AXIS ARCH INSTALLATION MANUAL
Revision: 3.2 Part # HPAXISARCHTOP01
Optional HPAXISARCHSID01

TABLE OF CONTENTS
Equipment Utilities ............................................................... Page: 1
Equipment Specifications ....................................................... Page: 1
Suggested Tools and Installation Materials .................................. Page: 1
Installation Instructions .......................................................... Page: 2
Pneumatic Installations ............................................................ Page: 2
Electrical Installations ............................................................. Page: 14
Plumbing Installations ............................................................ Page: 15
Operation ............................................................................. Page: 18
Status Codes ........................................................................ Page: 19
Start-Up Procedures ............................................................... Page: 25
Parts Identifications ............................................................... Page: 28

High Pressure Arch
HPAXISARCHTOP01

Optional High Pressure Sides
HPAXISARCHSID01

| ELECTRICAL | POWER: 115 VAC, 1 PH, 12 AMPS | SIGNAL: 24 to 120 V AC/DC From CW Controller |
|            | Two Functions Required: Arch Ready and HP Pump | N/A |

PNEUMATICS
5 SCFM @ 100 PSI
N/A

WATER
RECLAIMED OR FRESH: 18 GPM @ 900 PSI
RECLAIMED OR FRESH: 18 GPM @ 900 PSI

Equipment Utilities

- Convenient 115VAC Single Phase Supply Minimize Installation Cost
- Compact Design: Only 49” Deep, 151” Wide and 126” Tall
- High Pressure Rotary Turbo Nozzle: 12 Nozzle for Axis Arch and 6 Nozzles for Each High Pressure Sides
- High Impact Cleaning up to 35” from vehicle Surface
- Advance Fluent Vertical Movement Technology Delivering a Constant Mapping of Vehicle Surfaces
- Automatically Adjust to Various Conveyor Line Speed
- Profiling Arch Automatically Changes to up to THREE Different Positions on Different Area of the Vehicle
- Bump and Breakaway System Protect Equipment and Vehicles from Uncontrolled Vehicle Drive Through
- Unique PICK-UP Truck Rear Window Recognizing System Adjust Arch to Maximize Cleaning

Suggested Installation Tools and Materials

✔ Hammer Drill with 1/2” Drill bit
✔ Sledge Hammer
✔ Set of Standard Combo Wrenches
✔ Measuring Tape
✔ Standard Screw Drivers
✔ 3/8” OD Polyflow Tubing

☐ (8) Wedge Anchor Bolts 1/2” x 3-3/4”
☐ Allen Wrenches
☐ Plastic Ties 8”
☐ Safety Goggles
☐ Torpedo Level
☐ 3/4” Hydraulic Hose
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 TAKE 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 washing equipment and/or the safety of the people working on the equipment!

**Installation Instructions for AXIS HIGH PRESSURE ARCH**

- Open all boxes and crates and verify that you have all the required components and installation materials.

- Locate where the Axis High Pressure Arch will be installed and verify that the area is sufficiently large for the ARCH WORKING ENVELOPE (see Picture #1 and #2).

THE WORKING ENVELOPE SHOWN IN PICTURE #1.0 INCLUDES BOTH THE ARCH AND THE HIGH PRESSURE SIDES APPLICATORS.

THE ENVELOPE DOES NOT INCLUDE THE NECESSARY ROOM FOR THE ARCH MANIFOLD TO BREAKAWAY COMPLETELY FROM ITS TRACKS AND FULLY “SWING OUT” IN THE EVENT OF AN IMPACT FROM A VEHICLE “DRIVE THROUGH”.

ADDITIONAL ROOM FOR THE NEXT PIECE OF EQUIPMENT MAY BE REQUIRED BEYOND THE EXIT END OF THE EXISTING WORKING ENVELOPE.
Open the shipping crate and visually inspect your equipment for damages.

PLEASE COMMUNICATE WITH YOUR LOCAL MOTOR CITY WASH WORKS REPRESENTATIVE FOR ANY DAMAGE TO YOUR EQUIPMENT!
 Remove from the crate the **AXIS ARCH HEAD ASSEMBLY** and carefully drop it on a heavy duty furniture dolly or any type of rolling cart and set it aside. The rolling dolly will permit you to safely move the head assembly into the wash bay without risking damage to the equipment.

 Locate the two arch legs assemblies (see Picture #3) and bring them to the installation area. Notice the **HIGH** and **LOW LIMIT SENSOR MOUNTS** visible from the outside face of the D/S leg assembly.

 ![Pic #3 D/S Leg Assembly](image)

 ![Pic #4 P/S Leg Assembly](image)

 Locate the **HP FILTER** from the shipping crate and mount on the **DRIVER’S SIDE LEG** as shown below:

 ![Pic #4A High Pressure Filter](image)

 Position the D/S leg assembly **38”** from the **INSIDE EDGE** of the **BASE PLATE** to the **INSIDE EDGE** of the **INSIDE GUIDE RAIL** (see Picture # 5). Square the base plate with the conveyor guide rail by measuring the distance between the base plate edge and inside guide rail for each end of the base plate as shown on Picture # 6. Secure the leg to the floor using four (4) 1/2” wedge type anchor bolts.

 **DO NOT DRIVE THE ANCHOR BOLTS TOO DEEP AND DO NOT TIGHTEN THE NUTS (SNUG ONLY)!**
 YOU MAY BE REQUIRED TO SHIM ONE OF THE TWO LEGS IN ORDER TO LEVEL THE ARCH AT A LATER TIME DURING THE INSTALLATION.
Position the P/S leg assembly in line with the D/S and 132" between each base plate (see Picture #5) and square with the conveyor. Secure the leg to the floor using four (4) 1/2" wedge type anchor bolts.

Position the P/S leg assembly in line with the D/S and 132" between each base plate (see Picture #5).

Bring the head assembly to the legs and position it perpendicular to the conveyor and on the ENTRANCE SIDE of the legs with the front of the head assembly facing the entrance of the wash. The front of the head assembly can be identify by the AXIS LOGO located on the top left of the head (see Picture #7).
Pick the head assembly with a Portable Lift (or a fork lift truck) capable of lifting at least 1000 LBS and before raising it up, remove the fasteners secured on each STANDOUT MOUNT on each end (see Picture #8). Removes the plastic ties holding the two ELEVATION BELTS, uncoil them and let them hang down as shown in Picture #9.

Raise the head assembly under the leg’s upper mounting plates and secure the standout mounts to the leg plate as shown in Pictures #11 and 12. Use the “inside” set of holes from the leg plates (see Pictures #11 below).

Finally, tighten the leg’s base anchor bolts and verify the LEVEL OF THE AXIS ARCH by using a level on top of the head assembly: THE ARCH ASSEMBLY HAS TO BE LEVEL ACROSS THE WASH BAY! Shim one of the legs if necessary.
Locate the main manifold assembly and before bringing it to the working area, secure the Emitter Photo-Eye Tree on the passenger’s side of the manifold (see Picture #13). Secure the Receiver Photo-Eye Tree on the driver’s side of the manifold (see Picture #13-A).

Locate the Tension Spring Assembly and FIRST secure the fastener closest to the manifold (as shown in picture #14). Secure the tension spring to the clamp as shown below (picture #14) and then ROTATE THE MOUNT UP and secure the second fastener (see Picture #14-A).
Grab the junction box hanging from the manifold and set it on top of the manifold assembly. Bring the ARCH MANIFOLD to the working area and set it on a cart sufficiently high to allow you to connect the two ELEVATION BELTS to the arch. Notice the ROTARY CYLINDER located on the PASSENGER'S SIDE of the arch assembly (see Picture #15). Locate the small ACCESSORY BAG (secured on top of the arch manifold assembly) containing the two BELT RETAINER PINS, open the bag and keep the pins for the next task (see Picture #16).

Remove both POSITIVE STOP PLATES from the side of the BELT MOUNT. Take the belt and count 19 TEETH starting from the end of the belt and make a loop by FOLDING IT IN HALF with the teeth facing each other. Slide the loop into the BELT MOUNTS and slide one RETAINER PIN into the loop as shown in Picture 17. Reinstall the Positive Stop Plate on the mount. Repeat the process for the second belt.
Raise one side of the MANIFOLD ASSEMBLY and engage it by sliding the UPPER MANIFOLD GUIDE into the track. Repeat the same procedure for the other side. The MANIFOLD ASSEMBLY should now be properly engaged in each track and ready to move UP and DOWN when running.

Open the middle cover of the head assembly and hang the cover as shown below. Using the MANUAL CRANK located near the electric motor, raise the manifold in order to allow anyone to walk under the arch for the duration of the installation. The MANUAL CRANK can be used to raise the manifold anytime the Axis Arch is out of service and the wash bay has to be cleared.

Locate the CONTROL BOX ASSEMBLY (see Picture #18) and bring it to the working area.
Mount the **CONTROL BOX ASSEMBLY** on the **DRIVER'S SIDE** of the head assembly with the front of the box facing outside the leg (see Picture #19).

Unroll the **CABLE CARRIER ASSEMBLY** and using the provided fasteners, secure to the arch manifold assembly as shown below. Secure the **SENSOR ELECTRICAL JUNCTION BOX** to the utility mount using the fasteners already located on the mount (see Picture #20).

Locate the **3/8” BLUE and YELLOW POLYFLOW TUBING**. Connect the tubing at the arch manifold assembly as shown in the picture below and pull the hose on one side and the tubing on the other side of the cable carrier toward the control box. Connect the manifold hydraulic hose to the **fitting assembly** (see Picture #21).
Connect the hydraulic hose to the HP FILTER located on top of the D/S LEG (see Picture #22). Connect the two tubes into the PNEUMATIC CONTROL BOX as show in Picture below:

Uncoil the UMBILICAL CORD (see Picture #24) from the control box (the UMBILICAL CORD is terminated with a connector and each wire is terminated with ferrules) and pull it through the cable carrier in the SAME RACEWAY AS THE TUBING. Pull the cord connector through the 1/2” NPT opening of the SENSOR ELECTRICAL JUNCTION BOX (see Picture 25) and connect each with wires as shown in Schematic #26.
Secure the umbilical cord with plastic ties. Secure all sensor cables into clips mounted on the manifold frame.

Secure the 1/2" hydraulic hose with HEAVY DUTY PLASTIC TIES at both ends of the cable carrier in order to prevent the hose from sliding out of the cable carrier while running. Secure the tubing and the umbilical cord to the 1/2" hydraulic hose.

Remove the D/S Leg Covers and secure the UPPER and LOWER LIMIT SENSORS to the D/S leg (see Picture #27 Task below). Secure both cables with plastic ties and re-install both covers.

Connect both the HIGH and LOW ENCODER CABLES to the encoder sensors located in the main head frame on D/S (see Picture #27 Task below).

Finally connect the ELEVATION MOTOR CABLE to the control box (see Picture #27 Task below).
Your AXIS HIGH PRESSURE ARCH requires about 5 SCFM @ 100 PSI of compressed air supply. The inlet air supply is equipped with a 3/8” PUSH-ON FITTING located on the bottom of the PNEUMATIC CONTROL BOX.

Pull a 3/8” OD poly-flow air tube from the MAIN AIR SUPPLY to the Axis Arch and connect it to the Axis main air inlet (see Picture #29).

WARNING!
IT IS IMPERATIVE TO SUPPLY THE AXIS ARCH PNEUMATIC SYSTEM PANEL 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 AXIS AIR DELIVERY SYSTEM OR ITS COMPONENTS
Electrical Installation of Your AXIS HIGH PRESSURE ARCH

Your AXIS HIGH PRESSURE ARCH operates from a SINGLE PHASE POWER SOURCE. Connect the arch POWER CORD to a SEPARATE 120VAC, 1PH, 15AMPS ELECTRICAL CIRCUIT. The power cord is the HEAVY MULTIWIRE GRAY CABLE located on the bottom right of the electrical enclosure (see Picture #30). The last cable (HEAVY MULTIWIRE BLACK CABLE) is the CONTROL CABLE.

THE AXIS ARCH REQUIRES A SEPARATE ELECTRICAL SUPPLY OF 15AMPS, 120VAC, 1PH
TO AVOID EQUIPMENT MALFUNCTION
DO NOT CONNECT ANY OTHER ELECTRICAL DEVICE
ON THE SAME CIRCUIT FEEDING YOUR AXIS ARCH CONTROL PANEL

WARNING!
THE MATERIAL REQUIRED FOR CONNECTING THE ARCH CONTROL PANEL IS THE CUSTOMER’S RESPONSIBILITY!
ALL WORK HAS TO COMPLY WITH LOCAL AND NATIONAL CODES!

Untie and unroll both the power and control cables and run them together to the ceiling of the wash to the RIGHT END SIDE of the CONTROL BOX as shown in picture #31. The cables are 20 FEET LONG from the ENCLOSURE to the cable end. This should allow for sufficient cable length to reach any ceiling height as well as reaching most mechanical room areas when located on the same side of the Axis Control Box.

Bring the cable to an ELECTRICAL JUNCTION BOX or directly to a 15AMPS 120VAC WALL OUTLET or ask your local electrical contactor to run a circuit from the arch to the lighting panel.
The **CONTROL CABLE** has **FOUR PAIRS** of two #18AWG each (see Picture #32). Each pair is pre-labeled at the factory and identified:

1. **MANIFOLD UP:** These wires may be connected to a momentary contact push button for a manual JOG UP. Pushing the override button will raise the manifold.

2. **E-STOP:** These wires have to be connected in series with the car wash EMERGENCY STOP circuit

3. **READY SIGNAL:** These wires have to be connected to the car wash controller OUTPUT-FUNCTION dedicated to the arch

4. **HP PUMP:** Theses wires have to be connected in series with the control wire commanding the HIGH PRESSURE PUMP starter control (coil)

---

**Your AXIS ARCH** requires a “READY” SIGNAL from your car wash controller. The READY signal can accommodate a wide range of voltage signals from **24 VOLTS DC** to **120 VOLTS AC**. The READY signal input is connected at the factory through the control cable. The control cable has also three other pairs of wires which have to be connected: Jog Up, E-Stop circuit and HP PUMP circuit. Both E-STOP and PUMP have to be connected **IN SERIES** within the car wash control system.

---

**WARNING!**

**THE MAXIMUM CAPACITY FOR EACH E-STOP AND HP PUMP CIRCUIT MUST NOT EXCEED 5AMP AT 120VAC (MAX)!**

---

**Connect** the control cable to the READY SIGNAL, the E-STOP circuit and the HP PUMP circuit as shown in picture #33. If needed, you may connect the **JOG UP** wire pair (1) to a button. This feature allows the operator to **MANUALLY JOG UP** and **RAISE** the manifold while operating. As soon as the **JOG UP BUTTON** is released, the manifold flips toward the exit and profiles the vehicle as in normal operation. This feature may be used to avoid the manifold coming in contact with oversized roof racks or other large equipment located on the roof of a particular vehicle.
Supply your AXIS HP ARCH with 18GPM @ 1000PSI. The HP SIDE units also require 18GPM @ 1000PSI. Use the schematic shown below to build your water supplies to the arch.
Special attention has to be paid to the size of the vehicle entering the wash: Your Axis High Pressure Arch can wash almost any vehicle produced on the market. However, some dimension limitations apply (see Picture #36).

The READY SIGNAL FUNCTION has to be programmed before the vehicle enters the arch. After the Axis Arch receives a READY SIGNAL, the manifold assembly comes from its highest position down until it reaches the LOWER LIMIT SENSOR (see Picture #29). The manifold arch is now oriented toward the ENTRANCE OF THE WASH ready for the first car. The CAR WASH CONTROLLER output has to be programmed to allow the arch assembly to come down "on time" for the first car.

THE ARCH will not enable the HP PUMP until the manifold assembly comes down to about 48” off the ground. Therefore, the CAR WASH CONTROLLER output for the HIGH PRESSURE PUMP has to be programmed to turn ON no sooner than the arch reaching its lowest position.

When a vehicle reaches the arch, the PHOTO-EYES will command the arch manifold to raise and “profile” the vehicle. The Picture #37 identifies the position and the relationships between the different photo-eyes.
After the LOWER ENTRANCE PHOTO-EYE beam gets broken by the front end of the vehicle, the arch will start to RISE UP (see Picture #38). The rising speed is preset at the factory and will be sufficiently fast to profile the entire front of the vehicle for most of the conveyor line speeds. If the rising speed is not sufficiently fast for the current conveyor line speed or the vehicle presents a particularly high front end, the HIGHER ENTRANCE PHOTO-EYE light beam will be broken, increasing the arch rising speed to allow the arch to safely move above the front end of the vehicle.

As soon as the arch reaches a pre-determined height, the MANIFOLD ASSEMBLY WILL NOW ROTATE IN A DOWNWARD DIRECTION POSITIONING THE NOZZLES ALMOST PERPENDICULAR TO THE VEHICLE TOP SURFACE (hood, roof, etc.). The transition position from front end to top surface may vary with the conveyor speed as well as the shape and size of the vehicle. The arch transition timing may differ depending on vehicle type from the tip of the hood to somewhere the middle of the hood.

If the entrance photo-eye beam gets broken by the hood or the top surface of the vehicle, the arch will rise and re-position itself accordingly, accurately profiling the vehicle while consistently keeping the distance between the NOZZLES AND THE VEHICLE SURFACE FROM ABOUT 19” TO 24” see Picture #40).
distance may also vary slightly depending on the conveyor line speed, the shape and size of the vehicle and the area it is covering. The manifold assembly will now remain in that downward position until it reaches the rear of the vehicle or until it reaches the rear window of a **PICK-UP TRUCK**.

![Pic #40 Top Surfaces Spraying](image)

Both the MIDDLE and EXIT PHOTO-EYES are used as “HOLD” to maintain the height of the arch manifold assembly. When the arch reaches the rear of the vehicle, the manifold assembly ROTATES TOWARD THE REAR of the vehicle and starts the move down on the rear surface of the vehicle (see Picture #41 and 42). The transition of the arch manifold from the top surface to the rear surface may vary depending on the conveyor line speed, the size, type and shape of the vehicle.

![Pic #41 Rear Surface Spraying](image)
When the arch reaches its LOWEST POSITION after the rear of the vehicle, the manifold assembly will now ROTATE BACK TOWARD THE ENTRANCE OF THE WASH, to its original position, ready for the next car. If the READY SIGNAL is turned OFF, the arch will rise back to its highest home position, waiting for the next READY SIGNAL. If the ready signal is turned back ON while the arch is rising to its original home position, the arch will immediately interrupt the homing process and lower itself back to its lowest home position, ready for the next vehicle.
In the event of a malfunction, your **AXIS HIGH PRESSURE ARCH** features a self-diagnostic system that communicates the **STATUS OF THE ARCH PROCESS** thru the **STATUS LIGHT** (see Picture #43) located on the **MAIN CONTROL PANEL**. The different **STATUS CODES** are conveniently listed on the front of the **ARCH CONTROL ENCLOSURE**. The different status codes are explained below:

<table>
<thead>
<tr>
<th>LIGHT</th>
<th>STATUS</th>
<th>DIAGNOSTICS</th>
<th>REMEDIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 BLINK</td>
<td>RING SWITCH ERROR</td>
<td>1) OVERSIZED VEHICLE RING SWITCH SENSOR CIRCUIT MALFUNCTION</td>
<td>VERIFY FOR PRESENCE OF OVERSIZED VEHICLE OR VEHICLE EQUIPPED WITH OVERSIZED AFTER MARKET ACCESSORIES</td>
</tr>
<tr>
<td>2 BLINKS</td>
<td>HOMING PROCESS</td>
<td>ARCH IS CURRENTLY HOMING FOLLOWING A POWER-UP</td>
<td>WAIT UNTIL &quot;HOMING&quot; PROCESS IS COMPLETED</td>
</tr>
<tr>
<td>3 BLINKS</td>
<td>PHOTO-EYE ERROR</td>
<td>PHOTO-EYE SENSOR CIRCUIT MALFUNCTION</td>
<td>IDENTIFY DEFECT PHOTO-EYE SENSOR OR CIRCUIT AND REPLACE</td>
</tr>
<tr>
<td>4 BLINKS</td>
<td>MOTION ERROR</td>
<td>1) ENCODERS DID NOT RESPOND FOLLOWING MOTION COMMAND 2) MECHANICAL FAILURE OF THE ELEVATION SYSTEM</td>
<td>1) IDENTIFY DEFECTIVE ENCODER SENSOR AND REPLACE 2) IDENTIFY MECHANICAL ISSUE WITH ELEVATION SYSTEM AND REPAIR</td>
</tr>
<tr>
<td>6 BLINKS</td>
<td>MANUAL MODE PROCESS</td>
<td>ARCH COMMANDS ARE CURRENTLY IN MANUAL MODE</td>
<td>SWITCH THE &quot;MANUAL-AUTO&quot; SELECTOR (see Picture #43) BACK FROM MANUAL TO AUTO</td>
</tr>
<tr>
<td>7 BLINKS</td>
<td>INVERTER ERROR</td>
<td>ELEVATION INVERTER FAULTED</td>
<td>1) TURN THE POWER OFF, OPEN THE CONTROL ENCLOSURE AND TURN THE POWER BACK ON. OPERATE THE ARCH MANUALLY UP AND DOWN AND VERIFY FOR INVERTER FAULT. IF FAULT OCCURS, RECORD THE ERROR CODE FROM THE INVERTER AND CALL THE FACTORY 2) LOOK FOR DEFECTIVE ELEVATION MOTOR OR MECHANICAL FAILURE OF THE ELEVATION SYSTEM</td>
</tr>
<tr>
<td>8 BLINKS</td>
<td>END LIMIT ERROR</td>
<td>1) HIGH OR LOW LIMIT SENSOR CIRCUIT MALFUNCTION MECHANICAL FAILLURE OF THE ELEVATION SYSTEM</td>
<td>1) IDENTIFY DEFECTIVE LIMIT SENSOR AND REPLACE 2) IDENTIFY MECHANICAL ISSUE WITH ELEVATION SYSTEM AND REPAIR</td>
</tr>
</tbody>
</table>

**Pic #43 Status Codes and Remedies**
STATUS LIGHT

- 1 BLINK = RING SWITCH FAULT
- 2 BLINKS = HOMING PROCESS
- 3 BLINKS = PHOTO-EYE ERROR
- 4 BLINKS = MOTION ERROR
- 6 BLINKS = MANUAL MODE PROCESS
- 7 BLINKS = INVERTER ERROR
- 8 BLINKS = END LIMIT ERROR
In the event of a failure in which your **AXIS HP ARCH** is out-of-service, you have the opportunity to disable it by turning **OFF** the main switch. However, as a safety feature, the **CAR WASH EMERGENCY STOP CIRCUIT** will open shutting down your car wash. In order to bring your **CAR WASH BACK IN SERVICE** you will have to **FLIP DOWN** the **BY-PASS SWITCH** (see Picture 45) located in the control enclosure.

**FLIPPING THE SWITCH TO BY-PASS WILL DISABLE THE ARCH. MOVE THE ARCH MANIFOLD ASSEMBLY CLEAR FROM THE VEHICLE. USE THE MANUAL OVERRIDE BUTTONS TO OPERATE THE ARCH MANUALLY BEFORE DISABLING IT**
Start-Up Procedures:

- You are now finished with your installation and are ready to safely bring your **AXIS HIGH PRESSURE ARCH** to life. First task will be to disconnect each HP water line feed at the equipment inlet. “BUMP ON” momentarily each HP Pump unit in order to prime the water pump and flush the water lines. When the lines are flushed, reconnect each water feed and repeat the same operation in order to verify that the nozzles are working properly. Adjust the pressure at the pumping station to **1000PSI**. Repeat the same procedures for your optional **HIGH PRESSURE SIDE UNITS**.

- Repeat the same procedure with the **AIR SUPPLY** by disconnecting the air line at the **MAIN EQUIPMENT INLET** (see Picture #27), open the air supply to the 3/8” line and purge for a couple of seconds. Shut off the air supply and reconnect to the equipment. **Turn ON** the air to the arch and verify that the **MAIN PRESSURE AIR REGULATOR** located in the pneumatic enclosure is set at **90PSI**. Adjust as needed.

- **Turn “OFF”** the **MAIN POWER SWITCH** (see Picture #44) if not already done and **TURN ON** the main breaker feeding the power to the arch. Open the control enclosure, using voltmeter, measure the voltage coming to the arch on the **BOTTOM OF THE MAIN SWITCH**. The voltage should read about **120VAC**. Shut the enclosure door and turn the power **OFF**.

**DO NOT TURN ON THE MAIN POWER SWITCH YET!**

- **Switch** the arch to “**MANUAL MODE**” using the manual-auto selector switch located on the control enclosure and **TURN ON** the **MAIN POWER SWITCH**. Wait for about 10 seconds or until the **STATUS LIGHT BLINKS 6 TIMES** indicating that the arch is currently on manual mode. Using the **UP BUTTON**, jog the arch all the way up until it reaches the **HIGH LIMIT SENSOR** (the sensor indicator light will change color from **GREEN TO ORANGE** when the arch manifold reaches its position).

**WARNING!**  
**THERE ARE NO ELECTRICAL LIMITS STOPPING THE JOG PROCESS. BE AWARE THAT YOU MAY OVER TRAVEL THE MANIFOLD ARCH BY HOLDING THE JOG BUTTON BEYOND THE PHYSICAL HEIGHT LIMIT**

- **Jog** the arch manifold down to about **HALF THE HEIGHT** and stop. Turn the manual-auto selector back to **AUTO** and observe the arch doing a **HOMING PROCESS**: The arch will rise up until it reaches the high limit sensor and back down looking for the bottom one. When done, the arch will now rise again to its **IDLE HOME** position, waiting for the first **READY SIGNAL**.

- **Again, Switch** the arch to “**MANUAL MODE**” and bring the manifold to about **5” off the floor**. Remove each nozzle from the manifold by unscrewing the brass fitting nuts from the adaptor. **“BUMP ON”** again the HP Pump unit for about **ONE MINUTE**. This procedure allows for the manifolds and its components to be thoroughly flushed before reconnecting the **RotoNozzle**. Reconnect the RotoNozzle and switch back to **AUTO**.
Parts Identification:

- **8CPLGLJYIRN0002**: 1" BORE IRON COUPLING
- **8CPLGLJYIRN0003**: 1-1/8" BORE IRON COUPLING
- **8AXISSHFSPA0003**: GBOX SHAFT SPACER
- **8GRBXWRMBDL0001**: WORM GEARBOX 60:1
- **8GRBXWRMBDL0001**: WORM GEARBOX 60:1
- **8CPLGLJYURE0001**: URETHANE SPIDER
- **8FASTBLTHEX0015**: 3/8" – 16 X 1" BOLT
- **8FASTNUTREG0003**: 3/8" – 16 NUT
- **8ELECCBLMN10001**: AXIS MOTOR CABLE 14 AWG
- **8MOTRELCTR0001**: ELEC. MOTOR 1 HP
- **8FTNGCGPNYL0007**: CORD GRIP 1 CABLE
- **8MANLAXISARCR001**: ELECTRIC MOTOR MANUAL CRANK BOLT

© Motor City Wash Works, Inc. 48285 Frank, Wixom Michigan 48393 U.S.A. Phone: 248.313.0272 • Fax: 248. 313.0271
8MANLAXISARCR001 www.motorcitywashworks.com 29
**Warranty and Return Procedure:**

Motor City Wash Works warrants this product to be free of defect in materials and/or workmanship for a period of **one year** from the date of purchase. 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, but 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 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.