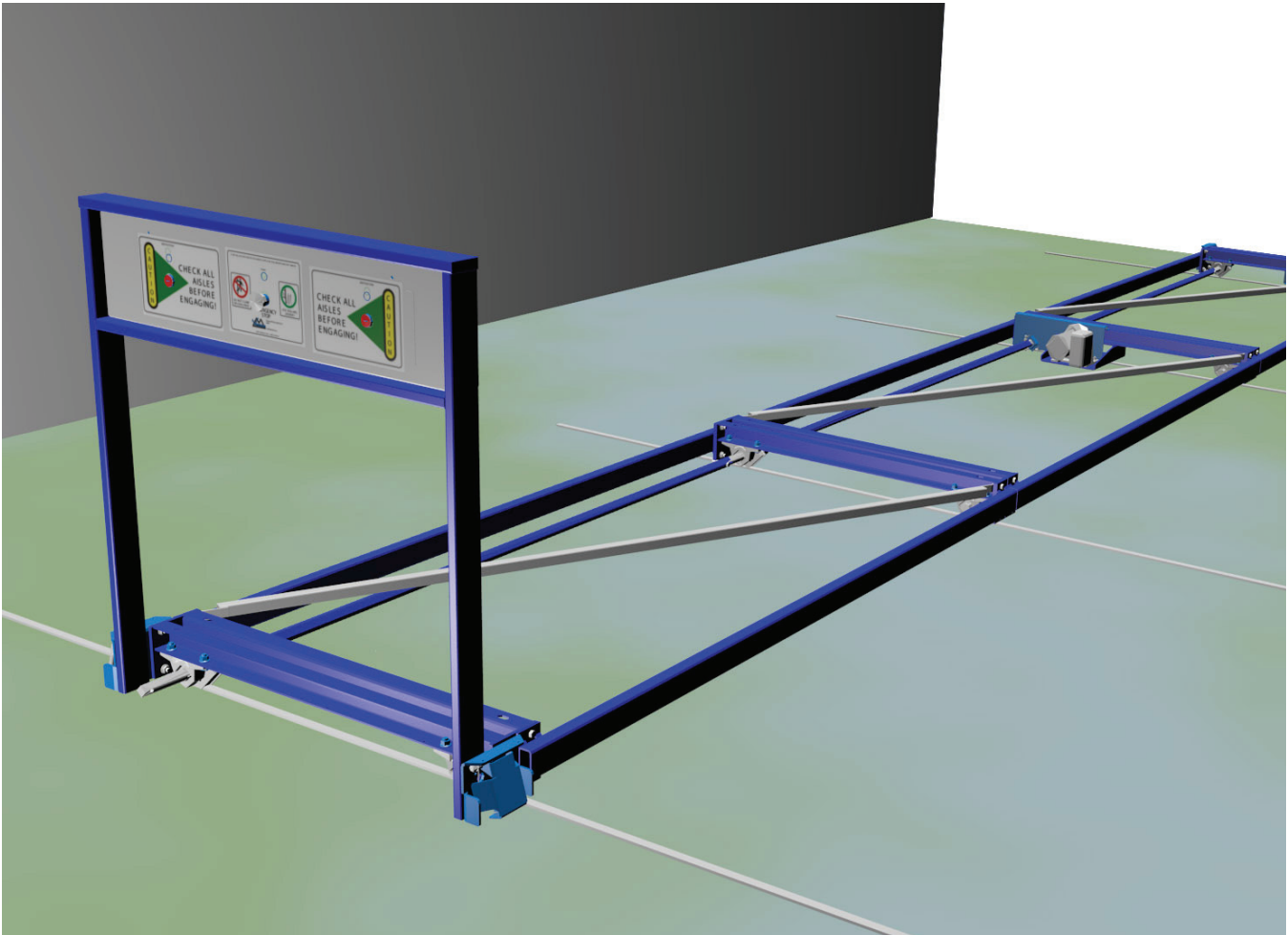


# MOTORIZED MOVABLE BASE

## Service Manual - Original Instructions

MMB-sm-02-Nov2015



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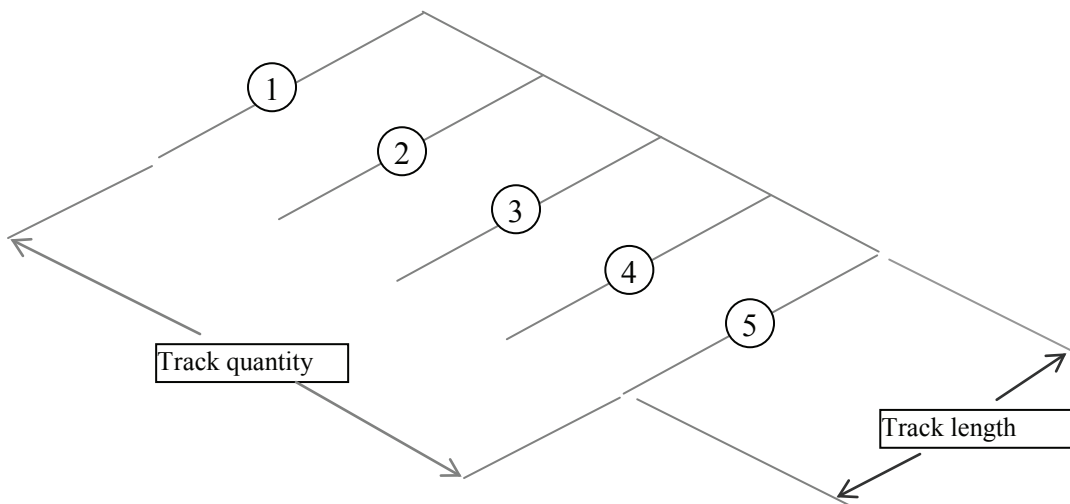
|  |           |
|--|-----------|
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## Number and Lengths of Tracks

Use the following chart to determine the track lengths and quantity used for the various base configurations.

| <u>Base model</u> | <u>Track quantity</u> | <u>Track length</u>                | <u>Track length</u>   |
|-------------------|-----------------------|------------------------------------|---|
| <b>MMB32</b>      | 5                     | <b>50" per base plus 64" aisle</b> | <b>(CA. MA. Only)</b><br><b>57" per base plus 64" aisle</b> |
| <b>MMB28</b>      | 5                     |                                    |   |
| <b>MMB24</b>      | 4                     |                                    |   |
| <b>MMB20</b>      | 4                     |                                    |   |

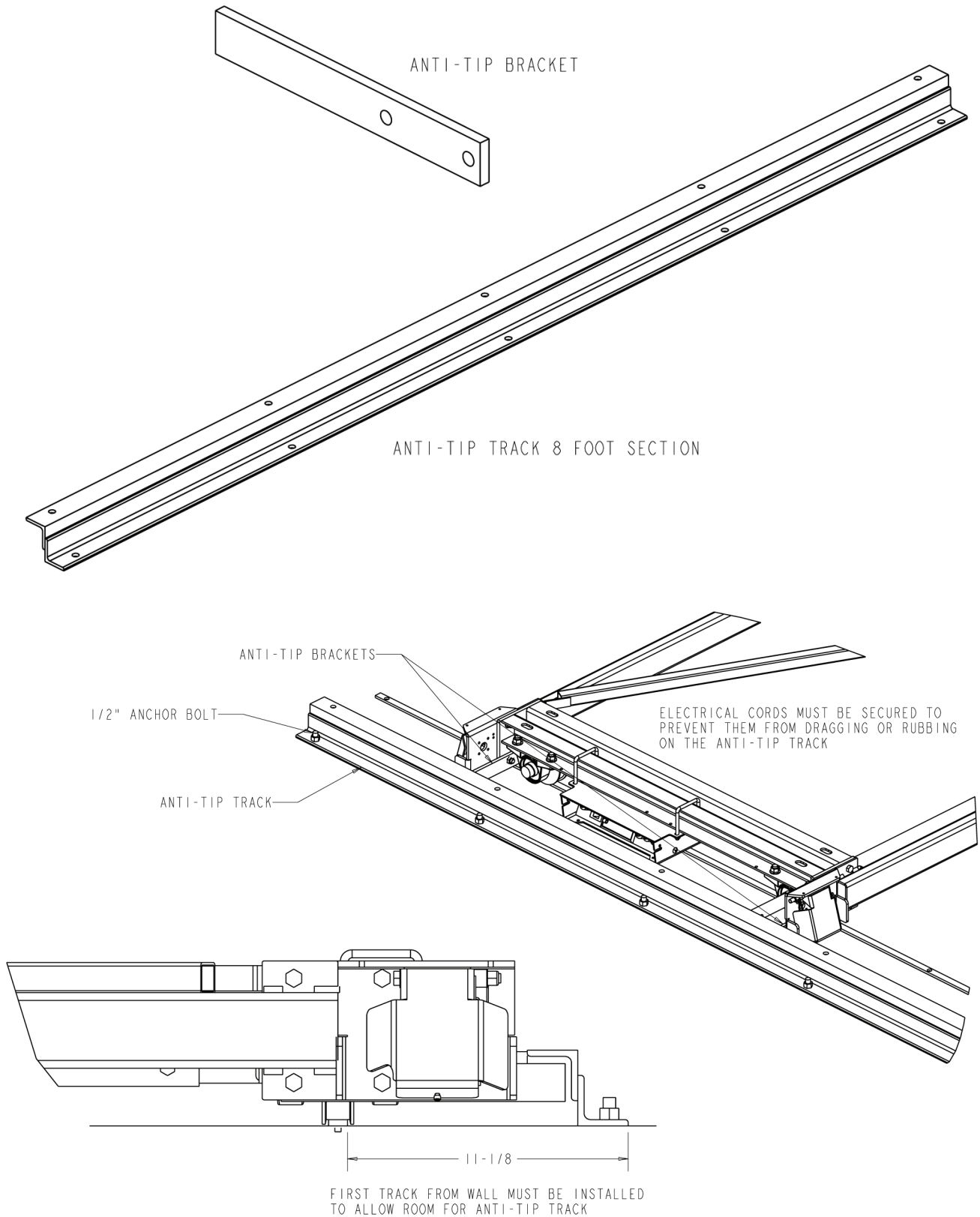
| # of bases | Aisle | Inches per base | Total Track | Inches per base | Total track |
|------------|-------|-----------------|-------------|-----------------|-------------|
| 3          | 64"   | 50"             | 214"        | 57"             | 235"        |
| 4          | 64"   | 50"             | 264"        | 57"             | 292"        |
| 5          | 64"   | 50"             | 314"        | 57"             | 349"        |
| 6          | 64"   | 50"             | 364"        | 57"             | 406"        |
| 6          | 64"   | 50"             | 364"        | 57"             | 406"        |
| 7          | 64"   | 50"             | 414"        | 57"             | 463"        |



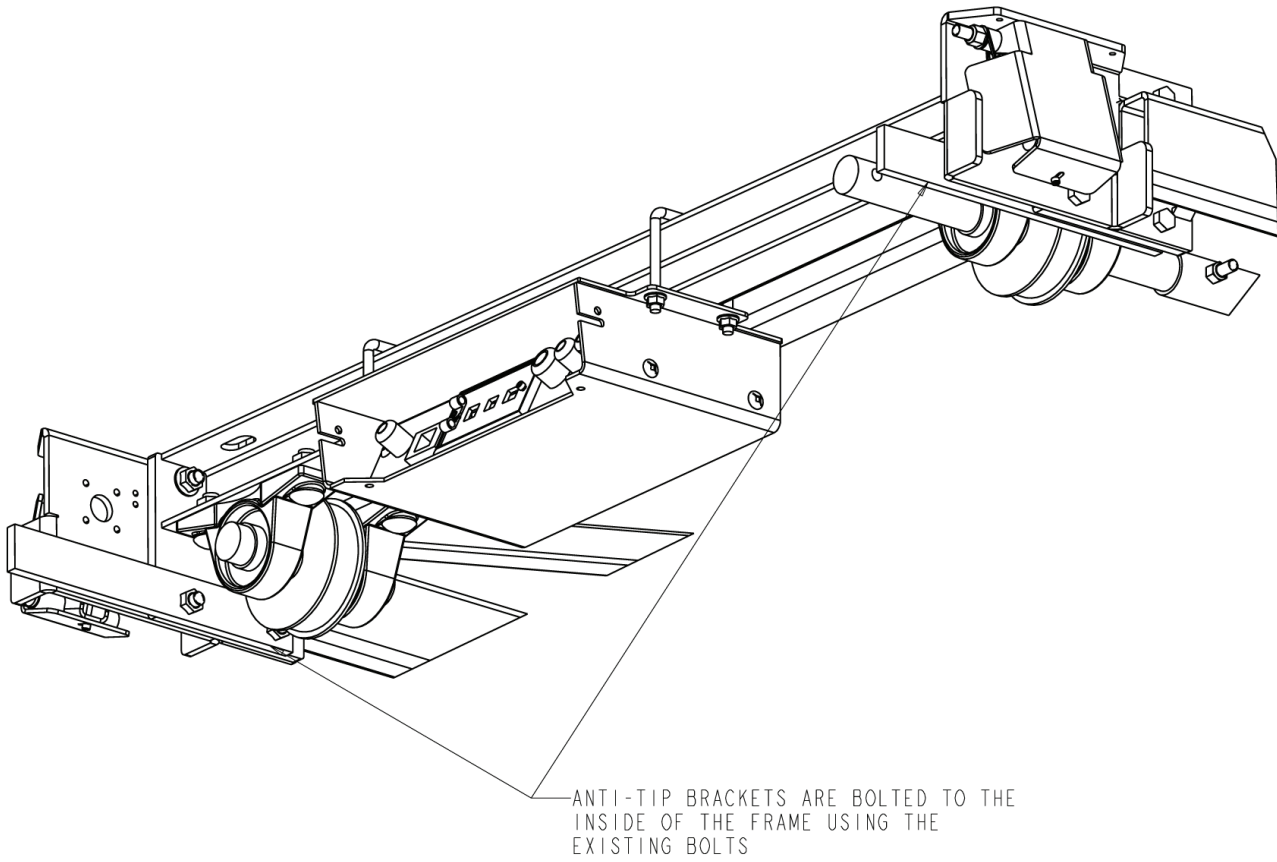
## Number and Lengths of Tracks

| Floor Track & Hardware |  | Vidir Part # | WM SAP    |
|------------------------|--|--------------|-----------|
|                        | Hammer bit rockcarb SDS 3/16 45-6.5    | 300-0020     | 100044884 |
|                        | Screw masonry csunk 1/4 x 1 1/4"       | 002-0076     | 100043899 |
|                        | Screw masonry csunk 1/4 x 2 1/4"       | 002-0078     | 100567044 |
|                        | Screw masonry csunk 1/4 x 2 3/4"       | 002-0129     | 100566653 |
|                        | Screw masonry csunk 1/4 x 3"           | 002-0130     | 100568866 |
|                        | MMB floor track embedded 12"           | 10-77935     | 100577512 |
|                        | MMB floor track embedded 24"           | 10-77934     | 100576542 |
|                        | MMB floor track embedded 36"           | 10-77933     | 100577497 |
|                        | MMB floor track embedded 48"           | 10-77932     | 100576543 |
|                        | MMB floor track embedded 60"           | 10-77953     | 100577496 |
|                        | MMB floor track embedded 72"           | 10-77952     | 100577495 |
|                        | MMB floor track embedded 84"           | 10-77931     | 100576541 |
|                        | MMB floor track embedded 96"           | 10-77951     | 100577494 |
|                        | MMB floor track surface 16" (for MMB2) | 10-56530     | 100570162 |
|                        | MMB floor track surface 22" (for MMB2) | 10-49203     |           |
|                        | MMB floor track surface 26" (for MMB2) | 10-48204     |           |
|                        | MMB floor track surface 28" (for MMB2) | 10-56529     |           |
|                        | MMB floor track surface 43" (for MMB2) | 10-56528     | 100567495 |
|                        | MMB floor track surface 61" (for MMB2) | 10-49509     | 100570161 |
|                        | MMB floor track surface 68" (for MMB2) | 10-56527     | 100570163 |
|                        | MMB floor track surface 72" (for MMB2) | 10-48203     |           |
|                        | MMB floor track surface 84" (for MMB2) | 10-56526     |           |
|                        | MMB floor track surface 96" (for MMB2) | 10-48202     | 100567506 |
|                        | MMB floor track surface per foot       | MMBTRACK     | 100059952 |

## MMB Anti-Tip Installation Detail



## MMB Anti-Tip Installation Detail



# MAINTENANCE

## Troubleshooting

Comments and explanation of terms used.

**Unit** = MMB

**1st unit** = this unit plugs to the electrical box on the wall.

**2nd unit** = this unit plugs into unit number 1.

**Wall mounted electrical box** contains the ice cube relays for photo sensors and VFD for all units.

**Rear electrical box** contains the motor contactor, terminal strip and telephone jack.

**Front electrical control panel** contains the green and red lights and the direction switches.

**Sensor Flaps;** 1 at each corner that hold the photo sensors.

**Red light** indicates an obstruction or that the photo sensors are misaligned.

**Green light** indicates power to the unit.

Units have a soft start. Please allow some time for units to start moving after pressing the direction buttons.

## Troubleshooting

| Problem                               | Symptoms   | Solution  |
|---------------------------------------|--|---|
| Unit will not run in either direction | No green light   | <ul style="list-style-type: none"> <li>- Pull E-stop button</li> <li>- Ensure unit is plugged in</li> <li>- Check all wiring connections at the rear electrical box</li> </ul>  |
| Unit will not run in either direction | Green light and red light  | <ul style="list-style-type: none"> <li>- Remove any obstructions</li> <li>- Check sensor flaps for damage and alignment</li> <li>- Check if sensors are securely fastened</li> <li>- Gently move sensor flaps to ensure they move freely</li> <li>- Check wiring connections</li> <li>- Ensure unit isn't skewed on the tracks</li> </ul> |
| Unit will not run in either direction | Green light and no red light (no clicking sounds to indicate that unit is attempting to run) | <ul style="list-style-type: none"> <li>- Check all the wiring connections and plugs at the rear electrical box on the unit and on the box on the wall</li> <li>- Check motor connections</li> <li>- Turn power off for 30 seconds on the wall box</li> <li>- Check front to back cord for damage</li> </ul>                               |
| Unit attempts to run                  | Green light no red light (clicks and strains)  | <ul style="list-style-type: none"> <li>- Check the drive display</li> <li>- Check if unit is skewed</li> <li>- Check drive chain on motor</li> <li>- Check for obstructions</li> <li>- Check wire connections</li> <li>- Repair motor plug connections</li> </ul>   |

# MAINTENANCE

## Troubleshooting (con't)

| Problem                                 | Symptoms  | Solution  |
|---|---|---|
| All of the units click but will not run | Green light no red light (clicks but no straining)                            | <ul style="list-style-type: none"> <li>- Turn power off for 30 seconds on the wall box</li> <li>- Check all the wiring connections and plugs at the rear electrical box and on the box on the wall</li> <li>- Reset power supply breaker</li> </ul>   |
| Unit runs only in one direction         | Green light no red light  | <ul style="list-style-type: none"> <li>- Check all the wiring connections and plugs at the rear electrical box &amp; wall box</li> </ul>  |
| Unit runs only in one direction         | Green light and red light   | <ul style="list-style-type: none"> <li>- Clear any obstructions</li> <li>- Check sensor flaps for damage and alignment</li> <li>- Check that sensor eyes are securely fastened inside sensor flaps</li> <li>- Check all the wiring connections and plugs at the rear electrical box and on the box on the wall</li> <li>- Check to ensure that the control panel is mounted square and securely to the frame</li> </ul> |
| Unit runs a short distance and stops    | Green light and red light   | <ul style="list-style-type: none"> <li>- Check for an obstruction</li> <li>- Check if unit is skewed</li> <li>- Check if wheels are jammed against the frame</li> <li>- Check to ensure that the control panel is mounted square and securely to the frame</li> <li>- Check sensor flaps for damage and alignment</li> </ul>  |
| Unit will not run in one direction      | Blinking green and no red light   | <ul style="list-style-type: none"> <li>- Check photo eye power cord for damage</li> </ul>   |
| Unit A runs but not with unit B plugged | Green light dims, or is off   | <ul style="list-style-type: none"> <li>- Check to ensure all cords are not damaged</li> <li>- Ensure cord ends are not damaged or dirty</li> <li>- Check front to back cord for damage</li> </ul>   |
| Unit is skewed on the tracks            | Green light but will not move at all or moves short distance in one direction | <ul style="list-style-type: none"> <li>- Check to ensure no boxes are sticking past the side of the MMB</li> <li>- Check if wheels are rubbing the frame if so move over and install a 1 ½" hose clamp on the shaft</li> <li>- To correct, block one side and run machine until straight</li> </ul>   |
| Unit is off track                       | Will not run at all or moves only a little distance                           | <ul style="list-style-type: none"> <li>- Unload unit and lift unit back onto the tracks</li> <li>- Call service</li> </ul>  |



# MAINTENANCE

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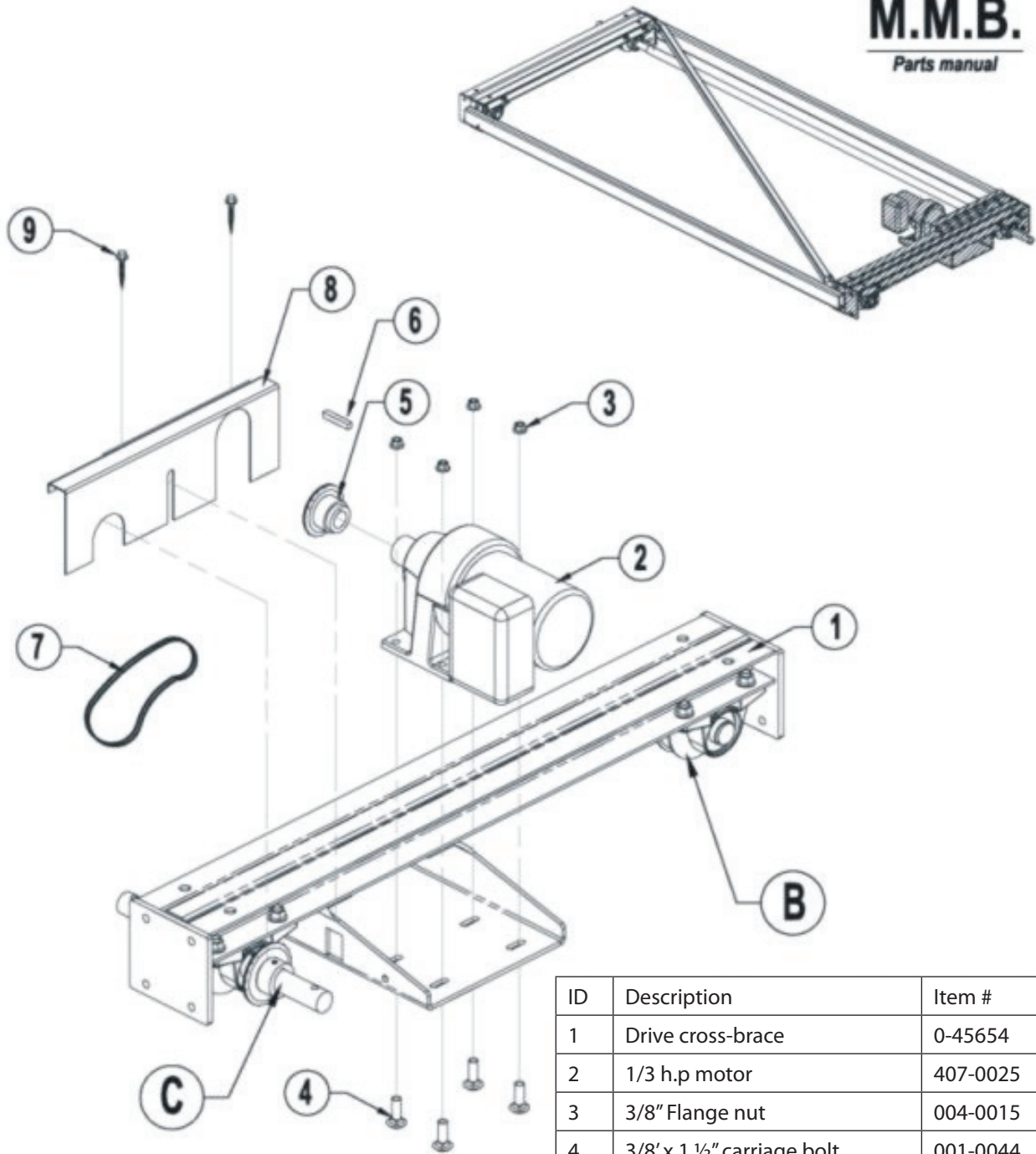
## Troubleshooting (con't)

| Problem   | Symptoms                       | Solution   |
|---|--------------------------------|--|
| Unit continues to move after releasing the button | Unit will not stop             | <ul style="list-style-type: none"><li>- Check if button is sticking</li><li>- Check to ensure no boxes are sticking past the side of the MMB</li></ul>                                   |
| Unit runs with red light lit                      | Unit doesn't stop on red light | <ul style="list-style-type: none"><li>- Check wiring in front panel</li><li>- Check front to rear cord</li><li>- Check wire connections</li><li>- Check rear small curly cords</li></ul> |

# COMPONENTS

## Drive End Frame Assembly

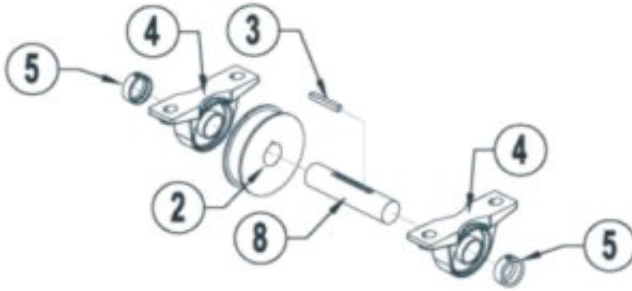
**M.M.B.**  
Parts manual



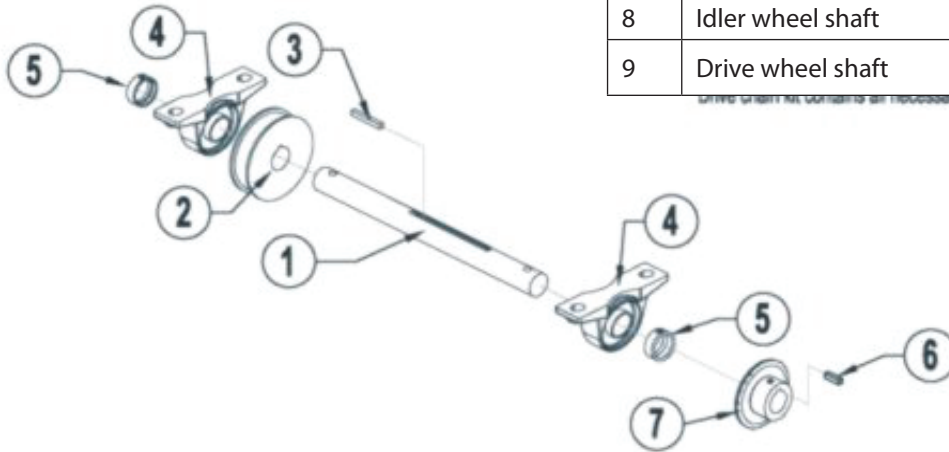
| ID   | Description                  | Item #   |
|--|------------------------------|----------|
| 1  | Drive cross-brace            | 0-45654  |
| 2  | 1/3 h.p motor                | 407-0025 |
| 3  | 3/8" Flange nut              | 004-0015 |
| 4  | 3/8" x 1 1/2" carriage bolt  | 001-0044 |
| 5  | 4015 drive sprocket/hub      | 0-52991  |
| 6  | 1/4" x 1 1/4" key            | 10-46109 |
| 7  | #40 x 30" drive chain kit*   | 46111    |
| 8  | Chain guard                  | 0-45719  |
| 9  | 1/4" x 1" self tapping screw | 002-0019 |
| * drive chain kit includes connector links |                              |          |

## Wheel Assemblies

**M.M.B.**  
Parts manual

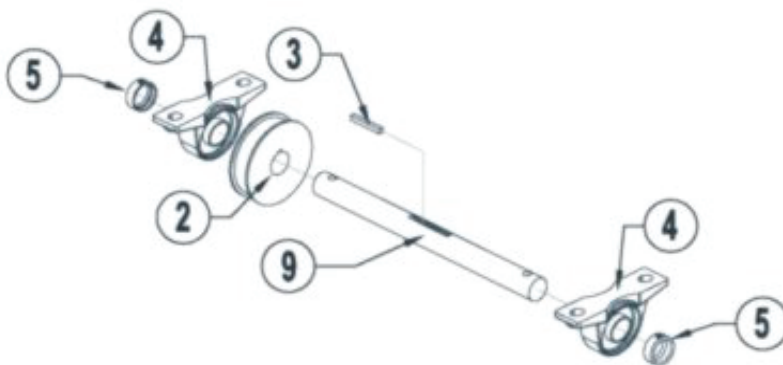


### **(B) Idler wheel assembly**



| ID | Description                     | Item #   |
|----|---------------------------------|----------|
| 1  | Drive shaft wheel               | 10-54672 |
| 2  | 4 1/2" Wheel                    | 104-0046 |
| 3  | 1/4" x 2" Key                   | 10-54671 |
| 4  | Bearing PilBI P206 W/B SA206-20 | 006-0071 |
| 5  | 206-20 locking collar           | 111-0256 |
| 6  | 1/4" x 1 1/4" key               | 10-46109 |
| 7  | #4021 Wheel sprocket            | 0-52990  |
| 8  | Idler wheel shaft               | 10-54675 |
| 9  | Drive wheel shaft               | 10-54676 |

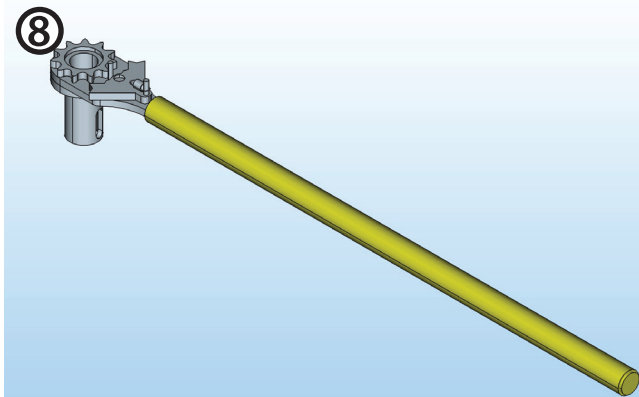
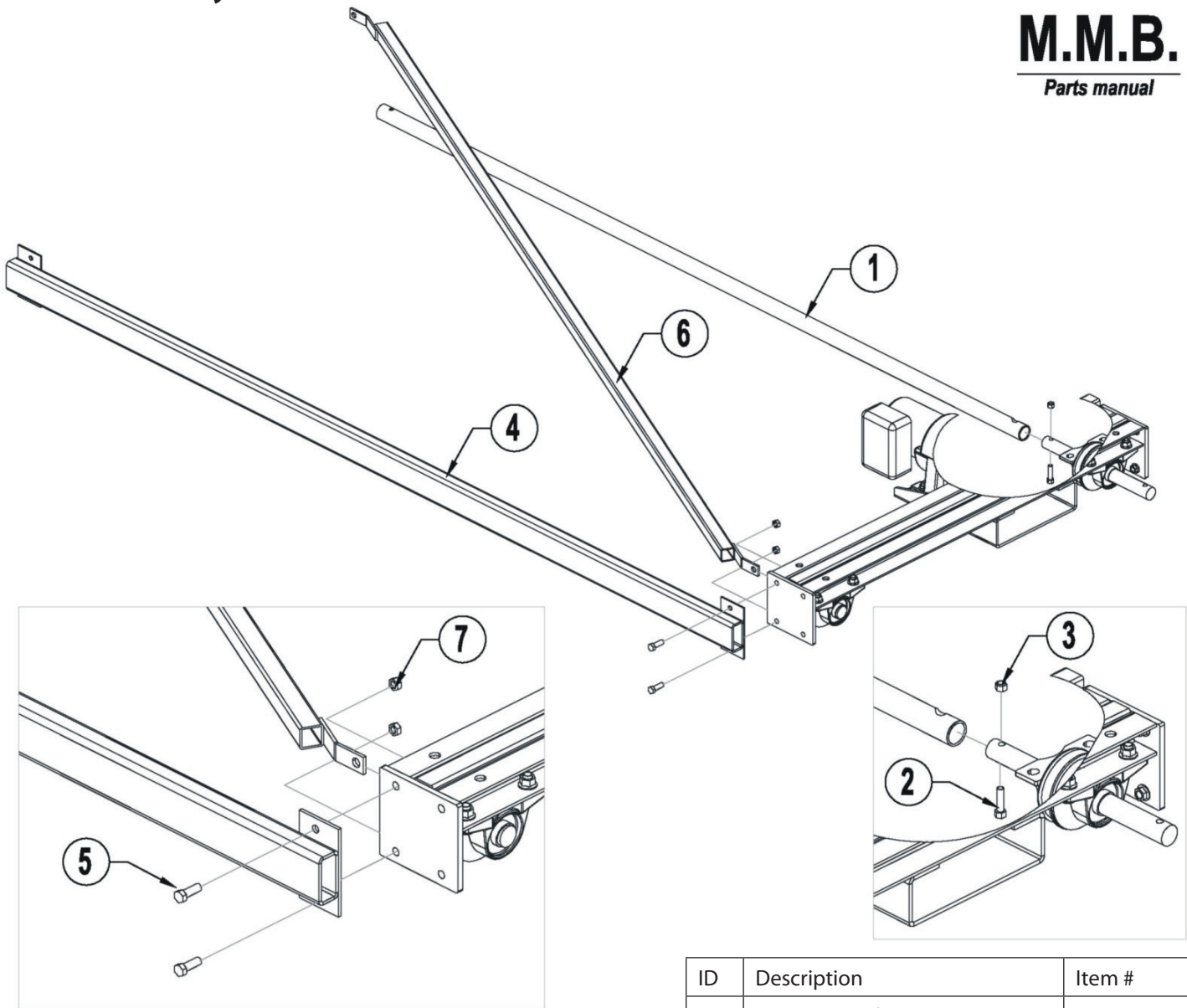
### **(C) Drive wheel assembly (with sprocket)**



### **(D) Drive wheel assembly (no sprocket)**

## Frame Assembly

**M.M.B.**  
Parts manual

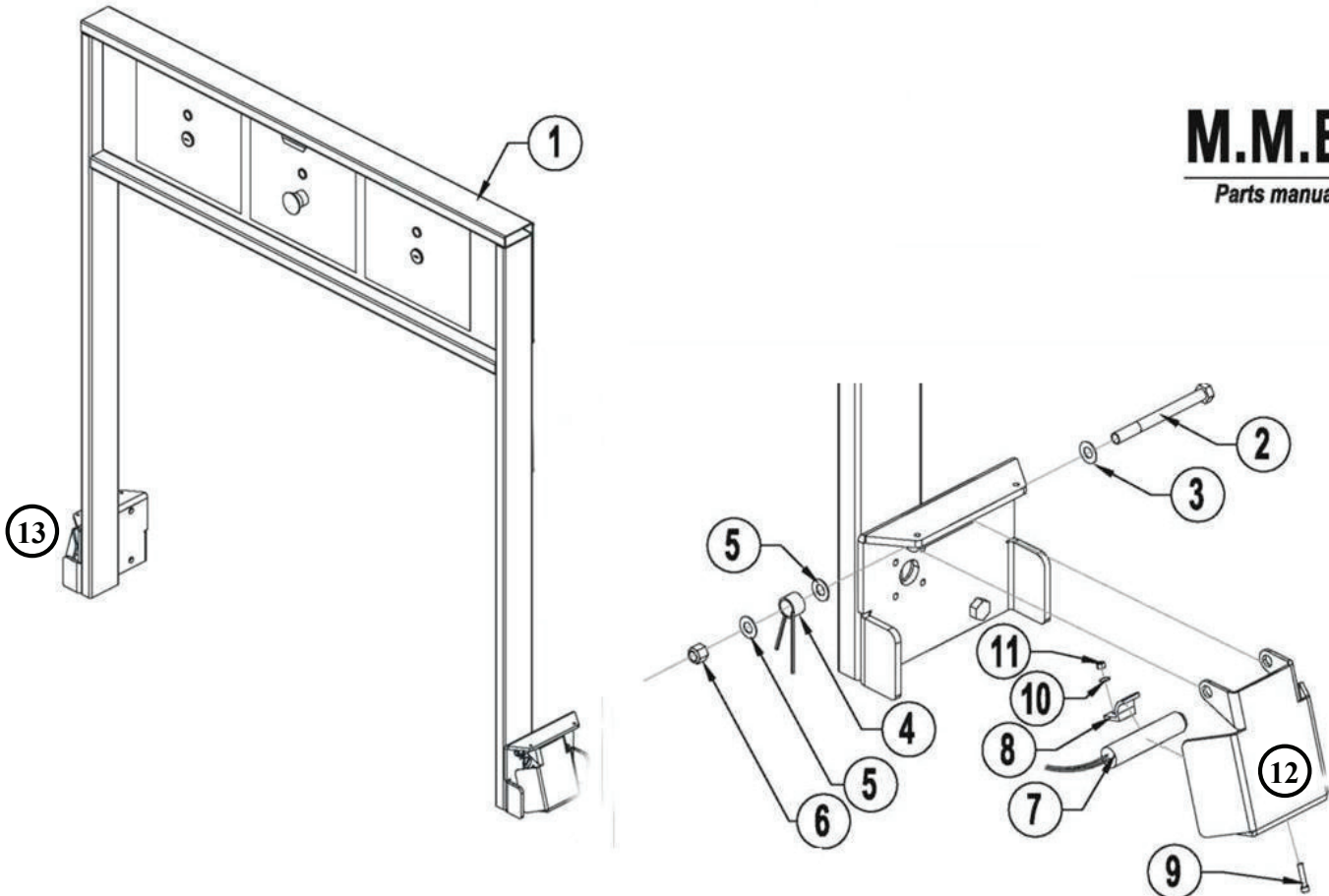


| ID                              | Description              | Item #   |
|---------------------------------|--------------------------|----------|
| 1                               | 85" drive shaft          | 0-45646  |
| 2                               | 3/8" x 2" hex bolt       | 001-0119 |
| 3                               | 3/8" steel lock nut      | 004-0087 |
| 4                               | 96" side channel         | 0-45673  |
| 5                               | 7/16" x 1 1/4" bolt      | 001-0132 |
| 6                               | Cross brace              | 0-45654  |
| 7                               | 7/16" GR5 UNC flange nut | 004-0016 |
| 20' & 28' drive base components |                          |          |
| 1                               | 37" drive shaft          | 0-45647  |
| 4                               | 48" side channel         | 0-45671  |
| 8                               | MMB hand wrench          | 0-45726  |

NOT SHOWN - Wrench Quick Pin ----- 113-0056

## Control Panel & Sensor Components

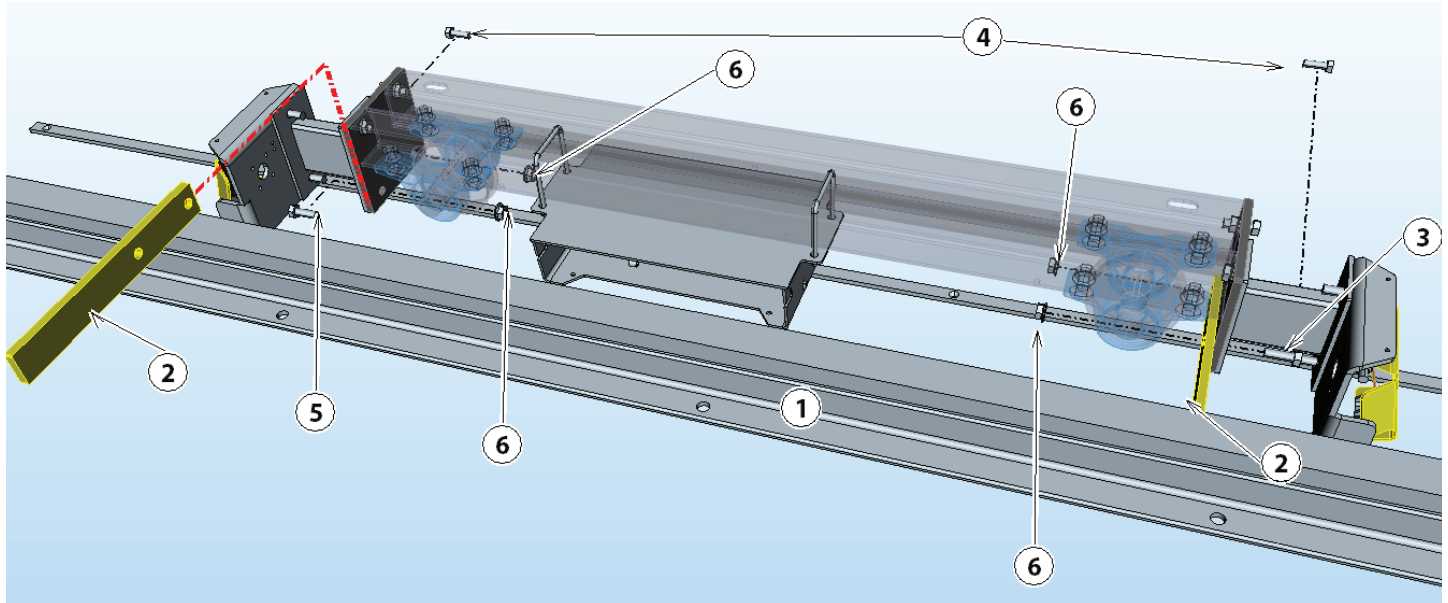
**M.M.B.**  
Parts manual



| ID | Description                   | Item #   |
|----|-------------------------------|----------|
| 1  | MMB1 Electrical Control Panel | 10-54658 |
| 2  | 3/8" x 4" hex bolt            | 001-0124 |
| 3  | 3/8" x 1/32" washer           | 003-0059 |
| 4  | Guard spring                  | 119-0028 |
| 5  | 3/8" x 3/4" x .125 washer     | 003-0008 |
| 6  | 3/8" steel lock nut           | 004-0044 |
| 7  | Sensor transmitter            | 410-0125 |
| 7  | MMB1 Sensor receiver          | 410-0126 |
| 7  | Sensor Send/Receive set       | 410-0092 |
| 8  | Sensor mounting bracket       | 10-46133 |
| 9  | 4 mm x 16 mm cap bolt         | 001-0004 |
| 10 | #4 star washer                | 003-0093 |
| 11 | 4 mm hex nut                  | 004-0037 |
| 12 | MMB sensor grd flap universal | 10-57173 |

Nov 2015: items 9, 10, 11 are obsolete; when ordering a new sensor mounting bracket (10-46133), you will receive a single bolt (002-0128) for installing the bracket.

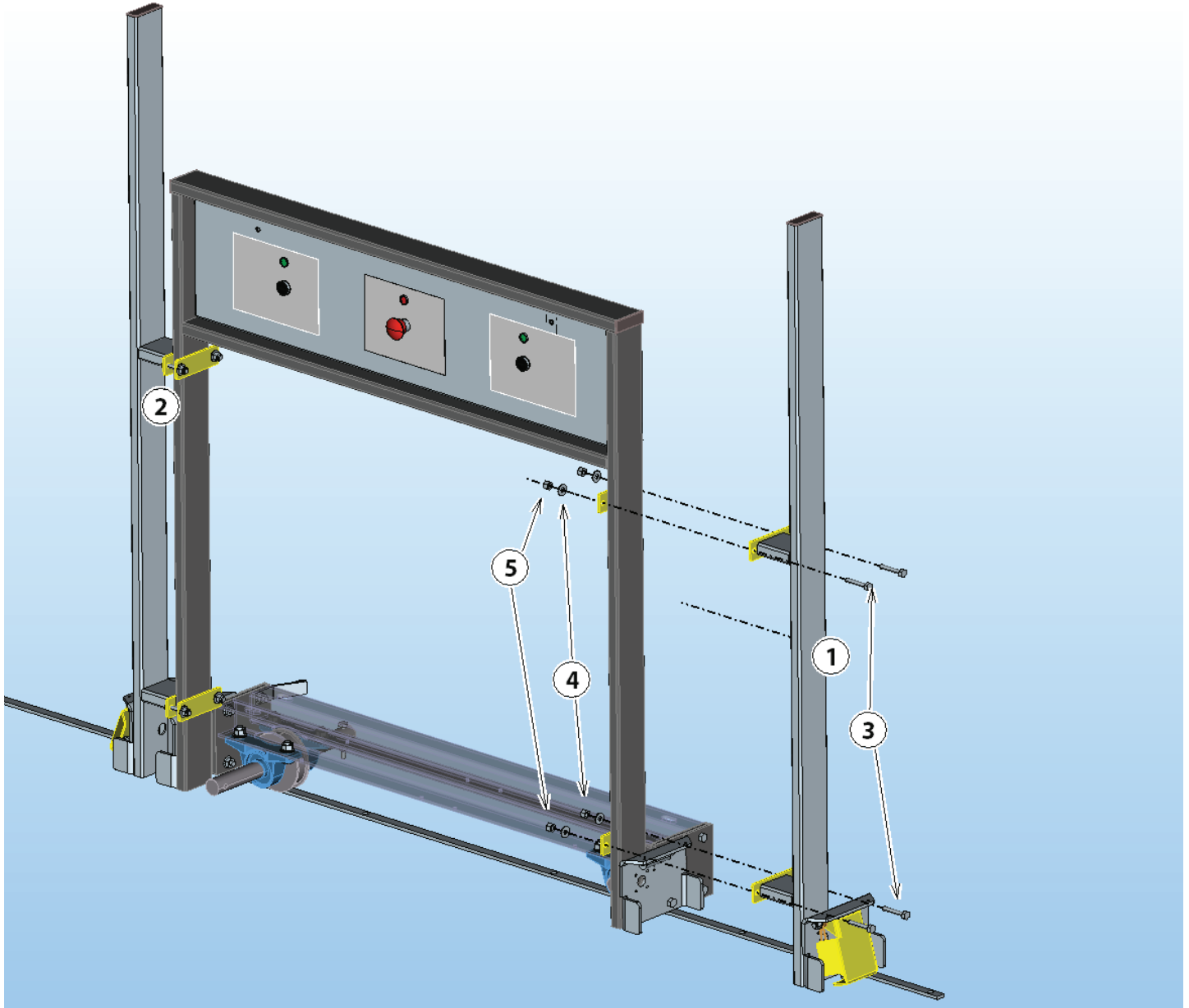
## Anti-Tip



| Key | Description                 | Item_no  |
|-----|-----------------------------|----------|
| 1   | Anti-tip track 96           | 10-56450 |
| 2   | Mmb anti tip bracket        | 10-56449 |
| 3   | Bolt hex 7/16x1-1/4 gr5 unc | 001-0132 |
| 4   | Bolt hex 7/16x1-1/4 gr5 unc | 001-0132 |
| 5   | Bolt hex 7/16x1-1/4 gr5 unc | 001-0132 |
| 6   | 7/16 Flange nut gr5 unc     | 004-0016 |
|     |                             |          |



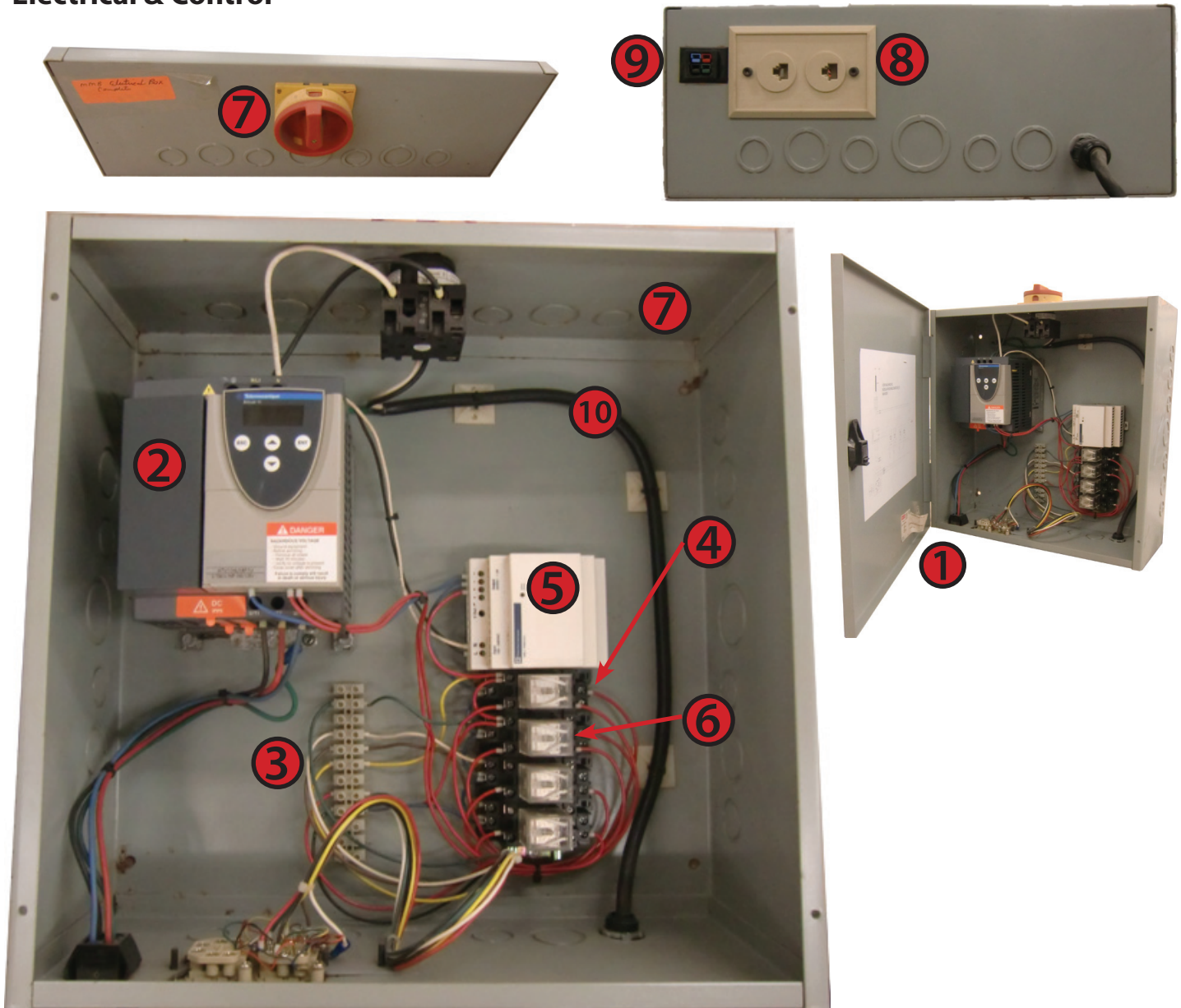
## Bumpers



| Key | Description                     | Item_no  |
|-----|---------------------------------|----------|
| 1   | Mmb_cal_frnt_extension_rt       | 10-47890 |
| 2   | Mmb_cal_frnt_extension_lft      | 10-47894 |
| 3   | 3/8 X 2 hex bolt gr5 unc        | 001-0119 |
| 4   | Washer sae 3/8 (.406X.813X.080) | 003-0008 |
| 5   | 3/8 Nylon lock nut gr5 unc      | 004-0044 |
|     |                                 |          |

# COMPONENTS

## Electrical & Control



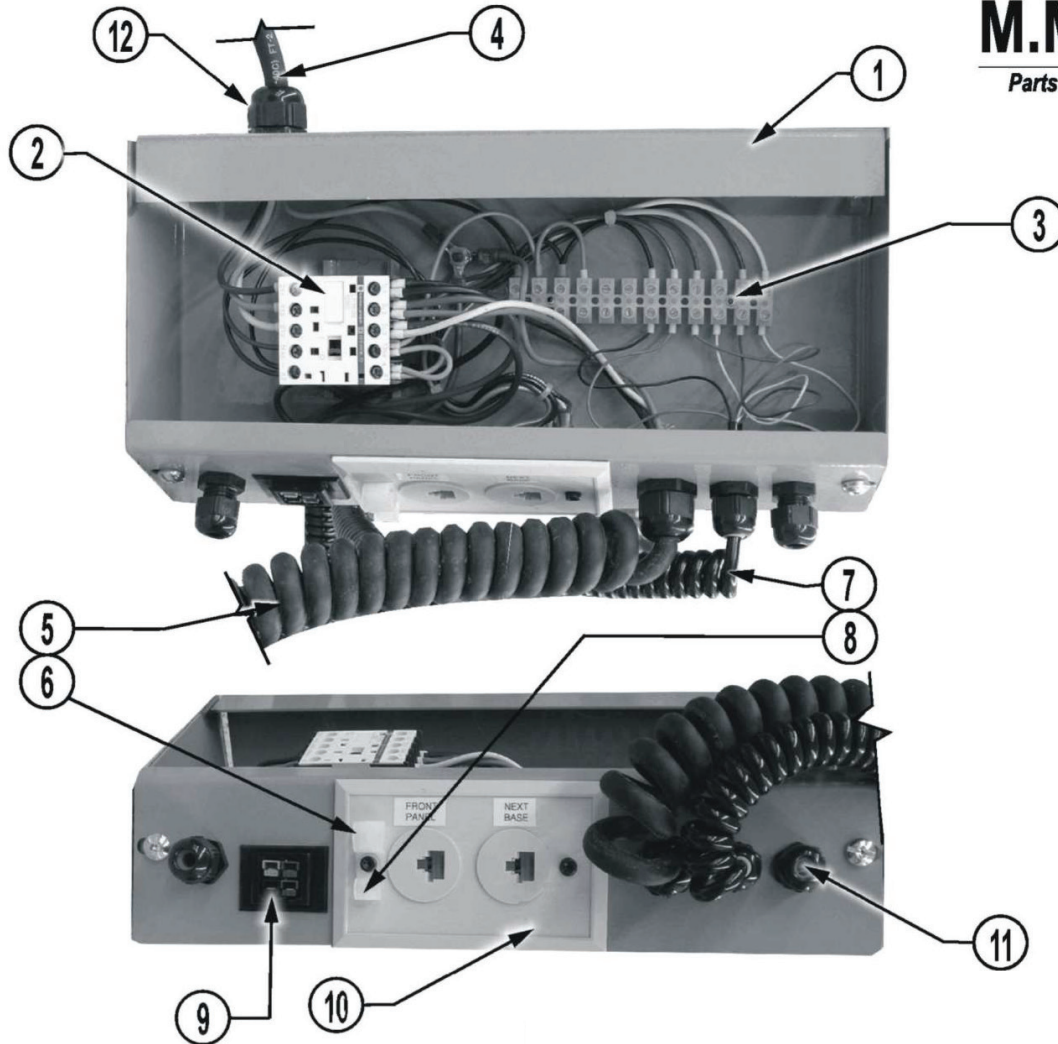
| ID | Description                  | Item #   |
|----|------------------------------|----------|
| 1  | MMB1 Electrical Box Complete | 10-46117 |
| 2  | 1 hp. VFD (Telemecanique)    | 403-0013 |
| 3  | Terminal strip               | 401-0050 |
| 4  | Relay base                   | 409-0022 |
| 5  | D.C. power supply            | 406-0016 |
| 6  | 24 Volt D.C. relay           | 409-0021 |
| 7  | Disconnect switch            | 410-0044 |

| ID | Description          | Item #   |
|----|----------------------|----------|
| 8  | RJ45 duplex          | 401-0028 |
| 9  | 4 pole receptacle    | 46119    |
| 10 | 15' Power cord -120V | 400-0049 |
|    | Empty electrical box | 10-61763 |



## Electrical & Control

**M.M.B.**  
*Parts manual*

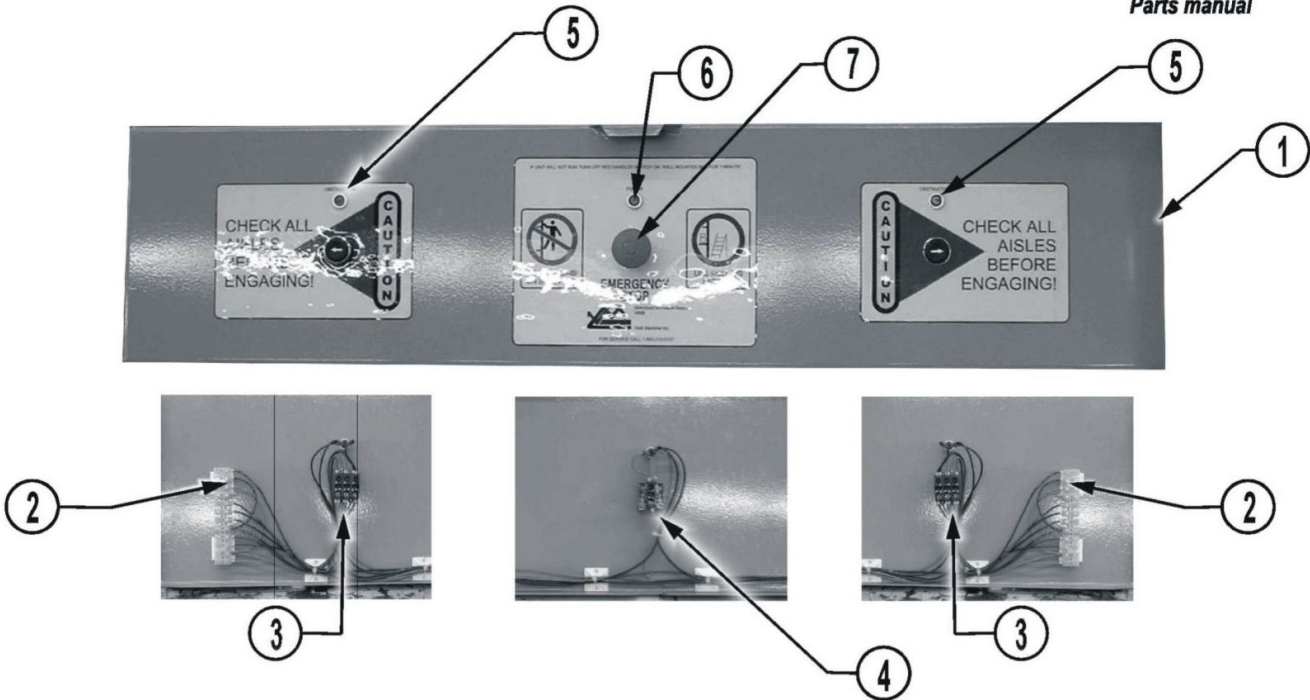


| ID | Description                       | Item #   |
|----|-----------------------------------|----------|
|    | MMB1 Rear Electrical Box Complete | 0-45721  |
| 1  | Satellite electrical box          | 0-45570  |
| 2  | Contacter                         | 409-0075 |
| 3  | Weiland terminal strip            | 401-0050 |
| 4  | 19' Power cord                    | 2-74225  |
| 4  | 23' Motor cord                    | 409-0105 |
| 5  | Curly cord (large)                | 400-0036 |
| 6  | Cable clamp (large)               | 411-1096 |
| 7  | Curly cord (small)                | 400-0037 |
| 8  | Cable clamp (small)               | 111-1096 |
| 9  | 4 pole receptacle                 | 46119    |
| 10 | RJ45 duplex (12-236-0)            | 401-0028 |

| ID | Description             | Item #   |
|----|-------------------------|----------|
| 11 | Strain relief, 3/8"     | 401-0053 |
| 12 | Strain relief, 1/2"     | 401-0004 |
|    | MMB front to rear cable | 400-0038 |

## Electrical & Control

**M.M.B.**  
*Parts manual*



| ID | Description                        | Item #   |
|----|------------------------------------|----------|
| 1  | Control electrical box cover       | 10-49362 |
| 2  | Weiland terminal strip             | 401-0050 |
| 3  | Contact blocks (green N.O.)        | 410-0060 |
| 4  | Contact blocks (red N.C.)          | 410-0061 |
| 5  | Red light                          | 410-0094 |
| 6  | Green light                        | 410-0093 |
| 7  | E-stop                             | 410-0056 |
|    | E-stop complete assembly           | 410-0042 |
|    | Direction switch complete assembly | 410-0050 |

# **MMB Preventative Maintenance Checklist**

|                             |            |                       |      |
|-----------------------------|------------|-----------------------|------|
| Company                     | City       | Province              | Date |
| Store No.                   | Serial No. | Model/Type            |      |
| Service Company:            |            | Store Signoff:(Print) |      |
| Service Technician (Print): |            | Store Title:          |      |
| Service Tech Signature:     |            | Store Signature:      |      |

**Preventative Maintenance is Recommended 12 Months. Inspect both sides of the machine.** The inspection of all cords, tracks, obstruction stops, and the overall condition of these components are critical to ensure machine safety, and integrity of the preventative maintenance process. Initialling each line as indicated below confirms these items have been thoroughly inspected for defects.

| ✓ Indicates item is inspected and in good condition - ✗ Indicates item requires additional service      | Service | Initials |
|---|---------|----------|
| Check all bolts, ensure they are tight.   |         |          |
| Check front panel that its vertically plumb.  |         |          |
| Check condition of cords, front to back should be routed inside frame to back, zip tied at sensor flap. |         |          |
| Curly cords condition, mounted securely to back wall.   |         |          |
| Check for stock between units and back wall, instruct manager on duty if present.                       |         |          |
| Check for stock protruding beyond the racking frame. Instruct manager on duty.                          |         |          |
| Check condition of track, ie; broken or bent up, missing sections.                                      |         |          |
| Main electrical box is accessible, not damaged. Mounted to wall.  |         |          |
| Check each base operation:  |         |          |
| Obstruction stops unit left and right.  |         |          |
| Obstruction turns red light on.   |         |          |
| Green light comes on when red power button is on  |         |          |
|   |         |          |
|   |         |          |
|   |         |          |
|   |         |          |
|   |         |          |

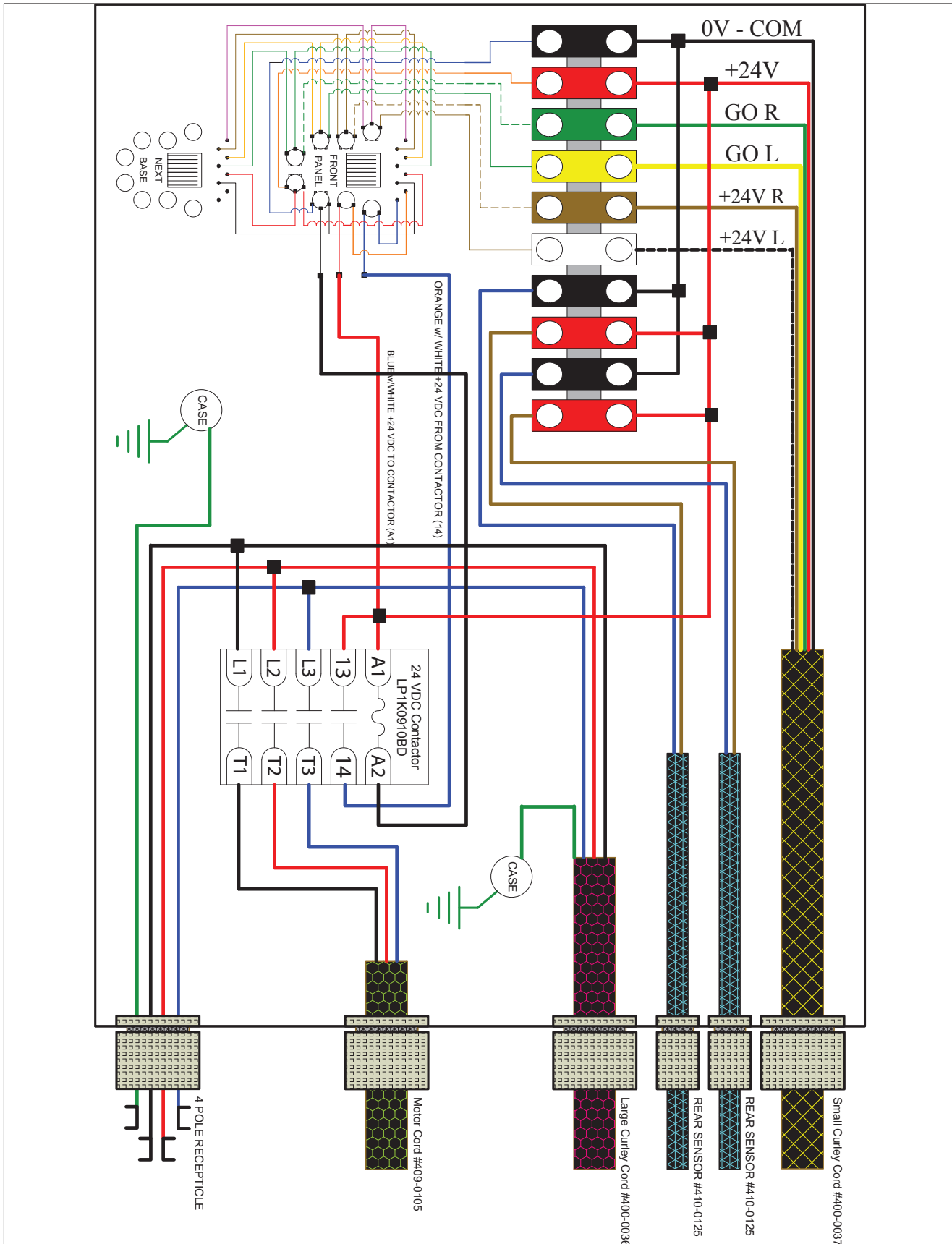
**Required Components**

| Qty | Description                 | Part #   |
|-----|-----------------------------|----------|
| 1   | MMB front to rear cable     | 400-0038 |
| 1   | Curly cord (small)          | 400-0037 |
| 4   | Curly cord (large)          | 400-0036 |
| 2   | P-clip                      | 111-1096 |
| 2   | MMB sensor flap (universal) | 10-57173 |
| 10  | Plastic zip ties, 6"        | 121-0001 |

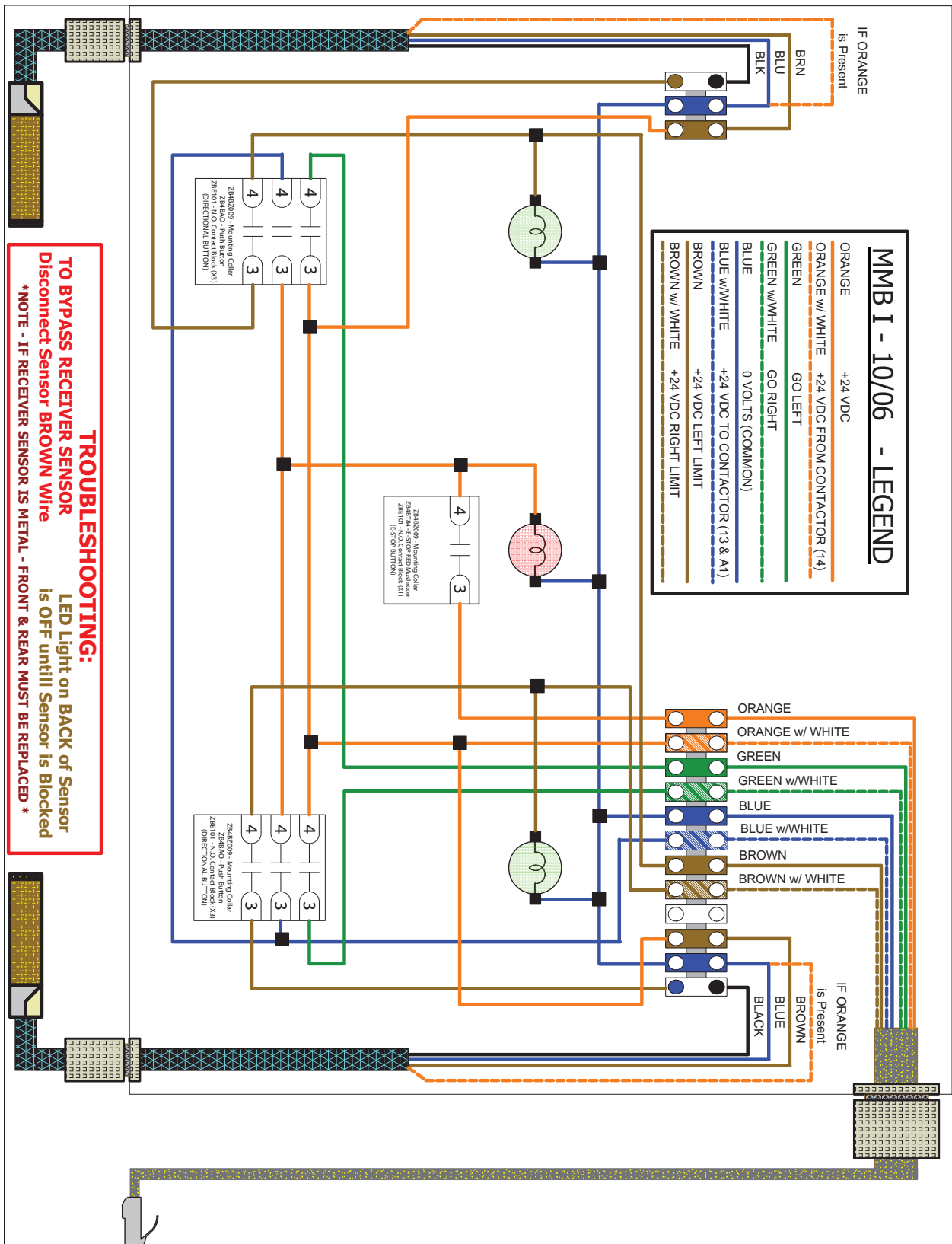
**Conclusion:** This unit has been inspected and serviced for safe operation and is operating as intended by the manufacturer.

Comments and Parts Used (If any): \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

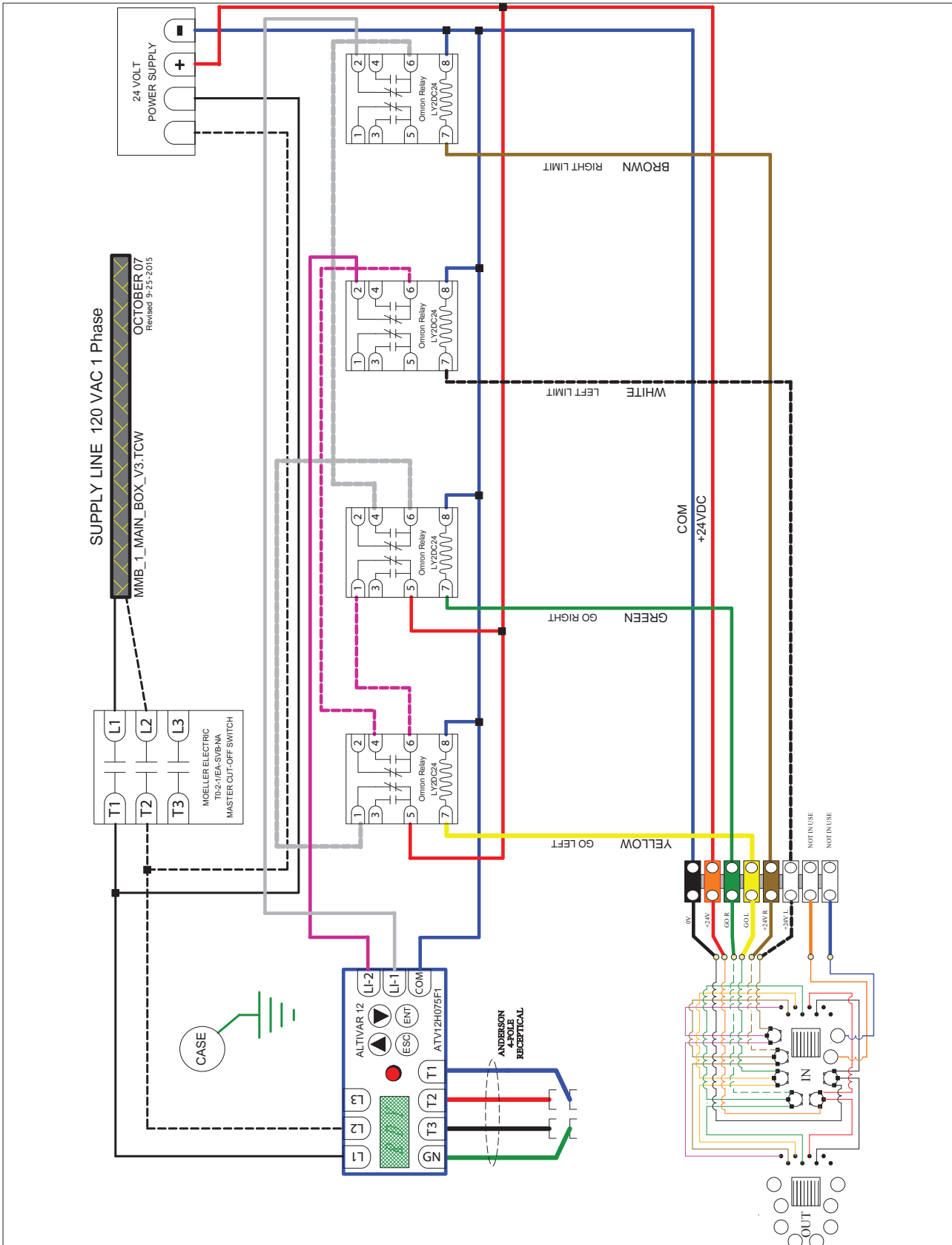
# WIRING SCHEMATIC



# WIRING SCHEMATIC



# WIRING SCHEMATIC



# WARRANTY & LIABILITY

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## Vidir Machine Inc. Warranty Agreement and Limitation of Liability

1. Vidir Machine Inc. ("Vidir") warrants solely that the equipment shall be free from any defect due to faulty workmanship or material deficiency at the time of delivery to the buyer thereof (the "Buyer") and for a period of one year therefrom.
2. All work except minor repairs or adjustments to the equipment furnished on an emergency basis, will be performed during regular working hours. If the Buyer requests that repair work be performed outside of regular working hours, it is the responsibility of the Buyer to pay the difference between regular and premium labour rates at the then standard hourly billing rate.
3. This warranty shall be voided by any modifications to the equipment or any use of the equipment for any purpose other than that for which it was specifically intended.
4. This warranty is the only warranty made by Vidir. The Buyer hereby expressly waives any obligations or liability, including liability for loss or damages due directly or indirectly, any obligations including, without limitation, loss of use, revenue, or profit, shipping and handling, and injury to person or property.
5. It is the responsibility of Buyer to know, understand and comply with the work and safety laws and regulations in effect and governing Buyer's use of the equipment. To the extent governing law requires inspections, records keeping and/or after-purchase modifications to the equipment, it is the responsibility of the Buyer to arrange for and comply with such requirements and any associated costs are the sole responsibility of the Buyer. Vidir assumes no responsibility or liability for Buyer's performance under or compliance with such laws and regulations.
6. If the equipment is found by the Buyer to be defective, the Buyer must notify Vidir within a period of 30 days of discovery of the defect.
7. The Buyer is expected to provide access to all equipment covered by this warranty. Vidir shall not be responsible for any expense incurred in removing, replacing, or refinishing any part of the building structure necessary for the performance of Vidir's obligations under this warranty.
8. In the event that any alterations, additions, adjustments or repairs are made by others without Vidir's prior written consent, Vidir may, at its option, immediately terminate this warranty by providing written notice to the Buyer.
9. In the event Vidir is required to make emergency calls, repairs and/or replacements under this warranty occasioned by the Buyer or any user's negligence, improper operation or misuse of the equipment or by fire, explosion, flooding, the elements, strikes, labour troubles, vandalism, riots or civil commotion, or by any cause beyond Vidir's control. The Buyer shall reimburse Vidir for such emergency calls, repairs and/or replacements in accordance with the then current rates for such services.
10. Vidir's liability for injury to persons or property shall, in any event, be limited to that caused directly by its negligence. Vidir shall not be liable, however, on any account, for any damage or loss to the Buyer or its dealers, representatives, affiliates or agents resulting from business interruption, inconvenience, loss of profits, or special or, indirect or consequential damage. Vidir shall not be deemed to guarantee or warrant the continuing operation or operating efficiency of the equipment covered, nor shall Vidir be liable for any breakdowns thereof or for any damage to any other property of the Buyer not covered by this warranty but resulting from any breakdowns in or operating mishaps of the equipment covered.
11. Should any payment due by the Buyer become thirty days or more delinquent, Vidir may terminate this warranty by written notice, and all moneys owed Vidir shall be immediately payable on demand.
12. This warranty is not transferable or assignable by the Buyer.
13. Vidir reserves the right to determine, in its sole and absolute discretion the best means and methods to be employed for any corrective or repair work deemed necessary by Vidir pursuant to this warranty.