



Retrofit Pre-Cleaner with Full Roof Catwalk

Grain Dryer Catwalk Assembly Manual

This manual applies to following models:

D1660, D1670, D1680, D1690, D16106, D16120, D16140, D16160
D24108, D24150, D24180, D24210, D24240, D24260, D24330, D24380
D32260, D32340, D32440, D32500



INSTALLATION AND WIRING MUST BE IN ACCORDANCE
WITH CEC, NEC, AND LOCAL ELECTRICAL CODES



Read this manual before using product. Failure to follow instructions and safety precautions can result in serious injury, death, or property damage. Keep manual for future reference.

Part Number: 7711390 R0

Revised: November 2024

Original Instructions



WARNING:

FIRE OR EXPLOSION HAZARD

- Do not store or use gasoline or other flammable vapours and liquids in the vicinity of the crop dryer.
- **WHAT TO DO IF YOU SMELL GAS**
 - Do not try to light any appliance.
 - Extinguish any open flames.
 - Do not touch any electrical switch.
 - Immediately call your gas supplier. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.



WARNING:

FIRE OR EXPLOSION HAZARD

Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.

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1. Introduction

Before assembling, please read this manual. Familiarize yourself with the process and the necessary precautions for efficient and safe assembly of this AGI Retrofit Pre-Cleaner with Full Roof Catwalk.

Everyone present at the assembly site is required to be familiar with all safety precautions.

Keep this manual available for frequent reference and review it with new personnel. Call your local distributor or dealer if you need assistance or additional information.

2. Safety

2.1. Safety Alert Symbol and Signal Words



This safety alert symbol indicates important safety messages in this manual. When you see this symbol, be alert to the possibility of injury or death, carefully read the message that follows, and inform others.

Signal Words: Note the use of the signal words **DANGER**, **WARNING**, **CAUTION**, and **NOTICE** with the safety messages. The appropriate signal word for each message has been selected using the definitions below as a guideline.



Indicates an imminently hazardous situation that, if not avoided, will result in serious injury or death.



Indicates a hazardous situation that, if not avoided, could result in serious injury or death.



Indicates a hazardous situation that, if not avoided, may result in minor or moderate injury.



Indicates a potentially hazardous situation that, if not avoided, may result in property damage.

2.2. General Safety Information

Read and understand all safety instructions, safety decals, and manuals and follow them when assembling the equipment.

- Only experienced personnel who are familiar with this type of assembly and installation should perform this work. Untrained assemblers/installers expose themselves and bystanders to possible serious injury or death.
- Do not modify the retrofit Pre-Cleaner in any way or deviate from the instructions in this manual without written permission from the manufacturer. Unauthorized modification or methods may impair the function and/or safety. Any unauthorized modification will void the warranty.
- Follow a health and safety program for your worksite. Contact your local occupational health and safety organization for information.
- Contact your local representative or AGI if you need assistance or additional information.
- Always follow applicable local codes and regulations.



2.3. Grain Dryer Safety

WARNING

- Do not overheat grain or operate the dryer temperature too high. Keep the maximum plenum temperature not more than the maximum set point temperature.
- Be cautious of spontaneous combustion when working with oil seeds.
- Grain dust is a fire hazard. Keep all areas (including areas under the perforated floors) free from dust and fines.
- Clean out the dryer after using to remove grain dust, husks, and other materials.
- Screen grain before it goes into a bin to help prevent dust and trash buildup. Using a grain spreader will help distribute dust/fines.
- Ventilate, purge all contaminants, and allow burner, and drying areas to cool inside the heater, in the heater area and the dryer area before any persons enter these areas.
- Do not remove covers, touch, or service internal components during operation.
- Do not install or combine with products from other manufacturers. The design and safety features may not be compatible.
- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of dryer.
- Do not use the dryer where a high concentration of grain dust or flammable liquids or vapors exist, such as milled grain dust.
- Use the dryer only with the gas types intended, connecting alternate fuel sources to the dryer can result in fires.
- Shut off and lock out or disconnect power and close valve at gas source before inspecting or servicing the heater, or when not in use.
- Keep away from fan impeller/blade; high suction can pull a person toward the inlet. Contact with an unguarded impeller/blade will cause severe injury.
- Keep the fan inlet screen in place at all times.
- Remove foreign material from the fan inlet before operating.
- Do not operate the fan if there is excessive vibration or noise.
- When the power is locked out, fans can still be dangerous because of potential “windmilling.” Always block the impeller/blade before working on any moving parts.

In case of a dryer fire:

- Turn off gas at the heater and supply tank.
- Shut off and lock electrical power.
- Seal the aeration fan inlet and any other opening to smother the fire.
- Evacuate all personnel from the area.
- Call the fire department.



2.4. Ladder Safety

WARNING

- Do not climb ladder if damaged, wet, icy, greasy, or slippery.
- Remove slippery materials on platforms, rungs and gripping surfaces.
- Maintain good balance by having at least three points of contact at all times.
- Use a fall restraint and arrest system when required. Consult your local health and safety organization.



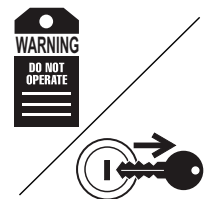
2.5. Drives and Lockout/Tagout Safety

Inspect the power source(s) before using and know how to shut down in an emergency. Whenever you service or adjust your equipment, make sure you shut down your power source and gas supply and follow lockout and tagout procedures to prevent inadvertent start-up and hazardous energy release. Know the procedure(s) that applies to your equipment from the following power sources.

For example:

- De-energize, block, and dissipate all sources of hazardous energy.
- Lock out and tag out all forms of hazardous energy.
- Ensure that only 1 key exists for each assigned lock, and that you are the only one that holds that key.
- After verifying all energy sources are de-energized, service or maintenance may be performed.
- Ensure that all personnel are clear before turning on power to equipment.

For more information on occupational safety practices, contact your local health and safety organization.



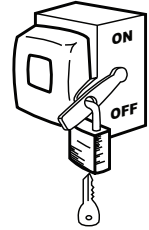
2.5.1 Electric Motor Safety

WARNING Power Source

- Electric motors and controls shall be installed and serviced by a qualified electrician and must meet all local codes and standards.
- Do not modify the magnetic starter. This component provides overload and under-voltage protection.
- Motor starting controls must be located so that the operator has full view of the entire operation.
- Locate main power disconnect switch within reach from ground level to permit ready access in case of an emergency.
- Motor must be grounded.
- Guards must be in place and secure at all times.
- Ensure electrical wiring and cords remain in good condition; replace if necessary.

Lockout

- The main power disconnect switch should be in the locked position during shutdown or whenever maintenance is performed.
- In the event of unexpected fan shutdown, the fan can be reset using the main power switch located on the fan or using a reset button when equipped.

SERVICE DISCONNECT

2.5.2 Variable Frequency Drive (VFD) Safety

WARNING Electric Shock Hazard

VFDs contain hazardous voltage when powered and even after power is disconnected. To prevent death or serious injury:

- Do not install or perform maintenance on the VFD unless you are a properly qualified and trained Electrician.
- Never operate the VFD when the enclosure is open.
- Remove AC line power from the VFD before doing any service or repair and wait for all power to be safely discharged from capacitors.

2.6. Personal Protective Equipment

The following Personal Protective Equipment (PPE) should be worn when installing or maintaining the equipment.

- **Safety Glasses**



Wear safety glasses at all times to protect eyes from debris.

- **Steel-Toe Boots**



Wear steel-toe boots to protect feet from falling debris.

- **Coveralls**



Wear coveralls to protect skin.

- **Work Gloves**



Wear work gloves to protect your hands from sharp and rough edges.

- **Hard Hat**



Wear a hard hat to help protect your head.

- **Fall Protection**



Use a fall arrester or fall restraint when climbing or working at heights.

2.7. Safety Equipment

The following safety equipment should be kept on site.

- **Fire Extinguisher**



Provide a fire extinguisher for use in case of an accident. Store in a highly visible and accessible place.

- **First-Aid Kit**



Have a properly-stocked first-aid kit available for use should the need arise, and know how to use it.

2.8. Safety Decals

- Keep safety decals clean and legible at all times.
- Replace safety decals that are missing or have become illegible. See decal location figures that follow.
- Replaced parts must display the same decal(s) as the original part.
- Replacement safety decals are available **free of charge** from your distributor, dealer, or factory as applicable.

2.9. Decal Installation/Replacement

1. Decal area must be clean and dry, with a temperature above 50°F (10°C).
2. Decide on the exact position before you remove the backing paper.
3. Align the decal over the specified area and carefully press the small portion with the exposed sticky backing in place.
4. Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place.
5. Small air pockets can be pierced with a pin and smoothed out using the decal backing paper.

3. Assembly

3.1. Assembly Safety

WARNING

- All installation and servicing operations are to be carried out by qualified technicians.
- Do not take chances with safety. The components can be large, heavy, and hard to handle. Always use the proper tools, rated lifting equipment, and lifting points for the job.
- Do not stand on, under, or near any component that is not secured.
- Carry out assembly in a large open area with a level surface.
- Always have two or more people assembling the retrofit Pre-Cleaner.
- Make sure you have sufficient lighting for the work area.
- Tighten all fasteners according to their specifications. Do not replace or substitute bolts, nuts, or other hardware that is of lesser quality than the hardware supplied by the manufacturer.
- Stay away from overhead power lines and other obstructions during assembly. Contact with power lines can cause electrocution.
- Do not work in high winds.

3.2. Check the Shipment

Unload the retrofit Pre-Cleaner parts at the assembly site and compare the packing slip to the shipment contents. Ensure that all items have arrived and that none are damaged. Take pictures of shipments prior to, or just after, unloading if there are any damages.

Report missing or damaged parts immediately to ensure that proper credit is received from AGI or your representative, and to ensure that any missing parts can be shipped quickly to avoid holding up the assembly process.

Important

Do not assemble or install damaged components.

This pre-cleaner comes with duct, harness and hardware kits. Check the [Section 4.1 – Pre-Cleaner Packing List on page 87](#) and use the kits that are compatible with your dryer.

3.3. Product Storage

AGI Retrofit Pre-Cleaner parts should be stored in a clean, dry location to prevent rust and corrosion of steel components.

For outdoor storage, protection should be provided.

Rust on Galvanized Parts

1. White rust forms when moisture is allowed to collect on galvanized surfaces that have yet to develop the durable zinc oxide layer. This zinc oxide layer naturally occurs as the surface interacts with carbon dioxide, and is characterized over time by the dull grey appearance that weathered galvanized surfaces get.
2. Parts that are not well ventilated or well drained can collect water between surfaces and develop white rust.

3. White rust is not a structural concern if its development is stopped in the early stages. A light film or powdery residue can occur after a period of heavy rainfall or a short time of improper storage. If white rust has started to develop, separate parts and wipe off any moisture. Next, using a clean cloth, apply a thin layer of petroleum jelly or food-grade oil to the entire part. Due to safety concerns with installation and use, AGI does not recommend the use of oil on other parts such as roof sheets, rungs, treads, and platforms.
4. If moisture is left on parts, this white rust can become more aggressive and turn into red rust. Red rust can cause degradation in the material and become a structural concern. Any parts that have red rust should be replaced immediately.

Storage Guidelines

- Keep all bundles dry before assembly of the retrofit Pre-Cleaner.
- Start assembly as soon as possible.
- Do not lay bundles on the bare ground. Raise all bundles 6" to 8" off the ground on wood blocks or timbers.
- All other bundles material should be placed so that they are well sloped to promote good drainage.
- Temporary storage can be provided by erecting a simple framework supporting a waterproof tarp.
- All hardware boxes should be stored inside. These are not waterproof, and will deteriorate in normal weather conditions, allowing moisture to contact the parts inside.

If Parts Become Wet

1. If parts become submerged or wet, the bundles should be opened as soon as possible, sheets or material separated and dried. Keep separated until assembly.

Brace parts properly so as to avoid damage or injury from material falling when in storage.

2. Any boxed parts that become wet should be dried and stored in a new box that is free of moisture.
3. In addition to wiping down the retrofit Pre-Cleaner parts, a food-grade oil can also be applied with a clean, lint-free cloth. This will assist in preventing any further moisture from contacting the galvanizing on the steel. Due to safety concerns with installation and use, AGI does not recommend the use of oil on other parts such as roof sheets, rungs, treads, and platforms.

3.4. Set Up Electrical Supply

WARNING

- AGI recommends hiring an expert for proper advice, accurate paperwork, and safe procedures to complete electrical work in conformance with local codes.
- For dryer installations in Canada — Electrical disconnect shall be installed and all wiring must be done in accordance with the Canadian Electrical Code, Part 1, CSA C22.1.
- The Dryer Rating Label on the control panel lists the full-load amps required for the dryer and the input voltage.
- The customer is responsible for providing materials and labor to connect the control to the power source, including a properly sized and placed fused disconnect box.
- The electrical power supply will have to meet service amp requirements.
- Copper wire of the appropriate size, based on the required amps and distance, must be run between the main disconnect switch and the distribution block located in the dryer control panel.

3.5. Assembling the Retrofit Catwalk

This installation is applicable for the dryers with pre-existing standard or extended Catwalk.

Note

The following assembly contents use the 24' catwalk as an example. The 16' and 32' catwalks will follow the same instructions, but part quantities will vary. Refer to the table in each step for the required parts.

Required Tools:

1. Drill w/ 7/16" reamer bit & 5/16" standard bit
2. Impact driver w/ sockets: 3/8", 7/16", 9/16"
3. Ratchet or 1/4" impact driver with 10 mm socket
4. Wrench: 3/8", 7/16", 9/16", 3/4"
5. Flathead Screwdriver

Figure 1. Example of Dryer Roof with Standard Catwalk

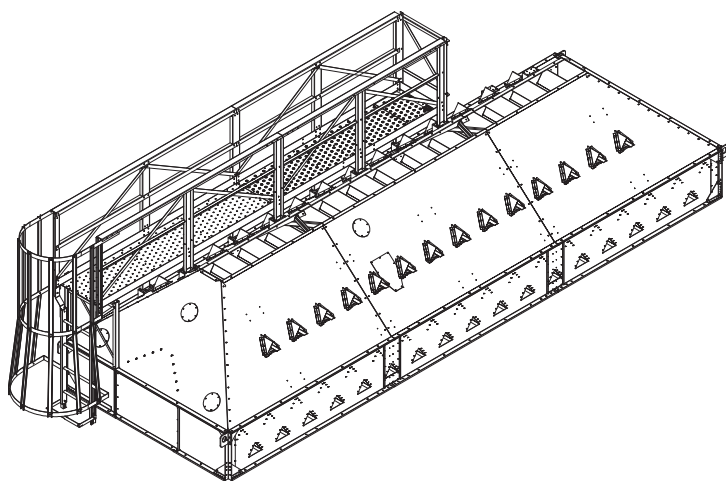
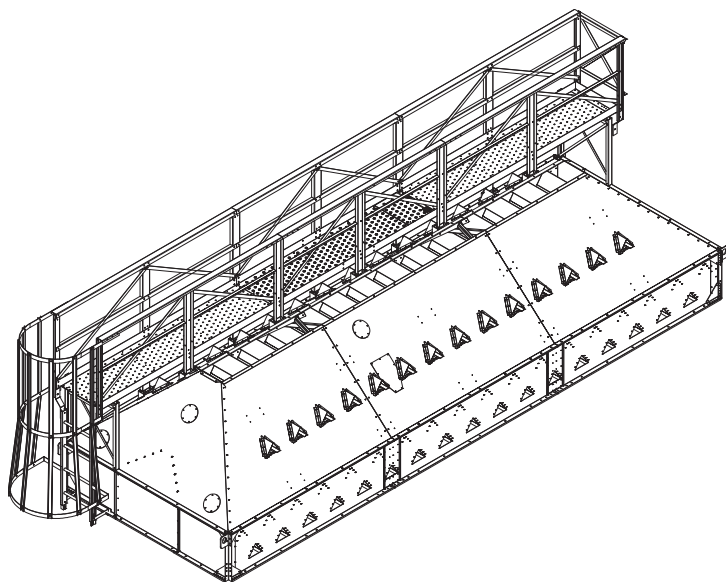


Figure 2. Example of Dryer Roof with Extended Catwalk



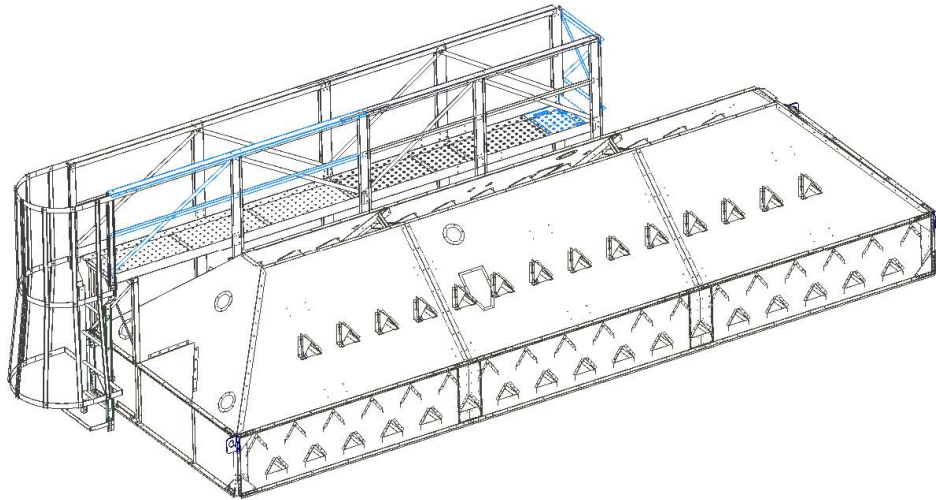
Note

It is recommended to remove the dryer roof and place it on the ground before installing the retrofit catwalk.

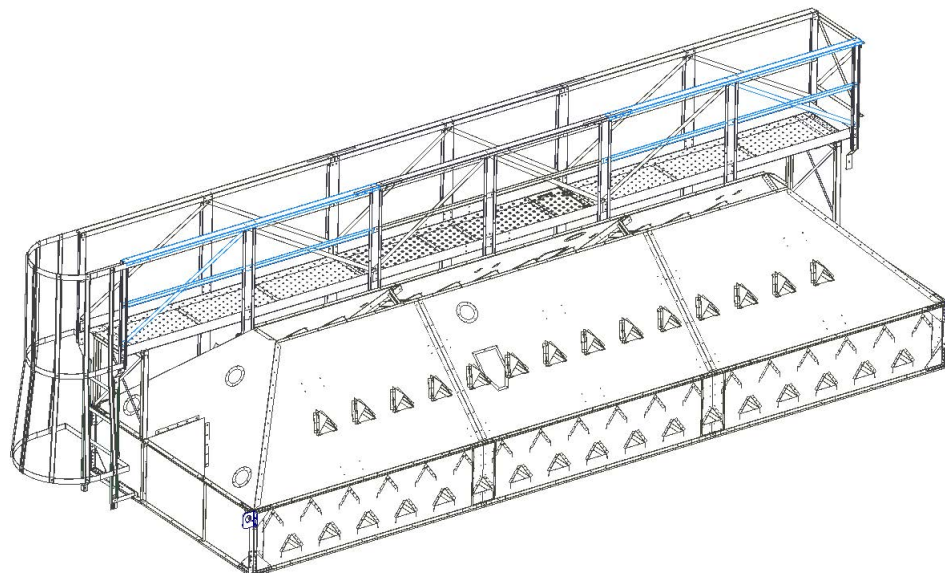
Assembly Procedure:

1. Remove the highlighted parts from the Catwalk. Refer to [Figure 3](#) and [Figure 4](#). Do not discard them. These parts will be reused later.

Figure 3. Remove the Highlighted Parts (For Roof with Standard Catwalk)

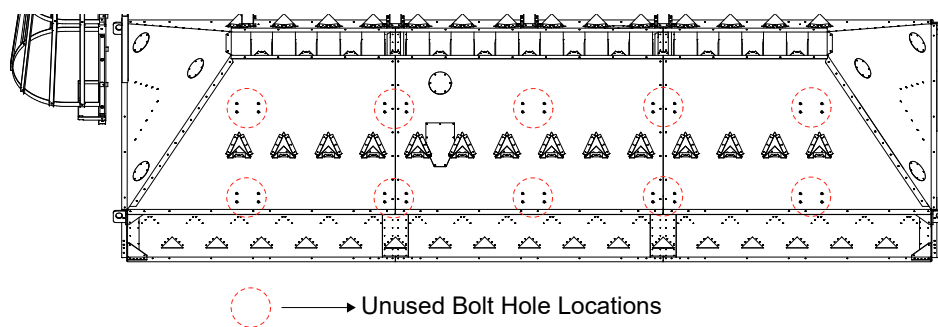


Part Number	Part Name	Quantity		
		16ft	24ft	32ft
035369P	Hinge 3X3 Butt Zinc Plated	2	2	2
7612973	Catwalk Toeboard End For Hinge	1	1	1
7612975	Catwalk Platform Access Door	1	1	1
7612976	Catwalk Access Panel Cross Brace	1	1	1
7712567	Catwalk Handrail Upper Front 106"	1	1	1
7712568	Catwalk Handrail Lower Front 106"	1	1	1
7712569	Catwalk Floor Support/Splice	1	1	1
7712576	Catwalk Handrail Cross Brace	2	2	2
7712583	Catwalk Diagonal Brace End	2	2	2
7712587	Catwalk Diagonal Brace Side Front	1	1	1
F118072	Handle Sliding Door	1	1	1

Figure 4. Remove the Highlighted Parts (For Roof with Extended Catwalk)

Part Number	Part Name	Quantity		
		16ft	24ft	32ft
7712567	Catwalk Handrail Upper Front 106"	2	2	2
7712568	Catwalk Handrail Lower Front 106"	2	2	2
7712587	Catwalk Diagonal Brace Side Front	2	2	2

- Use a flathead screwdriver to remove the hole caps from the unused Catwalk Upright Support holes. Expand these mounting holes to 7/16" using a reamer drill bit. Refer to [Figure 5](#).

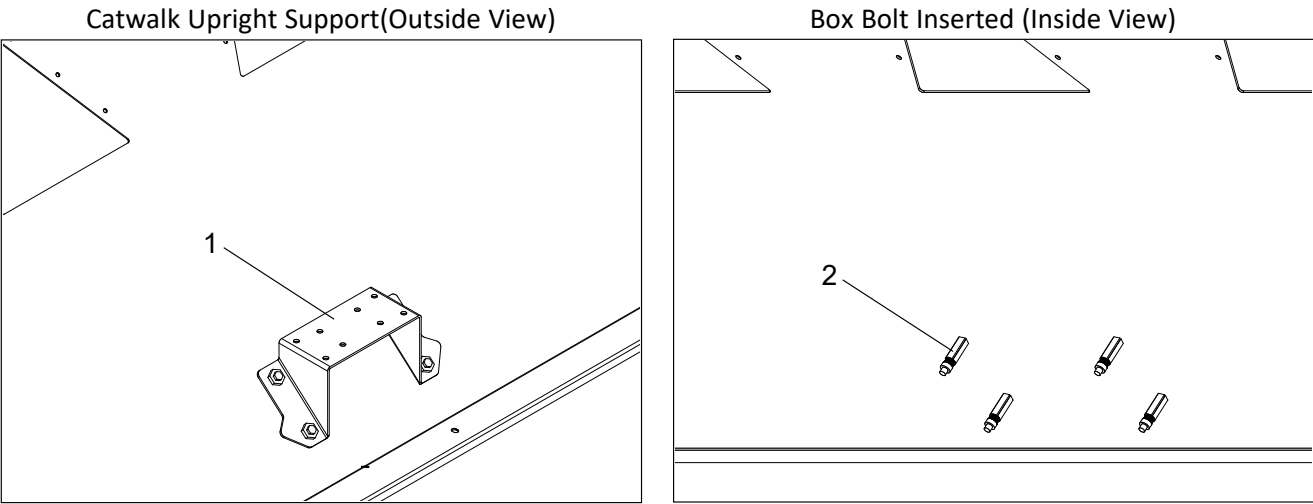
Figure 5. Remove the Hole Caps

- Place the Catwalk Upright Support (7711193) onto the roof. Hold them in place by inserting four box bolts (081540) through the flange holes. Refer to [Figure 6](#).

Important

Tighten the flanged knob against the bolt sleeve before inserting the box bolt into the dryer. Failure to do so may result in the knob falling into the dryer.

Figure 6. Place the Catwalk Upright Support onto the Roof



Item	Part Number	Description	Quantity		
			16ft	24ft	32ft
1	7711193	Catwalk Upright Support - Refit	6	10	14
2	081540	Box Bolt 7/16" OD X 1-3/4", 11/16" X 3/16" Shoulder	24	40	56

4. Secure the box bolts by placing a 3/4" wrench over the neck of the box bolt. Turn the bolt's head clockwise with a 10mm socket. Refer to [Figure 7](#).

NOTICE If an impact is used, do not use a tool with a drive larger than 1/4". **Do not** apply more than 15 ft-lbs of torque to the bolt head.

Figure 7. Secure the Box Bolts

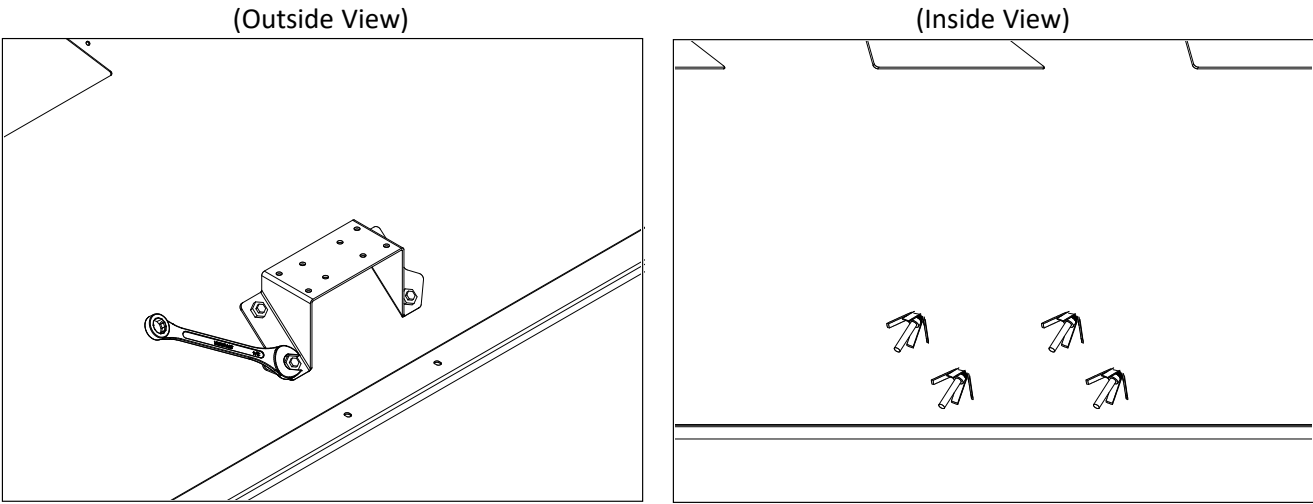
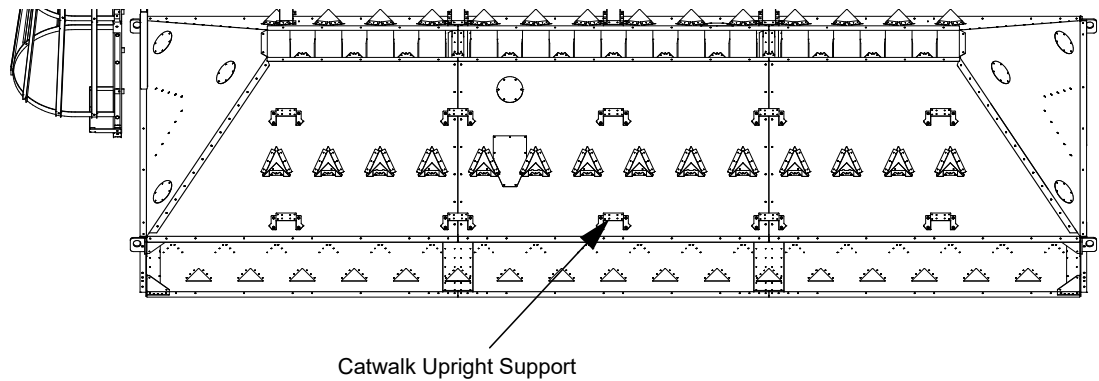
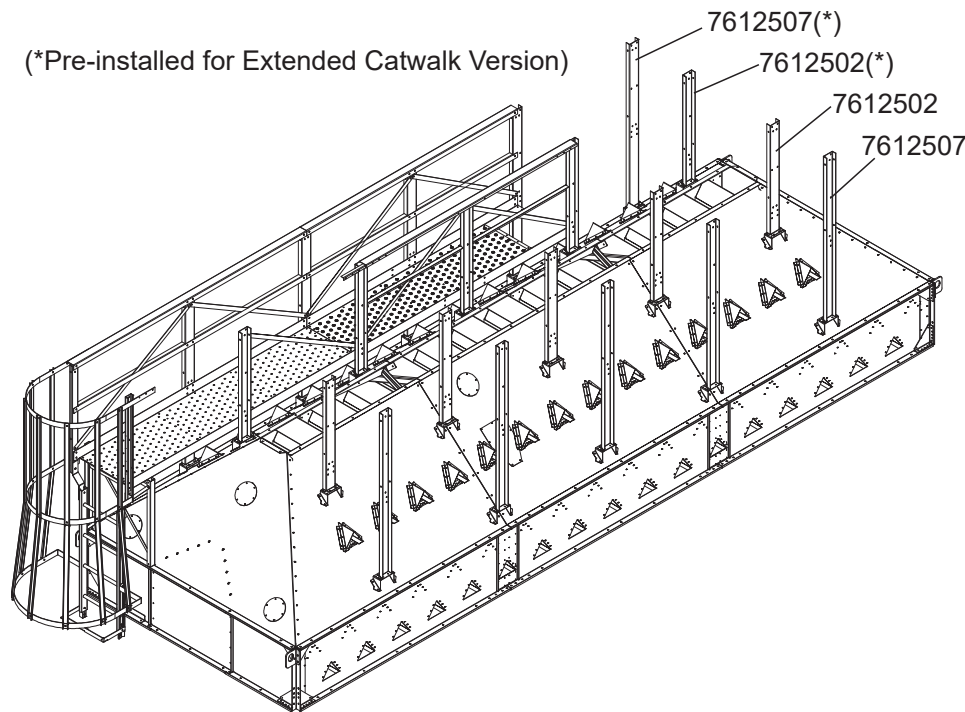


Figure 8. Installed Catwalk Upright Supports



5. Install the Catwalk upright supports to the feet using 1/4" flanged bolts and flange nuts.

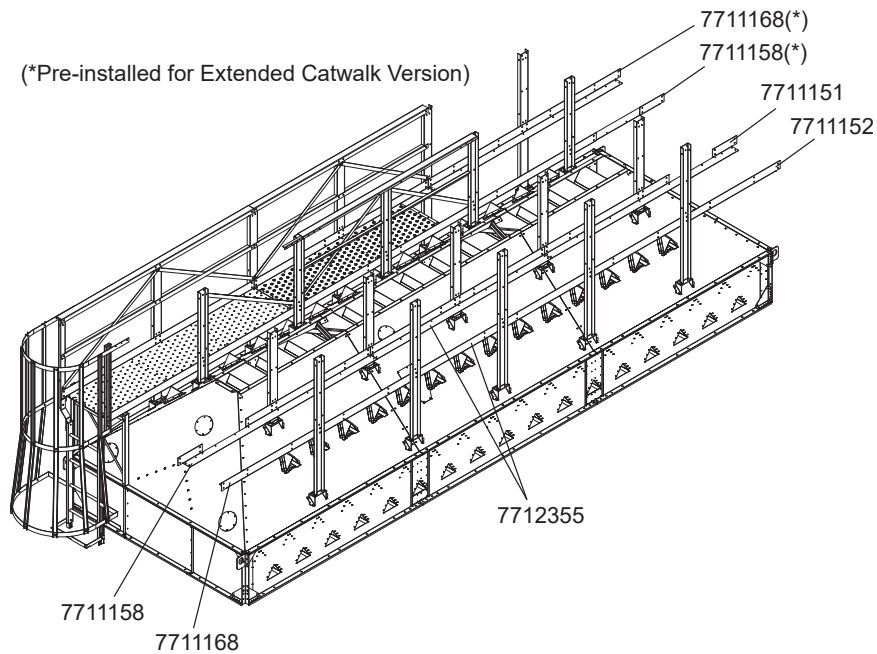
Figure 9. Install the Catwalk upright supports to the feet



Part Number	Description	Quantity					
		For Roof with Standard Catwalk			For Roof with Extended Catwalk		
		16ft	24ft	32ft	16ft	24ft	32ft
7612502	Catwalk Handrail Upright Inner	4	6	8	3	5	7
7612507	Catwalk Handrail Upright Outer	4	6	8	3	5	7

6. Install the toe boards onto the Catwalk upright supports using 3/8" bolts, washers and flange nuts.

Figure 10. Toe Boards onto the Catwalk Upright Support

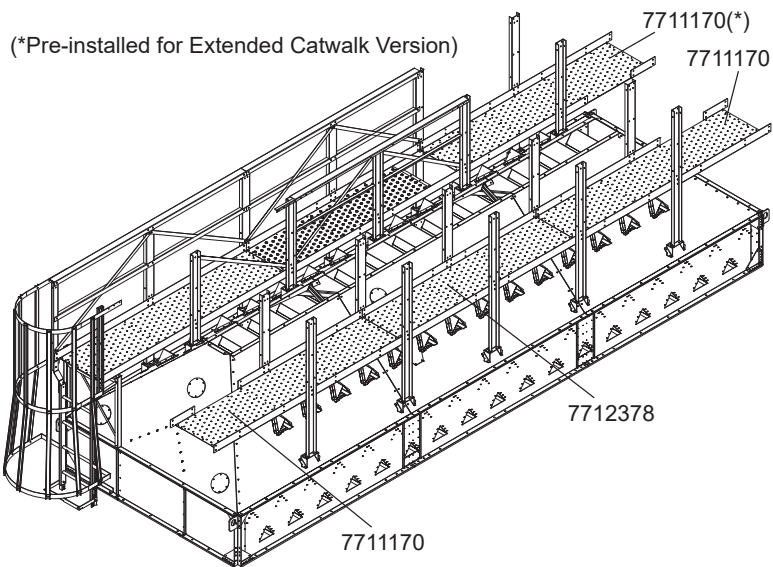


Part Number	Description	Quantity					
		For Roof with Standard Catwalk			For Roof with Extended Catwalk		
		16ft	24ft	32ft	16ft	24ft	32ft
7711151	Catwalk Toeboard w/Crossover R 106	1	1	1	1	1	1
7711152	Catwalk Toeboard Front L 106	1	1	1	1	1	1
7711158	Catwalk Toeboard w/Crossover L 106	2	2	2	1	1	1
7711168	Catwalk Toeboard Front R 106	2	2	2	1	1	1
7712355	Catwalk Toeboard Middle 96"	N/A	2	4	N/A	2	4

7. Place the floorboards in the locations shown in [Figure 11](#). Do not secure them to the toe boards.

Figure 11. Place the Floorboards

(Roof with Standard Catwalk)

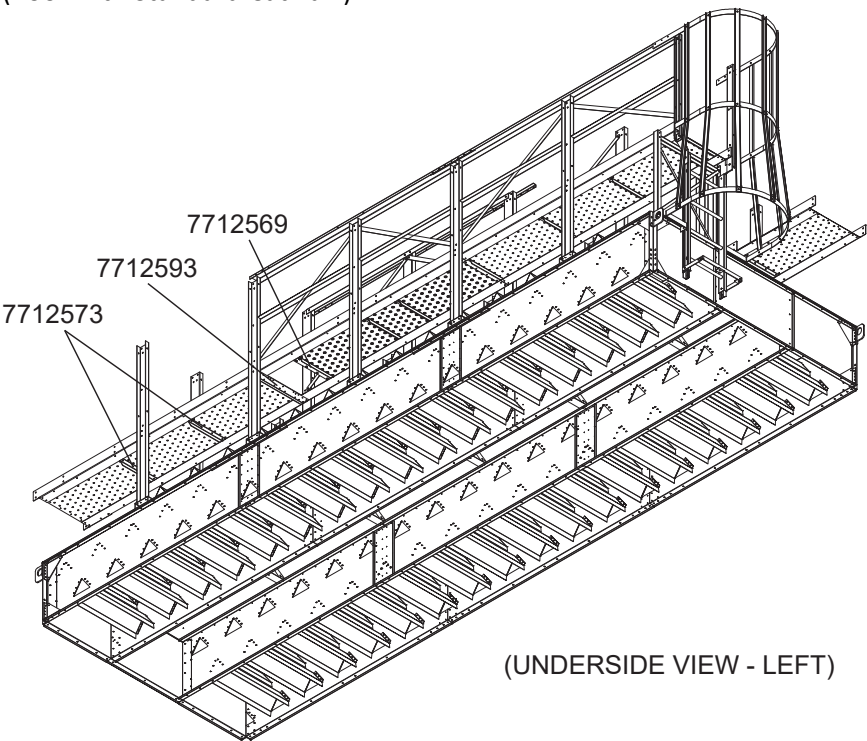


Part Number	Description	Quantity					
		For Roof with Standard Catwalk			For Roof with Extended Catwalk		
		16ft	24ft	32ft	16ft	24ft	32ft
7711170	Catwalk Platform 103-3/16"	3	3	3	2	2	2
7712378	Catwalk Platform Middle 96"	N/A	1	2	N/A	1	2

8. **(For roof with standard Catwalk)** Attach the stiffeners and splice plates to the bottom of the floorboards using 1/4" flanged bolts and 1/4" flange nuts. Refer to [Figure 12](#).
- Make sure the bent edges of the Catwalk Splice Plates (7712569 and 7712593) are under the floorboards when installing these Catwalk Splice Plates. Also, make sure half of each Splice Plate protrudes into the gap between the floorboards.
 - Once the stiffeners are installed, attach the floorboards to the toe boards using 1/4" flanged bolts and flange nuts.

Figure 12. Attach the Stiffeners (For Roof with Standard Catwalk)

(Roof with Standard Catwalk)

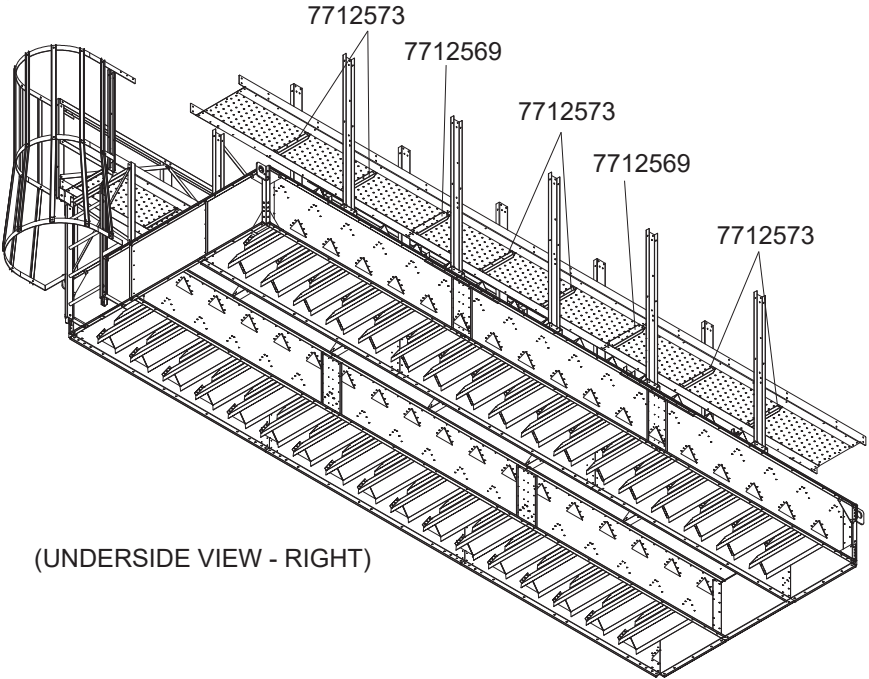


Part Number	Description	Quantity		
		16ft	24ft	32ft
7712569	Catwalk Floor Support/Splice	1	1	1
7712573	Catwalk Floor Support	2	2	2
7712593	Catwalk Floor Support/Door Headr	1	1	1

9. **(For roof with extended Catwalk)** Attach the stiffeners and splice plates to the bottom of the floorboards using 1/4" flanged bolts and 1/4" flange nuts. Refer to [Figure 13](#).
- Once the stiffeners are installed, attach the floorboards to the toe boards using 1/4" flanged bolts and flange nuts.

Figure 13. Attach the Stiffeners

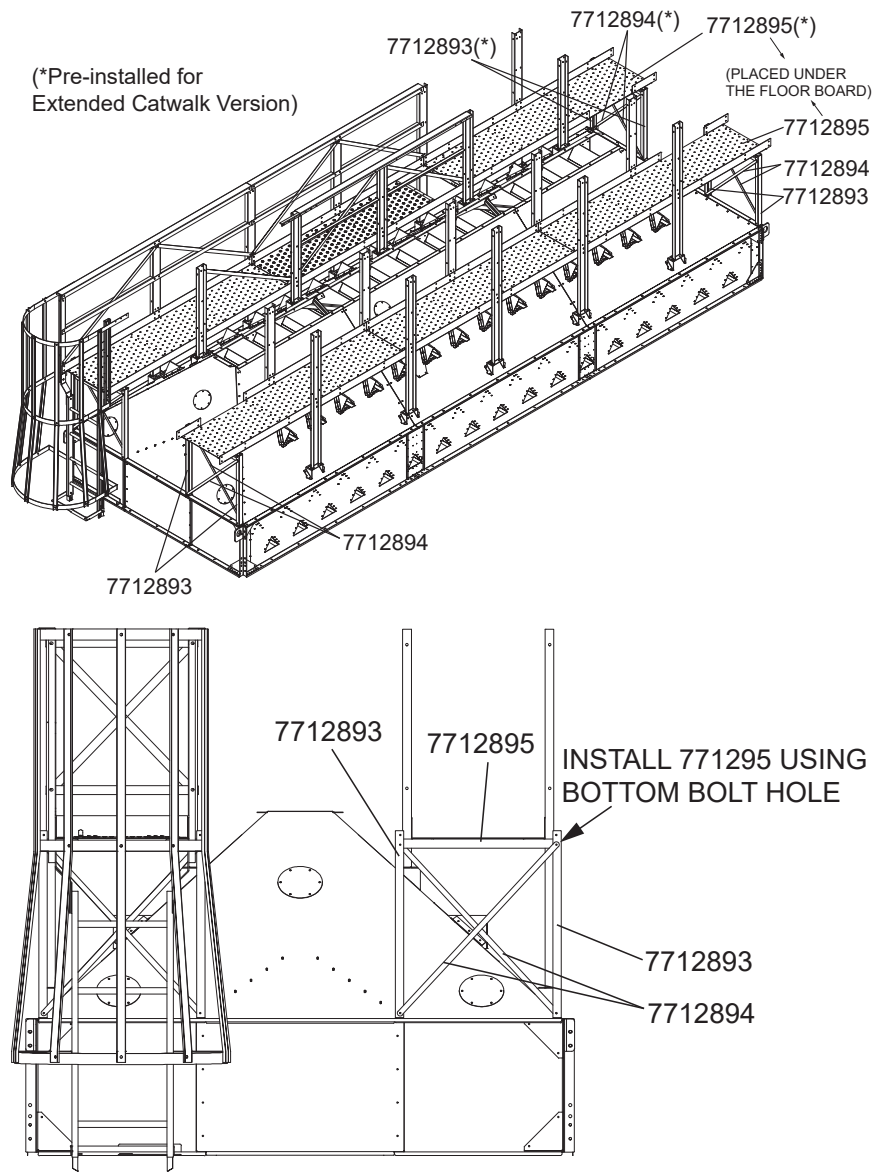
(Roof with Standard Catwalk)



Part Number	Description	Quantity		
		16ft	24ft	32ft
7712569	Catwalk Floor Support/Splice	1	2	3
7712573	Catwalk Floor Support	4	6	8

10. Assemble Catwalk end supports. Use 1/4" flanged bolts and flange nuts. Refer to [Figure 14](#).

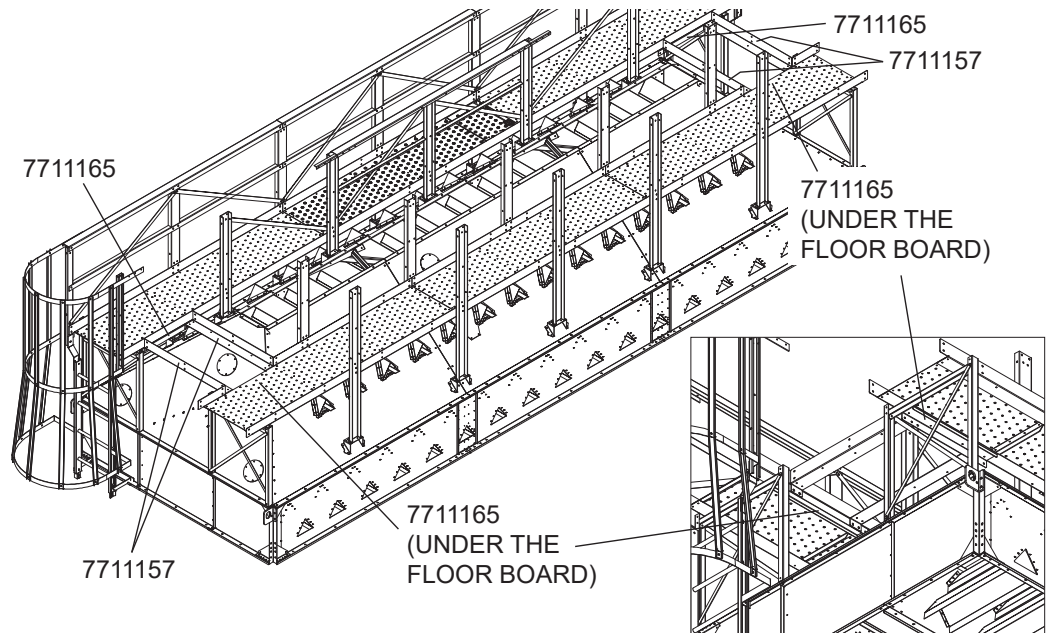
Figure 14. Assemble Catwalk End Supports



Part Number	Description	Quantity					
		For Roof with Standard Catwalk			For Roof with Extended Catwalk		
		16ft	24ft	32ft	16ft	24ft	32ft
7712893	Catwalk Floor Support/Splice	6	6	6	4	4	4
7712894	Catwalk Floor Support	6	6	6	4	4	4
7712895	Catwalk Floor Support/Door Headr	3	3	3	2	2	2

11. Install the Crossover supports. Refer to [Figure 15](#), [Figure 16](#), and [Figure 17](#).
- a. Secure Catwalk Crossover Brace (7711165) under the toe boards. Use 1/4" flanged bolts and flange nuts.
 - b. Use a 1/4" drill bit to create two more bolt holes for each instance of 7711165 attached to an existing toe board. Each crossover brace should be secured using four bolts total.
 - c. Install Catwalk Crossover Toeboard (7711157) between the attached units of 7711165. Use 3/8" bolts, washers and flange nuts.

Figure 15. Install the Crossover Supports



Part Number	Description	Quantity		
		16ft	24ft	32ft
7711157	Catwalk Crossover Toeboard	4	4	4
7711165	Catwalk Crossover Brace	4	4	4

Figure 16. Installing Crossover Braces (Close-up View From Below)

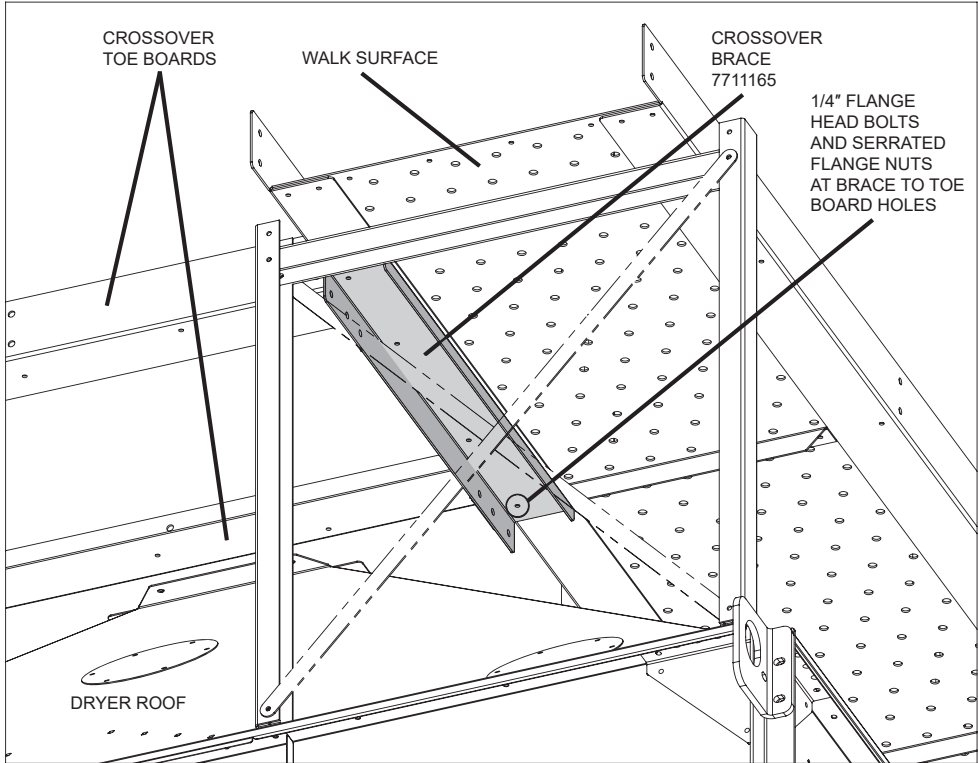
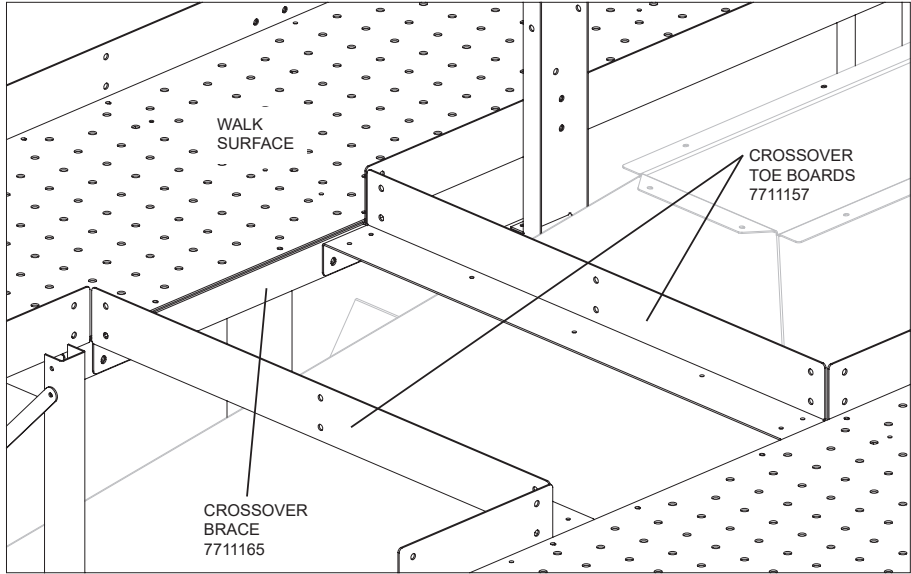
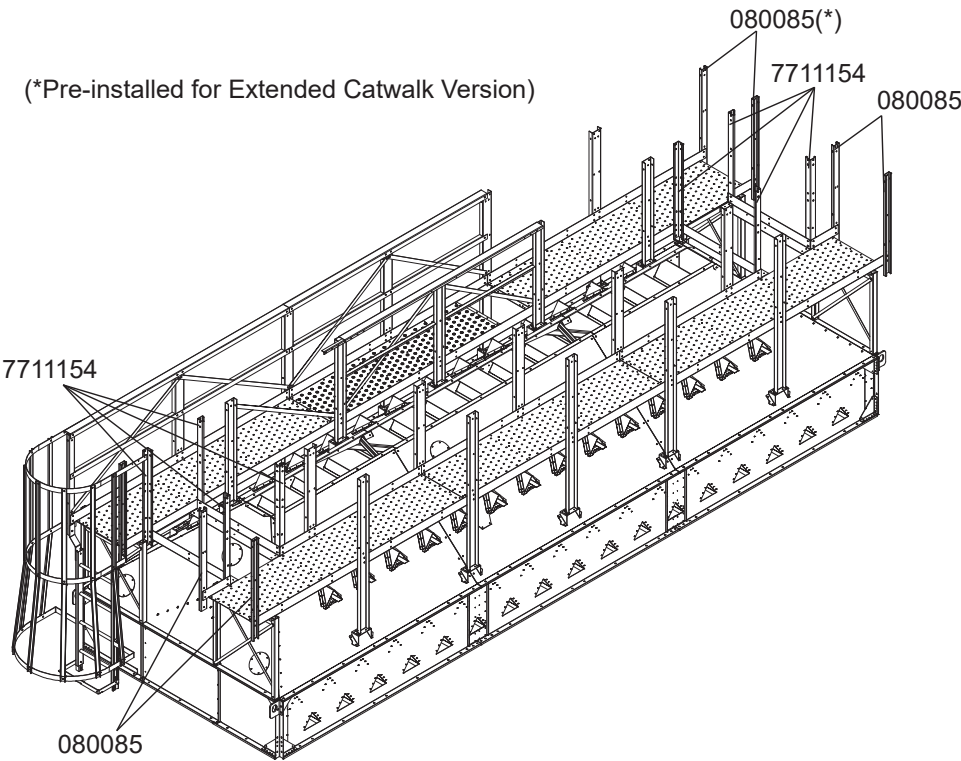


Figure 17. Installing Crossover Toe Boards and Crossover Braces (Close-up View From Top)



12. Install remaining Catwalk uprights. Use 3/8" bolts, washers and flange nuts.

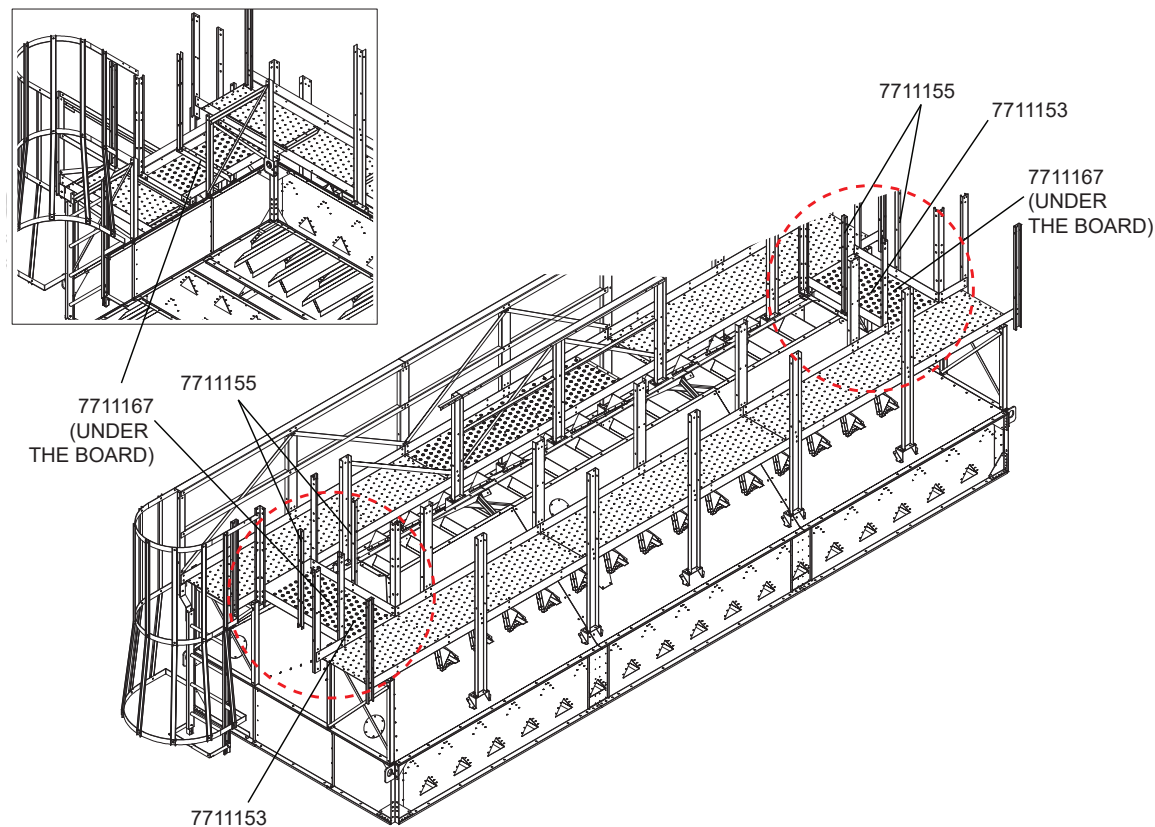
Figure 18. Install Remaining Catwalk Uprights



Part Number	Description	Quantity					
		For Roof with Standard Catwalk			For Roof with Extended Catwalk		
		16ft	24ft	32ft	16ft	24ft	32ft
080085	Ladder Extension Rail Walkthru	6	6	6	4	4	4
7711154	Crossover Upright Corner	8	8	8	8	8	8

13. Install the Crossover Floorboards using 1/4" flanged bolts and nuts and install the uprights using 3/8" bolts. Catwalk Handrail Support Brace (7711167) does not attach to the floor or toe boards.

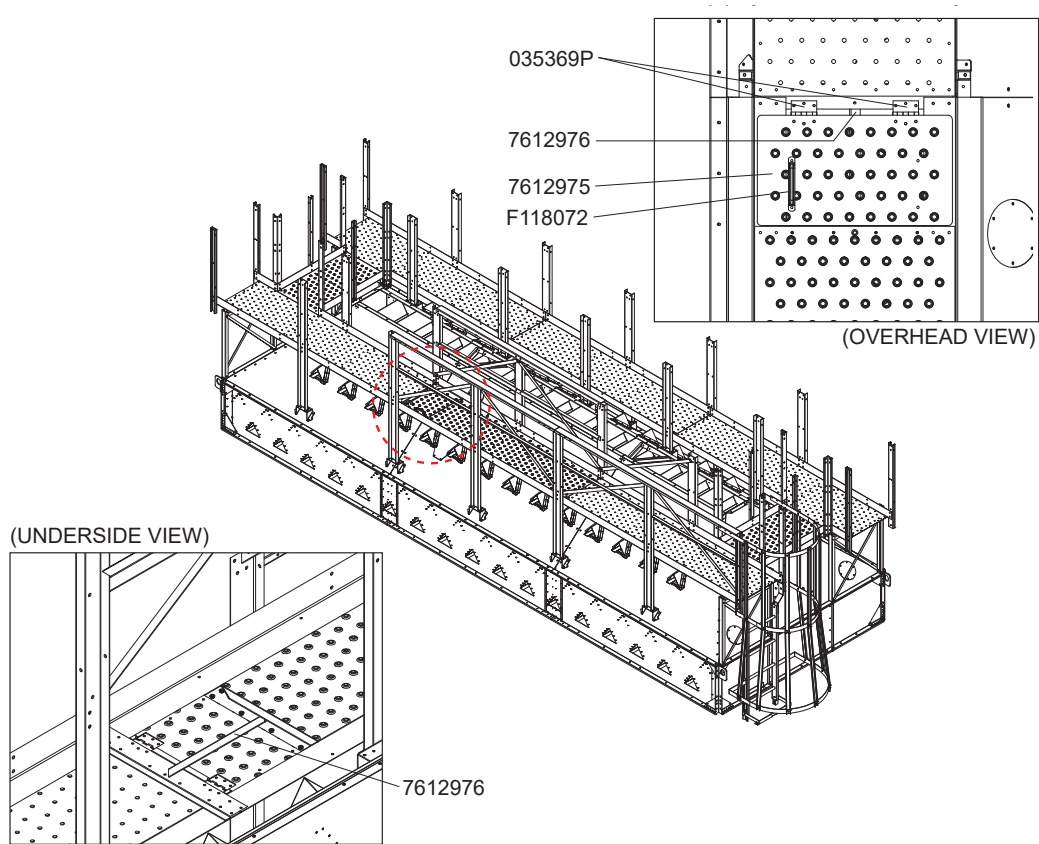
Figure 19. Install the Crossover Floorboards



Part Number	Description	Quantity		
		16ft	24ft	32ft
7711153	Catwalk Crossover Plank	2	2	2
7711155	Catwalk Mid Upright	4	4	4
7711167	Catwalk Handrail Support Brace	2	2	2

14. (For roof with standard Catwalk only) Assemble the trapdoor using the original parts.

Figure 20. Assemble the Trapdoor

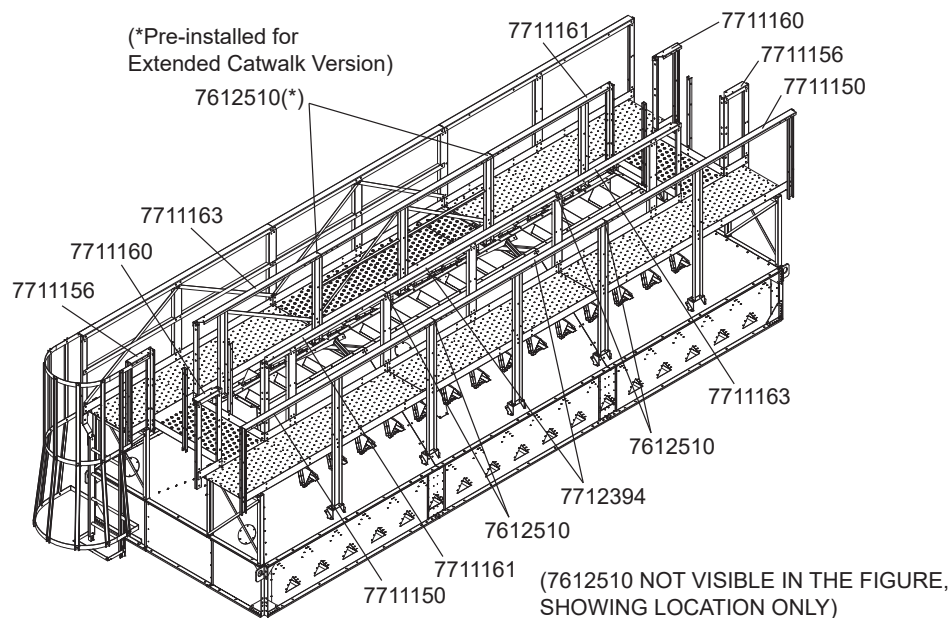


Part Number	Description	Quantity		
		16ft	24ft	32ft
035369P	Hinge 3X3 Butt Zinc Plated	2	2	2
7612975	Catwalk Platform Access Door	1	1	1
7612976	Catwalk Access Panel Cross Brace	1	1	1
F118072	Handle Sliding Door	1	1	1

15. Install the top rails onto the upright columns. Use 3/8" bolts, washers and flange nuts.

- Join the top rail sections together using the rail splices (7612510) using 1/4" flanged bolts and nuts. On the side with the pre-installed rails, use the splices that are already in place.

Figure 21. Install the Top Rails onto the Upright Columns

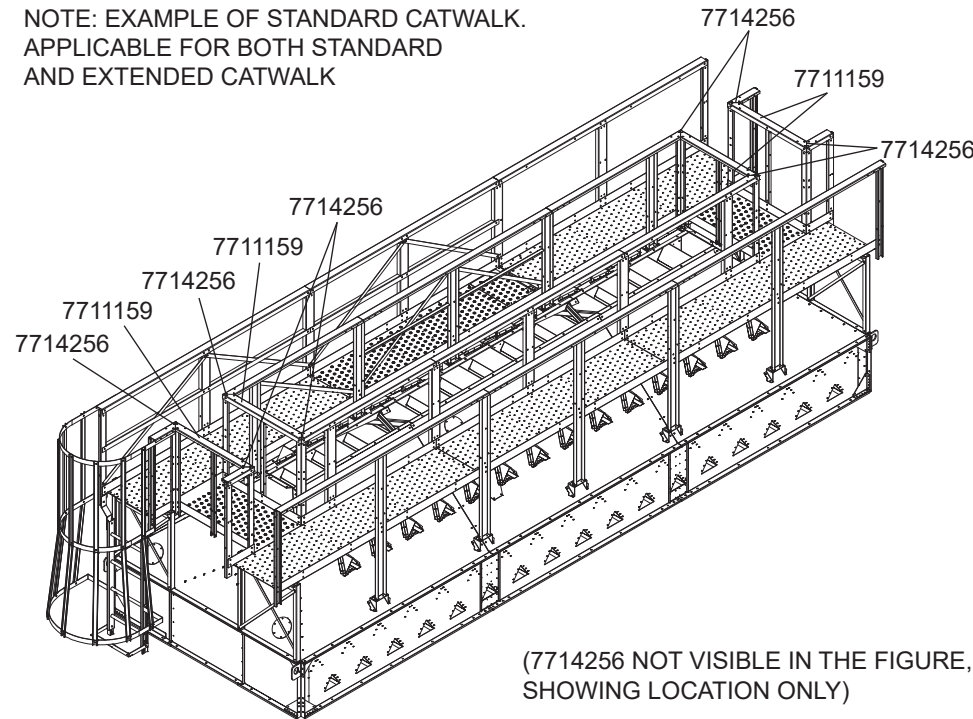


Part Number	Description	Quantity		
		16ft	24ft	32ft
7612510	Catwalk Handrail Splice	4	6	8
7711150	Catwalk Handrail Upper Front 106	2	2	2
7711156	Catwalk Handrail Short Corner LH	2	2	2
7711160	Catwalk Handrail Short Corner RH	2	2	2
7711161	Catwalk Handrail Long Corner LH	2	2	2
7711163	Catwalk Handrail Long Corner RH	2	2	2
7712394	Catwalk Handrail Upper Middle 96"	N/A	2	4

16. Install the Crossover top rails. Use 3/8" bolts, washers and flange nuts.

- Join the rail sections together using the angled splice plates (7714256). Use 1/4" flanged bolts and flange nuts.

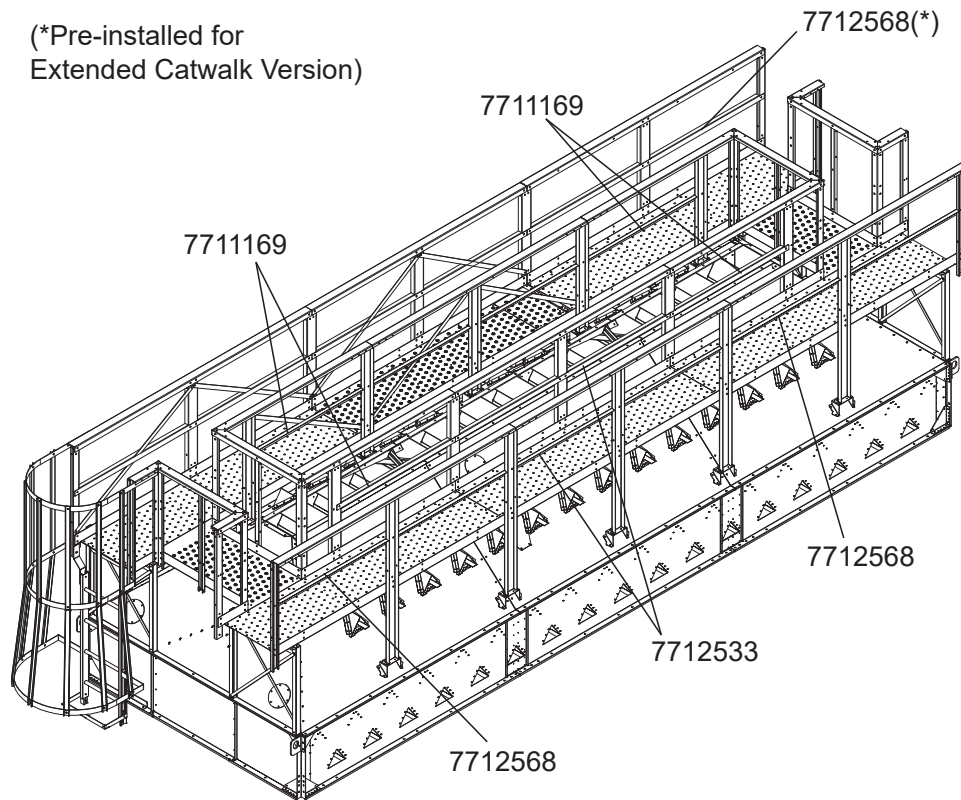
Figure 22. Install the Crossover Top Rails



Part Number	Description	Quantity		
		16ft	24ft	32ft
7711159	Catwalk Handrail Crossover	4	4	4
7714256	Platform Handrail Splice Plate	8	8	8

17. Install the middle rails onto the upright supports. Use 3/8" bolts, washers and flange nuts.

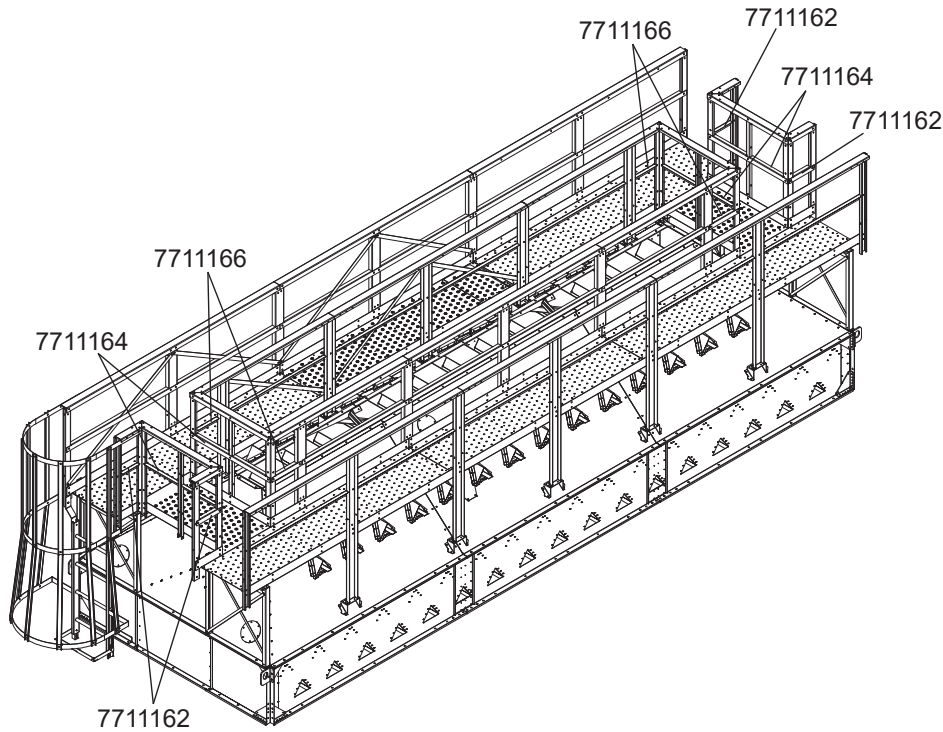
Figure 23. Install the Middle Rails onto the Upright Supports



Part Number	Description	Quantity					
		For Roof with Standard Catwalk			For Roof with Extended Catwalk		
		16ft	24ft	32ft	16ft	24ft	32ft
7711169	Catwalk Handrail Lower Middle 50.5"	N/A	4	4	N/A	4	4
7712533	Catwalk Handrail Lower Middle 96"	N/A	2	4	N/A	2	4
7712568	Catwalk Handrail Lower Front 106"	4	2	2	2	N/A	N/A

18. Install the Crossover middle rails. Use 3/8" bolts, washers and nuts.

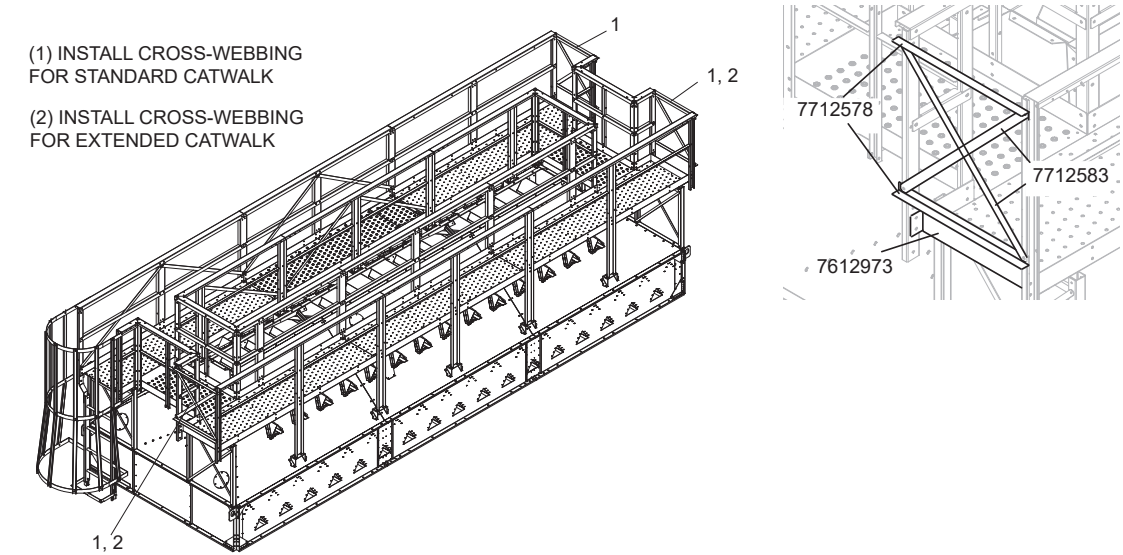
Figure 24. Install the Crossover Middle Rails



Part Number	Description	Quantity		
		16ft	24ft	32ft
7711162	Catwalk Handrail Lower 10.6	4	4	4
7711164	Catwalk Handrail Lower Crossover	4	4	4
7711166	Catwalk Handrail Lower 13	4	4	4

19. Install the Catwalk End Cross-Webbing. Use 3/8" bolts, washers and flange nuts.

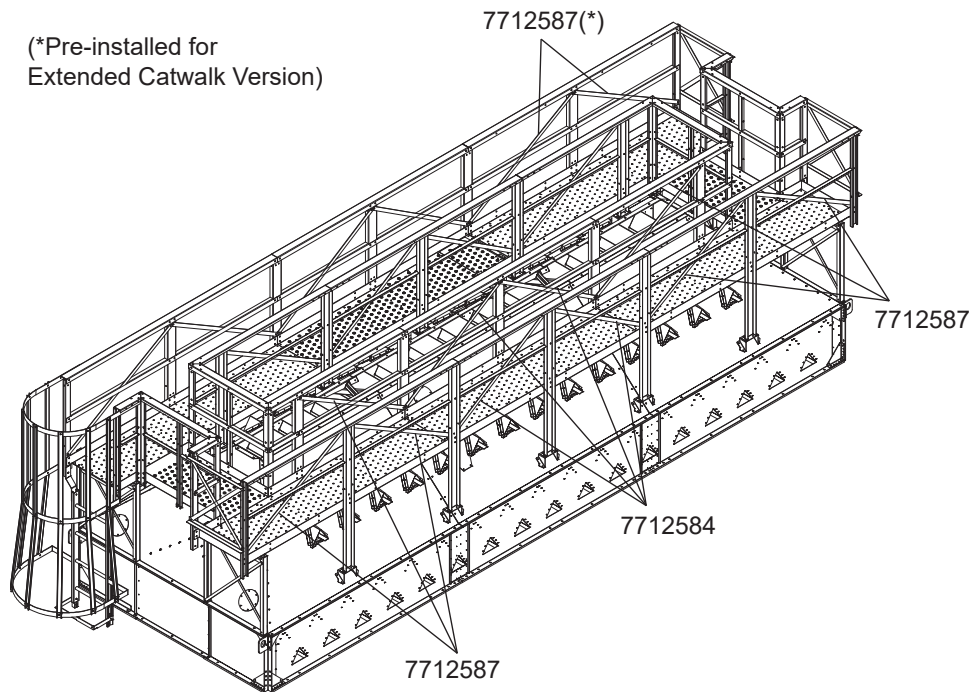
Figure 25. Install the Catwalk End Cross-Webbing



Part Number	Description	Quantity					
		For Roof with Standard Catwalk			For Roof with Extended Catwalk		
		16ft	24ft	32ft	16ft	24ft	32ft
7612973	Catwalk Toeboard End For Hinge	3	3	3	2	2	2
7712576	Catwalk Handrail Cross Brace	6	6	6	4	4	4
7712583	Catwalk Diagonal Brace End	6	6	6	4	4	4

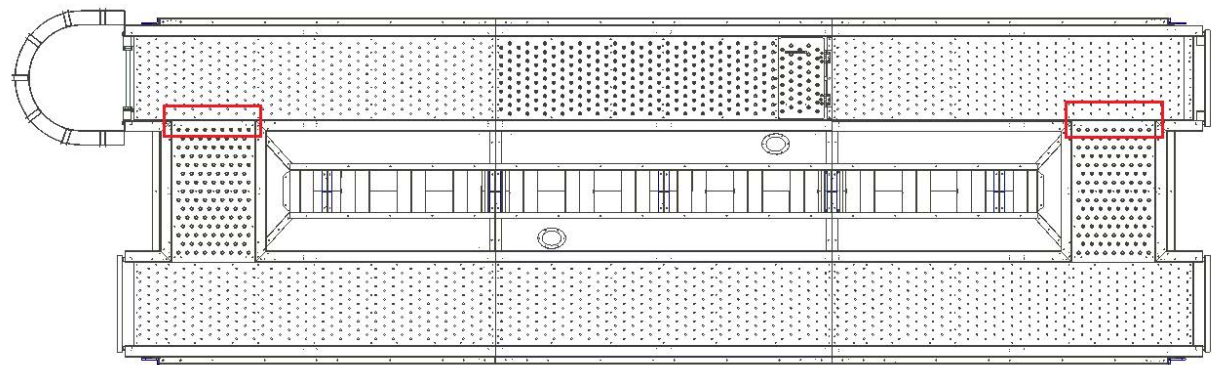
20. Install Side Wall Cross-Bracing. Use 3/8" bolts, washers and flange nuts.

Figure 26. Install Side Wall Cross-Bracing



Part Number	Description	Quantity					
		For Roof with Standard Catwalk			For Roof with Extended Catwalk		
		16ft	24ft	32ft	16ft	24ft	32ft
7712584	Catwalk Diagonal Brace Side Mid	N/A	4	8	N/A	4	8
7712587	Catwalk Diagonal Brace Side Front	4	4	4	N/A	N/A	N/A

21. The Crossover nearest to the ladder is obstructed by the previously installed toe board. Remove the intervening material using a cutoff wheel.



3.6. Blower Mount and Raised Blower Access Platform Assembly

Note

The instructions on this page pertain only to dryer installations having a grain pre-cleaner.

- The blower mount and/or access platform can be installed in the following acceptable locations on the catwalk.
- Install the blower motor in-line with the center of the gravity fill.

Figure 27. 16' Acceptable Blower Mount Installation Locations

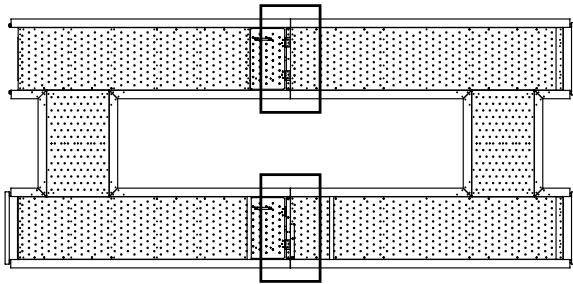


Figure 28. 24' Acceptable Blower Mount and Access Platform Installation Locations

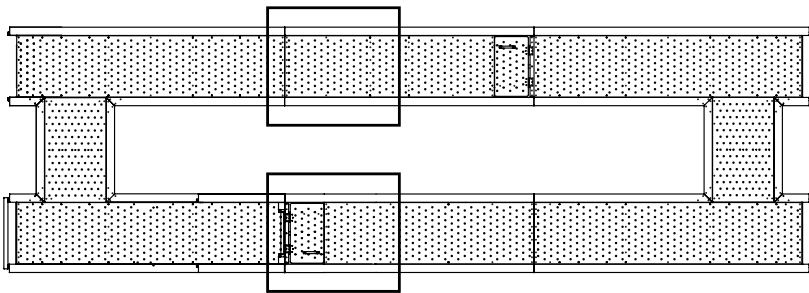
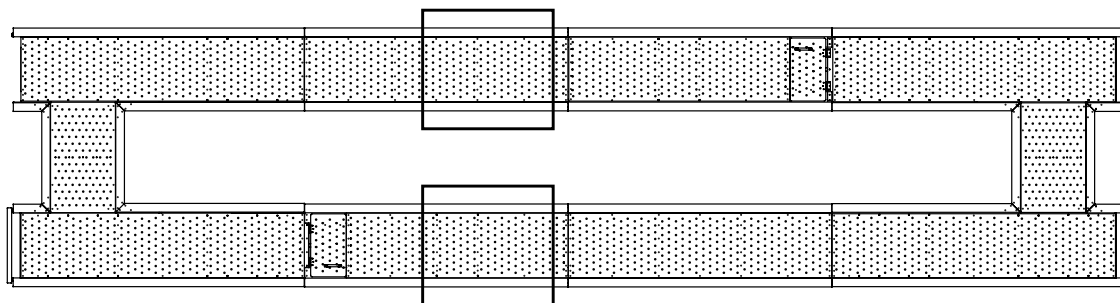


Figure 29. 32' Acceptable Blower Mount and Access Platform Installation Locations



3.6.1 16' Blower Mount Installation

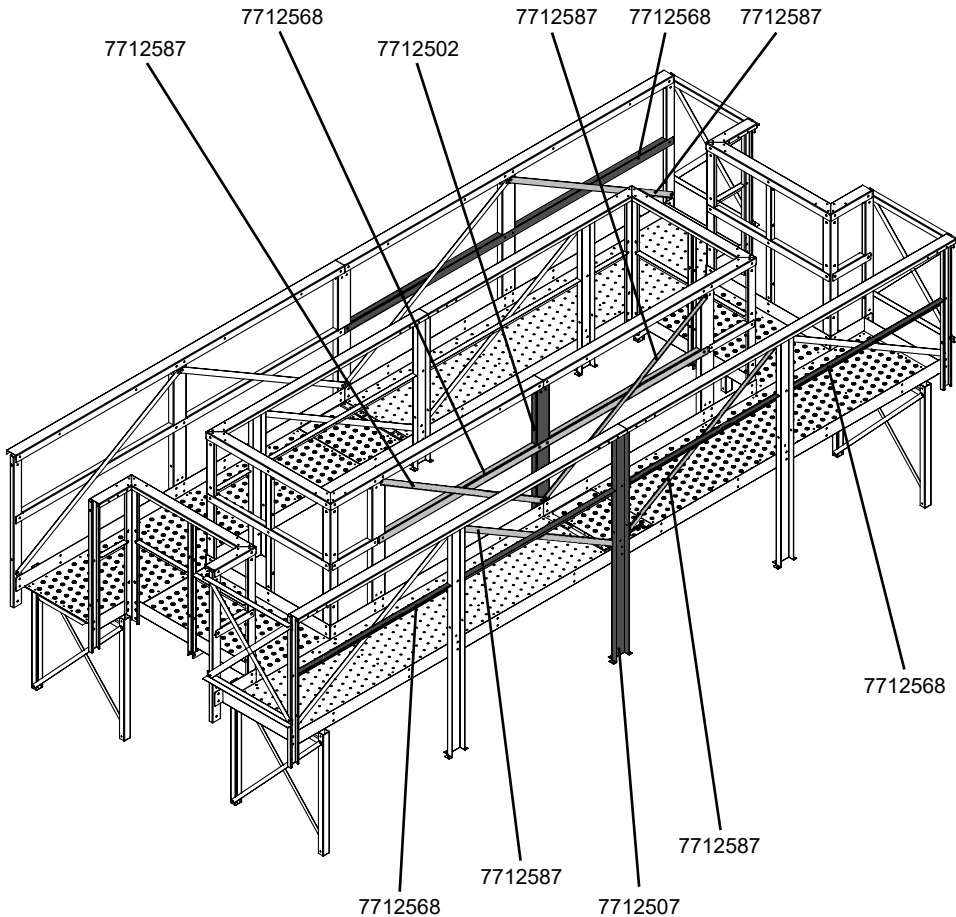
Removing Designated 16' Catwalk Parts in Preparation for Mount Assembly

Remove the following 16' catwalk parts and temporarily support the remaining catwalk assembly until the 16' blower mount assembly is installed.

Note

The following installation is a Cyclone Right Hand (RH) discharge installation. Components are in opposite orientation on a Cyclone Left Hand (LH) installation.

Figure 30. Removing Parts In Preparation for Blower Mount Assembly



Part Number	Part Name	Quantity
7612502	Inner Leg Upright	1
7612507	Outer Leg Upright	1
7612568	106" Lower Front Handrail	4
7612587	Front Side Diagonal Brace	5

Installing Short Blower Mount Leg Uprights

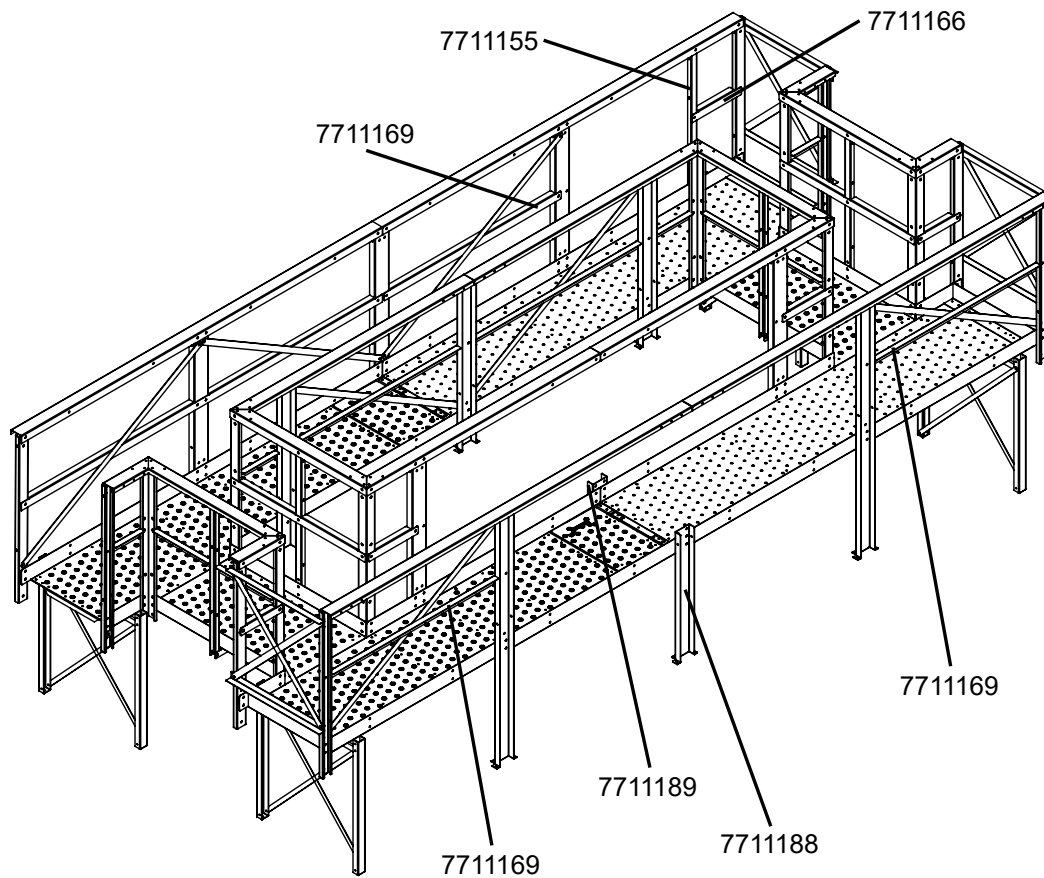
Install short catwalk uprights in the center of the catwalk.

- Install the uprights to the factory installed roof feet using 1/4" flange head bolts.
- Install the uprights to the toe boards using 3/8" bolts and washers.

Note

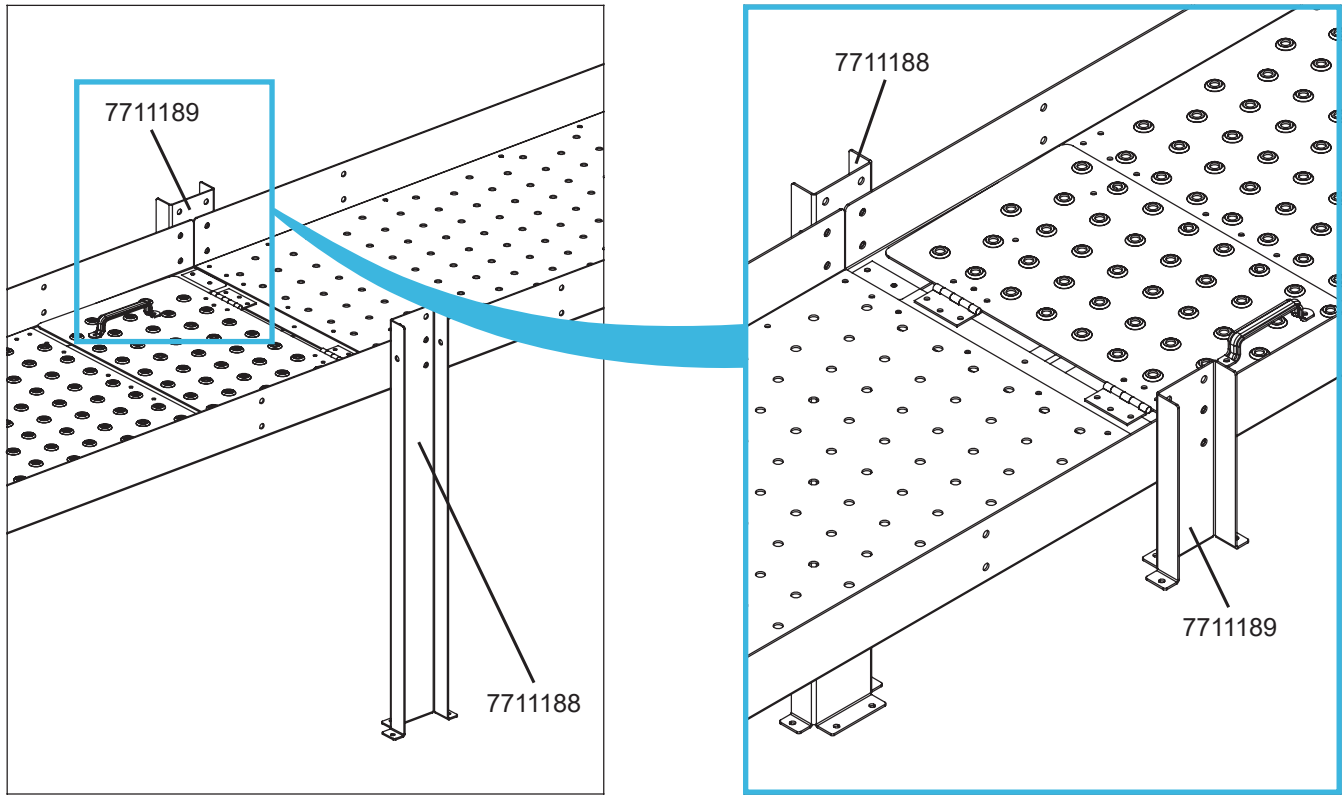
See also the figure on the next page.

Figure 31. Installing Short Blower Mount Leg Uprights



Part Number	Part Name	Quantity
7711188	16' Short Blower Mount Outer Leg Upright	1
7711189	16' Short Blower Mount Inner Leg Upright	1
7711155	Mid Upright	1
7711166	13" Lower Handrail	1
7711169	50-1/2" Lower Handrail	3

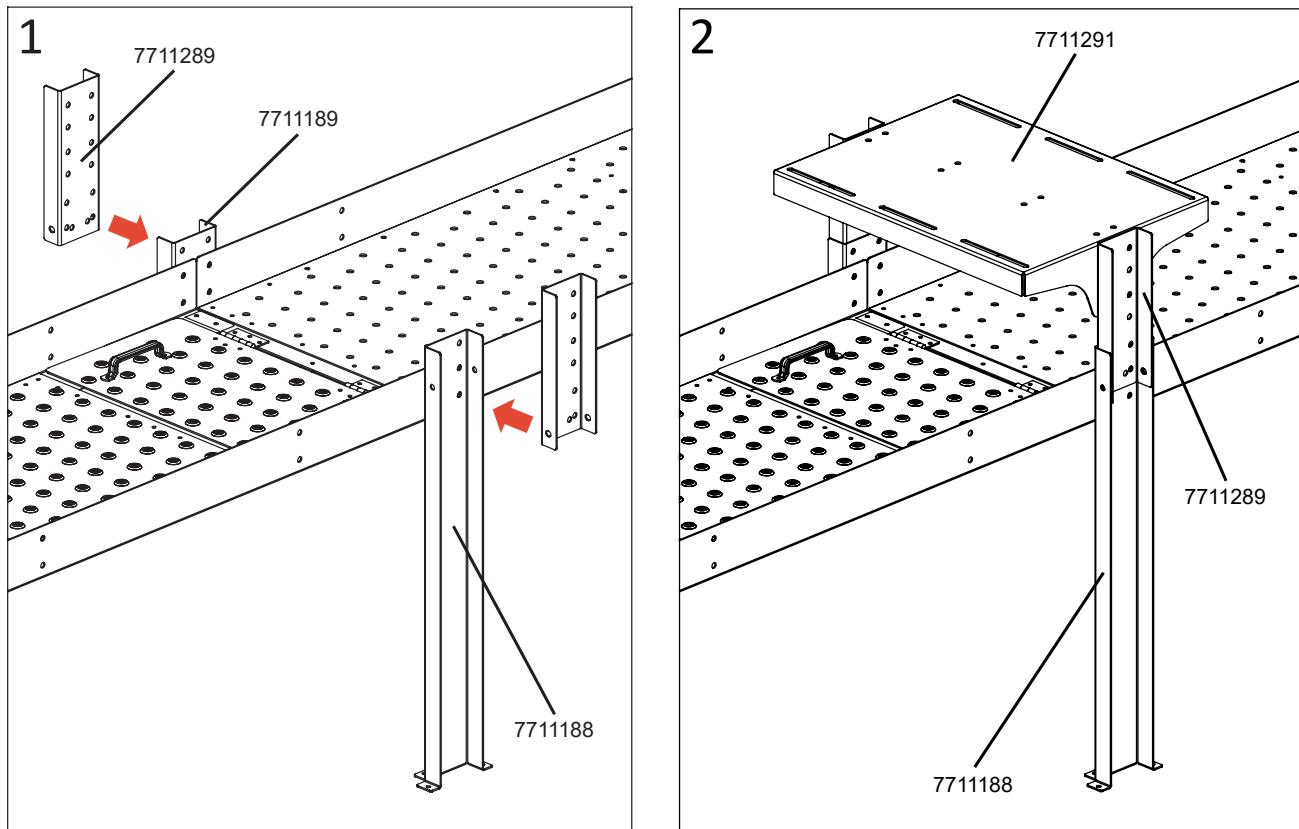
Figure 32. Installing Short Blower Mount Leg Uprights, Close-up Views



Installing the 16' Motor Mount Base Onto the Short Catwalk Uprights

1. Install the motor mount uprights (7711289) to the 16' blower inner and outer uprights.
 - Use 3/8" bolts, washers, and flanged nuts.
2. Install the 17" blower and motor mount base (7711291) to the motor mount uprights (7711289), keeping the top of the base flush with the top of the uprights.
 - Use 3/8" bolts, washers, and flanged nuts.

Figure 33. Installing the 16' Blower and Motor Mount Base to the Short Leg Uprights



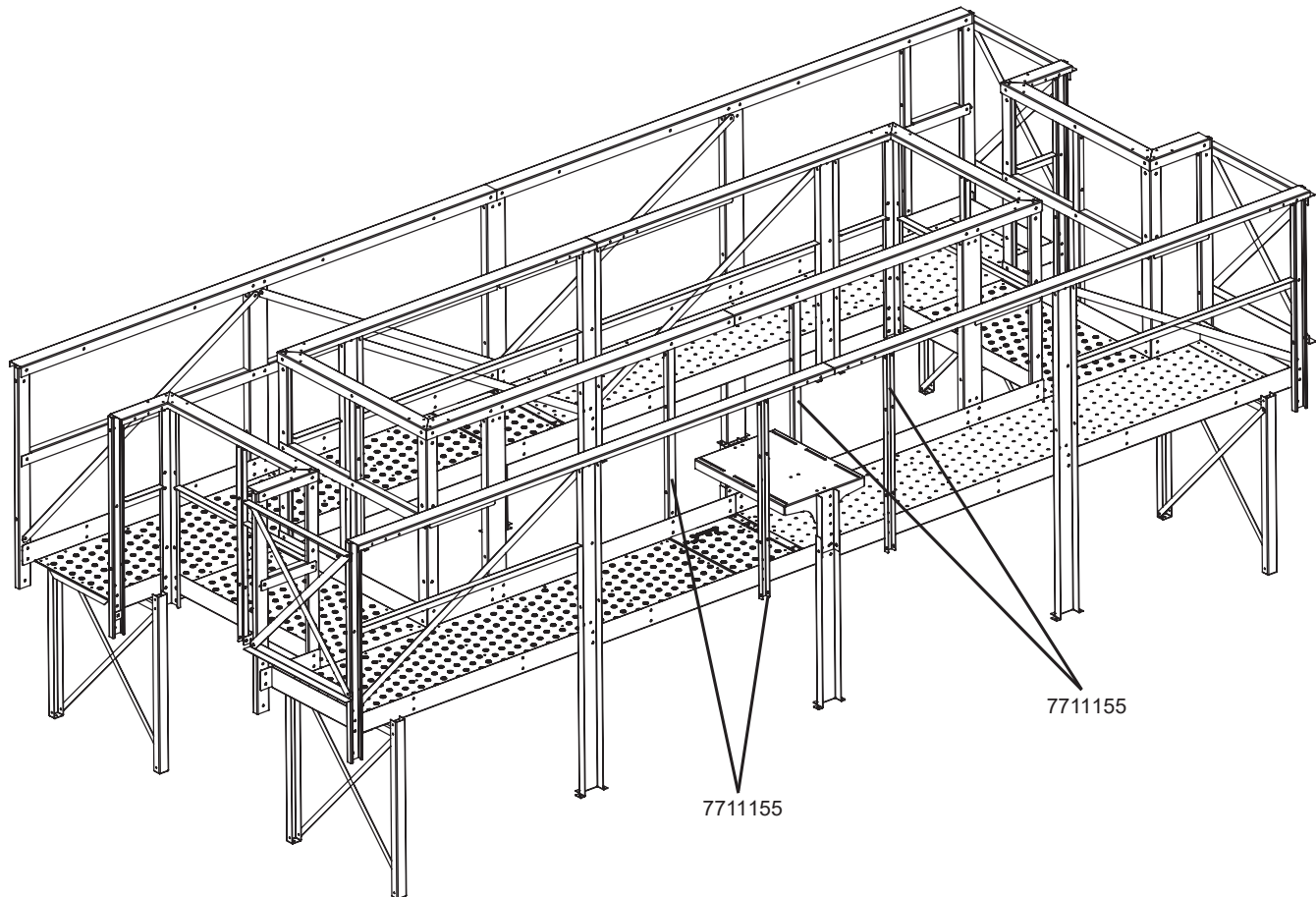
Part Number	Part Name	Quantity
7711188	16' Short Blower Mount Outer Leg Upright	1
7711189	16' Short Blower Mount Inner Leg Upright	1
7711289	Motor Mount Upright	2
7711291	17" Blower and Motor Mount Base	1

Installing Mid Uprights Next to the Motor Mount Base

Install mid uprights (7711155) next to the motor mount base.

- Use 3/8" bolts, washers, and flange nuts.

Figure 34. Installing Mid Uprights Next to the Blower and Motor Mount Base



Part Number	Part Name	Quantity
7711155	Mid Upright	4

Installing Middle Rails Next to the Motor Mount Base

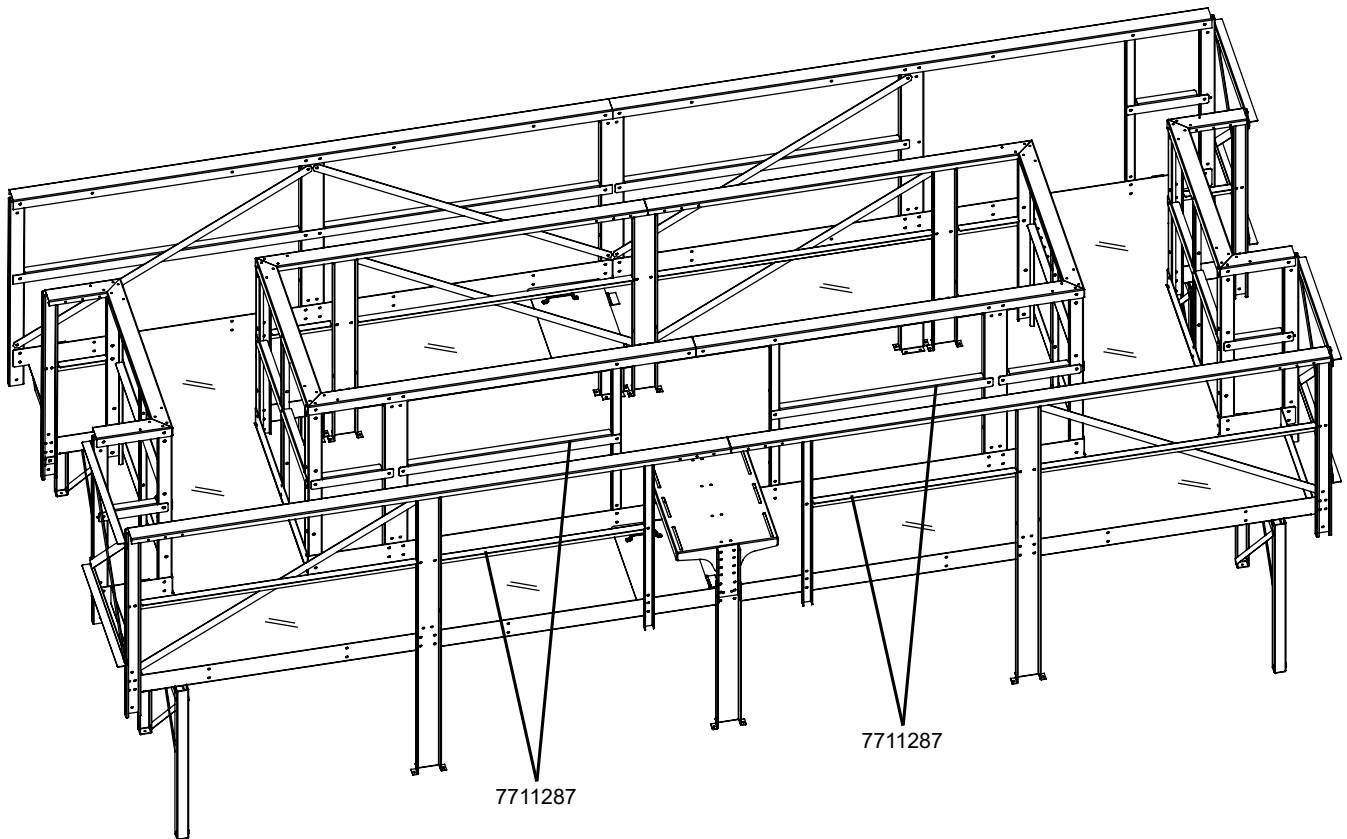
Install middle rails next to the motor mount base.

- Use 3/8" bolts, washers, and flange nuts.

Note

Position the middle rail gap in the location the aspirator pipe will be routed through. The middle rail gap doesn't need to be in the location depicted in the following figure.

Figure 35. Installing Middle Rails Next to the Blower and Motor Mount Base



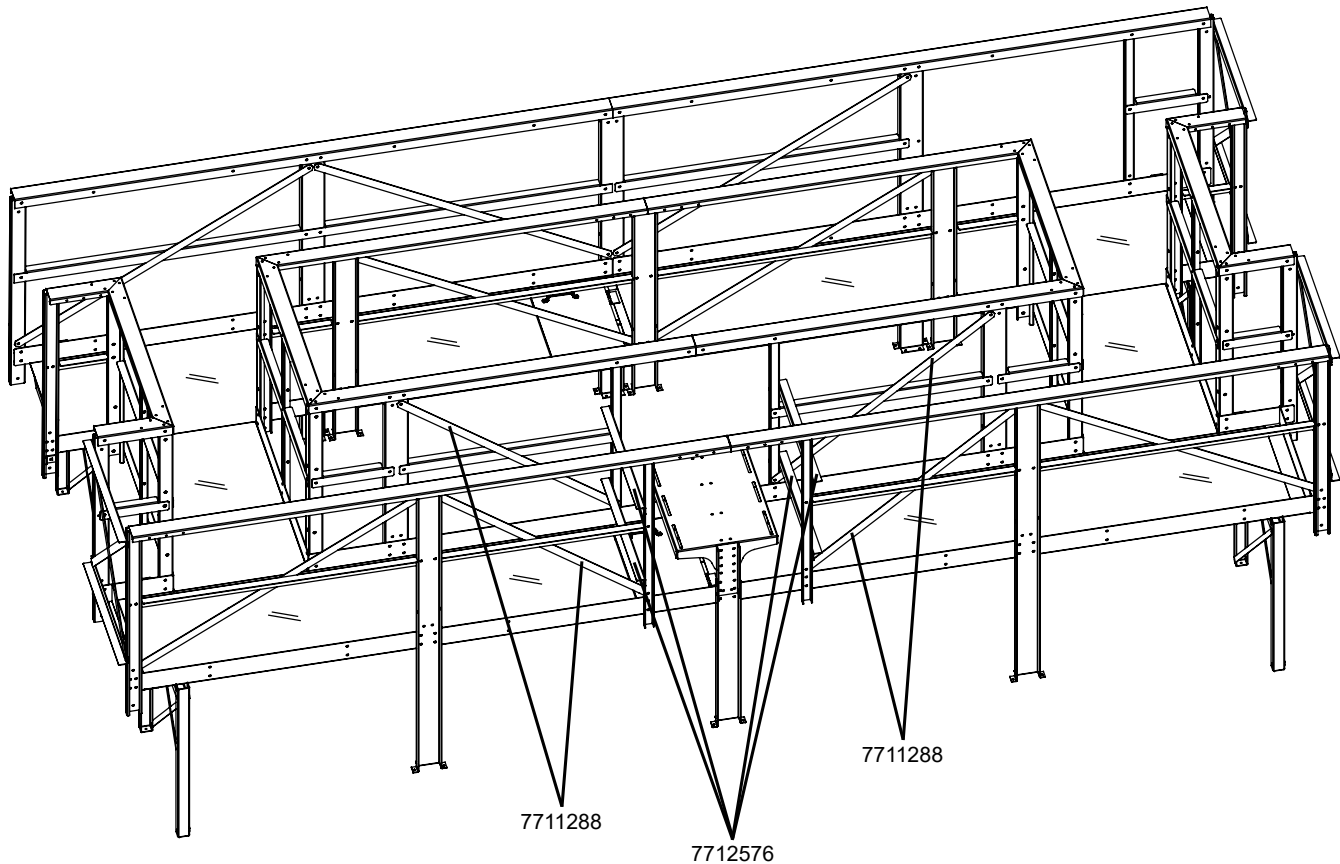
Part Number	Part Name	Quantity
7711287	37-3/4" Lower Handrail	4

Installing Diagonal Braces Next to the Motor Mount Base

Install diagonal braces next to the blower and motor mount base.

- Use 3/8" bolts, washers, and flange nuts.

Figure 36. Installing Diagonal Braces Next to the Blower and Motor Mount Base



Part Number	Part Name	Quantity
7712576	Handrail Cross Brace	4
7711288	Mid Diagonal Brace	4

3.6.2 24' Blower Mount and Raised Blower Platform Installation

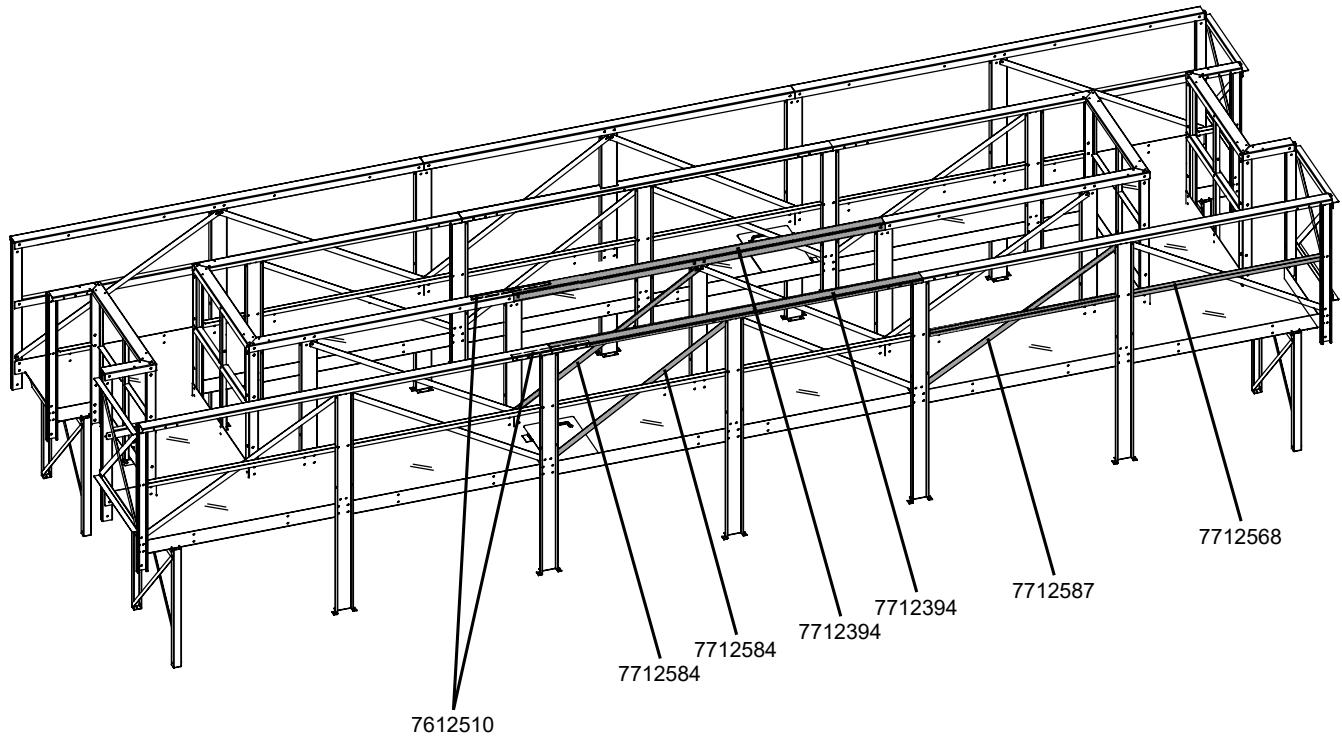
Removing Designated 24' Catwalk Parts in Preparation for Mount Assembly

Remove the following 24' catwalk parts and temporarily support the remaining catwalk assembly until the 24' platform and blower mount assembly is installed.

Note

The following installation is a Cyclone Left Hand (LH) discharge installation. Components are in opposite orientation on a Cyclone Right Hand (RH) installation.

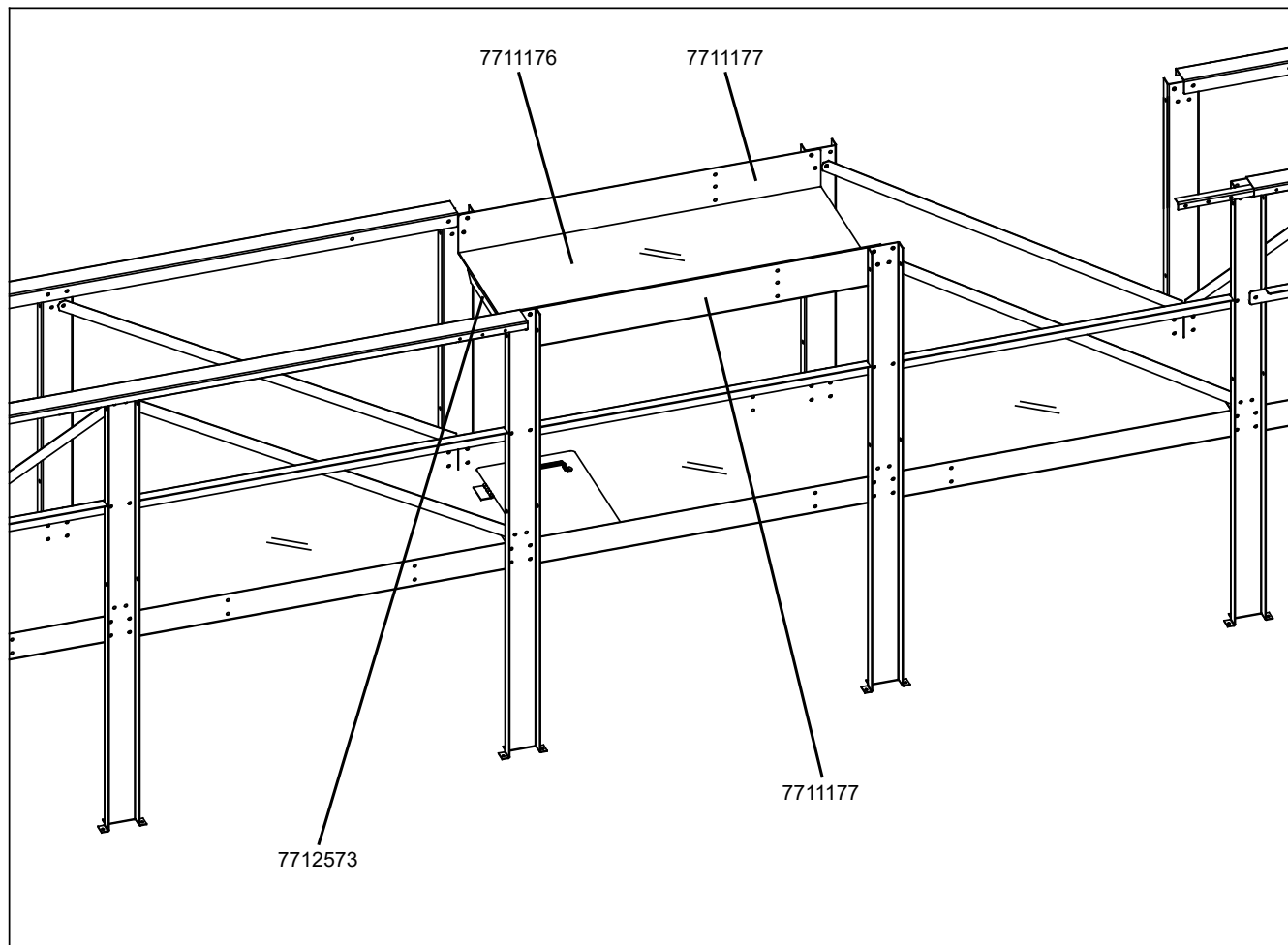
Figure 37. Removing the Designated Parts In Preparation for Platform and Mount Assembly



Part Number	Part Name	Quantity
7612510	Handrail Splice	2
7712394	96" Upper Middle Handrail	2
7712568	106" Lower Front Handrail	1
7712584	Side Mid Diagonal Brace	2
7712587	Front Side Diagonal Brace	1

Installing the 24' Blower Platform Leg Uprights, Surface, and Toe Boards

1. Install the blower platform toe boards (7711177) to the uprights.
 - Use 3/8" bolts and flange nuts.
2. Install the walk surface stiffener (7712573) to the blower platform surface bottom end.
 - Use 1/4" flange head bolts and flange nuts.
3. Install the blower platform surface (7711176) to the platform toe boards (7711177).
 - Use 1/4" flange head bolts and flange nuts.

Figure 38. Installing the 24' Blower Platform Toe Boards and Surface

Part Number	Part Name	Quantity
7712573	Walk Surface Stiffener	1
7711176	Blower Platform Surface	1
7711177	Blower Platform Toe Board	2

Installing Short Rails Next to Blower Platform Toe Boards

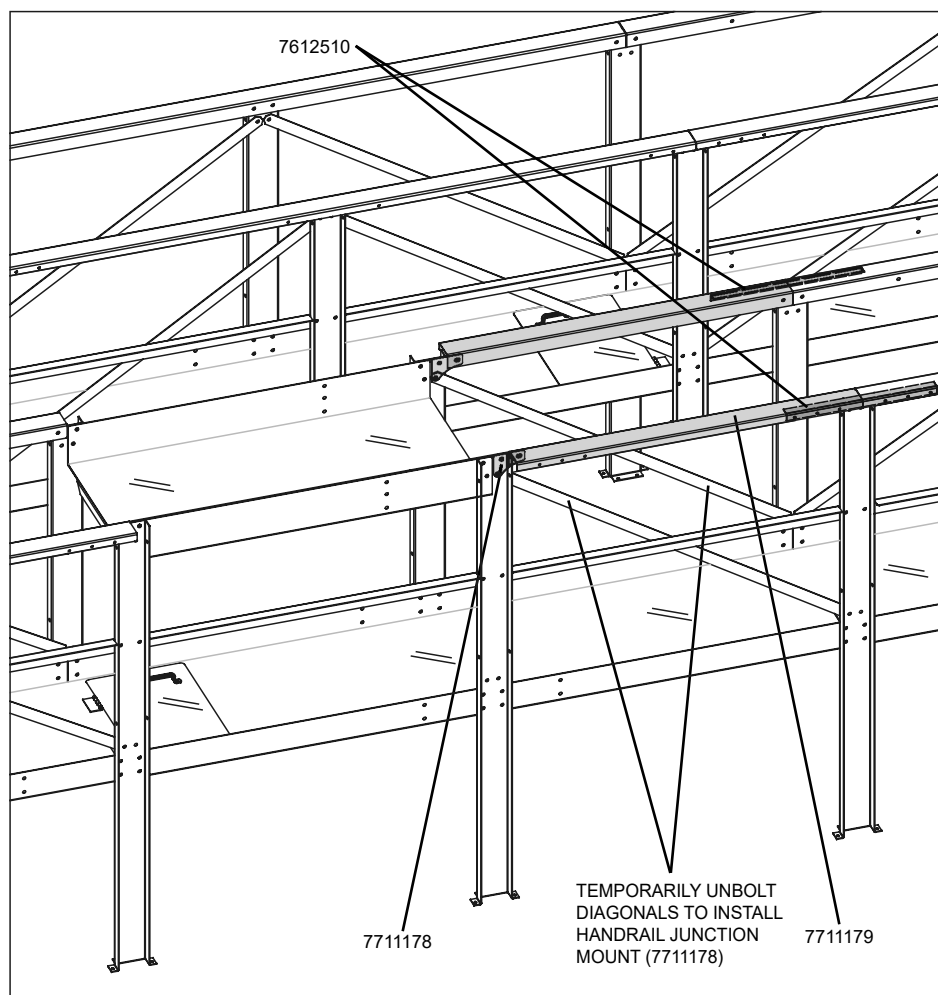
1. First unattach the catwalk diagonal braces at the location 45-3/4" handrails and handrail junction mounts are to be installed.
2. Install the handrail junction mounts (7711178) to the uprights.
 - Use 3/8" bolts and 3/8" flange nuts.
3. Install the 45-3/4" handrails (7711179) to handrail junction mounts (7711178) and the pre-installed handrail splices (7612510) filling in the remaining handrail gaps.
 - Use 3/8" bolts and 3/8" flange nuts.

Note

The rail splices use 1/4" flange nuts and flange-head bolts.

4. Repeat the above three steps for both the inner and outer handrail.

Figure 39. Installing the Short Rails Next to the Blower Platform Toe Boards

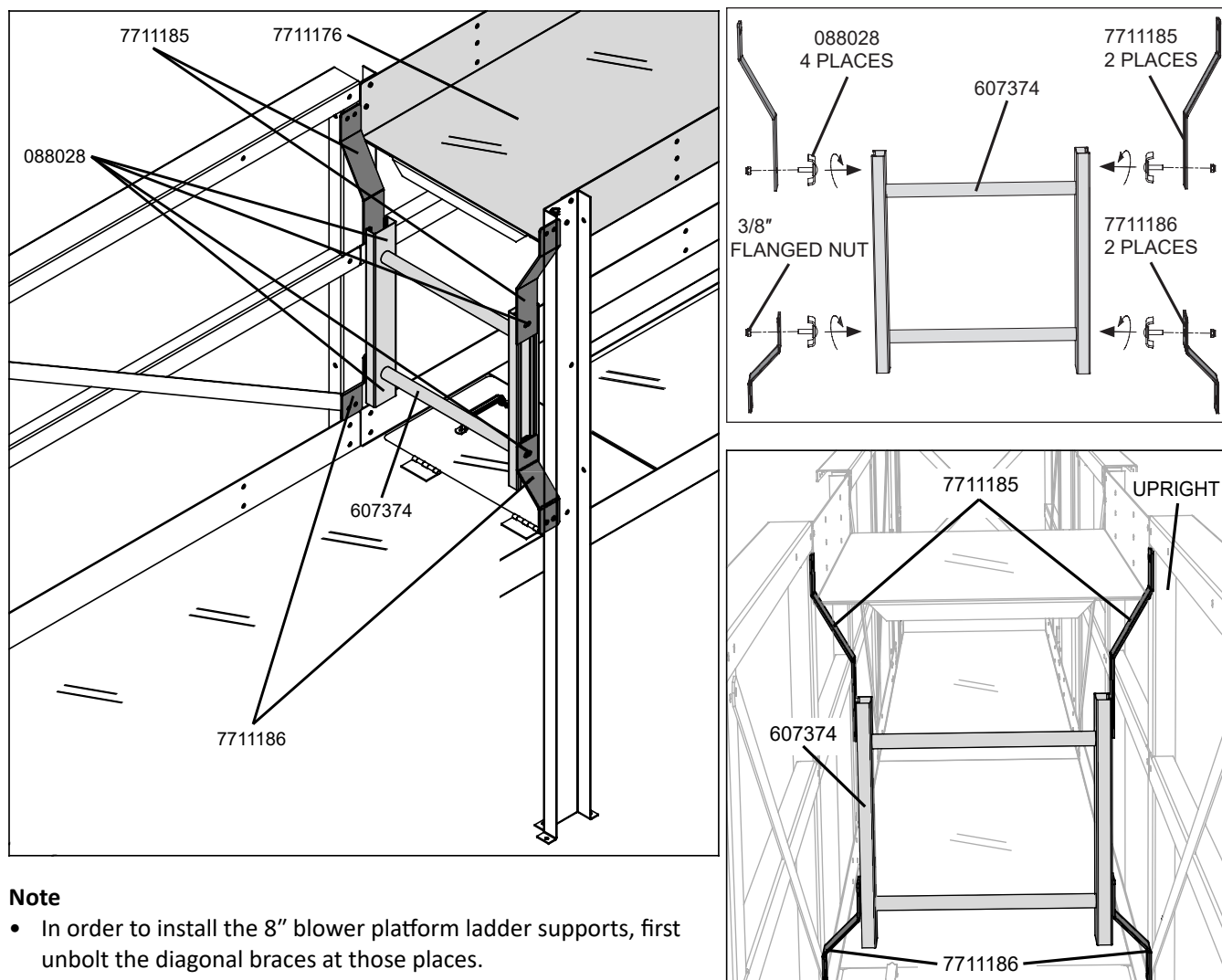


Part Number	Part Name	Quantity
7711178	Handrail Junction Mount	2
7711179	45-3/4" Handrail	2

Installing the 24' Assembly Ladder to the Blower Platform Entry

1. Install the ladder brackets at the front of the blower platform as shown in the following figure.
 - Use 3/8" bolts, washers, and flanged nuts.
2. Install the ladder to the ladder brackets.
 - Use 3/8" ladder clip & bolt assemblies and 3/8" flanged nuts.

Figure 40. Installing the 24' Assembly Ladder to the Blower Platform Entry



Note

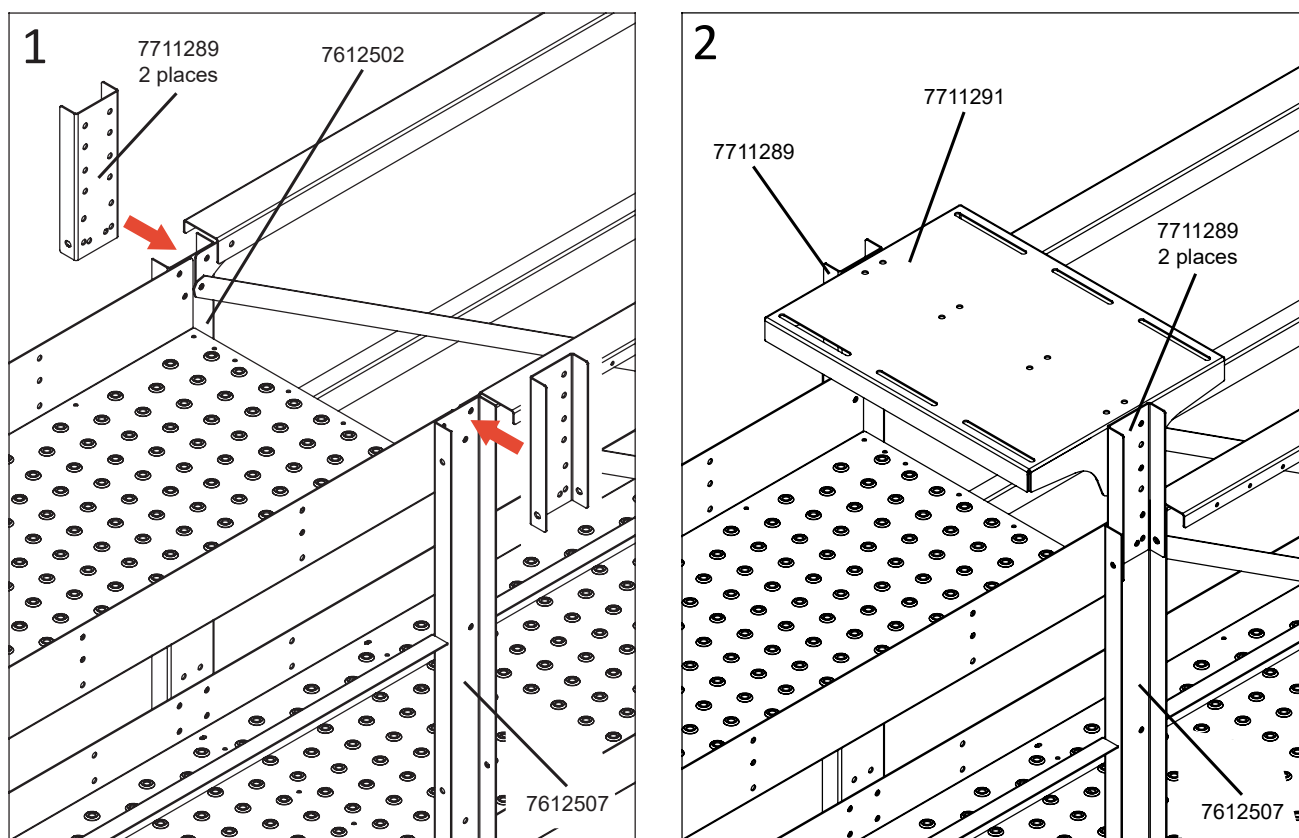
- In order to install the 8" blower platform ladder supports, first unbolt the diagonal braces at those places.
- Then, install the diagonal braces and 8" blower platform ladder supports at these places since both parts share the same bolt hole.

Part Number	Part Name	Quantity
088028	Ladder Clip and Bolt Assembly	4
607374	18" Ladder Section	1
7711185	13-1/4" Blower Platform Ladder Support	2
7711186	8" Blower Platform Ladder Support	2

Installing the 24' Motor Mount Base Onto the Catwalk Uprights

1. Install the motor mount uprights (7711289) to the 24' blower mount inner and outer leg uprights (7612507).
 - Use 3/8" bolts, washers, and flanged nuts.
2. Install the motor mount base (7711291) onto the motor mount uprights (7711289).
 - Use 3/8" bolts, washers, and flanged nuts.

Figure 41. Installing the 24' Blower and Motor Mount Base to the Leg Uprights

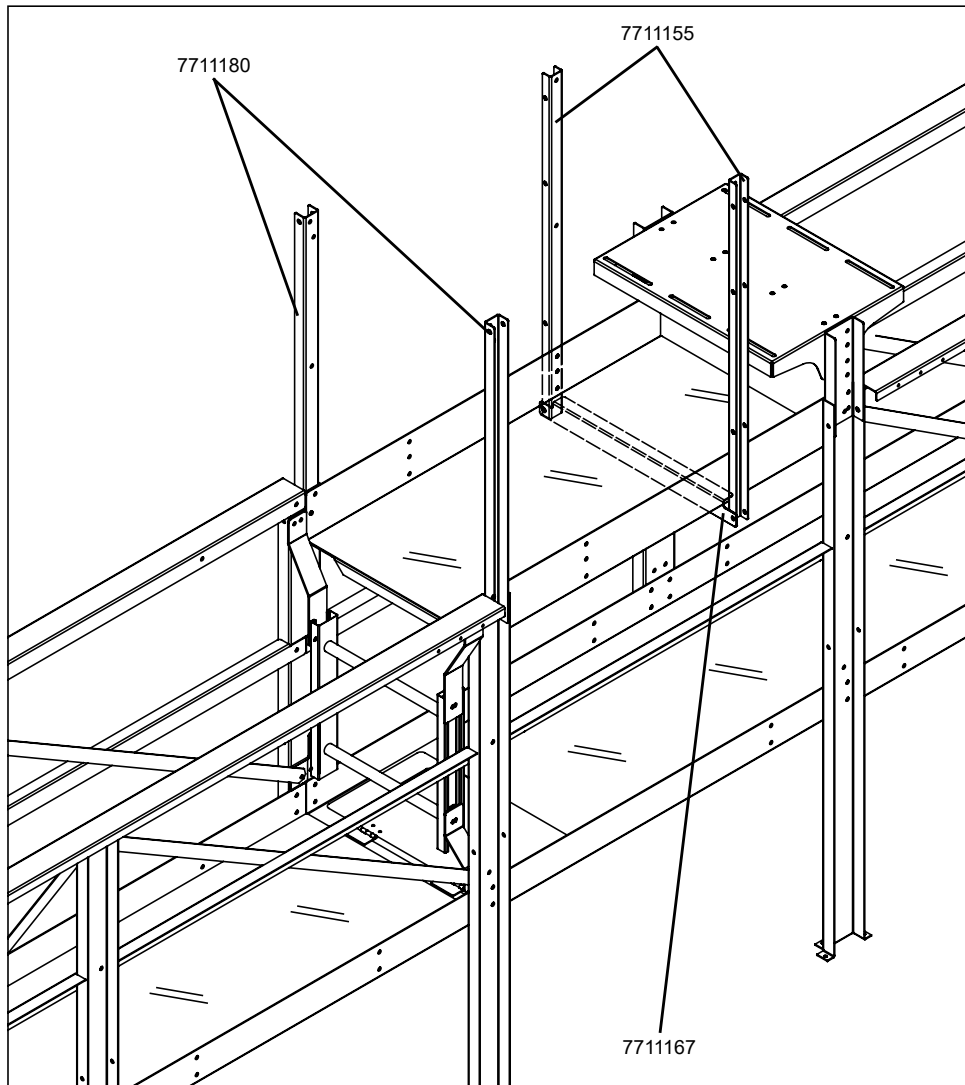


Part Number	Part Name	Quantity
7711289	Motor Mount Upright	2
7711291	17" Blower and Motor Mount Base	1

Installing the 24' Blower Platform Uprights

1. Install the blower platform uprights (7711180 and 7711155) to the blower platform toe boards.
 - Use 3/8" bolts, washers, and flange nuts.
2. Install the handrail support brace (7711167) to the bottom of the mid uprights (7711155).
 - Use 3/8" bolts, washers, and flange nuts.

Figure 42. Installing the 24' Blower Platform Uprights



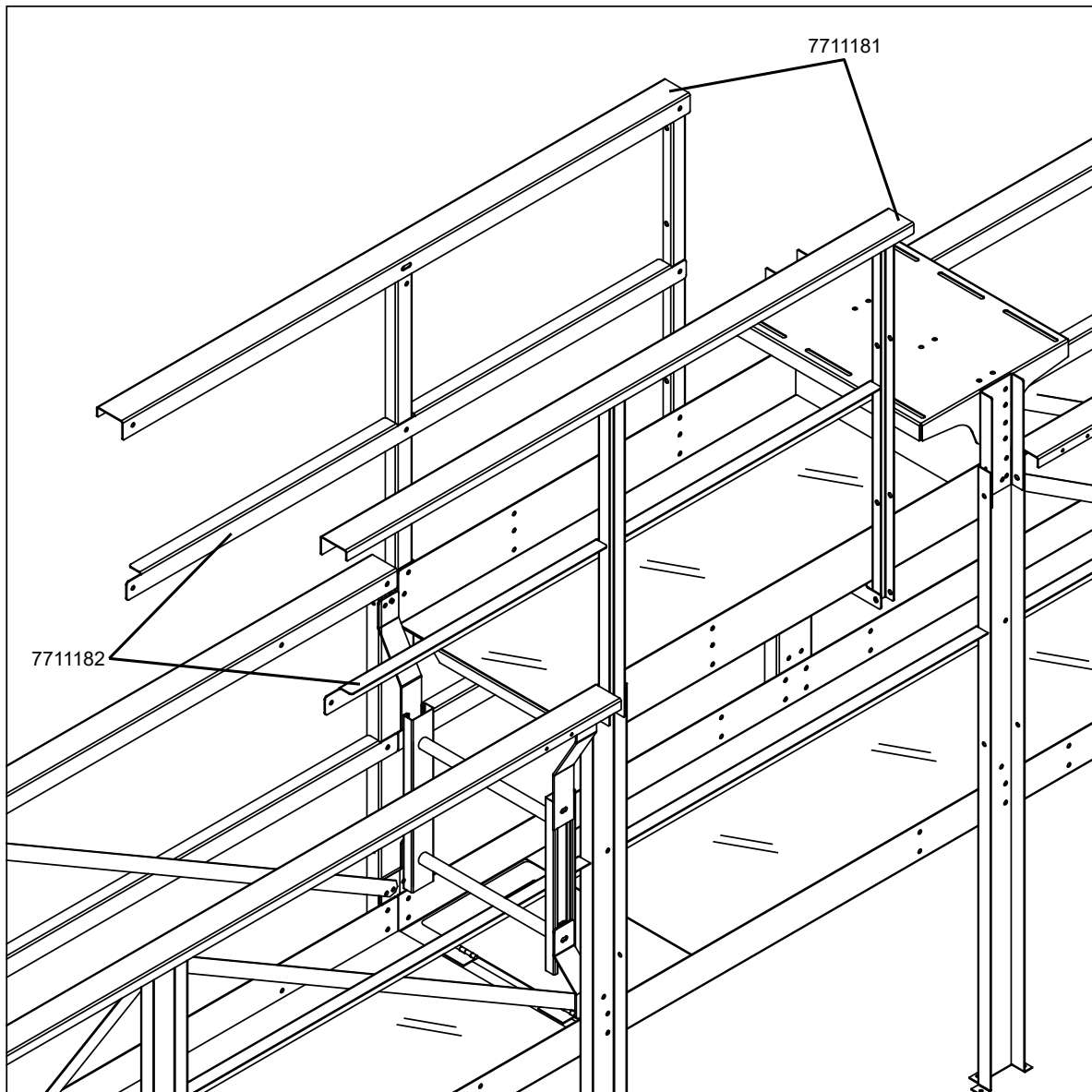
Part Number	Part Name	Quantity
7711155	Mid Upright	2
7711167	Handrail Support Brace	1
7711180	Work Platform Upright	2

Installing the 24' Blower Platform Middle and Top Rails

Install the blower platform middle (7711182) and 68-1/2" upper handrails (7711181) letting the ends hang free off the platform.

- Use 3/8" bolts, washers, and flange nuts.

Figure 43. Installing the Platform Middle and Top Rails



Part Number	Part Name	Quantity
7711181	68-1/2" Upper Handrail	2
7711182	Upper Blower Platform Lower Handrail	2

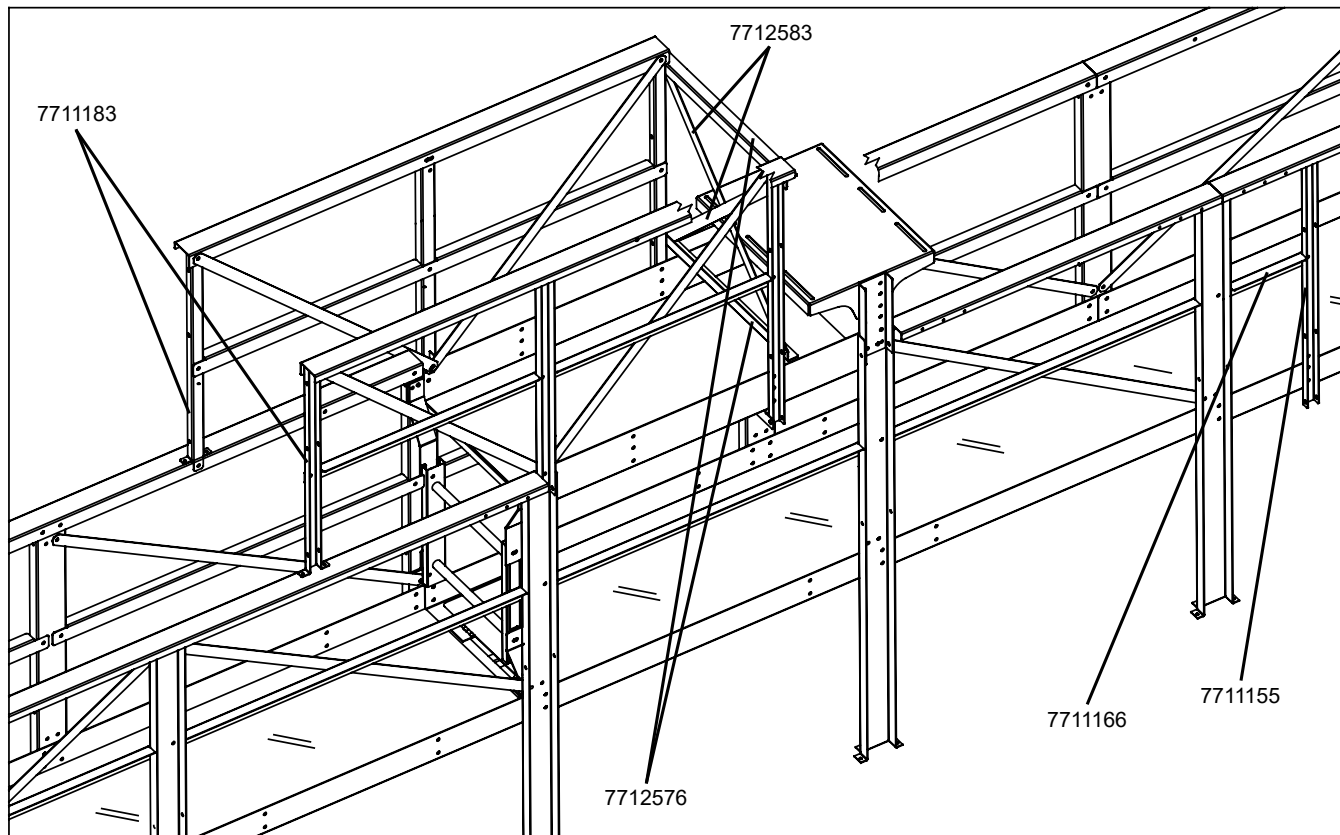
Installing the 24' Assembly Final Bracing

1. Install the end braces at the motor mount base platform end.
 - Use 3/8" bolts, washers, and flange nuts.
2. Install the remaining uprights and 13" lower handrail (7711166).
3. Install the 24' end handrail supports (7711183) to the top handrails.
 - Use 3/8" bolts, washers, flange nuts, and #14 sheet metal screws.

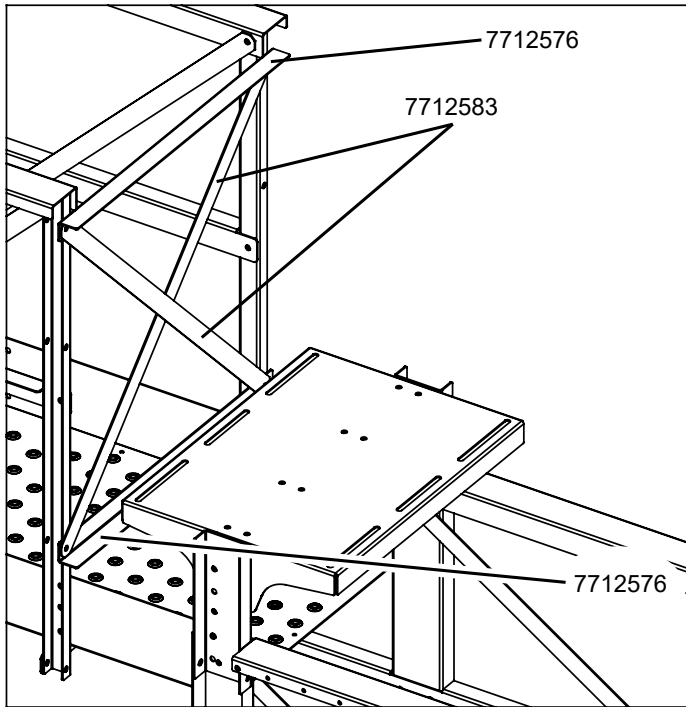
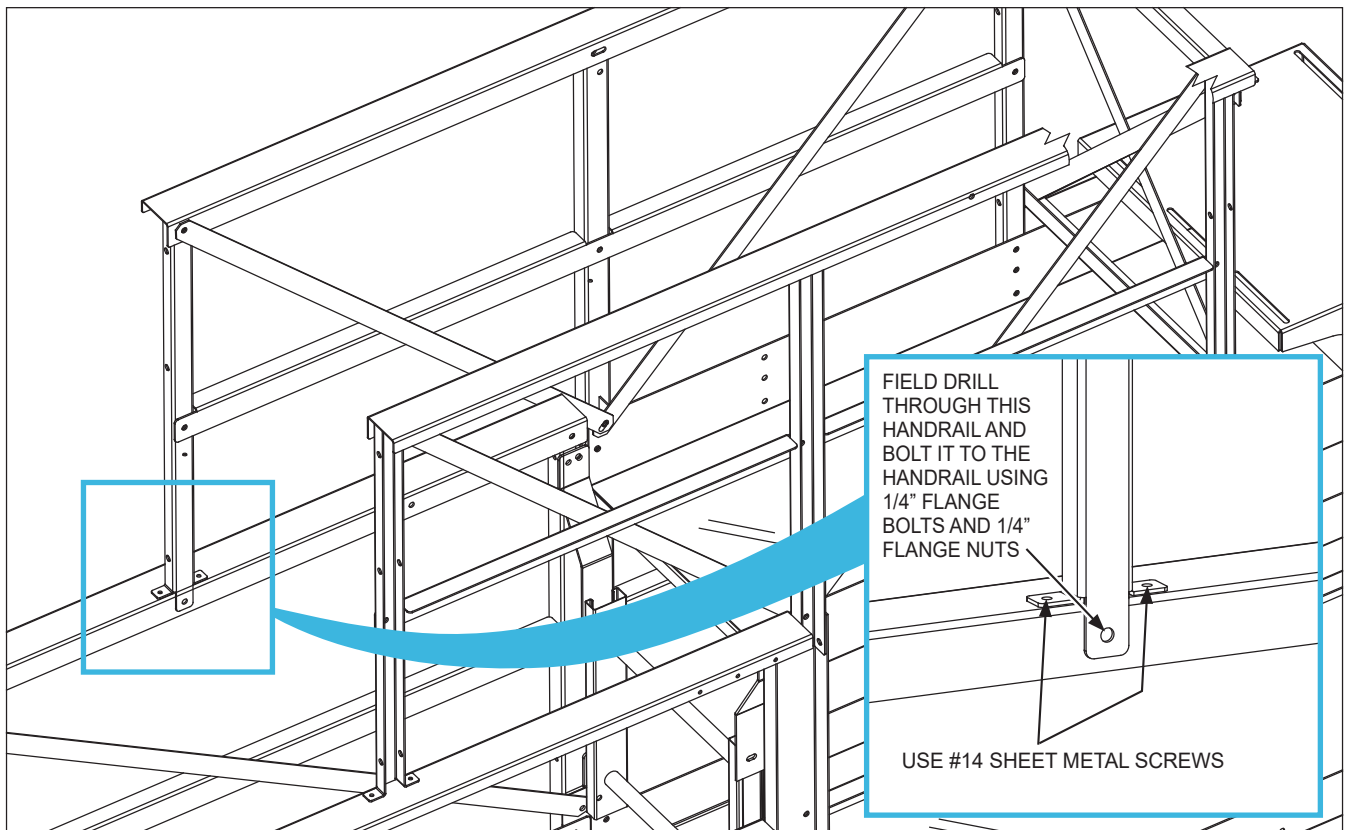
Note

See the detail drawings on the next page.

Figure 44. Installing the Platform End Braces



Part Number	Part Name	Quantity
7711155	Mid Upright	1
7711166	13" Lower Handrail	1
7711183	24' work platform end upright	2
7712576	Handrail Cross Brace	2
7712583	End Diagonal Brace	2

Figure 45. Installing the Braces at the Motor Mount Base Platform End**Figure 46. Installing the End Handrail Supports**

3.6.3 32' Blower Mount and Raised Blower Platform Installation

Removing Designated 32' Catwalk Parts in Preparation for Mount Assembly

Remove the following 32' catwalk parts and temporarily support the remaining catwalk assembly until the 32' platform and blower mount assembly is installed.

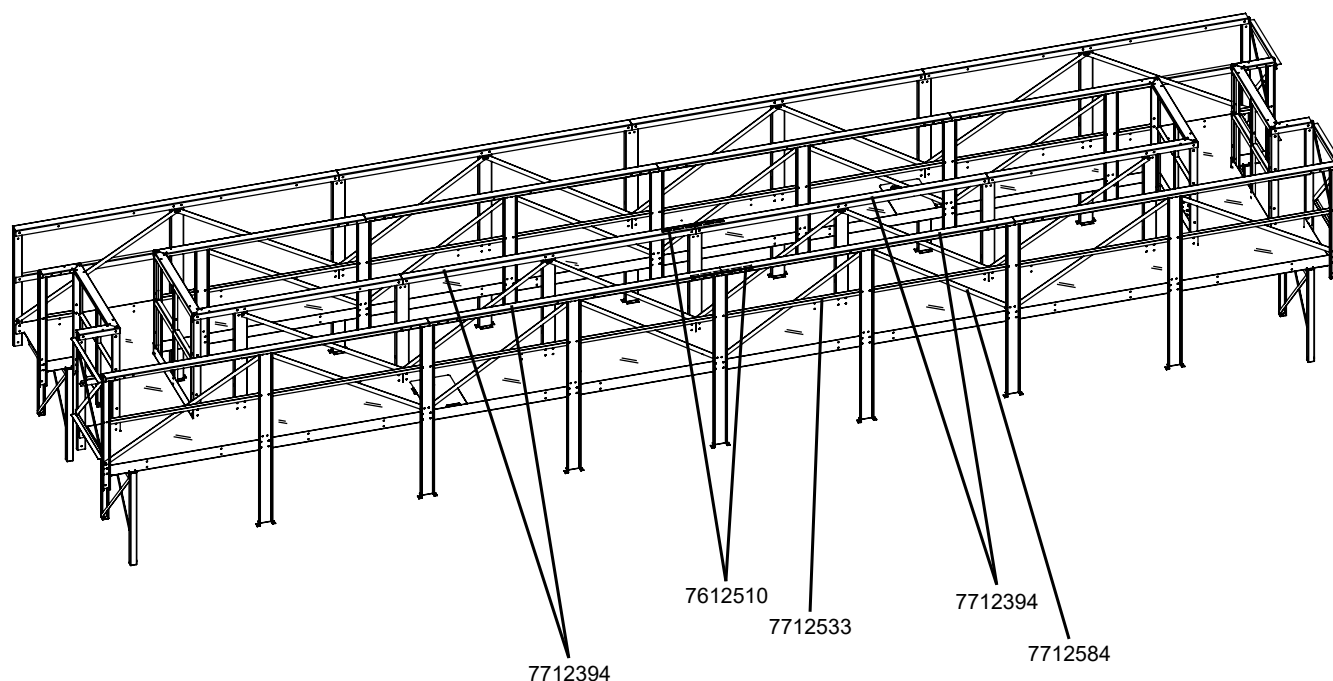
Note

These parts aren't needed and will be replaced with the 32' platform and blower mount assembly.

Note

The following installation is a Cyclone Left Hand (LH) discharge installation. Components are in opposite orientation on a Cyclone Right Hand (RH) installation.

Figure 47. Removing Parts in Preparation for Installing the 32' Platform and Mount Assembly

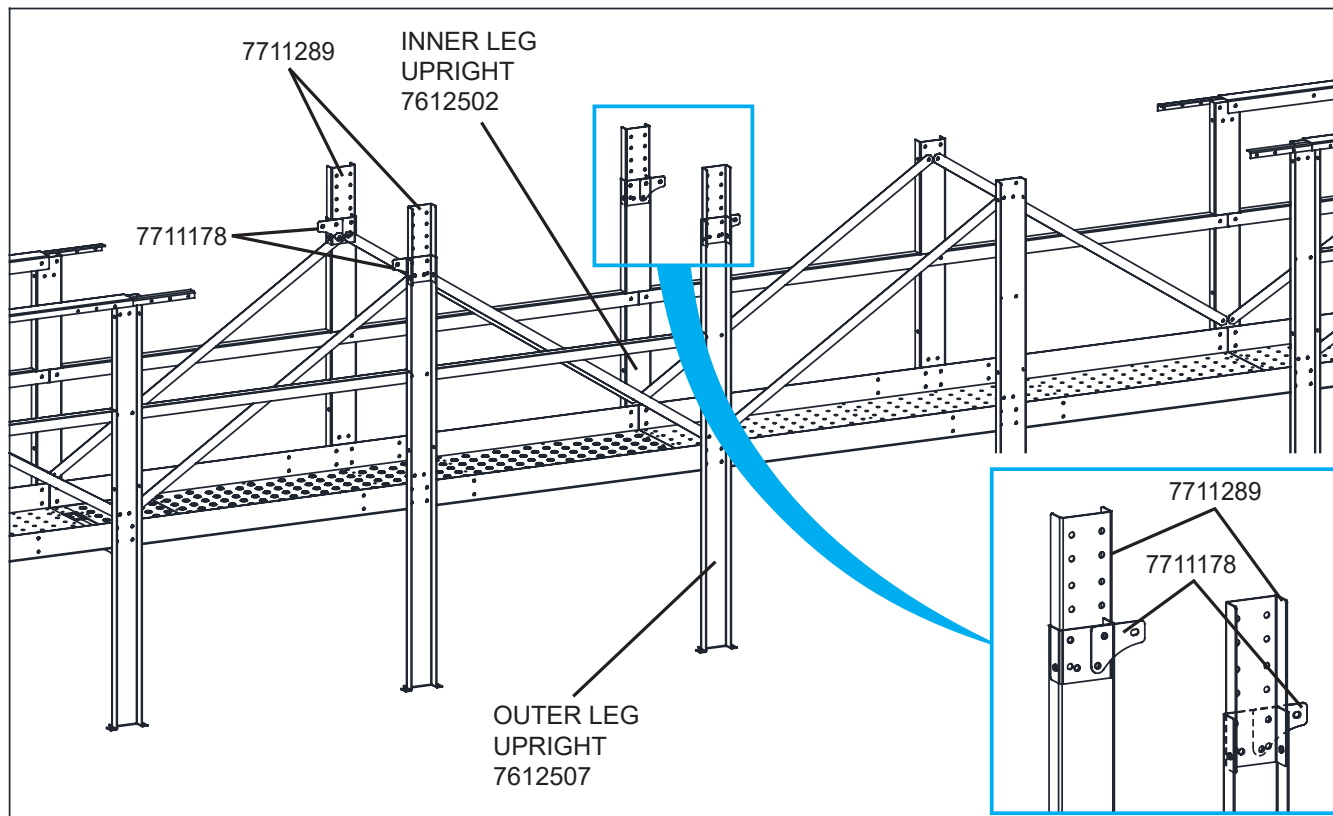


Part Number	Part Name	Quantity
7712533	96" Lower Middle Handrail	1
7712394	96" Upper Middle Handrail	4
7612510	Handrail Splice	2
7712584	Side Mid Diagonal Brace	1

Installing the 32' Replacement Top Rails and Connector Uprights

1. Install the Connector Upright (7711289) and the handrail junction mounts (7711178) to the four uprights the blower mount platform will be installed to.
 - Use 3/8" bolts, washers, and flange nuts.

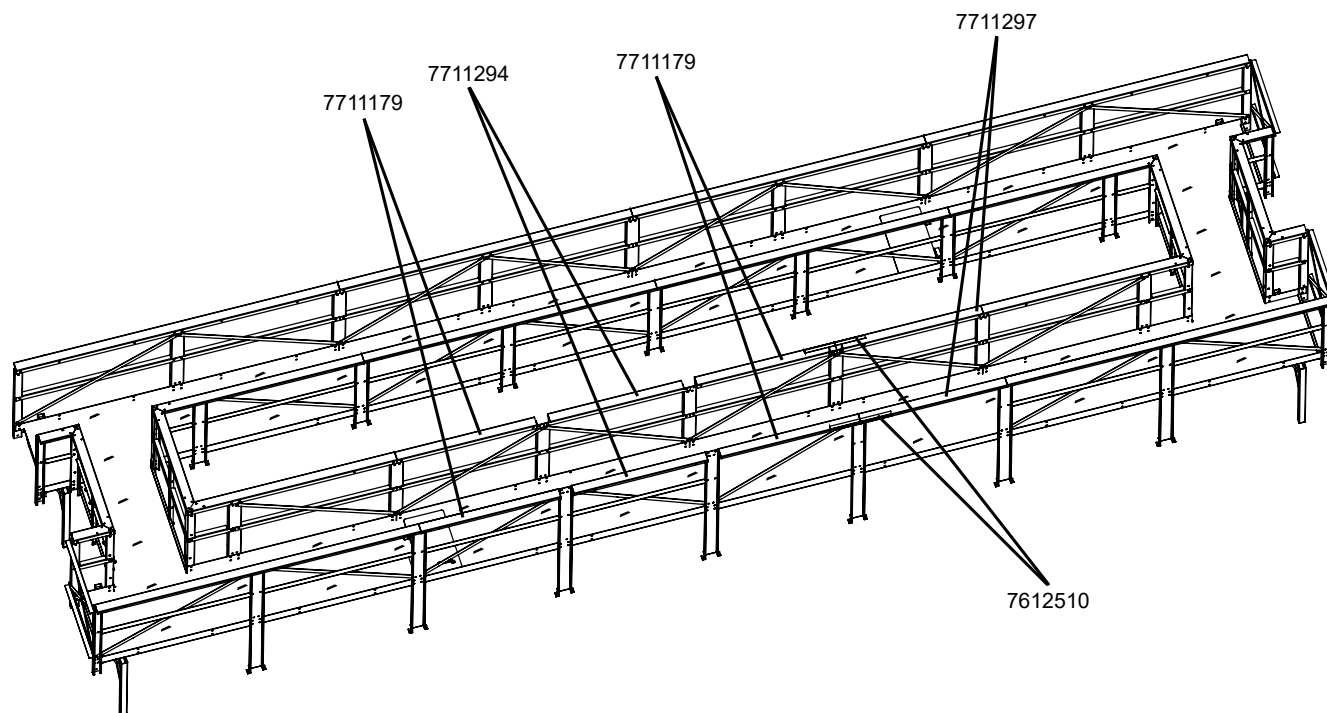
Figure 48. Installing the Connector Uprights and Handrail Junction Mounts



Part Number	Part Name	Quantity
7711178	Handrail Junction Mount	4
7711289	Connector Upright	4

2. Install the 45-1/2" notched handrails (7711294) and 45-1/2" Handrail (7711297) to the inner leg upright (7612502) and the outer leg upright (7612507).
 - Use 3/8" bolts, washers, and flange nuts.
3. Install the 45-3/4" handrails (7711179) to uprights and to handrail junction mounts (7711178 which was installed on the previous page) and to the handrail splices (7612510).
 - Use 1/4" flange head bolts and flange nuts.

Figure 49. Installing the Replacement Top Rails and Handrail Splices

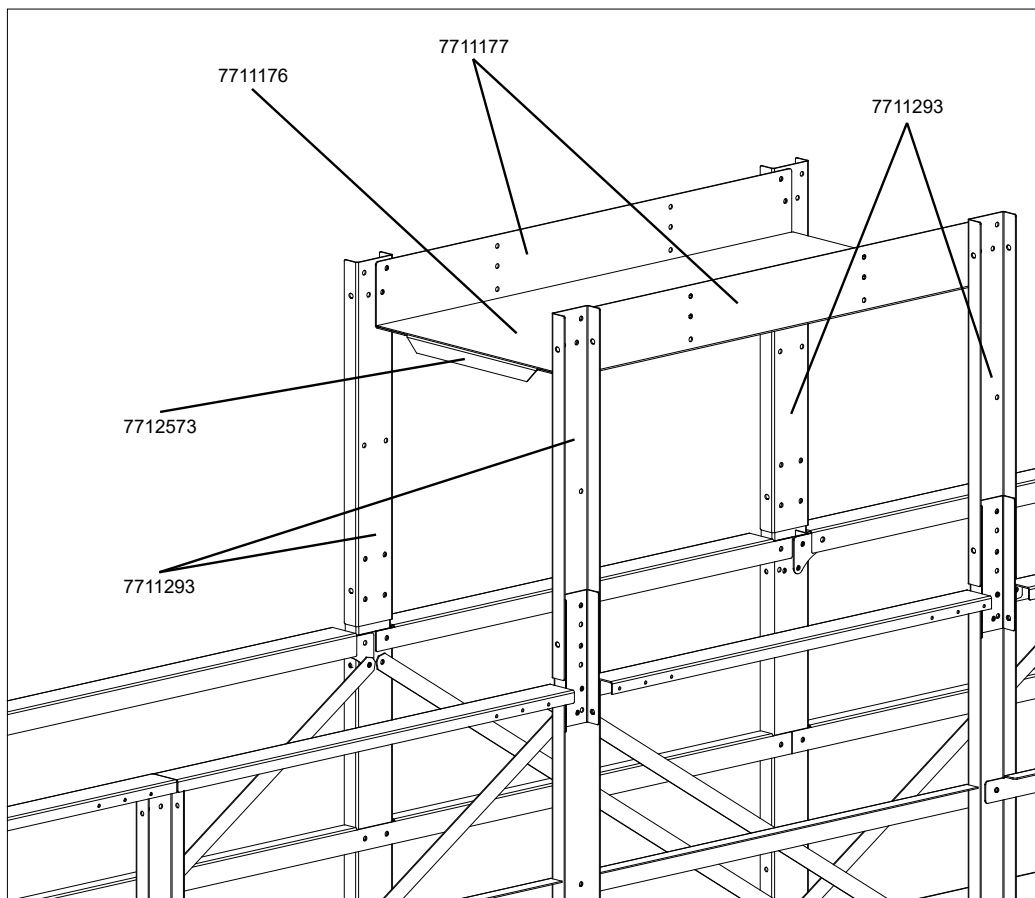


Part Number	Part Name	Quantity
7612510	Handrail Splice	2
7711179	45-3/4" Handrail	4
7711294	45-1/2" Notched Handrail	2
7711297	45-1/2" Handrail	2

Installing the 32' Blower Platform Leg Uprights, Surface, and Toe Boards

1. Install the 32' upright extenders (7711293) to the blower platform location leg uprights.
 - Use 3/8" bolts, washers and flange nuts.
2. Install the upper blower platform toe boards (7711177) to the 32' upright extenders (7711293).
 - Use 3/8" bolts, washers and flange nuts.
3. Install the walk surface stiffener (7712573) to the blower platform surface (7711176).
 - Use 1/4" flange head bolts and flange nuts.
4. Install the blower platform surface (7711176) to the toe boards.
 - Use 1/4" flange head bolts and flange nuts.

Figure 50. Installing the Blower Platform Leg Uprights, Surface, and Toe Boards

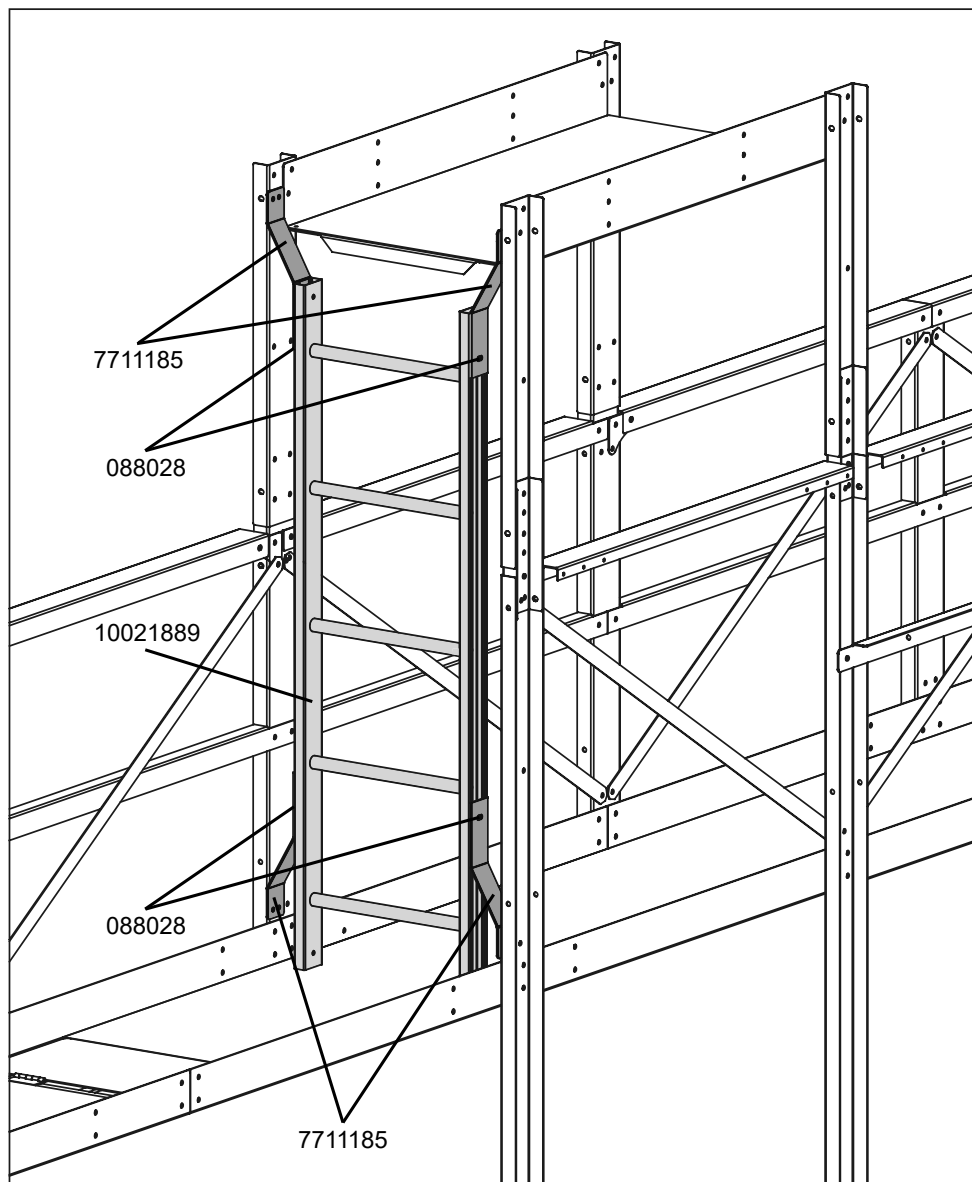


Part Number	Part Name	Quantity
7711176	Blower Platform Surface	1
7711177	Upper Blower Platform Toe-Board	2
7711293	32' Upright Extender	4
7712573	Walk Surface Stiffener	1

Installing the 32' Assembly Ladder to the Blower Platform Entry

1. Install the ladder brackets at the front of the blower platform as shown in the following figure.
 - Use 3/8" bolts, washers, and flanged nuts.
2. Install the ladder to the ladder brackets.
 - Use 3/8" ladder clip & bolt assemblies, and 3/8" flanged nuts.

Figure 51. Installing the Ladder at the Blower Platform Entry

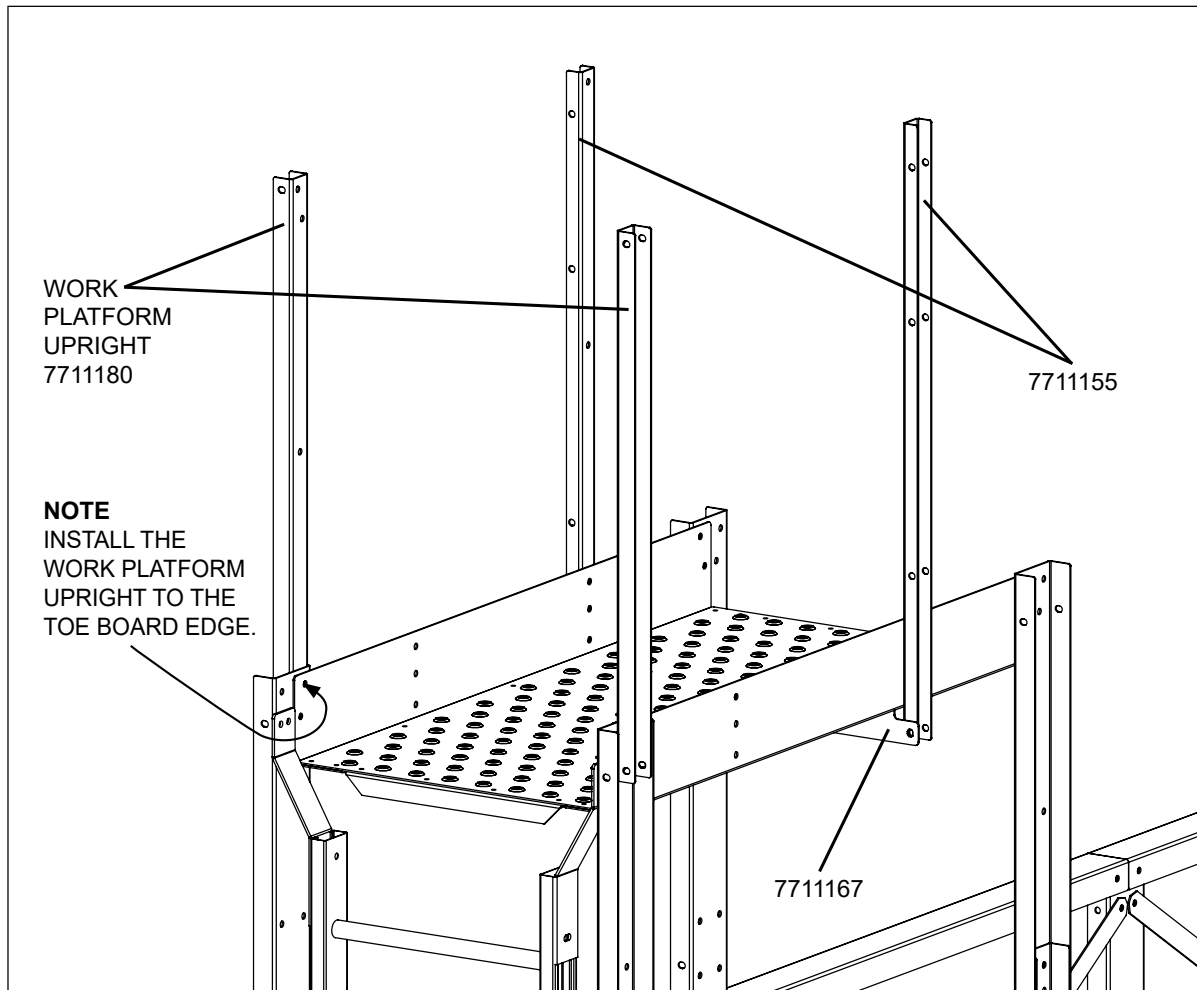


Part Number	Part Name	Quantity
088028	Ladder Clip and Bolt Assembly	4
7711185	13-1/4" Blower Platform Ladder Support	4
10021889	5' Ladder Section	1

Installing the 32' Blower Platform Uprights

1. Install the blower platform uprights (7711180 and 7711155) to the blower platform toe boards (7711177).
 - Use 3/8" bolts, washers, and flange nuts.
2. Attach the handrail support brace (7711167) to the bottom of the mid uprights (7711155).
 - Use 3/8" bolts, washers, and flange nuts.

Figure 52. Installing the Blower Platform Uprights

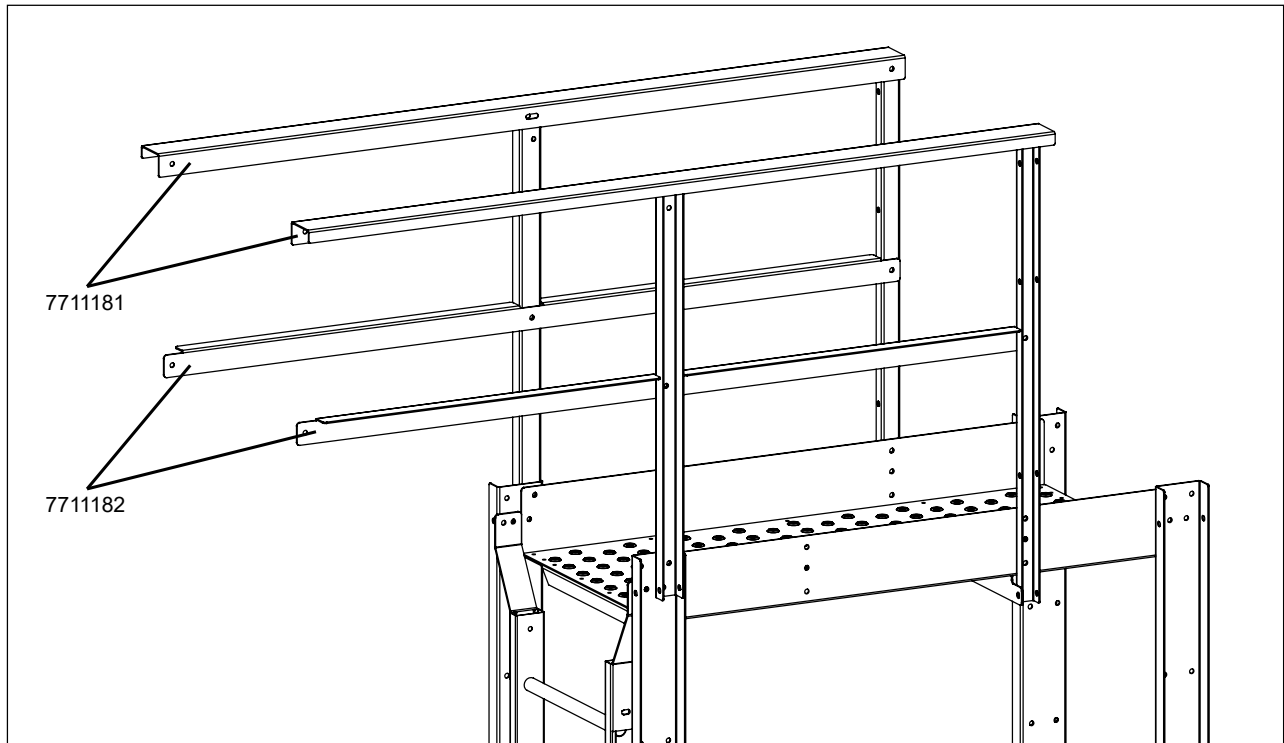


Part Number	Part Name	Quantity
7711155	Mid Upright	2
7711167	Handrail Support Brace	1
7711180	Work Platform Upright	2

Installing the 32' Blower Platform Middle and Top Rails

1. Install blower platform lower handrails (7711182).
 - Use 3/8" bolts, washers, and flange nuts.
2. Install 68-1/2" upper handrails (7711181).
 - Use 3/8" bolts, washers, and flange nuts.

Figure 53. Installing the Blower Platform Middle and Top Rails

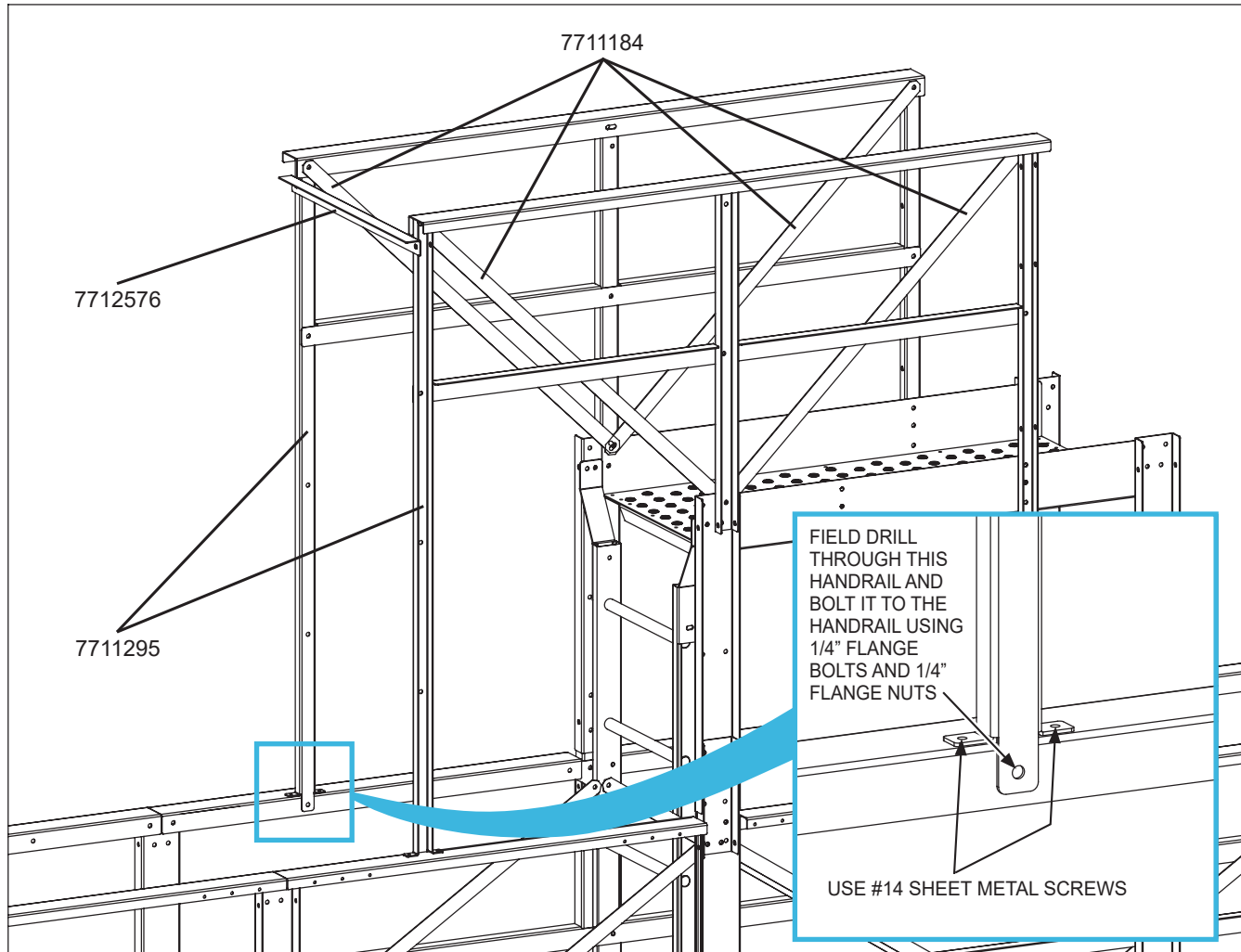


Part Number	Part Name	Quantity
7711181	68-1/2" Upper Handrail	2
7711182	Blower Platform Lower Handrail	2

Installing the 32' End Handrail Supports and Diagonal Braces

1. Install 47-1/2" diagonal braces (7711184) to the blower platform uprights.
 - Use 3/8" bolts, washers, and flange nuts.
2. Install the 32' blower platform end handrail supports (7711295) to the 45-3/4" handrails (7711179).
 - Use #14 sheet metal screws (003485).

Figure 54. Installing the Handrail Supports and Diagonal Braces



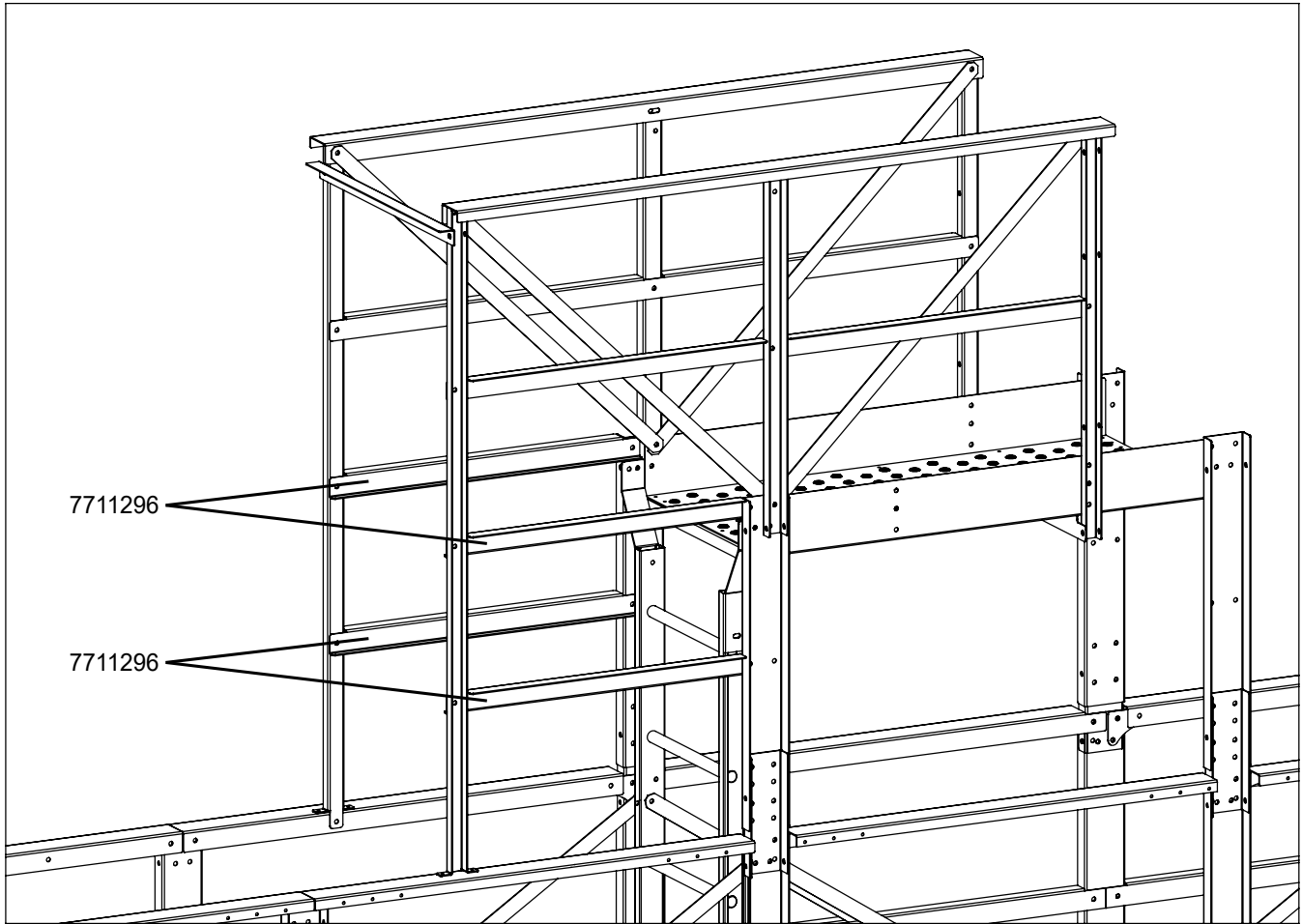
Part Number	Part Name	Quantity
7711184	47-1/2" Diagonal Brace	4
7711295	32' Blower Platform End Handrail Support	2
7712576	Handrail Cross Brace	1

Installing Ladder Cage Supports

Install the 32' blower platform ladder cage supports (7711296) between the 32' blower platform end handrail supports (77111295) and the uprights.

- Use 3/8" bolts, washers, and flange nuts.

Figure 55. Installing the Ladder Cage Supports

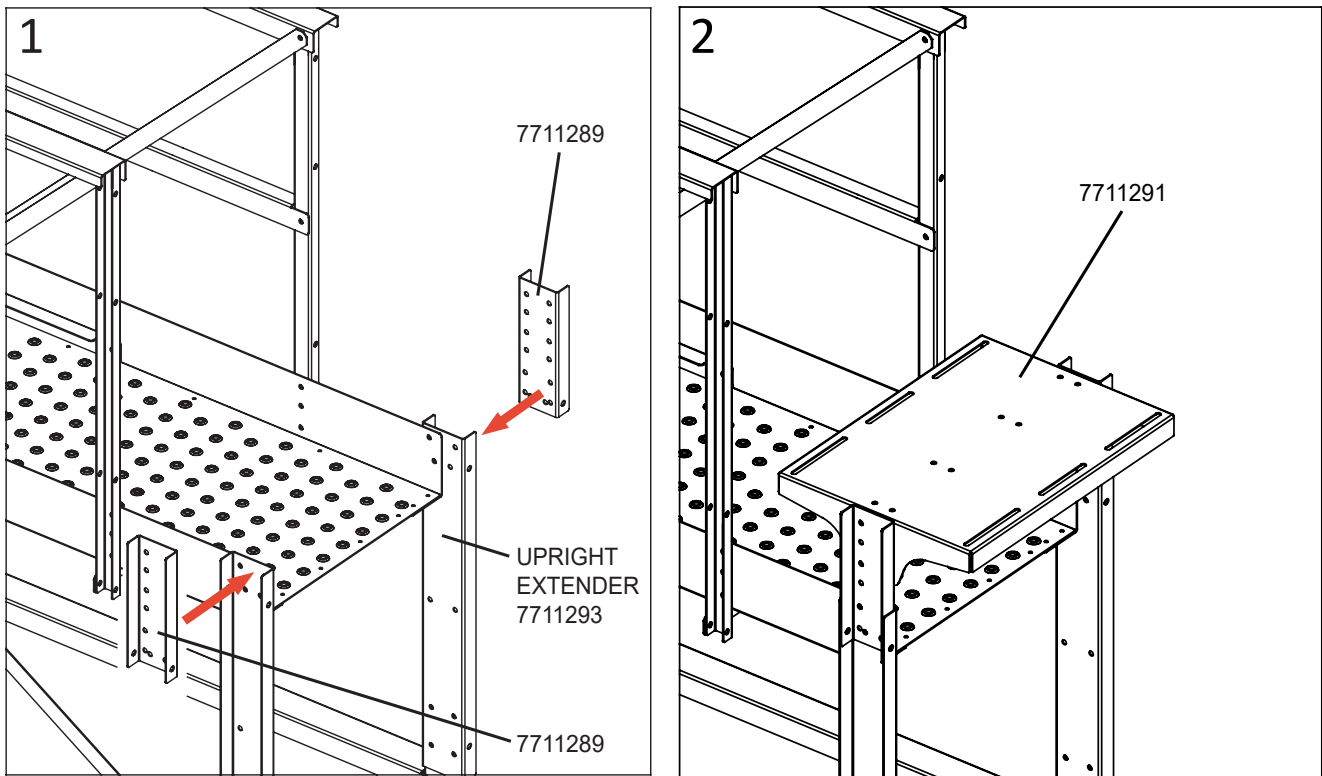


Part Number	Part Name	Quantity
7711296	32' Blower Platform Ladder Cage Support	4

Installing the 32' Motor Mount Uprights and the Motor Mount Base

1. Install the motor mount uprights (7711289) onto the 32' upright extenders (7711293).
 - Use 3/8" bolts, washers, and flanged nuts.
2. Install the 17" blower and motor mount base (7711291) onto the motor mount uprights (7711289).
 - Use 3/8" bolts, washers, and flanged nuts.

Figure 56. Installing the 32' Blower and Motor Mount Base to the Motor Mount Uprights



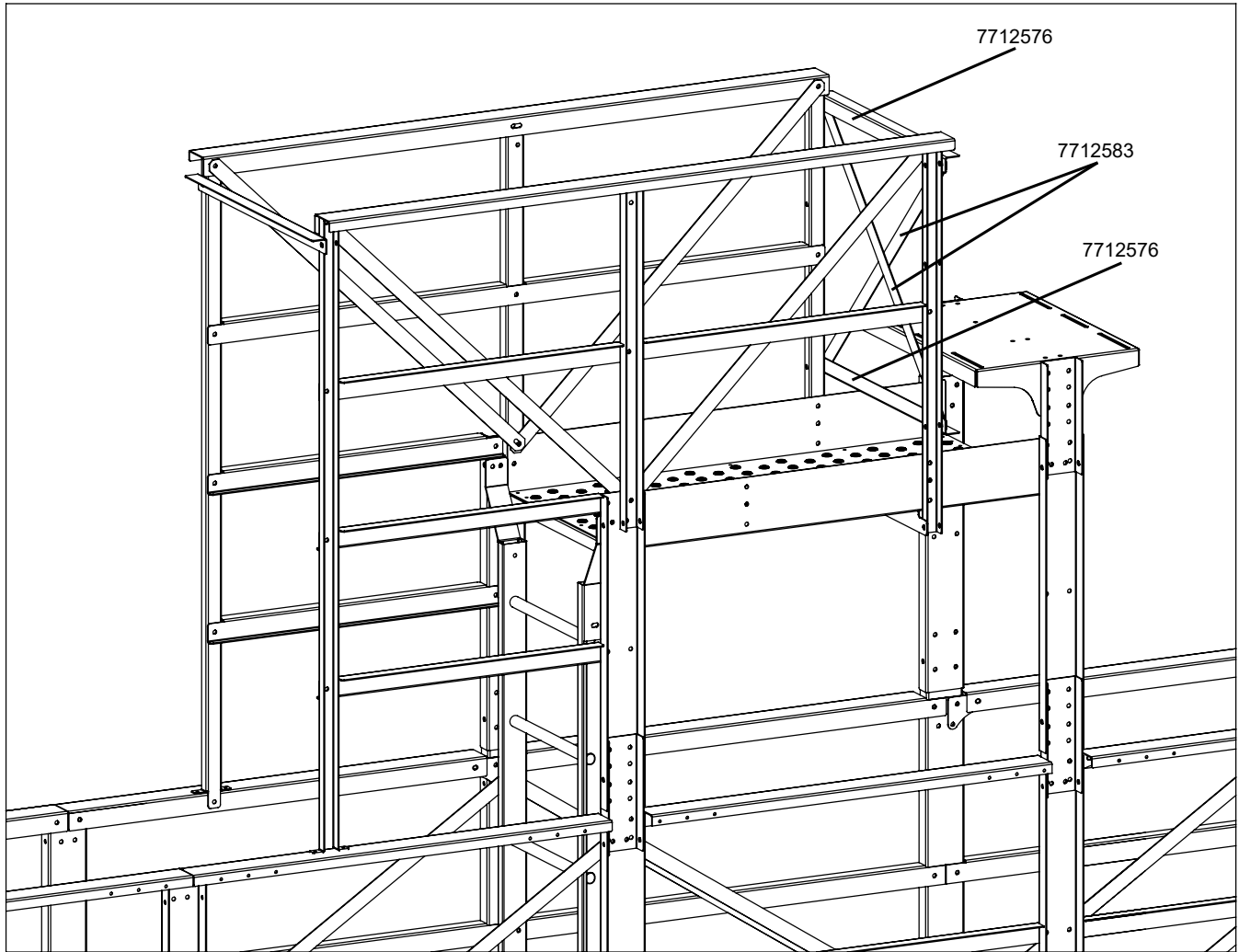
Part Number	Part Name	Quantity
7711289	Motor Mount Upright	2
7711291	17" Blower and Motor Mount Base	1

Installing the 32' Assembly Final Bracing

Install the end braces at the blower platform end.

- Use 3/8" bolts, washers, and flange nuts.

Figure 57. Installing the Platform End Braces

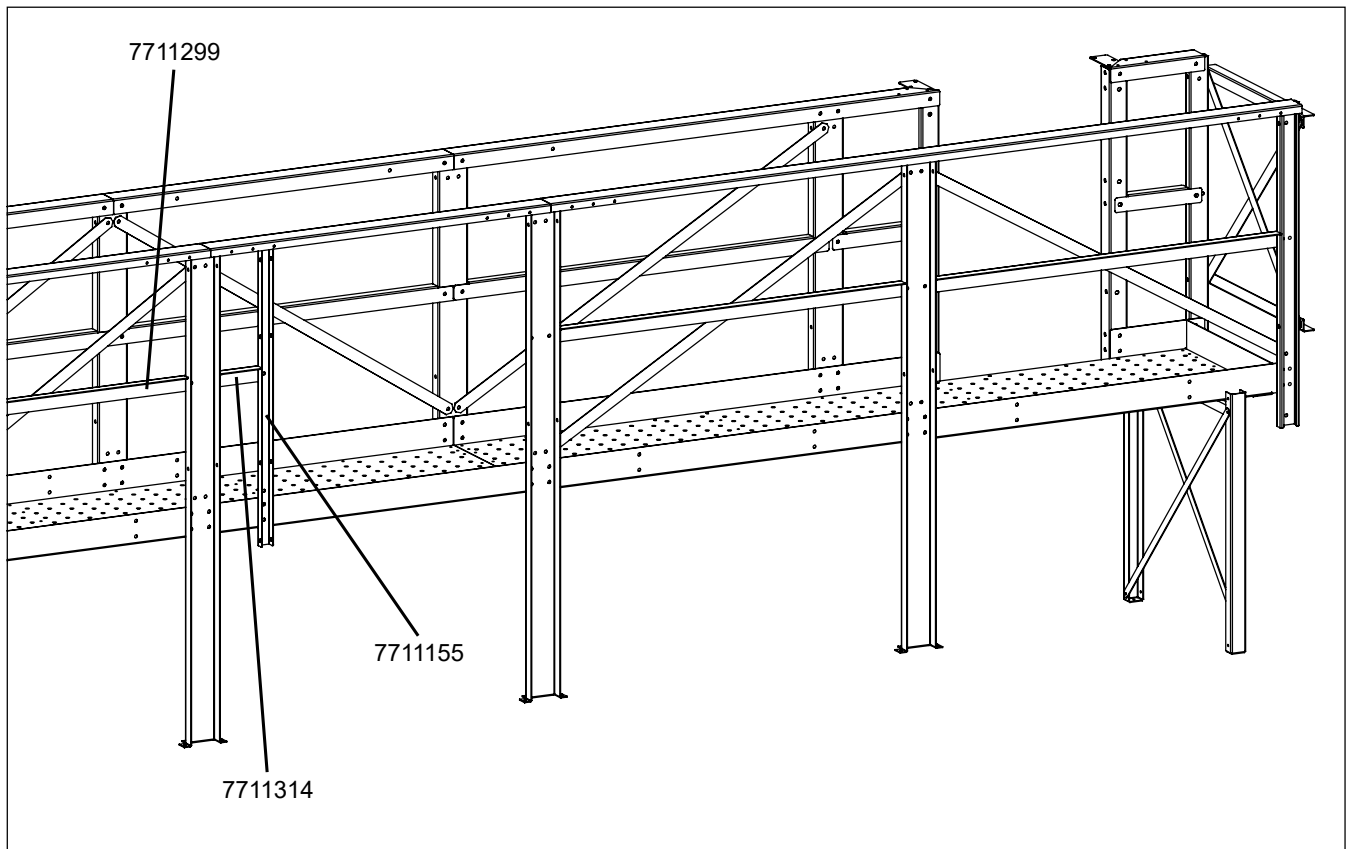


Part Number	Part Name	Quantity
7712576	Handrail Cross Brace	2
7712583	End Diagonal Brace	2

Install the remaining mid upright (7711155) and 7-3/4" lower handrail (7711314).

- Use 3/8" bolts, washers, and flange nuts.

Figure 58. Install the Remaining Mid Upright and 7-3/4" Middle Lower Handrail



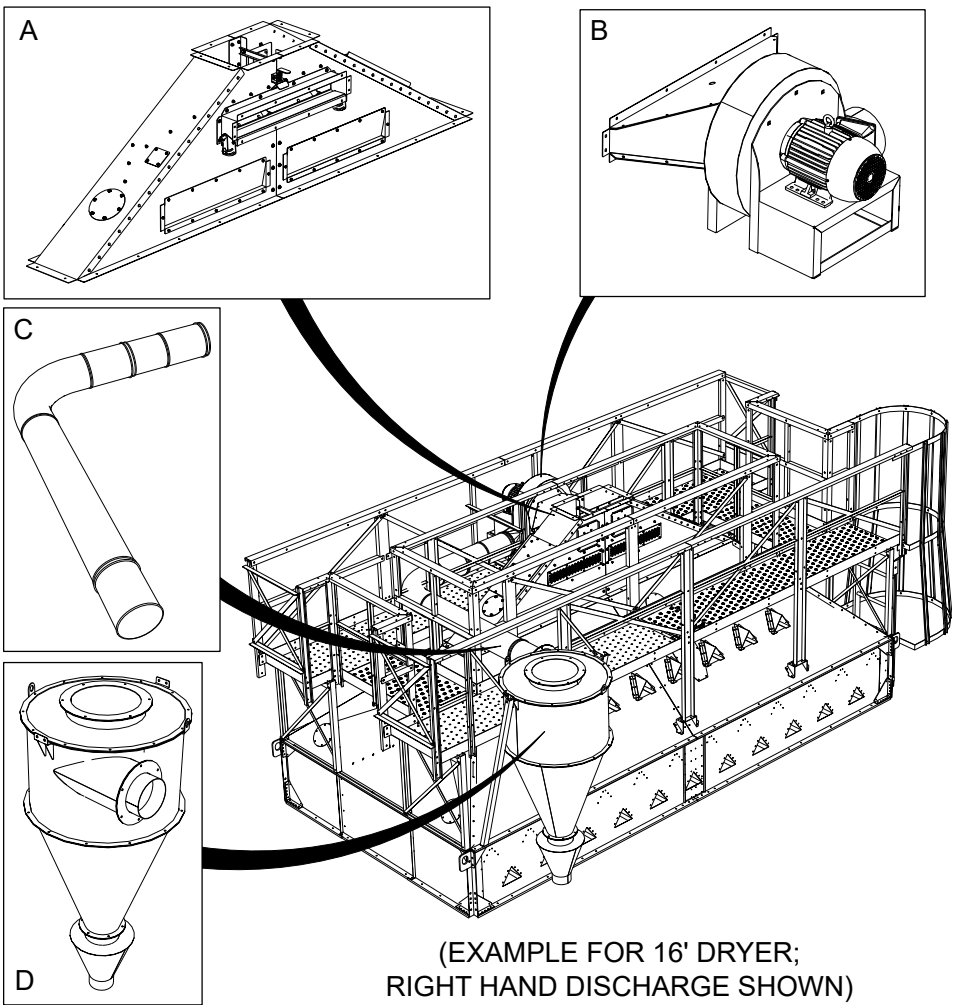
Part Number	Part Name	Quantity
7711155	Mid Upright	1
7711299	45-1/2" Middle Lower Handrail	1
7711314	7-3/4" Lower Handrail	1

3.7. Installing Dryer Inlet Pre-Cleaner

3.7.1 Required Tools

1. Impact Driver with 3/8", 7/16" and 9/16" sockets
2. 13mm socket
3. Wrench, 13mm, 7/16", 1/2", 9/16"
4. Drill with 1/4" drill bit

3.7.2 Pre-Cleaner Feature

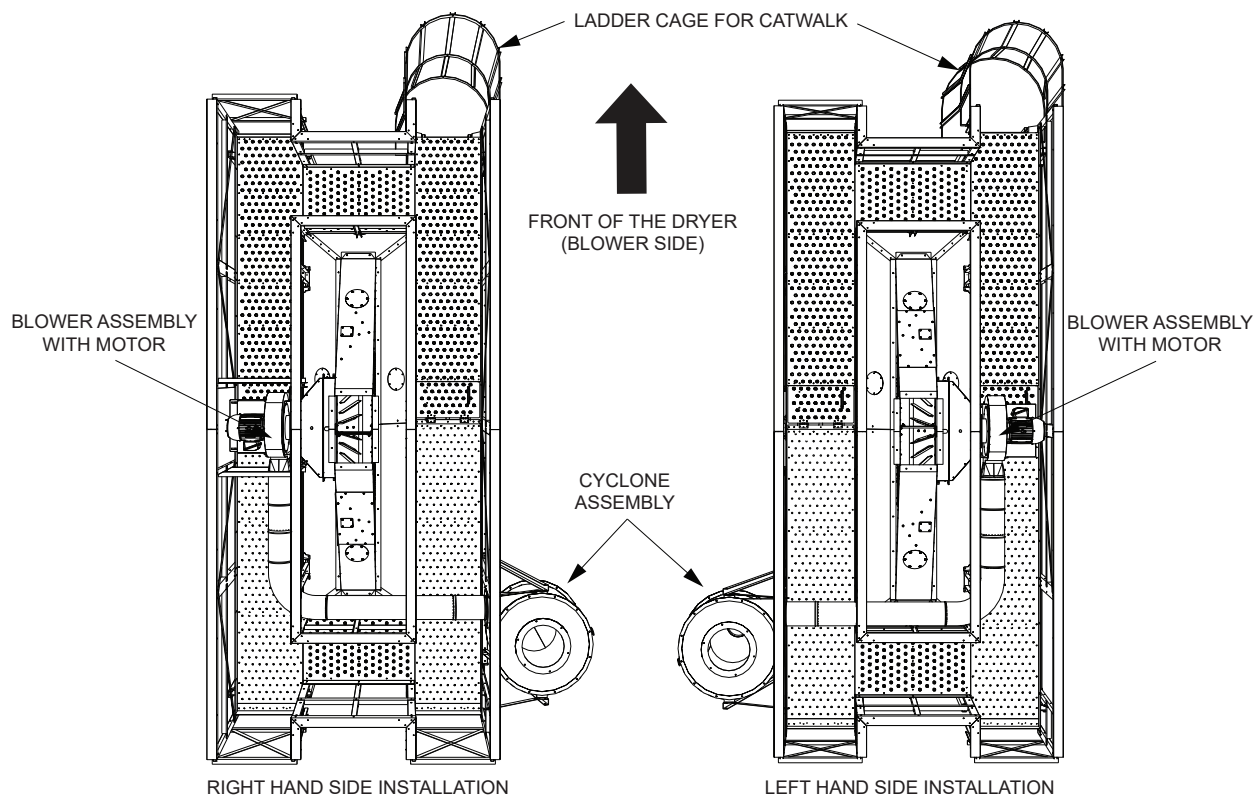


Item	Description
A	Pre-Cleaner Gravity Fill
B	Blower Assembly (Pre-Assembled with Motor and Motor Mount)
C	Rooftop Blower Pipes
D	Cyclone Assembly

3.7.3 Preferred Installation Method

The pre-cleaner assembly can be installed in either side of the dryer (see [Figure 59](#)). Choose the preferred side of your dryer and check for installation sequence:

Figure 59. Example of Installed Pre-Cleaner on a 16' dryer

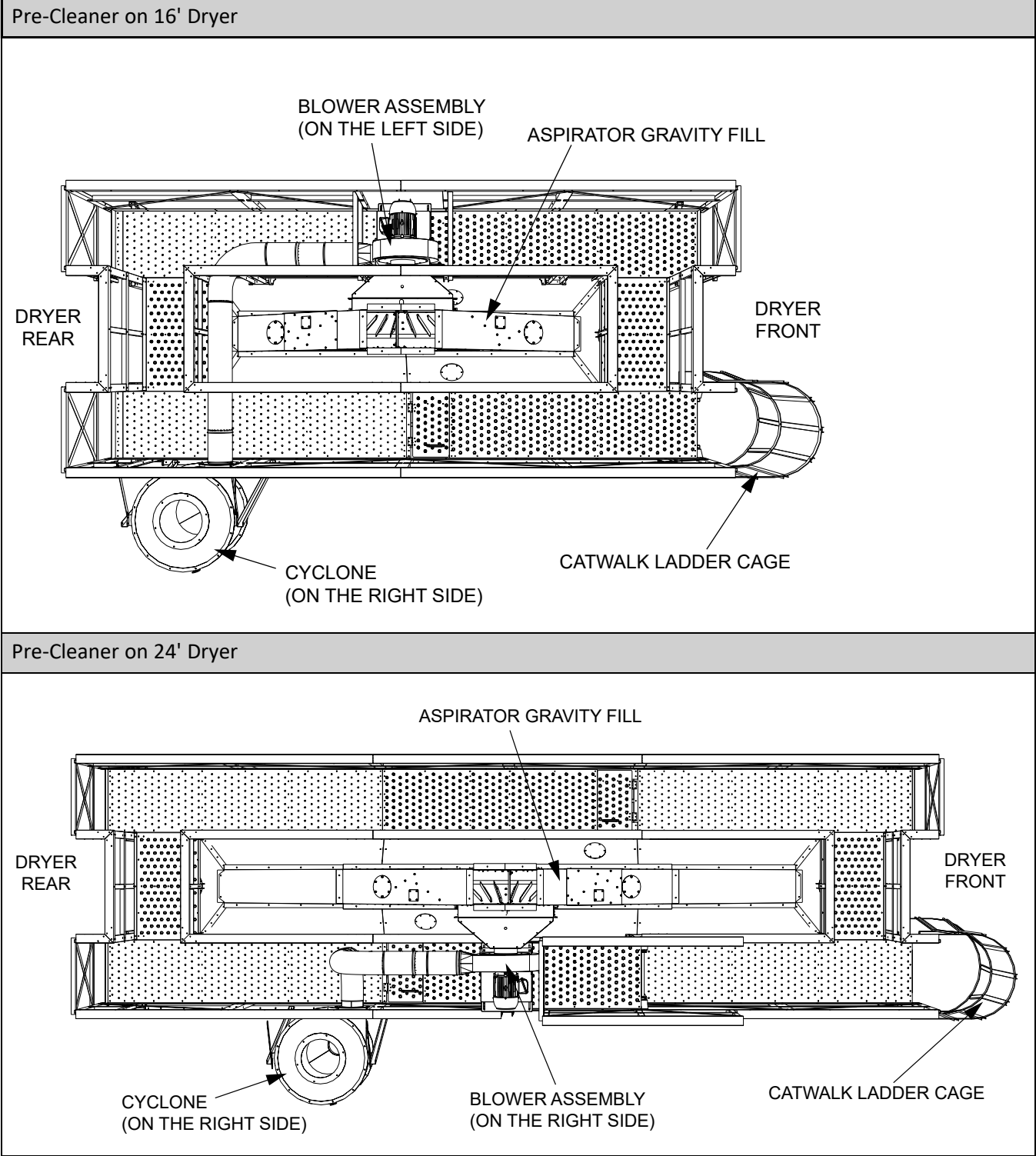


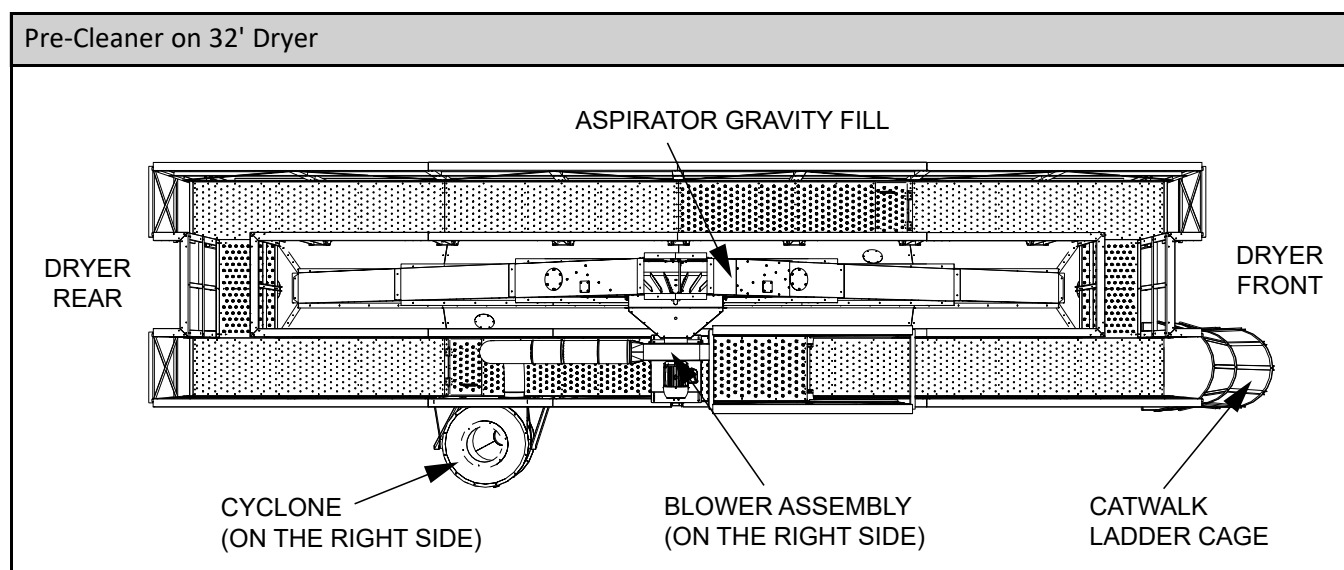
NOTE: FOR SINGLE BURNER DRYERS, THE LADDER CAGE IS MOUNTED IN THE BACKSIDE OF THE DRYER

Please note, the figures in the pre-cleaner installation instructions in this manual represents the right side installation. Check the layouts of the pre-cleaner for 16', 24' and 32' dryer for right side installation in .

3.7.4 Pre-Cleaner Layouts on Dryers

The following layouts represent right side installation of the Pre-Cleaner.



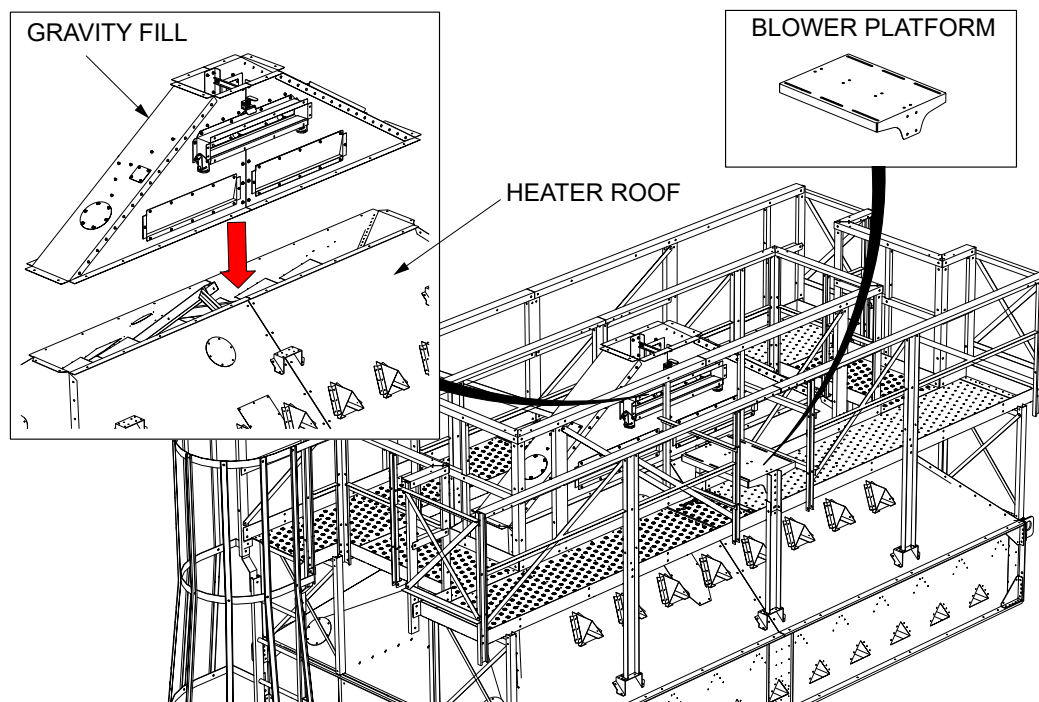


3.7.5 Installing Pre-Cleaner Gravity Fill

Table 1. Gravity Fill Part Numbers (Domestic)

Dryer Model Size	Part Number
16'	7711106
24'	7711304
32'	7711305

Figure 60. Pre-Cleaner Gravity Fill on the dryer Roof (Example of 16' Dryer)



1. Align the gravity fill on the dryer roof. Make sure the aspirator outlet is facing the blower platform.

Note

- The blower and motor assembly will always be mounted in the center of the catwalk on either side of the aspirator gravity fill.

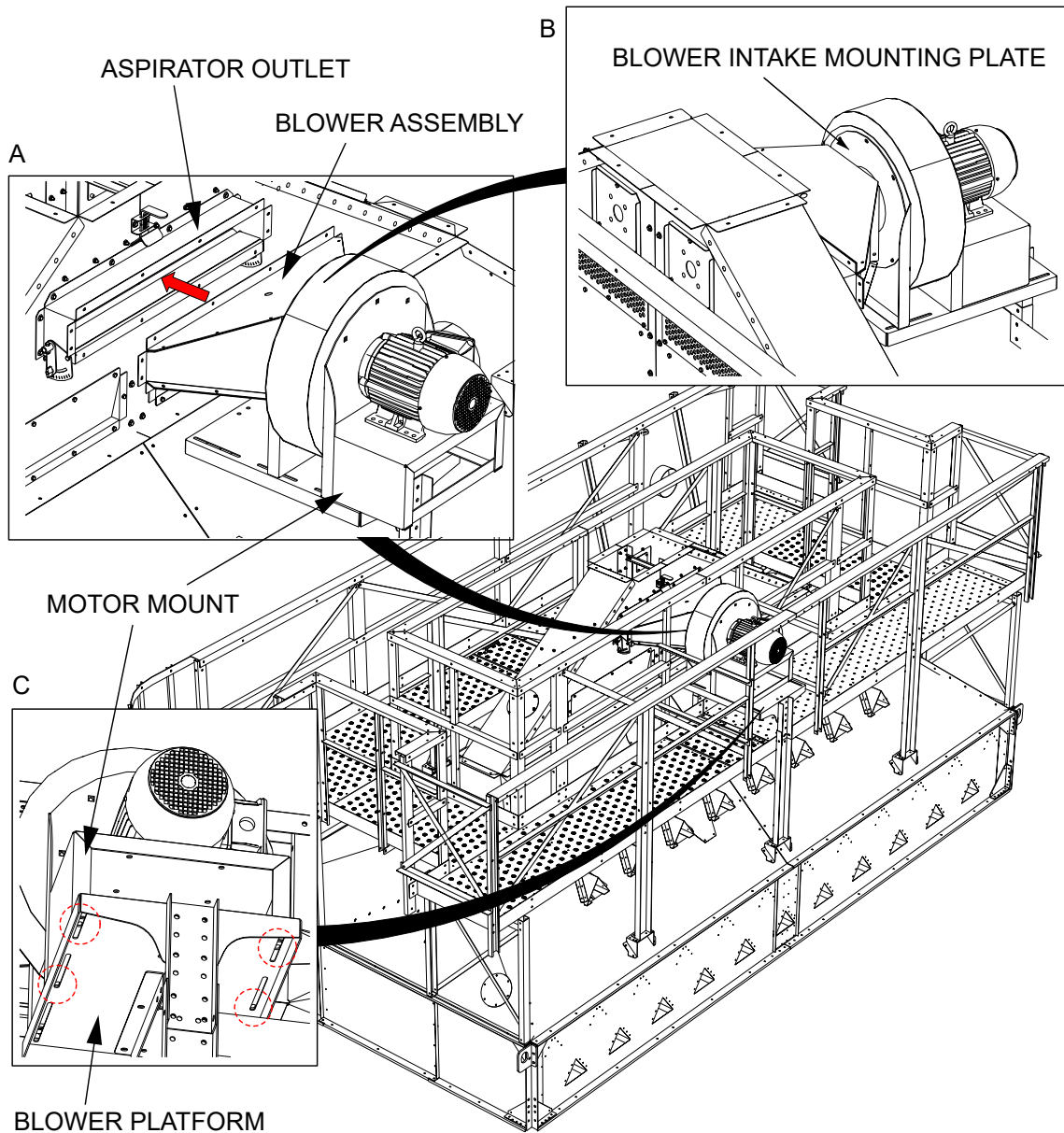
2. Secure the gravity fill with 1/4" flanged bolt and whiz nut.

3.7.6 Installing Blower Assembly

Note

- Use one 1/4" flanged bolt and whiz nut in 1/4" hardware location.
- Use one 3/8" bolt, washer, and whiz nut in 3/8" hardware location.

Figure 61. Blower Assembly Installation



1. Hoist the blower assembly onto the Blower Platform.
2. Loosen the bolts of the Blower Intake Mounting Plate using 13mm socket (see detail B in [Figure 61](#)) and align the bolt slots of Blower Intake with the Aspirator Outlet (see detail A in [Figure 61](#)) and Motor Mount with the Blower Platform.
3. After adjusting the bolt slots, attach the Blower Intake to the Pre-Cleaner Aspirator Outlet using 1/4" hardware (see detail A in [Figure 61](#)) and
4. Attach the Motor Mount to the Blower Platform using four 3/8" hardware (see detail C in [Figure 61](#). 3/8" hardware location are shown in red circles)
5. Tighten the bolts on the Blower Intake Mounting Plate

Important

Do not over-tighten these bolts as they are threaded directly into the blower housing without any nut. Over tightening can permanently damage the bolt hole threads.

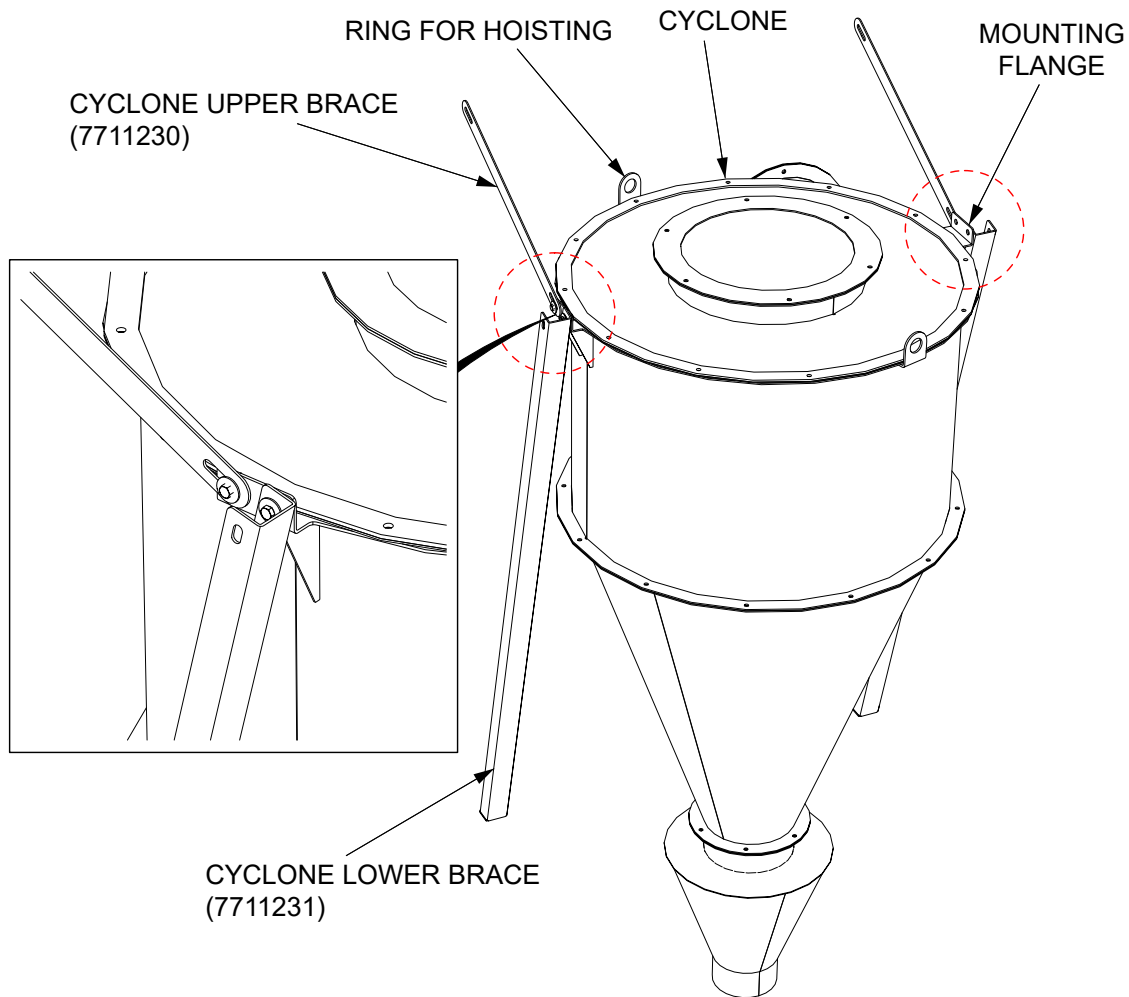
3.7.7 Installing Cyclone

Note

Cyclone's correct location varies depending on the discharge direction

Note

- Use one 1/4" flanged bolt and whiz nut in 1/4" hardware location.
 - Use one 3/8" bolt, washer, and whiz nut in 3/8" hardware location.
1. Install Cyclone upper braces (7711230) and lower braces (7711231) on the mounting flanges on the top of the Cyclone. Use 3/8" hardware. Hand tight the bolts. See [Figure 62](#).
 - a. Each mounting flange has two holes. The front hole is the one closer to the cyclone inlet tube. Install the upper braces (7711230) in the front holes, and the lower braces (7711321) in the rear holes.

Figure 62. Installing the Cyclone Braces

2. Prepare the Cyclone for hoisting.

Important

Do not use the mounting flanges to hoist the Cyclone.

Note

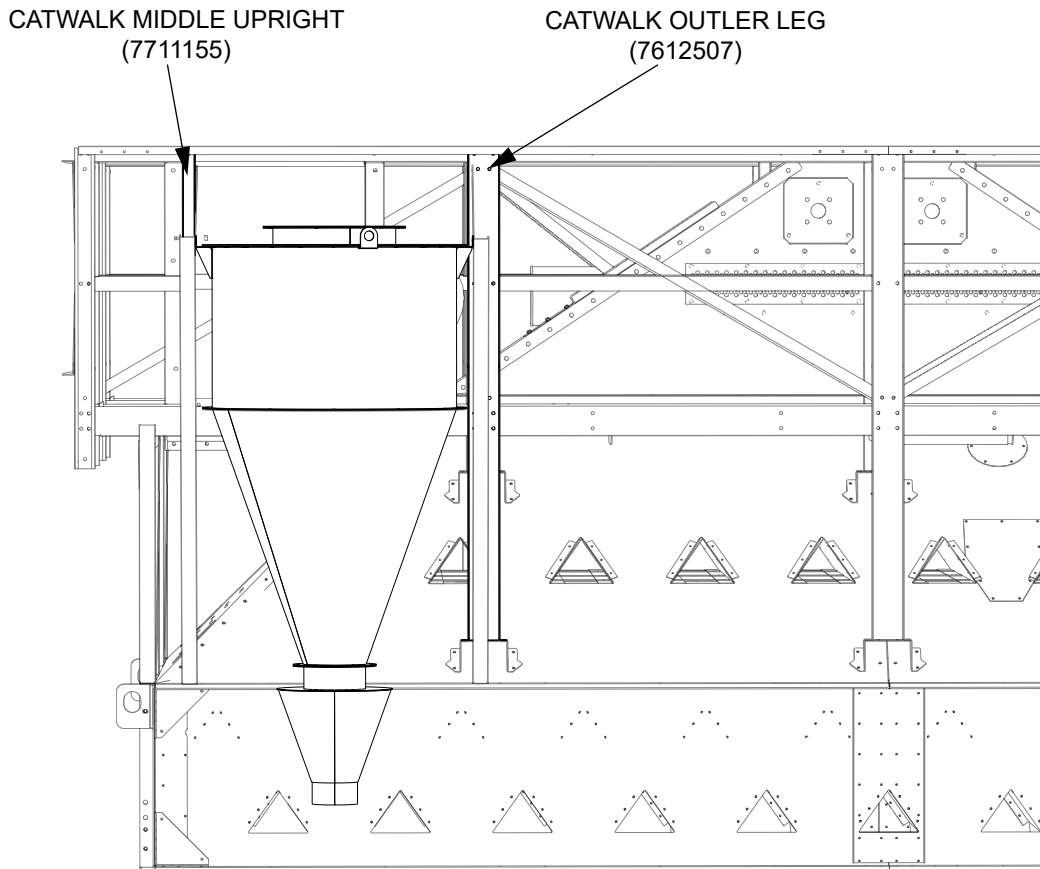
- The rings on top of the Cyclone can be used as lifting lugs.
- Alternatively, a lifting strap can be fed through the Cyclone and stabilized with a cross bar underneath.

3. Hoist the Cyclone into position. See [Figure 63](#).

Note

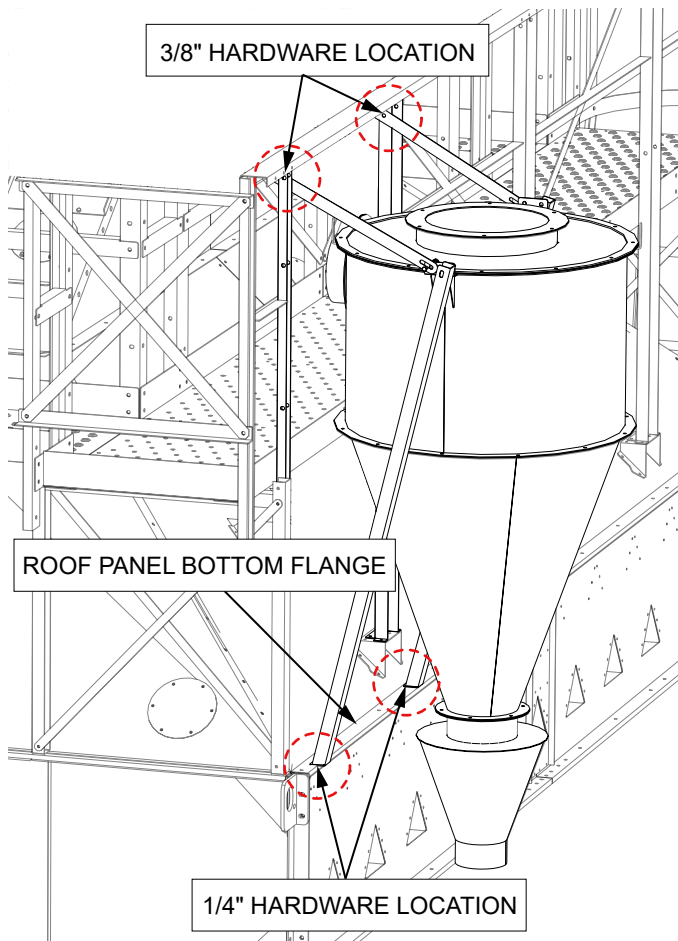
- Make sure the Cyclone is in the rail gap between a Catwalk outer leg (7612507) and Catwalk middle upright (7711155).
- The lower braces (7711231) should rest on the roof panel's bottom flange.

Figure 63. Hoisting the Cyclone into Position



4. Attach the upper braces (7711230) to the outside of the Catwalk upright legs using 3/8" hardware. Attach the lower braces (7711231) to the dryer side using 1/4" hardware. [Figure 64](#).

Figure 64. Attaching Upper Braces to Catwalk



Note

- Make sure the Cyclone is centered between the Catwalk upright supports
- Make sure the Cyclone lower braces (7711231) are square against the dryer.
- Use an existing 1/4" bolt hole if possible. If this cannot be done while keeping the Cyclone squarely mounted, drill new 1/4" holes.

3.7.8 Installing Rooftop Blower Pipes

1. Cut the 8"x 5' pipe (7711251) to the sizes specified below.

Duct Kit	# Ducts Provided (7711251)	Duct Lengths Required
16ft	1	RH & LH: 13" & 47"
24ft	1	RH: 13" & 13" LH: 13" & 30"
32ft	2	RH: 17" & 43" LH: 38" & 43"

2. Assemble the duct work as shown in [Figure 65](#), [Figure 66](#) and [Figure 67](#) below.
 - a. All assembly diagrams depict right-hand discharge configurations.
 - b. Right-handed parts are designated with "RH" in the part label. Left-handed parts are designated with parentheses and an "LH" designation.
 - c. Secure all ducts with 8" pipe clamps (7711258).

Figure 65. Pipe Installation for 16' Dryer

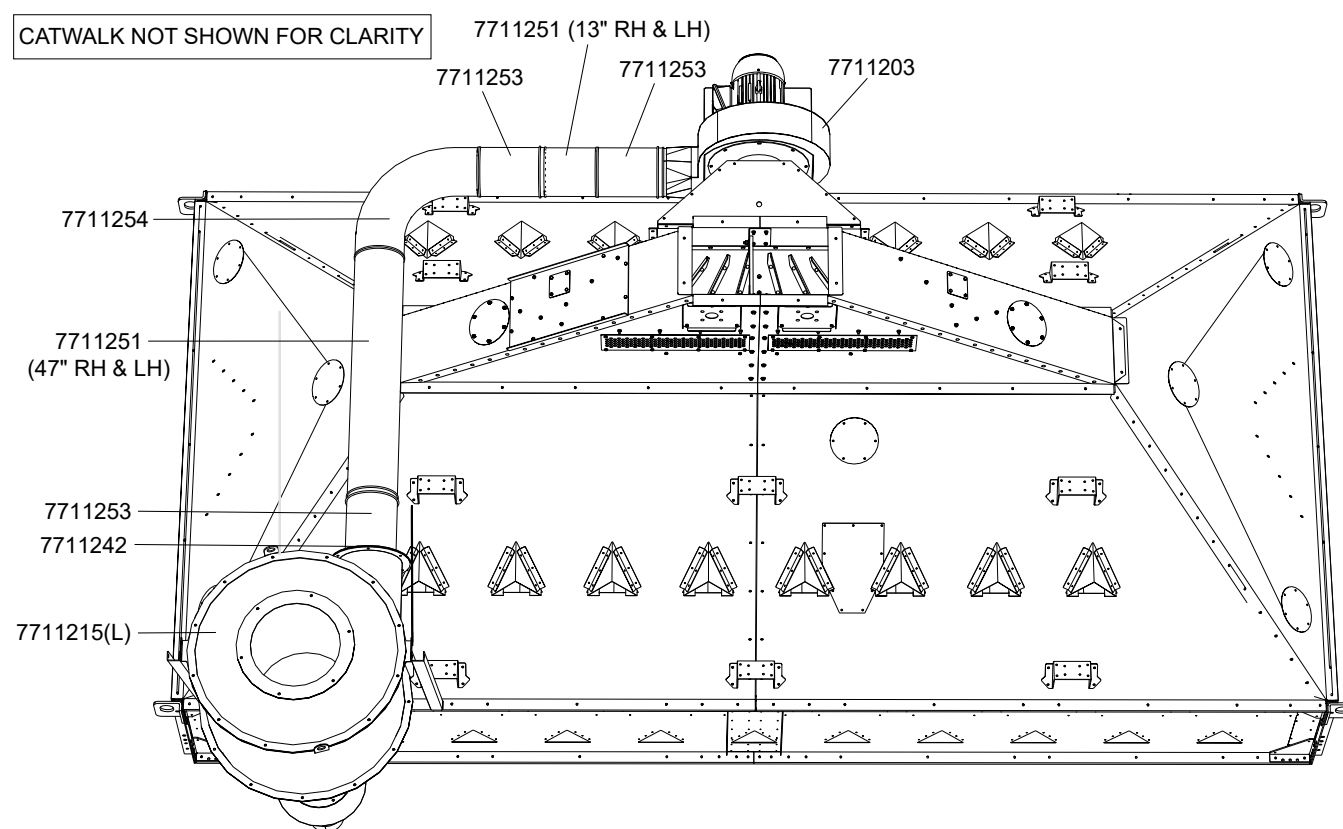


Figure 66. Pipe Installation for 24' Dryer

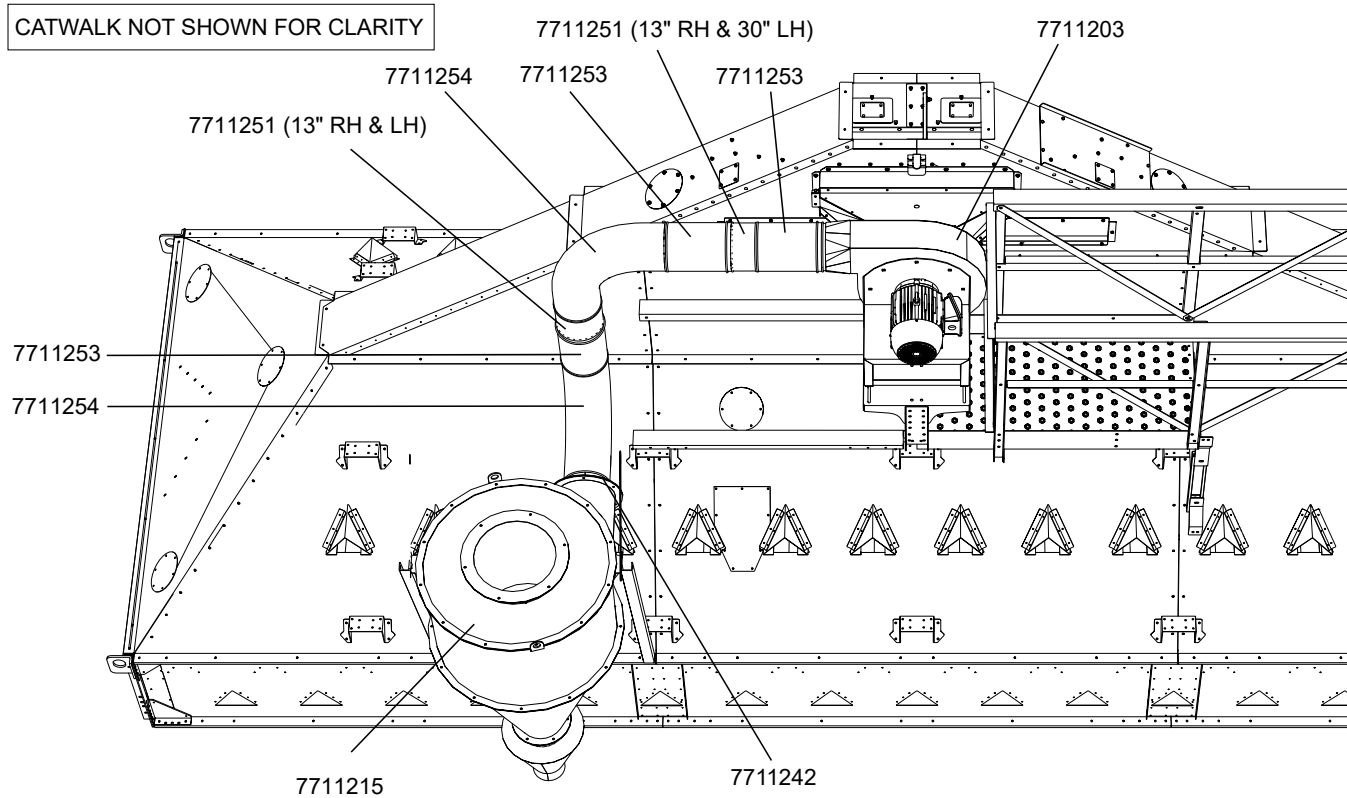
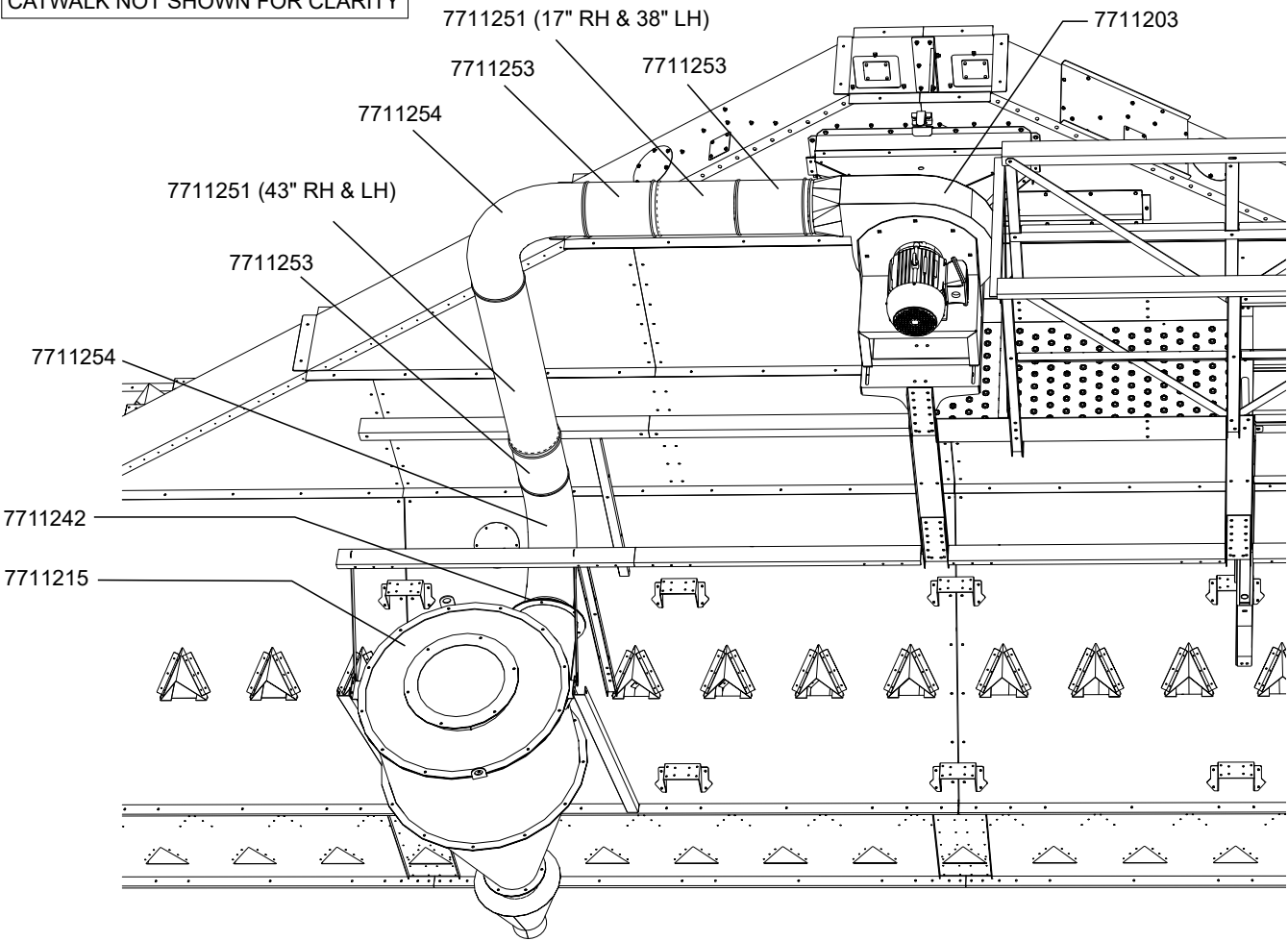


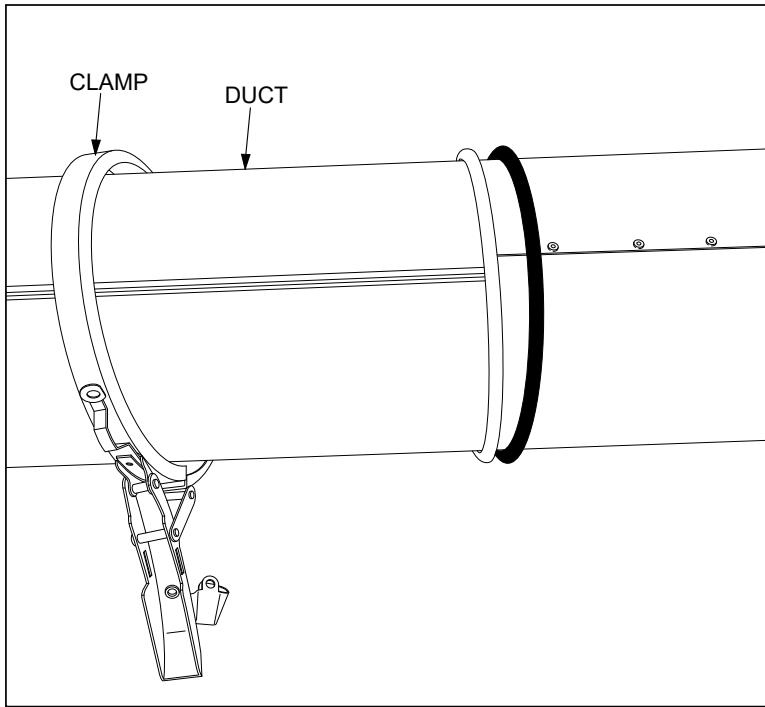
Figure 67. Pipe Installation for 32' Dryer

CATWALK NOT SHOWN FOR CLARITY



3. Insert the cut end of the 8" ducts into the next pipe. Leave the pipe clamp loose around the duct until proper alignment with the next is achieved. See [Figure 68 on page 76](#).

Figure 68. Duct Assembling



4. Place an O-ring on either the 8" duct section or the duct it attached to. See [Figure 69 on page 77](#) to [Figure 71 on page 78](#) for O-ring placement diagrams.

Note

O-rings labelled “SLEEVE” are pre-placed on the pipe sleeve 7711253. O-rings labeled “HARDWARE KIT” must be retrieved from the provided hardware kit. Each roof duct kit will use four O-rings.

Figure 69. O-Ring Placement for 16' Dryer

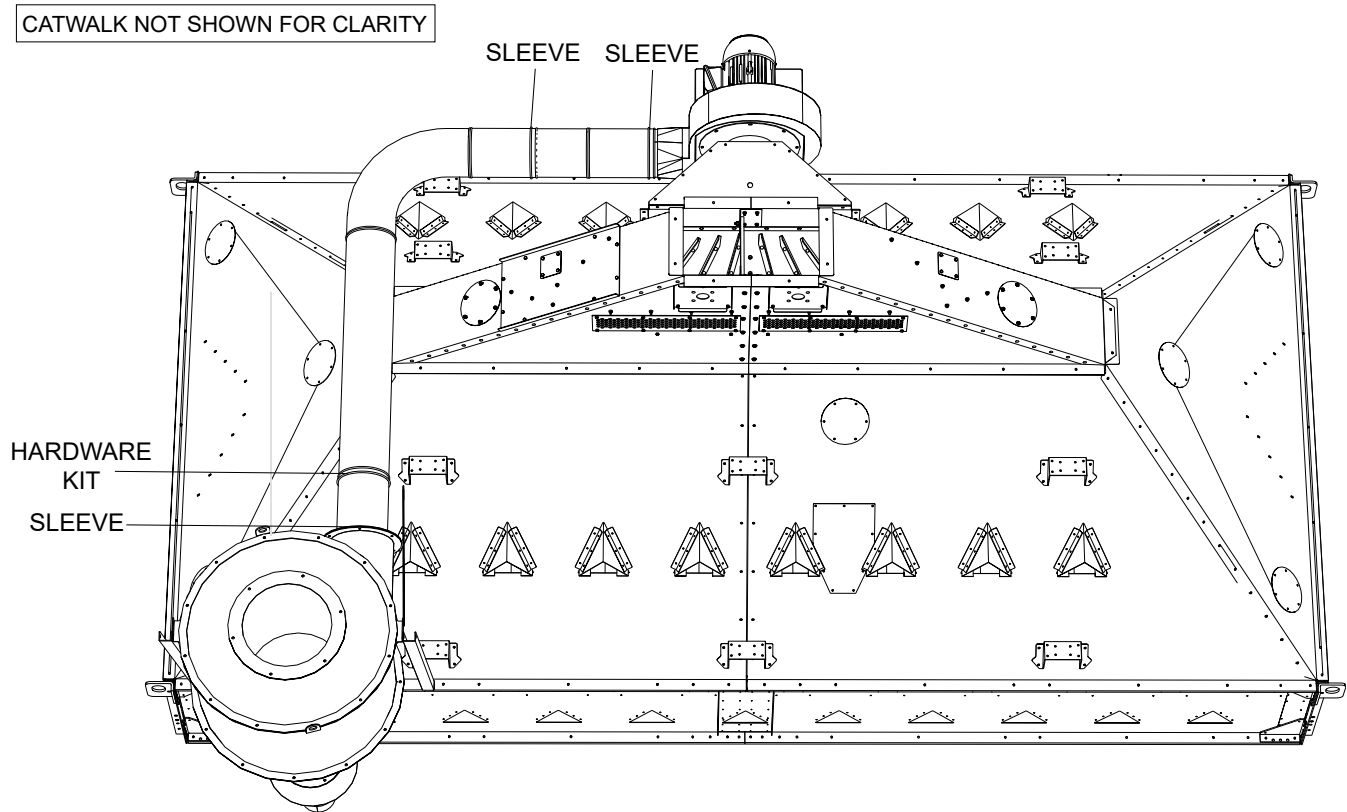


Figure 70. O-Ring Placement for 24' Dryer

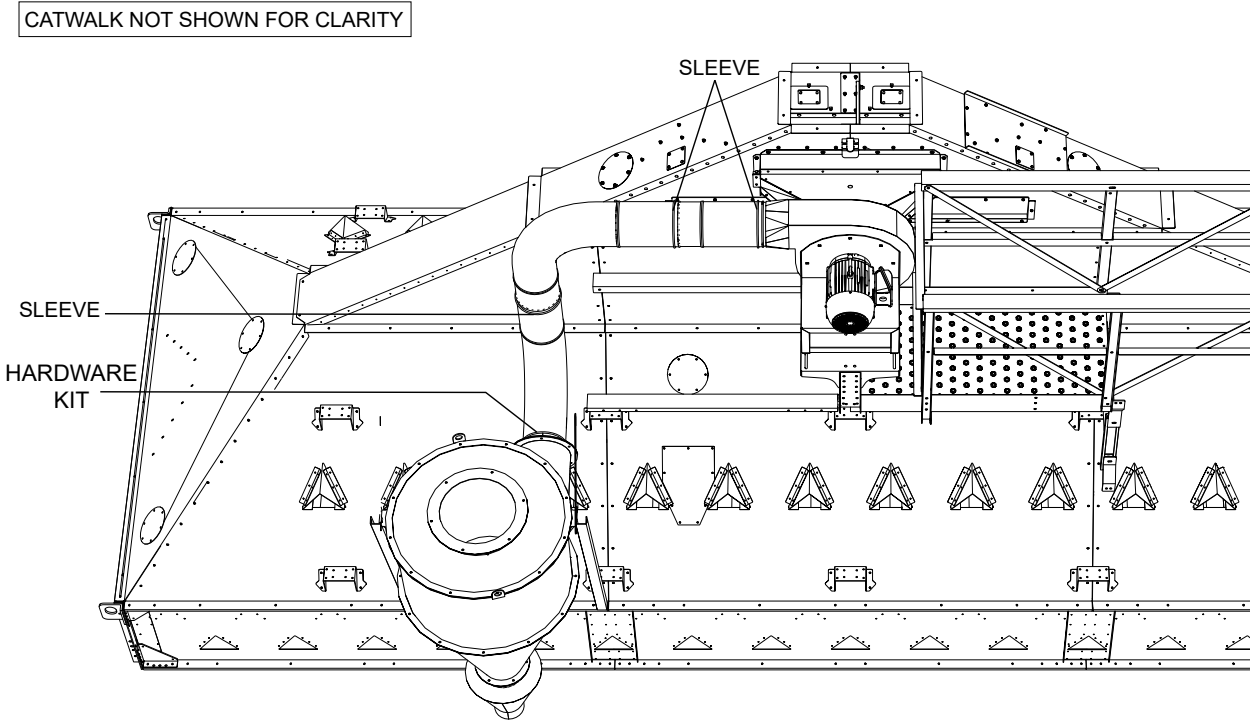
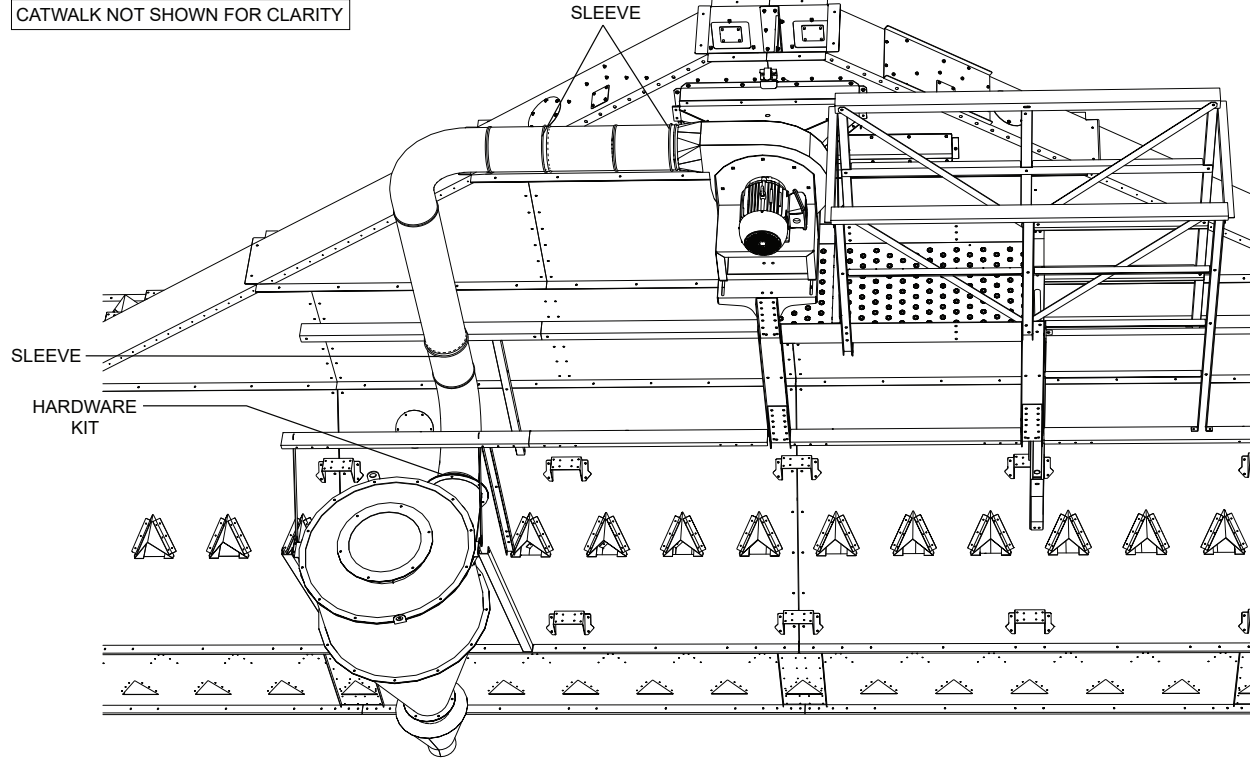
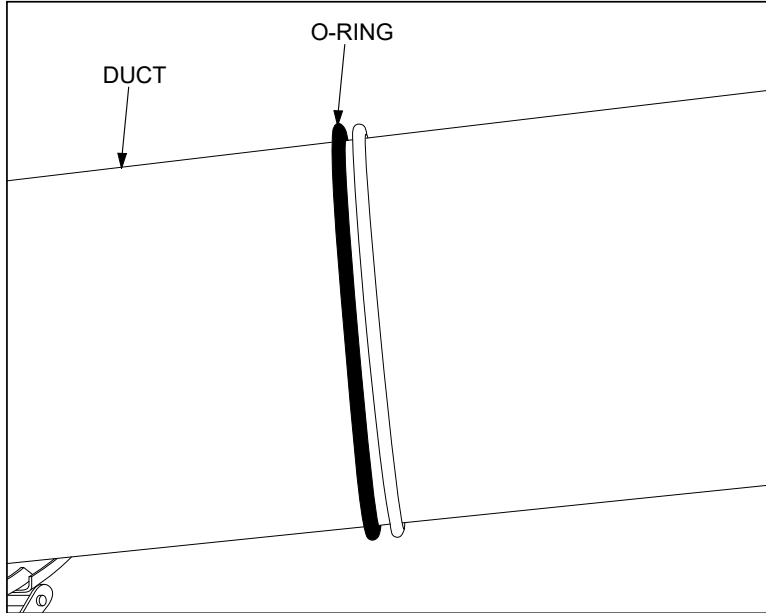


Figure 71. O-Ring Placement for 32' Dryer



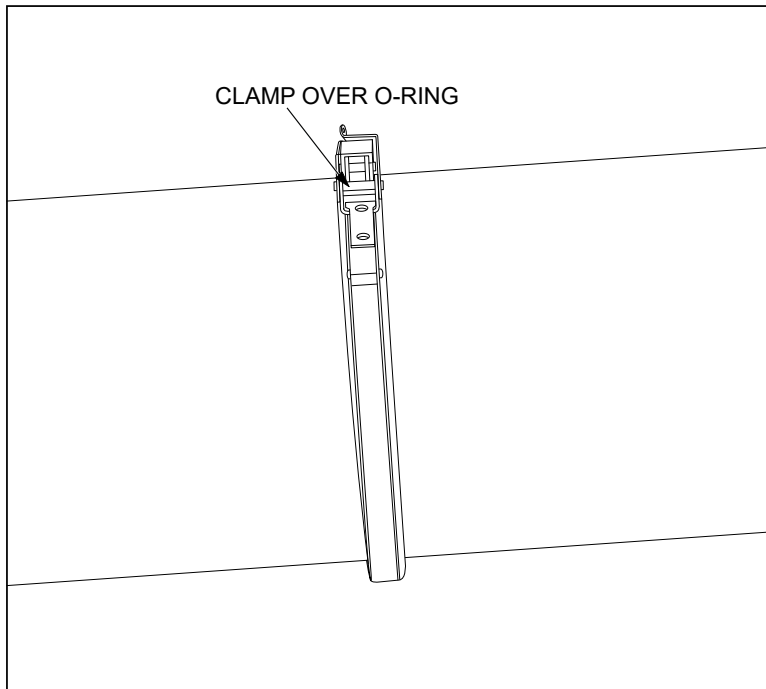
5. Position the O-ring against the duct's rolled lip. See [72 Positioning O-ring on page 79](#).

Figure 72. Positioning O-ring



6. Place the pipe clamp over the duct lip and O-ring. Secure it to lock the duct section in place. See [73 Installing Clamp over O-ring on page 79](#).

Figure 73. Installing Clamp over O-ring



3.8. Route Motor Harness and Wire Into Panel

1. Disconnect dryer power source before performing any electrical work.
2. Uncoil motor harness and route along the inner toe-board of the catwalk towards the blower side of the dryer. Secure harness using provided conduit clamps.

Important

Ensure motor harness is not routed or secured in walkway.

3. Route harness down the dryer and enter the control panel next to the blower motor conduit.
4. Wire motor leads into the VFD according to the schematic label inside the panel.

3.9. VFD Control (M241 PLC Only)

WARNING Do not touch any electrical components or terminals when the power is on.

Wiring

Figure 74. Wiring Decal for 230/460V

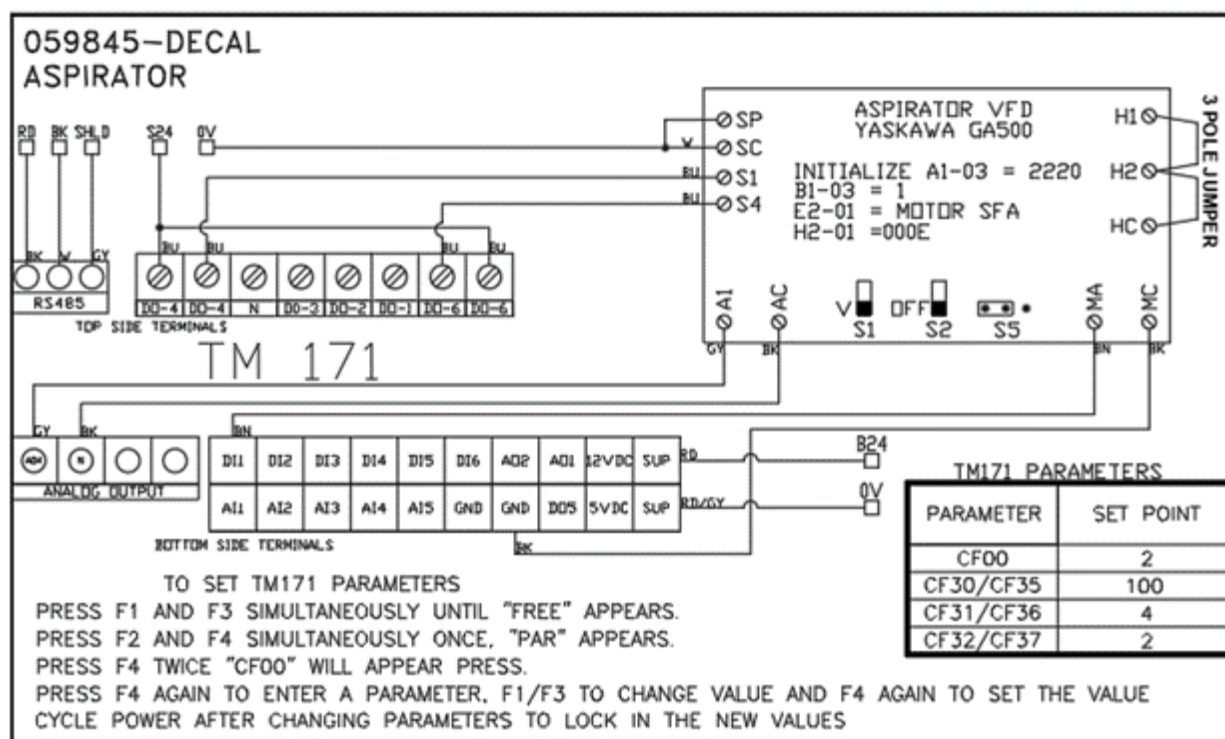
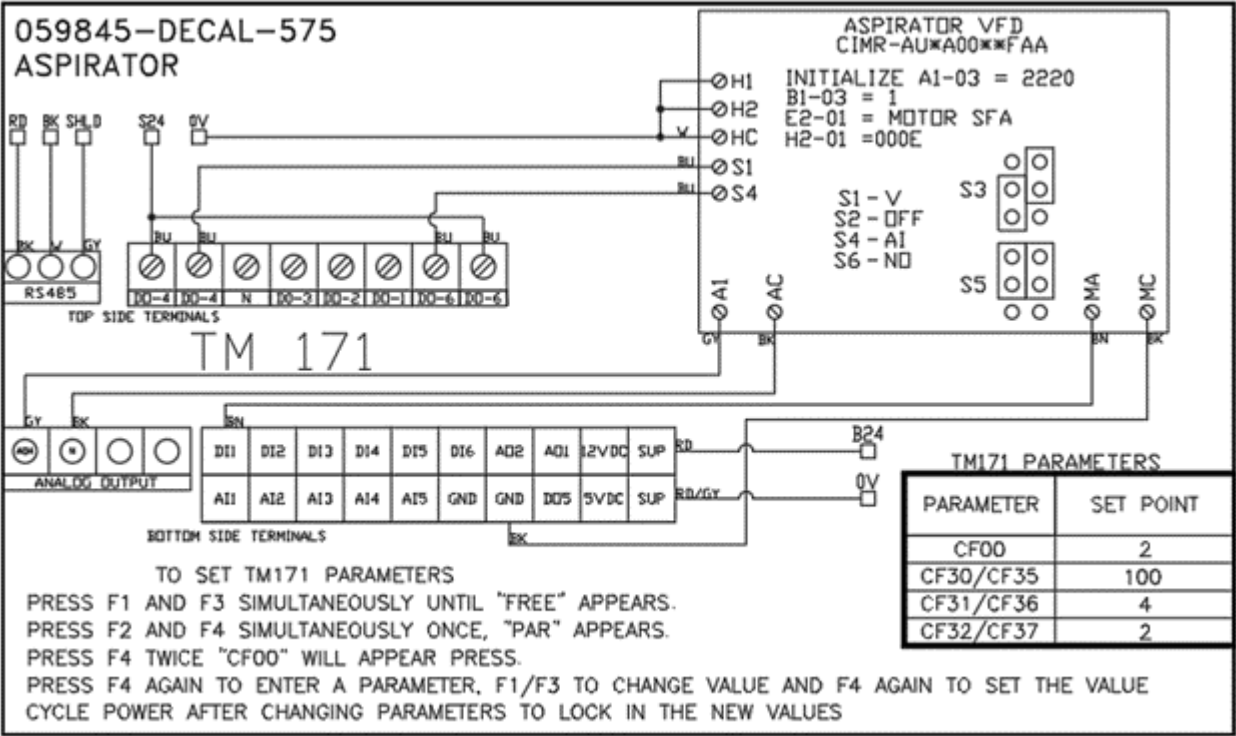
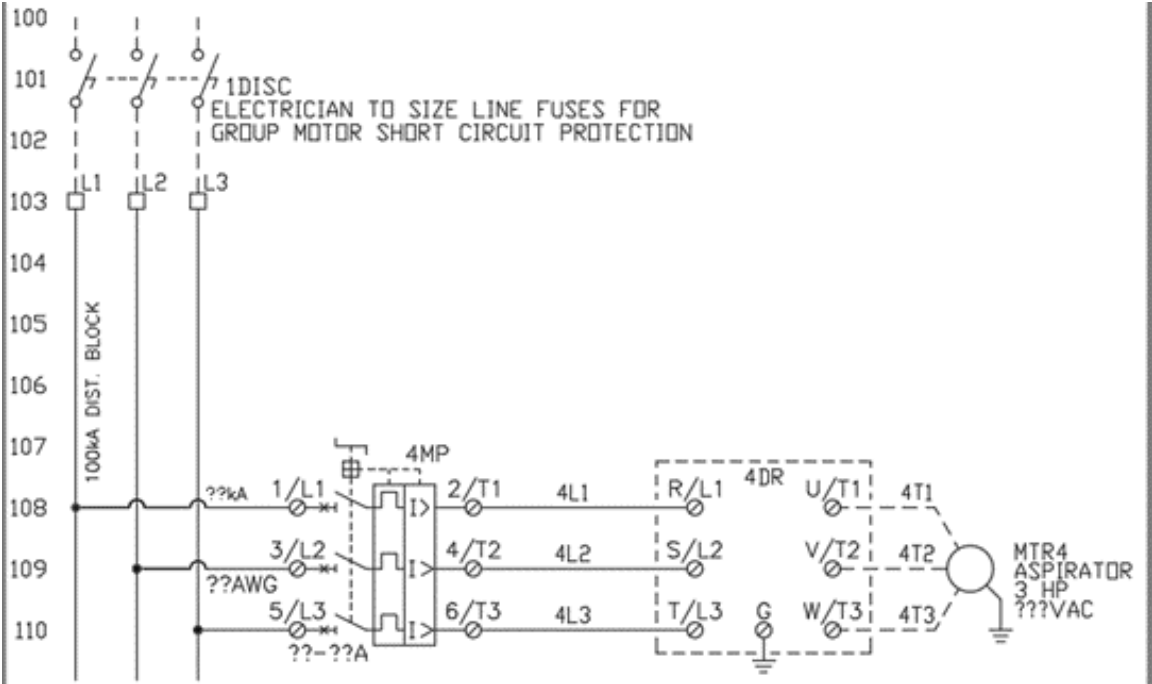


Figure 75. Wiring Decal for 575V



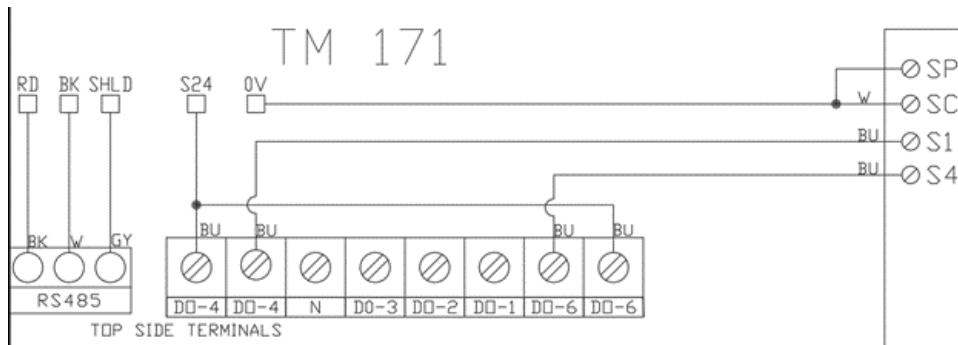
1. Disconnect the dryer supply power. Verify the panel is completely powered down.
2. Mount **VFD, Motor Overload**, and **TM171 PLC** to the back panel inside of the main control panel located behind the bottom blower.
3. Reference new dryer schematic for high voltage terminations.



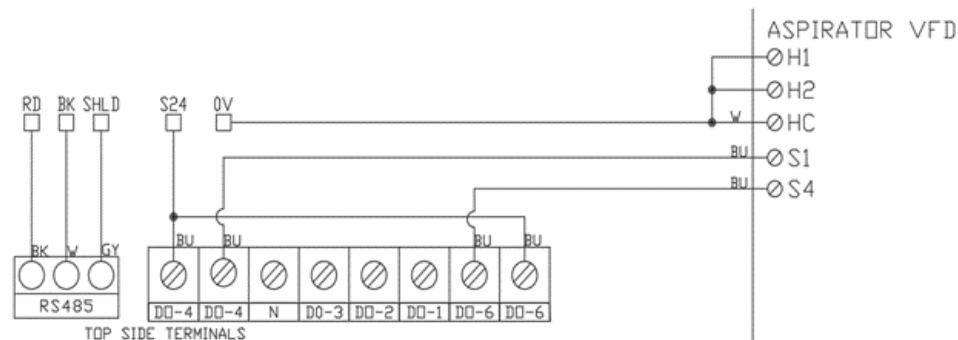
4. Next grab the 3-wire connector (Black, White, Gray cables) and connect to the terminal at the top left of the new TM171 PLC. The 3 wires that come off this connector terminates into the top of Wago terminal block. Wago terminal block is on the far-right side of main control panel.

Wire	Connection Terminal
Black	Wago terminal block labeled RD
White	Wago terminal block labeled BK
Gray	Wago terminal block labeled SHLD

5. Grab the Green 8 screw terminal connector and plug it into the top right of the TM171 PLC. With the blue wire provided, connect the left most screw terminal (of the green connector) to S24. In the green terminal, jumper the top left terminal to the furthest right screw terminal.
6. Then connect the 2nd terminal from the left (of green terminal) to the S1 screw terminal on the face of the VFD. You will need to remove the Yaskawa face cover to get to the S1 terminal. Next connect the 2nd from the right terminal to S4 on the VFD.
7. Connect the following:
- **For 230V/460V:** Connect SC/SP terminals on the VFD to a 0V WAGO block.



- **For 575V:** Connect H1/H2/HC terminals on the VFD to a 0v WAGO block.



8. Grab the 4-wire connector (Gray, Black, Red, and Blue wires), and plug it into the 4 pin connection point at the bottom of the TM171 PLC. Terminate the Gray wire to the A1 terminal on the VFD board. Terminate the Black wire to the AC on the VFD board.

9. Next Grab the 20-wire connector and plug it into the large black connector port at the bottom of the TM171 PLC, the plug clip point towards the screen. This step will use only 4 of the twenty wires.

Wire	Connection Terminal
Brown (closest to the left-hand side)	MA (on the VFD)
Either of the Black	MC (on the VFD)
Red (on the far right side)	S24 located on WAGO terminal block
Red and Grey	0V on WAGO terminal block

10. Place the cover back over the face of the VFD and clean up any scrap or loose wire. Leave the unused wires from the Mini plc hang off till operation is verified.
11. Close the main control panel and turn on the dryer main power.

Programming

- At HMI touch screen, log in and go to the Set up menu. In the top right-hand corner, it will identify which PLC and HMI program that is currently installed on your dryer. These program numbers must match and be greater than 300.7, preferably the most recent program (see AGI Dealer Support site). Update your dryer if necessary.
- Next Return to the Set Up main and enter the dryer configuration menu. Along the top of the screen, it will ask for dryer length with 4 options, Level Auger Yes/No, and then Aspirator Yes/No. Press the Aspirator so that it turns green.
- Return the Main electrical control panel and open the door.



WARNING Do not touch any electrical components or terminals when the power is on.

- At the TM171 press and hold the left 2 keys F1 and F3 until "Free" appears on the display.
- Press F2 and F4 once and "Par" will appear on the display. Hit F4 once and "CF00" will appear on the display.
- At this point you are inside the parameter menu of the TM171 arrowing up and down will cycle through parameters, pressing F4 will enter and set parameters. ESC/F2 will back out or cancel what has been changed. Inside the parameter, use up or down arrow keys to change the value and use Set/F4 key to confirm the value. Set each parameter according to [Table 2](#). It is also located on the smaller aspirator decal.

Table 2. TM171 Parameters

Parameter	Set Point
CF00	2
CF30/CF35	100
CF31/CF36	4
CF32/CF37	2

- Next will be changing a few parameters on the VFD itself. Press the down arrow key till Par appears on the screen. The VFD uses a letter/number- two-digit number format for its parameters. First initialize the VFD by going to A1-03 and enter: 2220.
- Next Set parameters to

- a. B1-03 to 1
 - b. E2-01 to the aspirator motor SFA (information located on aspirator motor name plate)
 - c. H2-01 to 000E
9. Close the main control cabinet door and shut off the dryer main supply power. Wait 30 seconds and then turn the power back on and return the HMI screen.
 10. At the HMI go Setup-Dryer Configuration and turn on the aspirator one more time. Once the aspirator button is green, hit the back button and press save configuration. Back up or Press Main menu. Then go to Fill/Empty dryer menu now in the upper the left-hand side you will have an Aspirator start stop button and speed percentage. Set the speed percentage to 80%.
 11. Leave the HMI and return to the main control cabinet (Power is Live act with caution). Open the back door and if set up correctly your VFD screen should Read "F50.00".

Important

Close the cabinet door securely. Verify that the Aspirator is ready to be turned on and that no one will be harmed when activated.

12. Return to the HMI touch screen and press the aspirator on button. You should now be able to hear the aspirator fan kick on. Check fan for proper rotation direction. If motor rotation is incorrect, do the following:
 - a. Disconnect the dryer from the power source and wait 30 seconds after the VFD display screen shuts off.
 - b. Swap 2 legs of the motor leads to reverse motor rotation
 - c. Re-connect the dryer power source.

Optionally, shut off power to the dryer. Open the main control cabinet, open the door. At the TM171 after verifying operation of the aspirator it is now safe to cut flush any non-used wire.

3.10. Potentiometer Control

WARNING Do not touch any electrical components or terminals when the power is on.

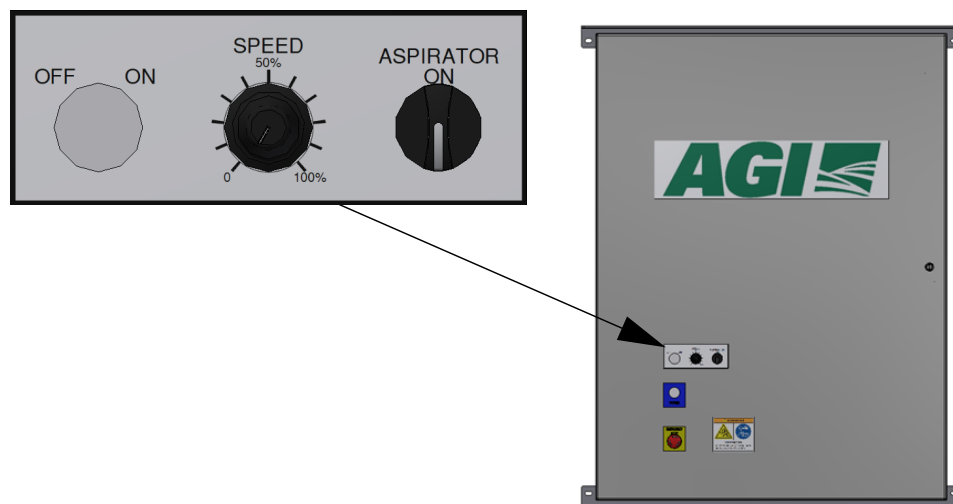
1. Disconnect the dryer supply power. Verify panel is completely powered down.
2. Mount VFD, and Motor overload to the back panel inside of the main control panel located behind the bottom blower.

Note

Refer to new dryer schematic for high voltage terminations.

3. Apply the silver decal to the outside of the panel. Drill holes for the potentiometer, 2 position switch, and Run light. Then mount the 3 devices.

Figure 76. Apply the Silver Decal to the Panel



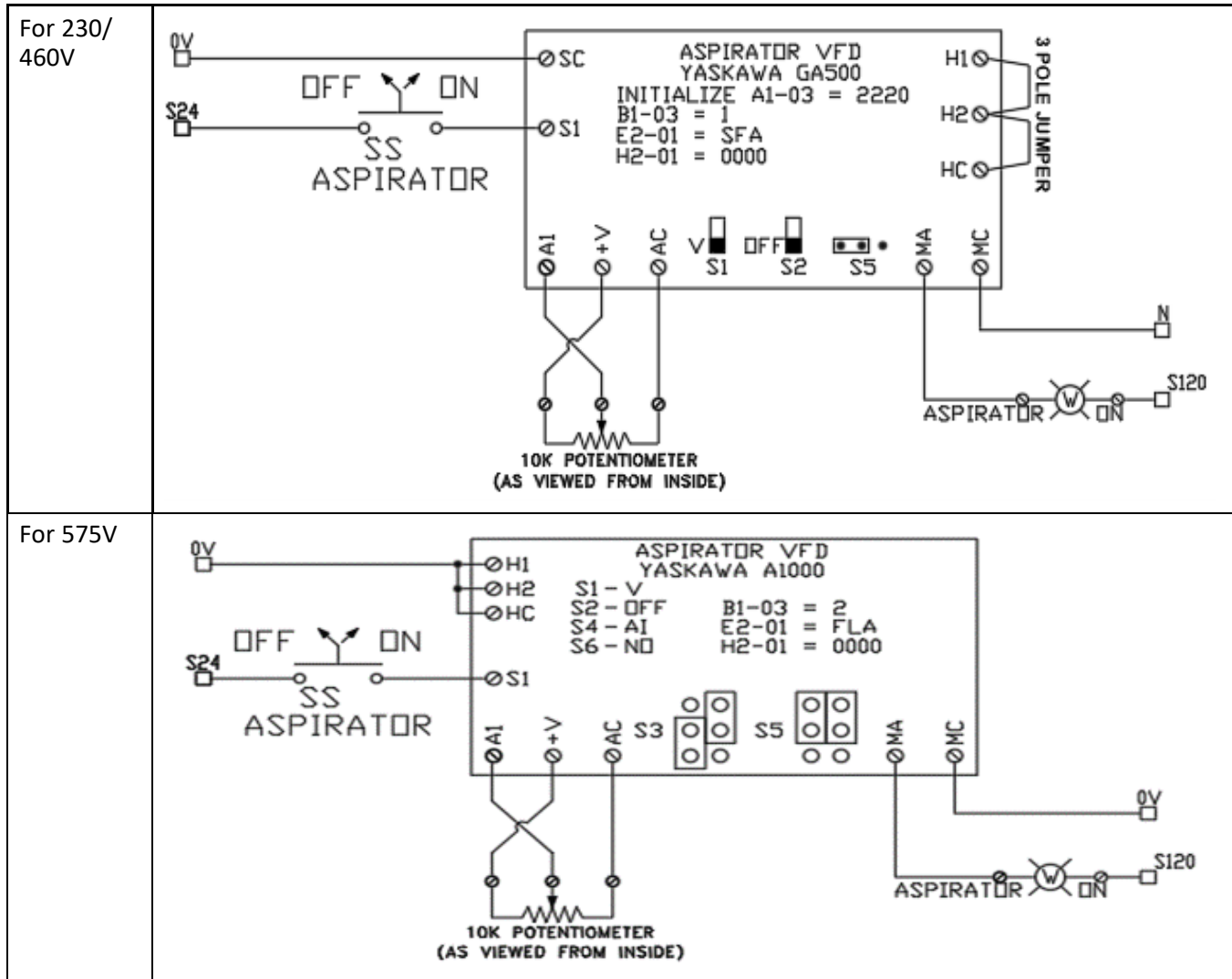
4. The new panel schematic (see [Figure 77](#)) provided terminate low voltage wiring between the VFD, terminal strip, and the 3 new external control devices.
5. Verify the micro dip switches are in the correct position on the face of the VFD.
6. At this point, close the door to the main control panel and turn on power to the dryer.

WARNING Do not touch any electrical components or terminals when the power is on.

7. Next change a few parameters on the VFD. Press the down arrow key till Par appears on the screen. First initialize the VFD by going to A1-03 and enter: 2220.

Note

The VFD uses a letter/number- two-digit number format for its parameters.

Figure 77. New Panel Schematic

8. Set parameters to:
 - a. B1-03 to 1
 - b. E2-01 to the aspirator motor SFA (information located on aspirator motor name plate)
 - c. H2-01 to 0000
9. Close the panel door and Cycle the power off and back on to the dryer. Now the new aspirator should turn on and off with the 2 position switch and speed up and slow down with the potentiometer. Check fan for proper rotation direction. If motor rotation is incorrect, then do the following:
 - a. Disconnect the dryer from the power source and wait 30 seconds after the VFD display screen shuts off.
 - b. Swap 2 legs of the motor leads to reverse motor rotation.
 - c. Re-connect the dryer power source.

4. Appendix

4.1. Pre-Cleaner Packing List

Cyclone (For All Dryers)	
Left-Hand	Right-Hand
7711215L	7711215

6" Discharge Duct Kit		
Kit #	Dryer Models	Dryer Height
7711271	D1660/K600, D1670/K700, D1680/K800, D1690/K900, D24108	4-7 Tiers
7711272	D16106, D16120, D24150, D24180	8-10 Tiers
7711273	D16140, D16160, D24210, D24240, D32260	12-14 Tiers
7711274	D16180, D24260, D32340	16 Tiers
7711275	D24330, D24380, D32440, D32500	20-24 Tiers

6" Discharge Duct Kit Contents						
Item	Description	Kit #				
		7711271	7711272	7711273	7711274	7711275
7711245	Pipe Support Flange	2	2	3	4	7
7711250	6" Rolled Lip Duct 5' L	3	4	5	6	9
7711252	6" Duct Adjustable Sleeve 11" L	2	2	2	2	2
7711256	6" Duct 30 Deg Elbow	2	2	2	2	2
7711257	6" Duct Galvanized Clamp w/ Gasket	7	8	9	10	13
7711261	6" Duct Hanger	3	3	4	5	8





Blower Wiring Harness			
Dryer Models	Input Voltage		
	230V / 3Ph	460V / 3Ph	575V / 3Ph
D1660/K600, D1670/K700, D1680/K800, D1690/K900, D16106, D24108, D24150	7711203-230-50	7711203-460-50	7711203-575-50
D16120, D16140, D16160, D16180, D24180, D24210, D24240, D24260, D32260	7711203-230-70	7711203-460-70	7711203-575-70
D24330, D24380, D32340, D32440, D32500	7711203-230-90	7711203-460-90	7711203-575-90

Gravity Fill			
Dryer Length	Gravity Fill Part #	Description	Hardware Kit #
16ft	7711106	Aspirator Gravity Fill Top Assy	045498
24ft	7711304	Aspirator Gravity Fill 24'	045513
32ft	7711305	Aspirator Gravity Fill 32'	045550

4.2. Bolt Torque

Table 3 gives the correct torque values for various hardware. Tighten all bolts to the torque specified, unless otherwise noted. Check tightness periodically, using Table 3 as a guide. Replace the hardware with the same strength bolt, contact AGI if you are unsure.

Table 3. Recommended Bolt Torque¹

Size	Dry or Lubricated	Threads per inch (Course/Fine)	Area of Bolt (sq in.)		Recommended Torque (ft-lb)							
					 Grade 2		 Grade 5		 Grade 8		 8.8 S/S	
			Coarse	Fine	Coarse	Fine	Coarse	Fine	Coarse	Fine	Coarse	Fine
1/4"	Dry	20/28	0.0318	0.0364	5.5	6.3	8	10	12	14	6.3	7.8
	Lubricated				6.3	4.7	6.3	7.2	9	10	-	-
5/16"	Dry	18/24	0.0524	0.058	11	12	17	19	24	27	11	11.8
	Lubricated				8	9	13	14	18	20	-	-
3/8"	Dry	16/24	0.0775	0.0878	20	23	30	35	45	50	20	22
	Lubricated				15	17	23	25	35	35	-	-
7/16"	Dry	14/20	0.1063	0.1187	32	36	50	55	70	80	31	33
	Lubricated				24	27	35	40	50	80	-	-
1/2"	Dry	13/20	0.1419	0.1599	50	55	75	85	110	120	43	45
	Lubricated				35	40	55	65	80	90	-	-
9/16"	Dry	12/18	0.182	0.203	70	80	110	120	150	170	57	63
	Lubricated				55	60	80	90	110	130	-	-
5/8"	Dry	11/18	0.226	0.256	100	110	150	170	210	240	93	104
	Lubricated				75	85	110	130	160	180	-	-
3/4"	Dry	10/16	0.334	0.373	175	200	260	300	380	420	128	124
	Lubricated				130	140	200	220	280	310	-	-
7/8"	Dry	9/14	0.462	0.508	170	180	430	470	600	670	194	193
	Lubricated				125	140	320	350	180	180	-	-
1"	Dry	8/14	0.606	0.679	250	280	640	720	910	1020	287	289
	Lubricated				190	210	480	540	680	760	-	-
1-1/8"	Dry	7/12	0.763	0.856	350	400	790	890	1290	1440	288	290
	Lubricated				270	300	590	670	970	1080	-	-
1-1/4"	Dry	7/12	0.989	1.073	500	550	1120	1240	1820	2010	289	291
	Lubricated				380	420	840	930	1360	1510	-	-
1-1/2"	Dry	6/12	1.405	1.581	870	960	1950	2200	3160	3560	-	-
	Lubricated				650	730	1460	1640	2370	2670	-	-

1. Torque value for bolts and cap screws are identified by their head markings. Established at 75% of yield strength of bolt given the cross-sectional area.

Note






Torque figures in table are valid for non-greased or non-oiled threads and head unless otherwise specified. Therefore, do not grease or oil bolts or cap screws unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

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9364 N. 45th St. Omaha, Nebraska, USA 68152

P 402.453.6912 | **F** 402.502.1709 | **E** sales@necodryers.com | aggrowth.com/neco

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Please include the part number listed on the cover page in your message.