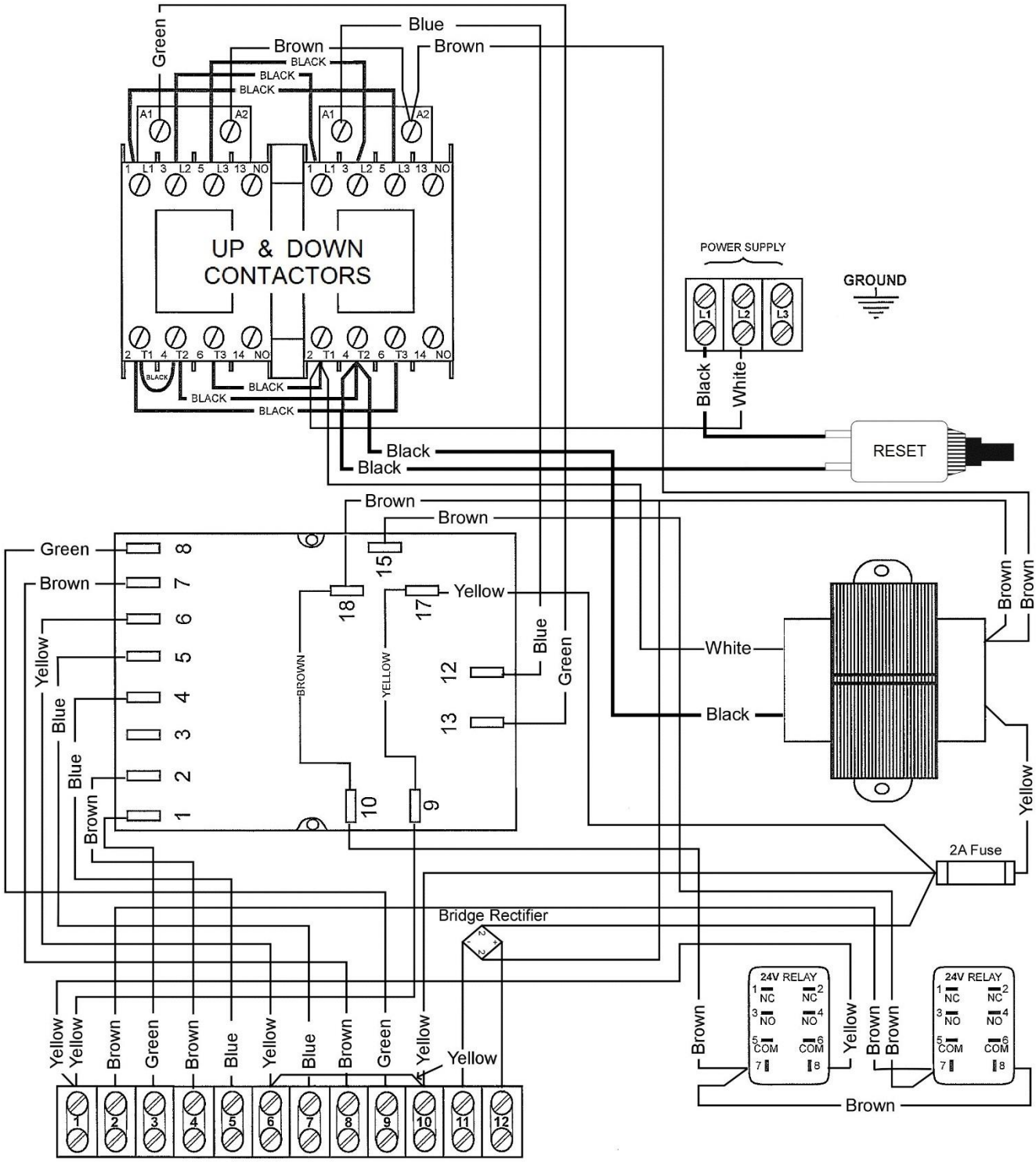
## Three Phase



# Troubleshooting

## Controller Wiring Diagram

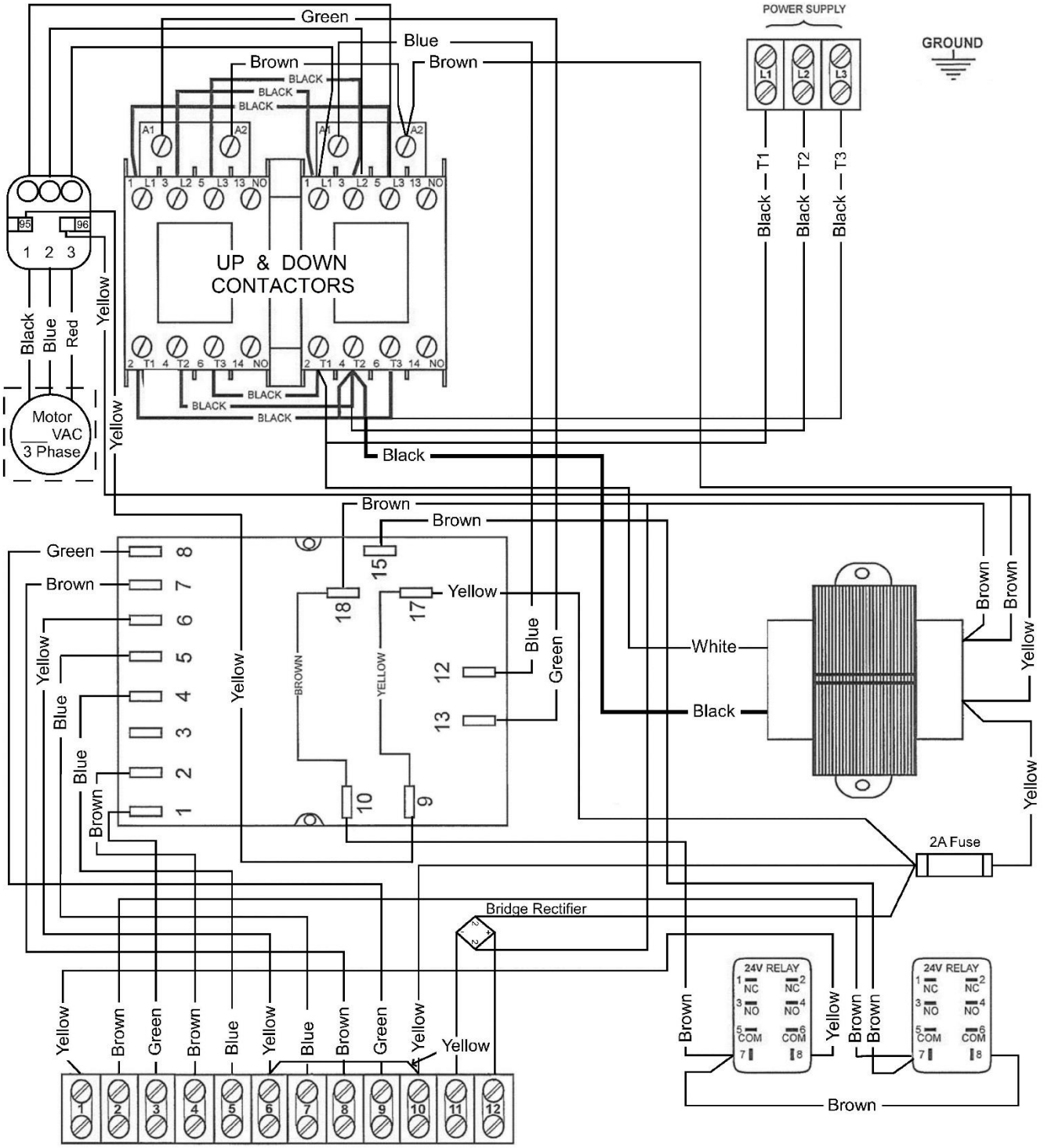
## 3-Stop / Single Phase



# Troubleshooting

## Controller Wiring Diagram

## 3-Stop / Three Phase



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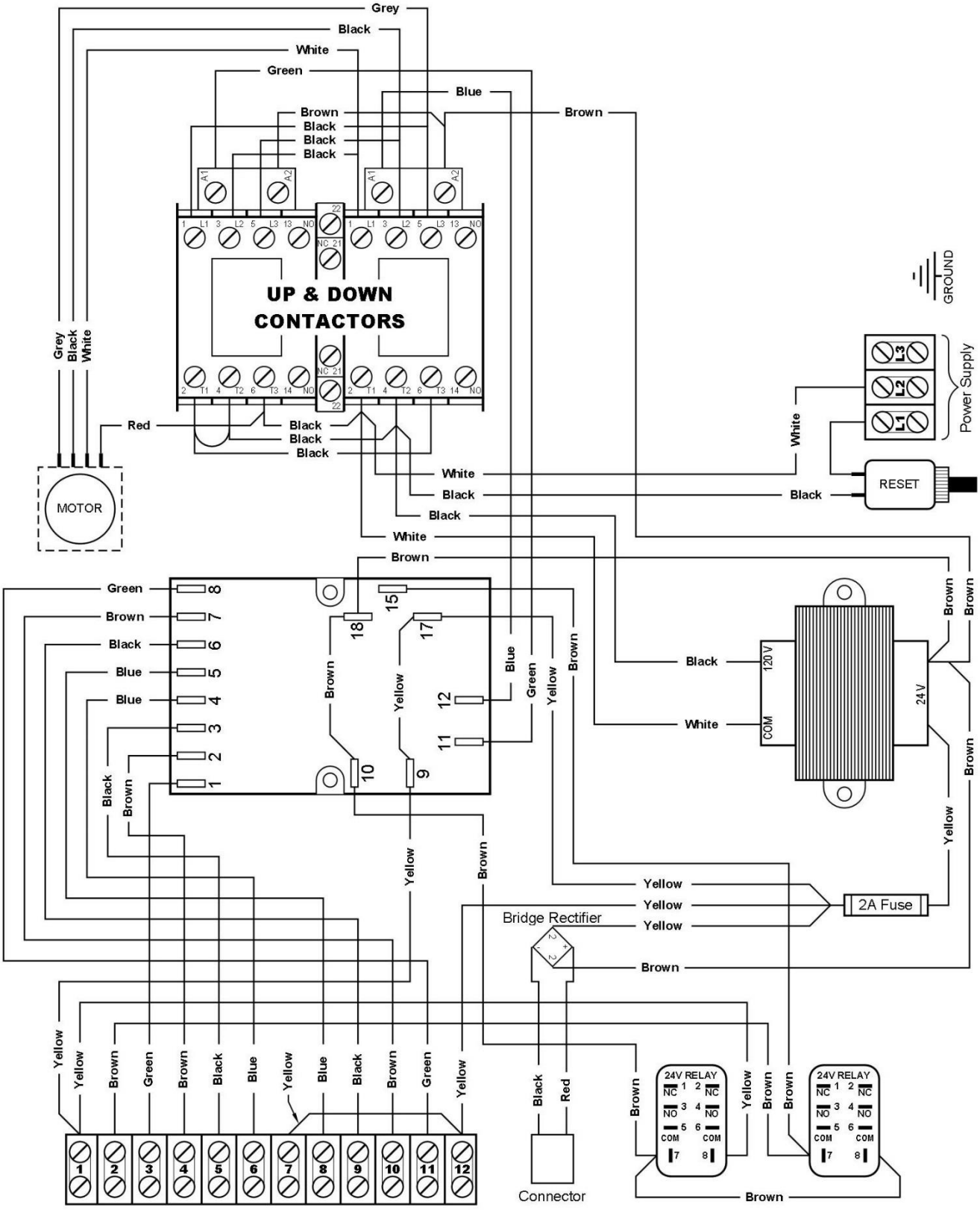
# Troubleshooting

## Controller Wiring Diagram

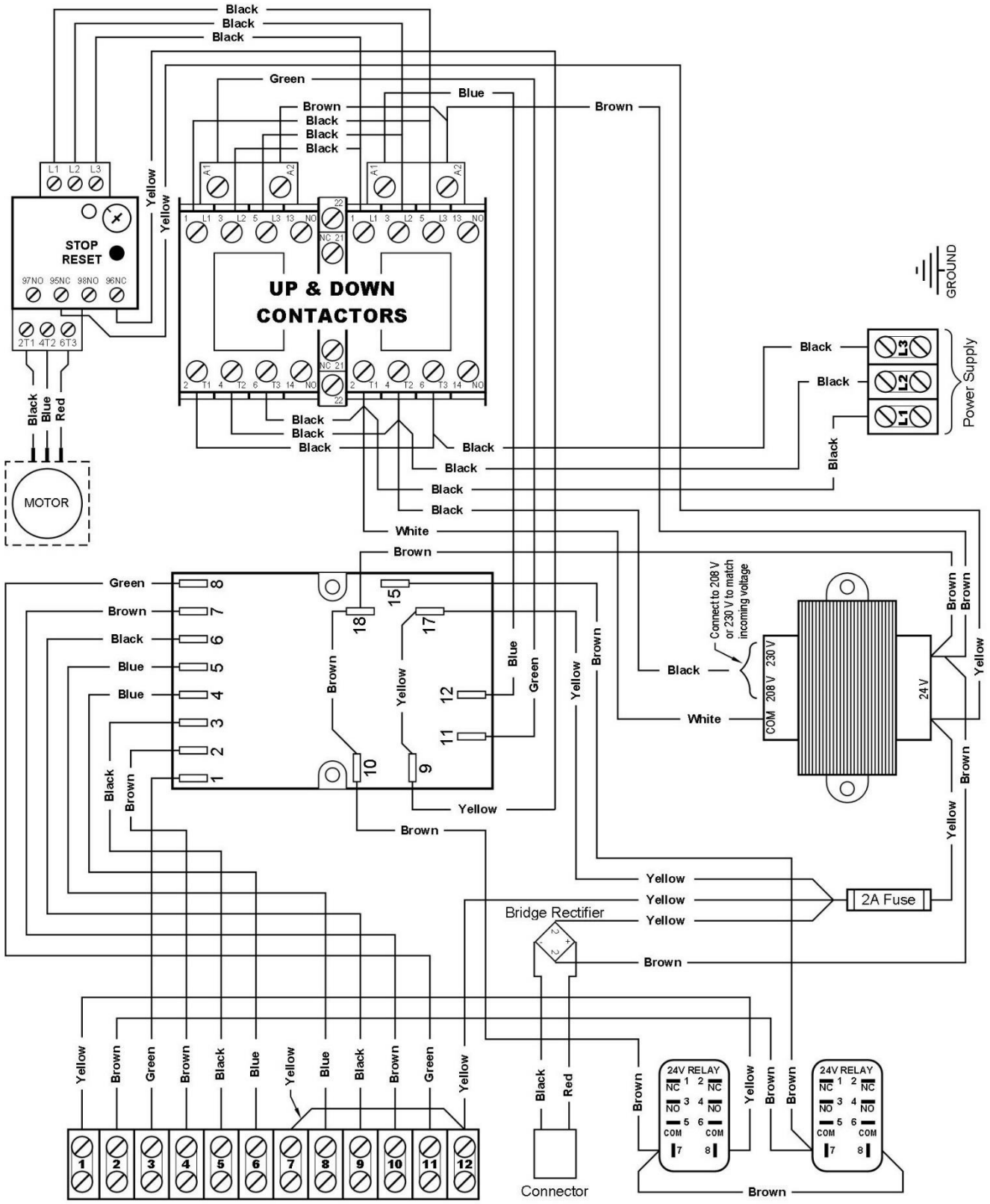
## 4-Stop / Single Phase



# Troubleshooting

## Controller Wiring Diagram

## 4-Stop / Three Phase



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From all of us at

Powerlift Dumbwaiters, Inc.

Thank you for your business.

May God bless you and your family.

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