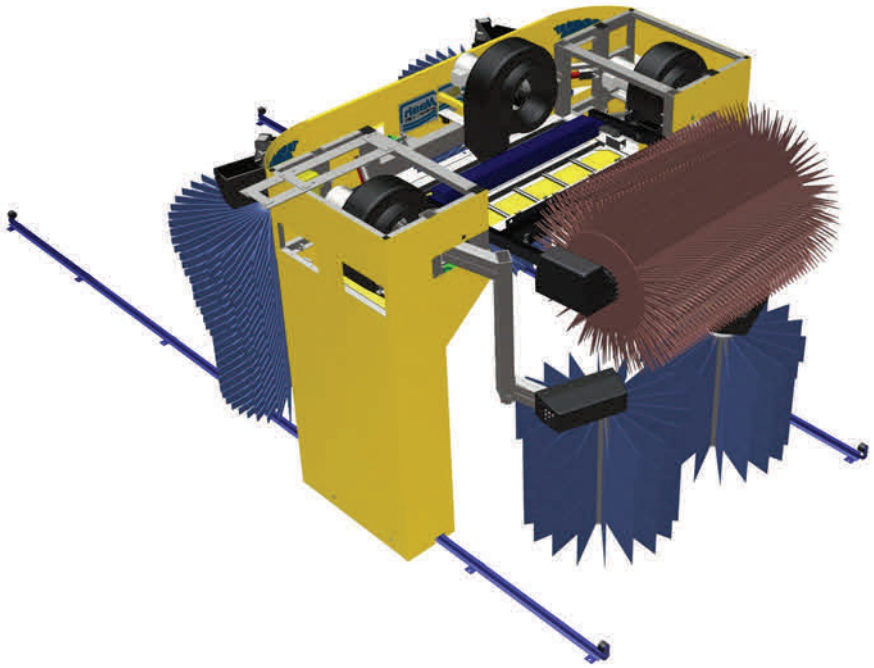
BayWash
i5 In-Bay Automatic



Installation Manual

Oasis Car Wash Systems, Inc.
1909 E 12th Street
Galena, KS 66739

i5.2M16

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INTRODUCTION

This Owner's Manual contains information that is vital to the successful installation, operation, and maintenance of your BayWash i5 vehicle washing equipment.

Please read the full content of this manual prior to any installation and/or operation of the equipment. Keep this manual in a location where it may be used for ongoing reference.

Should you have any questions on the operation or servicing of this equipment please contact us directly at:

TECHNICAL SERVICES DEPARTMENT

OASIS CAR WASH SYSTEMS

1909 EAST 12TH STREET

GALENA, KS 66739

TOLL FREE (US) PHONE: 800.892.3537 Ext: 26
FAX: 620.783.5735

partsdept@oasiscws.com

SAFETY REQUIREMENTS

1) Only employees specifically instructed by the location manager will be permitted to enter the wash bay to perform inspections or maintenance.
2) DO NOT enter the wash bay when the equipment is operating.
3) Always exercise caution when walking through the wash area, obstructions and slippery conditions may be present.
4) NO NOT run through the wash area for ANY reason.
5) DO NOT perform any work on equipment without first performing Lock-Out Safety Procedures.
6) When maintenance requires that a piece of equipment be in operation, one qualified maintenance person must stay at the power disconnect switch while that equipment is operating.
7) All electrically powered equipment must have manually operated disconnects capable of being locked in the "OFF" position. Equipment that has been "locked out" for any reason can only be started by the person who performed the "lock out" procedure.
8) DO NOT attempt to repair or adjust any pressurized liquid or pneumatic part, hose, pipe, or fitting while that equipment is in operation.
9) Any "Stop" switch activated must be reset only by the person who initiated the operation.
10) Electrical connections and repairs are to be performed only by a Licensed Electrician.
11) Store all cleaning and washing solutions and oils in a well ventilated area away from heat.
12) Clean up fluid spills immediately to prevent hazardous safety conditions.
13) Be certain to follow all safety procedures on MSDS sheets for each chemical product used.
14) All new employees must be thoroughly trained in safe operation and maintenance practices.
15) All employees must attend periodically scheduled safety briefings.
16) DO NOT operate any piece of equipment that requires safety covers with those covers removed or improperly installed.
17) DO NOT allow any part of your body, loose clothing, jewelry, etc. to come into contact with moving machinery.
18) DO NOT wear loose fitting clothing around moving machinery.
19) At least two (2) qualified maintenance technicians must be present when performing equipment repairs or preventative maintenance.
20) When working on any equipment that is higher than a person's shoulders, always use a fiberglass ladder that is in good condition.

CUSTOMER CONNECTIVITY REQUIREMENTS

The Internet Communication Package (optional) features a built-in web server within the HMI that provides real time information about your machine, the ability to make option changes to your wash remotely, and sends out fault information to your email.

As a customer, you are required to obtain a dedicated high speed internet access via a DSL or Cable Modem from a local internet provider in order to receive alerts, access the BayWash i5 remotely, and updates for the HMI equipment.

Please make sure you order a commercial grade internet circuit with a static public IP address.

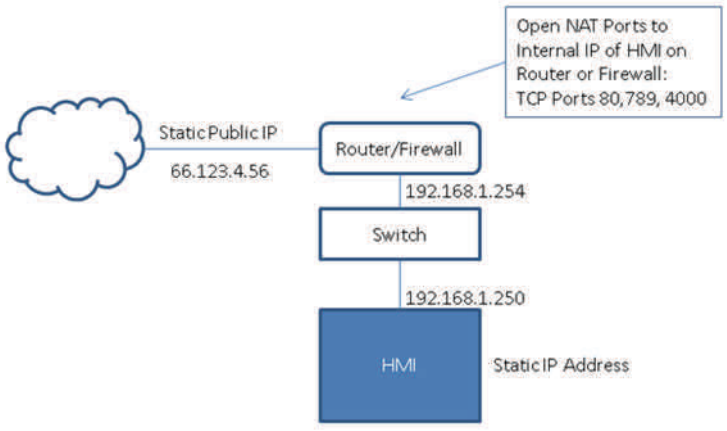
Once your internet connection has been established and tested you will need to setup Port Forwarding or Network Address Translation (NAT) on your router in order for the BayWash personnel to access and manage the HMI remotely.

Please instruct your local Computer Technician to enable Port Forwarding or NAT as follows on your router/firewall equipment:

NOTE: You must obtain a static IP address from your ISP in order to successfully complete this portion of the Installation process.

Source	TCP Ports	Function	Destination
Internet		Web Server	Internal HMI IP Address
Internet		Remote HMI update	Internal HMI IP Address
Internet		Remote PLC update	Internal HMI IP Address

If you don't have a local Computer Technician we suggest you contact a local Geek Squad or similar company to address the network changes. A sample network diagram is provided below only as a reference.



Utilities Requirements

UTILITIES INTERCONNECTION AND THE MATERIALS REQUIRED FOR INTERCONNECTION TO OASIS' EQUIPMENT ARE THE RESPONSIBILITY OF THE CUSTOMER !

PERFORM ALL TRADES WORK TO ALL APPLICABLE LOCAL AND NATIONAL CODES!

Water

- The Customer's Plumber is to provide and install three 1 inch city water lines @ 60psi (nominal) with manual shut-off valve to be connected to the equipment.
- The Plumber's scope of work may expand dependant on support equipment ordered.

Electrical

- The Customer's Electrician is to provide and install 3 phase power 208 VAC-240 VAC to the unit and make needed connections to related equipment as required by the options ordered.
- Electricians need to refer to the machine electrical schematic for AMPERAGE (electric current) specifications.

BE CERTAIN THE ELECTRIC MOTORS ARE PROPERLY WIRED FOR THE SUPPLY VOLTAGE !

- The Customer's Electrician is to provide and install single phase power as specified in the electrical schematics.
- The Electrician's scope of work may expand with support equipment ordered and local code requirements.

NOTE:

It is the responsibility of the Site Owner or Manager to obtain any and all permits and/or inspections related to the installation of Oasis equipment.

INSTALLATION TOOLS

1) Safety Glasses
2) 1/2” Drive Ratchet Set
3) Standard Combo Wrenches
4) Large Standard Screwdriver
5) 1” Hammer Drill
6) 3lb. Sledge Hammer
7) Forklift-5,000lb. Rated, 6ft. Forks, 3-Stage, Side-to-Side
8) i5 Dollies (carts)
9) Pry Bar
10) Masonry Nylon String-brightly colored
11) Impact Gun-Deep Well Set
12) Wire Dykes
13) Needle Nose Pliers
14) Lifting Strap-3” Width, Various Lengths, Rated for 6,500lbs.
15) Hoist
16) Sawzall or Portable Band Saw
17) Levels-Torpedo & 4ft.
18) Tin Snips
19) Ball-Peen Hammer
20) High Speed Drill
21) Broom and Dustpan
22) Welder-225 amp Minimum, Continuous Duty
23) Bottle Jack
24) Welding Helmet
25) Appropriate Protective Clothing
26) Tri-Square
27) Drift Pins, Spud Wrench (Alignment Tools)
28) Extension Cords-20 Amp Grounded, Assorted Lengths
29) Chain-3ft.
30) Johnson Bar (s)
31) Ladders-6ft. & 8ft. Fiberglass
32) Grinders-9” & 4-1/2”
33) Torch & Cutting Tanks
34) Skill Saw
35) Drill Bits-Assorted Metal and 3/8”, 1/2”, 5/8” Masonry
36) C-Clamps-6” & 8”
37) Wood 2”x4”-Various Lengths
38) Laser Level or Transit
39) Multi-meter (Volt-Meter)
40) Small Electrical Screwdriver Set
41) Channel Locks-12” or Larger
42) Crescent Wrenches-12” or Larger
43) Step Bit-3/4”
44) Hose Cutters
45) Utility Knife

*This Installation Tools list is to be used for reference only. Some tools required for your site-specific installation may not be listed. Some tools may also be listed that are not required for your site specific installation.

1) Pipe Dope

2) Anti-Seize

3) Teflon Tape

4) Shim Plates-1/4”

5) Lumber Pencil

6) PVC Pipe & Glue

7) Cush-a-Clamps

8) Tap-con Screws

9) Masking Tape

10) Black Marker (Sharpie)

11) Installation Kits

12) Anchor Bolts

13) Spring Nuts w/ Bolts

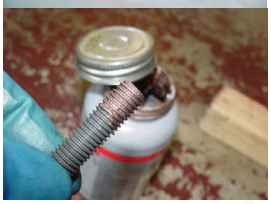
14) RPC Clamps

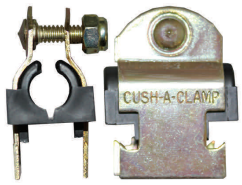
15) Uni-Strut

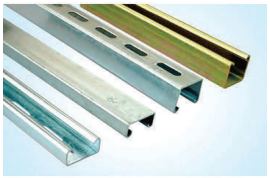
16) Hoses & Tubing

17) Zip Ties

INSTALLATION CONSUMABLES







INSTALLATION DOCUMENTS

Bill of Lading

Equipment manuals (Installation and Operation)

Packing list

Oasis' site-specific drawings

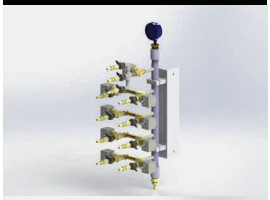
On-Board and Off-Board electrical schematics

NOTE: Only BayWash i5 supplied equipment will be found on the documents provided by Oasis. If you are using another supplier's equipment, please reference those drawings and documents for proper placement and installation.

*Included in your Documentation Packet are the Specification Sheets for all components related to your On-Board and Off-Board Panels. These items can be found in a sealable plastic packet with your Operations Manual.

EQUIPMENT INCLUDED

Chemical System: Consists of a 3/8" valve for each chemical component you intend to use on your BayWash i5. Assembled as a manifold-type application, this system can be mounted in various locations throughout your pump room to accommodate chemical supply routing and space saving.



Chemical Booster Pump: This pump, typically 1 HP or larger, can be mounted in various locations much like that of the Chemical System. Its role is to push water through your Chemical System and out to the nozzles, without using the Pump Stand.

Off-Board Panel: Approximately 3'wide x 4'tall this panel can either be mounted to the floor with a leg kit or hung from the wall to save floor space. Components found within this panel include processor, input/output cards, power supply, transformer, terminal blocks, etc.

Pump Stand: Built to suit the specifications of your BayWash i5, this pump stand is approximately 30"wide x 30"deep x 6'6"tall.

Energy Chain: Also referred to as an Igus Chain, this flexible in-bay tube system houses all of the electrical wires and fluid hoses transitioning from your bay to your pump room. It is mounted to the wall of the bay on a two (2) piece trough via three (3) wall supports.

Gantry Tracks: Shipped as four (4) separate pieces, these mount to the floor of the bay to give your BayWash i5 a smooth traveling surface.

Brush Assemblies: Both front and rear Brush Assemblies are removed from your BayWash i5 prior to shipping to your location. The motor and hub are pre-assembled to the shaft and ready for re-installation upon site arrival.

Brush Material: Typically shipped in boxes, separated, stacked and ready for installation. Instructions for loading this material onto the hubs is included both in this manual and in each box of material.

OPTIONAL EQUIPMENT

Undercarriage: Typically used with the BayWash i5 is a stationary option installed on the bay floor located under the vehicle as the BayWash i5 is operating. This is also available as a bay entrance option which would turn on as the vehicle enters the bay.

Horn Assembly: A water resistant speaker which sounds a horn to let your customers know when they have reached the "stop" point in the bay.

Speaker Assembly: A water resistant speaker which gives verbal commands to your customers for different in-bay actions i.e. "stop, back up, exit wash bay, please drive forward".

Total Body Protectant Chemical Option: An added chemical option (valve, injector, showerhead and fittings) to meet the needs of those customers using this product.

BayWash by Oasis i5

IN-BAY BOX COMPONENTS

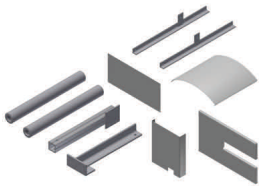
Rear Arm Cylinders, Shock Absorbers, Pins, and Spacers: Vital to the smooth operation of the rear arms, these components are shipped separate and easily installed.

Uplift Angle Brackets: Designed to protect the Gantry from being lifted off the Tracks, these brackets mount under the lower drive assemblies.

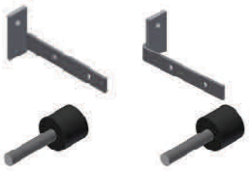
Reflective Flags: Wall mounted aluminum flags with reflective tape that give the Gantry a target to find the end of travel points at both entrance and exit ends of the bay.

Top Brush Rubber Bumpers: These items are removed from your BayWash i5 prior to shipping to your location. Their purpose is to cushion the impact of the Top Brush while coming into contact with the Gantry framework during normal operation.

Gantry Skins: Typically the skins to cover the Lower Drive Assemblies are shipped loose to avoid damage. These skins are probably the last cosmetic piece you will want to install on your BayWash i5.



Gantry Stop Brackets: These brackets are the back-up defense to stop your Gantry in the event that a Reflective Flag did not read. They mount to the end of the Gantry Tracks and use a rubber bumper as a cushion.



Hardware Kit: Everything from wedge anchors to flat washers, this Kit was designed to minimize your search for the right fastener for the job. Keep in mind certain circumstances may require items we do not supply, so please be sure to have a contingency available.

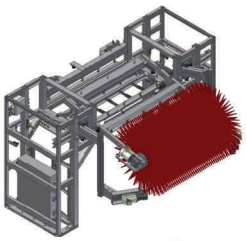
Chemical Poly Hoses and Gantry Hoses: Any hose not already installed on the Gantry or Pump Stand should be here. These hoses are typically those whose lengths always vary or those that were removed for shipping purposes. Keep in mind, anything with a JIC fitting on each end should be used "as-is" and not cut to a smaller size.

Gantry Splice Plates: These plates are designed to be used in cases where the Uplift Angle Brackets are left off. Their role is to connect the two (2) sections of Gantry Track together in the middle to keep them from shifting during Gantry movement. *Only use if rails are not welded together.

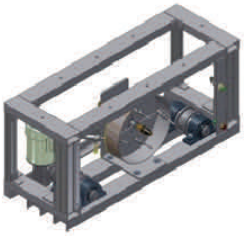
Undercarriage Optics (if applicable): Both a transmitter and a receiver to be installed within range of the exit side of the entrance undercarriage to activate and de-activate its use.

BAYWASH i5 COMPONENTS

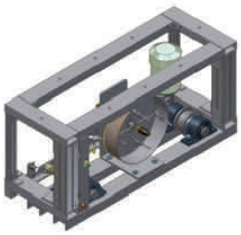
Upper Assembly: The upper portion of the overall "Gantry", this component attaches to the lower drive assemblies prior to being set onto the tracks.



Driver Side (DS) Lower Drive Assembly: This component houses both a drive and non-drive wheel rocker blaster bar (if applicable), and attaches to the bottom of the Upper Assembly.



Passenger Side (PS) Lower Drive Assembly: This component houses both a drive and non-drive wheel rocker blaster bar (if applicable), and attaches to the bottom of the Upper Assembly.



Driver Side (DS) Rear Arm Assembly: The longest of the two rear arm assemblies, this component mounts to the Gantry and acts as a pivot point for the Brush Assembly.

Passenger Side (PS) Rear Arm Assembly: The shortest of the two rear arm assemblies, this component mounts to the Gantry and acts as a pivot point for the Brush Assembly.

Front Brush Hubs: These components attach to both the DS and PS front arms and, after installed, are loaded with the appropriate brush material.

Rear Brush Assemblies: These assemblies attach to the Rear Arm Assemblies. They are complete with motor, shaft, and hub. After installed they are loaded with the appropriate brush material.

Energy Chain Trough and Wall Supports: These components will attach to the wall of the bay in accordance with your site specific drawings to hold the Energy Chain.

SITE INSPECTION/ UNLOADING

1) Locate the site Project Manager/Owner and introduce yourself. Inform them that you will be conducting a site inspection and invite them to participate. Assure them that they will be informed of any problems you find during the site inspection.
2) Inspect the site, paying close attention to the bay, pump room, and property in general to ensure that all areas are ready for installation to begin. Confirm that the water service is installed and in the proper location.
3) Identify a large open area with easy bay access where the equipment can be unloaded and staged once it arrives.
4) Identify both the entrance and exit ends of the bay, then determine the easiest and/or more convenient doorway to use when installing the BayWash i5.

NOTE: Look for any obstacles on the floors, walls, etc. that would prevent easy access for the forklift and dollies (including pit grate and curbs).

5) Once the truck arrives, locate the appropriate tools for unloading the trailer including but not limited to; forklift (5,000lbs. or greater), i5 dollies, pry bar, Johnson bar, 3ft. Chain, c-clamps, tin snips.
6) Determine the appropriate piece of moving equipment (i.e. Johnson bar & dolly or forklift) to assist in unloading equipment from the truck. Bring the selected equipment to the truck and begin the unloading process.
7) Remove all straps holding the BayWash i5 and its components to the trailer.

NOTE: The following steps are best completed by use of a forklift and i5 dollies.

8) Position the forklift in front of the entrance side of the BayWash i5 upper assembly. Raise the forks and place them under the header (belly pan) of the upper assembly until you have approximately 1 inch between the end of your forks and the frame of the top brush.
9) Use c-clamps to attach the BayWash i5 upper assembly to the forks.
10) Raise the BayWash i5 upper assembly off the trailer and position over the i5 dollies, then lower the upper assembly onto the dollies.
11) Using the forklift, remove the remaining components and equipment from the trailer and move them to the staging area for later use.

Forklift Placement Under Gantry

Clamp Fork to Gantry for Security

i5 Dollies (Purchased Separately)

INSTALL OFF-BOARD PANEL

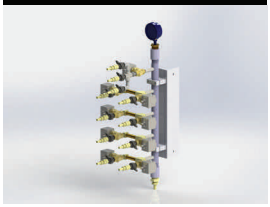
1) Check the site-specific drawings provided to determine the best placement of the off-board panel.
2) Once the location has been determined, it will now need to be mounted. With one person holding the unit in place, mark two holes.
3) Move the unit and drill the two holes you just marked with a hammer drill.
4) Attach the unit to the wall using concrete anchors.
5) Drill the remaining two holes then attach the unit using the same method as above.

NOTES:

Allow at least one (1) foot of clearance under the Off-Board Panel for wire-in connections.

The Off-Board Panel can be mounted either to the floor with legs attached or to the wall without legs attached.

INSTALL CHEMICAL SYSTEM



1) Check the site-specific drawings provided to determine the best placement of the Chemical System.
2) Once the location has been determined, mark and drill holes in relation to brackets provided.
3) Once holes are drilled, place unit on the wall over holes and attach to the wall with concrete anchors.

NOTE: The Chemical System is attached to the Pump Stand for shipping. If you wish to leave it attached and use it as it is shipped, disregard steps 1-3 and continue to step 4.

4) Now that the Chemical System is firmly attached, locate the wires coming from the coils.
5) Once located, connect the opposing ends of each wire to its terminal location inside the Off-Board Control Panel.

NOTE: Each colored wire will connect to its designated terminal while all solid white wires will connect to the coil's neutral voltage terminal. If the coil is 24VDC, the solid white wires will connect to a #4 terminal. If the coil is 24VAC, the solid white wires will connect to a #2 terminal.

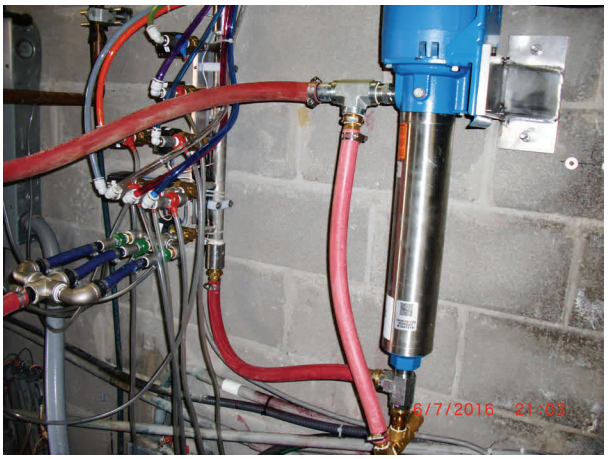
6) Once all wires have been attached to their respective terminals, the 3/8" poly tubing can be connected to each injector and routed to its respective chemical source.

INSTALL BOOSTER PUMP

1) Check the site-specific drawings provided to determine the best placement of the Chemical Booster Pump.
2) Once the location has been determined, mark and drill holes in relation to the attached bracket.
3) Once holes are drilled, place unit on the wall or floor over holes and attach with concrete anchors.

NOTE: Follow the manufacturer's instructions for proper orientation when installing this unit on a wall. Oasis will not be held responsible for damage done to the pump due to improper installation.

4) Once the Chemical Booster Pump is securely in place, connect wiring and hoses in accordance with both the Manufacturer's instructions and the site-specific drawings.



INSTALL MAIN WATER SOLENOID

IF APPLICABLE

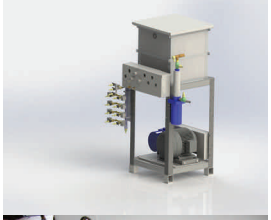
1) Locate the city water supply line that will feed water to the Pump Stand.
2) Check the site-specific drawings provided and install the 1" Main Water Solenoid Valve (24VDC) provided by Oasis.

NOTE: The 1" Main Water Solenoid Valve (24VDC) is used to feed the 1" red hose in the Energy Chain, which supplies city water to the BayWash i5.

3) Wire the Din Connector with the 5m cable provided by Oasis as follows:
   - Blue wire to terminal 2 on Din Connector.
   - Black wire to terminal 1 on Din Connector.
   - White and Brown wires are not used.(Do not cut, save for future use if needed.)

4) Feed the opposite end of the 5m cable into the Off-Board Control Panel and wire as follows:
   - Blue wire from terminal 2 on Din Connector wires into any #4 terminal block.
   - Black wire from terminal 1 on Din Connector wires into (see I/O sheet).

INSTALL PUMP STAND



1) Check the site-specific drawings to determine the best placement of the Pump Stand.
2) Once the location has been determined, move the unit into place and square up with a wall or other reference point.
3) Once set into its final location, level all four (4) corners of the Pump Stand and secure to floor with concrete anchors and aluminum angle (not provided).

NOTES:
Some things to keep in mind when deciding placement of the Pump Stand include, but are not limited to;

1) Location of incoming city water supply.
2) Orientation of Pump Stand in relation to fittings, hoses, etc.
3) Distance from electrical components, walls, other equipment, etc.

NOTES

INSTALL GANTRY TRACKS

READ ENTIRE SECTION PRIOR TO INSTALLATION

1) Inspect entire bay for obstructions on both walls and floor. If any found, clear them in order to proceed with installation.

NOTE: Ask about in-ground floor heat before drilling.

2) Refer to the site-specific drawings provided to determine the proper location of the Gantry Tracks. Be sure to accommodate room at each end of the bay for brushes.
3) Locate the center of each doorway and make a mark on the floor at this point. This will be critical to the rest of the installation process.
4) Using a chalk line, lay a line the length of the bay between the center marks you made in step 3. This will be your reference point to parallel both sets of tracks.
5) Measure outward from the center line toward each wall and make a mark at 63" on each side of the bay. You should now have four marks, two at each end of the bay, 126" apart.
6) Using a chalk line, lay a line the length of the bay between the marks you made in step 5. This will be your reference point to lay the Tracks into place.

NOTE: At this point you should have 3 lines chalked on the floor parallel to each other and running the entire length of the bay.

7) Using a laser level or transit, survey the floor elevation along your outside chalk lines for any irregularities in height. Mark the highest point on the floor when found.

NOTE: Remember, the highest point in the floor will be the starting location for leveling your Tracks.

8) Bring one set of rails into the building and lay them on the floor in their approximate location. Lay them directly over the outermost chalk line.
9) The first pair of Tracks is to be placed at 63" from the bay centerline to the center of the Track itself. Using a tape measure, set one side of Tracks first (2 rails). Next, place the other side of the Track by measuring 126" from the centerline of the already positioned Tracks.
10) Measure the Tracks from corner to corner (X pattern) to check if the rails are square.

NOTE: The distance between the centerlines of each side of the tracks (PS and DS) should be 63" apart, making a total of 126" from the center of each set of rails.

11) With all four (4) sections of Track positioned and parallel to each other, mark and drill holes for the anchor bolts using a hammer drill and 5/8" bit.
12) Once all holes are drilled, reposition Tracks if necessary and shim both sides to level.
13) Once all Tracks are level, parallel, and 126" apart measured from the bay centerline, decide which end of the bay would be best to accommodate entry of the Gantry.

NOTE: Most bays are not long enough for all sections of the Track to be installed prior to moving the Gantry into the bay. Decide which end you wish to bring the Gantry in from as you will leave these two (2) sections of Track out until the Gantry is sitting in the bay.

14) Once Gantry entry has been decided, insert anchors into the floor for only one end of the bay's Tracks. The other two (2) Tracks at the opposite end will be installed after the Gantry is in the bay.
15) Secure and tighten the leveled Tracks to the bay floor using the anchor bolts provided, using anti-seize for all bolt threads. Cut off excess bolt lengths flush with nuts before proceeding.

NOTE: Once one end of the bay's Tracks have been installed, proceed to the "i5 GANTRY INSTALLATION" (pages 21-22) prior to completing the following steps.

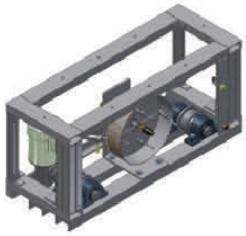
16) Now that the Gantry is sitting on the rails that are installed, position the final two (2) Tracks into place and follow the same procedures to attach them to the floor as the previous Tracks.
17) Once all Tracks are secured to the floor, you can either weld the seams of the Track sections together, or use the provided Splice Plates and bolts. In either case, make sure the seam of the Tracks is flat and level as not to impede movement of the Gantry.

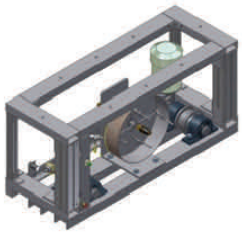
INSTALL DS & PS LOWER DRIVE ASSEMBLY

1) Place the DS and PS lower i5 drive assemblies on the rails using a forklift or other suitable equipment.

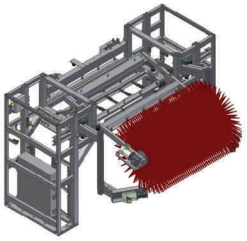
NOTE: Make sure the Wheel Blaster nozzles are facing inward toward the center of the bay, and make sure you have the correct Lower Assembly on the correct side (refer to site-specific drawings).

2) Once both sides are in place, level them up with a block of wood or other suitable material until the Upper Assembly is bolted into place during a later step.





INSTALL i5 UPPER ASSEMBLY

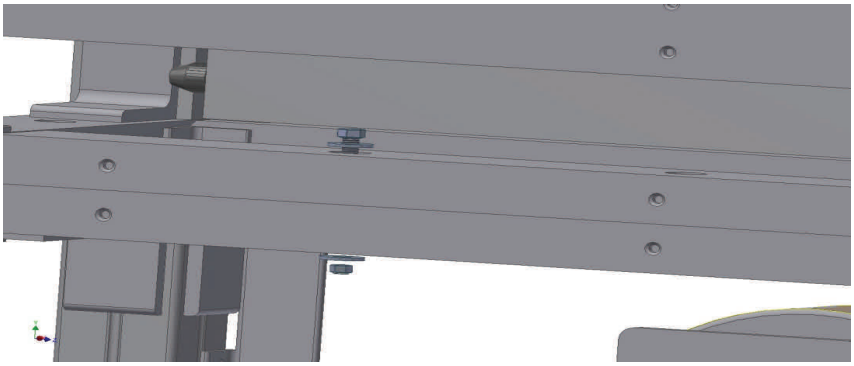


NOTE: If you do not have the DS and PS Lower Assemblies set into place and leveled, please refer to page 21 and do so before proceeding with the following instructions.

1) Using the forklift (from the Rear Brush side) move the Upper Assembly into the bay if possible. If this is not possible with a forklift due to width restrictions, use suitable means to place the Upper Assembly into the bay with the Rear Brushes facing the entrance of the bay.
2) Once the Upper Assembly is resting in the bay, rotate it so that it is square with the rails and both DS and PS Lower Assemblies.
3) Once positioned, using the forklift, pick up the Upper Assembly and place it over the DS and PS Lower Assemblies. Lower the Upper Assembly to approximately 1" above both Lower Assemblies for now.
4) Using a Drift Pin/Alignment Tool, align the holes in the Upper and Lower Assemblies and lower the Upper Assembly into position.
5) Once resting on the DS and PS Lower Assemblies, insert bolts and washers into the holes in the framework of the Upper Assembly as shown in the figure below.
6) Once all bolts are in place, use a washer and nut as shown in the figure below, and tighten each down securely one at a time, making sure each hole is aligned properly.

NOTE: It is recommended that anti-seize is used on all bolts during the installation process.

Illustration for reference only.



BayWash i5 upper assembly to DS lower i5 drive assembly and PS lower i5 drive assembly hardware. (Only 1 of 16 bolts shown for illustrative purposes.)

INSTALL RAIL STOPS & FLAGS

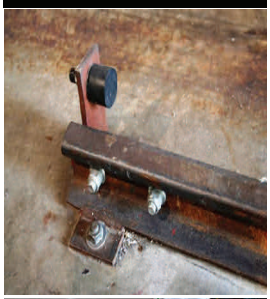
RAIL STOPS

1) Refer to site-specific drawings provided for Rail Stop (Track Bracket) locations.

NOTE: New 1/2" holes may need to be drilled for Track Bracket installation depending on rail placement and bay length.

2) Install the Track Brackets so the rubber bumper is facing the Gantry.
3) Once all four (4) Track Brackets have been installed, adjust the rubber stops out to a matching distance and lock into place.

IMPORTANT NOTE: Do not install the Track Brackets at the entrance end of the bay until you have first determined where the Gantry will rest in relation to full travel and brush clearance. It may be necessary to skip installation of these two Track Brackets until the Rear Brush Assemblies have been installed.



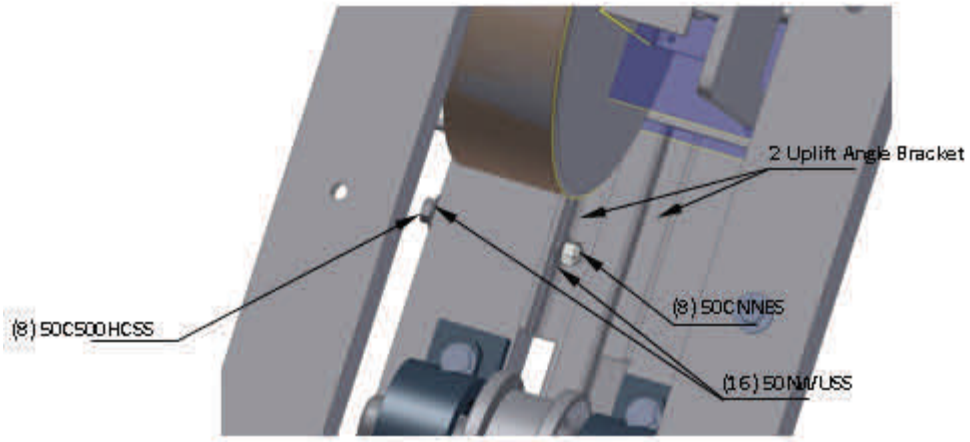
FLAGS (REFLECTIVE)

1) Refer to site-specific drawings provided for Flag placement.
2) Mark and drill holes only after confirming the proper location for the Flags.
3) Once holes are drilled, secure the Flags to the wall using appropriate anchors.

INSTALL UPLIFT ANGLE BRACKETS

1) Locate the Uplift Angle Brackets and 1/2”x5” bolts to be mounted on the four corners of both the DS and PS Lower Drive Assemblies.
2) Slide the Uplift Angle Brackets into place and align with the track.
3) Secure the Angles to the frame using the 1/2”x5” bolts.
4) Refer to illustrations below for orientation and placement.

NOTE: If using the Splice Plates provided, you will not need to install the Uplift Angle Brackets.



INSTALL ENERGY CHAIN

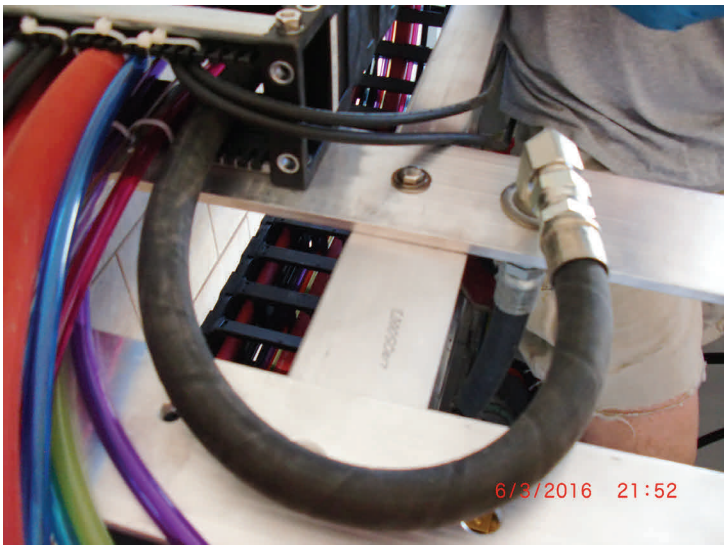
1) Check the site-specific drawings provided to determine the location of the Energy Chain (Igus Tube) assembly.
2) Once the location has been determined, attach the Support Brackets to the bay wall.

NOTE: Keep in mind that wall materials vary (concrete, wood, drywall, glass, etc.) so be sure to use the proper hardware during the installation process.

3) Locate the Trough and set it onto the previously installed Support Brackets so it is parallel to the Gantry, maintaining adequate clearance for Gantry travel.

NOTE: It may be necessary to cut the Support Brackets once they are installed to ensure that they do not strike the Gantry.

4) Once the Trough is set and you have confirmed it cannot strike the Gantry, anchor it to the Support Brackets using appropriate fasteners.
5) Place the Energy Chain into the Trough and anchor it to the Gantry.
6) Once anchored to the Gantry, be sure to double check movements before anchoring the other end to the Trough.

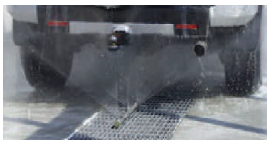


INSTALL UNDER-CARRIAGE

1) Check the site-specific drawings provided to determine the type and location of the Undercarriage.

NOTE: The Undercarriage is an option and more than one type is available. Depending on the type chosen, there may be a need for special concrete work prior to installation.

2) Once the location has been determined, place the unit on the floor.
3) With the Undercarriage in place, connect piping/hosing as needed to feed water from the Pump Stand.
4) When complete, depending on type of Undercarriage, either anchor it to the floor or tie it to the grate using zip ties.



INSTALL DS and PS REAR ARM

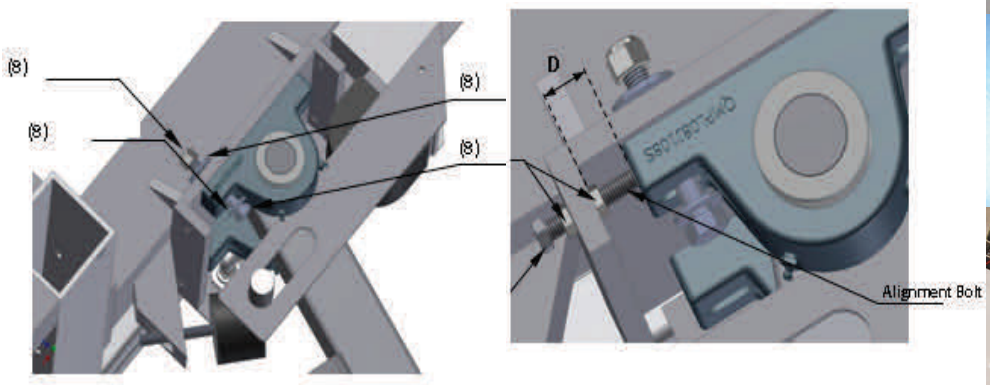
1) Locate the DS (51”) and PS (39”) Rear Arm Assemblies. Both Arms will have pillow block bearings attached from the factory.

NOTE: Installation of the Rear Arms is safer and more efficient with two people.

2) One by one, lift the Arms into position on the rear of the Gantry.

3) While the Arm is lifted into place, insert the 1/2”x3” bolts, flat washers, and nylock nuts, and bolt into position loosely.
4) Once all four bolts are in place, center the bearings in the frames using the alignment bolts. The top and bottom bearings need to be parallel and the Arms need to be level.
5) Use a tape measure to make sure the four alignment bolts are set at the same distance from the pillow block bearings to the inside of the channel.

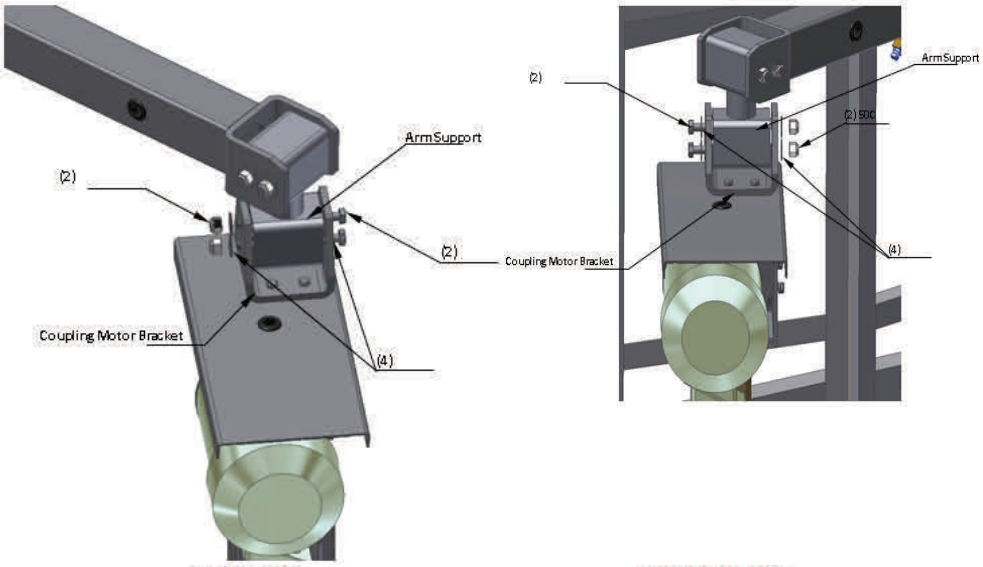
IMPORTANT NOTICE: When the machine is shipped, the DS and PS Rear Brush Proximity Sensors and brackets are removed from the Upper Assembly. Once the Arms are installed, the Proximity Sensors and brackets will need to be mounted in their designated positions.

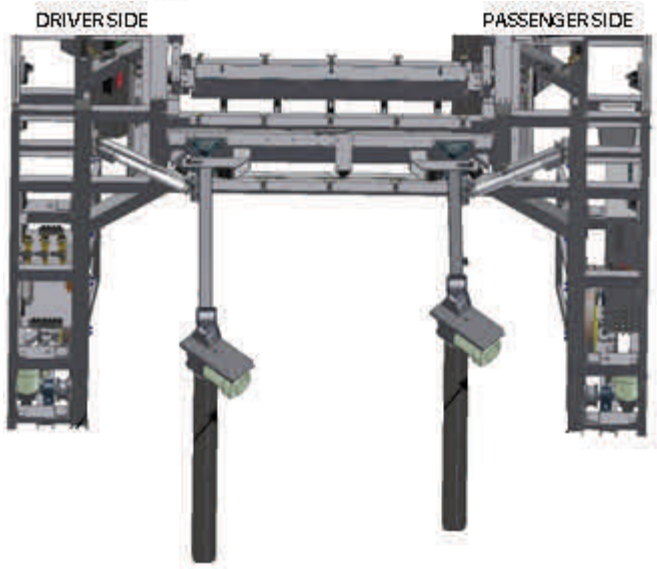


INSTALL DS and PS REAR BRUSH ASSEMBLY

1) Locate the DS and PS Rear Brush Assemblies.
2) Place the Assembly onto a floor jack or forklift.
3) With one person stabilizing the Assembly, raise it into position until the coupling motor bracket is high enough to be inserted into the arm support.
4) Once the motor coupling bracket holes are aligned with the Arm Assembly holes, insert the bolts and tighten into place.

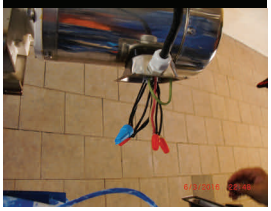
NOTE: See illustrations below for reference.





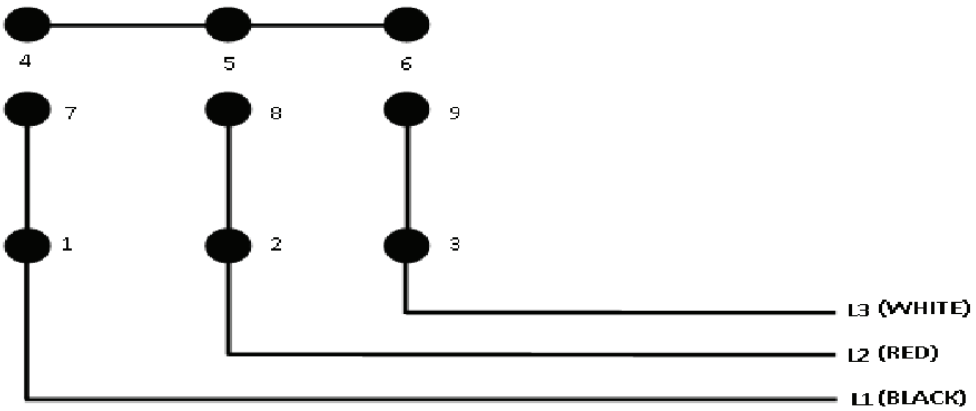
NOTE: On the Energy Chain side of the Gantry, the Rear Arm Assembly will be mounted so the motor is facing in toward the bay to avoid striking the Energy Chain as depicted in the illustration above.

INSTALL MOTOR WIRING

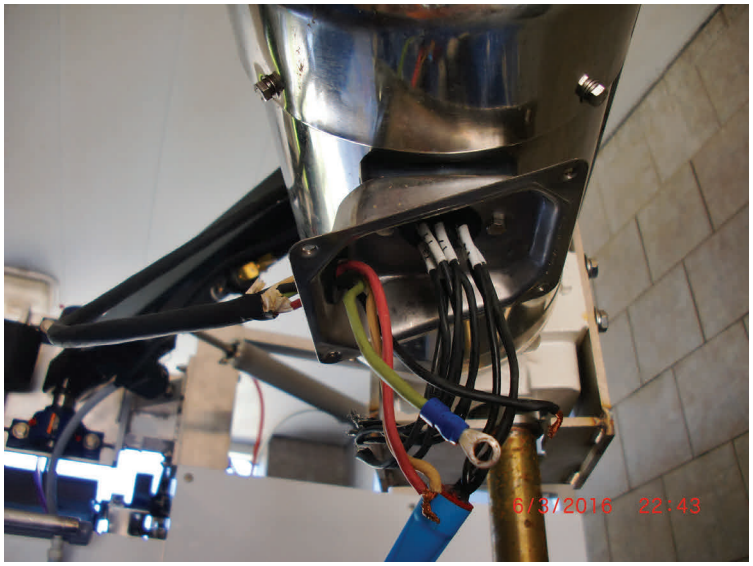


1) Locate the wires for the Brush Motors and Gantry Drive Motors.
2) Wire together motor wires 4, 5, and 6 using wire nuts and electrical insulation tape.
3) Wire together motor wires 1, 7, and L1 (Black) using the same method as step 1.
4) Wire together motor wires 2, 8, and L2 (Red) using the same method as step 1.
5) Wire together motor wires 3, 9, and L3 (White) using the same method as step 1.
6) Crimp a connector onto the (Green) ground wire and attach it in its designated location within the electrical box on the Brush Motor.

NOTES: Always check the nameplate on the motor, electrical schematics, and the inside of the motor's electrical connection box for wiring connections.



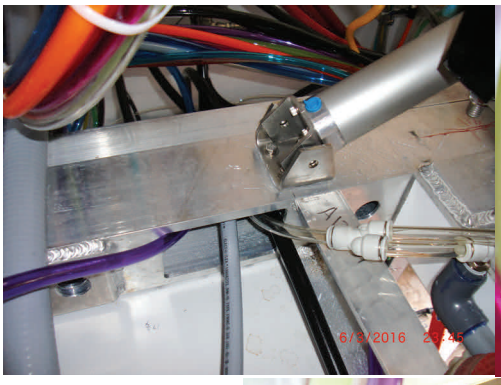
Brushes Motor Wiring Configuration



INSTALL REAR ARM/ TOP BRUSH CYLINDERS

1) Connect the Cylinders to the square bracket with a short pin and clevis as depicted on the site-specific drawings.
2) Using a long pin and plastic spacers, connect the Cylinders to the “E” Bracket on the Gantry following the site-specific drawings.
3) Once the Shock Cylinders are connected to the “E” Bracket on the Gantry, repeat similar steps to connect them to the Rear Brush Arms.

NOTE: These steps need to be taken for both the Driver and Passenger side of the Gantry.

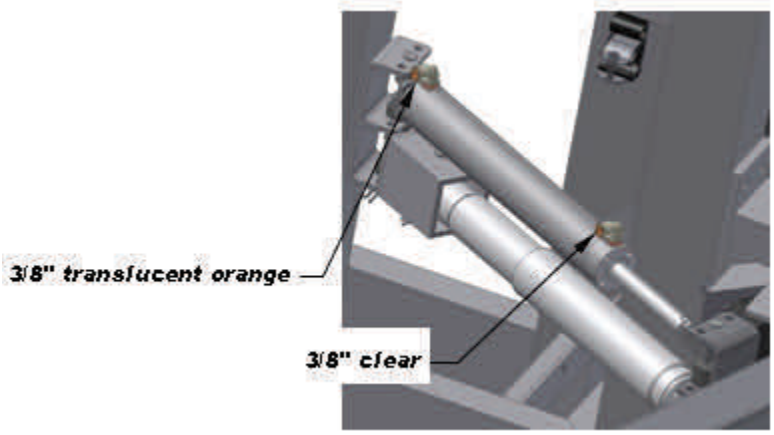


INSTALL AIR LINES ON DS AND PS CYLINDERS

NOTE: The air tubing lines for the Rear Arm Cylinders are pre-installed from the factory. After installing the Shock Absorbers and Air Cylinders, the air tubing lines need to be connected to the DS and PS Air Cylinders.

1) Locate the tubing designated for the Rear Arm Cylinders.
2) Attach the tubing to the Push-Lock fittings on the Air Cylinder as shown in the illustration below.

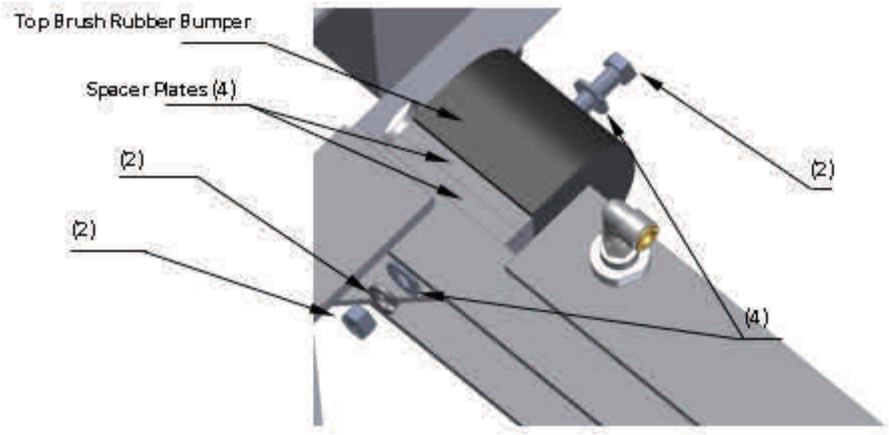
3/8" clear tubing is used to retract the Rear Arms
3/8" translucent orange tubing is used to extend the Rear Arms



INSTALL DS AND PS TOP BRUSH RUBBER BUMPERS

1) Locate the two bumper stops, four spacer plates, and hardware for the top brush.
2) Slide the bolt through the frame and install a nut on the back side as shown in the illustration below.

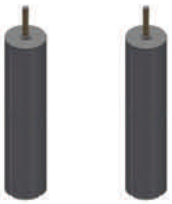
NOTE: Use (2) spacer plates for each side (Driver Side and Passenger Side)

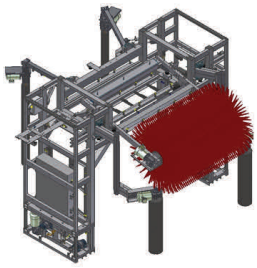


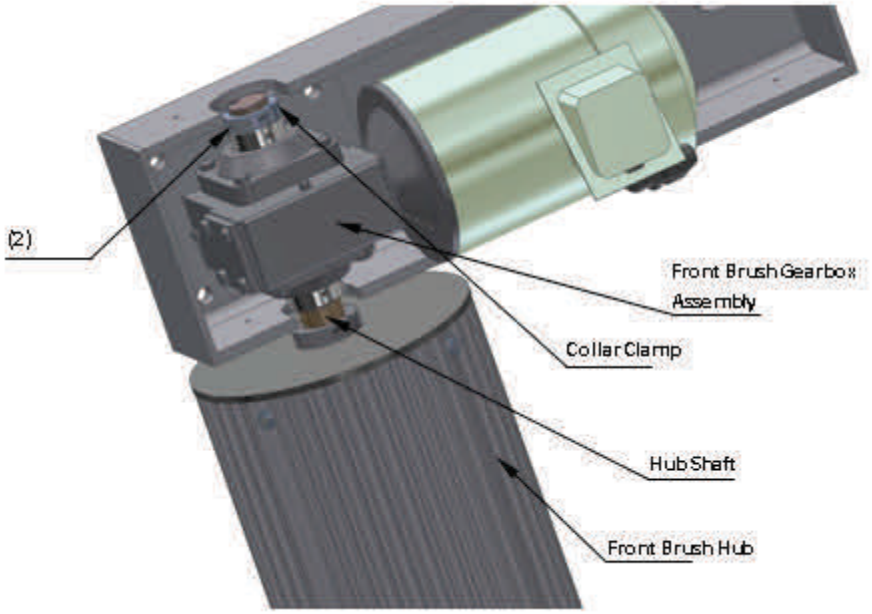
INSTALL DS AND PS FRONT BRUSH HUBS

NOTE: The DS and PS front brush gearbox assemblies are already installed on the Upper Assembly.

1) Locate the Front Brush Hubs (there is no difference in DS and PS).
2) Locate the front brush gearbox on the Upper Assembly.
3) Locate the Collar Clamps that will be used to secure the Front Brush Hubs to the gearbox assemblies.
4) Remove the tape holding the keyway onto the spindle of the Front Brush Hubs and clean thoroughly to remove any adhesive that may be left from the tape.
5) Apply a light layer of Anti-Seize to the spindle of the Front Brush Hubs to aide in sliding it up into the gearbox.
6) Using a jack or forklift, position the Hub under the gearbox and align the spindle and keyway.
7) Slowly lift the Hub into the gearbox, being careful to keep it straight so it does not get into a bind.
8) Once the spindle is far enough into the gearbox to attach the top Collar Clamp, do so using an allen wrench to tighten it down.
9) Repeat steps 4 through 8 for the other side of the Unit.

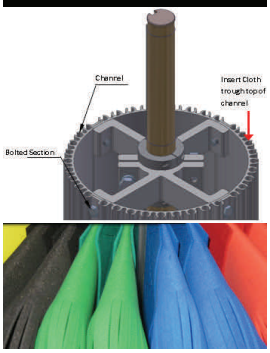






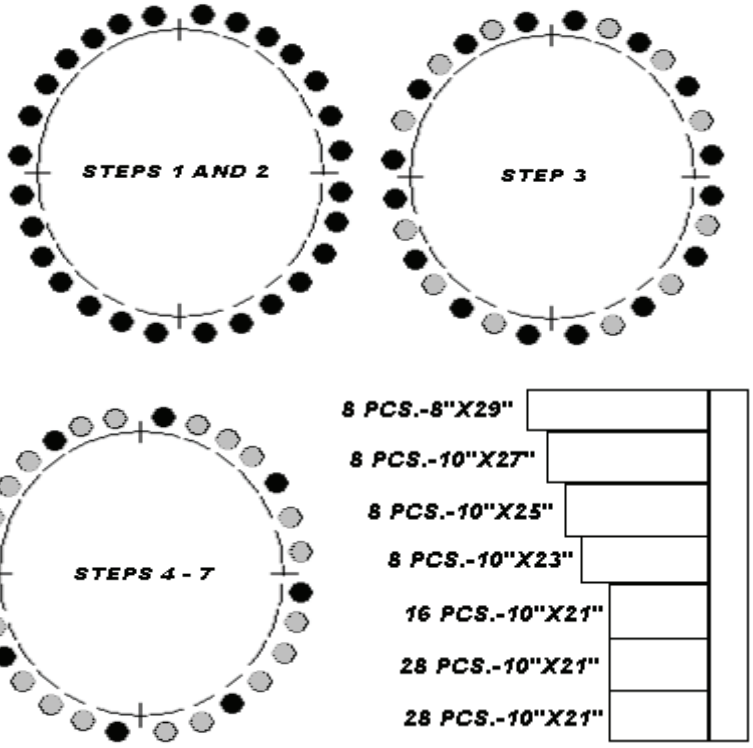
Rear Brush Instruction (Be sure to load all brushes with closed end of fold facing up)

INSTALL REAR BRUSH MATERIAL



EACH BOX OF BRUSH MATERIAL INCLUDES ENOUGH FOR ONE FULL HUB

OASIS HUSH BRUSH FOR 68" REAR BRUSHES (PROFILE INSTRUCTION)



1) Starting with the bottom layer (10"x21"), load brush material into each slot. Every slot all the way around the hub will receive brush material. There are twenty eight (28) pieces in this layer.

2) Second layer up from the bottom (10"x21") will be loaded the same as the first. There are twenty eight (28) pieces in this layer.

3) Third layer from the bottom (10"x21") beginning at each side of the seams in the hub, load every other slot with brush material. There are sixteen (16) pieces in this layer.

4) Fourth layer from the bottom (10"x23") beginning with the left side of each seam in the hub, load brush material, then skip three (3) slots (TO THE LEFT) and load another. There are eight (8) pieces in this layer.

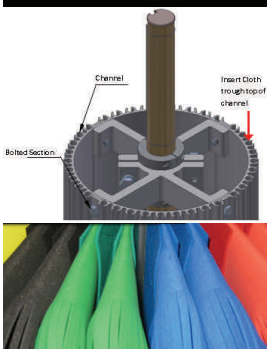
5) Fifth layer up from the bottom (10"x25") will be loaded the same as step four (4). There are eight (8) pieces in this layer.

6) Sixth layer up from the bottom (10"x27") will be loaded the same as steps four (4) and five (5). There are eight (8) pieces in this layer.

7) Seventh layer up from the bottom [top layer] (8"x29") will be loaded the same as steps four (4) five (5) and six (6). There are eight (8) pieces in this step.

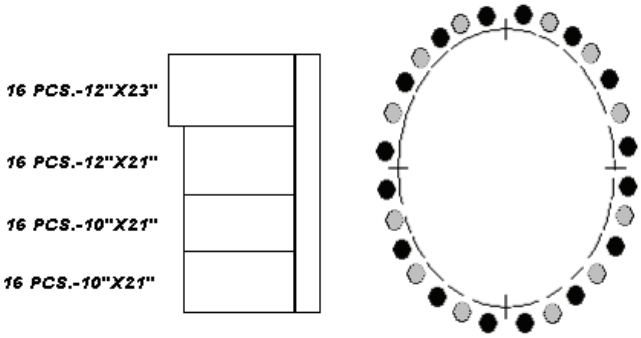
Front Brush Instruction (Be sure to load all brushes with closed end of fold facing up)

INSTALL FRONT BRUSH MATERIAL



EACH BOX OF BRUSH MATERIAL INCLUDES ENOUGH FOR ONE FULL HUB

OASIS HUSH BRUSH FOR 44” FRONT BRUSHES (PROFILE INSTRUCTION)



1) Starting with the bottom layer (10”x21”), beginning at each side of the seams in the hub, load every other slot with brush material. There are sixteen (16) pieces in this layer.
2) Second layer up from the bottom (10”x21”), will load the same as step one (1). There are sixteen (16) pieces in this layer.
3) Third layer up from the bottom (10”x21”), will load the same as steps one (1) and two (2). There are sixteen (16) pieces in this layer.
4) Fourth layer up from the bottom [top layer] (12”x23”), will load the same as all previous steps. There are sixteen (16) pieces in this layer.

SKIN COMPONENTS

NOTES: In order to install the Skins, the Skin Supports need to be identified and separated by location. It is important not to tighten ANY bolts completely until ALL of the Skins have been set into position.

Most of the skins are pre-assembled on your i5 prior to shipping, but a select few are removed for shipping purposes.

Skins that will need installed on site are as follows:

Two- Face Panel Skins (DS and PS)

Two- Front Curve Skins (DS and PS)

Two- Wheel Blaster Skins (DS and PS)

Four- Bottom Face Skins (DS and PS)

Two- Lower Side Skins (DS and PS)

Skin Support Parts for the Front Face (Signage) Skins are as follows:

Two- Side Support Pivot (DS and PS)

One- Skin Support Sub-Weld

Two- Side Skin Flex Member (DS and PS)

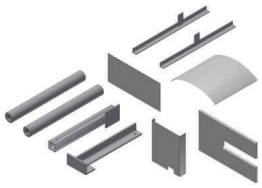
One- Skin Support Sub-Weld Mount

Two- Skin Mounting Rod (DS and PS)

INSTALL SKINS

*Once the Skin Components have been identified, decide the order in which the Skins will be installed onto the Gantry. It is recommended to use Anti-Seize on all Skin Bolts during the installation process.

NOTE: Remember, do not fully tighten any hardware or Skin Bolts until all of the Skins are in place and fit correctly.



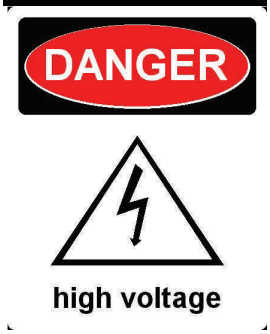
Wheel Blaster Skins, Bottom Face Skins and Lower Side Skins:

1) Prepare the correct amount of Skin Bolts for each Skin application and stage the Skins according to their location and order of installation.
2) Hold the Skins into place making sure all holes line up with the corresponding holes on the Gantry.
3) Insert Skin Bolts one at a time and hand tighten until all Bolts are in place.
4) Once all Skin Bolts are in place, use a #3 Phillips bit or screwdriver to tighten.

Front Face (Signage) Skins:

1) Refer to the Site-specific drawings for proper placement of the supports and sub-welds for this portion of the installation.
2) Stage all Supports and Sub-Welds in order of installation.
3) Prepare all hardware and Skin Bolts with Anti-Seize prior to beginning installation.
4) Install the DS and PS Front Curve Skins by holding them in place while inserting Skin Bolts.
5) Install the DS and PS Side Support Pivots and Skin Mounting Rods with the Skin Mounting Rods facing inward toward the center of the bay.
6) Install the Skin Support Sub-Weld onto the top center of the Gantry.
7) Install the DS and PS Side Skin Flex Members, attaching them only to the Skin Mounting Rods at this time.
8) Install the Skin Support Sub-Weld Mount only to the Skin Support Sub-Weld at this time.
9) One at a time, position the DS and PS Face Panel Skins around the Rear Brush Arms and attach to the Front Curve Skins and Side Skin Flex Members.
10) Insert the remaining hardware into all Skins and begin to tighten from the inside-out.
11) Once all hardware and Skin Bolts are in place, tighten snug to complete installation.

INSTALL HIGH VOLTAGE CONNECTIONS



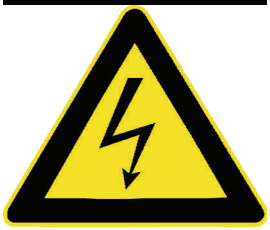
NOTE: All high voltage connections should be made by a qualified licensed electrician, and should never be attempted with live voltage present!

1) Refer to the site-specific drawings and electrical schematics provided to locate information needed for this portion of the installation.
2) Refer to the UL sticker located inside the door of the Control Panel for voltage requirements.

High Voltage connections are considered to be:

- ♦575 volts three phase
- ♦460 volts three phase
- ♦208/230 volts three phase
- ♦220 volts single phase
- ♦110 volts single phase

INSTALL LOW VOLTAGE CONNECTIONS



1) Refer to the site-specific drawings and electrical schematics provided to locate information needed for this portion of the installation.

Low voltage connections are considered to be:

- ♦24 VDC single phase
- ♦24 VAC single phase

INSTALL
COMMUNICATION NETWORK CONNECTIONS

INSTALL PNEUMATIC CONNECTIONS

NOTE: Refer to the site-specific drawings for necessary Pneumatic Connections and locations.

Pneumatic Connections consist of, but are not limited to:

- Air feed to Gantry
- Air feed to Chemical System
- Air feed for Brush Cylinders

INSTALL CHEMICAL CONNECTIONS

NOTE: Refer to the site-specific drawings for necessary Chemical Connections and locations.

Chemical Connections consist of, but are not limited to:

- Chemical product to Chemical System
- Chemical product to Gantry

INSTALL WATER CONNECTIONS

NOTE: Refer to the site-specific drawings for necessary Water Connections and locations.

Water Connections consist of, but are not limited to:

- Water feed to Pump Stand
- Water feed to Chemical Booster Pump
- Water feed to Undercarriage
- Water feed to Gantry

ONBOARD PANEL/IN-BAY PROCEDURES

1. Set motor control protector devices
Set motor control protector devices for brushes motors at 4A
Set MPC2 device for drive motors at 7A
MCP1 Top brush motor
MCP2 VFD contactor
MCP3 DS front brush motor
MCP4 PS front brush motor
MCP5 DS rear brush motor
MCP6 PS rear brush motor

2. Set up ITV's
Set 4 pressure points

ITV 1 DS front brush	(30/ 25/30/55)
ITV 2 PS front brush	(30/25/30/55)
ITV 3 DS rear brush	(45/10/20/35)
ITV 4 PS rear brush	(45/10/20/35)

3. Set motor rotation
Set brush motor rotation for Pass 2 (clockwise) and Pass 3 (counter clockwise)
Set blower motor rotation for Pass 3
M1 Top brush motor
M2 Gantry drive motor
M3 DS front brush motor
M4 PS front brush motor
M5 DS rear brush motor
M6 PS rear brush motor

4. Check overloads
MCP1 Top brush motor
MCP2 VFD
MCP3 DS front brush motor
MCP4 PS front brush motor
MCP5 DS rear brush motor
MCP6 PS rear brush motor

5. Adjust proximity sensors devices
Sensing range for 30mm proximity sensors : 1/8"
PS13 Top brush up limit
PS12 Top brush safety
PS10 Reverse gantry travel end
PS11 Forward gantry travel end
PS7 PS proximity sensor
PS8 DS proximity sensor
Reflective Optics

PRE-START UP PROCEDURES CONTINUED...

6. Check pneumatic plumbing

DS front brush
DS rear brush
Top brush
ITV
PS front brush
PS rear brush
Chemical Regulators

7. Adjust counter-weight top brush (2-3/8" from back of top brush frame)

DRYER PANEL

1. Set motor control protector devices

Set motor control protector devices for blower motors at 40A

MCP7 PS blower motor
MCP8 DS blower motor
MCP9 Top blower motor

2. Set motor rotation

M7 PS blower motor
M8 DS blower motor
M9 Top blower motor

OFF-BOARD PANEL

1. Test chemical pump stations

Triple Foam
Lava Bath
Rain-X
Presoak
Tire Cleaner
Brush Lube
Clear Coat

2. Test water solenoids/ support equipment

Main water (if Applicable)
Spot free
HP wheel blaster pump

5. Test door outputs (if Applicable)
Entrance open
Entrance close
Exit open
Exit close

PRE-START UP PROCEDURES CONTINUED...

NETWORK TESTING

ONBOARD PANEL

1. Check network power to remote I/O blocks
RI1
RA1
RO1
RO2
SMC COMPOBUS module

2. Check network status to remote I/O blocks
RI1
RA1
RO1
RO2
SMC COMPOBUS module

DRYER PANEL

1. Check network power to remote I/O blocks
RO1

2. Check network status to remote I/O blocks
RO1

OFF-BOARD PANEL

1. Check network power to remote I/O blocks
RI1
RO1
RO2
RO3

2. Check network status to remote I/O blocks
RI1
RO1
RO2
RO3

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