MINI WRAP™ INSTALLATION MANUAL

Part # WRAPMHYD[. . . . .]01
WRAPMELE[. . . . .]01
FOR COTTON CLOTH™, STAR FOAM or C-CHANNEL FOAM BRUSHES

TABLE OF CONTENTS

Equipment Utilities

	HYDRAULIC DRIVE WRAPMHYD[. . . . .]03	ELECTRIC DRIVE WRAPMELE[. . . . .]03
ELECTRICAL	120, 24VAC, 60HZ OR 24VDC, 12W VALVE	POWER: 120 VAC, 1 PH, 12 W VALVE UL® CERTIFIED MOTORS: 3 HP (2 X 1.5 HP) 13.2-6 AMP @ 208-460 VAC, 3 PH UL® RECOGNIZED, CSA CERTIFIED, CE MARK, IEC IP 55
HYDRAULIC	**6 GPM @ 1000 PSI**	**N/A**
PNEUMATICS	**2 SCFM @ 100 PSI** (INCLUDING OPTIONAL RETRACT PANEL)	**2 SCFM @ 100 PSI** (INCLUDING OPTIONAL RETRACT PANEL)
WATER	**RECLAIMED OR FRESH:** **4 GPM @ 40 PSI**	**RECLAIMED OR FRESH:** **4 GPM @ 40 PSI**

Equipment Specifications and Features

- ☐ Three Convenient Voltages Available: 120, 24VAC and 24VDC
- ☐ Compact Design: Utilizes only 11'-0" of Tunnel Space
- ☐ Only 10'-00" Overall Height
- ☐ Vehicle Clearance of More than 91"
- ☐ Supplied Standard with MCWW Foam Streamers™ for Added Lubrication and Cleaning
- ☐ Great Cleaning up to 80 CPH
- ☐ Aluminum Structure with Color Skinz™ Snap-On UHMW Colored Covers… Great Appeal!
- ☐ Electric or Hydraulic Drive Available
- ☐ Choice of Cleaning Media between Cotton Cloth™, C-Channel and Star Foam

Suggested Installation Tools and Materials

- ☑ Hammer Drill with 5/8” Drill bit
- ☐ Sledge Hammer
- ☐ Set of Standard Combo Wrenches
- ☐ Measuring Tape
- ☐ Standard Screw Drivers
- ☐ 3/8” OD Polyflow Tubing
- ☐ 2000 LBS Fork Lift Truck
- ☐ (8) Wedge Anchor Bolts 5/8” x 6”
- ☐ Set of Standard Ratchet and Sockets
- ☐ Torpedo Level
- ☐ Safety Goggles
- ☐ Reusable Hydraulic Fittings
- ☐ 1/2" Hydraulic Hose
- ☐ 1000 LBS Proof L-Clamp

Notes and safety Symbols

Where necessary, important points will be highlighted in this manual, using the following symbols:

NOTE: **PROVIDES FURTHER INFORMATION!**

STOP! **PRECAUTION TO AVOID EQUIPMENT MALFUNCTION OR ERROR!**

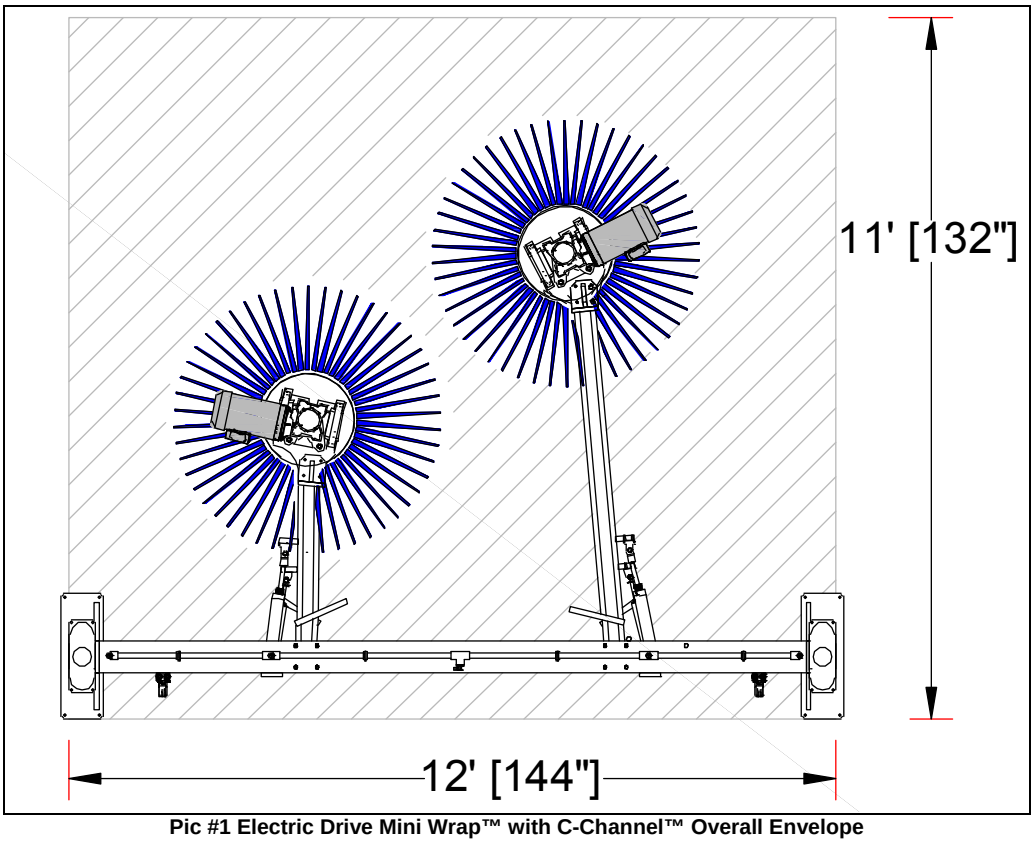
WARNING! **DANGEROUS SITUATION WHICH MAY CAUSE EQUIPMENT DAMAGE, PERSONAL INJURIES OR FATALITIES!**

Always follow all notes, warnings, and instructions. Failure to do so may have serious consequences on the overall performance of the equipment and/or the safety of the people working on the equipment!

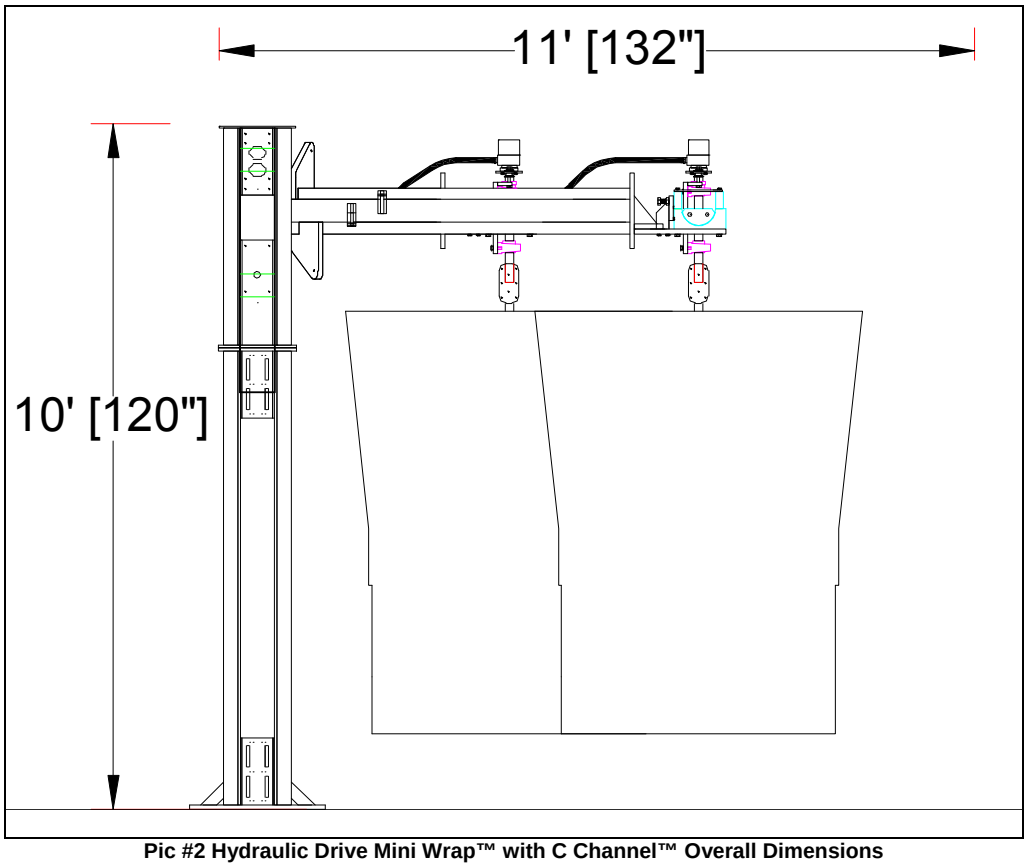
Installation Instructions for Mini Wrap Around

☑ **Open** all boxes and crates, and verify that you have all the required components and your installation materials.

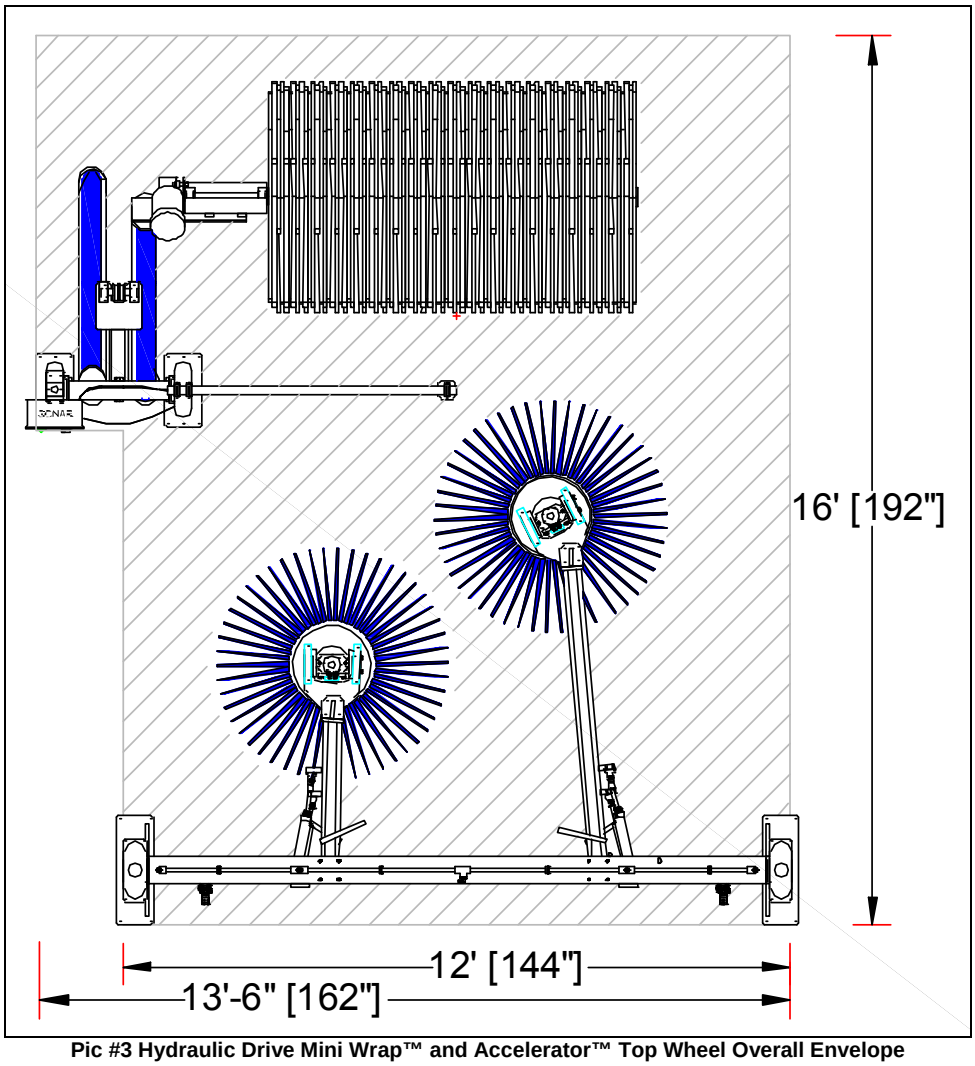
☐ **Locate** where the wrap around will be installed and verify that the area is sufficiently large for your **MCWW MINI WRAP™ WORKING ENVELOPE** and **DIMENSIONS** (see Picture #1 though #4).



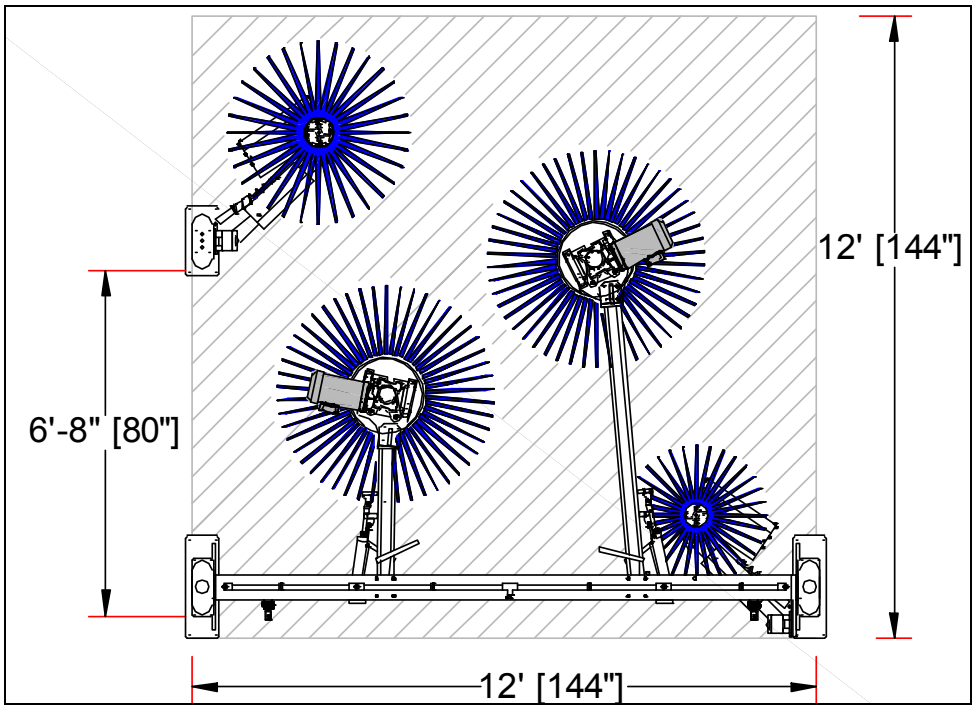
Pic #1 Electric Drive Mini Wrap™ with C-Channel™ Overall Envelope



Pic #2 Hydraulic Drive Mini Wrap™ with C Channel™ Overall Dimensions

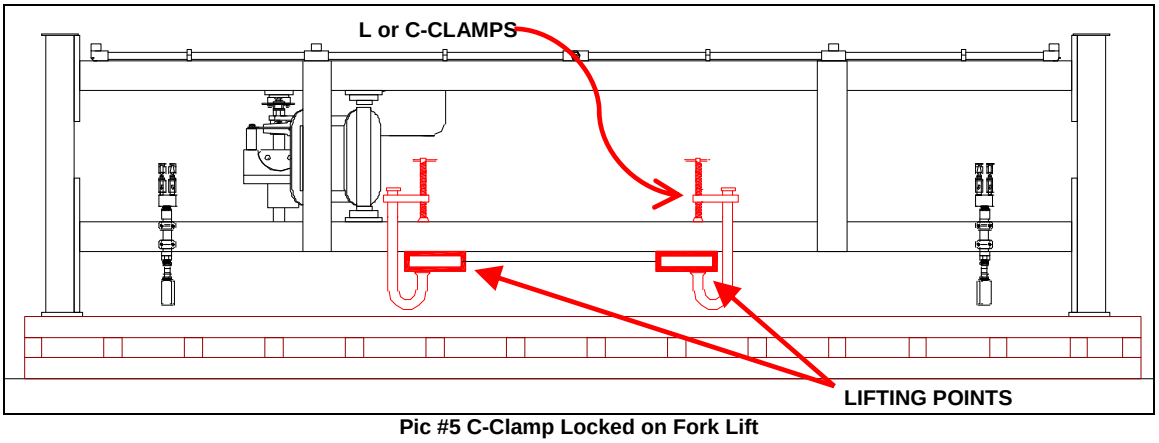


Pic #3 Hydraulic Drive Mini Wrap™ and Accelerator™ Top Wheel Overall Envelope



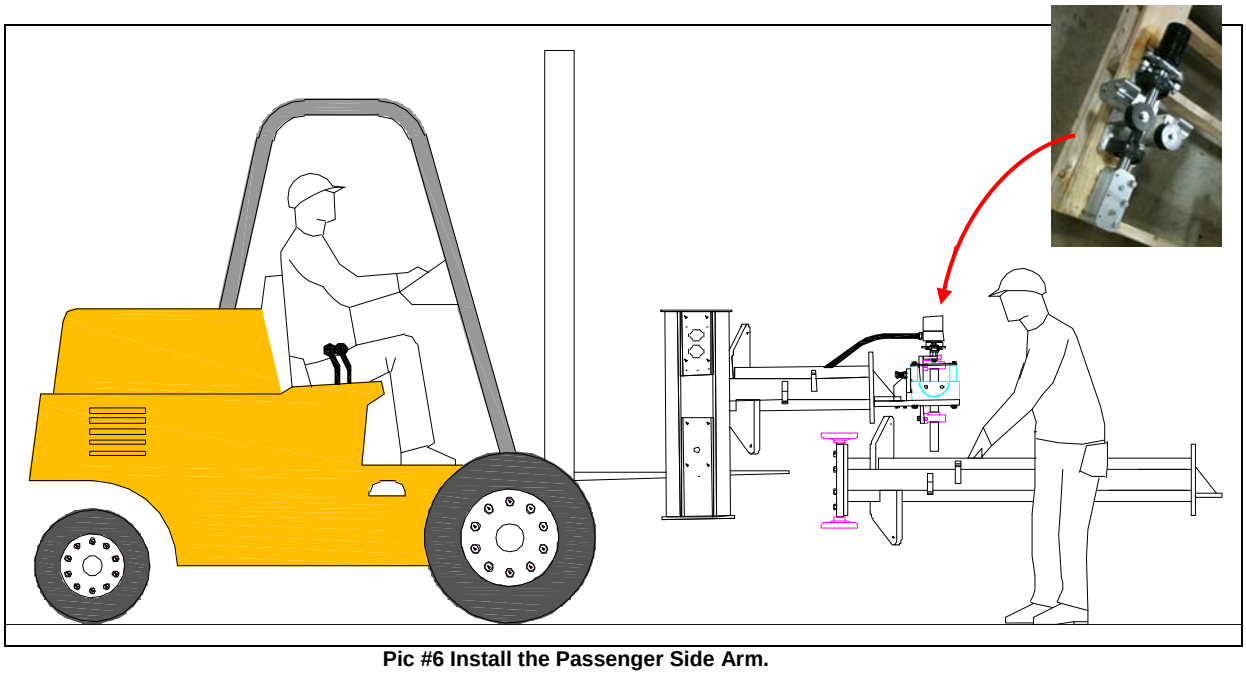
Pic #4 Electric Drive Mini Wrap™ with Electric Drive Low Riders™ Side Wheels Overall Envelope

☐ **Remove** the **WRAP AROUND HUB ASSEMBLIES**, the **PASSENGER SIDE ARM ASSEMBLY** and the **TWO LEGS** from the main pallet. Bring to your working area. Using the fork lift, insert the forks on each side of the head assembly center beam **UNDER THE BOTTOM CROSS BEAM (**as shown in Picture #5). Remove some of the top covers and secure one of the forks with a **LARGE L or C-CLAMP** (see below).



Pic #5 C-Clamp Locked on Fork Lift

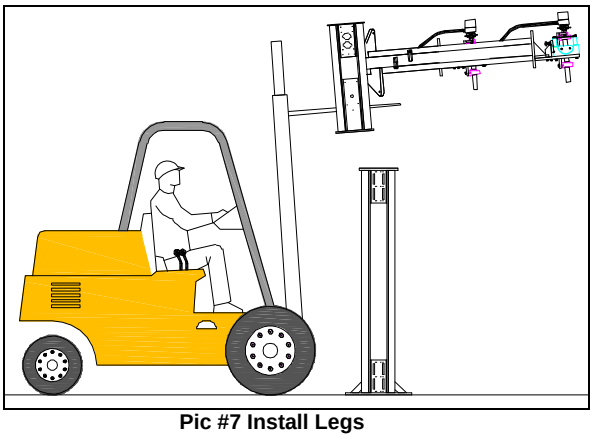
☐ **Bring** the head assembly to your installation area. Install one **HYDRAULIC DRIVE ASSEMBLY** to the **DRIVER SIDE ARM** (see picture #6 below) before raising the head assembly to the legs. Install the **PASSENGER SIDE ARM** to the head assembly and then the second **HYDRAULIC DRIVE ASSEMBLY** to the **PASSENGER SIDE ARM.** Connect the **CYLINDERS** and **DAMPENERS** to both arms. Raise the head assembly and **SECURE THE TWO LEGS** (see Picture #7)**.**



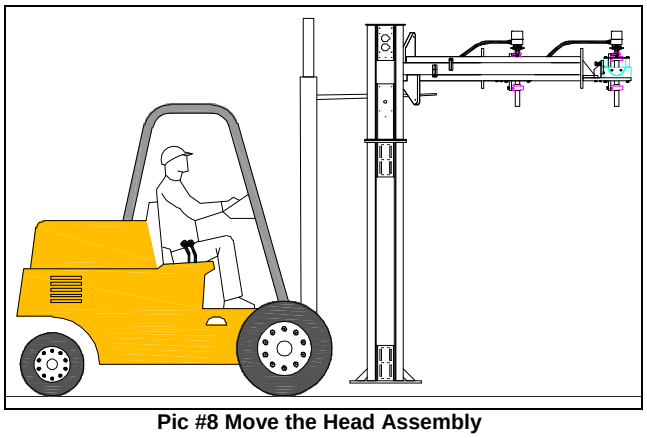
Pic #6 Install the Passenger Side Arm.

STOP!

IF YOUR MINIWRAP IS ELECTRIC DRIVE, THE DRIVE UNIT ASSEMBLIES ARE SIDE SENSITIVE.
MOUNT EACH DRIVE UNITS AS SHOWN ON PICTURE #1:
EACH MOTORS POINTING OUTWARD

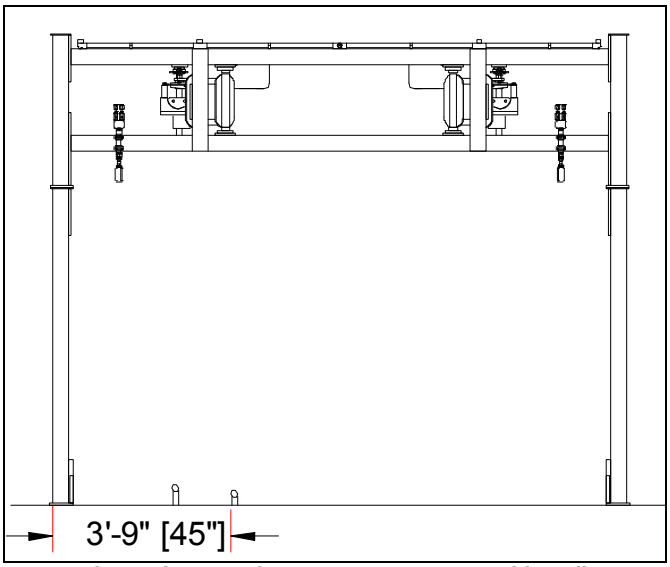


Pic #7 Install Legs

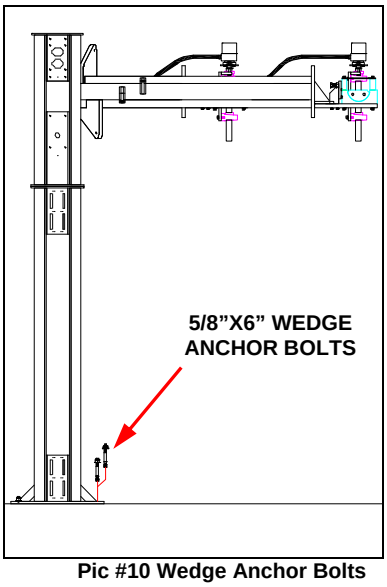


Pic #8 Move the Head Assembly

☐ **Position** the **BACK OF THE DRIVER'S SIDE LEG 45" AWAY FROM THE INSIDE EDGE OF THE INSIDE GUIDE RAIL** (See Picture #9).

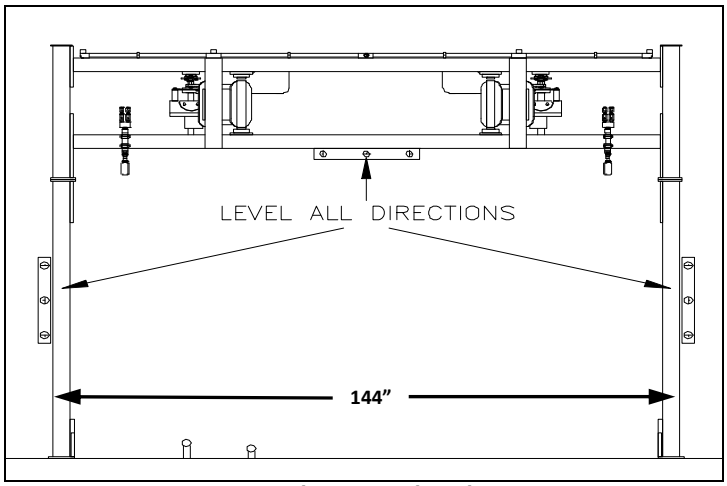


Pic #9 Distances from Leg to Conveyor Guide Rail



Pic #10 Wedge Anchor Bolts

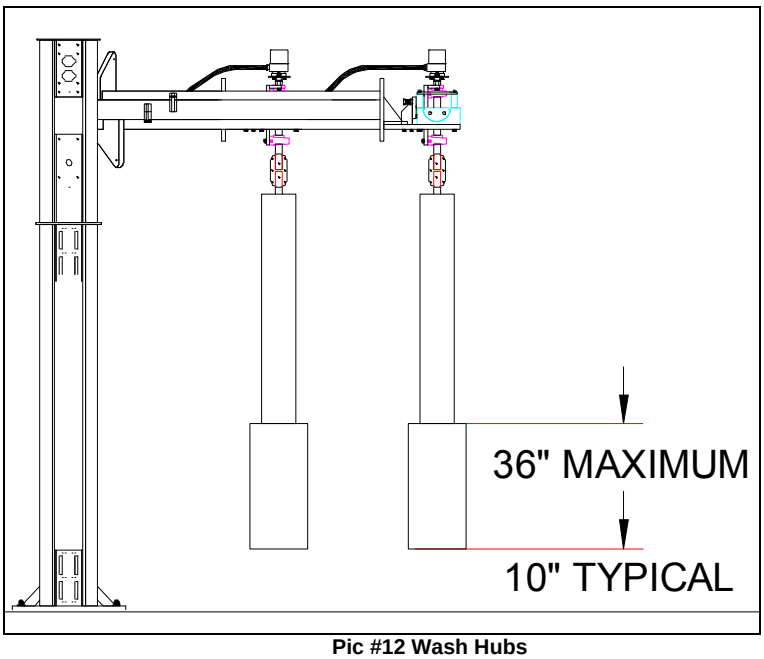
☐ **Using FOUR 5/8"X6" WEDGE ANCHOR BOLTS** (see picture #10) secure the **DRIVER'S SIDE LEG** to the floor. Detach the **CLAMP FROM THE FORK.** Drop the forks slightly down to allow the passenger's side leg to sit firmly on the floor and **leave the fork lift in place as a safety precaution!**. Measure 144" outside to outside from driver side leg to passenger side leg, position the passenger side leg than secure to the floor. **LEVEL THE DRIVER'S SIDE LEG as well as THE HEAD ASSEMBLY.** Finally, **LEVEL THE PASSENGER'S SIDE LEG**.



Pic #11 Level Equipment

C Channel Foam Loading Installation:

☐ **Mount** the two **HUB ASSEMBLIES** on each arm as shown in picture #12 below. Verify that the bottoms of the hubs are **BETWEEN 8" to 10" OFF THE FLOOR.**



Pic #12 Wash Hubs

☐ **To CHANGE THE HEIGHT OF THE HUBS** remove one core from the hub assembly and loosen the **CLAMPS** holding the cores in place (as shown in Picture #13 and 14). Raise or lower the entire core assembly. Retighten the clamps in the new position. Reinstall the core piece.

Pic #13: Open Core

Pic #14: Adjust Core Height

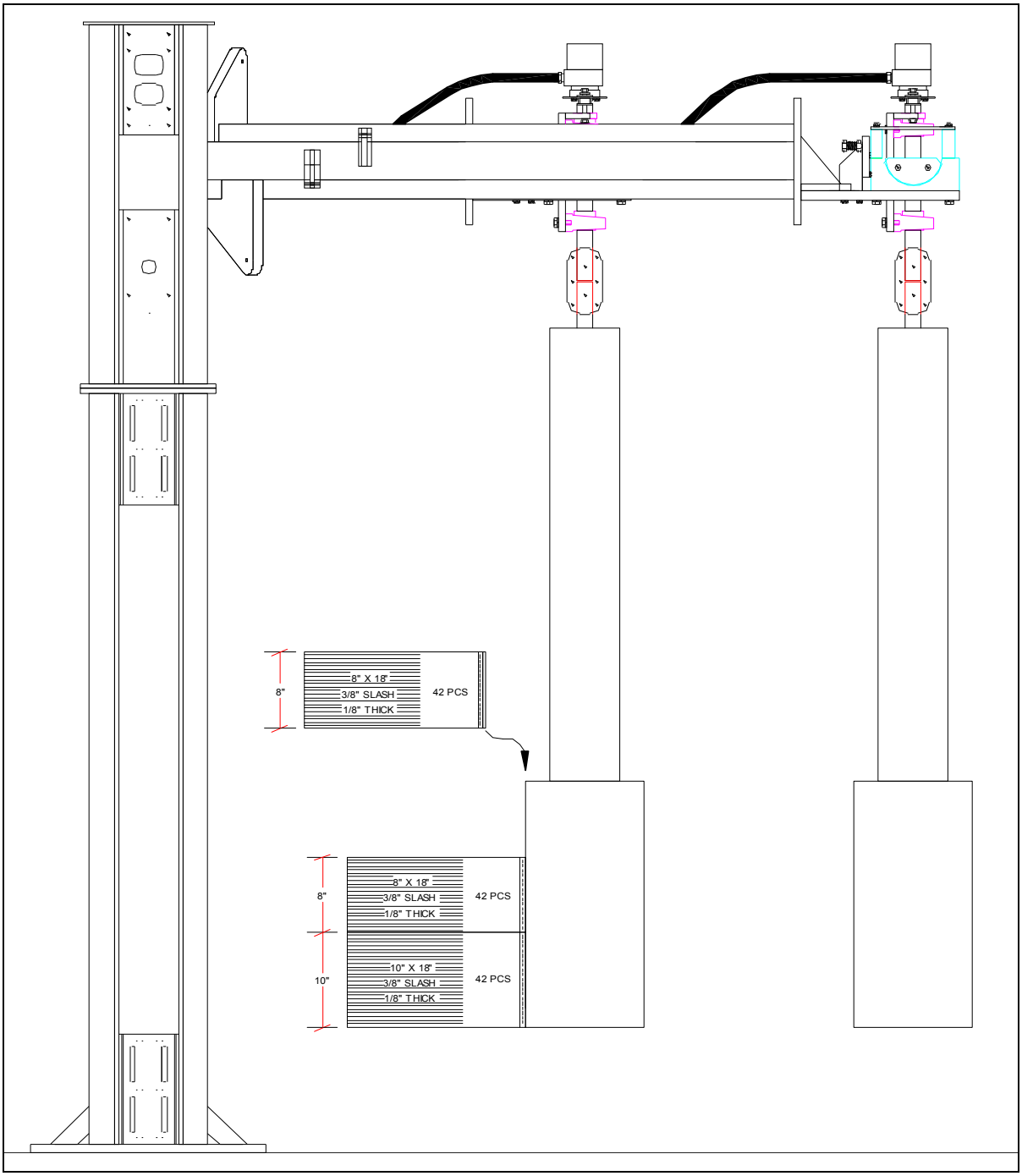
STOP!

DO NOT SET THE TOP OF THE BOTTOM HUB HIGHER THAN 36" OFF THE FLOOR.

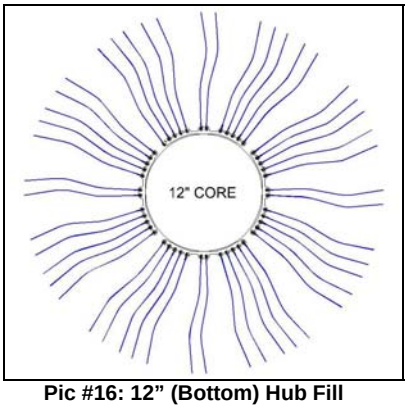
☐ **Open** the washing material boxes and load the foam into the bottom hub as shown in Picture #20.

STOP!

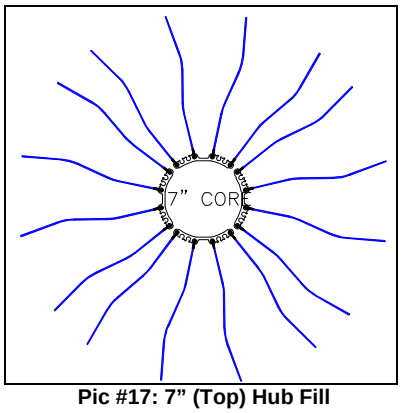
VERIFY THAT YOU HAVE THE CORRECT FOAM MATERIAL BEFORE STARTING TO LOAD THE HUBS FOAM MATERIAL COMES IN MANY DIFFERENT LENGTH, THICKNESS AND CONFIGURATION. NOT FOLLOWING PROPER LOADING INSTRUCTIONS MAY LEAD TO EQUIPMENT MALFUNCTION



Pic #15 Wash Material Bottom Hub

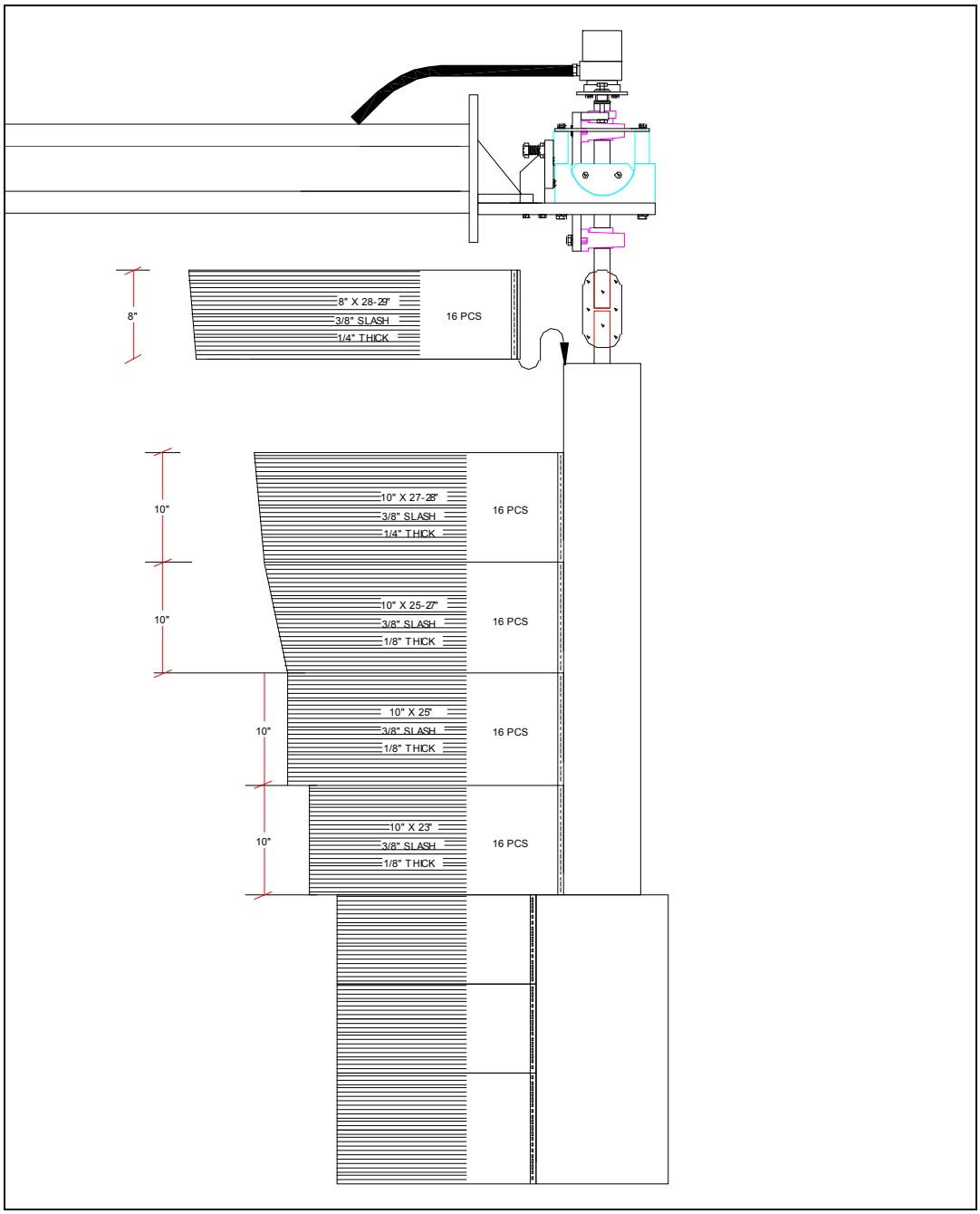


Pic #16: 12" (Bottom) Hub Fill



Pic #17: 7" (Top) Hub Fill

☐ **Repeat** the same process for the top hubs on both wheels.

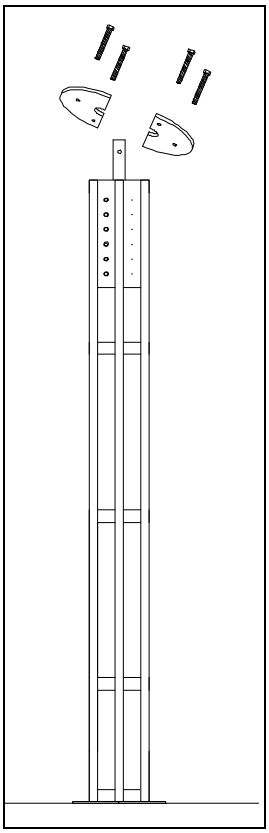


Pic #18 Top Hub Fill

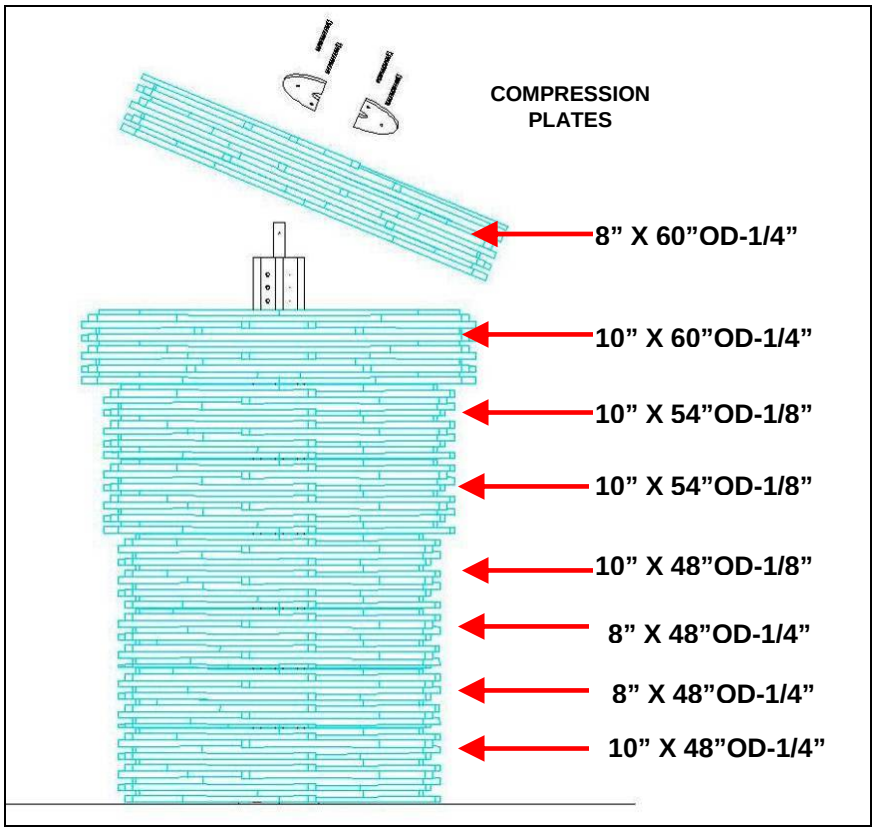
Star Foam Loading Instruction:

☐ **Bring** the two **HUB ASSEMBLIES** to your working area and remove the two compression plates from the top of the hub (see Picture #19).

☐ **Open** the washing material boxes and load in **ONE 10" X 48"OD-1/4" BUN** followed by **TWO 8" X 48" OD-1/4" BUNS** and another **10" X 48"OD-1/8" BUN** onto the hub assembly (see Picture below). Next, load **TWO 10" X 54"OD-1/8" BUNS, ONE 10" X 60"OD-1/4" BUN,** and finally, **ONE 8" X 60"OD-1/4" BUN.** Reinstall the two compression plates and mount the hub to the main shaft.



Pic #19 Star Foam Hub



Pic #20 Star Foam Hub Assembly

STOP!

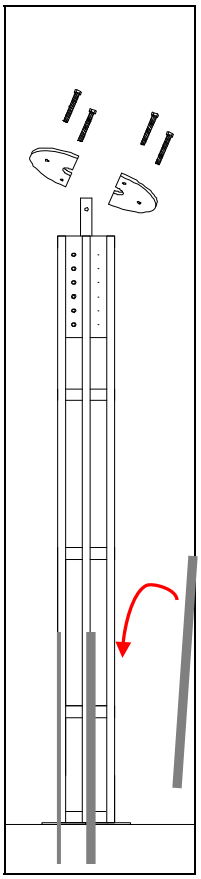
VERIFY THAT YOU HAVE THE CORRECT FOAM AND CLOTH MATERIAL BEFORE STARTING TO LOAD THE HUBS WASH MATERIAL COMES IN MANY DIFFERENT LENGTH, THICKNESS AND CONFIGURATION. NOT FOLLOWING PROPER LOADING INSTRUCTIONS MAY LEAD TO EQUIPMENT MALFUNCTION

Cotton Cloth™ Loading Instructions:

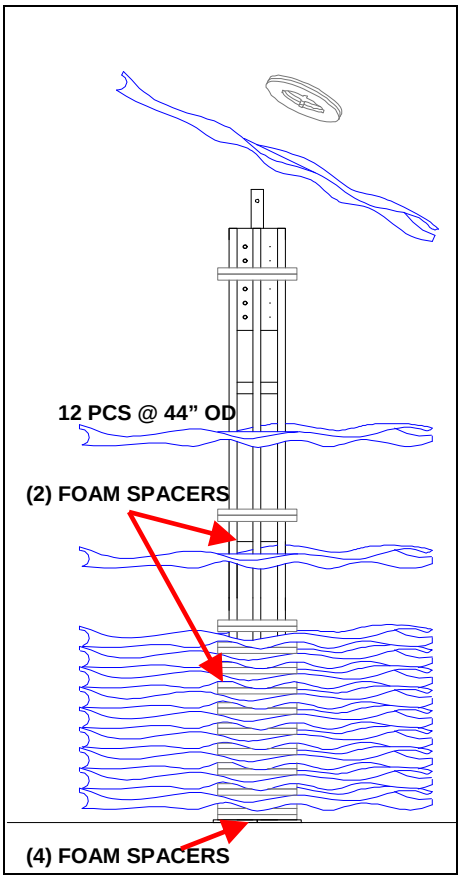
☐ **Bring** the two **HUB ASSEMBLIES** to your working area and remove the two compression plates from the top of the hub. Slide 4 **PVC STRIPS** into each channel (see Picture #21) and temporarily hold them in place with a small piece of masking tape.

☐ **Open** the washing material boxes and start loading the hub with **THREE FOAM SPACERS,** followed by **ONE COTTON CLOTH™ RING,** and then **TWO FOAM SPACERS.** Continue until you've installed a total of **12 CLOTH RINGS** (See Picture #22 below)**.** Finish with T**HREE FOAM SPACERS.**

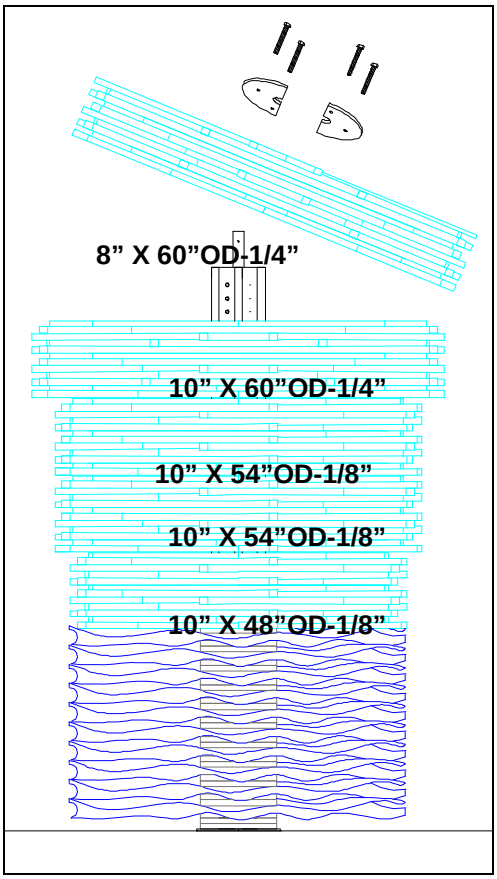
☐ **Load ONE 10" X 48"OD-1/8" BUN, TWO 10" X 54"OD-1/8" BUNS, ONE 10" X 60" OD-1/4"** and finally **ONE 8" X 60"OD-1/4" BUN.** Reinstall the two compression plates and mount the hub to the main shaft.



Pic #21 Cloth Hub



Pic #22 Cotton Cloth Hub Assembly



Pic #23 Cotton Cloth/Star Foam Hub Assembly

STOP!

VERIFY THAT YOU HAVE THE CORRECT FOAM AND CLOTH MATERIAL BEFORE STARTING TO LOAD THE HUBS WASH MATERIAL COMES IN MANY DIFFERENT LENGTH, THICKNESS AND CONFIGURATION. NOT FOLLOWING PROPER LOADING INSTRUCTIONS MAY LEAD TO EQUIPMENT MALFUNCTION

Optional Low Riders Wash Material Loading Instructions:

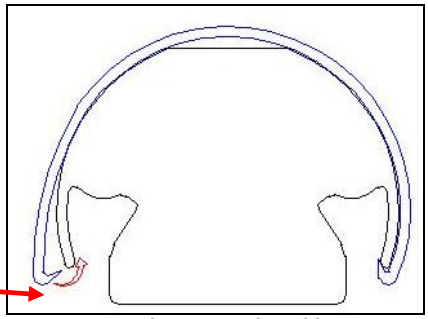
NOTE:

FOLLOW INSTRUCTION IN THE LOW RIDER-HIGH BOY INSTALLATION MANUAL

☐ Locate the boxes containing the **COLOR SKINZ™** covers and install on each leg, arm, and frame cross beams.

Pic #24 Color Skinz™

SELECT THE PROPER COLOR SKINZ™ COVER. SNAP ONE SIDE OF THE LIP, SLIDE THE COVER AROUND THE LEG AND FINALLY SNAP THE SECOND LIP PAST THE EXTRUSION EDGE (see Picture #25)



Pic #25 Color Skinz™

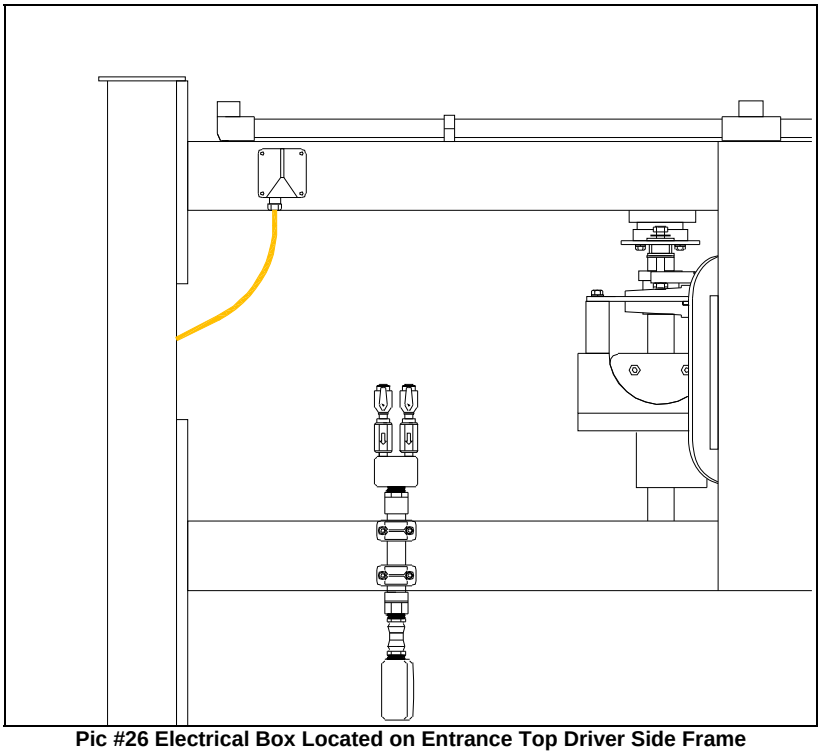
Electrical Installation:

☐ **Your** MCWW **MINI WRAP™** does require a signal from the car wash controller. The signal is voltage sensitive and can be anything between **120, 24 VOLTS AC** or **24 VOLTS DC.**

WARNING!

THE MATERIAL REQUIRED FOR CONNECTING THE MINIWRAP™ IS THE CUSTOMER'S RESPONSIBILITY!

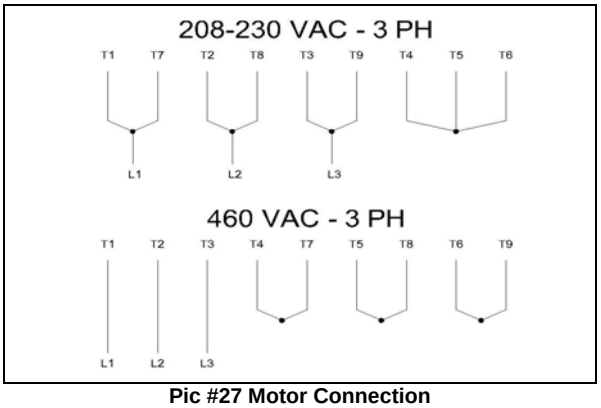
ALL WORK HAS TO COMPLY WITH LOCAL AND NATIONAL CODES!



Pic #26 Electrical Box Located on Entrance Top Driver Side Frame

☐ **If** you have purchased the **ELECTRIC DRIVE MINIWRAP™,** connect each **1.5 HP MOTOR** to a separate starter unit. Each motor has to be protected with an **OVERLOAD RELAY SET AT THE MOTOR RATED FULL LOAD CURRENT FOR THE PROPER VOLTAGE.**

NOTE: **NEITHER OF THE MOTOR ELECTRICAL CABLES ARE CONNECTED TO THE MOTOR LEADS WHEN SHIPPED FROM THE MCWW FACTORY. OPEN THE MOTOR CONNECTION BOXES AND CONNECT THEM TO THE MOTOR LEADS, FOLLOWING THE APPROPRIATE CONNECTION DIAGRAM BELOW OR ON THE MOTOR PLATE (PICTURE #27) FOR PROPER VOLTAGE.**



Pic #27 Motor Connection

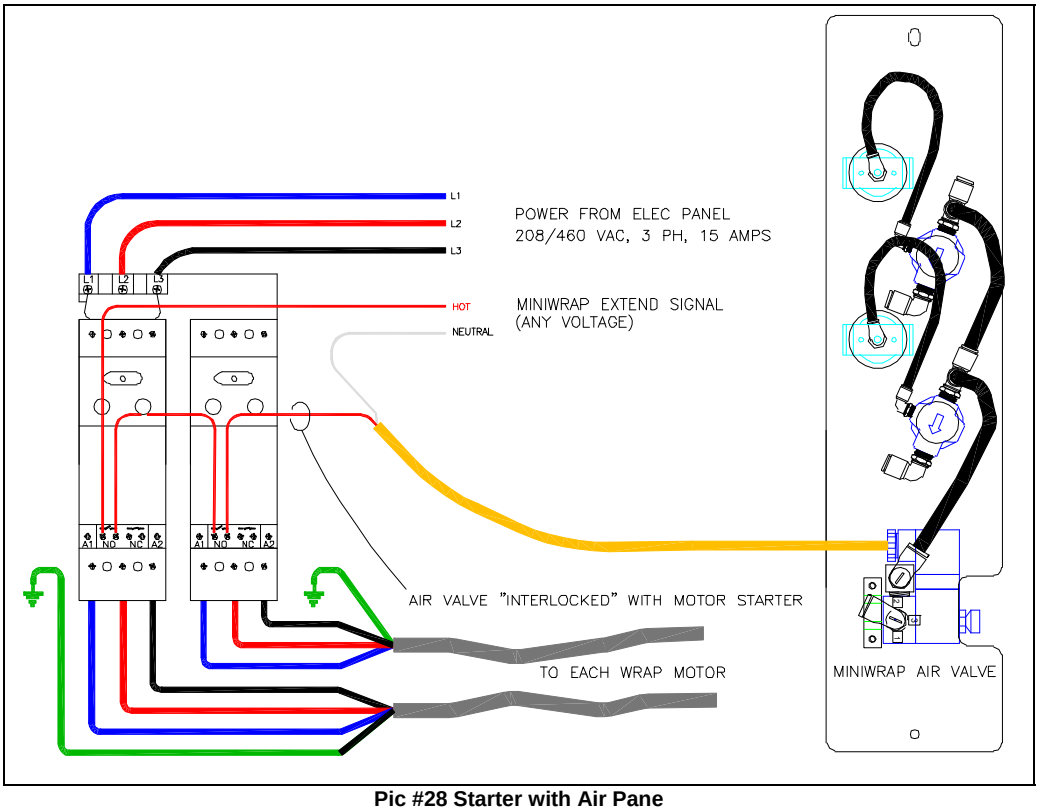
WARNING!

EACH MOTOR HAS TO BE PROTECTED WITH AN OVERLOAD RELAY SET AT THE MOTOR RATED FULL LOAD CURRENT FOR THE PROPER VOLTAGE:

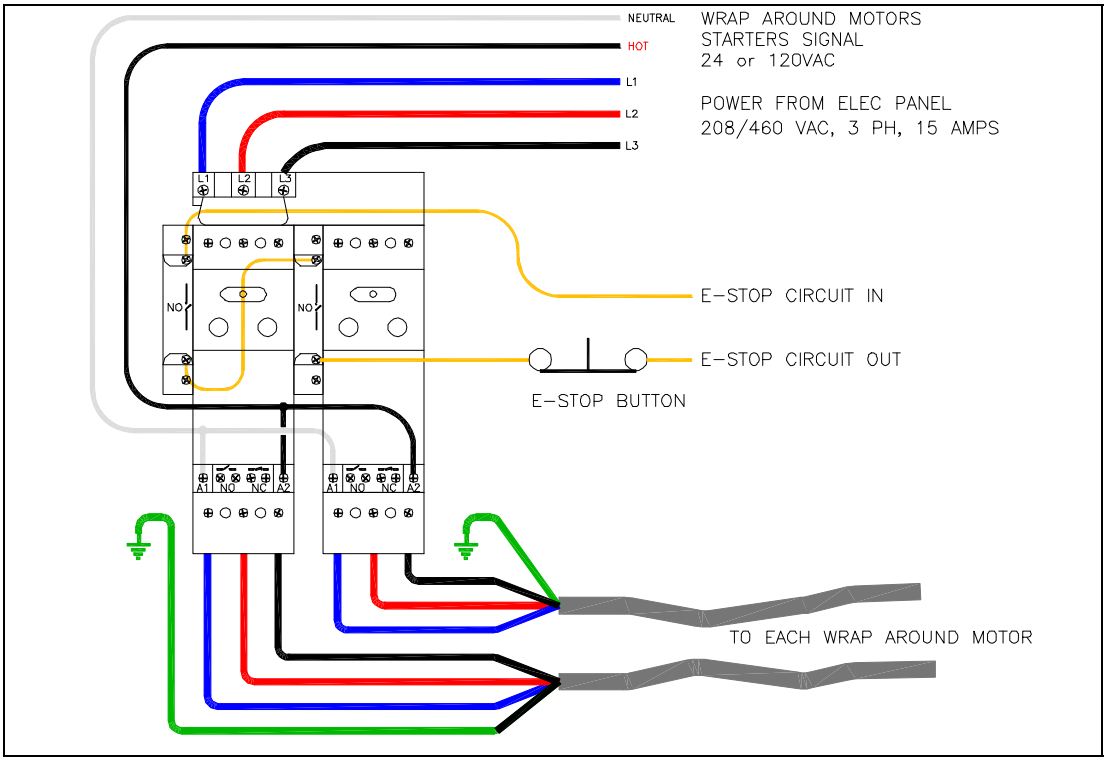
5.8 AMPS @ 208 VAC - 3PH
5.0 AMPS @ 230 VAC – 3PH
2.5 AMPS @ 460 VAC – 3PH

WARNING!

EACH MOTOR STARTER AUXILIARY CONTACT HAS TO BE CONNECTED IN SERIES WITH THE AIR EXTEND PANEL (SEE PICTURE #28), CONNECT THE OVERLOAD CONTACTS WITH THE EMERGENCY STOP CIRCUIT (SEE PICTURE #29).



Pic #28 Starter with Air Pane



Pic #29 Starters without Air Panel

☐ **If** you have purchased the **ELECTRIC DRIVE MINIWRAP™** with the **MCWW OVERDRIVE® INVERTER BOX,** connect the motors following the diagram on picture #30.

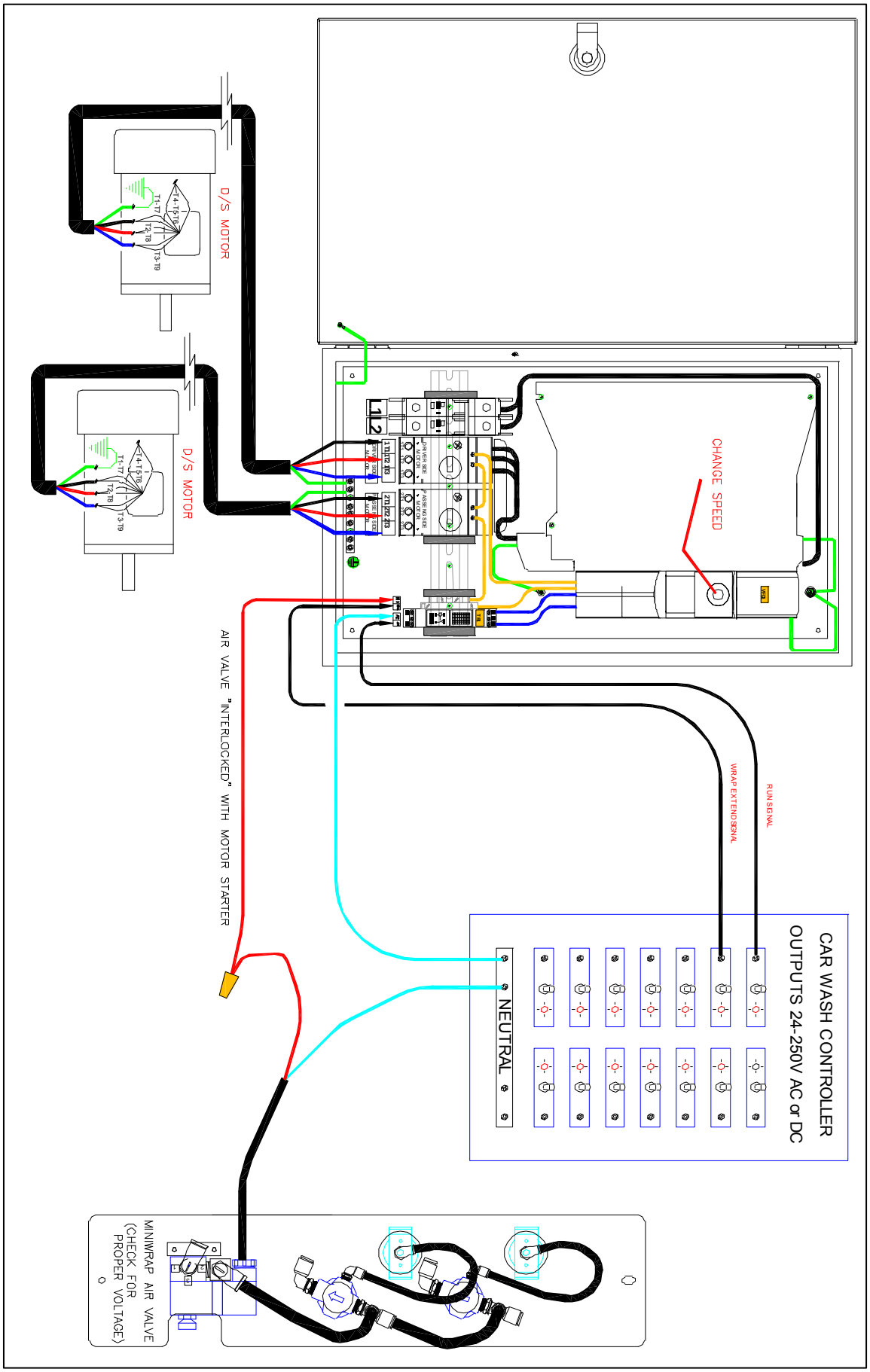
☐ **Connect** the **RUN SIGNAL INPUT** (**A1** and **A2**) to one function of your car wash controller. The **RUN** signal in voltage can be anywhere between **12 to 250 VOLTS AC or DC.**

☐ **Connect** the retract air panel to one function of your car wash controller and trough **TERMINALS R1A and R1C.**

WARNING!

THE AIR VALVE INTERLOCK CONTACT HAS TO BE CONNECTED IN SERIES WITH THE WARP AIR VALVE (SEE PICTURE #30).

IF YOUR MINIWRAP® WRAP IS EQUIPPED WITH A DIFFERENT VFD, VERIFY THAT WRAP AIR VALVE IS CONNECTED IN SERIES WITH THE VFD'S FAULT CONTACTS. IN THE EVENT OF A FAULT FROM THE VFD, THE WRAP HAS TO BE RETRACTED TO AVOID POSSIBLE DAMAGES TO THE CAR OR THE EQUIPMENT.



Pic #30 Inverter Panel

Pneumatic , Water Supplies:

☐ **Your MCWW MINIWRAP™** requires an air supply capable of **2 SCFM @ 100 PSI.**

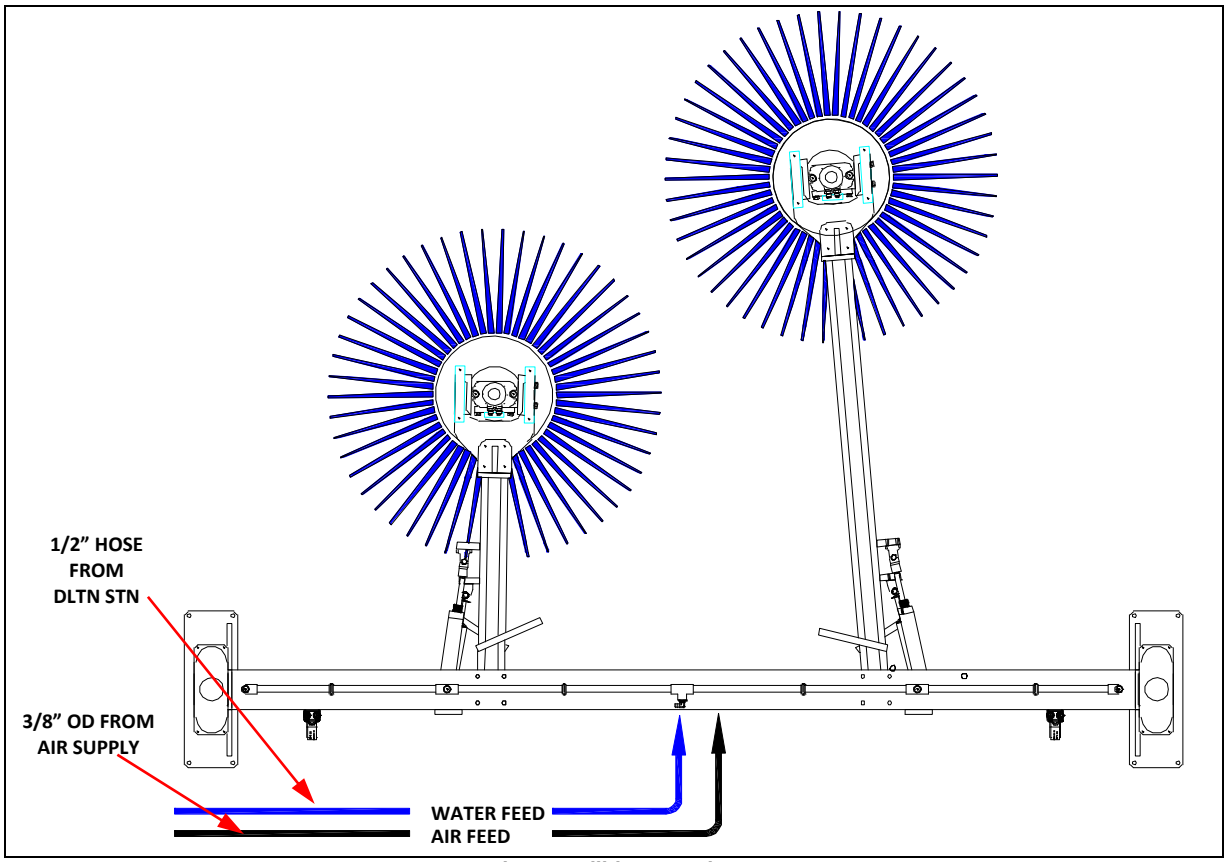
WARNING!

IT IS IMPERATIVE TO SUPPLY YOUR MINiWRAP™ PNEUMATIC SYSTEM WITH CLEAN, DRY, COMPRESSED AIR.

ANY AMOUNT OF MOISTURE, VAPORIZED OIL, OR ANY OTHER IMPURITIES WITHIN THE MAIN AIR SUPPLY MAY AFFECT THE PERFORMANCE OF THE EQUIPMENT AND LEAD TO PREMATURE WEAR OR MAJOR DAMAGE TO THE CROSS-OVER™ DELIVERY SYSTEM OR ITS COMPONENTS.

☐ **Bring** a **3/8" OD** polyflow tubing air line from the main compressed air supply to the **MIDDLE OF THE TOP CROSS BEAM** and connect it to the existing 3/8" push-on fitting (see Picture # 31).

☐ **Bring** a **1/2" HOSE** from a dilution station to **MIDDLE OF THE TOP CROSS BEAM** and connect to existing hose barb fitting (see Picture #31).

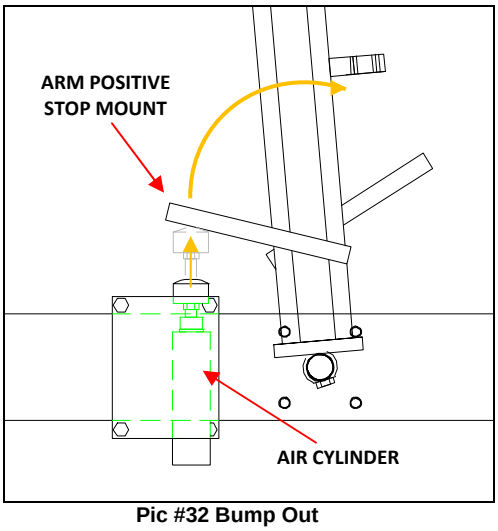


Pic #31 Utilities Location

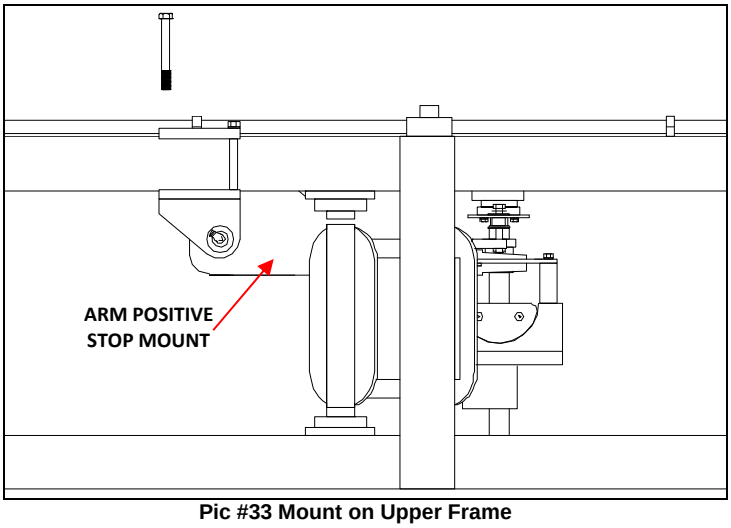
Optional License Bump Retract:

☐ **Your** MCWW License Plate Bump Retract system is designed to “move the brush away” from the center front of the vehicle by about 16 to18” by pushing the **ARM POSITIVE STOP MOUNT** (see Picture #32).

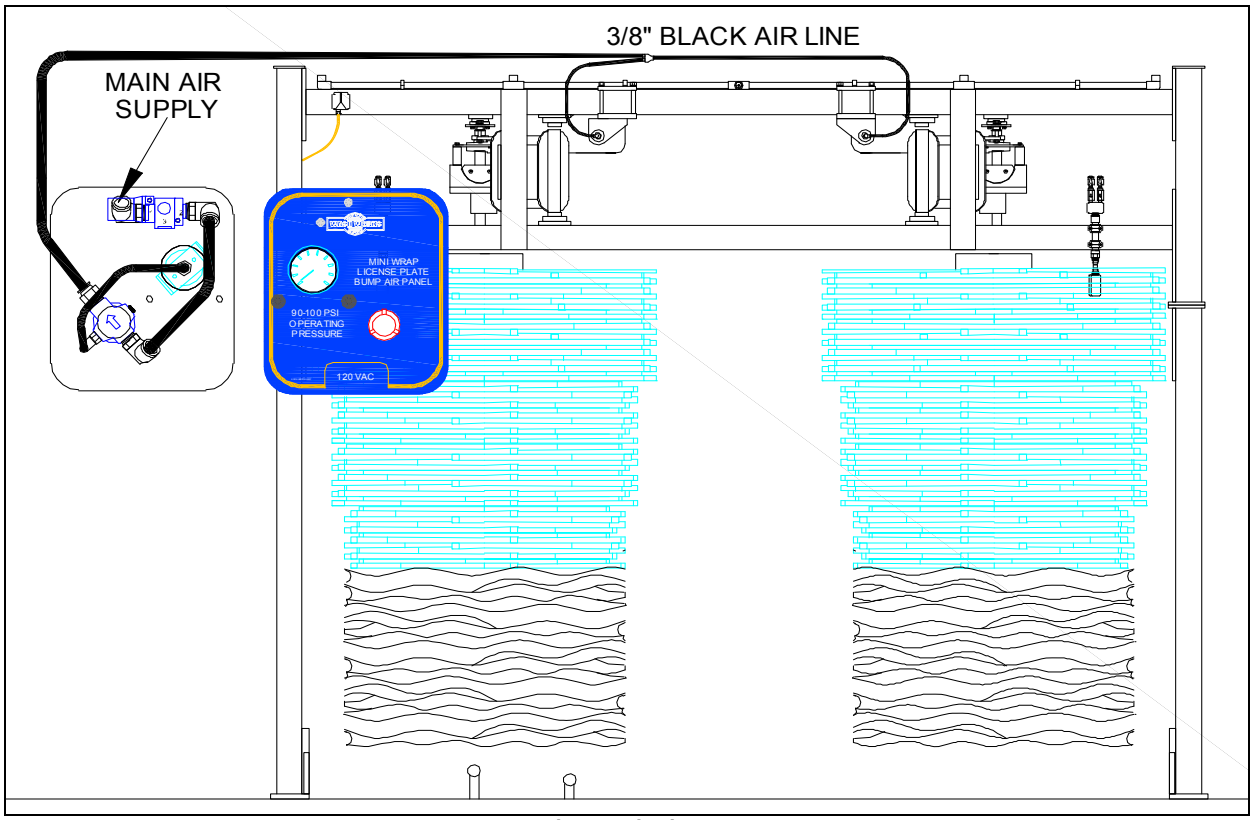
☐ **Install** the **PASSENGER SIDE** cylinder assembly on the upper head frame, and position in behind the positive stop mount like shown on Picture #33 below.



Pic #32 Bump Out



Pic #33 Mount on Upper Frame



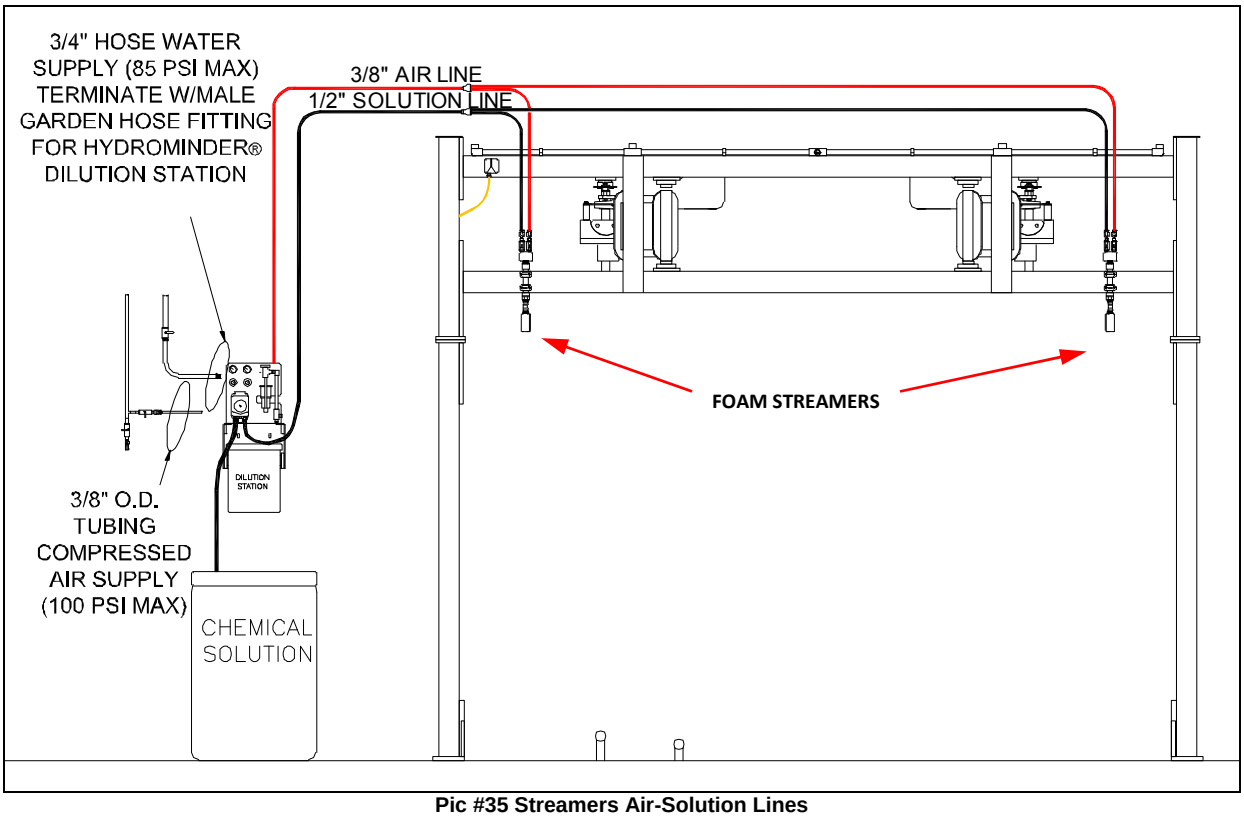
Pic #34 Air Lines

☐ **Install** the air panel in the mechanical room and pull a **3/8” OD BLACK AIR LINE** from the air panel to the **MINIWRAP** and then **BRANCH TEE** to each cylinder.

Foamers Connections:

☐ **Bring ONE 1/2" OD and ONE 3/8" OD** polyflow tube from a dilution station to the **MIDDLE OF THE TOP CROSS BEAM** and connect to the existing push-on fittings (see Picture # 35).

NOTE: **THE DILUTION STATION SHOWN IN PICTURE #38 IS NOT INCLUDED WITH YOUR CROSS-OVER™ WRAP AROUND UNIT; IT CAN BE PURCHASED SEPARATELY THROUGH YOUR LOCAL MCWW DISTRIBUTOR (PART# FOAMDLUTNSTN0001).**



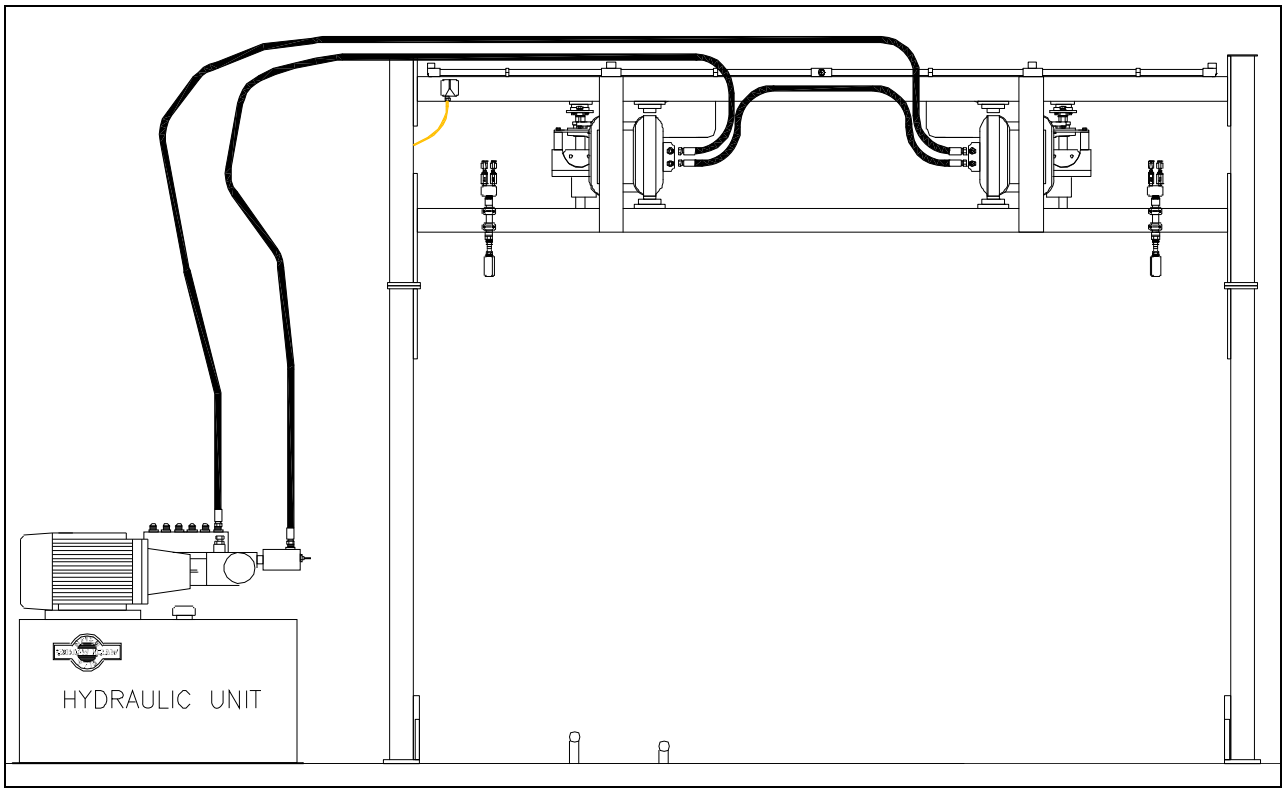
Pic #35 Streamers Air-Solution Lines

Hydraulic Installation:

☐ **Your MCWW MINIWRAP™** requires a **HYDRAULIC SUPPLY CAPABLE OF 6 GPM @ 1000 PSI** connected to two hoses (one pressure and one return line) located on each arm on the entrance side of the head frame.

☐ **Use the HYDRAULIC SCHEMATIC** shown in Picture #36 as an installation guide.

WARNING!
DO NOT OPERATE YOUR MINI™ WRAP AROUND UNIT WITH A HYDRAULIC SYSTEM OPERATION AT A PRESSURE ABOVE 1250 PSI.



Pic #36 Hydraulic Schematic

Start-Up Procedures:

☐ **Manually turn on** your **HYDRAULIC POWER UNIT** and set the hydraulic flow control valve to a **WHEEL SPEED OF 85 TO 90 RPM** for a **MINIWRAP™** using **COTTON CLOTH™.**

If your **MINIWRAP™** is equipped with **C-CHANNEL FOAM,** set the **WHEEL SPEED** between **90 to 105 RPM.**

☐ **Check** all hydraulic lines for leaks. Turn the hydraulic power unit OFF.

NOTE: **IF THE MINIWRAP™ IS ELECTRIC DRIVE, THE WHEEL SPEED IS PRESET AT 88 RPM. USING A VARIABLE SPEED DRIVE (VFD), INSTEAD OF STARTER UNITS, ALLOWS FOR WHEEL SPEED ADJUSTMENTS. REFER TO RECOMMENDATIONS ABOVE FOR OPTIMAL WHEEL SPEED ADJUSTMENT.**

☐ **Set** the **DRIVER'S SIDE ARM** air pressure at **35 PSI** and the **PASSENGER'S SIDE ARM** air pressure at **60 PSI**

☐ **MANUALLY TURN ON** the **STREAMER SOAP FOAMER DILUTION STATION** to the wrap, adjust the foamers and position the **STREAMER HEADS TO SPRAY THE FOAM TOWARD EACH WHEEL.** Turn OFF the dilution station. Consult your MCWW Dilution Station Installation manual for adjustment.

☐ **Manually turn on** the **WATER DILUTION STATION** and adjust the **SPRAY NOZZLES TO COVER** the wheel from the **LOWER HUB to the TOP ONE.** Turn OFF your dilution station. Consult your MCWW Dilution Station Installation manual for adjustment.

☐ **Run** a car through the wash and verify proper operation of both **WRAP WHEELS:**

- **Confirm** wheel speed under vehicle load with the **HYDRAULIC POWER UNIT SET AT 1000 PSI.** Open the hydraulic flow control valve or increase the hydraulic power unit pressure as needed to reach recommended speed value previously specified. **DO NOT EXCEED 1250 PSI AT THE HYDRAULIC UNIT!**
- **Confirm** that both arms are **MOVING** around the front of the vehicle.
- **Confirm** that both **SECONDARY ARMS** are turning the rear corner of the vehicle properly in order to clean the **REAR OF THE VEHICLE.**

WARNING!

FOR AN ELECTRIC DRIVE CROSS-OVER™, TURN OFF EACH OVERLOAD RELAY, ONE AT A TIME, AND CONFIRM THAT THE CONVEYOR STOPS OR THAT THE WRAP AROUND ARM RETRACTS. FAILURE TO DO SO MAY LEAD TO MAJOR EQUIPMENT DAMAGE IF ONE OF THE TWO WRAP MOTOR OVERLOAD RELAYS TRIPS OR MALFUNCTIONS.

Maintenance:

DAILY:

- Check for hydraulic leaks, chaffed hoses electrical cable, etc.
- Visually inspect for any signs of wear.
- Move the arms manually and duplicate its regular motion and look for abnormalities: A loose fastener may allow some parts to move or rub and may create a dark stain running down the equipment.
- Start the day with a TEST WASH and check for proper operation.
- While you are watching the TEST WASH, check for clogged nozzles. If a nozzle is clogged, remove the nozzle body and clean the nozzle by inserting a small piece of wire (a small paper clip wire will do fine!) in the nozzle opening.
- Check for proper coverage of the two Streamer™ Foamers if applicable.
- Check for the overall performance of the equipment on the vehicle: Profiling, cleaning, etc.
- Wash down your equipment and the surrounding area at the end of each day.

MONTHLY:

Each piece of MCWW equipment is assembled with the highest quality bearings which have been factory pre-lubricated, therefore it does not require supplemental grease for at least the first month of operation.
Use any lithium-based NLGI #2 grease (ex: Exxon Mobil MOBILITH AW2).

WARNING!

OVERLUBRICATION IS A MAJOR CAUSE OF BEARING FAILURES! LUBRICATE CONSERVATIVELY!

- After the first month of operation, grease each bearing (see Picture #49-54).
- Wash your equipment with a solution made of a mild degreaser and water. Rinse thoroughly.
- Perform daily maintenance.

Warranty and Return Procedure:

Motor City Wash Works warrants this product to be free of defects in material and/or workmanship for a period of **one year.** During the warranty period MCWW will at its discretion, at no charge to the customer, repair or replace this product if found defective, with a new or refurbished unit, not to include costs of removal or installation. Any product returned to MCWW for warranty has to have a **Return Material Authorization Number**. All shipping costs to MCWW are assumed by the customer. This is only a summary of **MCWW''s Limited Warranty**. Please, communicate with MCWW for our complete warranty.

Prior to returning any product to MCWW, the customer must call in for a **Return Material Authorization Number** and a copy of our **Return Material Authorization** Form must be completed. The **RMA** number must be written clearly on the outside of the shipping package and a copy of the form must be included in the package.