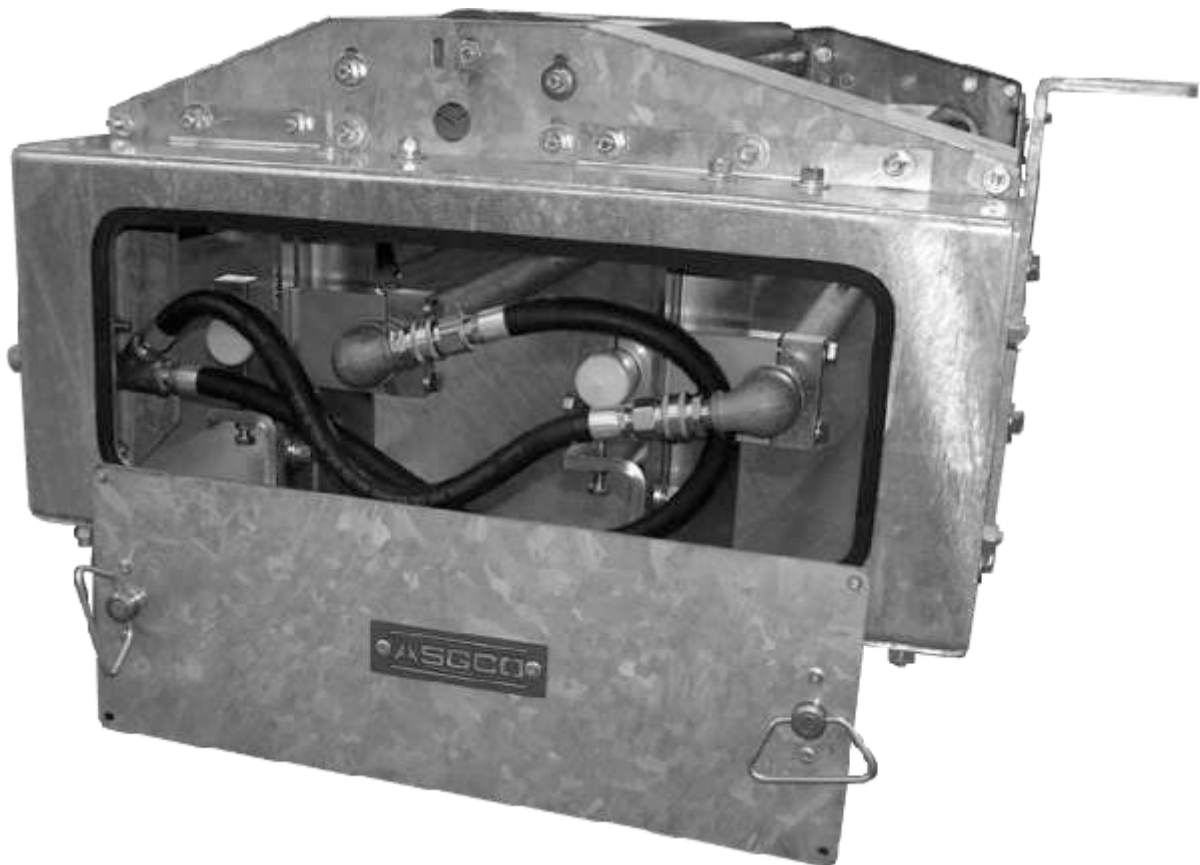




WASH BOX

SECONDARY BELT CLEANER SYSTEM

INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS



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IMPORTANT SAFETY NOTICE

Always observe the basic rules of safety when working with any conveyor system. To avoid injury and equipment damage, be sure that all controls to the conveyor are locked out and the power source is disconnected at all times during installation and maintenance.

Overview

If mounting structure is not available, additional steel structure may have to be added.

Wash Box System

System Part Number: M-ASG-WB-XX-SYS-X

XX = Belt Width (Inches)

X = Finish

SS – Stainless Steel

PC – Powder coated

G – Galvanized

Example: M-ASG-WB-36-SYS- SS

The example designates at Wash Box for a 36in [900mm] belt width with a Stainless Steel finish components.

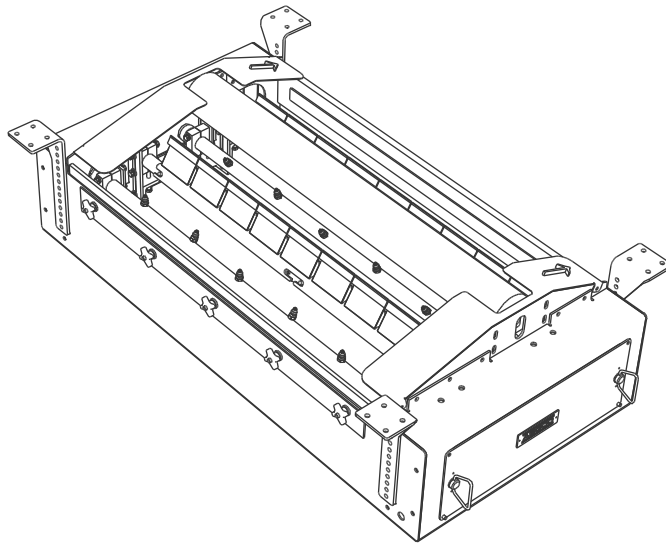


Figure 1. Wash Box System Complete

Wash Box Frame / Tank

Complete Frame / Tank include the Tank Weldment, Frame Components and Box Enclosure Components.

Complete Frame / Tank Part Number: M-ASG-WB-XX-FRAME-X

XX = Belt Width (Inches)

X = Finish

SS – Stainless Steel

PC – Powder coated

G – Galvanized

Example: M-ASG-WB-36-FRAME- SS

The example designates at Frame / Tank for a 36in [900mm] belt width with a Stainless Steel finish components.

Tank Weldment Part Number: M-ASG-WB-XX-TW-X

XX = Belt Width (Inches)

X = Finish

SS – Stainless Steel

PC – Powder coated

G – Galvanized

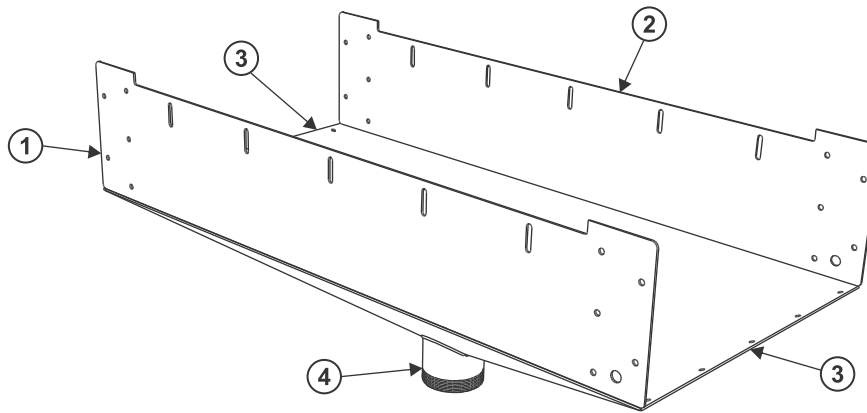


Figure 2. Tank Weldment

Table I. Tank Weldment Parts List

Item	Description	Part Number	Qty
1	Front Panel	ASG-WB-FP-XX	1
2	Back Panel	ASG-WB-BP-XX	1
3	Bottom Half	ASG-WB-BH-XX	2
4	Drain Pipe	ASG-WB-DP-XX	1

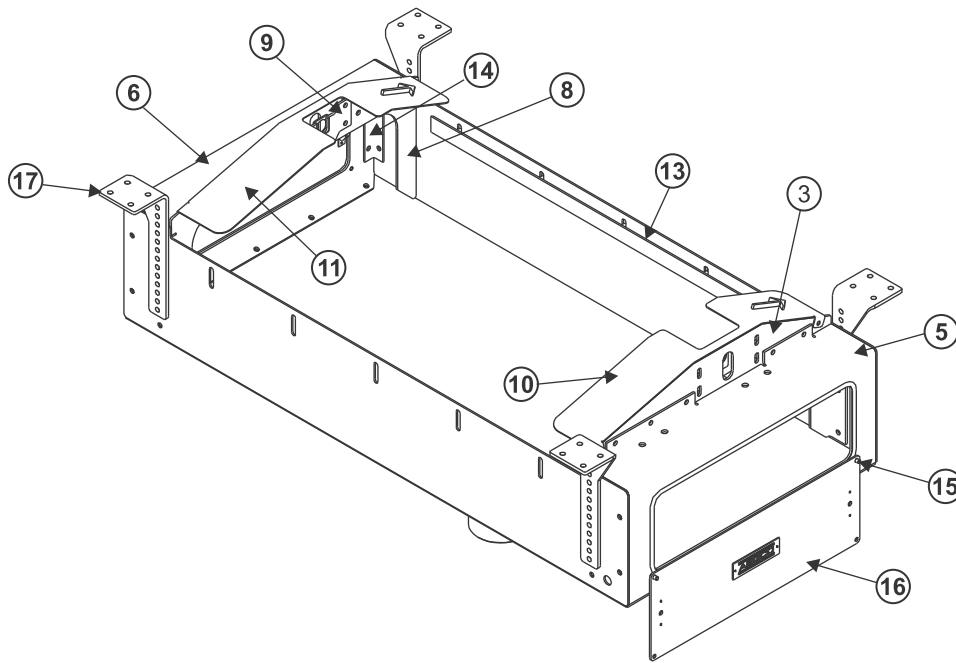


Figure 3. Frame Components & Enclosure

Table II. Frame Components & Enclosure Parts List

Item	Description	Part Number	Qty
5	Outside Plate, Right	ASG-WB-OPR	1
6	Outside Plate, Left	ASG-WB-OPL	1
7	Inside Plate, Right	ASG-WB-IPR	1
8	Inside Plate, Left	ASG-WB-IPL	1
9	Idler Support Bracket	ASG-WB-ISB	2
10	Over Spray Cover, Right	ASG-WB-OSCR	1
11	Over Spray Cover, Left	ASG-WB-OSCL	1
12 (NS)	Idler Clip	ASG-WB-IC	2
13	Wiper Holder	ASG-WB-WH-XX	1
14	Angle Support	ASG-WB-AS	4
15	Door Stud	ASG-WB-DS	4
16	Access Door	ASG-WB-AD	2
17	Hanger	ASG-WB-HANG	4

NS = Not Shown

XX = Belt Width (inches)

Hold Down Roll

Part Number: ASG-**-RET-XX

** = CEMA Rating and Roll Diameter (inches) Example: C6

XX = Belt Width (inches)

Urethane Wipe

Part Number: ASG-5560-1x4-H-XX
XX = Belt Width (inches)

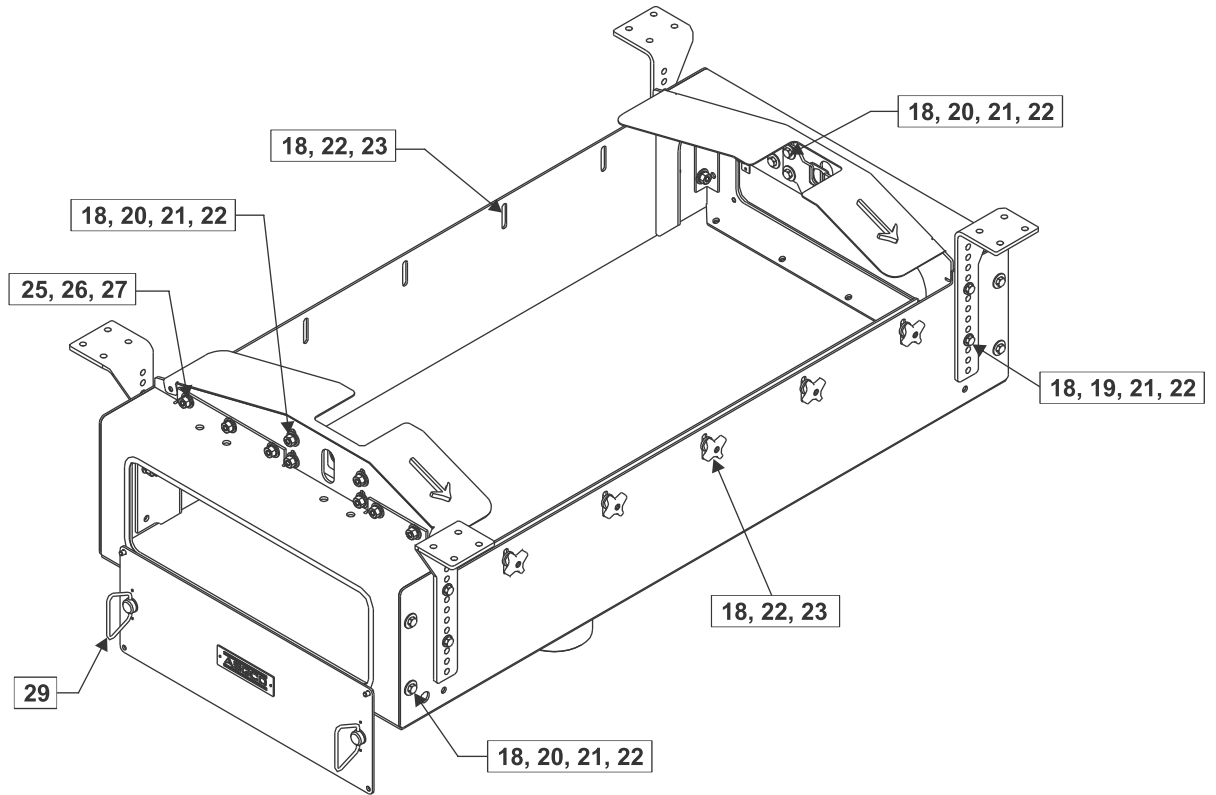


Figure 4. Frame / Tank Hardware

Table III. Frame / Tank Hardware Parts List

Item	Description	Part Number	Qty
18	Flat Washer, 1/2	ASG-FW-1/2	Table IV
19	Hex Head Bolt, 1/2 -13NC x 2-1/4	ASG-BOLT-C08x40G5	12
20	Hex Head Bolt, 1/2 -13NC x 1-1/2	AS-HHBOLT-C08x36G5	36
21	Hex Nut, 1/2 -13NC	ASG-NUT-1/2G5	48
22	Spring Lock Washer, 1/2	ASG-LW-1/2	Table IV
23	Four Arm Knob, Thru -Hole, 1/2 -13NC	ASG-4KNOB-1/2	Table VI
24 (NS)	Hex Head Bolt, 1/4 -20NC x 3/8	ASG-HHBOLT-.25-20x.375	2
25	Hex Head Bolt, 3/8 -16NC x 1	ASG-HHBOLT-C06x016	4
26	Flat Washer, 3/8	ASG-FW-3/8	8
27	Hex Nut, 3/8 -16NC	ASG-NUT-3/8G5	4
28	Spring Lock Washer, 3/8	ASG-LW-3/8	4
29	Compression Spring Latch	ASG-WB-LATCH	4
30	Door Gasket, Rubber	ASG-WB-GASKET	2

NS = Not Shown

Table IV. Flat Washers per Belt Width

Belt Width	Qty
24 [600]	98
30 [750]	99
36 [900]	99
42 [1050]	100
48 [1200]	100
54 [1350]	101
60 [1500]	101
66 [1650]	102
72 [1800]	102
78 [2000]	103
84 [2100]	103
90 [2300]	104
96 [2400]	104

Note: Belt Width in Inches [Millimeters]

Table V. Spring Lock Washers per Belt Width

Belt Width	Qty
24 [600]	50
30 [750]	51
36 [900]	51
42 [1050]	52
48 [1200]	52
54 [1350]	53
60 [1500]	53
66 [1650]	54
72 [1800]	54
78 [2000]	55
84 [2100]	55
90 [2300]	56
96 [2400]	56

Note: Belt Width in Inches [Millimeters]

Table VI. Four Arm Knobs per Belt Width

Belt Width	Qty
24 [600]	4
30 [750]	6
36 [900]	6
42 [1050]	8
48 [1200]	8
54 [1350]	10
60 [1500]	10
66 [1650]	12
72 [1800]	12
78 [2000]	14
84 [2100]	14
90 [2300]	16
96 [2400]	16

Note: Belt Width in Inches [Millimeters]

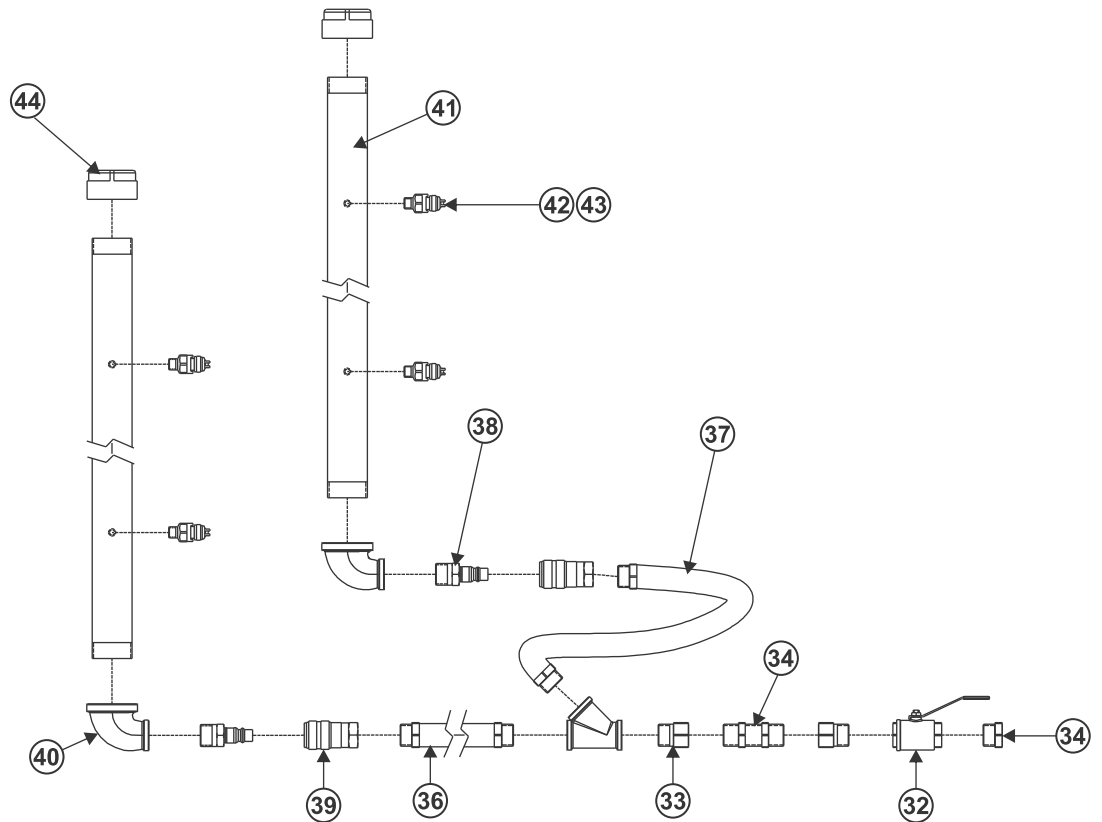


Figure 5. Spray Bar Plumbing Example

Table VII. Spray Bar Plumbing Parts List

Item	Description	Part Number	Qty
31	Plug, 3/4, B	ASG-WB-3/4-PLUG	1
32	Brass Ball Valve, 3/4, B	ASG-WB-VALVE	1
33	F 3/4 BSP to M 3/4 NPT Adapter	ASG-WB-3/4-ADP	2
34	Bulkhead Fitting, M 3/4 BSP	ASG-WB-3/4-BH	1
35	Wye, 3/4 NPT, B	ASG-WB-3/4-Y	1
36	Hose, M-M, 3/4, 2 Foot	ASG-WB-HOSE-2	1
37	Hose, M-M, 3/4, 3 Foot	ASG-WB-HOSE-3	1
38	Quick Disconnect Coupling, Plug, B	ASG-3/4-QDC-P	2
39	Quick Disconnect Coupling, Socket, B	ASG-3/4-QDC-S	2
40	Reducing Elbow, 90deg, 3/4, G	ASG-WB-90-ELBOW	2
41	WashBox Spray Bar, G, Belt Width (XX)	ASG-SPRAYBAR-XX	2
42	Spray Nozzle, Jet and Body, B, 10	Y-1/4QJJA	Table VIII
43	Spray Nozzle, Strainer, B	Y-12686-50	Table VIII
44	End Cap, SprayBar, 1-1/2, G	ASG-SB-EC	2

XX = Belt Width (inches)

Table VIII. Spray Nozzle / Strainer Quantity per Belt Width

Belt Width	Qty
24 [600]	6
30 [750]	6
36 [900]	6
42 [1050]	8
48 [1200]	8
54 [1350]	10
60 [1500]	10
66 [1650]	12
72 [1800]	12
78 [2000]	14
84 [2100]	14
90 [2300]	16
96 [2400]	16

Note: Belt Width in Inches [Millimeters]

Razor-Back® with Bolt-Up™ Tensioner and Spray Bar Kit

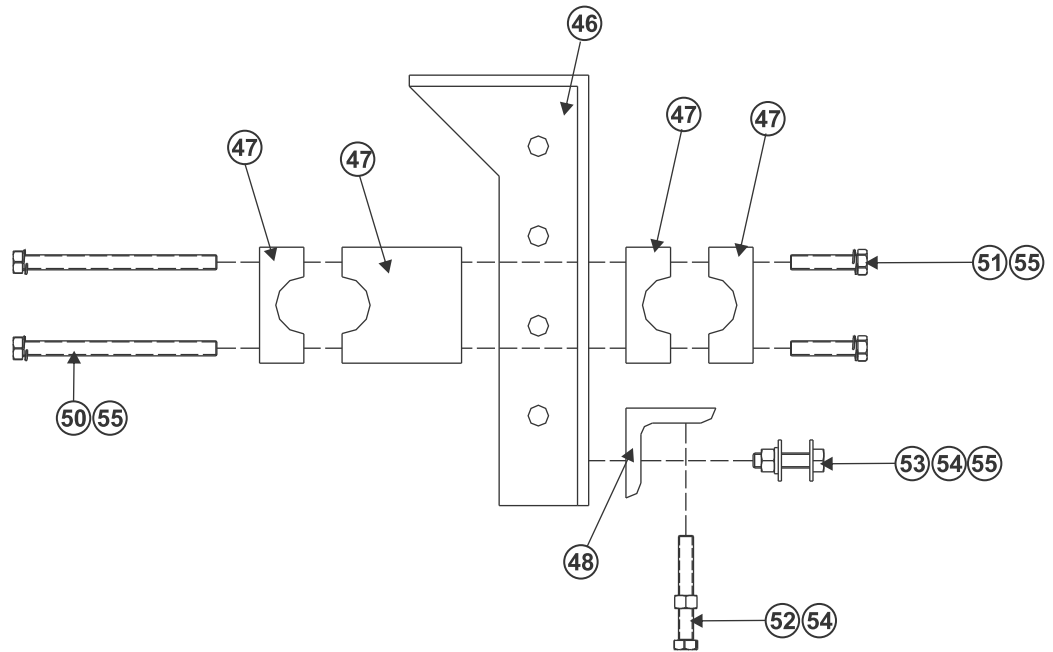


Figure 6. Bolt-Up Tensioner with Spray Bar Kit – Exploded View

Table IX. Bolt-Up™ Tensioner with Spray Bar Kit

Item	Description	Part Number	Qty
45 (NS)	Mounting Bracket, Left Hand	ASG-NW3-BU-LHMB	1
46	Mounting Bracket, Right Hand	ASG-NW3-BU-RHMB	1
47	Spray Bar Block Kit	ASG-NW3-BU-ADJ-BLK-SP	2
48	Height Adjustment Angle	ASG-NW3-BU-HT-ADJ	2
49 (NS)	Mounting Hardware Kit	ASG-SKMT-AC	2
50	Hex Head Bolt, 1/2-20NF x 6-1/2	ASG-BOLT-1/2-20X6.5	4
51	Hex Head Bolt, 1/2-20NF x 2-1/4	ASG-BOLT-1/2-20X2.25	4
52	Hex Head Bolt, 1/2-13NC x 3-1/2	ASG-BOLT-1/2-13X3.5	2
53	Hex Head Bolt, 1/2-13NC x 1-3/4	ASG-BOLT-1/2-13X1.75	2
54	Hex Nut, 1/2-13NC	ASG-NUT-1/2G5	4
55	Spring Lock Washer, 1/2	ASG-LW-1/2	10

NS = Not Shown

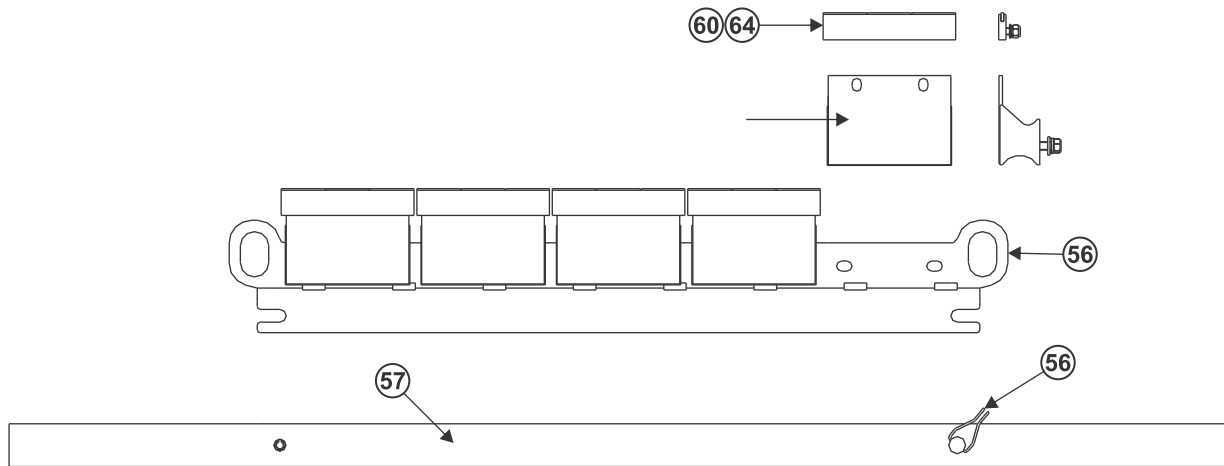


Figure 7. Razor-Back® Secondary Belt Cleaner for Wash Box System

Table X. Razor-Back® Secondary Belt Cleaner for Wash Box System

Item	Description	Part Number	Qty
56	Razor-Back, Blade Holder	ASG-RBBH-XX	2
57	Razor-Back, Mounting Tube	ASG-RBMT-XX-SP-WB	2
58	Razor-Back, Blade Cushion, 6"	ASG-CUS-RZ-6C	Table XI
59	Blade Holder, Locking Pin	ASG-SSKMT-CL	2
60	F-Tip Blade, 6", AR400	ASG-BLD-RZ-6-AR	Table XI
61	C-Tip Blade, 6", TC	ASG-BLD-NW3-6-TC-C	Table XI
62	V-Tip Blade, 6", TC	ASG-BLD-RZ-6-TC	Table XI
63	MDX C-Tip Blade, 6", TC	ASG-BLD-NW3-6-TC-C-MDX	Table XI
64	MDX V-Tip Blade, 6", TC	ASG-MDX-BLD-RZ-6-TC	Table XI

XX = Belt Width (inches)

Table XI. Razor-Back® Cushion / Blade Quantity Per Belt Width

Belt Width	Qty
24 [600]	4
30 [750]	5
36 [900]	6
42 [1050]	7
48 [1200]	8
54 [1350]	9
60 [1500]	10
66 [1650]	11
72 [1800]	12
78 [2000]	13
84 [2100]	14
90 [2300]	15
96 [2400]	16

Note: Belt Width in Inches [Millimeters]

Install Wash Box System

The Wash Box System is a secondary belt cleaning device and as such should be located on the return side of the belt after the belt leaves contact with the head pulley. Preferably it should be located before and after a set of return idlers to help steady the belt, in order to dampen system vibration. This will ensure smooth and direct belt contact on the Razor-Back® Blade Tips. Direction of belt travel shown below, See Figure 8.

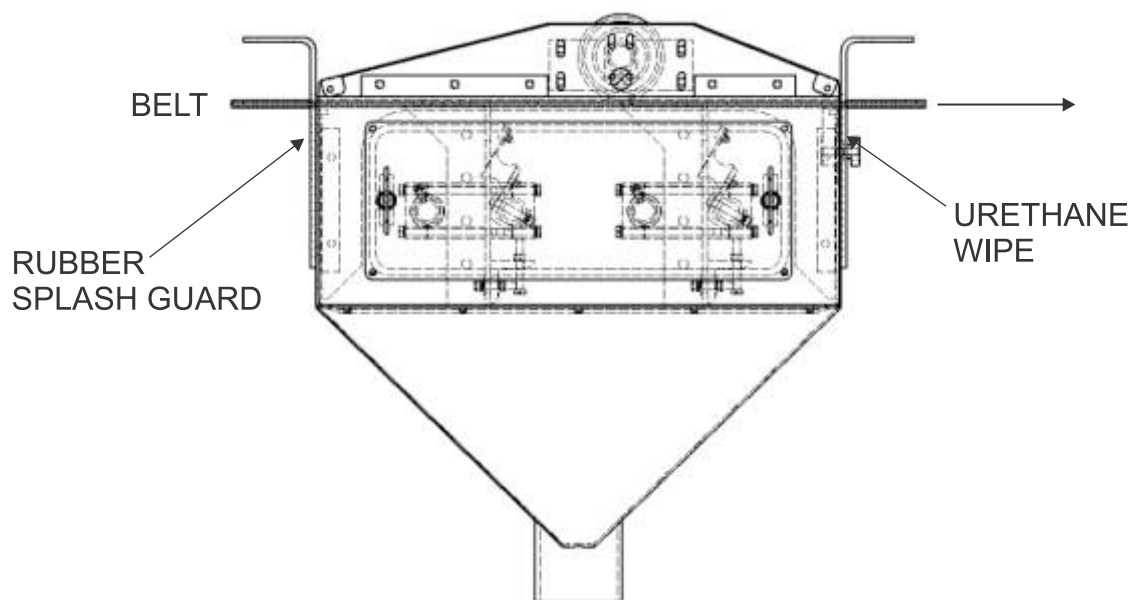


Figure 8. Belt Travel Through Wash Box

The Hangers (17) of the Wash Box mount to the frame / structure of the conveyor system. The Hangers have multiple height adjustment holes. The top inside edge of the Wash Box should be 0 – 1" from bottom of the belt. See Figure 9. In most applications it will be necessary to remove the Hold Down Roller for installation of the Wash Box. Once the Wash Box has been installed in the correct location, the Hold Down Roller can be reinstalled.

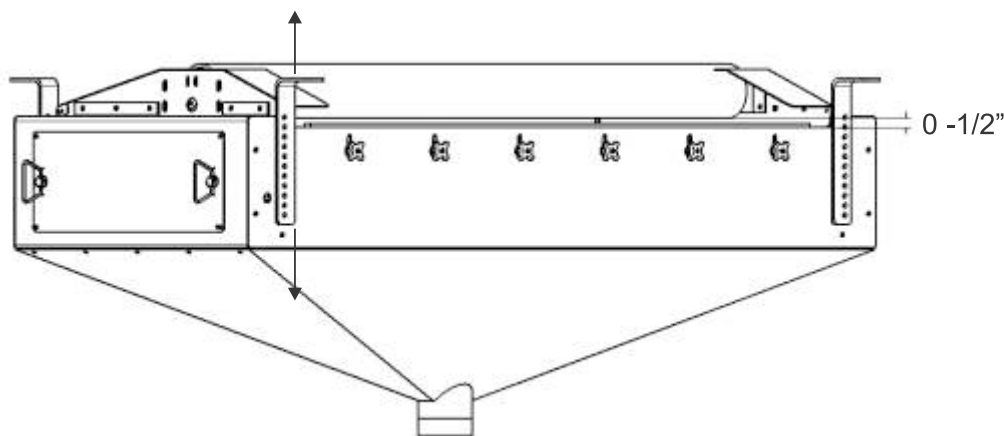


Figure 9. Wash Box Install Height

INTERNAL CLEANER ADJUSTMENTS

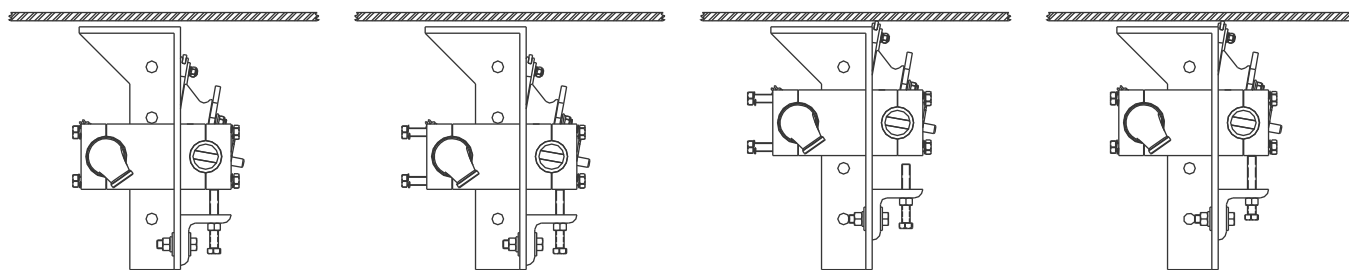


Figure 10. Razor-Back® with Spray Bar Adjustment

Razor-Back® with Spray Bar:

Loosen Hex Head Bolt (50) on both tensioners, this will allow for height adjustment of Razor-Back®.

Adjust height by tightening the Height Adjustment Bolt (52). It may be necessary to move the Height Adjustment Angle (48).

Once belt contact has been made, turn the Adjustment Bolt (52) until the blade tip has moved up a maximum of 1/8".

Make sure Spray Tube is angled 5-10 degrees into the belt travel. Tighten the tube clamp lock bolts (50, 51).

Now test run the conveyor. If chatter occurs, loosen the tube clamp bolts and rotate the blade tip about 5 degrees in the direction of the belt travel (Razor-Back® only).

If cleaning performance is unsatisfactory, slightly increase the force against the belt and test it again. If the cleaner has about 1/8" or more of material to remove, a primary cleaner may be needed.

Hold Down Roll:

Lower or raise the Hold Down Roll so as there is 0 – 1/2" clearance between the bottom of the roll and the top of the conveyor belt. Adjustment of the Razor-Back® will take up the gap.

Urethane Wipe:

Raise the Urethane Wipe by loosening the four-Arm Knobs (23) and raising the Wipe Holder (13) so the urethane is touching the belt. Then tighten the 4-Arm Knobs to lock the Urethane Wipe in place.

Rubber Splash Guard:

Raise the Rubber Splash Guard by loosening the four-Arm Knobs (23) and raising the Wipe Holder (13) so the rubber is one inch from the belt. Then tighten the 4-Arm Knobs to lock the Rubber in place. This is installed to minimize water from exiting the front of the Wash Box.

Setting of Pressure Regulator:

The Pressure Regulator is used to control the pressure feeding the spray bars inside the Wash Box. The optimal pressure is the pressure needed to allow the spray nozzles to function at their full 110 degree spray pattern. In order to correctly set the pressure regulator, it needs to be done by visually watching the spray patterns on the nozzles. The regulator supplied has a range from 30-70 psi. First open the regulator to its full range of 70 psi. While watching the spray nozzles start to close the regulator until you see the 110 degree pattern compromised. Once you see this happen, open the regulator an additional one half turn. This setting will give you the proper amount of water needed.

MAINTENANCE

After one day of operation:

- Inspect the cleaner for proper belt cleaning and operation.

Weekly:

- Frequent inspection is the key to proper belt cleaning and easy secondary servicing. Weekly inspections are recommended, but actual service frequency may vary widely depending on various plant operating conditions
- Hose down inside of the Wash box three to four times a week.
 - Including any build up on the Razor-Back® blade tips front and back and rubber cushions front and back.
- Inspect each spray nozzle
 - To verify that no debris is clogging the tips of the nozzles.
- Run water through nozzles to verify the water flow.
- Adjust urethane squeegee to assure proper contact on the belt.
- Remove any debris build up at urethane squeegee on the outside of the wash box
- Conveyor belt needs to be centered entering the wash box.

Monthly

Every 3-4 weeks both Razor-Back® systems need to be adjusted to ensure proper blade cleaning. Below are the steps to adjusting the Razor-Back® Cleaners.

- Loosen the two horizontal bolts that are attached to the L bracket.
- Loosen the jam nut on vertical jack bolt.
- Rotate the jack bolt 1 revolution.
- Re-tighten the jam nut.
- Tighten the two horizontal bolts that are attached to the L bracket.

TROUBLE SHOOTING

PROBLEM	SOLUTION
Excess vibration of the scraper.	Make certain all bolts are tight. If belt is non-reversing, rotate the blade about 5 degrees in the direction of the belt movement.
Excess carryback.	Check for proper Scraper tension. Put additional tension on cleaner. <i>Check for wear on the cleaning tips</i> Check thickness of carryback. If the cleaner must remove more than about 1/8" of material then an additional cleaner may be needed.
Excess belt movement, cupping	Install a hold down roller to stabilize the belt surface.
Unable to tension scraper properly, belt moves away from blades.	Install a hold down roller to reduce sag of the belt when tensioning.
Frozen material on scraper.	Place heaters near scraper to melt frozen material. <i>(Use caution not to burn belt or cleaner)</i>
Poor Pressure from Spray Nozzles	Check to see if Nozzles are plugged. Check to see if Nozzle filters need to be replaced.