ASGCO
Complete Conveyor Solutions

RAZOR-BACK MDX®

with Spring-Shoc Tensioner System

INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS

Check us out at www.asgco.com

Customer Service
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In Our 4th Decade

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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.

Overall View

If mounting structure is not available, additional steel may have to be added. *Note: Excess mounting tube may be trimmed after installation. In addition two mounting strips will be shipped to you in the event you have ordered the urethane blade Razor-Back unit.*

Components Diagram

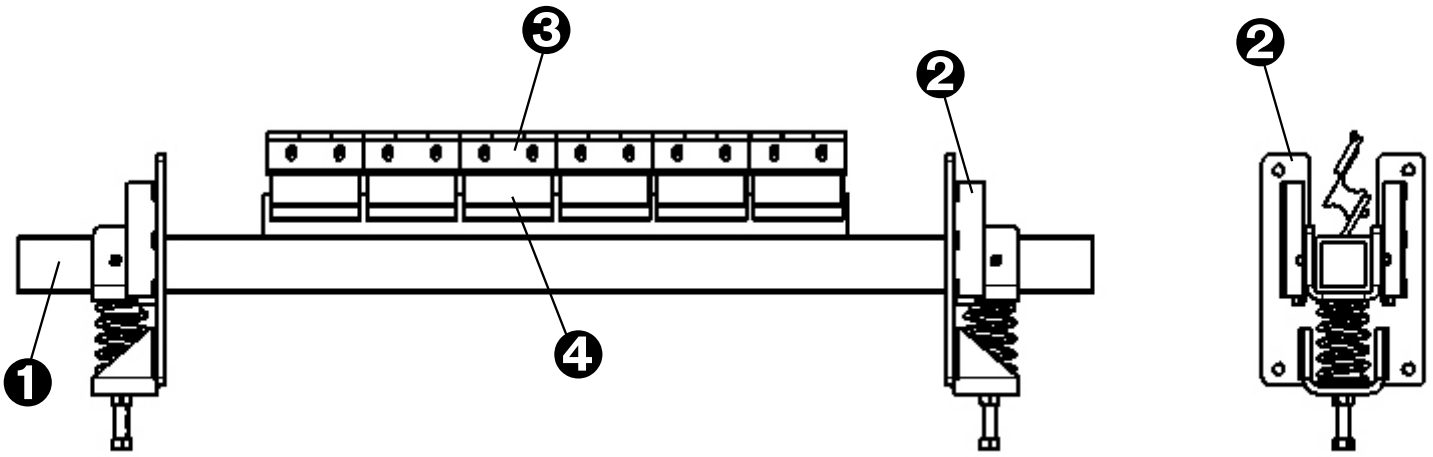

Figure 1. Razor-Back MDX Parts Diagram

1. Razor-Back MDX Mounting Tube
2. Spring-Shoc Tensioner
3. Razor-Back Blade Tip, V-Tip, Shown
4. Razor-Back Blade Cushion

Razor-Back Spring-Shoc Tensioner Components

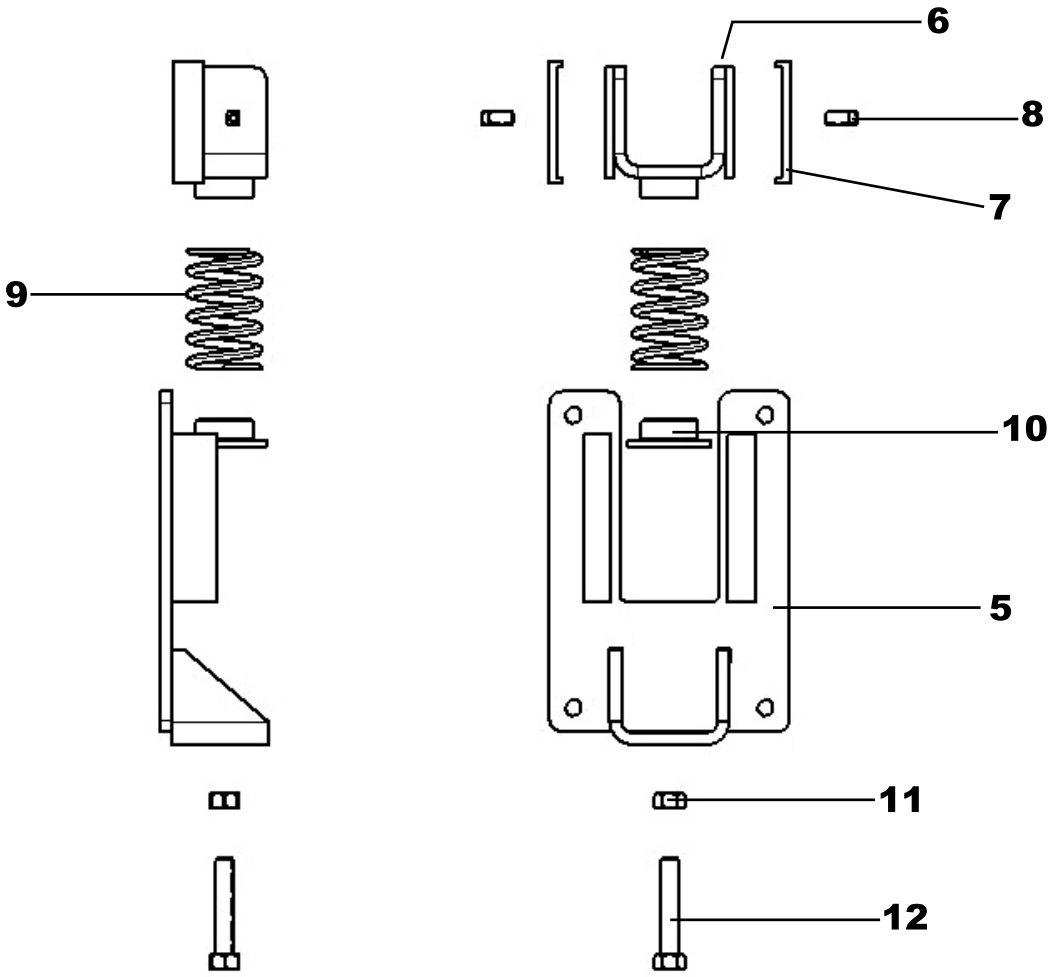

Figure 2. Spring-Shoc Tensioner Parts Diagram

Spring-Shoc Tensioner Parts List	Qty
5. Mounting Bracket	(2)
6. Slide Block	(2)
7. UHMW Slide	(4)
8. Set Screws	(4)
9. Compression Spring	(2)
10. Spring Bushing	(2)
11. ACME Lock Down Nut	(2)
12. ACME Adjustment Bolt	(2)

Determine Location of Cleaner

The Razor-Back MDX is a secondary belt cleaner and as such should be located on the return side of the belt after the belt leaves contact with the head pulley as shown below. Preferably it should be located within the confines of the head or dribble chute. See Figure 3.

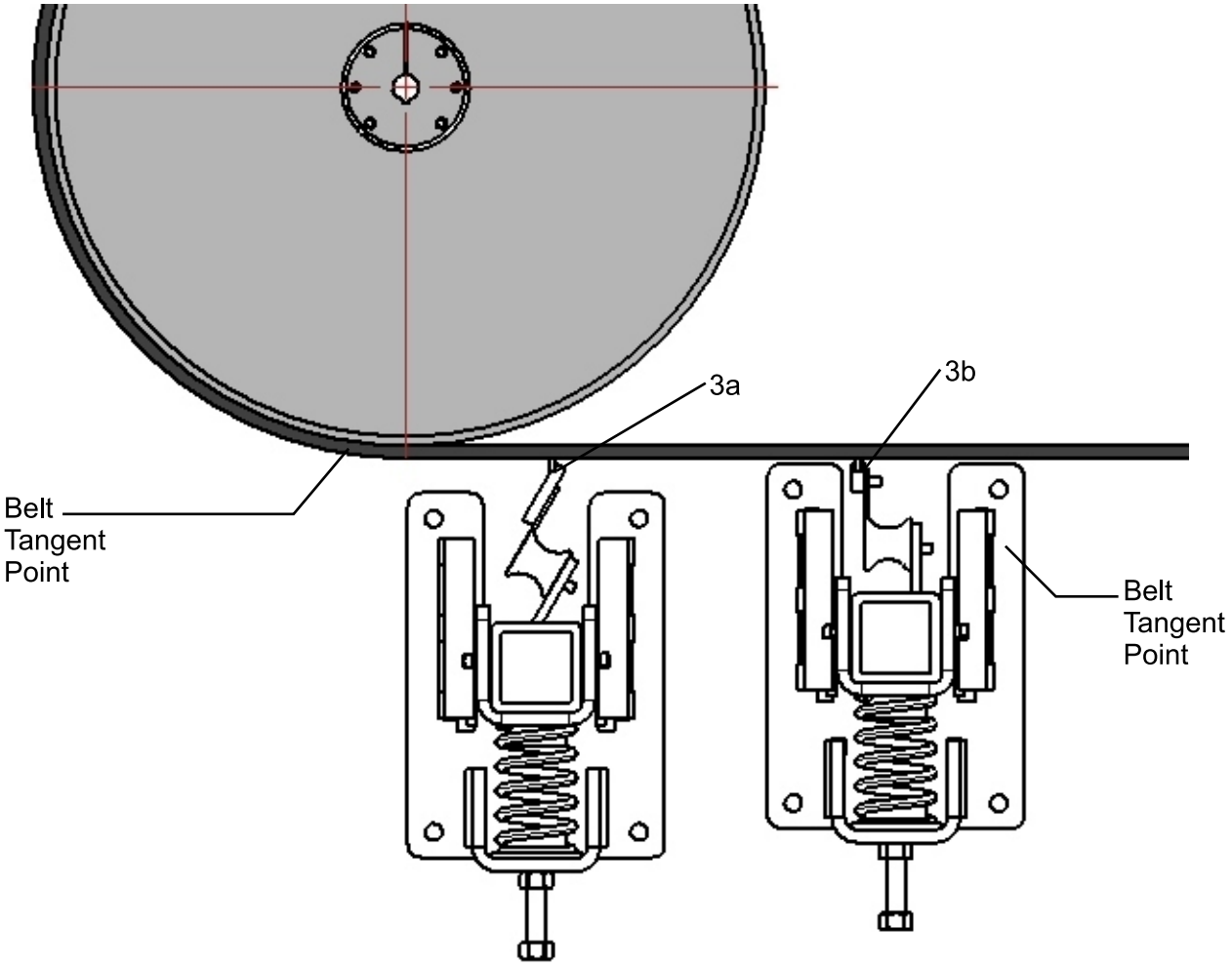

Figure 3. Typical Cleaner Mounting Locations

- The Tips of the Razor-Back MDX should be horizontally located as close as possible to Belt Tangent Point (the point where the belt leaves contact with the head pulley). This will ensure the belt is as flat as possible, to provide the most effective cleaning.
- Do not place the Tips of the Razor-Back MDX against the belt where it is still in contact with the pulley, as this can cause damage to the belt surface.
- Make sure the Mounting Brackets are mounted perpendicular to the belt.
- The recommended minimum clearance between the mounting tube of the Razor-Back MDX and a snub pulley or dribble chute is 5 ½ inches (140 mm).

Locate Mounting Bracket

The Mounting Bracket should be attached to the chute wall or conveyor structure using the four mounting holes and ½ -13 UNC x 2 ½ inch hex head bolts. See Figure 4 for mounting hole dimensions.

NOTE: *The Mounting Brackets can also be welded in place.*

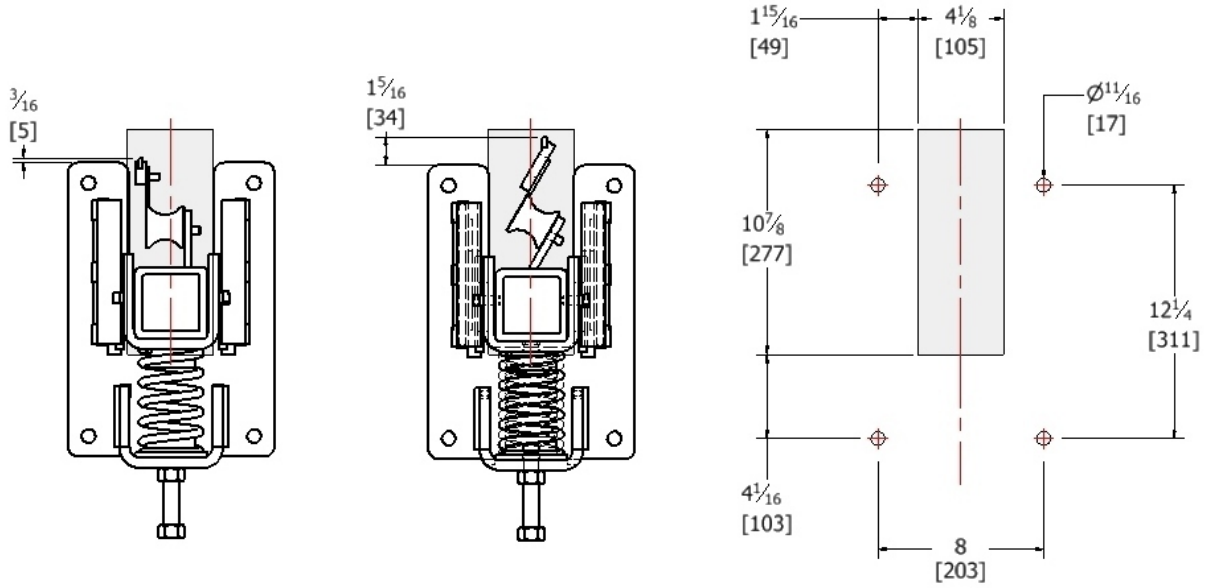

Figure 4: Mounting Bracket Hole Dimensions

- To determine the desired vertical location of the Mounting Brackets. Locate the Mounting Bracket so that the top of the rectangular cut out is approximately even with the bottom edge of the belt. See Figure 4.
- If the Razor-Back MDX is to be installed on a conveyor with an enclosed chute, it may require that slots and holes be cut in to mount the cleaner. If required, mark and cut slots of the chute side wall to allow the Mounting Tube to pass. The required slot size/location and hole size/location are shown in Figure 4.
- Attach Mounting Brackets to conveyor structure or chute sidewall, with provided Hardware or Welding

Install Razor-Back MDX

- With the Mounting Brackets attached, now assemble the Spring-Shoc Tensioners as shown in Figure 2.
- Slide the Mounting Tube with Cushions and Blade Tips attached through the Slide Blocks of the assembled Spring-Shoc Tensioners.
- Center the Blade Tips on the belt by sliding the Mounting Tube in the Slide Blocks.
- With the Blade Tips centered on the belt, firmly tighten the set screws (to approximately 70 ft-lbs) on the Slide Blocks to affix the translation of the Mounting Tube. See Figure 5

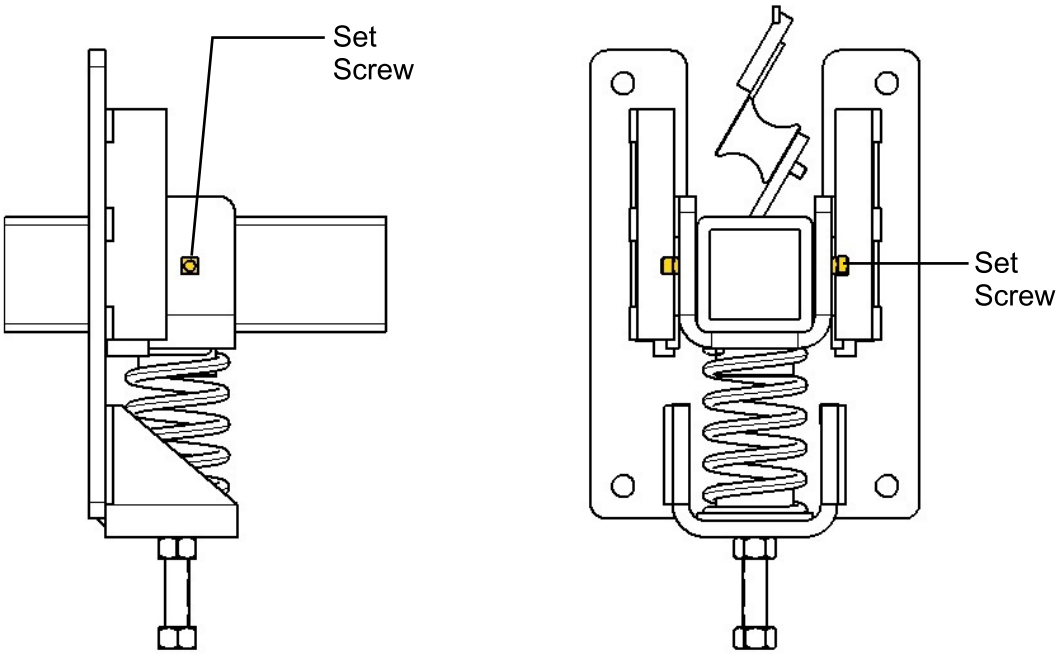

Figure 5: Tighten Set Screws

Tensioning and Operation

- Raise the Slide Blocks by evenly turning the Adjustment Bolts until the Blade Tips just contact the bottom of belt surface. Check that the Blade Tips are evenly contacting the belt along the entire length of the Blade Tips.
- Once uniform blade/belt contact has been achieved, evenly raise the Slide Blocks causing the spring to load. Continue to tighten until sufficient upward force (blade pressure) has been achieved see Table 1.

Table 1. Spring-Shoc Tensioner, Tension Chart

Belt Width		Spring Compression		Spring Height (H)	
(in)	(mm)	(in)	(mm)	(in)	(mm)
36	914.4	9/16	14.2	5 7/16	137.9
42	1066.8	5/8	15.8	5 3/8	135.9
48	1219.2	3/4	19.0	5 1/4	133.6
54	1371.6	13/16	20.6	5 3/16	131.6
60	1524.0	7/8	22.2	5 1/8	129.5
66	1676.4	1	25.4	5	127.5
72	1828.8	1 1/16	26.9	4 15/16	125.2
84	2133.6	1 1/4	31.7	4 3/4	121.2
96	2438.4	1 3/8	34.9	4 5/8	116.8

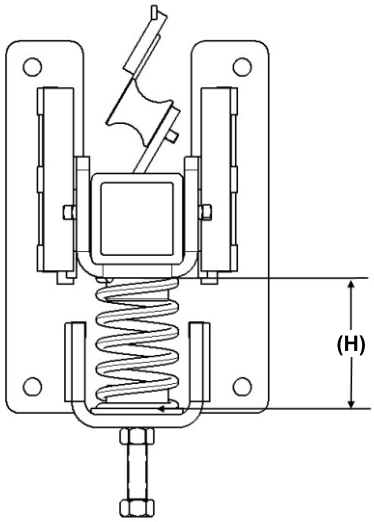

Figure 6: Spring Height (H)

- It maybe possible that there is enough play in the belt that there can be enough downward force via belt weight so that compressing the spring may not be necessary.
- Firmly tighten the Lock Down Nut on the Adjustment Bolt, once appropriate tension is applied.
- Test run the conveyor. If chattering or vibration of the Blade Tips occurs, try increasing the spring compression.

OPERATION & MAINTENANCE

After one day of operation:

1. Inspect the cleaner for proper belt cleaning and operation.

Weekly:

1. Frequent inspection is the key to proper belt cleaning and easy Scraper servicing. Weekly inspections are recommended, but actual service frequency may vary widely depending on various plant operating conditions.
2. Wash the entire cleaner regularly to prevent excessive buildup. If material tends to accumulate on the Scraper Assembly then possible scraper relocation may be in order.
3. Carefully inspect the wear tips of the cleaner blades. Make sure blades are not chipped or worn out.
4. Inspect the belt surfaces and edges for cracks, splits, tears, holes or any other worn or damaged condition occurring on the surfaces or edges of the belt itself. If necessary make repairs to the belt.

REPLACEMENT AND RE-TENSIONING OF CLEANING BLADES

1. Lower the Mounting Tube by loosening the Adjustment Bolt on both sides of the cleaner. This will disengage the cleaner Blade Tips from the belt.
2. To remove the mounting tube from the conveyor frame, loosen the Set Screws from both Slide-Block collars.
3. Slide the Mounting Tube out with Blades Tips and Cushions attached out through the Mounting Bracket.
4. Loosen and remove the nuts and washers holding the Blade Tips onto the Razor-Back Cushion.
5. Remove the worn Blade Tips and discard.
6. Position new Blade Tips on the Razor-Back Cushions and reinstall the nuts and washers to hold the Blade Tips on the Razor-Back Cushions, making sure the Blade Tips are flush along the leading edge.
7. Install and center Mounting Tube, tighten Set Screws and engage Blade Tips according to above directions.

TROUBLESHOOTING

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 carry-back.	Check for proper Scraper tension. Put additional tension on cleaner.
Check for wear on the cleaning tips.	Check thickness of carry-back. If the cleaner must remove more than about 1/8" of material then a pre-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. (Use caution not to burn belt or cleaner)

Information

Key	Description	Part Number
1	Mounting Tube	ASG-MDX-RBMT - (BW) [BW] = Belt Width
2	Spring-Shoc Tensioner	ASG-MDX-RB-ST
3a	V-TIP, MDX	ASG-MDX-BLD-RZ-TC
3b	C-TIP, MDX	ASG-BLD-NW3-6-TC-C-MDX
4	Blade Cushion	ASG-CUS-RZ-6C
5	Mounting Bracket	ASG-STMDX-MB
6	Slide Block	ASG-STMDX-SB
7	UHMW Slide	ASG-MDX-RZ-UHMW-GUIDE
8	Set Screws	AS-SCREW-C08x016
9	Compression Spring	ASG-STMDX-SPRING
11	ACME Lock Down Nut	ASG-RSS-3/4-6-NUT
12	ACME Adjustment Bolt	ASG-RSS-3/4-6x5

Call your ASGCO Distributor for any questions or replacement parts