# Safety, Operation, Maintenance & Parts Manual

TWC rev. A6.00

Safety is our #1 concern!

Form #1207

#### **Models Effected:**

TWC, Three Way Conveyor, 9' Drive, Standalone TWC-EXT, Three Way Conveyor, 9' Extension Deck



WARNING! Read and understand this manual before using this machine.

#### California

#### Proposition 65 Warning



**WARNING:** Breathing gas/diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Always start and operate the engine in a well-ventilated area. If in an enclosed area, vent the exhaust to the outside. Do not modify or tamper with the exhaust system. Do not idle the engine except as necessary.

For more information go to www.P65warnings.ca.gov.



**WARNING:** Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection.

For more information go to www.P65Warnings.ca.gov/wood.

#### Active Patents assigned to Wood-Mizer, LLC

Wood-Mizer, LLC has received patents that protect our inventions which are a result of a dedication to research, innovation, development, and design. Learn more at: <u>woodmizer.com/patents</u>

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#### SECTION 1 SAFETY

### 1.1 Safety Symbols

The following symbols and signal words call your attention to instructions concerning your personal safety. Be sure to observe and follow these instructions.



**DANGER!** indicates an imminently hazardous situation which, if not avoided, will result in serious injury or death.



**WARNING!** suggests a potentially hazardous situation which, if not avoided, could result in serious injury or death.



**CAUTION!** refers to potentially hazardous situations which, if not avoided, may result in minor or moderate injury or damage to equipment.

**NOTICE** indicates vital information.

## 1.2 Safety Instructions

**NOTE:** ONLY safety instructions regarding personal injury are listed in this section. Caution statements regarding only equipment damage appear where applicable throughout the manual.



**WARNING!** Clean sawdust from all guards, vents, control boxes, or any area where sawdust may gather after every shift. Failure to do so may result in fire, causing death or serious injury.



#### **OBSERVE SAFETY INSTRUCTIONS**

**NOTICE** Read the entire Operator's Manual before operating the deck. Take notice of all safety warnings throughout this manual and those posted on the machine. Keep this manual with this machine at all times, regardless of ownership.

Also read any additional manufacturer's manuals and observe any applicable safety instructions including dangers, warnings, and cautions.



Only persons who have read and understood the entire operator's manual should operate the deck. The equipment is not intended for use by or around children.

**NOTICE** It is always the owner's responsibility to comply with all applicable federal, state and local laws, rules and regulations regarding the ownership, operation of your Wood-Mizer products. All Wood-Mizer product owners are encouraged to become thoroughly familiar with these applicable laws and comply with them fully while using the machine.

#### **KEEP DECK AND AREA AROUND DECK CLEAN**



**DANGER!** Maintain a clean and clear path for all necessary movement around the machine and lumber stacking areas. Failure to do so will result in serious injury.

#### **CAUTIONS FOR DECK SETUP**

WARNING! Securely fasten the feet of the deck to the floor before operating the machine.

#### **CHECK DECK BEFORE OPERATION**



**DANGER!** Make sure all guards and covers are in place and secured before operating the equipment.

#### **KEEP PERSONS AWAY**



**WARNING!** Keep all persons out of the path of moving equipment and boards while operating.

#### USE PROPER PROCEDURE WHEN CONDUCTING MAINTENANCE



**DANGER!** Make sure all electrical installation, service and/or maintenance work is performed by a qualified electrician and is in accordance with applicable electrical codes.

Hazardous voltage inside the control box and at the motor can cause shock, burns, or death. Disconnect and lock out power supply before servicing! Keep all electrical component covers closed and securely fastened during operation.



**WARNING!** Consider all electrical circuits energized and dangerous.



Never assume or take the word of another person that the power is off; check it out and lock it out.

Do not wear rings, watches, or other jewelry while working around an open electrical circuit.

## **SECTION 2 INTRODUCTION**

#### 2.1 About This Manual

This manual replaces any previous information received on your Wood-Mizer® equipment.

The information and instructions in this manual do not amend or extend the limited warranties for the equipment given at the time of purchase.

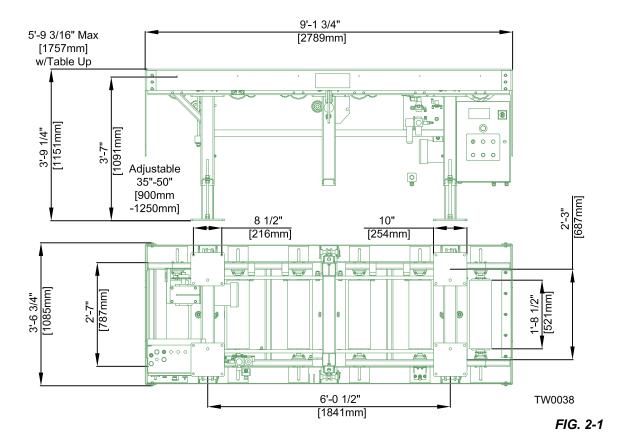
## 2.2 Getting Service

For contact information, sales, service, parts, and additional manuals, sign into your account on <a href="https://woodmizer.com">https://woodmizer.com</a>, or call inside the USA: 1-800-553-0182 or from outside the USA: 317-271-1542

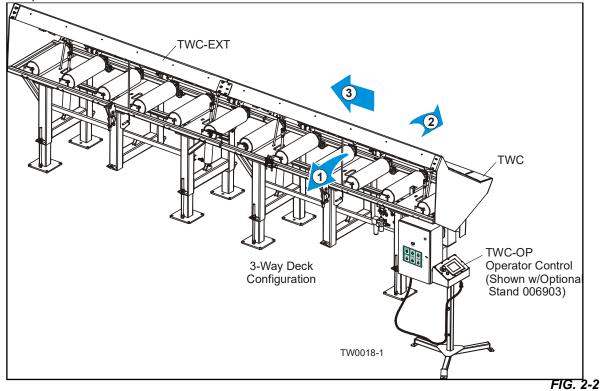
## 2.3 Specifications

Equipment specification are included in the Online Manuals, which are found at <a href="https://apps.woodmizer.com/Manuals/Manuals/Manuals.aspx?parent=0.">https://apps.woodmizer.com/Manuals/

#### **DIMENSIONS**



A single TWC deck can be used to route material up to 9 feet long in three directions. A TWC-EXT deck can be attached to increase the capacity up to 18 feet long. The TWC-OP deck control can be mounted to the stand to operate the deck from the processing line. The control can also be installed at the sawmill operator location to allow the sawmill operator to control deck operation (requires Auxiliary E-Stop kit 053395).



A second TWC deck can be added to route material up to 9 feet long in five directions. A TWC-EXT deck can be attached to each deck to increase the capacity up to 18 feet long.

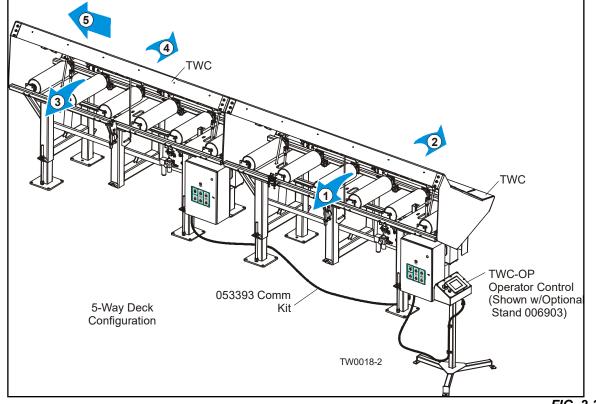


FIG. 2-3

A third TWC deck can be added to route material up to 9 feet long in seven directions. A TWC-EXT deck can be attached to each deck to increase the capacity up to 18 feet long.

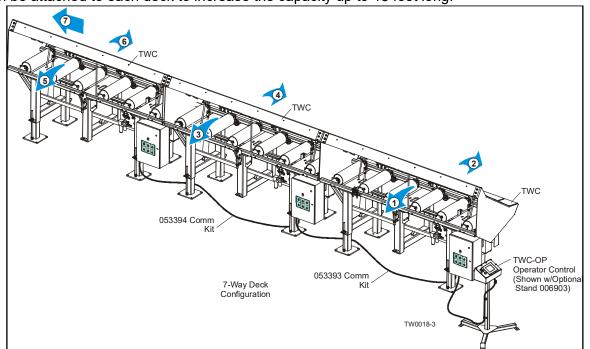


FIG. 2-4

#### 2.4 Installation

#### FIRST DECK POSITION

Prepare a firm, level area where the deck can be anchored next to the incline conveyor. A cement pad with 1/2" diameter anchor bolts is recommended.



**WARNING!** Securely fasten the feet of the deck to the floor before operating the machine. Failure to do so may result in serious injury or death.

- Position the first Three-Way Deck inline with the Incline Conveyor. The end of the deck should be no further than 18" from the outfeed roller on the Incline Conveyor.
- 2. Position the deck so the rollers are centered with the Incline Conveyor roller.

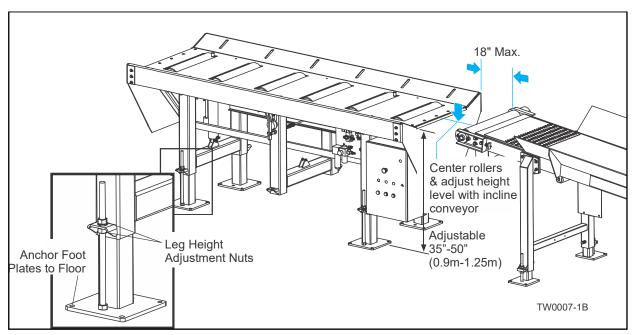


FIG. 2-5

- 3. Adjust the table legs so the height of the three-way table is level with the height of the incline conveyor.
- 4. To adjust the legs, turn the adjustment nuts to raise or lower the leg as desired.
- 5. Tighten the adjustment nuts when the adjustment is complete.
- 6. Secure the table to the floor with 1/2" anchor bolts. Use at least two anchors in each foot plate.

#### TABLE EXTENSION INSTALLATION (OPTIONAL)

- 1. Remove the table end plate from the primary deck and install it to the rear of the extension deck.
- 2. Position the extension deck behind the primary deck and align the connecting plate holes with the primary deck table holes.
- 3. Adjust the extension deck legs if necessary to the same height as the primary deck. Secure the tables together with the previously removed connecting plate bolts.

4. Secure the tables to the floor with 1/2" anchor bolts. Use at least two anchors in each foot plate.

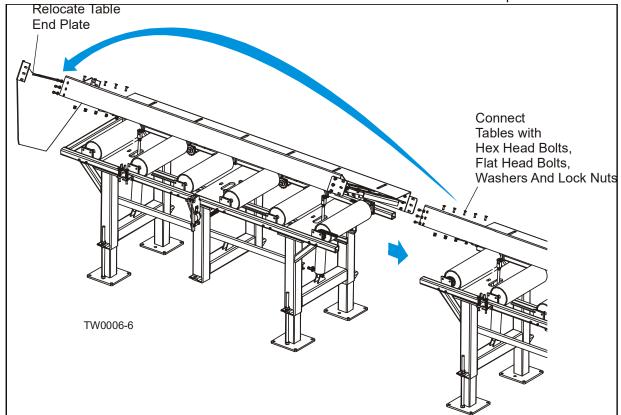


FIG. 2-6

- **5.** Locate the 3/8" and 1/4" air line 'T' fittings extending from the extension table. These fittings will be spliced into the air lines of the primary table. Install the 3/8" 'T' fitting to the 3/8" air line on the primary table near the rear table lift cylinder.
- 6. Cut the air line approximately 3 feet from the cylinder fitting and insert each end into the extension table 'T' fitting.
- 7. Install the 1/4" 'T' fitting to the 1/4" air line on the primary table near the air bag cylinder.
- 8. Cut the air line approximately 2 feet from the air bag fitting and insert each end into the extension table 'T' fitting.
- 9. Secure all air lines away from moving parts of the tables to avoid damage.
- 10. Separate the master link of the #50 x 45" roller chain located around the front roller sprocket of the extension table.
- 11. Route the chain around the rear roller sprocket of the primary table and reinstall the master link.
- **12.** Remove the board sensor from the bracket at the rear of the primary table and reinstall it in the bracket at the rear of the extension table.

13. Secure the sensor cable out of the way of moving parts to avoid damage.

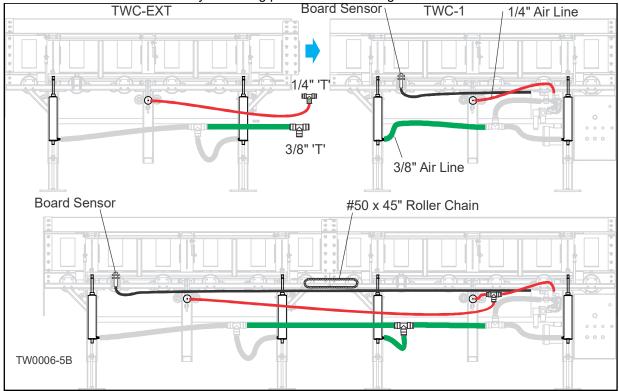


FIG. 2-7

#### SECOND/THIRD DECK POSITION (OPTIONAL)

Up to three decks can be installed inline. If extension tables (TWC-EXT) are to be used, install the extensions to the primary tables as described in the section: *Table Extension Installation (Optional)*.

- 1. Place the second deck at the end of the first deck with about 1" of space in between decks.
- 2. Adjust the table legs so the height of the second deck is level with the height of the first deck.
- 3. To adjust the legs, turn the adjustment nuts to raise or lower the leg as desired.
- **4.** Tighten the adjustment nuts when the adjustment is complete.
- 5. Secure the table to the floor with 1/2" anchor bolts. Use at least two anchors in each foot plate.
- 6. Repeat for the third deck at the end of the second deck, if applicable.

#### **ELECTRICAL/AIR INSTALLATION**



**DANGER!** Make sure all electrical installation, service and/or maintenance work is performed by a qualified electrician and is in accordance with applicable electrical codes.

Have a qualified electrician install the power supply before receipt of your machine. The power supply must meet the provided specifications concerning wire size, fused disconnect, and voltage. The electrical installation must also meet local codes.

1. Install a fused disconnect switch for each deck control within sight of the machine. Typical minimum switch, fuse, and wire sizes are shown. All electrical installation must meet local electrical codes. Fuses are sized for short-circuit protection only.

| 3-Phase Volts Fuse Disconnect |         | onnect Time Delay Fuse Suggested Wi |                 |
|-------------------------------|---------|-------------------------------------|-----------------|
| 460 VAC                       | 30 Amps | 5 Amps                              | 16AWG up to 50' |

TABLE 2-1

The TWC electrical specifications are shown below.

| Model | FLA of Largest Load | FLA  | IR (AIC) | SCCR | Voltage | Hz | Phase |
|-------|---------------------|------|----------|------|---------|----|-------|
| TWC   | 3.1A                | 3.1A | 25kA     | 5kA  | 460V    | 60 | 3     |

TABLE 2-2

**NOTICE** The TWC is wired for use with a 460 volt power supply. To operate the TWC with 240V, 400V or 600V power supplies an additional transformer is required. See the table below for transformers available from Wood-Mizer. All transformers are manufactured by Square D.

| Conversion From/To  | 240 to 480 volts | 400 to 480 volts | 600 to 480 volts |
|---------------------|------------------|------------------|------------------|
| Wood-Mizer Part No. | 078203           | 078204           | 078205           |

TABLE 2-3

- 2. Route the incoming power supply from the disconnect switch to the control box.
- 3. Secure the power supply cable in the provided connector.
- **4.** Connect the ground wire to the ground stud in the control box.
- Remove the wireway covers and route the three power lines through the wireways to the disconnect block at the top of the cabinet.
- 6. Repeat for each additional deck control.

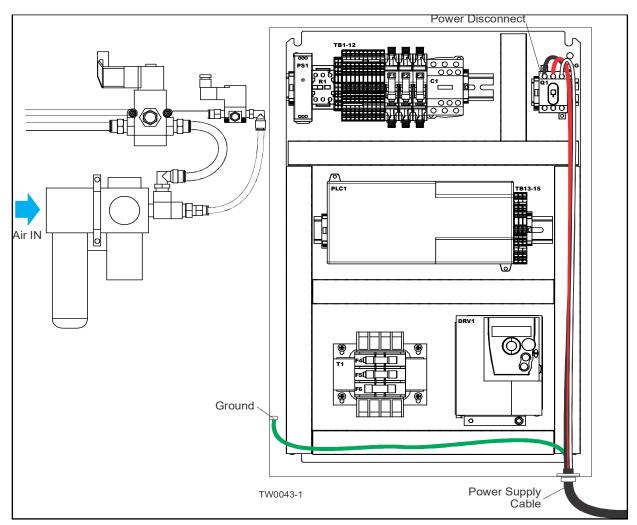


FIG. 2-8

7. Install the appropriate fittings to the air system filter and connect the air supply line.

**NOTE:** The air supply should be 3 scfm per nine foot deck (4.5 scfm if equipped with optional third air cylinder). A minimum 3/4" air supply line is required.

#### 2.5 Control Installation

#### **DECK #1**



**DANGER!** Disconnect and lock out power supply before servicing!

1. Assemble the operator control to the optional stand or at the sawmill control. Mounting hole locations are provided if you wish to fabricate a mounting solution.

NOTE: If the operator control is to be installed at the sawmill control, installation of an Auxiliary E-Stop Harness is required

to interface the 3-Way deck E-stop with the sawmill E-Stop (See Section 2.4.4).

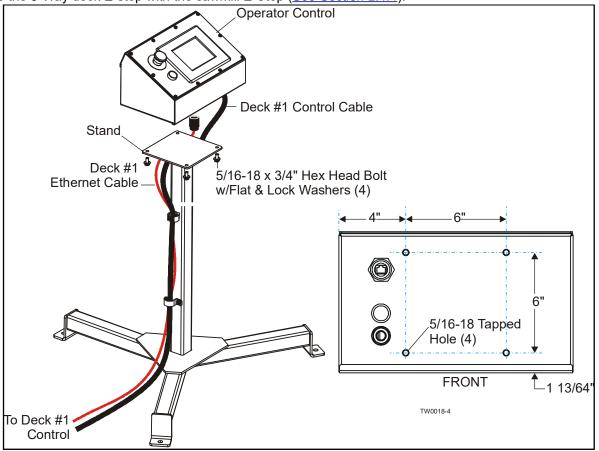


FIG. 2-9

- 2. Connect one end of the provided deck #1 ethernet cable to the receptacle at the bottom of the operator control.
- **3.** Push the connectors together and twist the outer housing to lock together.
- 4. Route the ethernet and control cables down toward the first three-way deck control box.
- 5. If using the optional operator control stand, secure the cables in the clamps on the stand post.
- **6.** Plug the ethernet cable into connector J1 in the bottom of the control box.
- 7. Remove the hole plug in the bottom of the deck control box and route the control harness up into the box.
- 8. Secure the cable to the box with the provided connector, seal and lock nut.
- 9. Remove the wireway covers and route the control cable wires to terminal block bank TB13-TB15.

- 10. Connect the control wires to the control components as described below.
  - Connect blue wire #66 to terminal block #TB14 C2.
  - Connect white/black wire #61 to terminal block #TB13 B2.
  - Connect black wire #53 to terminal block #TB14 B2.
  - Connect orange wire #65 to terminal block #TB13 A2.
  - Connect red wire #55 to terminal block #TB14 A2.
  - Connect green ground wire to the ground terminal located next to the disconnect.

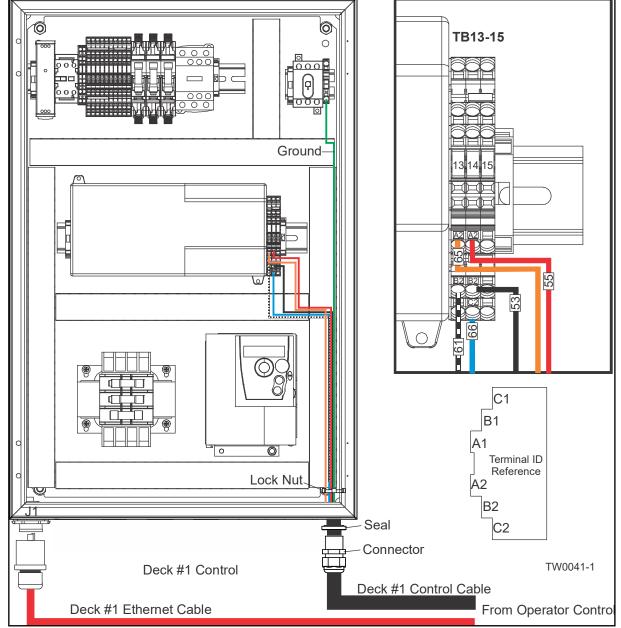


FIG. 2-10

11. Secure the control and ethernet cables out of the way of moving parts to avoid damage.

**NOTE:** If you are installing a single 3-way configuration, replace the wireway covers and close the control box door. Refer to <u>Section 2.4.4</u> to install the optional auxiliary E-stop harness, if applicable.



#### **DECK #2**



**DANGER!** Disconnect and lock out power supply before servicing! Failure to do so will result in shock, burns or death.

- 1. To connect a second deck control for a 5-way configuration, use the communication kit to connect the first deck control to the second deck control.
- 2. Locate the plugged hole in the bottom of deck #1 control box behind the existing ethernet receptacle.
- 3. Remove the hole plug and install the provided RJ45 receptacle to the port hole.
- **4.** Orient the receptacle with the housing and seal outside of the box and secure with the threaded locking ring.
- 5. Connect the receptacle to connector "J2" on the PCB assembly with the 1' ethernet jumper cable.
- 6. Plug the deck #2 ethernet cable into the receptacle.

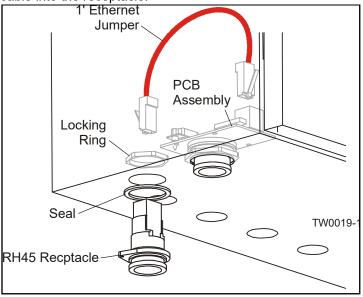
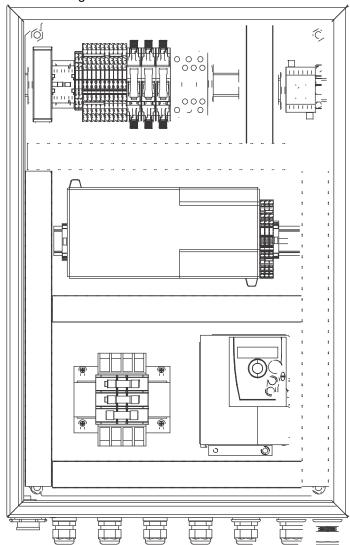


FIG. 2-11

- 7. Remove the hole plug in the bottom of deck control box #1 and route deck #2 control cable up into the box.
- 8. Secure the cable to the box with the provided connector, seal and lock nut.
- 9. Route the control cable wires to terminal block banks TB3-12 & TB13-TB15.

- 10. Connect the control wires to the control components as described below.

  - Connect white wire #404 to terminal block #TB15 C2. Connect red wire #400 to terminal block #TB12 B2. Connect black wire #403 to terminal block #TB12 A2.
  - Connect green wire #406 to terminal block #TB15 B2.



- 11. Remove the hole plug in the bottom of deck control box #2 and route deck #2 control cable up into the box.
- 12. Secure the cable to the box with the provided connector, seal and lock nut.
- 13. Route the control cable wires to terminal block bank TB13-TB15.

- **14.** Connect the control wires to the control components as described below.
  - Connect white wire #404 to terminal block #TB14 C2.
  - Connect red wire #400 to terminal block #TB13 B2.
  - Connect green wire #406 to terminal block #TB14 B2.

  - Connect black wire #403 to terminal block #TB13 A2. Move blue PLC wire #55 from terminal X1 to terminal X2.

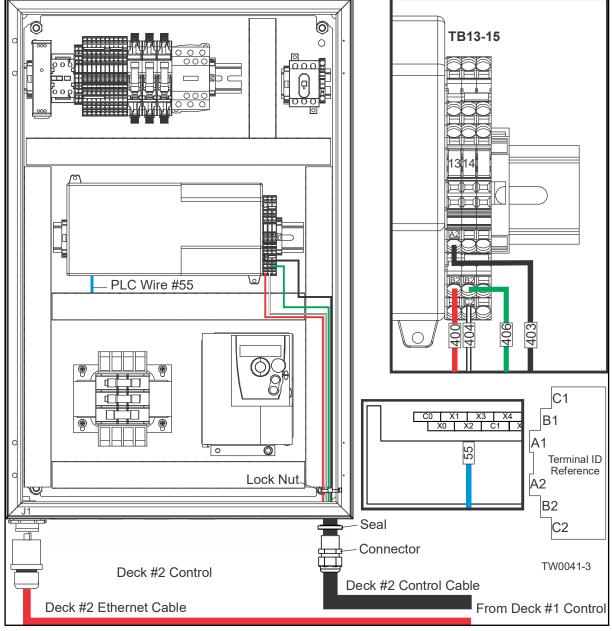


FIG. 2-13

- 15. Secure the power and ethernet cables out of the way of moving parts to avoid damage.
- **16.** If you are installing a 5-way configuration, set DIP switch #9 in deck control #1 to "OFF" position (See Section 4.5 for DIP switch reference).
- 17. Replace the wireway covers in both deck control boxes and close the control box doors.
- **18.** Refer to <u>Section 2.4.4</u> to install the optional auxiliary E-stop harness, if applicable.

#### **DECK #3**



**DANGER!** Disconnect and lock out power supply before servicing!

- 1. To connect a third deck control for a 7-way configuration, use the communication kit to connect the second deck control to the third deck control.
- 2. Locate the plugged hole in the bottom of deck #2 control box behind the existing ethernet receptacle.
- 3. Remove the hole plug and install the provided RJ45 receptacle to the port hole.
- 4. Orient the receptacle with the housing and seal outside of the box and secure with the threaded locking ring.
- **5.** Connect the receptacle to connector "J2" on the PCB assembly with the 1' ethernet jumper cable.
- **6.** Plug the deck #3 ethernet cable into the receptacle.

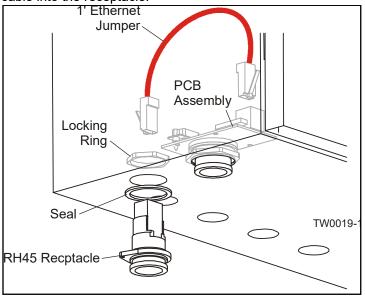


FIG. 2-14

- 7. Remove the hole plug in the bottom of deck control box #2 and route deck #3 control cable up into the box.
- 8. Secure the cable to the box with the provided connector, seal and lock nut.
- 9. Route the control cable wires to terminal block banks TB3-12 & TB13-TB15.

- **10.** Connect the control wires to the control components as described below.
  - Connect white wire #405 to terminal block #TB15 C2.
  - Connect red wire #401 to terminal block #TB12 B2.
  - Connect black wire #402 to terminal block #TB12 A2.
  - Connect green wire #407 to terminal block #TB15 B2.

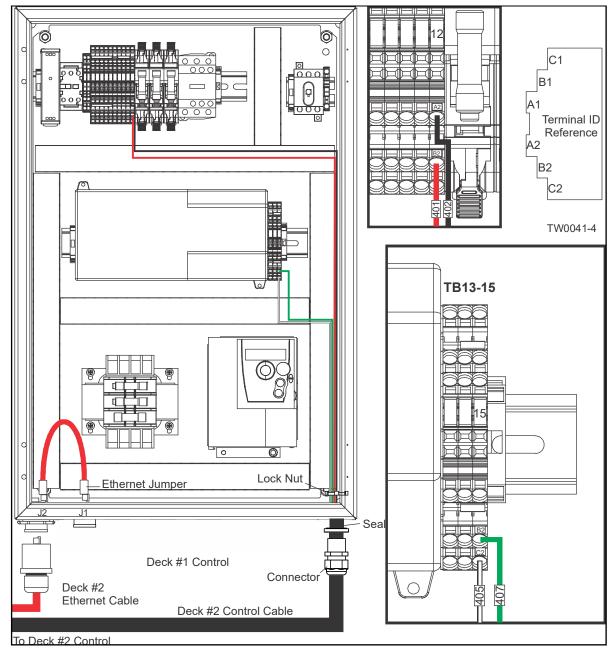


FIG. 2-15

- 11. Remove the hole plug in the bottom of deck control box #3 and route deck #3 control cable up into the box.
- 12. Secure the cable to the box with the provided connector, seal and lock nut.
- 13. Route the control cable wires to terminal block bank TB13-TB15.
- 14. Connect the control wires to the control components as described below.
  - Connect white wire #405 to terminal block #TB14 C2.
  - Connect red wire #401 to terminal block #TB13 B2.
  - Connect green wire #407 to terminal block #TB14 B2.
  - Connect black wire #402 to terminal block #TB13 A2.

Move blue PLC wire #55 from terminal X1 to terminal X3.

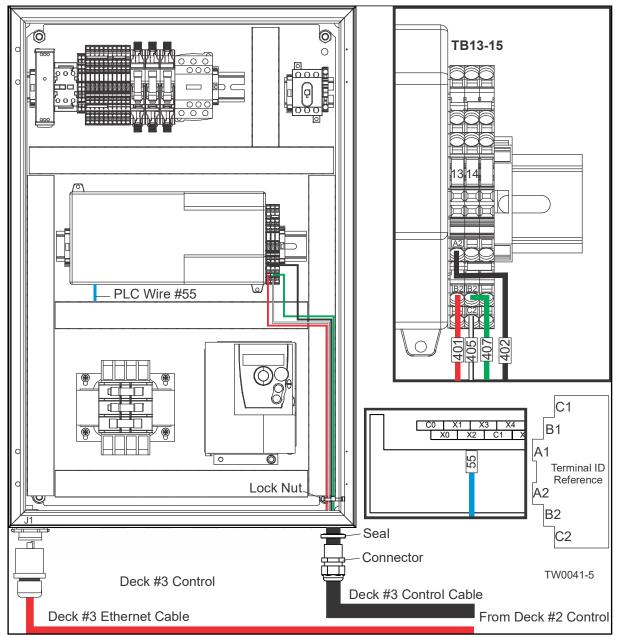


FIG. 2-16

- 15. Secure the power and ethernet cables out of the way of moving parts to avoid damage.
- **16.** For 7-way deck operation, set DIP switch #9 in deck control #1 and deck control #2 to "OFF" position (<u>See Section 4.5</u> for DIP switch reference).
- 17. Replace the wireway covers in both deck control boxes and close the control box doors.
- **18.** Refer to <u>Section 2.4.4</u> to install the optional auxiliary E-stop harness, if applicable.

#### **AUXILIARY E-STOP**



**DANGER!** Disconnect and lock out power supply before servicing!

The TWC deck operator control can be configured so the E-stop(s) interface with the E-stop of other equipment. An optional auxiliary E-stop harness is available to connect the operator control to auxiliary equipment, such as an LT300 saw-mill.

**NOTE:** If the TWC deck operator control is installed at the control location of the sawmill, installation of the Auxiliary E-stop harness is required.

- 1. To install the harness, remove the operator control panel.
- 2. Remove the plug from the bottom of the operator control box and route the E-stop harness up into the box.
- 3. Secure the cable to the box with the provided connector, seal and lock nut.
  - Remove the jumper wire from terminal block #TB19.2 & #TB20.2.
  - Connect red wire #10 to terminal block #TB19.2.
  - Connect black wire #30 to terminal block #TB20.2.
  - Connect white wire #83 to terminal block #TB25.2
  - Connect green wire #84 to terminal block #TB26.2

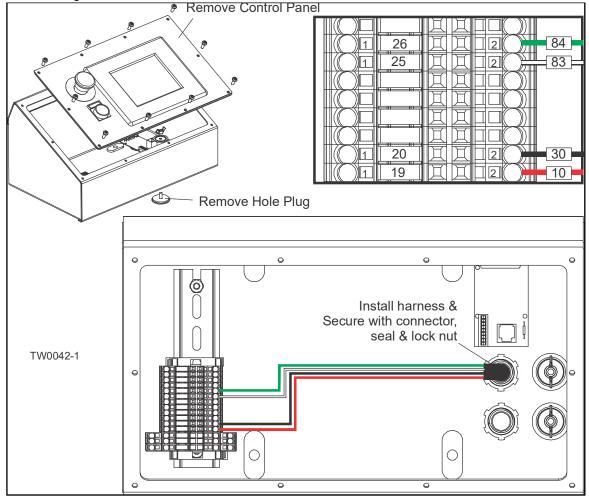


FIG. 2-17

- **4.** Replace the operator control panel and route the harness to the control of the auxiliary equipment and connect according to the equipment instructions.
- **5.** Install the provided switch contact harness to the auxiliary equipment E-Stop.

- **6.** For an LT300 sawmill, remove the control panel, connect the switch contact to the E-Stop switch and route the wires down into the control cabinet.
- 7. Replace the control panel.

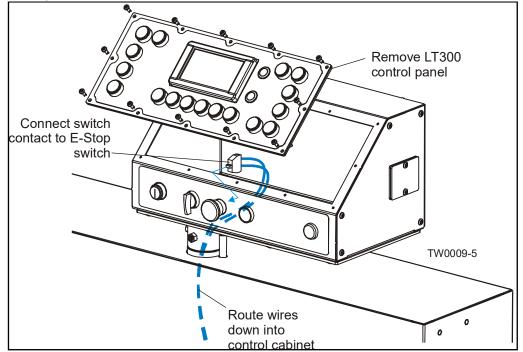


FIG. 2-18

- 8. Open the LT300 control cabinet doors.
- 9. Route the harness from the deck operator box up into the LT300 control cabinet.
- **10.** Secure the cable to the box with the provided connector, seal and lock nut. Install the provided terminal block next to the existing terminal block bank X10-X22 (LT300 Rev. B3.00+) or bank X16-X32 (LT300 prior to Rev. B3.00).
- 11. Locate terminal blocks X6-X8.
- 12. Remove the screws in the center of these terminal blocks and remove the bridge contact connecting the three terminal blocks.
- 13. Use pliers to break off one segment of the bridge contact.
- 14. Replace the two segment bridge to connect terminal blocks X7 & X8.
- **15.** Replace the center screws.
- **16.** Remove the wireway covers and route the E-Stop wires and harness wires to the new terminal block and X6-X7.
- 17. Connect the E-Stop harness and switch wires as described below.
  - Connect red wire #10 to new terminal block port #A1.
  - Connect black wire #30 to new terminal block port #B1.
  - Connect white wire #83 to terminal block #X6.2
  - Connect green wire #84 to terminal block #X7.2

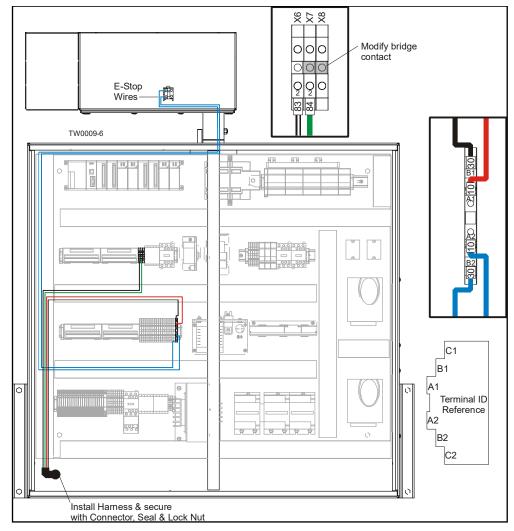


FIG. 2-19

**18.** Replace the wireway covers and close the control cabinet doors.

## 2.6 Operation



**DANGER!** Make sure all guards and covers are in place and secured before operating the deck. Failure to do so may result in serious injury.



**WARNING!** Keep all persons out of the path of moving equipment and boards while operating deck. Failure to do so may result in serious injury or death.

The Three-Way Deck can be operated from the deck location with the switches on the deck control box. The deck can also be controlled from the operator control box.

#### **DECK CONTROL BOX SWITCHES**

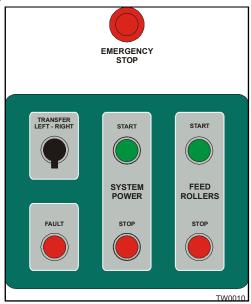


FIG. 2-20

**SYSTEM POWER** - Push START to turn the deck power on. This allows operation of the deck table to dump left or right. Push STOP to turn deck power off. If multiple decks are installed, START and STOP will turn all decks on or off.

**FEED ROLLERS** - With the operator control in MANUAL MODE, push START to start feed rollers spinning. Push STOP to stop the feed rollers.

**TRANSFER** - With the operator control in MANUAL MODE, turn switch to LEFT to dump material on the left side of the table (SYSTEM POWER must be on). Turn switch to RIGHT to dump material on the right side of the table.

**FAULT** - Lights when an error has occured in AUTO mode. Stop SYSTEM POWER and check machine. Place the auxiliary control in MANUAL mode, then back to AUTO to clear the FAULT.

**EMERGENCY STOP** - Push to stop all deck functions. Turn clockwise to release the stop.

#### **OPERATOR CONTROL SWITCHES**



FIG. 2-21

ON - Turns deck(s) SYSTEM POWER on. This allows operation of the deck table to dump left or right.

**EMERGENCY STOP** - Push to stop all deck functions. Turn clockwise to release the stop.

#### **TOUCH CONTROL PANEL MAIN SCREEN**

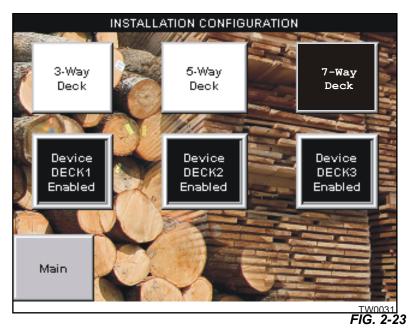


FIG. 2-22

**NOTE:** Upon initial power-up, the control is configured for 3-way deck configuration. To change the configuration, select INSTALL CONFIG.

#### **INSTALL CONFIG**

- 1. Push to configure the deck(s) for 3-way, 5-way or 7-way configurations.
- **2.** Enter the password '8180' to enter the configuration menu.
- **3.** Choose the appropriate button from the top row to change the configuration. The corresponding buttons in the bottom row should highlight when an allowable configuration is selected.



**NOTE:** Choosing a configuration that requires more decks than are installed will cause an error. If this occurs, communication with the control will be slow.

4. Push the correct configuration button and wait until the button is highlighted.

**NOTE:** Choosing a configuration that requires less decks than are installed will disable the second or third decks as indicated by the bottom row buttons.

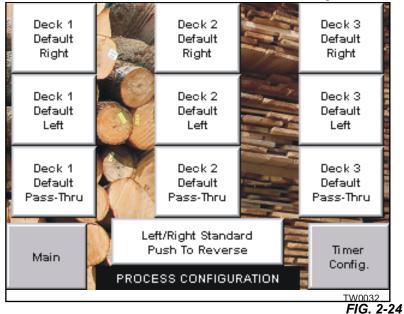
**5.** Push MAIN to return to the main menu.

PROCESS CONFIG - By default, the left and right orientation of the deck(s) is set as viewed from the front of the deck(s).

1. If your process requires this orientation be reversed, push the PROCESS CONFIG button (system power must be ON).

**NOTE:** The default left/right orientation of the deck(s) is shown.

2. Use the PUSH TO REVERSE button to reverse the orientation. Note that the right and left deck indicators change.



**NOTE:** Only the decks installed per the Install Configuration will be displayed.

- 3. Push the PUSH FOR STANDARD button to return to the default orientation.
- **4.** Select the default action you want the deck to perform when the board sensor is activated in AUTO MODE.
- 5. Push MAIN to return to the Main menu.

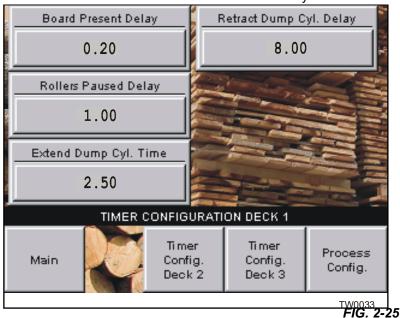
#### **TIMER CONFIG -**

1. From the Process Configuration menu, select the TIMER CONFIG button.

**NOTE:** This menu allows you to change the timer settings for each function of the deck(s). By default, the timer settings for deck #1 are displayed. These settings can be adjusted to fine-tune the deck operation to your processing system.

The timing of four functions can be adjusted for each deck. By default, the settings for Deck #1 are displayed.

- 2. Select the desired button to adjust the timer settings for that function. The current, maximum and minimum settings for the function are displayed.
- 3. To change the setting, enter the numerical value and select ENTER. Factory default timer settings are shown below.



**BOARD PRESENT DELAY** - This setting controls the amount of time the system will pause upon sensing a board before pausing the rollers.

**ROLLERS PAUSE DELAY** - This setting controls the amount of time the system will wait after the rollers have paused before beginning the dump cycle.

**EXTEND DUMP CYL. TIME** - This setting controls the amount of time the system raises the deck table until the table is lowered.

**RETRACT DUMP CYL. DELAY** - This setting controls the amount of time the system will wait to sense the deck table is down before going into fault mode.

- 1. Press the TIMER CONFIG DECK 2 or TIMER CONFIG DECK 3 buttons to view/adjust the settings for these decks, if applicable.
- 2. Press PROCESS CONFIG to return to the Process Configuration menu or MAIN to return to the Main menu.

I/O - The Input/Output screens allow you to troubleshoot control systems of the deck(s). Pressing I/O will display the input values of Deck #1 by default.

A darkened indicator next to each value indicates a received signal from the PLC control. The Input/Output values with the deck in AUTO mode are shown below. As the deck(s) is operated, you can view the action of the inputs.



FIG. 2-26

1. Press DECK 1 OUTPUTS to view the Deck 1 Output values.

NOTE: If you have setup the PROCESS CONFIG in reverse, the Right Latch and Left Latch outputs will be reversed.

- 2. Press DECK 1 INPUTS to return to the Inputs screen, or MAIN to return to the Main menu.
- 3. PRESS DECK 2 INPUTS or DECK 3 INPUTS to view the Input values of these decks, if applicable. A DECK 2 OUT-PUTS and DECK 3 OUTPUTS button is available from each respective Input screen.

**MANUAL MODE** - In Manual Mode, the rollers and dump functions of each deck can be controlled with the buttons on the touch screen.

- 1. Press the FEED ROLLERS button to turn on the rollers of each deck.
- **2.** Push the button again to turn off the feed rollers.
- 3. Push the DUMP RIGHT or DUMP LEFT buttons to raise the table of each deck.
- 4. Push the button again to lower the deck table.

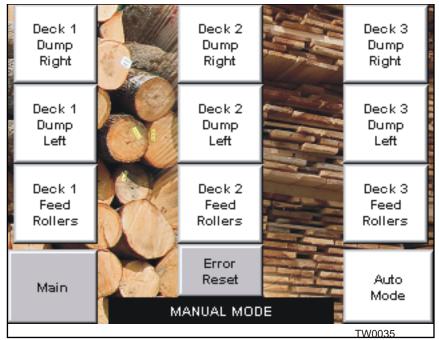


FIG. 2-27

**NOTE:** If you have setup the PROCESS CONFIG in reverse, the Dump Right and Dump Left buttons will be reversed. Only the decks installed per the Install Configuration will be displayed.

- 5. If an error occurs during operation, press ERROR RESET to clear the error.
- 6. Press MAIN to return to the Main menu.
- 7. Press AUTO MODE to enter the Auto Mode menu.

**AUTO MODE** - In Auto Mode, all feed rollers are activated and sensors are used to detect when a board is present. When the sensor is activated, the deck will perform the function as indicated by the buttons selected.

By default, Auto Mode will cause the deck to perform the action as set in the PROCESS CONFIG menu when the board sensor is activated.

1. To override the default, push any of the available buttons to enter the function in the Dump Sequencer. Up to 10 functions can be entered and the function will be cleared after it is performed.

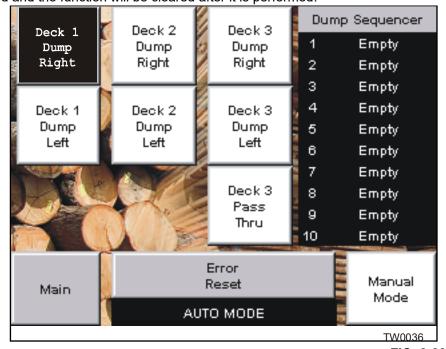


FIG. 2-28

**NOTE:** If you have setup the PROCESS CONFIG in reverse, the Dump Right and Dump Left buttons will be reversed. Only the decks installed per the Install Configuration will be displayed.

- 2. If an error occurs during operation, press ERROR RESET to clear the error.
- 3. Press MAIN to return to the Main menu.
- 4. Press MANUAL MODE to enter the Manual Mode menu.

**Example:** In a 5-way configuration using two decks, the first deck in the process dumps boards to be edged to the right. The second deck dumps finished boards to the left. Slabs to be routed to a chipper are sent straight through.

The log is square on three sides and turned to saw the fourth side. The first cut results in a slab.

- Press DECK 2 PASS THRU. The next two boards are to be edged.
- Press DECK 1 DUMP RIGHT twice. The next three boards are finished boards.
- Press DECK 2 DUMP LEFT three times.

**ALARMS** - The Alarms menu displays a list of messages received by the PLC control. This menu can assist you in trouble-shooting problems when they occur.

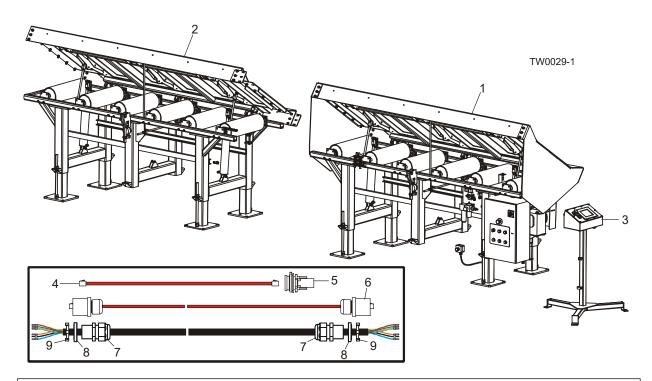
| Ala      | arm Histor     | у       | Total of 5 Alarms |              |                 |  |  |
|----------|----------------|---------|-------------------|--------------|-----------------|--|--|
| Entry No | Alarm No       | )       | Message Confirm   |              |                 |  |  |
| 1        | 1              | Messa   | Message-1         |              |                 |  |  |
| 2        | 2              | Messa   | Message-2         |              |                 |  |  |
| 3        | 3              | Messa   | ge-3              |              |                 |  |  |
| 4        | 4              | Messa   | Message-4         |              |                 |  |  |
| 5        | 5              | Messa   | ge-5              |              |                 |  |  |
|          | āĆ             |         | Prev.             | Next         | Exit<br>Details |  |  |
| Main     | Error<br>Reset | Details | Line Up           | Line<br>Down | Clear<br>All    |  |  |
|          | TW0037         |         |                   |              |                 |  |  |

FIG. 2-29

- 1. If an error occurs during operation, press ERROR RESET to clear the error.
- 2. Press LINE UP or LINE DOWN to scroll through the Alarm History list.
- 3. Press DETAILS to view detailed information for the selected message in the Alarm History. Press NEXT to view the Details of the next entry in the Alarm History list. Press PREV to view the Details of the previous entry.
- **4.** Press EXIT DETAILS to return to the Alarms menu.
- 5. Press CLEAR ALL to clear all items in the Alarm History list.
- 6. Press MAIN to return to the Main menu.

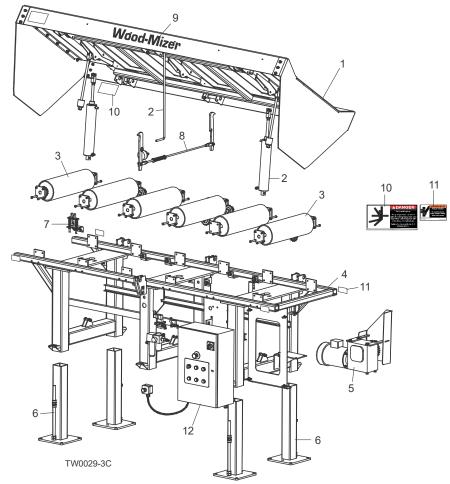
## **SECTION 3 REPLACEMENT PARTS**

## 3.1 Three-Way Deck



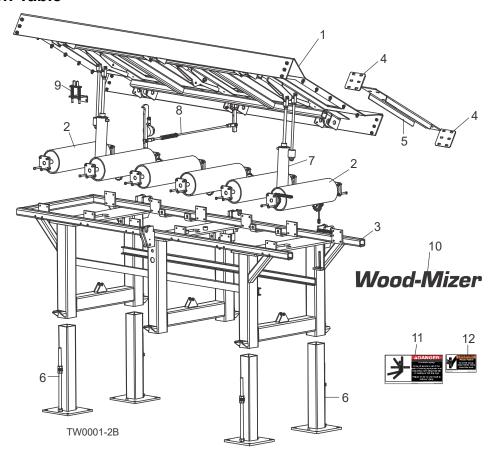
| REF | PART #   | DESCRIPTION                                       | COMMENTS   | QTY. |
|-----|--|---|--|------|
| 1   |  | Drive Table Parts (See Section 3.2)               |  |      |
| 2   | Extension Table Parts ( <u>See Section 3.3</u> ) |   |  |      |
| 3   |  | Operator Control Parts ( <u>See Section 3.3</u> ) |  |      |
|     | 053393   | Cable Kit, Five-Way Deck Communication            | One 053393 required to connect two decks for 5-way configuration. One 053393 and one     | 1    |
|     | 053394   | Cable Kit, Seven-Way Deck Communication           | tion. One 053393 and one 053394 required to connect three decks for 7-way configuration. | 1    |
| 4   | 052994   | Cable, 1' RJ45 Ethernet                           |  | 1    |
| 5   | 052993   | Receptacle, RJ45 Straight Panel Mount             |  | 1    |
| 6   | 052989   | Cable Assembly, 30' RJ45 Ethernet                 |  | 1    |
| 7   | 051229   | Connector, 1/2" NPT .1747 Cable                   |  | 2    |
| 8   | E20460   | Ring, 1/2" Sealing                                |  | 2    |
| 9   | E20461   | Nut, 1/2" NPT Connector Lock                      |  | 2    |

## 3.2 Drive Table



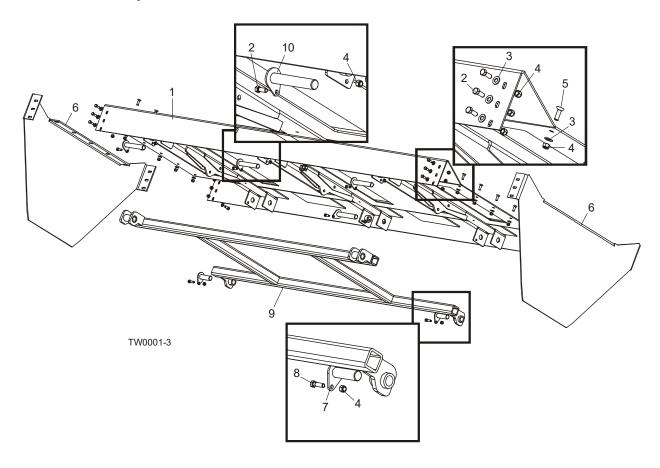
| REF | PART # | DESCRIPTION   | COMMENTS | QTY. |
|-----|--------|---|----------|------|
|     | TWC    | Table Assembly, Primary Three-Way Drive               |          | 1    |
|     | 047374 | Table Assembly, Three-Way Drive                       |          | 1    |
| 1   |        | Pivoting Table Top Parts (See Section 3.4)            |          |      |
| 2   |        | Air Cylinder/Prop Parts (See Section 3.5)             |          |      |
| 3   |        | Table Roller/Sprocket Parts ( <u>See Section</u> 3.7) |          |      |
| 4   | 047375 | Frame Weldment, Three-Way Drive Table                 |          | 1    |
| 5   |        | Drive Parts ( <u>See Section 3.10</u> )               |          |      |
| 6   |        | Table Leg Parts (See Section 3.8)                     |          |      |
| 7   |        | Table Sensor Bracket Parts ( <u>See Section</u> 3.9)  |          |      |
| 8   |        | Pivot Latch Parts (See Section 3.6)                   |          |      |
| 9   | 076281 | Decal, 20" Black Wood-Mizer Logo                      |          | 2    |
| 10  | S09851 | Decal, Keep Away Danger                               |          | 2    |
| 11  | S12641 | Decal, Hand Pinch Point Warning                       |          | 4    |
|     | R01869 | Line, 1/4" Air  |          | 5.33 |
|     | 005453 | Line, 3/8" Air  |          | 8.69 |
| 12  |        | Air/Electrical Control Parts (See Section 3.11)       |          |      |

## 3.3 Extension Table



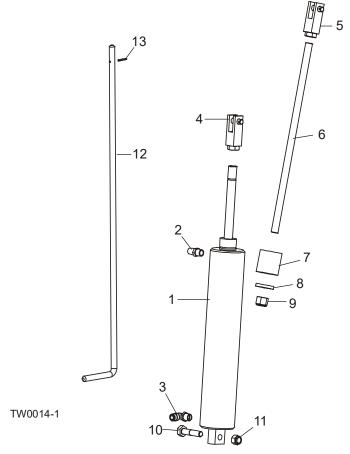
| REF | PART #  | DESCRIPTION   | COMMENTS | QTY.   |
|-----|---------|---|----------|--------|
|     | TWC-EXT | TABLE ASSEMBLY, THREE-WAY EXTENSION                   |          | 1      |
|     | 047341  | Table Assembly, Three-Way Extension                   |          | 1      |
| 1   |         | Pivoting Table Top Parts (See Section 3.4)            |          |        |
| 2   |         | Table Roller/Sprocket Parts ( <u>See Section</u> 3.7) |          |        |
| 3   | 047342  | Frame Weldment, Three-Way Extension Table             |          | 1      |
| 4   | 054139  | Plate, Table End Splice                               |          | 2      |
| 5   | 054149  | Plate, Table Bottom Splice                            |          | 1      |
| 6   |         | Table Leg Parts (See Section 3.8)                     |          |        |
| 7   |         | Air Cylinder/Prop Parts (See Section 3.5)             |          |        |
| 8   |         | Pivot Latch Parts (See Section 3.6)                   |          |        |
| 9   |         | Table Sensor Bracket Parts ( <u>See Section</u> 3.9)  |          |        |
|     |         | Sensor & Cable Parts (See Section 3.17)               |          |        |
|     | R01869  | Line, 1/4" Air  |          | 10 ft. |
|     | 005453  | Line, 3/8" Air  |          | 11 ft. |
| 10  | 052287  | Decal, 10" AWMV Logo                                  |          | 2      |
| 11  | S09851  | Decal, Keep Away Danger                               |          | 2      |
| 12  | S12641  | Decal, Hand Pinch Point Warning                       |          | 4      |

## 3.4 Pivot Table Top



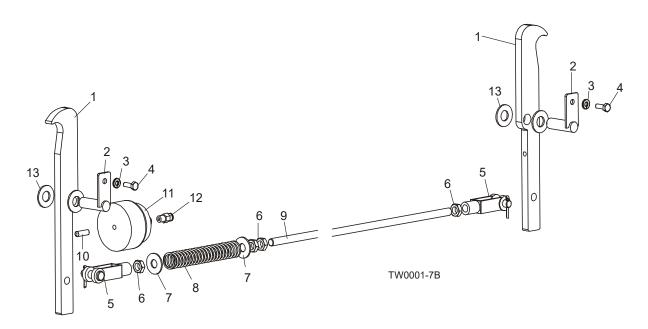
| REF | PART #     | DESCRIPTION                            | COMMENTS | QTY. |
|-----|------------|--|----------|------|
| 1   | 051480     | Top Weldment, Three-Way Pivot          |          | 1    |
| 2   | F05007-87  | Bolt, 3/8-16 x 1" Hex Head Grade 5     |          | 16   |
| 3   | F05011-3   | Washer, 3/8" SAE Flat                  |          | 22   |
| 4   | F05010-10  | Nut, 3/8-16 Hex Nylon Lock             |          | 28   |
| 5   | F05007-110 | Bolt, 3/8-16 x 1" Flat Socket Head     |          | 10   |
| 6   | 051481     | Plate, Table End (Drive Table Only)    |          | 2    |
| 7   | 047372     | Pin Weldment, Frame Pivot              |          | 2    |
| 8   | F05007-123 | Bolt, 3/8-16 x 1 1/4" Hex Head Grade 5 |          | 2    |
| 9   | 047349     | Frame Weldment, Pivot Table            |          | 1    |
| 10  | 054157     | Pin Weldment, Table Pivot              |          | 4    |

## 3.5 Air Cylinder/Prop



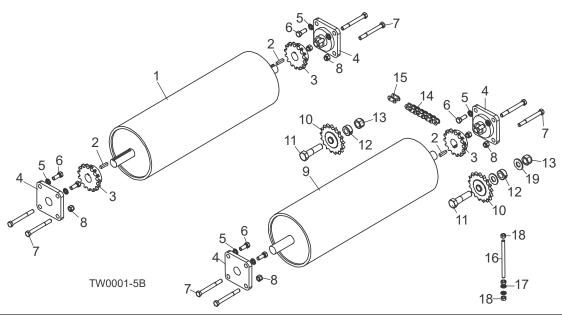
| REF | PART #     | DESCRIPTION                             | COMMENTS | QTY. |
|-----|------------|---|----------|------|
| 1   | 051455     | Cylinder, 3" x 12" Pneumatic            |          | 2    |
| 2   | P21528     | Muffler, 3/8" NPT Air CEC-3             |          | 2    |
| 3   | P21526     | Fitting, 3/8" NPT x 3/8" Tube 90° Elbow |          | 2    |
| 4   | 051456     | Clevis, 5/8-18 x 2 1/4"                 |          | 2    |
|     | 054177     | Rod Assembly, Table Top Stop            |          | 2    |
| 5   | 051456     | Clevis, 5/8-18 x 2 1/4"                 |          | 1    |
| 6   | 054161     | Rod, Table Top Stop                     |          | 1    |
| 7   | 014828     | Spring, Rubber STop                     |          | 2    |
| 8   | 034685     | Washer, 21/32" x 1 5/8" x 1/4"          |          | 2    |
| 9   | F05010-71  | Nut, 5/8-18 Nylon Lock                  |          | 2    |
| 10  | F05008-124 | Bolt, 1/2-13 x 2 1/4" Hex Head          |          | 2    |
| 11  | F05010-8   | Nut, 1/2-13 Hex Nylon Lock              |          | 2    |
| 12  | 054679     | Rod, Table Top Prop                     |          | 1    |
| 13  | F05012-34  | Pin, 1/8" x 1" Roll                     |          | 1    |

## 3.6 Pivot Latch



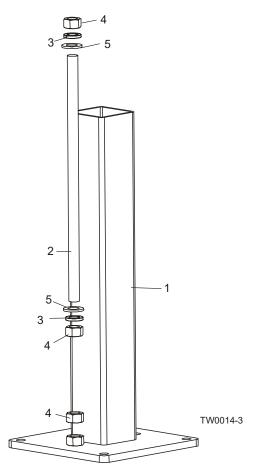
| REF | PART #     | DESCRIPTION  | COMMENTS | QTY. |
|-----|------------|--|----------|------|
| 1   | 051454     | Plate, pivot Latch                                   |          | 2    |
| 2   | 051458     | Pin Weldment, Lock                                   |          | 2    |
| 3   | F05011-14  | Washer, 1/4" SPlit Lock                              |          | 2    |
| 4   | F05005-1   | Bolt, 1/4-20 x 3/4" Hex Head Full Thread             |          | 2    |
| 5   | 054176     | Clevis, 7/16-20 x 2 7/8"                             |          | 2    |
| 6   | F05010-38  | Nut, 7/16-20 Hex Jam                                 |          | 4    |
| 7   | F05011-35  | Washer, 7/16" Standard Flat                          |          | 2    |
| 8   | 051535     | Spring, 7/8" OD x 5 5/8" Long x .1" Wire Compression |          | 1    |
| 9   | 054175     | Rod, 7/16-20 x 32 1/2" Threaded                      |          | 1    |
| 10  | F05006-122 | Screw, 5/16-18 x 1" Stainless Steel Flat Point Set   |          | 1    |
| 11  | 092045     | Bag, Air Brake                                       |          | 1    |
| 12  | P03078     | Fitting, 1/8" NPT x 1/4" Tube                        |          | 1    |
| 13  | F05011-5   | Washer, 5/8" SAE Flat                                |          | 4    |

# 3.7 Rollers, Sprockets & Chain



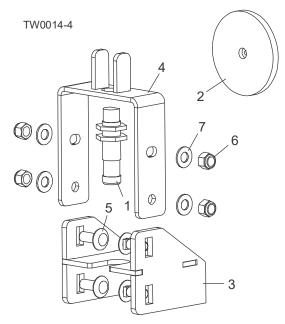
| REF | PART #    | DESCRIPTION  | COMMENTS | QTY. |
|-----|-----------|--|----------|------|
| 1   | 051464    | Roller Weldment, Dual Key Table                    |          | 1    |
| 2   | S21486    | Key, 1/4" x 1"                                     |          | 7    |
| 3   | 054172    | Sprocket, #50 15 Tooth x 1" Bore                   |          | 7    |
| 4   | 014090    | Bearing, VF4S-216                                  |          | 12   |
| 5   | F05011-4  | Washer, 3/8" Split Lock                            |          | 24   |
| 6   | F05007-87 | Bolt, 3/8-16 x 1" Hex Head Grade 5                 |          | 24   |
| 7   | F05007-6  | Bolt, 3/8-16 x 3 1/2" Hex Head Grade 8             |          | 24   |
| 8   | F05010-10 | Nut, 3/8-16 Nylon Lock                             |          | 24   |
| 9   | 051464    | Roller Weldment, Dual Key Table                    |          | 5    |
| 10  | P21504    | Sprocket, #50BB x 17H Tooth x 5/8" bore Idler      |          | 8    |
| 11  | F05009-20 | Bolt, 5/8-11 x 2 1/2" Hex Head Grade 5             |          | 8    |
| 12  | P05035    | Collar, 5/8" Lock                                  |          | 8    |
| 13  | F05010-34 | Nut, 5/8-11 Nylon Lock                             |          | 8    |
| 14  | 054182    | Chain, #50 x 45" (Connects Extension/Drive Tables) |          | 1    |
|     | 036643    | Chain, #50 x 220" (Extension Table)                |          | 1    |
|     | 054194    | Chain, #50 x 230" (Primary/Secondary Drive Table)  |          | 1    |
| 15  | P20208    | Link, #50 Master                                   |          | 2    |
|     | 036648    | Link, #50 Half                                     |          | 3    |
| 16  | 036743    | Rod, 5/16-18 x 5" Threaded                         |          | 1    |
| 17  | F05011-13 | Washer, 5/16" Split Lock                           |          | 2    |
| 18  | F05010-17 | Nut, 5/16-18 Hex                                   |          | 3    |
| 19  | F05011-5  | Washer, 5/8" SAE Flat (front Sprocket Only)        |          | 2    |

# 3.8 Table Legs



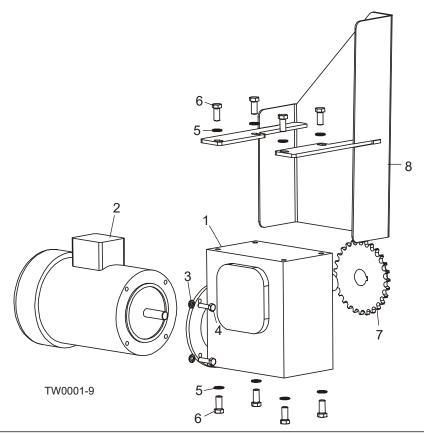
| REF | PART #    | DESCRIPTION                        | COMMENTS | QTY. |
|-----|-----------|------------------------------------|----------|------|
| 1   | 051478    | Leg Weldment, Three-Way Deck Table |          | 4    |
| 2   | 054147    | Rod, Threaded Leg Adjustment       |          | 4    |
| 3   | F05011-6  | Washer, 3/4" Split Lock            |          | 8    |
| 4   | F05010-7  | Nut, 3/4-10 Hex                    |          | 12   |
| 5   | F05011-62 | Washer, 3/4" SAE Flat              |          | 8    |

#### 3.9 Sensor Bracket



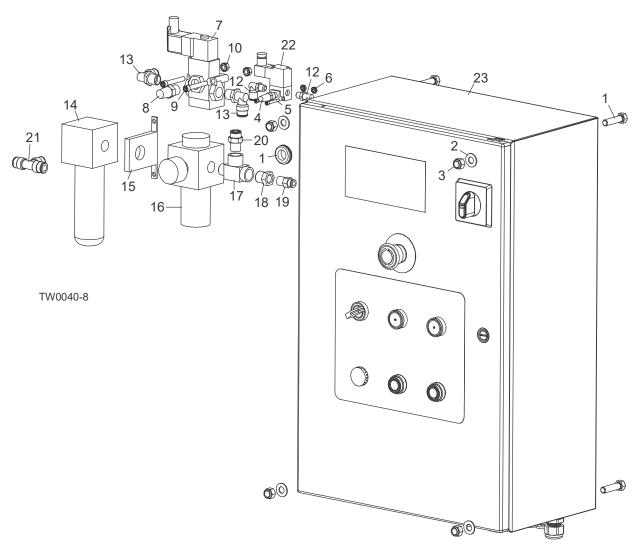
| REF | PART #     | DESCRIPTION                     | COMMENTS | QTY. |
|-----|------------|---------------------------------|----------|------|
|     | 054165     | BRACKET ASSEMBLY, SENSOR MOUNT  |          | 1    |
| 1   | 051831     | Sensor, Photo RA 18mm PNP       |          | 1    |
| 2   | 074771     | Reflector, IEC IP67 84mm        |          | 1    |
| 3   | 079358     | Mount Weldment, Sensor          |          | 1    |
| 4   | 079360     | Plate Weldment, Upper Mount     |          | 1    |
| 5   | F05007-165 | Bolt, 3/8-16x1 Carriage Grade 5 |          | 4    |
| 6   | F05010-10  | Nut, 3/8-16 Nylon Lock          |          | 4    |
| 7   | F05011-3   | Washer, 3/8" SAE Flat           |          | 4    |

## **3.10 Drive**



| REF | PART #     | DESCRIPTION   | COMMENTS | QTY. |
|-----|------------|---|----------|------|
| 1   | 047417     | Gearbox, 90° Right BMQ230                           |          | 1    |
| 2   | 079197     | Motor, 2HP 3P 230/460 56C Premium Eff               |          | 1    |
| 3   | F05011-13  | Washer, 5/16" Split Lock                            |          | 4    |
| 4   | F05006-93  | Bolt, 5/16-18 x 1 1/4" Hex Head Grade 5 Full Thread |          | 4    |
| 5   | F05011-48  | Washer, 7/16" Split Lock                            |          | 8    |
| 6   | F05007-145 | Bolt, 7/16-14 x 1" Hex Head Grade 5                 |          | 8    |
| 7   | 047418     | Sprocket, #50 x 27T x 1 1/4" bore                   |          | 1    |
| 8   | 047376     | Guard Weldment, Drive Chain                         |          | 1    |

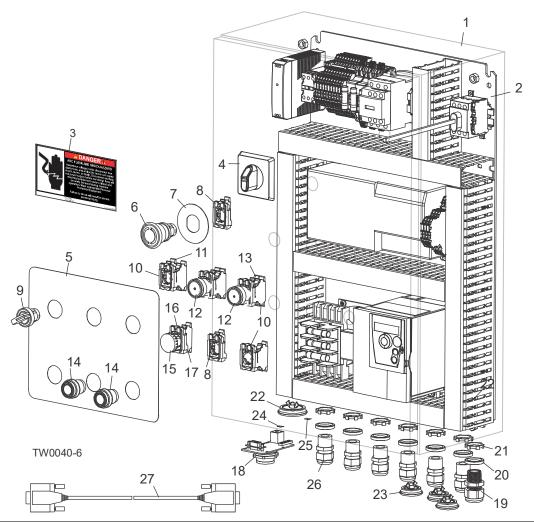
#### 3.11 Air/Electrical Controls



| REF | PART #     | DESCRIPTION                                | COMMENTS | QTY. |
|-----|------------|--|----------|------|
| 1   | F05007-17  | Bolt, 3/8-16 x 1 1/2" Hex Head Full Thread |          | 4    |
| 2   | F05011-3   | Washer, 3/8" SAE Flat                      |          | 4    |
| 3   | F05010-10  | Nut, 3/8-16 Nylon Lock                     |          | 4    |
| 4   | P20902     | Muffler, 1/8" NPT Air                      |          | 1    |
| 5   | F05004-70  | Screw, #6-32 x 1" Socket Head              |          | 2    |
| 6   | F05010-59  | Nut, #6-32 Self-Locking Hex                |          | 2    |
| 7   | 042659     | Valve, 3/8" NPT Air                        |          | 1    |
| 8   | P21528     | Muffler, 3/8" NPT Air                      |          | 1    |
| 9   | F05005-156 | Screw, 1/4-20 x 1 3/4" Socket Head         |          | 2    |
| 10  | F05010-9   | Nut, 1/4-20 Self-Locking Hex               |          | 2    |
| 11  | P11764     | Grommet, 5/8" ID Rubber                    |          | 1    |
| 12  | P09736     | Fitting, 1/8" NPT x 1/4" Tube Swivel Elbow |          | 2    |
| 13  | P21526     | Fitting, 3/8" NPT x 3/8" Tube Elbow        |          | 2    |
| 14  | 036750     | Filter, Air F18-03-SK00                    |          | 1    |
| 15  | 036752     | Bracket, Air Filter/Regulator Mount        |          | 1    |
| 16  | 036751     | Regulator, Air R18-03-F0G0                 |          | 1    |
| 17  | 016822     | Fitting, 3/8" NPT Male Run T               |          | 1    |

| REF | PART # | DESCRIPTION  | COMMENTS | QTY. |
|-----|--------|--|----------|------|
| 18  | 015490 | Fitting, 3/8" NPT x 1/4" NPT Reducer                           |          | 1    |
| 19  | P20903 | Fitting, 1/4" NPT x 1/4" Tube                                  |          | 1    |
| 20  | P21527 | Fitting, 3/8" NPT x 3/8" Tube                                  |          | 1    |
| 21  | P21529 | Fitting, 3/8" Tube 'T'   |          | 1    |
| 22  | 045225 | Valve, 1/8" NPT DIN C Air                                      |          | 1    |
| 23  |        | Standalone Three-Way Drive Control Assembly (See Section 3.12) |          |      |
|     | 051831 | Sensor, PHOTO RA 18MM PNP w/Reflector                          |          | 1    |
|     | 051439 | Sensor, Ind Prox M12 PNP NS EX                                 |          | 1    |

## 3.12 Main Control Assembly



| REF | PART #   | DESCRIPTION                                  | COMMENTS | QTY. |
|-----|----------|--|----------|------|
|     | 078346   | Control Assembly, Standalone Three-Way Drive |          | 1    |
| 1   | 051678   | Box, 3-Way Control Enclosure                 |          | 1    |
| 2   |          | TWC Control Panel Assembly(See Section 3.2)  |          |      |
| 3   | S20061   | Decal, Electrical Hazard Danger              |          | 1    |
| 4   | 050883-1 | Switch, Disconnect Red/Yellow 6mm            |          | 1    |
| 5   | 052214   | Decal, TWC Control Box                       |          | 1    |
| 6   | 068940   | Push-Button, Mshrm Mntnd Red TrnRl ZB5       |          | 1    |
| 7   | 050992   | Legend, Round Yellow E-Stop                  |          | 1    |
| 8   | 068950   | Collar, Mount 1NC ZB5                        |          | 1    |
| 9   | 068945   | Switch, 3Pos Momentary ZB5                   |          | 1    |
| 10  | 068952   | Collar, Mount 1NO ZB5                        |          | 4    |
| 11  | 068920   | Contact Block, NO ZB5                        |          | 1    |
| 12  | 052503   | Switch Head, PB Green Flush Illum ZB5        |          | 2    |
| 13  | 068910   | Light Module, Green ZB5                      |          | 2    |
| 14  | 068900   | Push-Button, Ext Red ZB5                     |          | 2    |
| 15  | 068930   | Pilot Light, Red ZB5                         |          | 1    |
| 16  | 068951   | Switch Collar, Mount ZB5                     |          | 1    |
| 17  | 068911   | Light Module, Red ZB5                        |          | 1    |

| REF | PART #   | DESCRIPTION                          | COMMENTS | QTY. |
|-----|----------|--------------------------------------|----------|------|
| 18  | 052937   | PCB Assembly, TWC Modbus Adaptor     |          | 1    |
| 19  | 078130   | Connector, 1/2" NPT .23546 Cord Grip |          | 1    |
| 20  | E20460   | Ring, 1/2 Sealing                    |          | 7    |
| 21  | E20461   | Nut, 1/2 npt Connector Lock          |          | 7    |
| 22  | E22762   | Plug, AS100 Oiltite                  |          | 1    |
| 23  | 024685   | Plug, AS050 Oiltite                  |          | 3    |
| 24  | 024368   | Decal, Connector ID (J1)             |          | 1    |
| 25  | 024369   | Decal, Connector ID (J2)             |          | 1    |
| 26  | 051299   | Connector, 1/2" NPT .1747            |          | 6    |
| 27  | 052992   | Cable, 2.5' HD15 Male/Female         |          | 1    |
|     | 078351   | Cable Assembly, TWC Board Sensor     |          | 1    |
|     | 078352   | Cable Assembly, TWC Deck Prox        |          | 1    |
|     | 078353   | Cable Assembly, TWC Deck Solenoid    |          | 1    |
|     | 078357-1 | Cable Assembly, TWC Roller Motor     |          | 1    |

#### **SECTION 4 ELECTRICAL INFORMATION**

#### 4.1 Electrical Symbol Diagram (TWC)

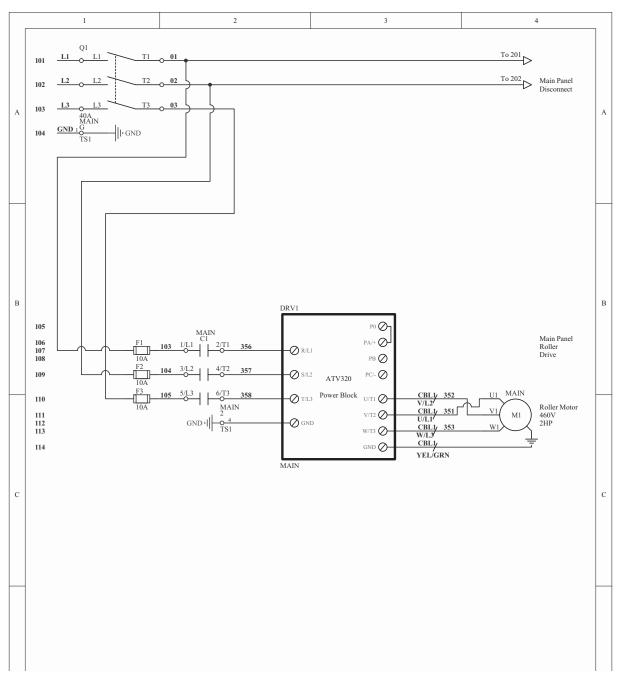


FIG. 4-1 (PAGE 1 OF 13)

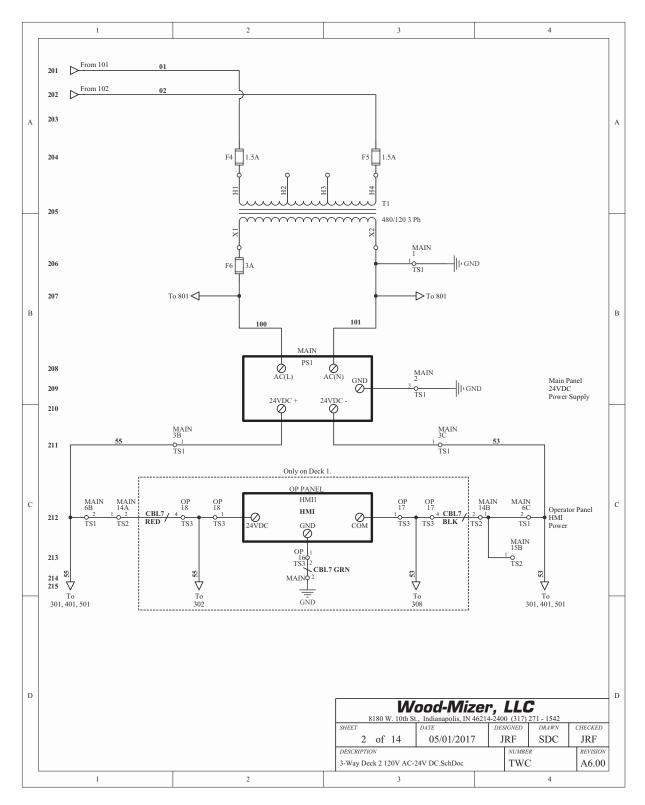


FIG. 4-2 (PAGE 2 OF 13)

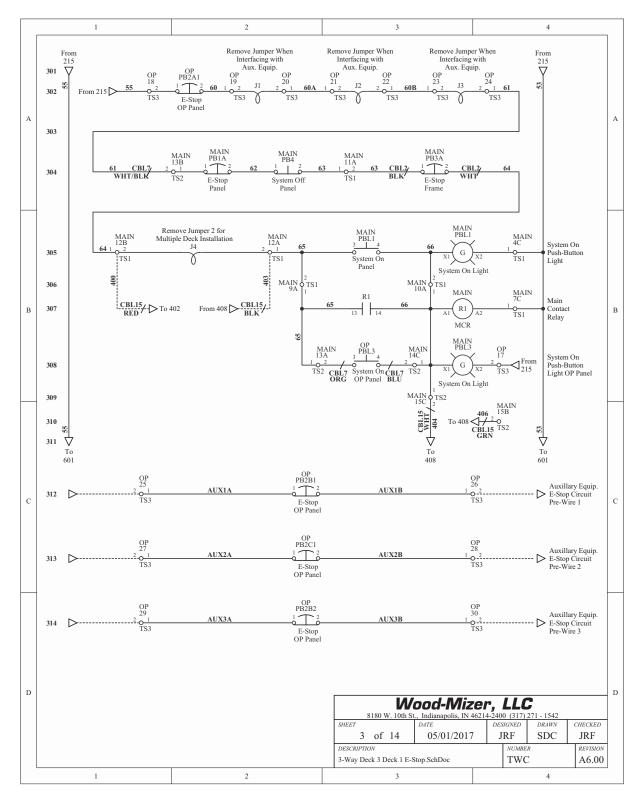


FIG. 4-3 (PAGE 3 OF 13)

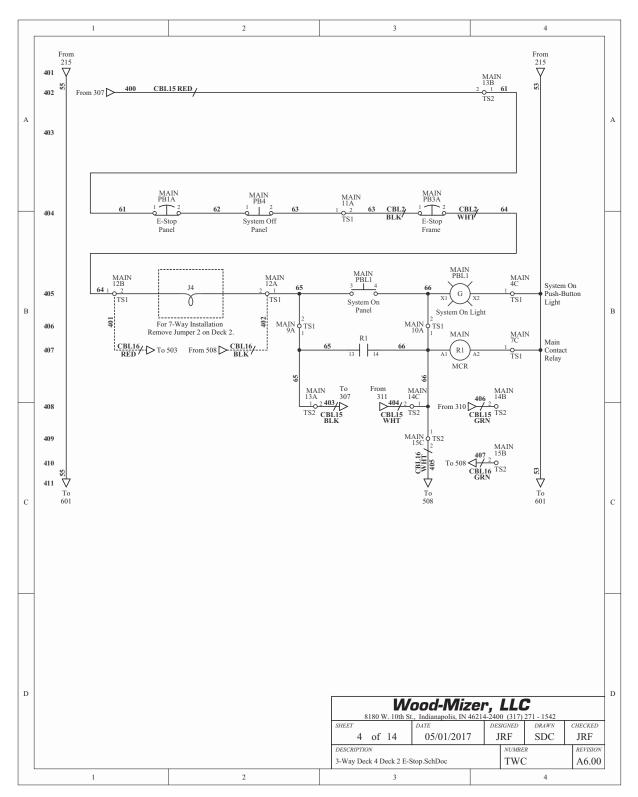


FIG. 4-4 (PAGE 4 OF 13)

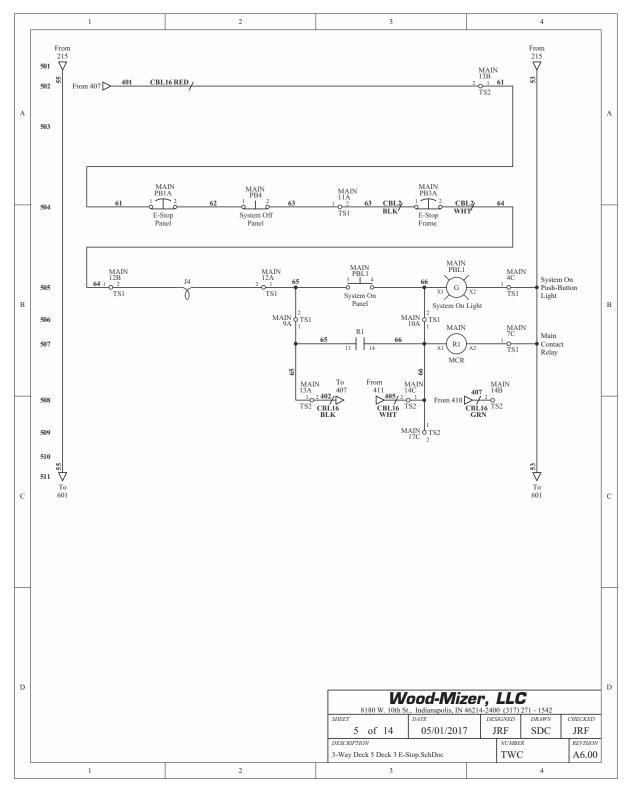


FIG. 4-5 (PAGE 5 OF 13)

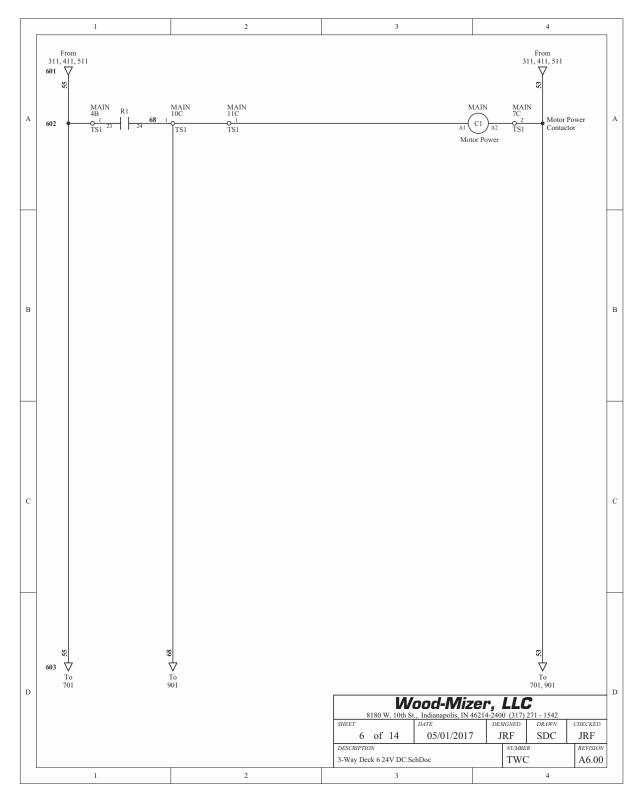


FIG. 4-6 (PAGE 6 OF 13)

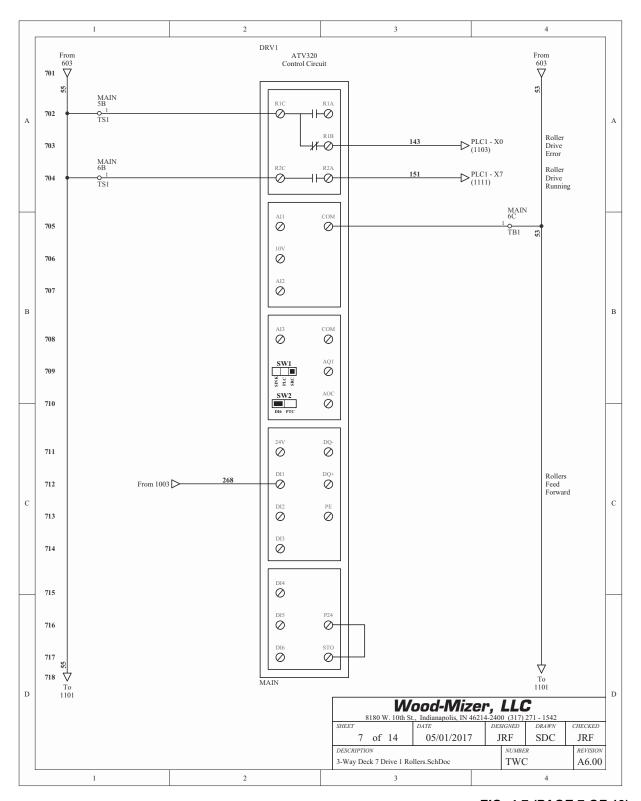


FIG. 4-7 (PAGE 7 OF 13)

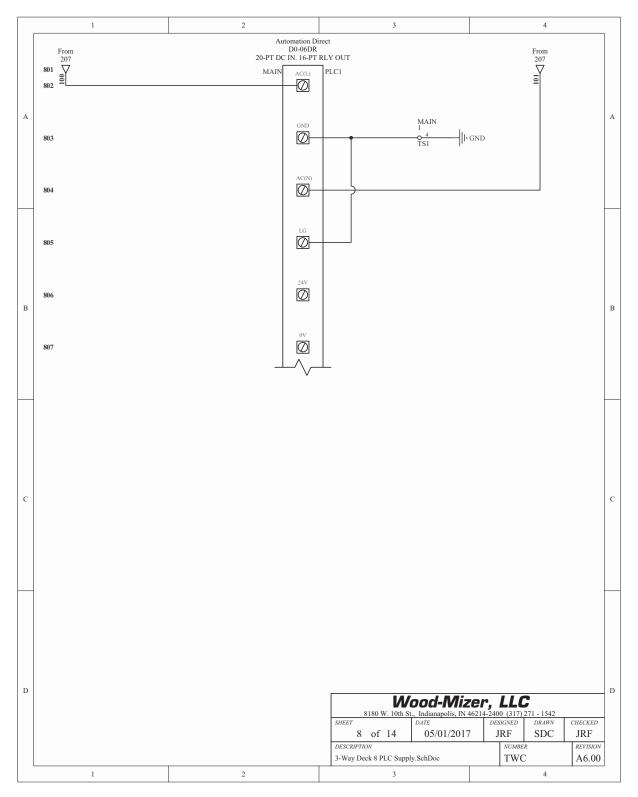


FIG. 4-8 (PAGE 8 OF 13)

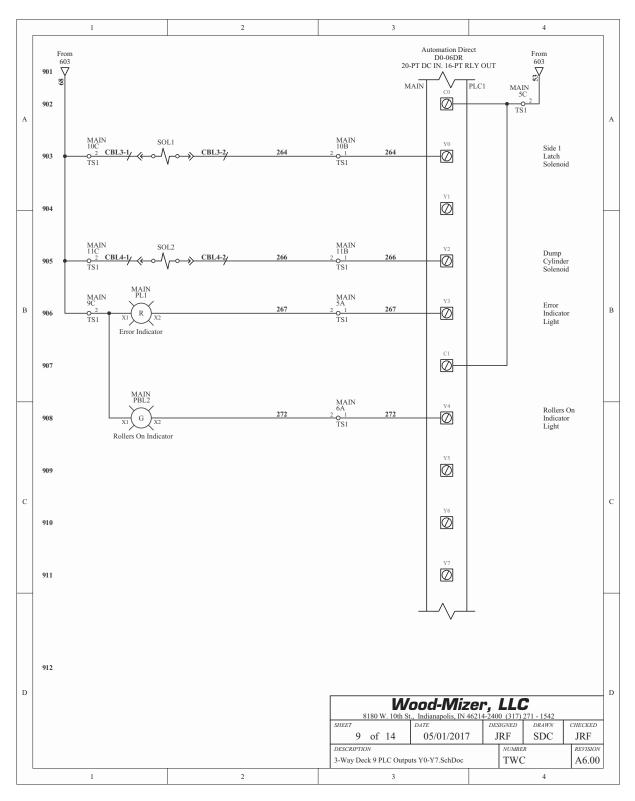


FIG. 4-9 (PAGE 9 OF 13)

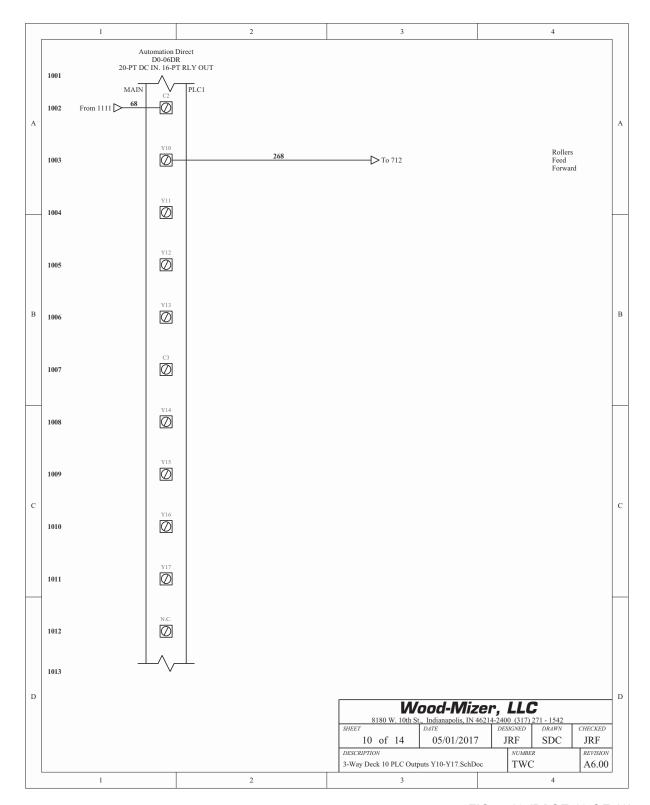


FIG. 4-10 (PAGE 10 OF 13)

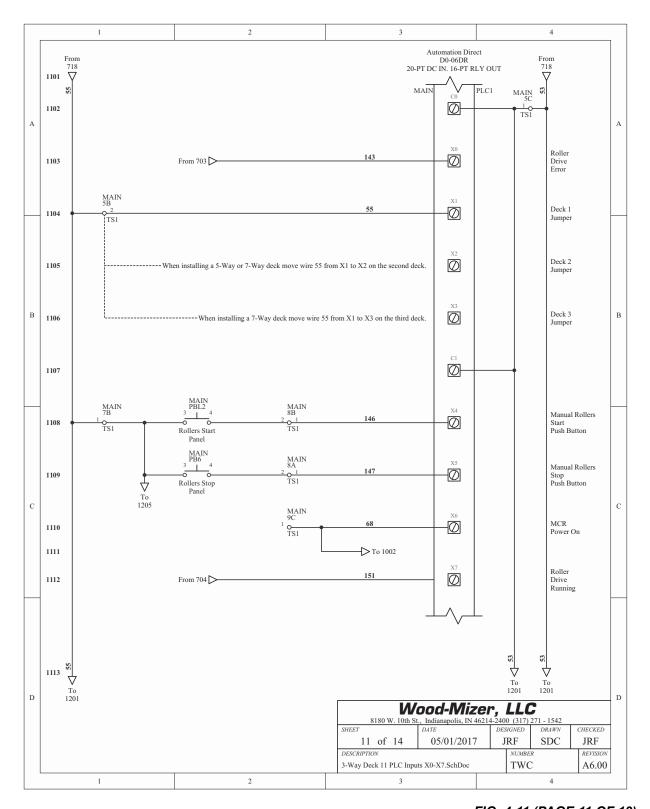


FIG. 4-11 (PAGE 11 OF 13)

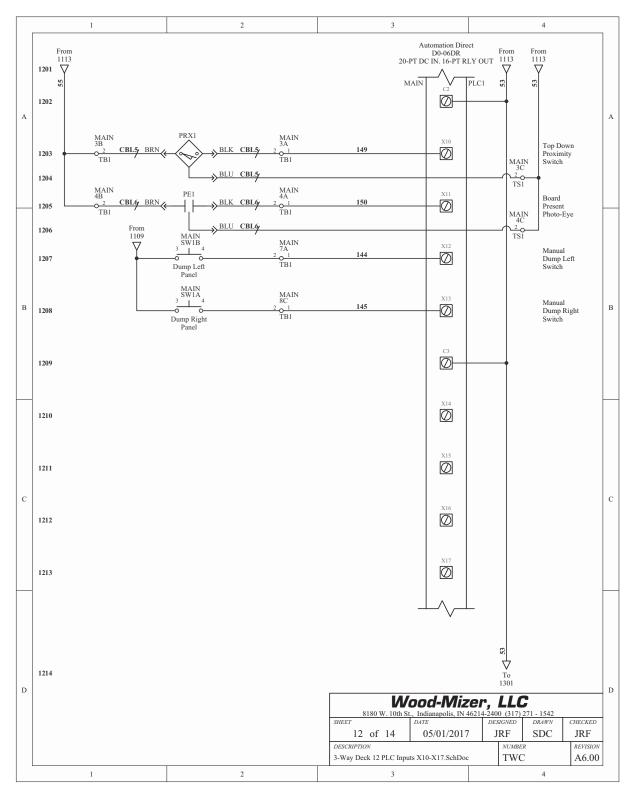


FIG. 4-12 (PAGE 12 OF 13)

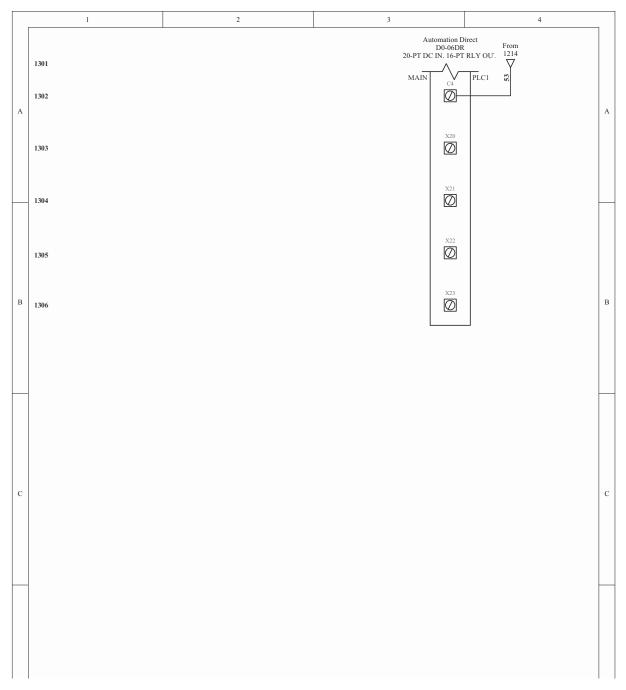
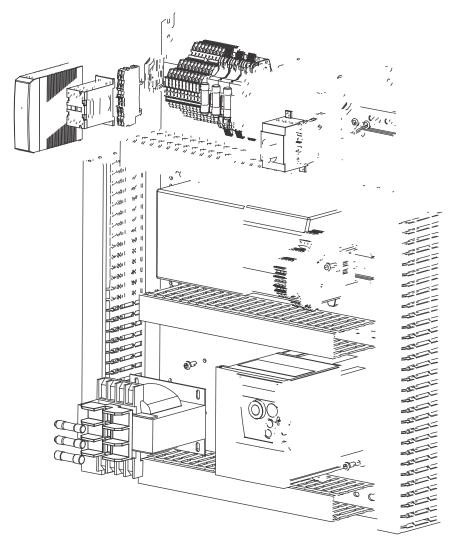


FIG. 4-13 (PAGE 13 OF 13)

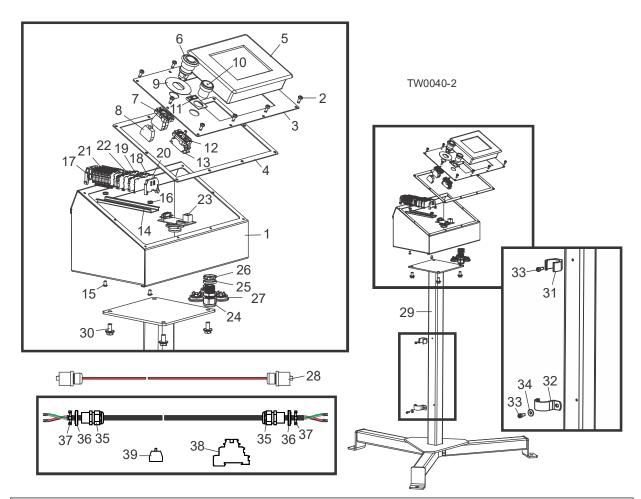
## 3.2 Main Control Insert Assembly



| REF | PART #    | DESCRIPTION                                    | COMMENTS | QTY. |
|-----|-----------|--|----------|------|
|     | 078348    | Insert Assembly, TWC Standalone Main           |          | 1    |
| 1   | 078349    | Insert, TWC Standalone Main                    |          | 1    |
| 2   | 024474    | Rail, 355mm x 7.5mm x 14" Steel DIN            |          | 3    |
| 3   | F05015-17 | Screw, #10-24 x 1/2" Phillips Pan Head Type 23 |          | 14   |
| 4   | 051986    | Din Clamp, Screwless                           |          | 3    |
| 5   | 053118    | Power Supply, 1A 24VDC Meanwell                |          | 1    |
| 6   | 051684    | Relay, IEC Control 2 NO 24VDC                  |          | 1    |
| 7   | 068104    | Terminal Block, 4Pos 1.5mm GND Clamp           |          | 2    |
| 8   | 068107    | Terminal Block, 2Pos 4mm GND Clamp             |          | 1    |
| 9   | 068109    | Terminal Block, 3 Tier 2.5mm Clamp             |          | 13   |
| 10  | 068067    | Fuse Holder, 3P Class CC Wire Clamps           |          | 1    |
| 11  | 051957    | Fuse, 10A 600V Class CC Delay                  |          | 3    |
| 12  | 024890    | Contactor, 9A 3P 24VDC Coil                    |          | 1    |
| 13  | 050903-1  | Disconnect, 40A 3PH Non-Fused 6mm              |          | 1    |
| 14  | 053361    | PLC Assembly, Standalone TWC w/Software        |          | 1    |
| 15  | 051673-1  | Shaft, Disconnect 180mm x 6mm                  |          | 1    |

| REF | PART #     | DESCRIPTION   | COMMENTS | QTY. |
|-----|------------|---|----------|------|
| 16  | 051682     | Transformer, 208/240/480 Primary 115Sec<br>150VA w/Fuse |          | 1    |
| 17  | 051686-1_5 | Fuse, 1.5A Class CC Time Delay Rejection                |          | 2    |
| 18  | 051761     | Fuse, 3A Midget Slo-Blow 250VAC                         |          | 1    |
| 19  | 051676-1   | Drive Assembly, TWC Roller AC w/Software                |          | 1    |
| 20  | 050735     | Cable Duct, 3H x 1W x 72L Open Slot Wht 6               |          | 6    |

# 3.3 Operator Control



| REF | PART #    | DESCRIPTION                                       | COMMENTS | QTY. |
|-----|-----------|---|----------|------|
|     | TWC-OP    | Control Kit, Three-Way Deck Operator              |          | 1    |
|     | 078347    | Control Assembly, Three-Way Deck Operator         |          | 1    |
| 1   | 061509    | Box Weldment, TWC Operator Control                |          | 1    |
| 2   | F05015-17 | Screw, #10-24 x 1/2" Phillips Pan Head<br>Type 23 |          | 10   |
|     | 078358    | Control Assembly, TWC Standalone HMI              |          | 1    |
| 3   | 061512    | Plate, TWC Operator Control Panel                 |          | 1    |
| 4   | 006891    | Gasket, TWC Control Panel                         |          | 1    |
| 5   | 053364-1  | Display Assembly, TWC Operator<br>Control         |          | 1    |
| 6   | 068940    | Push-Button, Mshrm Mntnd Red<br>TrnRl ZB5         |          | 1    |
| 7   | 068951    | Switch Collar, Mount ZB5                          |          | 1    |
| 8   | 050540    | Contact, NC ZBE102                                |          | 4    |
| 9   | 050992    | Legend, Round Yellow E-Stop                       |          | 1    |
| 10  | 052503    | Switch Head, PB Green Flush Illum<br>ZB5          |          | 1    |
| 11  | 050531    | Legend, ON  |          | 1    |
| 12  | 068952    | Collar, Mount 1NO ZB5                             |          | 1    |
| 13  | 068910    | Light Module, Green ZB5                           |          | 1    |
| 14  | 024474-6  | Rail, 35mm x 7.5mm x 6" Steel DIN                 |          | 1    |

| REF | PART #     | DESCRIPTION  | COMMENTS | QTY. |
|-----|------------|--|----------|------|
| 15  | F05004-218 | Screw, #10-24 x 3/8" Button Socket Head<br>Stainless |          | 2    |
| 16  | F05010-14  | Nut, #10-24 Hex Self-Locking                         |          | 2    |
| 17  | 051986     | Din Clamp, Screwless                                 |          | 2    |
| 18  | 068104     | Terminal Block, 4Pos 1.5mm GND Clamp                 |          | 1    |
| 19  | 068103     | Terminal Block, 4Pos 1.5mm Com Clamp                 |          | 2    |
| 20  | 068105     | Terminal Block, 4Pos 1.5mm End Plate                 |          | 1    |
| 21  | 068100     | Terminal Block, 2Pos 1.5mm Clamp                     |          | 12   |
| 22  | 068102     | Terminal Block, 2Pos 2.5mm End Plate                 |          | 1    |
| 23  | 052937     | PCB Assembly, TWC Modbus Adaptor                     |          | 1    |
| 24  | 078130     | Connector, 1/2" NPT .23546 Cord Grip                 |          | 1    |
| 25  | E20460     | Ring, 1/2 Sealing                                    |          | 1    |
| 26  | E20461     | Nut, 1/2 nPT Connector Lock                          |          | 1    |
| 27  | 024685     | Plug, AS050 Oiltite                                  |          | 3    |
|     | 078361     | Cable Assembly, TWC HMI Comms                        |          | 1    |
|     | 078345     | Cable Assembly, TWC Standalone Op                    |          | 1    |
|     | 068214     | Cable Assembly, Ind. Mill Aux Estop                  |          | 1    |
| 28  | 052988     | Cable Assembly, 100' RJ45 Ethernet                   |          | 1    |
|     | 006903     | Stand Assembly, Three-Way Deck Operator Control      |          | 1    |
| 29  | 061519     | Stand Weldment, TWC Operator Control                 |          | 1    |
| 30  | F05006-101 | Bolt, 5/16-18 x 3/4" Hex Head w/Flat & Lock Washer   |          | 4    |
| 31  | 038752     | Bracket, 3/4" Flex Mounting                          |          | 1    |
| 32  | P05436     | Clamp, 1" EMT  |          | 1    |
| 33  | F05004-26  | Screw, #10-24 x 1/2" Socket Head                     |          | 2    |
| 34  | F05011-18  | Washer, #10 SAE Flat                                 |          | 1    |
|     | 053395     | Parts Kit, Three-Way Auxiliary E-Stop                |          | 1    |
| 35  | 051299     | Connector, 1/2" NPT .1747 Cable                      |          | 2    |
| 36  | E20460     | Ring, 1/2" Sealing                                   |          | 2    |
| 37  | E20461     | Nut, 1/2" NPT Connector Locking                      |          | 2    |
| 38  | 024908     | Terminal Block, 3-Tier                               |          | 1    |
| 39  | 050540     | Contact, NC ZBE102                                   |          | 1    |

### 3.4 Component Layout Diagram (Control Box)

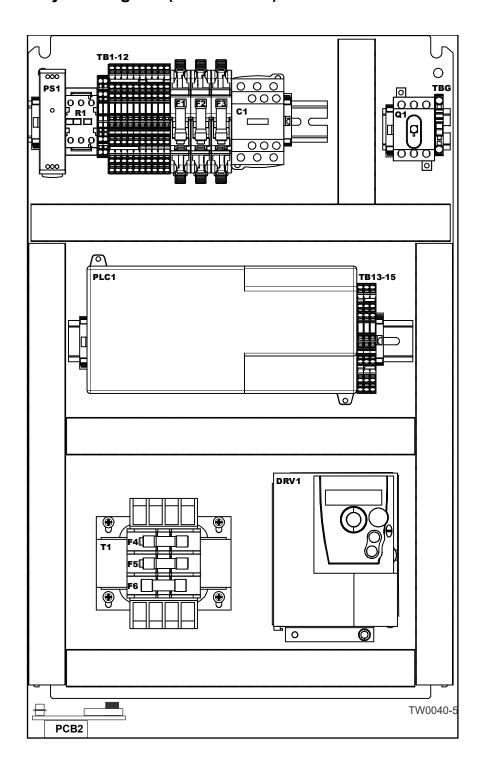


FIG. 3-14

## 3.5 Electrical Component List

| Component     | Wood-Mizer Part<br>No. | Description  |
|---------------|------------------------|--|
| C1            | 024890                 | Contactor, 3 Pole 9A 24VDC Coil LP4D09                         |
|               | 068214                 | Cable Assembly, Ind. Mill Aux Estop (part of Control Assembly) |
| CBL1          | 078357                 | Cable Assembly, TWC Roller Motor                               |
| CBL2          | 078356                 | Cable Assembly, TWC RMT E-Stop                                 |
| CBL3          | 078354                 | Cable Assembly, TWC Latch Solenoid                             |
| CBL4          | 078353                 | Cable Assembly, TWC Deck Solenoid                              |
| CBL5          | 078352                 | Cable Assembly, TWC Deck Prox                                  |
| CBL6          | 078351                 | Cable Assembly, TWC Board Sensor                               |
| CBL7          | 078345                 | Cable Assembly, TWC Standalone Op                              |
| CBL8          | 078361                 | Cable Assembly, TWC HMI Comms                                  |
| CBL9          | 052988                 | Cable Assembly, 100' RJ45 Ethernet                             |
| CBL10         | 052992                 | Cable, 2.5' HD15 Male/Female                                   |
| CBL11         | 052994                 | Cable Assembly, 1' RJ45 Ethernet                               |
|               | 078364                 | Kit, TWC 5-Way Cables (Includes CBL12 & CBL15)                 |
| CBL12         | 052989                 | Cable Assembly, 30' RJ45 Ethernet                              |
| CBL15         | 078362                 | Cable Assembly, TWC Deck 1 to Deck 2                           |
|               | 078365                 | Kit, TWC 7-Way Cables (Includes CBL12, CBL13, CBL15 & CBL16)   |
| CBL12         | 052989                 | Cable Assembly, 30' RJ45 Ethernet                              |
| CBL13         | 052989                 | Cable Assembly, 30' RJ45 Ethernet                              |
| CBL15         | 078362                 | Cable Assembly, TWC Deck 1 to Deck 2                           |
| CBL16         | 078363                 | Cable Assembly, TWC Deck 2 to Deck 3                           |
| CBL17         | 053395                 | Harness Assembly, LT300 E-Stop (Optional)                      |
| HMI1          | 053364                 | Display, 3-Way Operator Control w/Software                     |
| DRV1          | 051676-1               | AC Drive Assembly, 3-Way Deck w/Software (Altivar 320)         |
| F1 - F3       | 051957                 | Fuse, 10A Class CC Time Delay Rejection                        |
| F4 - F5       | 051686-1_5             | Fuse, 1.5A Class CC Time Delay Rejection                       |
| F6            | 051761                 | Fuse, 3A Midget Slo-Blow 250VAC                                |
| M1            | 042390                 | Motor, 2HP 230/460V 3P   |
| PB1           | 068940                 | Push-Button, Mshrm Mntnd Red TrnRl ZB5                         |
|               | 050992                 | Label, E-Stop  |
|               | 068950                 | Collar, Mount 1NC ZB5  |
| PB2           | 068940                 | Push-Button, Mshrm Mntnd Red TrnRl ZB5                         |
|               | 050992                 | Label, E-Stop  |
|               | 068951                 | Switch Collar, Mount ZB5                                       |
| DD2           | 050540                 | Contact, 10A NC AENL Series                                    |
| PB3           | 053366                 | Box Assembly, Three-Way Deck Remote E-Stop                     |
| PB4           | 068900                 | Push-Button, Ext Red ZB5  Coller Mount 1NC ZB5                 |
| PB6           | 068950<br>068900       | Collar, Mount 1NC ZB5  Push-Button, Ext Red ZB5                |
| FDO           | 068900                 | Collar, Mount 1NO ZB5  |
| PCB1 - PCB2   | 052937                 | PCB Assembly, 3/5-Way Modbus Adaptor                           |
| 1 001 - 1 002 | 002001                 | 1 05/1000mbly, 0/0 tray woodad/idaptor                         |

| PBL1 - PBL3 | 052503   | Switch Head, PB Green Flush Illum ZB5     |
|-------------|----------|---|
|             | 068952   | Collar, Mount 1NO ZB5                     |
|             | 068910   | Light Module, Green ZB5                   |
| PE1         | 051831   | Sensor, Photo RA 18MM PNP w/Reflector     |
| PL1         | 068930   | Pilot Light, Red ZB5                      |
|             | 068911   | Light Module, Red ZB5                     |
| PLC1        | 053361   | PLC Assembly, 3-Way Deck w/Software (TWC) |
| PRX1        | 051439   | Sensor, Proximity M12 PNP NS Ex           |
| PS1         | 053118   | Power Supply, 1A 24VDC Meanwell           |
| Q1          | 050903-1 | Switch, 40A 3P Non-Fused Disconnect 6mm   |
|             | 051673-1 | Shaft, Disconnect 180mm x 6mm             |
|             | 050883-1 | Switch, Disconnect Red/Yellow 6mm         |
| R1          | 051684   | Relay, 24VDC 2 NO IEC Control             |
| SOL1        | 045225   | Valve 1/8" NPT Air Solenoid (Pivot Latch) |
| SOL2        | 042659   | Valve, 3/8" NPT Air Solenoid (Table Dump) |
| SW1         | 068945   | Switch, 3Pos Momentary ZB5                |
|             | 068952   | Collar, Mount 1NO ZB5                     |
|             | 068920   | Contact Block, NO ZB5                     |
| T1          | 051682   | Transformer, 208/240/480 150VAC 115sec    |
| TB1 - TB2   | 068104   | Terminal Block, 4Pos 1.5mm GND Clamp      |
| TB3 - TB15  | 068109   | Terminal Block, 3 Tier 2.5mm Clamp        |
| TB16        | 068104   | Terminal Block, 4Pos 1.5mm GND Clamp      |
| TB17 - TB18 | 068103   | Terminal Block, 4Pos 1.5mm Com Clamp      |
| TB19 - TB30 | 068100   | Terminal Block, 2Pos 1.5mm Clamp          |
| TBG         | 068107   | Terminal Block, 2Pos 4mm GND Clamp        |

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