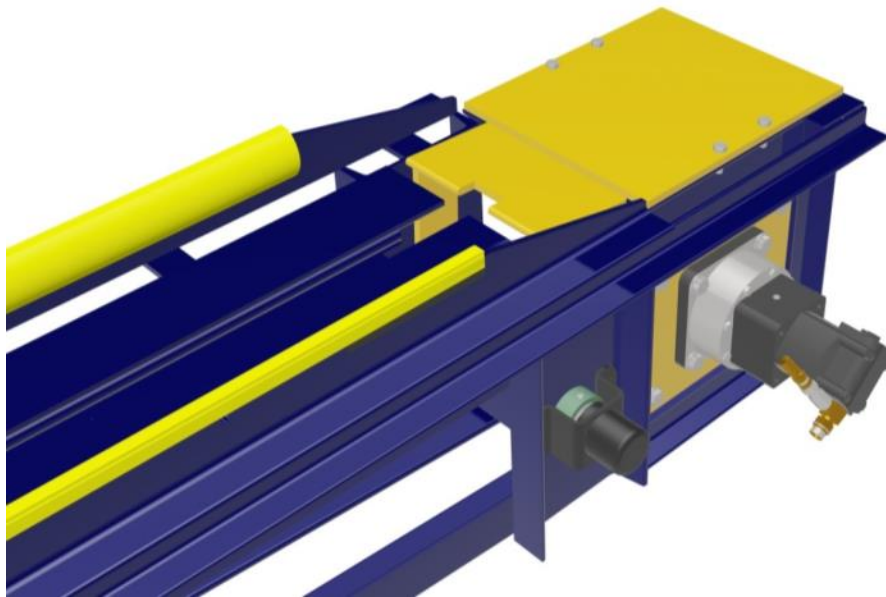




Over-Under Conveyor Soft-Drop



Repair Manual

Sonny's Enterprises, Inc.
5605 Hiatus Road
Tamarac, Florida 33321
2017



Equipment Program - Manuals Over-Under Conveyor Soft-Drop

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WARNING *SAFETY REQUIREMENTS* WARNING

1. All employees must be thoroughly trained in safe operation and standard maintenance practices. All employees must review this entire manual monthly.
2. Do not enter the wash tunnel when the equipment is operating. Death or dismemberment may occur.
3. Do not wear loose fitting clothing or jewelry around moving equipment. Do not allow any part of your body or other objects (including ladders, hoses or tools) to come in contact with moving equipment. Entanglement may result causing death or dismemberment.
4. Do not leave a ladder or any other items such as wash down hoses or tools in the wash tunnel while equipment is running. Vehicle damage and injury, including death, can occur.
5. Always exercise caution when walking (never run) through the wash tunnel as there may be slippery conditions. Be careful so you do not bump into or trip over equipment.
6. Only those employees specifically instructed and trained by the location management are permitted to enter the wash tunnel to perform inspections or maintenance. At least two qualified maintenance people must be present when performing equipment repairs or preventive maintenance.
7. Do not perform any maintenance or work on equipment unless you first perform Lock-Out Safety Precautions. 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 must be restarted only by the person who performed the "lock out" operation.
8. When working on any equipment that is higher than your shoulders, always use a fiberglass ladder that is in good condition.
9. Do not attempt to repair or adjust any pressurized liquid or pneumatic part, hose, pipe or fitting while that equipment is in operation.
10. Electrical connections and repairs must be performed by a Licensed Electrician Only.
11. Emergency "STOP" buttons must be well marked and their location and proper use reviewed with all personnel. Any activated "STOP" button must be reset only by the person who activated it. Clear the wash tunnel of any people, ladders, hoses, tools and other loose items before restarting the equipment. An audible device must sound to warn people that the equipment is starting.
12. Do not operate any piece of equipment that requires safety covers with those covers removed or improperly installed. Do not operate any piece of equipment if any component of that piece is suspected to be defective or malfunctioning.



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13. Store all cleaning and washing solutions and oils in a well-ventilated area. Clean up fluid spills immediately to prevent hazardous safety conditions. Be certain to follow all safety procedures on SDS Sheets for each chemical product used.
14. All hydraulic and electric systems in the wash tunnel equipped with a torque relief or overload should be checked and set at the minimum amount that will allow for proper functionality under normal washing conditions.
15. No unauthorized people should ever be permitted in the wash tunnel or near the equipment at any time.

* * *

!! CAUTION !!

When a piece of equipment must be in operation during inspection or maintenance, one qualified technician must stay at the power disconnect switch while another qualified technician performs the inspection or maintenance.



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INTRODUCTION

This Manual contains information that is vital to the successful installation, operation and maintenance of your SONNY'S vehicle washing equipment.

Please read, and understand, the full contents of this manual before installation and operation of the equipment. Keep this booklet 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:

TECHNICAL SERVICES DEPT.

SONNY'S ENTERPRISES INC.

5605 Hiatus Road

TAMARAC, FLORIDA 33321

TELEPHONE: 800-327-8723 FAX: 800-495-4049

THANK YOU FOR YOUR CONFIDENCE IN SONNY'S !!!!!





Product Specifications

- Accepts 13 inch wide tires
- Rubber pads placed in strategic positions to help reduce operations noise
- Direct drive speed reducer driven by high torque hydraulic motor
- Available in electric drive
- Removable cover on Take-Up section for ease of maintenance
- Reliable air shock system is standard
- Long lasting SC78 conveyor chain is standard, optionally Log, X458 or D88K chains are also available
- 7 ft. 4 in. roller spacing standard, optionally 3 ft. 6 in. roller spacing available
- 6 wheel mid-profile UHMW roller assemblies are standard, available low and tall profile rollers are also available
- 1/2 inch thick steel on top deck and 3/8 inch thick steel on all other levels. Also available in stainless steel
- Soft Drop Exit Door
- UHMW protective covering for the guide rails
- Air cylinder controlled roller-up fork
- Solid state pulse switch kit available
- Safety horn warning kit available
- Tracking bars and Kick off plate must be used with all Front Wheel Pull (FWP) installation



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For Parts/Accessories Information Please Reference our Catalog or Website.

Smooth Operator



Problem:

You need a conveyor that you never need to think about, that is easy to maintain, and delivers unparalleled safety and reliability.

Solved:

Why is SONNY'S Over-Under Conveyor the best-selling car wash conveyor in the world? Some say it's because our thicker frame and top deck results in longer lifespan. Others claim it's because our Banana Peel rails not only accommodate today's low profile tires, wide rims, and all-wheel-drive vehicles, but that they can guide even the most poorly aligned vehicle straighter in both rear-wheel-push AND front-wheel-pull configuration. Some operators insist it's because our new Soft-Drop exit door not only reduces maintenance, but provides a smoother transition off the conveyor that customers love. To us, we're just proud every time a customer tells us that their 15-year old conveyor is still plugging along.



New level entrance plate and increased front sprocket travel for longer maintenance intervals!



Electric or Hydraulic Drive to meet your requirements.



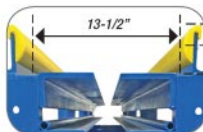
LifeTime Limited Weldment Warranty for generations to come.



1/2in thick top deck results in longer lifespan.



H-frame angle reinforcements every 4ft in a 15ft section for greater durability.



13-1/2in top deck width accommodates oversized tires. Custom widths available.



HEAVY-DUTY double roller bearing with easy access grease fittings.



Banana Peel rails for safer, more reliable vehicle tracking.



Air take-up for reliable performance that's simple to maintain. Spring take-up also available.



For in-depth information about this product, watch video at www.sonnysdirect.com

Specifications

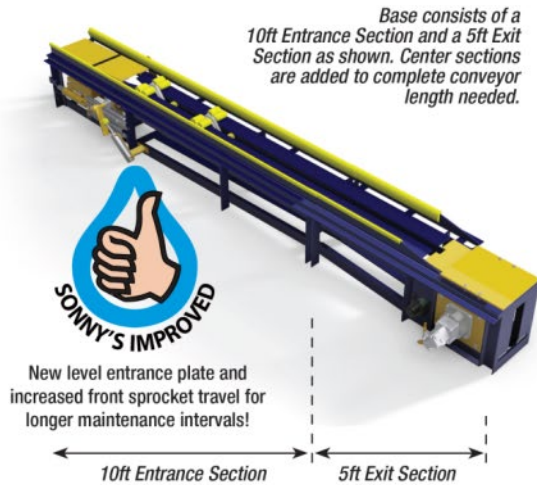
	Inches	Metric
Tire Clearance	13-1/2in	343 mm
Top Track	3in x 5in x 1/2in Angle	76mm x 127mm x 12.7mm Angle
Middle Track	3in x 4in x 3/8in Angle	76mm x 102mm x 9.5mm Angle
Bottom Track	3in x 4in x 3/8in Angle	76mm x 102mm x 9.5mm Angle



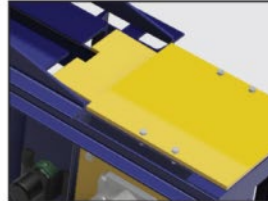
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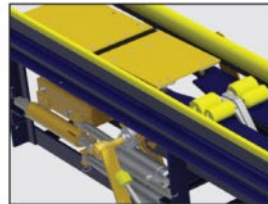
Soft-Drop



Soft-Drop Conveyor Trap Door Standard!



SONNY'S Soft-Drop conveyor exit end trap door lasts longer with less maintenance and provides a smoother, more customer friendly transition of the car off the conveyor. A revolutionary coupler design eliminates the use of counter weights, springs, or stops, just a simple mechanical innovation that will deliver reliable performance car after car, year after year. Standard on all new conveyors, owners of existing conveyors can update to the latest technology by replacing only the 5-foot drive section framework of their conveyor.



New Long-Slide Entrance Section Standard!

SONNY'S redesigned front entrance plate eliminates bumps and roll ahead while new longer take-up slide increases sprocket travel for longer maintenance intervals.

Configuring Your Over-Under Conveyor

Choose Your Finish



Painted Conveyor
Standard surface delivers excellent corrosion resistance at an affordable price.

or



Galvanized Conveyor
Optional surface coating can add years of life to your conveyor frame.

Choose Your Drive



Hydraulic Drive
Simple, safe, and durable choice for wet environment applications.

or



Electric Drive
Reduce utility consumption and eliminate the potential for hydraulic leaks.

Choose Your Take-Up



Air Take-up
Automatically adjusts to keep proper tension and easily releases for maintenance.

or



Spring Take-up
Long time industry standard for durability and reliability.

Choose Your Chain

Log Chain 
- Most durable
- Remove links without tools
- Easiest to maintain

X-458 
- Remove links without tools

SC78 
- Is the durable industry standard
- Compatible with older style D88K Chain

D88K 
- Self-locking chain.
(Available for 7" 4" spacing.
Call for pricing)

Features

- Anti-jam roller guides
- Exposed grease fittings for easy application
- Easy maintenance through access doors
- Durable 1/2in thick top deck & 3/8in steel frame
- Chain guides included
- Take-up idler sprocket or drum
- Exclusive double roller take-up bearings
- 1-1/2in stainless steel take-up adjustment shaft with UHMW poly bushings
- Heco direct-drive gear box available with electric or hydraulic motor

In Stock for Immediate Delivery!





INSTALLATION

Preparation of Concrete

**THE MOST IMPORTANT FACTOR IN SUCCESSFUL CONVEYOR OPERATION IS
ACCURATE CONCRETE WORK ON THE WASH TUNNEL FLOOR !!!**

Faithful adherence to the specifications shown on SONNY'S drawings #CWS-SC-01 and #CWT-SC-98004-A3 will help to achieve this goal! While all dimensions and features shown on these drawings are very important some key factors require special attention:

1. For a standard trench using REAR WHEEL PUSH Conveyors the concrete shelf for the conveyor track must be 19 3/4 inches BELOW the finished floor elevation.
(Ref. Section Thru Trench detail "E" Dwg. #CWS and #CWT)
2. For a standard trench using FRONT WHEEL PULL Conveyors the concrete shelf for the conveyor track must be 21 3/4 inches BELOW the finished floor elevation.
(Ref. Section Thru Trench detail "E" Dwg. #CWS and #CWT)
3. For a self-cleaning trench Conveyors the concrete shelf for the conveyor track must be 24 inches BELOW the finished floor elevation for FWP and RWP.
(Ref. Section Thru Trench detail "E" Dwg. #CWS and #CWT)
4. The width of the conveyor track shelf must be 20 inches and level from side to side. (Ref. Section Thru Trench detail Dwg. #CWS).
5. Proper placement of Customer supplied steel angle and flat plate as shown in Section Thru Trench detail Drawing #CWS.
6. The vertical wall adjoining the conveyor shelf must be plumb to the shelf itself with no bulges (Ref. Section Thru Trench detail dwg. #CWS).
7. The side to side slopes and level areas of the finished floor.
(Ref. section thru trench detail Dwg. #CWS and #CWT).
8. The entrance to exit finished floor and conveyor track shelf entrance to exit slope should RISE 3/16 inch per 10 feet of conveyor length, or 1 inch for every 50 ft of length.
9. The wash water and rinse water drain slopes and drain lines are shown in Drawing #CWT. Minimum depth of the water trench is to be 8 inches below the Conveyor track shelf.
10. Be certain that all Notes shown on Drawings #CWS and #CWT are understood and performed properly.
11. Confirm the location of all in-ground chases and conduits as well as required dimensions and slopes prior to pouring concrete.



Utilities Requirements

Utilities interconnection and the materials required for interconnection to Sonny's equipment are the responsibility of the customer!

Perform all trades work to all applicable local and national codes!

Electric

- The Customer's Electrician is to provide and install three #16AWG wires from the tunnel equipment controller to a pulse sensor switch located in the drive section of the conveyor or to an optional remote pulse switch.
- The Customer's Electrician is to provide and install two #16AWG wires from a 120VAC or 24VAC (specify with order) power source through the remote "Roller Up" control switch to the air solenoid valve or to the tunnel equipment controller.
- The Customer's Electrician is to provide and install two #16AWG wires from the tunnel equipment controller to an optional anti-jam switch located in the Take-Up section of the conveyor.
- The Customer's Electrician is to provide and install single phase power through the conveyor interlock circuit for the Horn Warning Kit and/or the Anti-Collision Control Kit. Reference the electrical schematic for the Horn Warning Kit and the electrical diagram with the Anti-Collision Kit.
- Where applicable, the Customer's Electrician is to provide materials and install 208VAC or 230VAC or 460VAC, 3-phase, 60Hz power to the electric motor on the hydraulic power pack or VFD panel from a properly sized three pole circuit breaker and motor starter with three thermal overloads.

Pneumatic

- The Customer's Plumber is to provide and install a 3/8 inch compressed air line (100PSI @ 0.5CFM) from the air compressor to the air distributor or to the regulator/solenoid manifold for the air cylinder on the conveyor Take-Up section.
- The Customer's Plumber is to provide and install a 3/8 inch compressed air line (100PSI @ 0.5CFM) from the air compressor to the air distributor or to the regulator/solenoid manifold for the optional air Take-Up.

Technical Disclaimer

- Although building codes have been considered in developing all drawings, verification of site-specific conditions and compliance with federal, state and local building codes is the exclusive responsibility of the customer and/or architect and engineer.

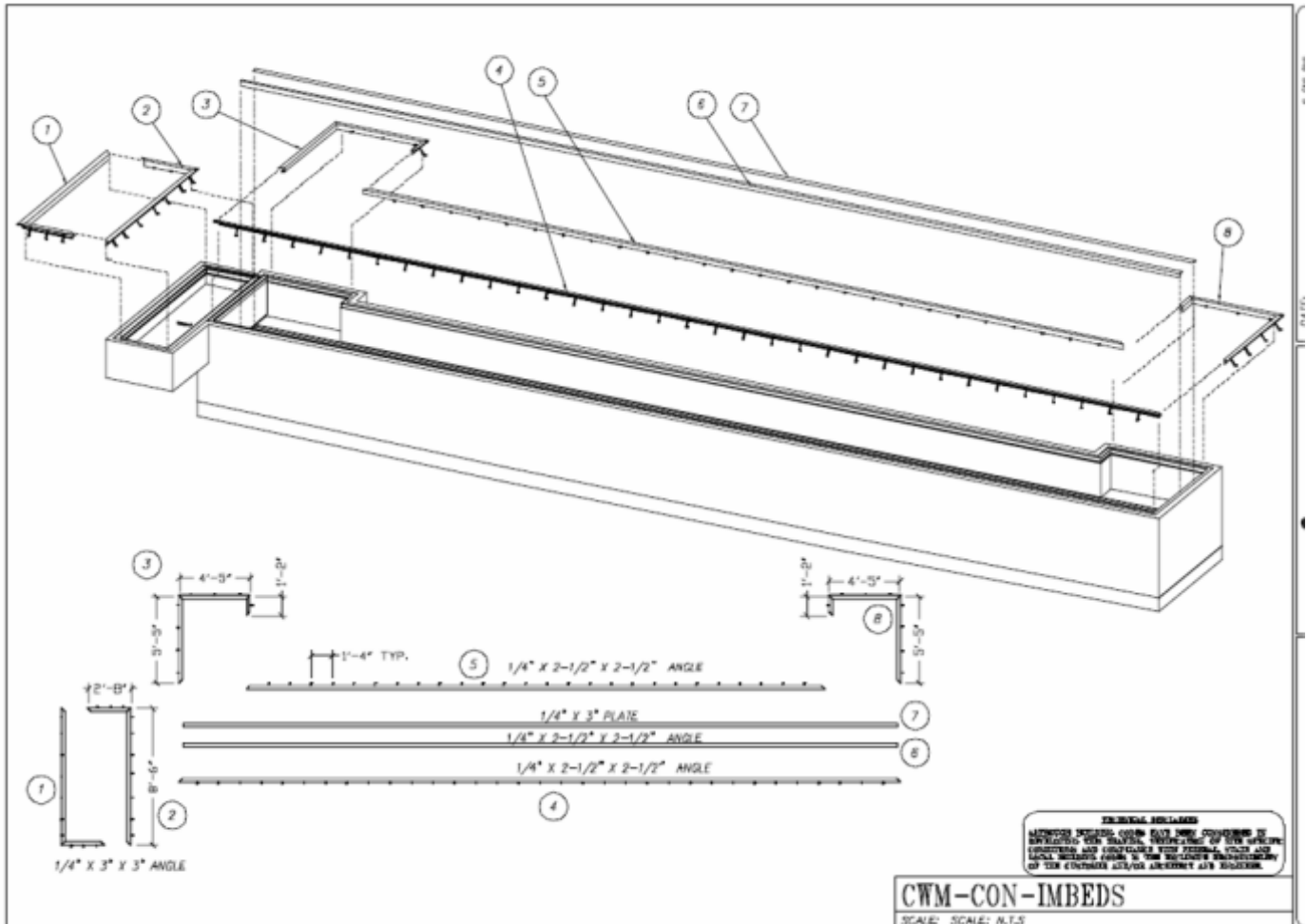


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Dimensions

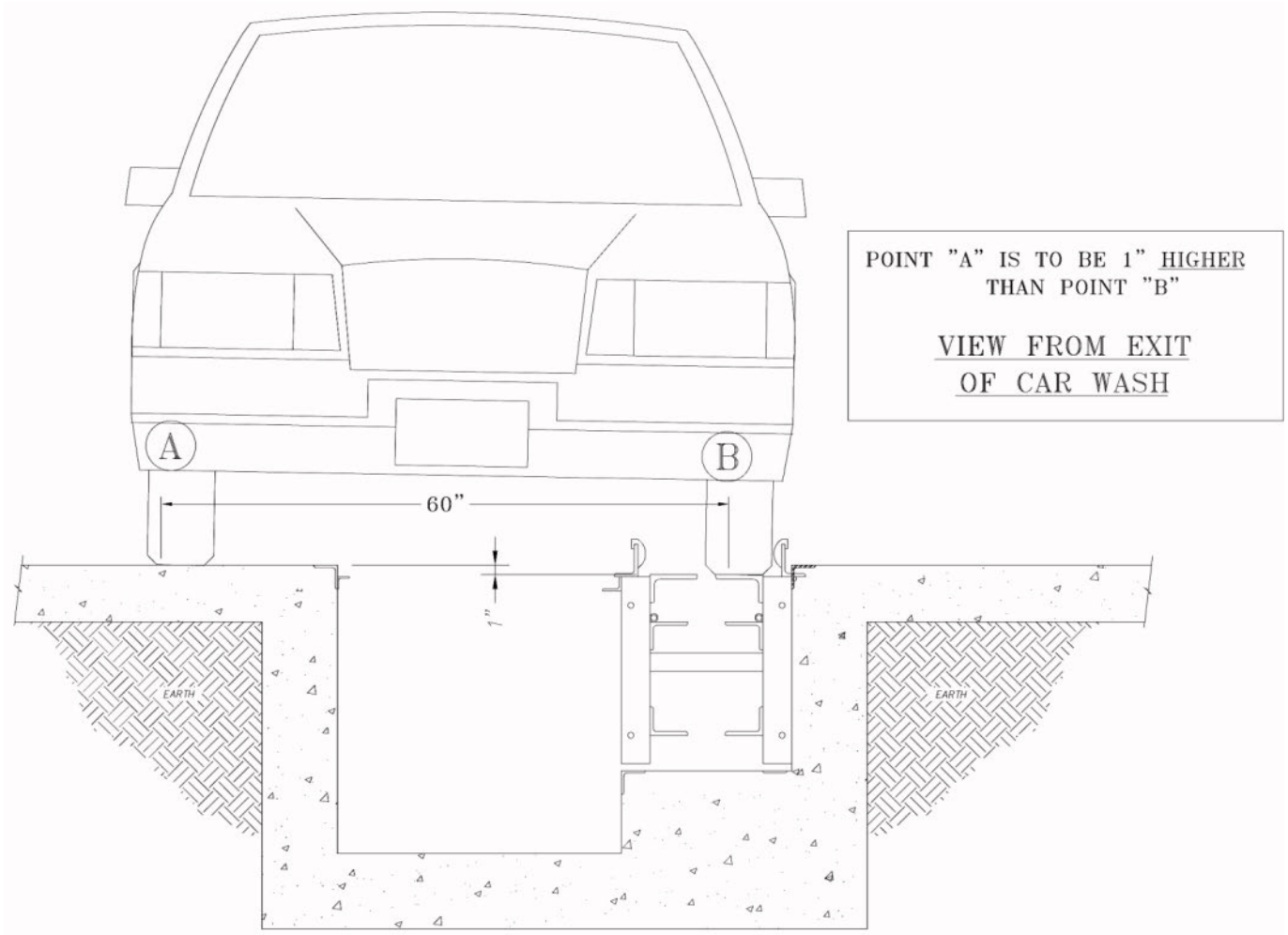




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FRONT WHEEL PULL
SECTION THRU TRENCH

TECHNICAL DISCLAIMER
ALTHOUGH BUILDING CODES HAVE BEEN CONSIDERED IN DEVELOPING THIS DRAWING, VERIFICATION OF SITE SPECIFIC CONDITIONS AND COMPLIANCE WITH FEDERAL, STATE AND LOCAL BUILDING CODES IS THE EXCLUSIVE RESPONSIBILITY OF THE CUSTOMER AND/OR ARCHITECT AND ENGINEER.

CWD-CONV-ELEVATION

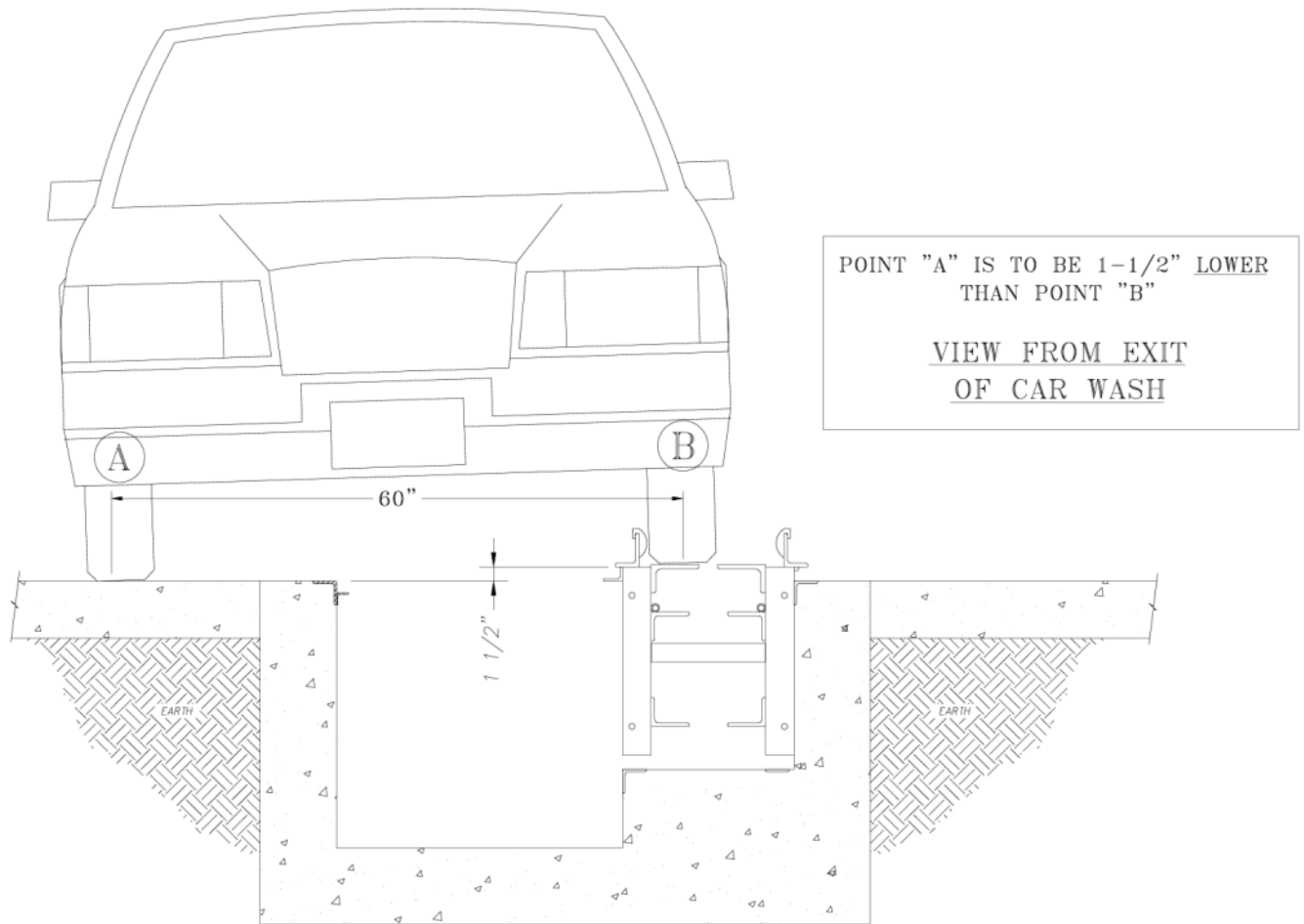
SCALE: N.T.S



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REAR WHEEL PUSH
SECTION THRU TRENCH

TECHNICAL DISCLAIMER

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CWD-CONV-ELEVATION

SCALE: N.T.S.

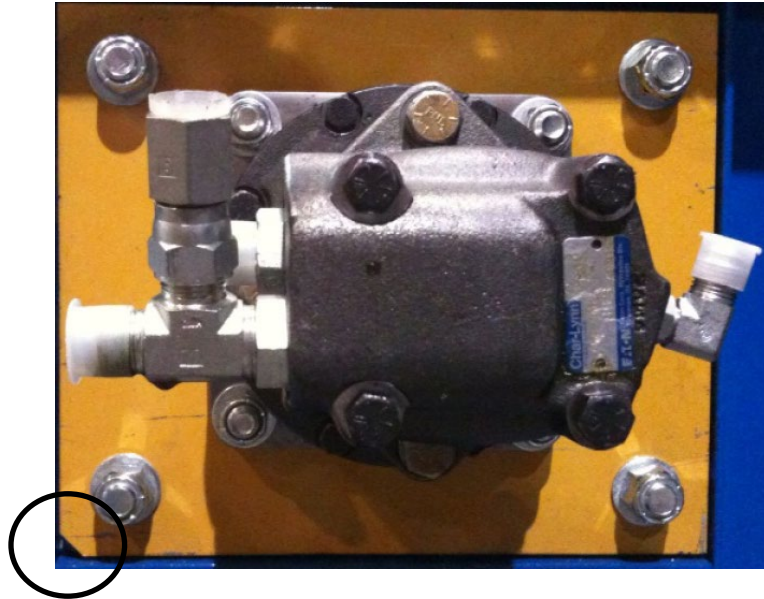


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Gear box mounting plate should be installed with 2 ½" side **DOWN** as indicated by bull-nosed corner when uses on a 4-tooth sprocket.

Direction of Roller Travel

2 ½"

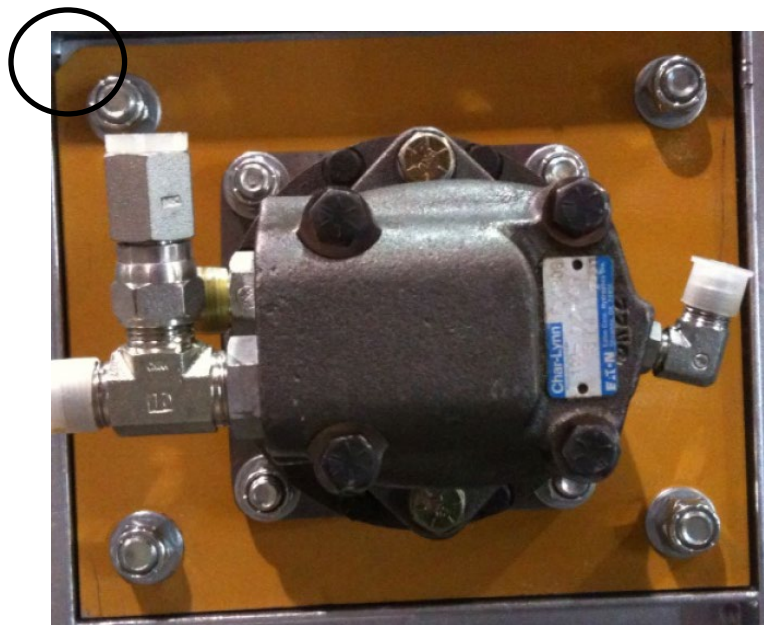


Gear box mounting plate should be installed with 2 ½" side **UP** as indicated by bull-nosed corner when used on a 12-tooth sprocket.



2 ½"

Direction of Roller Travel





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Equipment Installation

**ACCURATE CONVEYOR INSTALLATION IS CRITICAL FOR PROPER OPERATION
BE CERTAIN THAT YOUR INSTALLERS ARE WELL EXPERIENCED
IN OVER AND UNDER CONVEYOR INSTALLATION**

Conveyor Installation

Tools

1. Safety Glasses
2. 1/2" Drive Ratchet Set
3. Standard Combo Wrenches
4. Sledge Hammer
5. Tape Measure
6. Conveyor Leveling Tool
7. Conveyor Frame Lift
8. Cable Puller
9. 8" Bottle Jack
10. Various Size C Clamps
11. 5' Pry Bar
12. Welder
13. 6" Level
14. 4" Grinder
15. Sawzall
16. Fork Lift
17. Power Swaging Tool
18. Hose Cutter
19. Hose Cutter
20. Tape Measure

Work Force

Three (3) persons

Consumables

1. Anti-Seize Compound
2. Yellow Spray Paint
3. Marine Grease
4. Tie Wraps
5. 7/8" Clips
6. 3/4" Clamps

Time (assuming no problems)

6.00 - 8.00 hours



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Identifying the centerline of the equipment

- The measurement of seven inches (7") toward the driver side, from the passenger side pit wall, is commonly used as the centerline of the equipment. This should be the center at the entrance and exit doors.
- Take a tape measure and place it at the take-up end (entrance), on the inside corner of the passenger side pit wall.
- Begin on the passenger side and measure out sixty seven inches (72") and place a mark on the floor using a lumber pencil.
- Take a tape measure and place it on the mark you just made at sixty seven inches (72"). Now pull the tape out toward the driver side to one hundred forty four inches (144") and place a mark on the floor using a lumber pencil.



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Installation Steps

Self-Cleaning or Standard Conveyor

1. Prepare the pit for the beam placement if it is a self-cleaning pit. Prepare the shelf for conveyor installation if standard.
2. Start by cleaning the pit angle irons where the cross beams or conveyor are to be placed. Using a flat shovel, scrape the concrete from the angle iron and then sweep the area.
3. Make certain that there is no concrete left behind that could adversely affect the welds on the angle iron of the driver and passenger sides.
4. Lay the cross beams in the pit. One (1) beam needs to be placed at each leg with one at each seam. Start at the take-up section (entrance) and work toward the drive section (exit). Place the first beam even with the rear pit wall and place the second beam ten feet (10') from the pit wall. The next set of beams is placed fifteen feet (15') from where the first set of beams were placed if working with fifteen foot (15') sections. Make sure the beams are level by placing $\frac{1}{4}$ " shims under the beams if necessary.

Note: If a standard conveyor shelf is used place the conveyor on the shelf.



5. Using a forklift, lifting strap, and long chain, lay the conveyor in place.
6. Locate the drive section and the take-up section, which may be bolted together.
7. Unbolt the two sections using a wrench and an impact gun. Then attach a lifting strap/chain to the take-up section, making certain it is attached at the center point for balance. The other end of the strap needs to be attached to the lift-jig.
8. Using the lifting strap, attach each section making sure it is balanced. Then place each section, individually, in the pit. Have one person in the pit to assist in the proper placement of the crossbeams.
9. Bring the take-up section into the tunnel and place it in the pit. Next, line up the take-up section with the rear of the pit wall, as the additional sections will be lined up based on the placement of the first piece.

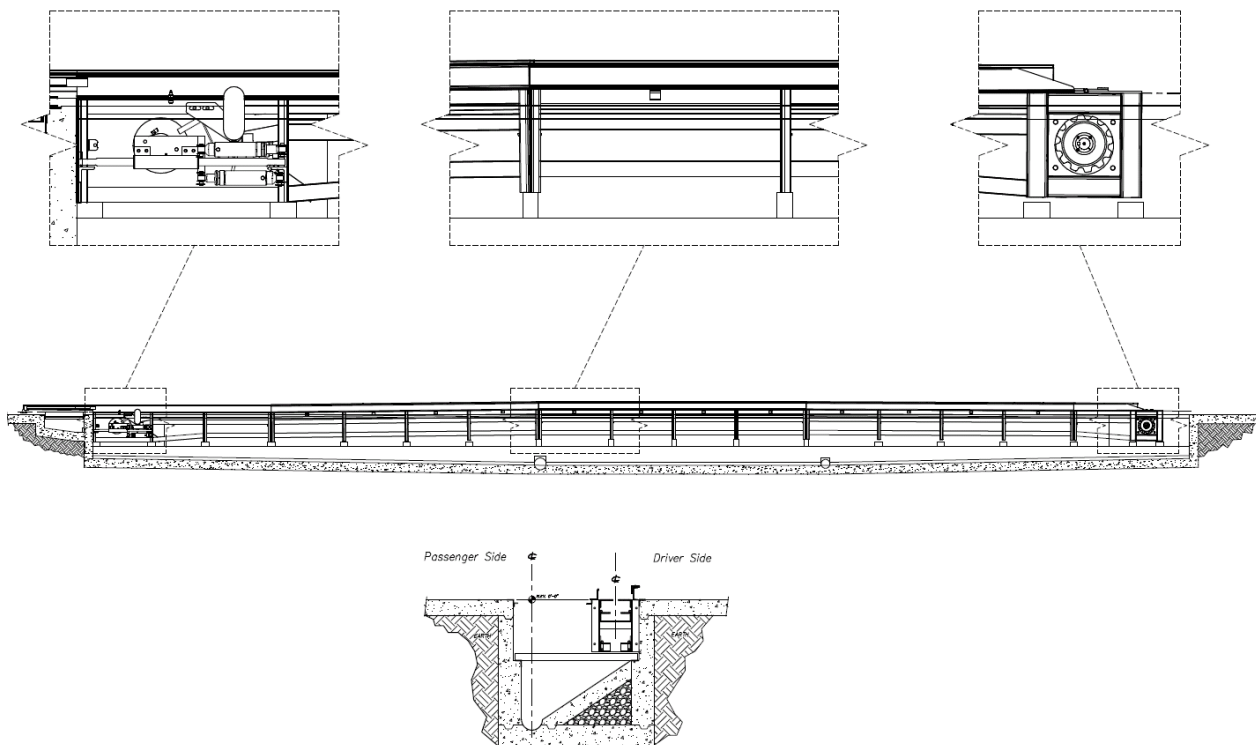


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10. With the forklift and attach the next section as noted in step 3, taking each section into the tunnel area until all sections are in place.



Note: When placing the conveyor on the crossbeams some of the tubes may need to be placed on their ends. The conveyor measurement should start at zero on the entrance end for the first twenty five feet (25') then tapered to one and a half inches (1.5"). The last fifteen to twenty five feet (15'-25') should taper to three quarters (3/4") of an inch.





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11. As each section is laid in the pit, make sure to butt it up against the previous section. All the sections will need to be re-adjusted before welding.
12. You will continue this process until all pieces of the conveyor have been laid in place.
13. The last piece of conveyor to be set in place is the drive section.

Note: When installing equipment that uses bolts it is necessary to apply Never Seize to the bolt to prevent the bolts from seizing. This procedure is applicable throughout this manual.

14. Using the leveling jig and starting at the take-up section place one side of the jig on the conveyor and the other side on the floor.
15. Then place the level on top of the jig and add the ¼" shim plates under the jig on the conveyor side until conveyor is level.



16. Using the jig, note the number of ¼" shim plates needed at each section of the conveyor (notations should be made at the back and front of each section) to ensure the conveyor is level.
17. Push the conveyor against the driver side pit wall.
18. Find the side line that was placed at one hundred forty four inches (144") and using a tape measure, measure in towards the pit forty inches (40") and place a mark on the entrance pit wall. Repeat this process at the exit end.
19. Place a Tapcon® screw on the mark made on the pit wall at the entrance end. Repeat this process at the exit.
20. Using a masonry string, wrap one end of the string around the Tapcon® screw at the entrance end and tie it off.
21. Pull the string down to the exit, and keeping it taut, wrap it around the Tapcon® screw and tie it off.



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22. Use this line down the center of the conveyor and move the conveyor until the line is centered the entire length of the conveyor. This will ensure your conveyor is straight for welding.
23. Gather the following tools to use in this process; welder, bottle jack, ¼" shim plates, protective clothing and a welding helmet.
24. Start welding the take-up section first. This is the most critical part for the conveyor welding, as the rest of the conveyor will be lined up off of this piece. Then line the take-up section flush with the wall in the rear of the pit, making sure it lined up perfectly and weld it to the cross beams. Then weld the cross beam to the angle iron in the pit shelf.



25. Next, weld the entrance guide rails onto the take-up section of the conveyor and then weld the guide rails on to the correlator.



26. Look at the shim plate markings made on the conveyor. Then, using the bottle jack, raise the section of conveyor up and adjust the cross beams if needed. Next, place the six inch (6") angle against the leg. Then weld the six inch (6") angle iron leg to the conveyor & cross beam. Next, weld the cross beam to the angle iron in the pit.



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27. Continue this process until the drive section is reached. The drive section will have some space between the conveyor and the pit wall, and there will be a guide-off plate that needs to be welded in place to close that gap.
28. After all the welding of the conveyor is complete, cut the conveyor railing from the conveyor to allow for clearance of the Tire Brush and Tire Shiner. For the Tire Shiner, lower the section three inches (3") and then weld it in place. For the Tire Brush remove the section before welding.
29. Outside the entrance end of the tunnel assemble the chain sections 20' to 30' in length. Start each section with a roller, installing rollers at the proper spacing, and end each with no roller.
30. Remove the Take-Up cover plate.
31. Tie a rope around the first roller of a section of chain and rollers and pull it into the conveyor making sure the rollers except the first go into the middle deck of the conveyor.
32. When the section is almost into the conveyor attach the next section of chain and roller to the end. At some point the assembly will become too heavy to pull by hand, a cable puller will need to be used.
33. When almost to the exit end of the tunnel remove the cover plate from the Drive section.
34. When the first roller reaches the Drive section of the conveyor pull it about six feet beyond the end of the conveyor.
35. Remove the rope or cable puller from the roller.
36. Insert the first roller around the Drive sprocket and into the bottom deck of the conveyor.
37. Remove the motor from the gearbox and pull the sun gear out.
38. Using the cable puller, continue to pull chain and roller sections into the conveyor by pulling the assembly back towards the entrance end of the tunnel.
39. When the last section of chain is attached and pulled into the conveyor, stop pulling it in when the end of that section is even with the end of the tunnel attach the Pin and Cotter section to the last section.
40. Feed the end of the Pin and Cotter section of chain around the Take-Up sprocket and pull it as close as possible to the first roller.
41. Attach the cable puller to the Take-Up Slide and the frame of the conveyor. Compress the tensions spring and tighten the nut down against the crossbeam.
42. Connect the first roller to the Pin and Cotter section of chain.
43. Loosen the nut from the crossbeam and run it back down to the cotter pin end.
44. Loosen and remove the cable puller from the Take-Up Slide.



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45. Check the position of the Spring Tension Bolt. It should extend 2-3 inches beyond the crossbeam. If it does not remove or add links from the painted section of chain until it does. The air take-up should sit between the split collars.
46. Replace the cover plates at both ends of the conveyor.
47. Replace the Sun Gear in the Heco Gear Box.

Hydraulic

48. Remove the plug from the port of the Conveyor hydraulic motor closest to the driver's side. Thread in a 1/2" x 5/8" O-ring fitting and tighten. This is the oil Feed port.
49. Remove the other plug and thread in a 1/2" JIC x 5/8" O-ring tee fitting and tighten with the tee portion facing down. This is the oil return port.
50. On the exit end of the motor remove the 1/4" o ring plug and replace it with a 3/8" JIC x 1/4" O-ring fitting. Tight the fitting so the JIC portion faces down. This is the return from the gearbox.
51. Coat the 3/8" MPT portion of the gearbox return hose with Teflon tape or paste. Thread it into the 1/2" JIC x 3/8" FPT adapter and tighten.
52. Thread the other end of the gear box return hose onto the 3/8" JIC Fitting in the return from the gearbox.
53. Set up the Power Swaging Tool in the tunnel and get out a reel of 1/2" Hydraulic hose in both Black and Orange. Crimp a 1/2 Female Swivel on the end of the black hose.
54. Screw a plug into the fitting to prevent any debris from entering the hose.
55. Snake the fitting end of the hose into the last chase way. Once the hose is thru the chase way, remove the plug and tighten the fitting to the Quick Disconnect fitting in the output port of the Top Power Pack.
56. Cut the hose to fit on the oil feed port with 12" to 18" of slack.
57. Repeat steps 6 thru 9 with the orange or red hose and attach it from the oil return port on the motor to the oil filter on the power pack

Pneumatic

58. Get out a reel of 3/8" compressed air line (100PSI @ 0.5CFM) and place in the tunnel near the Take-Up end of the conveyor. Place an end cap over the line end to prevent any debris from entering line.
59. Snake the end of the line into the chase way to the Air Manifold with the valve for the Roller-Up function.



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60. Once the hose is through the chase way, remove the cap and connect the line to the output of the air regulator/valve combination for the Roller-Up function. Leave enough slack in the line in case it must be connected to the other output.
61. Return to the Take-Up section of the conveyor and cut the line the proper length to connect to the Roller-Up air cylinder.
62. A manual drain valve should also be installed at the lowest point in the air line to facilitate draining liquid trapped in the line.
63. Repeat Steps 11 thru 15 for the other end of the Roller-Up air cylinder.

Electrical

64. If the pulse switch is installed on the Drive end of the conveyor place a reel of 3-#16AWG wire cable in the tunnel near the Drive end of the conveyor and snake the end into the chase way to the tunnel controller.
65. If a remote pulse switch is being utilized run the 3-#16AWG wire cable from it to the tunnel controller.
66. Select one color wire (prefer white) and connect it to the common(C or COM) terminal on the pulse switch and to the common(C, COM or HOT) terminal on the tunnel controller.
67. Select another color wire (prefer black) and connect it to the switched (NO) terminal of the pulse switch and to the pulse signal input (Pulse or Clock) terminal on the tunnel controller.
68. Select the last color wire (prefer green) and connect it to the ground terminal of the pulse switch or metal casing, if no ground terminal is provided. Connect the other end to the earth ground (GRD) terminal on the tunnel controller.
69. Connect the wires to the Roller-Up air solenoid valve and to the Roller-Up function terminals on the tunnel equipment controller.
70. Connect the wires to the anti-jam switch and to the Anti-Jam function terminals on the tunnel equipment controller.



Adjustments and Testing

Conveyor Speed

1. Conveyor speed can be adjusted at the flow control valve on the Hydraulic Power Pack that supplies fluid for the Conveyor.
2. Conveyor speed may be set from 50 to 200 cars per hour depending on the equipment in the tunnel and the quality of wash desired.
3. To determine the speed of the chain measure the length in inches a roller travels in 15 seconds. That number will be the same as the number of cars per hour the conveyor is set to.

Inches of Roller Travel in 15 seconds = Cars Per Hour

Speed and Torque Adjustment

1. Hydraulic
 - a. The speed can be adjusted on the flow control for the power pack.
 - b. To increase the speed move the handle on the flow control closer to the number 10.
 - c. To decrease the speed move the handle on the flow control closer to the number 1.
 - d. The torque must be set prior to operation and should be set between 600 and 900 PSI. For information on how to set the torque please refer to the Hydraulic Power Pack Manual.
2. Electric
 - a. The speed can be adjusted on the Variable Frequency Drive (VFD).
 - b. To increase the speed adjusts the Hertz on the VFD to a higher number.
 - c. To decrease the speed adjusts the Hertz on the VFD to a lower number.
 - d. The Overload on the Motor Starter protector(s) must be set at the lowest level to allow for operation. Adjust the amps in accordance with motor(s) name plate.

Conveyor Stall Torque

1. Conveyor stall torque can be adjusted at the bypass valve on the Hydraulic Power Pack that supplies fluid for the Conveyor.
2. Pressure gauge should indicate 1200PSI when the Power Pack is running with the conveyor stalled.



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Roller-Up Function (Air)

1. Adjustment is made at air regulator on the Control Panel.
2. Should be set to 40-50PSI at the switch.
3. Observe movement of Roller-Up forks should smoothly and completely up and down

Tension

1. The air take-up should have 40-50PSI at the switch.

Note: If using log chain, the tension pressure should be set at 60-70PSI



Chain Tension Adjustment - Air

1. This is the most common service performed on the Conveyor.
2. Run conveyor to position chain so removable links are easy to work on and stop it there.
3. Check the position of the carriage on the slide tube, if there is less than $\frac{1}{2}$ " between the carriage and split collar a link should be removed. (See figure #1 for collar placement)
4. Run the Conveyor until you see the master link section approaching the Take-Up section and stop the Conveyor just before that section reaches the Take-Up Sprocket.

Caution: You must shut off all power to the conveyor and lock out the Motor Control Center before getting in conveyor pit and starting this repair.

5. Shut off all power to the conveyor and lock out the Motor Control Center.
6. Release the air pressure to the shocks using the tension valve on the control panel.

Note: It may be necessary to use a pry bar to move the carriage all the way forward.

7. Remove pin and cotter from a chain link.
8. Remove pin and cotter from other end of the same chain link and remove the link.
9. Reconnect the ends of the chain using pin and cotter, replace cotter if damaged.
10. Flip the tension valve back to the on position to allow chain to be tensioned.

Note: If chain tension appears not to be working properly, check the air cylinders for water. If water is encountered, cylinders will need to be replaced and an air dryer added to the air compressor.

Caution: Before returning power to the conveyor and removing lock out from the Motor Control Center make sure all personnel are clear of the operational area.

1. Remove lock-out and run conveyor, make sure the carriage sits between the two collars. If not repeat Steps 1 – 9.

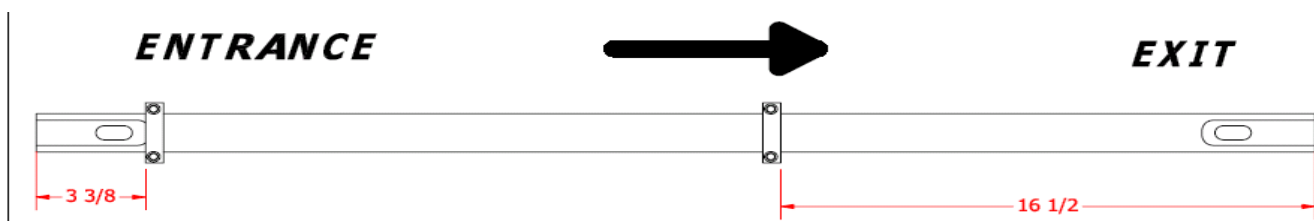


Figure #1



GENERAL OPERATION

CONVEYOR OPERATION

Starting and stopping conveyor movement is controlled by push-button switches that operate the motor starter coil for the conveyor drive hydraulic power pack.

The "Roller Up" function, to move vehicles through the car wash on the conveyor is controlled for each vehicle by a push-button switch on the tunnel controller push-button station. "Back Up" rollers may be raised automatically through the tunnel controller.

The "Anti-Jam" function prevents roller jams caused by the rollers being brought up at a point that would cause them to jam in the transition to the top deck.

The speed of conveyor movement may be changed by the flow control valve on the conveyor hydraulic power pack. See Adjustments and Testing Section.

OPTIONAL EQUIPMENT OPERATION

PULSE SWITCH KIT - Each time any magnet on the circular aluminum disc passes within range of the solid state sensor switch an electrical pulse signal is sent to the equipment Programmer to start and stop each piece of equipment according to the cumulative pulse count for each vehicle. The quantity of pulses transmitted in any given time frame is directly proportional to the speed of the conveyor.

SAFETY HORN WARNING KIT - Each time the conveyor start switch is pressed the horn will sound for a pre-determined period of time BEFORE the conveyor begins to move. Five seconds minimum of horn operation is suggested.

ANTI-COLLISION CONTROL KIT - When a vehicle has departed the last piece of equipment in the wash tunnel but has not vacated the exit concrete pad of the wash tunnel the Anti-Collision sensor detects this vehicle's presence. When a second vehicle approaches the last piece of equipment in the wash tunnel the Anti-Collision control sensor that has detected the first vehicle on the exit pad causes the conveyor to stop thereby preventing the second vehicle from hitting the first vehicle. The conveyor will start automatically after the first vehicle clears the anti-collision sensor. As a safety measure conveyor restart can only occur from a manual start operation.



PREVENTIVE MAINTENANCE

DAILY

1. Opening Checks
 - a. Check for leaks around hoses and fittings, repair any hydraulic leaks immediately.
 - 1) At Drive Section, check for hydraulic leaks around the Drive Motor and connectors.
 - 2) At Take-Up Section, check for air leaks around Roller-Up cylinder and shocks.
2. Operational Checks
 - a. Check the chain tension bolt, if less than 2 inches of threads showing plan to remove link from chain during weekly maintenance to ensure the chain does not become slack and cause chain jams.
 - b. General examination of general operation, listening for any unusual noises. Observe the operation of the conveyor, the roller-up function, and power pack, watch for anything out of place and listen for any unusual noises.
3. Closing Checks
 - a. Remove pit grading from the Take-Up and Drive sections of the conveyor and wash down the conveyor using prep gun. This should be done at the end of each day to prevent buildup which could cause chain jams and premature wear.
 - b. Open manual drain valves in the Roller-Up air cylinder air lines at the end of business each day.

WEEKLY

1. Perform a close inspection of operation.
 - a. Check Roller-Up operation, fork alignment and freedom of travel at the Take-Up section.
 - b. Check for oil leaks around drive motor and speed reducer at the Drive section.
 - c. Check for sprocket alignment and sprocket wear at both Take-Up and Drive sections.
2. Wipe excess dirt and grime off the Take-Up slides with a clean rag.
3. Grease Take-Up shaft bearings with 1-2 pumps per bearing.
4. Check the chain tension bolt, if less than 1" remove a chain link.
5. Check the position of the carriage on the slide tube, if there is less than 1/2" between the carriage and split collar a link should be removed. (See figure #1 for collar placement)
6. Spray lubricant (white lithium grease) on the air cylinder rod end and clevis.



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MONTHLY

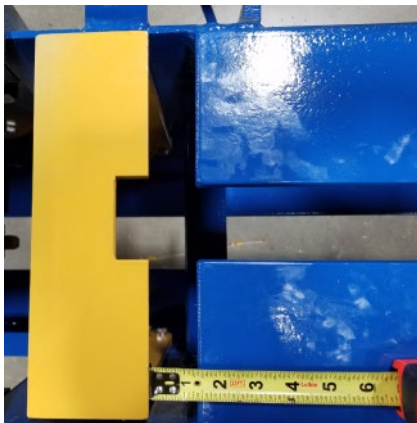
1. Inspecting all hardware and fittings for tightness.
2. Closely inspect each roller, chain link and cotter pin closely for wear and damage, replace as necessary.
3. Clean the entire assembly thoroughly.

Entrance Section

4. Grease the 2 slide tubes, until grease comes out the weep hole.
5. Grease Air take up hanger bearings with 1-2 pumps per bearing.

Exit Section (Soft Drop)

6. Grease Rosta bearings with 1-2 pumps per bearing.
7. Inspect the soft drop by measuring from the conveyor deck to the entrance end of the soft drop door. If the spacing between the conveyor deck and the soft drop measures more than 2 inches, replace the Rosta coupling.



Example 1 (1-3/8")



Example 2 (2-3/8")

CAUTION: To prevent injuries, do not step on the soft drop door.

ANNUALLY

1. Drain, flush and refill the hydraulic power pack with new, non-foaming, non-detergent hydraulic fluid (ISO #32 SAE10W).
2. If the chain is starting to wear unevenly, flip the chain upside down to extend its life.



COMMON REPAIRS

Repair Take-Up Door
Replace Roller-Up Fork and Bushings
Replace Take-Up Sprocket and Bearings
Replace Take-Up Slide Shaft Bushings
Replace Roller-Up Cylinder
Replace Take-Up Spring
Replace Chain and Rollers
Repair Exit Trap Door
Replace Chain Drive Sprocket
Replace Hydraulic Motor
Replace Gearbox
Replace Conveyor Roller
Replace UHMW Guide Rail



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Soft-Drop

Repair Take-Up Door

Tools

1. Safety Glasses
2. Standard Allen Wrenches

Work Force

One (1) person

Consumables

1. Anti-Seize Compound
2. Penetrating Oil

Time (assuming no problems)

0.50 - 1.00 hours

Replacement Parts

Qty.	Name of Replacement Part	Product Part Number
1	Rubber Hinge	20001574
8	Socket Cap Screw 3/8-16 x 1 ¼	10005956
8	Thin Nylon-Insert Locknut 3/8-16	10004501
4	1/4-20 x 5/8 Socket Cap Flat	10003073
4	Tee Nut Zinc Plated Steel 1/4-20 x 7/16	10003238

Repair Steps

Caution: You must shut off all power to the conveyor and lock out the Motor Control Center before getting in conveyor pit and starting this repair.

1. Shut off all power to the conveyor and lock out the Motor Control Center.
2. Saturate all of the door hardware with penetrating oil and allow it to soak in.
3. Remove the bolts that secure the door to the rubber hinge.
4. Remove the bolts that secure the rubber hinge from the cover plate.

Note: To prevent damaging the heads of the stainless steel screws place a small amount of anti-seize compound on each of the stainless steel screws before installing.

5. Install one side of the new rubber hinge to the door and the other side to the cover plate.
6. Remove all tools and equipment from the work area.

Caution: Before returning power to the conveyor and removing lock out from the Motor Control Center make sure all personnel are clear of the operational area.

7. Remove the lockout. Return the conveyor to operation. Observe equipment to ensure proper operation.
8. Bring up several rollers to test the door. The door should move smoothly up and down.



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Soft-Drop

Replace Roller-Up Fork and Bushings

Tools

1. Safety Glasses
2. 1/2" Drive Ratchet Set
3. Standard Combo Wrenches
4. Small Chisel
5. Sledge Hammer
6. Channel Lock Pliers
7. Standard Allen Wrenches
8. Sawzall
9. Punch

Consumables

1. Anti-Seize Compound

Work Force

One (1) person

Time (assuming no problems)

1.00 - 2.00 hours

Replacement Parts

Qty.	Name of Replacement Part	Product Part Number
1	Fork	20002550
2	Fork Bushings	20003744
1	Fork Cam/Pivot Bracket	20003746
1	5/16" Square x 2" Long Key stock	10006487
2	Collars 1-1/4" 2pc	10003082

Repair Steps

Caution: You must shut off all power to the conveyor and lock out the Motor Control Center before getting in conveyor pit and starting this repair.

1. Shut off all power to the conveyor and lock out the Motor Control Center.
2. Shut off air to roller-up 4-way pneumatic valve and drain.
3. Remove the cotter pin from the rod end and slide it out. Allow the cylinder to hang freely.
4. Remove the bolts from the fork pivot bracket onto the shaft of the Roller-Up fork.
5. Tap a small chisel into the gap in the fork pivot bracket until the bracket opens enough to remove it from the fork shaft.
6. Note the position of the fork shaft support brackets on both sides of the conveyor.
7. Remove the split collar from the driver's side of the fork shaft.
8. Remove the bolts from the fork shaft support bracket
9. Slide the bracket off of the shaft.



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10. Remove the fork from the other side bracket.
11. Remove the other support bracket.
12. Use the sledge hammer and punch to drive the old bushings out.
13. Tap the new bushings into the support brackets.
14. Install the support bracket removed in Step 11, according to the position noted in Step 6.
15. Install the new fork into the shaft support bracket just installed.
16. Install the driver side support bracket onto the fork shaft and bolt it to the conveyor frame, according to the position noted in Step 6.
17. Manually raise and lower the forks, they should be parallel to the sides of the conveyor.
18. They can be adjusted by loosening the mounting hardware, and moving the support brackets either forward or back.
19. Mount split collar to the passenger side fork shaft once the fork is properly adjusted.
20. Place a small amount of anti-seize compound on the fork shaft.
21. Install the new fork pivot bracket on the fork shaft.
22. Install the rod end on the roller-up cylinder to the fork pivot bracket.
23. Adjust the air cylinder so it is parallel with the conveyor when the forks are down.
24. Tighten the two bolts that secure the fork pivot bracket.
25. Turn on the air to the roller-up 4-way pneumatic valve.
26. Remove all tools and equipment from the work area.

Caution: Before returning power to the conveyor and removing lock out from the Motor Control Center make sure all personnel are clear of the operational area.

27. Remove the lockout. At the controller activate the roller-up override and check operation of forks. Check operation of forks. Look for any binding that would indicate improper alignment. Pay attention to the movement of the air cylinder. It should move freely with no binding.
28. Return the conveyor to operation. Observe equipment to ensure proper operation.



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Replace Take-Up Sprocket and Bearings

Tools

1. Safety Glasses
2. ½" Drive Ratchet Set
3. Standard Combo Wrenches
4. Sledge Hammer
5. Standard Allen Wrenches
6. Grease Gun
7. Cable Puller

Consumables

1. Anti-Seize Compound
2. Marine Grease
3. Emery Cloth
4. Penetrating Oil

Work Force

One (1) person

Time (assuming no problems)

1.00 - 2.00 hours

Replacement Parts

Qty.	Name of Replacement Part	Product Part Number
1	12 Tooth Sprocket w/ 10 3/16 Welded Shaft	20002656
2	1-15/16" Take-up Bearings	10007637

Repair Steps

1. Run the conveyor until the pin and cotter section of chain sits directly in front of the Take-Up section on the bottom deck.

Caution: You must shut off all power to the conveyor and lock out the Motor Control Center before getting in conveyor pit and continuing this repair.

2. Shut off all power to the conveyor and lock out the Motor Control Center.
3. Remove the cover plate from the Take-Up section.
4. Attach the cable puller to two points on the chain. Tighten the cable puller and compress the tension spring until there is enough slack to break chain.
5. Run the nut down the tension bolt to the cross member.
6. Remove a cotter pin to break the chain.
7. Allow the chain to slide down under the Take-Up.
8. Move the roller other end out of the way.
9. Run the nut up the tension bolt to the cotter pin.
10. Release the tension on the cable puller and remove it.
11. Wedge a block of wood underneath the old Take-Up sprocket.



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Note: If rusted or frozen hardware is encountered in removing the Take-Up sprocket, apply penetrating oil to the hardware and allow time to work.

12. Remove the tubing from the push-lock fittings mounted on the bearings.
13. Remove the bolts that hold the Take-Up bearings in place.
14. Pull the Take-Up sprocket and bearings out of the conveyor.
15. Slide the new bearings on to the new shaft and tighten a set screw on each bearing.
16. Slide the new Take-Up sprocket into the conveyor. Be sure the tubing fittings are facing up.
17. Bolt the bearings into place and remove block.
18. Tighten the set screws on both bearings.
19. Install the tubing into the new bearings.
20. Attach the cable puller to a fixed point on the conveyor frame. Release the cable and attach it to the Take-Up Slide frame. Compress the tension spring until there is enough slack to break chain.
21. Run the nut down the tension bolt to the cross member.
22. Reassemble the chain.
23. Run the nut up the tension bolt to the cotter pin.
24. Release the tension on the cable puller and remove it.
25. Install the cover plate on the Take-Up section.
26. Remove all tools and equipment from the work area.

Caution: Before returning power to the conveyor and removing lock out from the Motor Control Center make sure all personnel are clear of the operational area.

27. Remove the lockout. Return the conveyor to operation. Observe equipment to ensure proper operation.



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Replace Take-Up Slide Shaft Bushings

Tools

1. Safety Glasses
2. ½" Drive Ratchet Set
3. Standard Combo Wrenches
4. Long Punch
5. Sledge Hammer
6. Grease Gun
7. Vise

Consumables

1. Marine Grease

Work Force

One (1) person

Time (assuming no problems)

1.00 - 1.50 hours

Replacement Parts

Qty	Name of Replacement Part	Product Part Number
4	Take-up Slide Bushings Plastic	20002341

Repair Steps

Caution: You must shut off all power to the conveyor and lock out the Motor Control Center before getting in conveyor pit and starting this repair.

1. Shut off all power to the conveyor and lock out the Motor Control Center.
2. Block up the Take-Up Slide on the passenger side.
3. Remove the bolts Take-Up tube slide to the Take-Up slide frame.
4. Remove the bolts that hold the Take-Up slide shaft to the frame of the conveyor.

Note: If problems are encountered removing the old Take-Up slide bushings using a long punch and sledge hammer to tap it out of the tube slide.

5. Take the tube slide and secure in a vise. Remove the bushings from both ends.
6. Gently tap the new bushings into the tube slide being careful not to damage the new bushings.
7. Insert the Take-Up slide shaft in the tube slide.
8. Bolt the Take-Up slide shaft to the conveyor frame.
9. Bolt the tube slide to the slide frame.
10. Remove the blocks.
11. Repeat Steps 2 through 10 on the driver side.



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12. Fill the two Take-Up slide tubes with grease until grease comes out the weep holes.

13. Remove all tools and equipment from the work area.

Caution: Before returning power to the conveyor and removing lock out from the Motor Control Center make sure all personnel are clear of the operational area.

14. Remove the lockout. Return the conveyor to operation. Observe equipment to ensure proper operation.

15. Pay attention to the movement of the Take-Up slide, it should move smoothly and not bind.



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Replace Roller-Up Cylinder

Tools

1. Safety Glasses
2. Standard Combo Wrenches
3. Small Adjustable Wrench
4. Channel Lock Pliers
5. Standard Allen Wrenches

Consumables

1. Anti-Seize Compound
2. Thread Locking Compound
3. Teflon Tape
4. Masking Tape

Work Force

One (1) person

Time (assuming no problems)

0.50 - 1.00 hours

Replacement Parts

Qty.	Name of Replacement Part	Product Part Number
1	Cylinder	10006949
1	Rod Clevis / Pin (Conveyor)	10005298
1	Rear Clevis Bracket	20010613
2	Tube Male Connectors	10002837

Repair Steps

Caution: You must shut off all power to the conveyor and lock out the Motor Control Center before getting in conveyor pit and starting this repair.

1. Shut off all power to the conveyor and lock out the Motor Control Center.
2. Shut off air to roller-up 4-way pneumatic valve and drain.
3. Note the position of the air lines for proper re-installation.
4. Remove both the air line and fittings from the old cylinder.
5. Remove the cotter pins from both ends of the old cylinder.
6. Remove the old cylinder.
7. Mount the new rear clevis bracket to the new cylinder
8. Apply a light coat of thread locking compound to the threads of the rod end of the new cylinder.
9. Screw on the jam nut and the rod end.
10. Seal the threads of the new male connectors with Teflon tape.
11. Install the connectors to the new cylinder and tighten.



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12. Place the new air cylinder on the conveyor and install cotter pins.
13. Attach the air lines to the cylinder according to the position noted in Step 3.
14. Turn on air to roller-up 4-way pneumatic valve.
15. Manually activate the air valve to check the operation of the air cylinder.
16. Remove all tools and equipment from the work area.

Caution: Before returning power to the conveyor and removing lock out from the Motor Control Center make sure all personnel are clear of the operational area.

17. Remove the lockout. At the controller activate the roller-up override and check operation of forks. Listen for any air leaks from new fittings and tighten as needed.
18. Pay attention to the movement of the air cylinder. It should move freely with no binding. The air pressure to the cylinder may need some minor adjustment. The air pressure should be between 70-80 PSI.
19. Return the conveyor to operation. Observe equipment to ensure proper operation.



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Replace Take-Up Spring

Tools

1. Safety Glasses
2. Large Adjustable Wrench
3. Cross Cut Pliers
4. Sledge Hammer
5. Punch
6. Cable Puller

Consumables

1. Penetrating Oil

Work Force

Two (2) persons

Time (assuming no problems)

0.75 - 1.25 hours

Replacement Parts

Qty.	Name of Replacement Part	Product Part Number
1	Take-up Spring	20007191
1	Carriage Bolt 18" SS	20004755
3	Nut 1" Hex	10004891
1	Flat Washer	10000850
2	Split Lock Washer	10000773
1	Cotter Pins	10001841

Repair Steps

1. Run the conveyor until the pin and cotter section of chain sits directly below the Take-Up section cover plate.

Caution: You must shut off all power to the conveyor and lock out the Motor Control Center before getting in conveyor pit and continuing this repair.

2. Shut off all power to the conveyor and lock out the Motor Control Center.
3. Remove the cover plate from the Take-Up section.
4. Apply penetrating oil to the tension bolt liberally.
5. Attach the cable puller to a fixed point on the conveyor frame. Release the cable and attach it to the Take-Up Slide frame. Compress the tension spring until there is enough slack to break chain.
6. Run the nut down the tension bolt to the cross member.
7. Remove a cotter pin to break the chain.
8. Allow the chain to slide down under the Take-Up.



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9. Move the roller other end out of the way.
10. Run the nut up the tension bolt to the cotter pin.
11. Release the tension on the cable puller and remove it.
12. Remove the nut, washer and cotter pin from the end of the tension bolt.
13. Remove the nuts and lock washers that secure the tension bolt to the Take-Up slide.
14. Remove the tension bolt and spring from the Take-Up Slide.
15. Install a new tension bolt and spring.
16. Install the nuts and lock washers that attach to the Take-Up Slide.
17. Install the nut, washer and cotter pin to the end of the tension bolt.
18. Attach the cable puller to a fixed point on the conveyor frame. Release the cable and attach it to the Take-Up Slide frame. Compress the tension spring until there is enough slack to break chain.
19. Run the nut down the tension bolt to the cross member.
20. Reassemble the chain.
21. Run the nut up the tension bolt to the cotter pin.
22. Release the tension on the cable puller and remove it.
23. Install the cover plate on the Take-Up section.
24. Remove all tools and equipment from the work area.

Caution: Before returning power to the conveyor and removing lock out from the Motor Control Center make sure all personnel are clear of the operational area.

25. Remove the lockout. Return the conveyor to operation. Observe equipment to ensure proper operation.



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Replace Chain and Rollers

Tools

1. Safety Glasses
2. Channel Lock Plier
3. Cross Cut Pliers
4. Small Punch
5. Sledge Hammer
6. Cable Puller

Consumables

1. Yellow Spray Paint
2. Penetrating Oil
3. Nylon Rope

Work Force

Four (4) persons

Time (assuming no problems)

3.00-6.00 hours

Replacement Parts

Qty	Name of Replacement Part	Product Part Number
*	Rollers	Order appropriate rollers for conveyor
*	SC78 Pins and Cotters	10000860
*	SC78 Chain Riveted 16 Pitch Section	10005314
*	SC78 Chain Pin and Cotter Section	10005570

*(*Contact Customer Service for amounts to order)*

Repair Steps

1. Run the conveyor until a roller sits directly below the exit trap door.

Caution: You must shut off all power to the conveyor and lock out the Motor Control Center before getting in conveyor pit and continuing this repair.

2. Shut off all power to the conveyor and lock out the Motor Control Center.

Note: If rusted or frozen hardware is encountered, liberally apply high quality penetrating oil to the hardware and allow it ample time to work.

3. Remove the bolts that secure the Exit cover plate and trap door
4. Remove the plate and door.
5. Attach the cable puller to a fixed point on top of the conveyor.
6. Release the cable and attach it to the Take-Up slide frame.
7. Compress the tension spring until there is enough slack to break the chain.
8. Tighten the tension nut down to the frame cross-member.



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9. Remove the pin and cotter from the roller exposed in Step 4, leave the roller attached to the chain coming out of the middle deck of the conveyor.
10. Unwrap the loose end chain from the Drive sprocket and let it drop into the bottom deck of the conveyor.
11. Tie the rope to the roller on the chain extending from the middle deck of the conveyor.
12. Loosen and remove the cable puller, leaving Take-Up spring compressed by the tension nut position.
13. Begin pulling the old chain and rollers free from the conveyor. If it is difficult to pull, use the cable puller tight to a stationary object, such as a vehicle or large post, make sure you are pulling straight.
14. As the chain is being removed, break it into 20' to 30' sections to make it easier to handle. Keep going until all chain is removed from conveyor.
15. If the chain is being flipped, remove every roller from a section each section, install rollers on the other side of chain the chain, and after reassembly into 20' to 30' sections take the chain to the entrance end of the tunnel.
16. If new chain and rollers are being installed, assemble the new chain together into sections 20' to 30' in length at the entrance end of the tunnel. Start each section with a roller and end with a piece of chain.
17. Paint the pin and cotter section with the yellow spray paint. This will make for easy identification when the conveyor is in use.
18. Remove the bolts from the cover plate and trap door at the Take-Up section of the conveyor.
19. Remove the plate and door.
20. Tie a rope around the first roller of a section of chain and rollers and pull it into the conveyor making sure the rollers except the first go into the middle deck of the conveyor.
21. When the section is almost into the conveyor attach the next section of chain and roller to the end. At some point the assembly will become too heavy to pull by hand, then the cable puller will need to be used.
22. When the first roller reaches the Drive section of the conveyor pull it about six feet beyond the end of the conveyor.
23. Remove the rope or cable puller from the roller.
24. Insert the first roller around the Drive sprocket and into the bottom deck of the conveyor.
25. Remove the motor from the gearbox and pull the sun gear out.



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Over-Under Conveyor

Soft-Drop

26. Using the cable puller, continue to pull chain and roller sections into the conveyor by pulling the assembly back towards the entrance end of the tunnel.
27. When the last section of chain is attached and pulled into the conveyor, stop pulling it in when the end of that section is even with the end of the tunnel attach the Pin and Cotter section to the last section.
28. Feed the end of the Pin and Cotter section of chain around the Take-Up sprocket and pull it as close as possible to the first roller.
29. Attach the cable puller to the Take-Up Slide and the frame of the conveyor. Compress the tension spring.
30. Connect the first roller to the Pin and Cotter section of chain.
31. Loosen the tension nut from the crossbeam and run it back down to the cotter pin end.
32. Loosen and remove the cable puller from the Take-Up Slide.
33. Check the position of the Spring Tension Bolt. It should extend 2-3 inches beyond the crossbeam. If it does not remove or add links from the painted section of chain until it does.
34. Replace the cover plates at both ends of the conveyor.
35. Replace the Sun Gear in the Heco Gear Box.
36. Remove all tools and equipment from the work area.

Caution: Before returning power to the conveyor and removing lock out from the Motor Control Center make sure all personnel are clear of the operational area.

37. Remove the lockout. Return the conveyor to operation. Observe equipment to ensure proper operation.



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Repair Exit Trap Door

Tools

1. Safety Glasses
2. ½" Drive Ratchet Set
3. Standard Combo Wrenches
4. Standard Allen Wrenches

Consumables

1. Anti-Seize Compound
2. Penetrating Oil
3. Thread Locking Compound

Work Force

One (1) person

Time (assuming no problems)

0.25 – 0.75 hours

Replacement Parts

Qty	Name of Replacement Part	Product Part Number
1	Exit Door Hinged	20001889
1	Exit Rubber Hinge Flap	20004763
1	Door Hinge Pin	20004665
1	Trap Door Roller and Shaft	20004839
2	Cotter Pins 5/32" x 1"	10001841
8	Socket Cap Screw 3/8-16 x 1 ¼	10005956
8	Thin Nylon-Insert Locknut 3/8-16	10004501
4	1/4-20 x 5/8 Socket Cap Flat	10003073
4	Tee Nut Zinc Plated Steel 1/4-20 x 7/16	10003238

Repair Steps

Caution: You must shut off all power to the conveyor and lock out the Motor Control Center before getting in conveyor pit and continuing this repair.

1. Shut off all power to the conveyor and lock out the Motor Control Center.

Note: If rusted or frozen hardware is encountered, liberally apply high quality penetrating oil to the hardware and allow it ample time to work.

2. Spray all the hardware with penetrating oil and allow it to soak in.
3. Remove the bolts that hold the exit cover plate to the conveyor.
4. Remove the Allen head bolts that hold the rubber hinge flap in place.
5. Remove the bolts that hold the roller and shaft to the trap door.
6. Remove the cotter pins from the hinge pin.
7. Remove hinge pin.
8. Install the new trap door, hinge pin and cotter pins.



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9. Apply a small amount of anti-seize compound to the new stainless steel screws for the rubber hinge flap.
10. Install the new rubber hinge flap to the cover plate using the new stainless steel screws.
11. Apply a small amount of thread locking compound to the bolts that hold the roller shaft to the trap door.
12. Bolt the new roller and shaft onto the new trap door.
13. Apply a small amount of thread locking compound to the bolts for the cover plate.
14. Install the cover plate and trap door assembly to the conveyor.
15. Remove all tools and equipment from the work area.

Caution: Before returning power to the conveyor and removing lock out from the Motor Control Center make sure all personnel are clear of the operational area.

16. Remove the lockout. Return the conveyor to operation. Observe equipment to ensure proper operation. The door should move up and down freely; in addition make sure that the trap door roller spins easily.



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Replace Chain Drive Sprocket

Tools

1. Safety Glasses
2. ½" Drive Ratchet Set
3. Standard Combo Wrenches
4. Standard Allen Wrenches
5. Cross Cut Pliers
6. Small Chisel
7. Sledge Hammer
8. Cable Puller
9. Tape Measure

Consumables

1. Anti-Seize Compound
2. Emery Cloth
3. Clean Rag

Work Force

One (1) person

Time (assuming no problems)

1.00 - 2.00 hours

Replacement Parts

Qty	Name of Replacement Part	Product Part Number
1	12 Tooth Sprocket	20004475
1	2-¼" Taper Lock Bushing	10004235
1	Key stock ½" Square x 2" Long	10007099

Repair Steps

1. Run the conveyor until a roller sits directly below the exit trap door.

Caution: You must shut off all power to the conveyor and lock out the Motor Control Center before getting in conveyor pit and continuing this repair.

2. Shut off all power to the conveyor and lock out the Motor Control Center.

Note: If rusted or frozen hardware is encountered, liberally apply high quality penetrating oil to the hardware and allow it ample time to work.

3. Remove the bolts that secure the Exit cover plate and trap door
4. Remove the plate and door.
5. Attach the cable puller to a fixed point on top of the conveyor.
6. Release the cable and attach it to the Take-Up slide frame.
7. Compress the tension spring until there is enough slack to break the chain.
8. Tighten the tension nut down to the frame cross-member.



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9. Remove the pin and cotter from the roller exposed in Step 4, leave the roller attached to the chain coming out of the middle deck of the conveyor.
10. Unwrap the loose end chain from the Drive sprocket and let it drop into the bottom deck of the conveyor.
11. Pull the roller back into the conveyor to get room to work.
12. Release the tension from the cable pull, but leave the nut in against the cross-member.
13. Soak the hub heavily with penetrating oil.
14. Note the position of the sprocket and taper lock bushing on the shaft.
15. Remove the Allen head bolts from the hub.
16. Thread one of the Allen head bolts removed in Step 14 in the third hole in the hub that was empty.
17. As the bolt tightens up strike the face of the sprocket with the sledge hammer, and then continue to tighten the bolt.
18. Once the sprocket and taper lock bushing is separated, tap a chisel into the slot on the taper lock bushing and slide the bushing off of the shaft.
19. Remove the old sprocket from the shaft.
20. Tap out the old key stock.
21. Clean the shaft of the gearbox with an emery cloth so the new bushing can slide on easily, and then remove the bushing.
22. Cover the shaft with a thin coating of anti-seize compound.
23. Place the new key stock in the shaft.
24. Place the sprocket over the shaft.
25. Slide the taper lock bushing onto the shaft to the approximate location noted in Step 14.
26. Pull the sprocket onto the bushing carefully so as not to move the bushing.
27. Thread the new Allen head bolts into the bushing.
28. Alternate tightening until the sprocket is tight the bushing.
29. Check that the sprocket is centered in the conveyor
30. If not, the bushing will have to be loosened to adjust the sprocket.
31. Attach the cable puller to the Take-Up Slide and the frame of the conveyor. Compress the tension spring.
32. Feed the chain back around the Drive sprocket and connect the roller to the chain.



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33. Loosen the tension nut from the crossbeam and run it back down to the cotter pin end.
34. Loosen and remove the cable puller from the Take-Up Slide.
35. Replace the cover plate.
36. Remove all tools and equipment from the work area.

Caution: Before returning power to the conveyor and removing lock out from the Motor Control Center make sure all personnel are clear of the operational area.

37. Remove the lockout. Return the conveyor to operation. Observe equipment to ensure proper operation. Pay attention to the movement of the new sprocket, it should run straight and true.



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Replace Hydraulic Motor

Tools

1. Safety Glasses and Goggles
2. ½" Drive Ratchet Set
3. Standard Combo Wrenches
4. Oil Drain Pan
5. Two JIC Plugs

Consumables

None

Work Force

One (1) person

Time (assuming no problems)

1.00 - 2.00 hours

Replacement Parts

Qty	Name of Replacement Part	Product Part Number
1	Char-Lynn 2000 Series Motor 11.9 cu in/rev	20003118*
1	Char-Lynn 2000 Series Motor 18.9 cu in/rev	20003136*
1	Char-Lynn 2000 Series Motor 24.9 cu in/rev	10008374*
1	Heco Hose and Fitting Kit	20002097
1	Heco Sun Gear Kit 16E	10007276

*Order appropriate replacement

Repair Steps

Caution: You must shut off all power to the conveyor and lock out the Motor Control Center before getting in conveyor pit and continuing this repair.

1. Shut off all power to the conveyor and lock out the Motor Control Center.
2. Place the oil drain pan beneath the motor.
3. Note the position of the two hydraulic lines that connect to the motor as supply and return. The supply line is alone, while the return line has a small hose tee with it.
4. Disconnect the return line from the tee and plug the line.
5. Disconnect the supply line and plug the line.
6. Remove the bolts that mount the motor to the gearbox.
7. Slide the motor out of the gearbox with sun gear.
8. Make sure the new rubber O-ring is properly installed on the new motor and lubricate it with hydraulic oil.
9. Place the new sun gear in the new motor.
10. Slide the new motor, with the new sun gear attached, onto the gearbox.



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11. Bolt the new motor into place. Make sure supply and return ports are facing the entrance of the tunnel.
12. Lubricate the rubber O-ring of all the SAE fittings with a small amount of hydraulic oil before installing them.
13. Thread all new SAE fittings into the ports of the new motor, referring to the old motor for correct placement.
14. Install the short lubrication hose, referring to the old motor for correct placement.
15. Connect the return and feed lines to the positions noted in Step 3.
16. Check all fittings for tightness.
17. Remove oil drain pan and dispose of used oil properly.
18. Remove all tools and equipment from the work area.

Caution: Before returning power to the conveyor and removing lock out from the Motor Control Center make sure all personnel are clear of the operational area.

19. Remove the lockout. Return the conveyor to operation. Observe equipment to ensure proper operation. Check the fluid level on the hydraulic power pack that runs the conveyor and add oil as needed. Watch for leaks in the new fittings.



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Replace Gear Box

Tools

1. Safety Glasses
2. ½" Drive Ratchet Set
3. Standard Combo Wrenches
4. Standard Allen Wrenches
5. Small Chisel
6. Sledge Hammer
7. Cable Puller
8. Oil Drain Pan
9. Two JIC Plugs

Consumables

1. Anti-Seize Compound
2. Emery Cloth
3. Penetrating Oil

Work Force

Two (2) persons

Time (assuming no problems)

4.00 hours

Replacement Parts

Qty.	Name of Replacement Part	Product Part Number
1	Heco Gear Box	10009010
1	Sun Gear Kit	10007276
1	Key stock ½" Square x 2" Long	10007099

Repair Steps

1. Run the conveyor until a roller sits directly below the exit trap door.

Caution: You must shut off all power to the conveyor and lock out the Motor Control Center before getting in conveyor pit and continuing this repair.

2. Shut off all power to the conveyor and lock out the Motor Control Center.

Note: If rusted or frozen hardware is encountered, liberally apply high quality penetrating oil to the hardware and allow it ample time to work.

3. Remove the bolts that secure the Exit cover plate and trap door.
4. Remove the plate and door.
5. Attach the cable puller to a fixed point on top of the conveyor.
6. Release the cable and attach it to the Take-Up slide frame.
7. Compress the tension spring until there is enough slack to break the chain.
8. Tighten the tension nut down to the frame cross-member.
9. Remove the pin and cotter from the roller exposed in Step 4. Leave the roller attached to the chain coming out of the middle deck of the conveyor.



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10. Unwrap the loose end of chain from the Drive sprocket and let it drop into the bottom deck of the conveyor.
11. Pull the roller back into the conveyor to get room to work.
12. Release the tension from the cable pull, but leave the nut in against the cross-member.
13. Place the oil drain pan beneath the motor.
14. Note the position of the two hydraulic lines that connect to the motor as supply and return. The supply line is alone, while the return line has a small hose teed with it.
15. Disconnect the return line from the tee and plug the line.
16. Disconnect the supply line and plug the line.
17. Remove the bolts that mount the motor to the gearbox.
18. Slide the motor out of the gearbox with sun gear.

Caution: When the last bolt in Step 19 is removed the complete gearbox assembly will be freed and will fall if not supported. It is very heavy and will take a couple of men to lift it out.

19. Remove the bolts attaching the gearbox mounting plate to the frame.
20. Lift the gearbox assembly out of the tunnel and position it so the sprocket can be removed.
21. Soak the hub heavily with penetrating oil.
22. Note the position of the sprocket and taper lock bushing on the shaft.
23. Remove the Allen head bolts from the hub.
24. Thread one of the Allen head bolts removed in Step 14 in the third hole in the hub that was empty.
25. As the bolt tightens up strike the face of the sprocket with the sledge hammer, and then continue to tighten the bolt.
26. Once the sprocket and taper lock bushing is separated, tap a chisel into the slot on the taper lock bushing and slide the bushing off of the shaft.
27. Remove the old sprocket from the shaft.
28. Tap out the old key stock.
29. Remove the bolts attaching the gearbox to the gearbox mounting plate.
30. Bolt the new Heco Gearbox into the gearbox mounting plate.
31. Clean the shaft of the gearbox with an emery cloth so the taper lock bushing removed in Step 26 can slide on easily, and then remove the bushing.
32. Cover the shaft with a thin coating of anti-seize compound.
33. Place new key stock in the shaft.



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34. Place the sprocket over the shaft.
35. Slide the taper lock bushing onto the shaft to the approximate location noted in Step 22.
36. Pull the sprocket onto the bushing carefully so as not to move the bushing.
37. Thread the Allen head bolts into the bushing.
38. Alternate tightening until the sprocket is tight the bushing.
39. Lift the gearbox assembly into position in the conveyor.
40. Install the bolts securing the gearbox mounting plate to the frame.
41. Remove the plastic plug from the rear of the gearbox.
42. Install the new sun gear in the existing motor.
43. Install the existing motor making sure that the feed and return ports are facing the entrance end of the tunnel.
44. Install the bolts securing the motor to the gearbox.
45. Connect the return and feed lines to the positions noted in Step 14.
46. Check all fittings for tightness.
47. Remove oil drain pan and dispose of used oil properly.
48. Check that the sprocket is centered in the conveyor
49. If not, the bushing will have to be loosened to adjust the sprocket.
50. Attach the cable puller to the Take-Up Slide and the frame of the conveyor. Compress the tension spring.
51. Feed the chain back around the Drive sprocket and connect the roller to the chain.
52. Loosen the tension nut from the crossbeam and run it back down to the cotter pin end.
53. Loosen and remove the cable puller from the Take-Up Slide.
54. Replace the cover plate.
55. Remove all tools and equipment from the work area.

Caution: Before returning power to the conveyor and removing lock out from the Motor Control Center make sure all personnel are clear of the operational area.

56. Remove the lockout. Return the conveyor to operation. Observe equipment to ensure proper operation. Check the fluid level on the hydraulic power pack that runs the conveyor and add oil as needed. Watch for leaks in the new fittings. Pay attention to the movement of the new sprocket, it should run straight and true.



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Replace Conveyor Roller

Tools

1. Safety Glasses
2. ½" Drive Ratchet Set
3. Standard Combo Wrenches
4. Small Punch
5. Sledge Hammer

Consumables

1. Emery Cloth
2. Penetrating Oil

Work Force

One (1) person

Time (assuming no problems)

0.50 - 1.00 hours

Replacement Parts

Qty	Name of Replacement Part	Product Part Number
1	Roller	Order appropriate replacement roller

Repair Steps

1. Run the conveyor until a roller is on the Take-Up sprocket where it can be easily accessed once the Take-Up cover plate is removed.

Caution: You must shut off all power to the conveyor and lock out the Motor Control Center before getting in conveyor pit and continuing this repair.

2. Shut off all power to the conveyor and lock out the Motor Control Center.
3. Remove the bolts that secure the Take-Up cover plate and trap door and remove the plate and door.
4. Remove bolts holding the poly wheels at the end with the carrier link.
5. Remove the bolt that axle in the roller assembly.
6. Remove the axle using a punch and hammer if necessary, once the axle is removed the old roller assembly will be freed.
7. Repeat Steps 4 through 6 on the new roller assembly.
8. Install the new roller assembly on the carrier link using the new axle and bolt.
9. Install the new poly wheels with new bolts.
10. Install the cover plate and trap door.
11. Remove all tools and equipment from the work area.

Caution: Before returning power to the conveyor and removing lock out from the Motor Control Center make sure all personnel are clear of the operational area.

12. Remove the lockout. Return the conveyor to operation. Observe equipment to ensure proper operation.



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Replace UHMW Guide Rail

Tools

1. Safety Glasses
2. ½" Drive Ratchet Set
3. ½" Power Drill and bits

Consumables

1. Anti-Seize Compound
2. Penetrating Oil

Work Force

One (1) person

Time (assuming no problems)

0.50 - 1.00 hours

Replacement Parts

Qty.	Name of Replacement Part	Product Part Number
5	Carriage Bolt 5/16-18 x 1 ¼ (For Angle)	10005205
5	Hex Nut Nylon 5/16-18 SS (For Angle)	10003793
2	5' Section UHMW Angle	20007122

Repair Steps

Caution: You must shut off all power to the conveyor and lock out the Motor Control Center before getting in conveyor pit and starting this repair.

1. Shut off all power to the conveyor and lock out the Motor Control Center.
2. Apply penetrating oil to the existing hardware and allow it to soak in.

Note: If rusted or frozen hardware is encountered, liberally apply high quality penetrating oil to the hardware and allow it ample time to work.

3. Remove the bolts from the section of guide rail being replaced.
4. Remove old guide rail.
5. Locate the holes and drill new guide rail.
6. Install new guide rail on the conveyor and line up the mounting holes.
7. Apply a thin layer of anti-seize compound to the new bolts.
8. Install the bolts in the new guide rail.
9. Remove all tools and equipment from the work area.

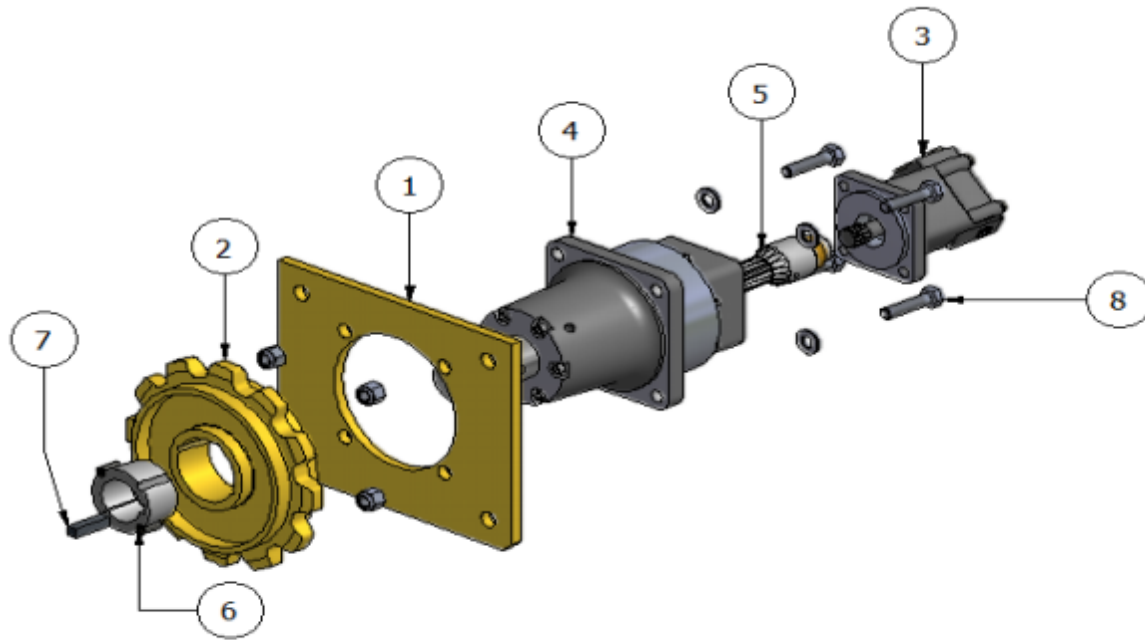
Caution: Before returning power to the conveyor and removing lock out from the Motor Control Center make sure all personnel are clear of the operational area.

10. Remove the lockout. Return the conveyor to operation. Observe equipment to ensure proper operation.



EXPLODED VIEWS

Heco Gear Assembly



Item #	Description	Part Number	Needed
1	Heco Plate, Spring and Air Take Up	20004762	1
2	Sprocket, 12 Tooth Taper Lock - SONNY'S	20004475	1
3	Char-Lynn 2000 106-1012-006 11.9 Cu In	20003118	1
4	Heco Center Flange 16CF105-7-A22	10009010	1
5	Heco 16E Sungear Adapter	10007276	1
6	Bushing 2517 x 2-1/4in Taper Lock	10004235	1
7	Key Stock 1/2 x 2.50in L Stl 50R250RKS0	10007099	1
8	Bolt Hardware Kit-8 for Heco and Plate	10003183	1

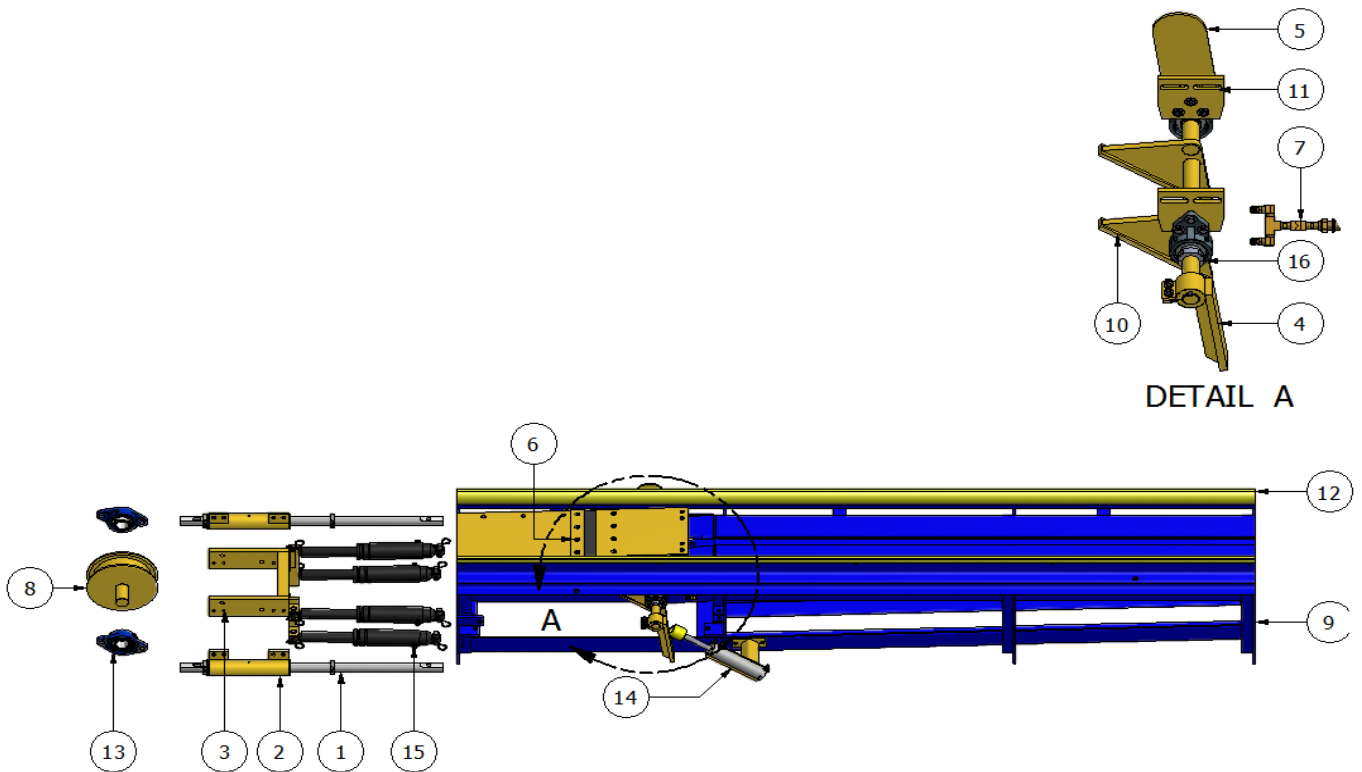


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Take-Up Section Assembly





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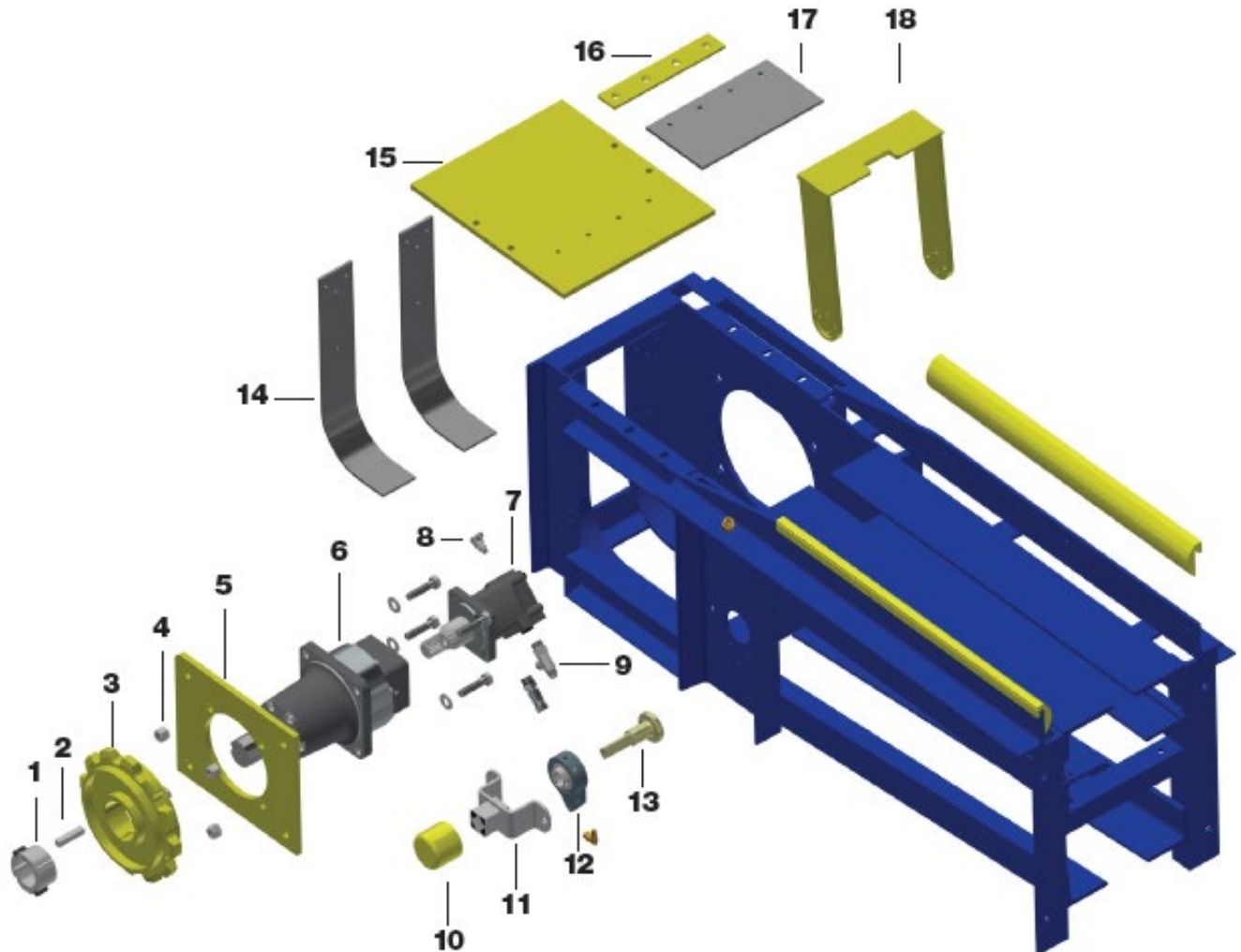
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Take-up Section Part Break Down

Item#	Description	Part Number	Needed
1	Take Up Slide Shaft 1-1/2" Dia x 39-1/2"	20004761	2
2	Take Up Slide Tube with UHMW Bushing	20002341	2
3	Carriage Weldment Air Take-Up SONNY'S	20007295	1
4	Fork Pivot Bracket for Air Take-Up	20006621	1
5	Fork Kick Up Plate for Air Take Up	20001703	1
6	Door, Trap Entrance Complete Assembly	20011102	1
7	Conveyor, Air Manifold Assembly	20007049	1
8	Drum, Take-Up Narrow 1-15/16 x 10-3/16in	20002624	1
9	Take Up Section	Please Call	1
10	Fork, Roller Up for Air Take Up Conveyor	20002510	1
11	Fork Hanger w/Bearing for Air Take Up	20002480	2
12	Banana Peel, 15ft Yellow UHMW Extrusion	10006495	N/A
13	Bearing 2-Bolt Flange 1-15/16in Timken	10007637	2
14	Cylinder, A550 1.5in Bore x 6in Stk SMC	10006688	1
15	Shock Tension 2 per Box w/Hose SONNY's	10007097	2
16	Collar 2pc Clamp 1-1/4in ID Zinc Plated	10003082	2



Drive Section Assembly Soft Drop





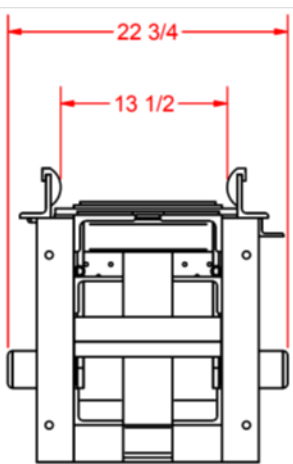
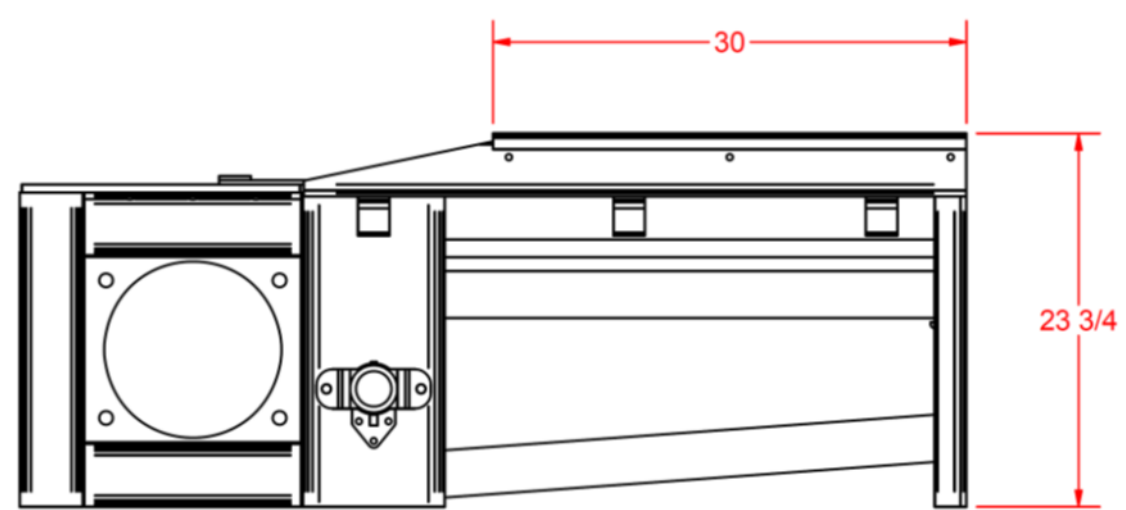
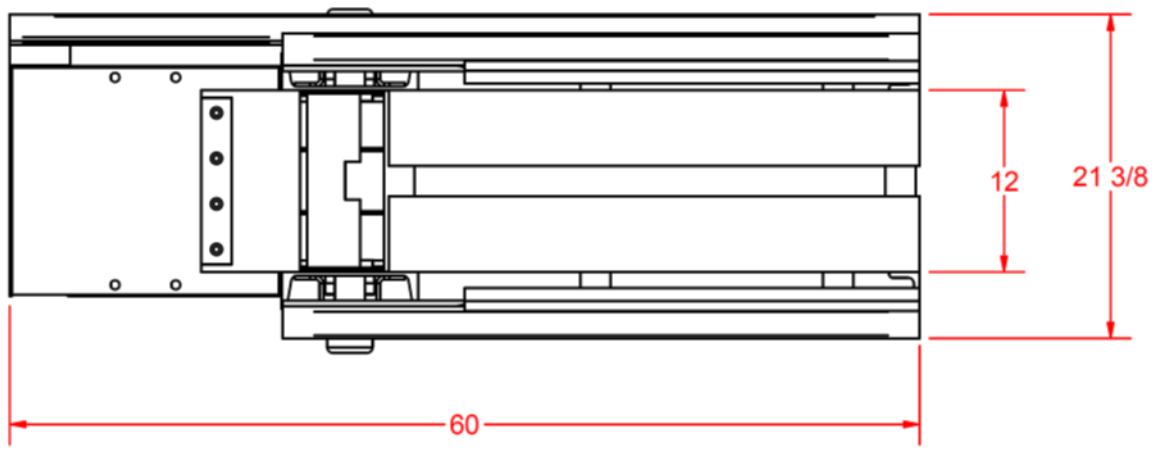
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Drive Assembly Parts Breakdown Soft Drop

Item #	Description	Part Number	Needed
1	Bushing 2517 x 2-1/4in Taper Lock	10004235	1
2	Key Stock 1/2 x 2.50in L Stl 50R250RKS0	10007099	1
3	Sprocket, 12 Tooth Taper Lock - SONNY'S	20004475	1
4	Bolt Hardware Kit-8 for Heco and Plate	10003183	1
5	Heco Plate, Spring and Air Take Up	20004762	1
6	Heco Center Flange 16CF105-7-A22	10009010	1
7	Char-Lynn 2000 106-1012-006 11.9 Cu In	20003118	4
8	Elbow 6801-6-4 M JIC 3/8 x 1/4 O-Ring	10001089	1
9	Tee Run 6804-8-10 1/2in M JIC x 7/8-14	10002703	1
10	Soft-Drop, Bearing Plastic Cover	20012450	2
11	Rosta Unit, Soft-Drop Conveyor Gate	20012333	2
12	AMI Bearing 3 Bolt Flange 1-1/4in Conv	10006254	2
13	Spindle, Soft-drop Exit Section NiP	20014242	2
14	Rubber Roller Belt Exit w/Holes	20001467	2
15	Door, Trap Exit Plate 15in x 11in	20002132	1
16	Door, Rubber Hinge Exit 12in x 6-1/2in	20004763	1
17	Door, Entrance Strap Plate 11in x 2in	20004759	1
18	Roller Gate, Soft-Drop	20012337	1



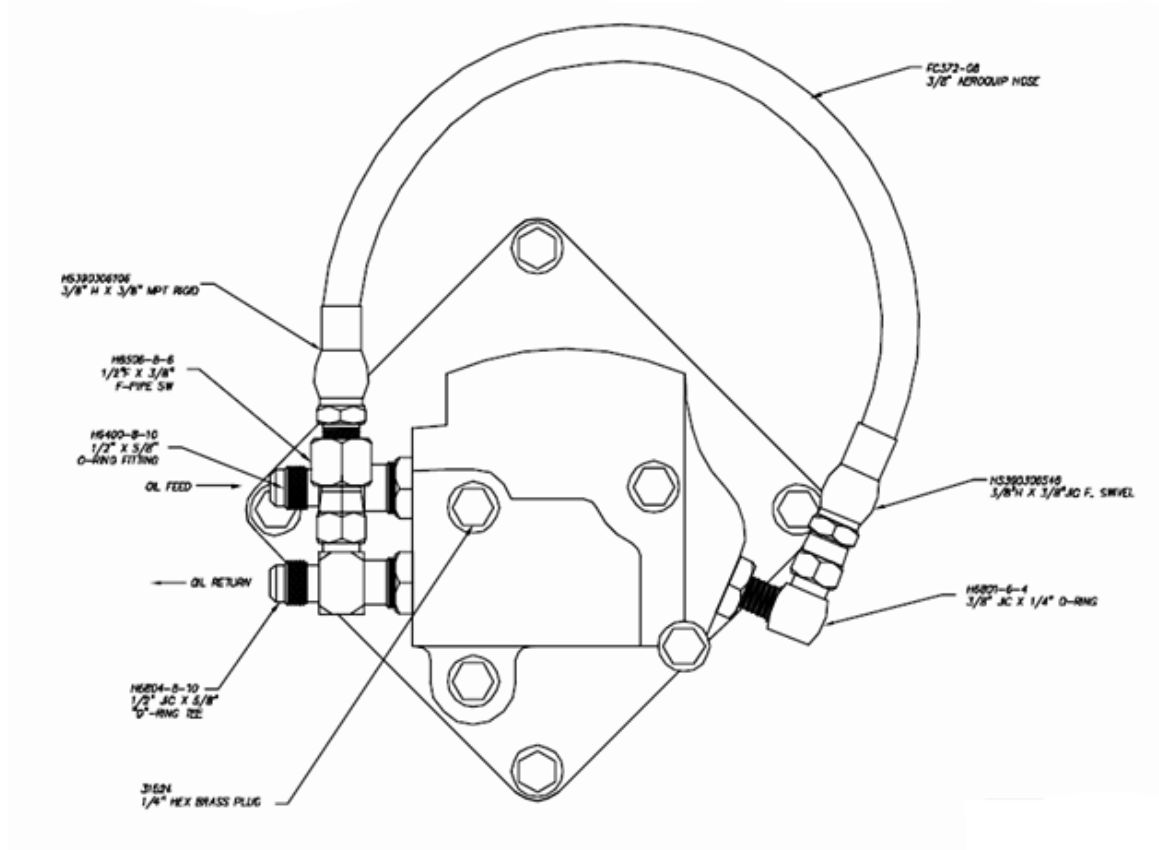
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Conveyor Hydraulic Drive Motor Hose Kit



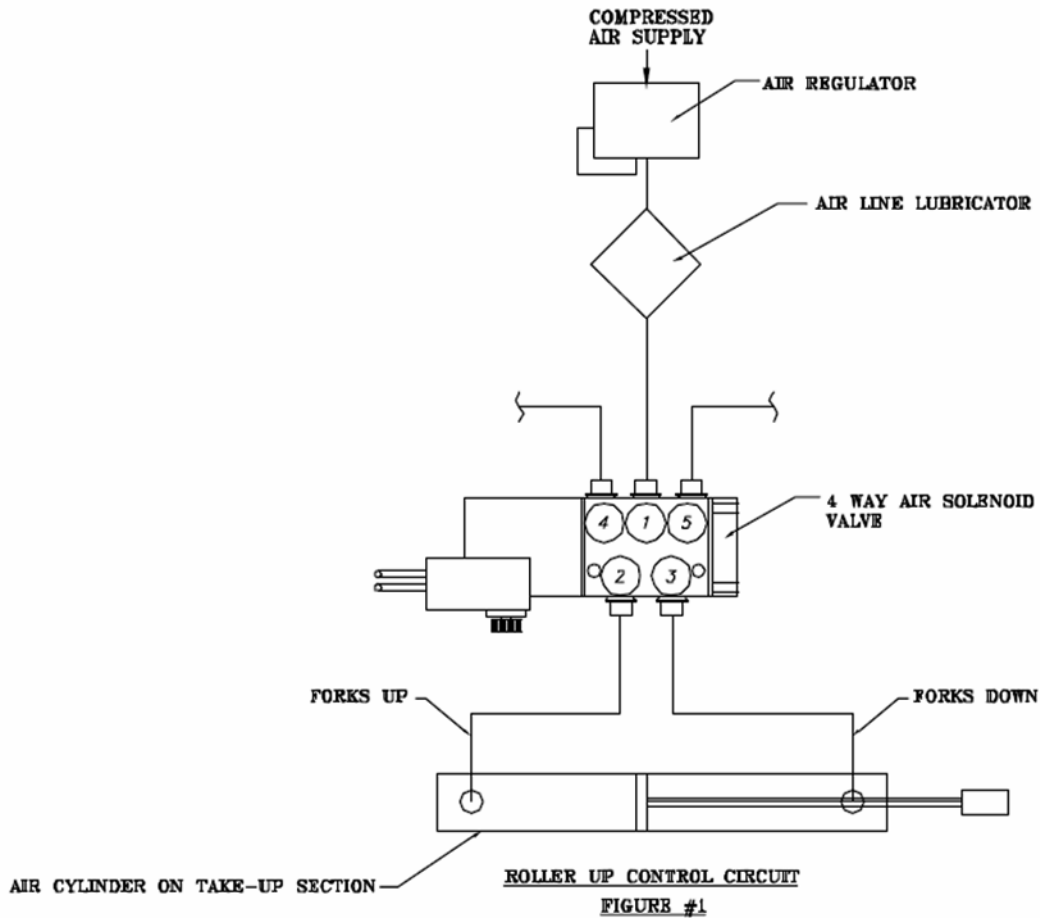
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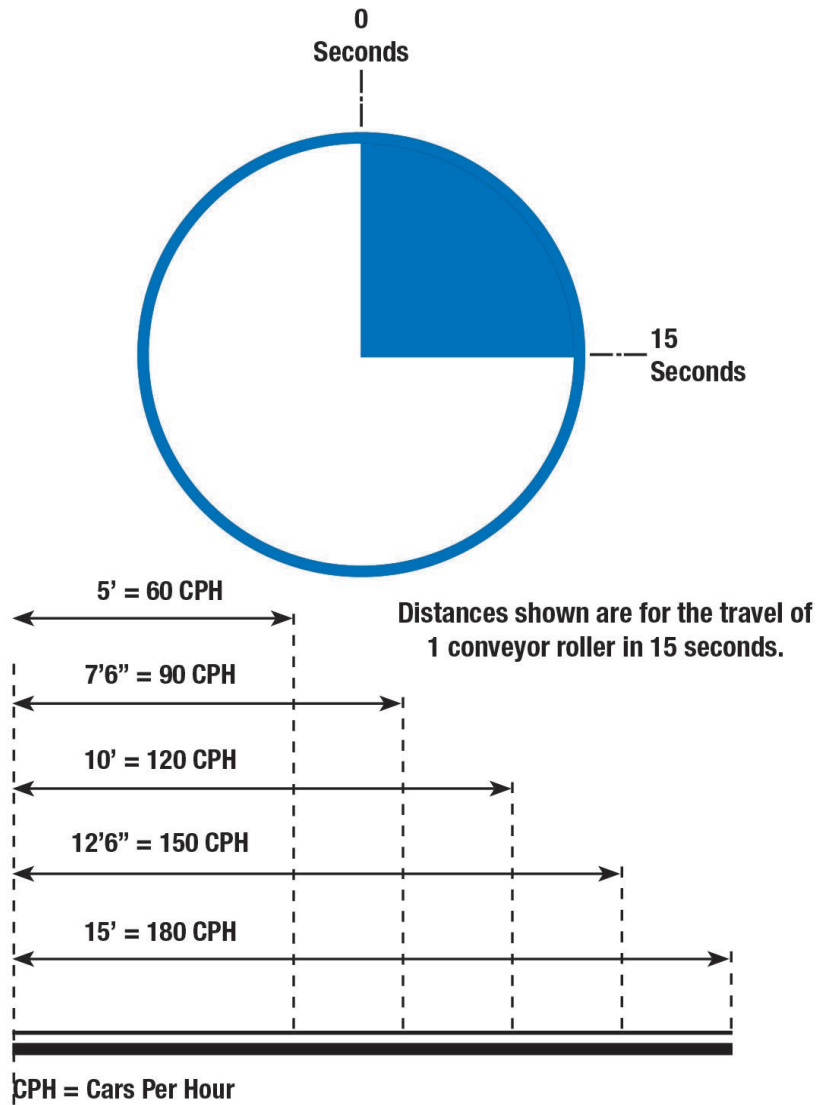
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Conveyor Speed Chart

Need to adjust your conveyor speed:



Quick reference chart for calculating conveyor speed in theoretical Cars per Hour.



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WARRANTY

SONNY'S ENTERPRISES, INC. FACTORY LIMITED LIFETIME WARRANTY

Equipment manufactured by SONNY'S ENTERPRISES, INC. is warranted to be free from defect in material and workmanship. Welded metal framework and other non-moving, non-wearable fabricated metal components manufactured by SONNY'S are warranted for the life of the equipment to the original purchaser. Fabricated metal wearable surface and moving components manufactured by SONNY'S are warranted for a period of one (1) year to the original purchaser of the equipment.

All components assembled to SONNY'S equipment that are manufactured by others are warranted by the appropriate manufacturer and subject to that manufacturer's limited warranty. Contact SONNY'S for the specific information on other component manufacturer's warranty terms. All new cloth shipped with new SONNY'S equipment is warranted for a period of one (1) year or 80,000 car washes, whichever occurs first.

This warranty is not assignable or transferable. The warranty period begins the first day following installation or 30 days from the original invoice date, whichever occurs first. The Seller's liability shall be limited to repair or replacement of materials found to be defective within the warranty period. In the event of repair or replacement this limited warranty is noncumulative. The Purchaser must supply the Seller with immediate written notice when any defects are found. The Seller shall have the option of requiring the return of defective material to establish the Purchaser's claim. Neither labor nor transportation charges are included in this warranty. Transportation damage claims are to be submitted to the carrier of the damaged materials.

This warranty is based upon the Purchaser's reasonable care and maintenance of the warranted equipment. It does not apply to any equipment which has been subject to misuse, including neglect, accident or exposure to harsh chemicals or chemicals that react violently with: water, organic acids (e.g. acetic acid), inorganic acids (e.g. hydrofluoric acid), oxidizing agents (e.g. peroxides), and metals (e.g. aluminum). Chemicals corrosive to: aluminum alloys, carbon steel, and other metals. Nor does it apply to any equipment which has been repaired or altered by anyone not so authorized by SONNY'S. Further, the equipment must be properly installed with proper accuracy of all specified plumbing, electrical, and mechanical requirements. This warranty does not apply to normal wear and tear or routine maintenance components.

EXCEPT AS EXPRESSLY STATED HEREIN, SONNY'S SHALL NOT BE LIABLE FOR DAMAGES OF ANY KIND IN CONNECTION WITH THE PURCHASE, MAINTENANCE, OR USE OF THIS EQUIPMENT INCLUDING LOSS OF PROFITS AND ALL CLAIMS FOR CONSEQUENTIAL DAMAGES. THE LIMITED WARRANTY EXPRESSED HEREIN IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED. SONNY'S NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION HERewith.



Equipment Program - Manuals Over-Under Conveyor Soft-Drop

CUSTOMER SERVICE

Please contact SONNY'S Equipment Department for installation and/or operational questions regarding this piece of equipment.

Please refer to the Parts Catalog and contact SONNY'S Customer Service Order Entry Department for any replacement parts for this piece of equipment.

You can also visit the web at www.SonnysDirect.com.

DEPARTMENT

Toll Free Main Line
Equipment Department

PHONE NUMBERS

800-327-8723
954-720-4100

FAX NUMBERS

800-495-4049
954-720-9292

Or you can email Sales at sales@SonnysDirect.com

Thank you for being a SONNY'S car wash equipment owner!

From all of us here at

