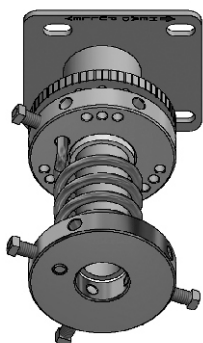
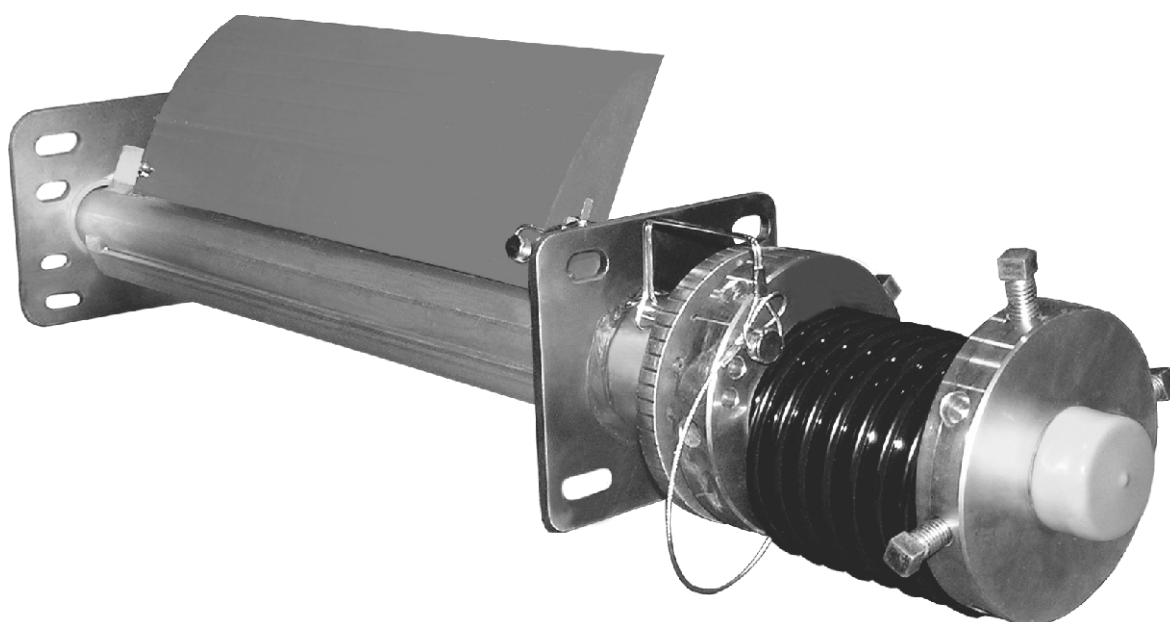




# PIT-SKALPER<sup>®</sup>

*with E-Z Torque<sup>®</sup>*

## INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS



**E-Z Torque<sup>®</sup>**

U.S. Patent No. 5,992,614  
Other Patents Pending

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ASGCO Mfg., Inc.  
301 Gordon Street  
Allentown, PA 18102  
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FAX 610-778-8991

## Important Safety Notice

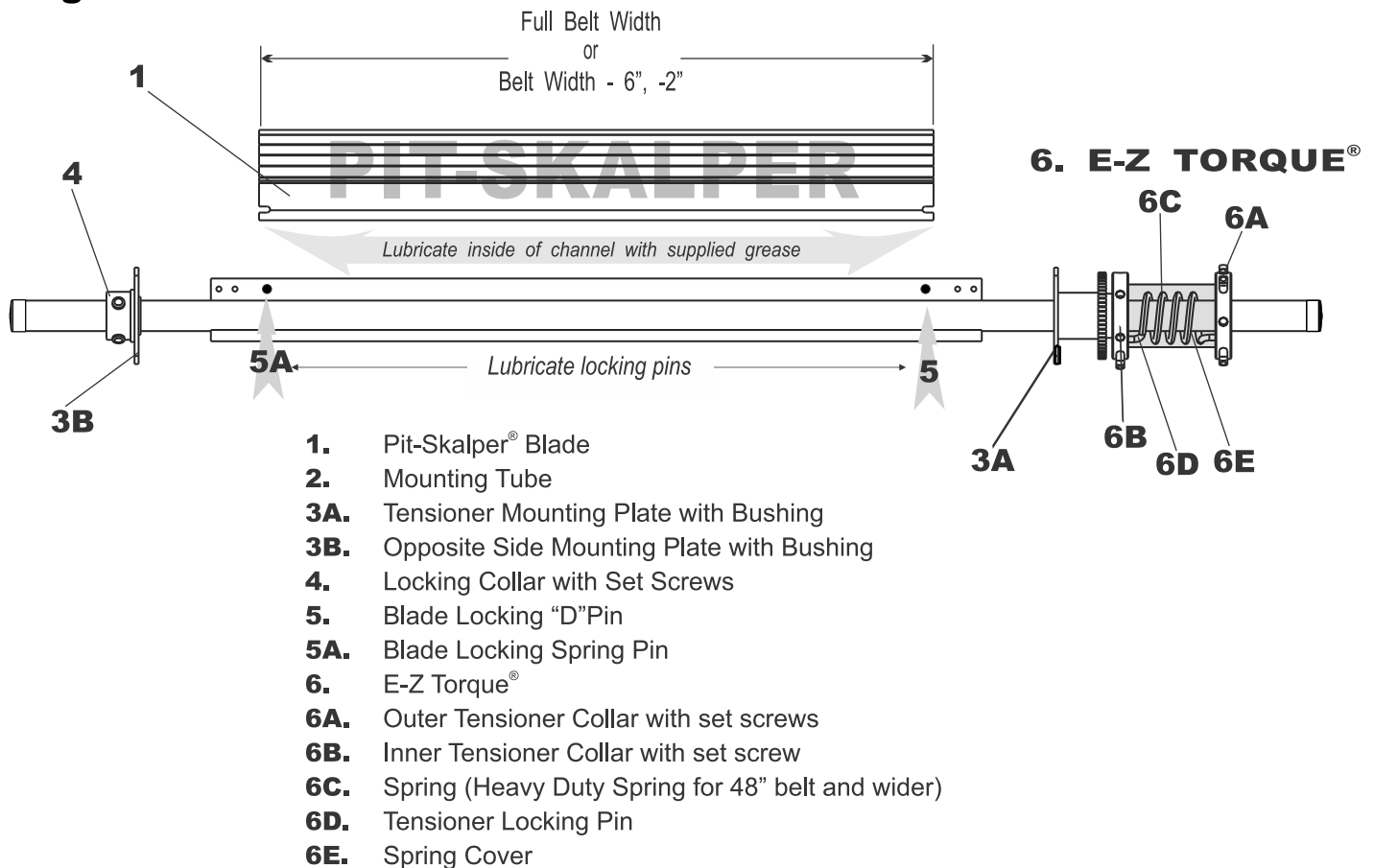
*Always observe the basic rules of safety when working with any conveyor system. To avoid injury and equipment damage, be sure that all controls to the conveyor are locked out and the power source is disconnected at all times during installation.*



## Overall View

If mounting structure is not available, additional steel may have to be added. *Note: Excess mounting tube may be trimmed after installation. Also note required lubrication of components.*

## Components Diagram



## 1. Determine the Critical "N" Dimension

Determining the "N" dimension, the distance from the belt surface to the mounting tube center, is critical to get the maximum cleaning performance from your system. Make sure mounting tube and tensioner system are clear of obstacles.

<b>"N" Dimension Table</b>	
Pulley Diameter inches [mm]	"N" Dimension inches [mm]
Note the tolerance is $\pm \frac{1}{4}$ " [6mm]	
12" [300mm]	4" [102mm]
14" [350mm]	3-3/4" [95mm]
16" [400mm]	3-1/2" [89mm]
18" [450mm]	3-3/8" [86mm]
20" [500mm]	3-1/4" [83mm]
24" [600mm]	3" [76mm]

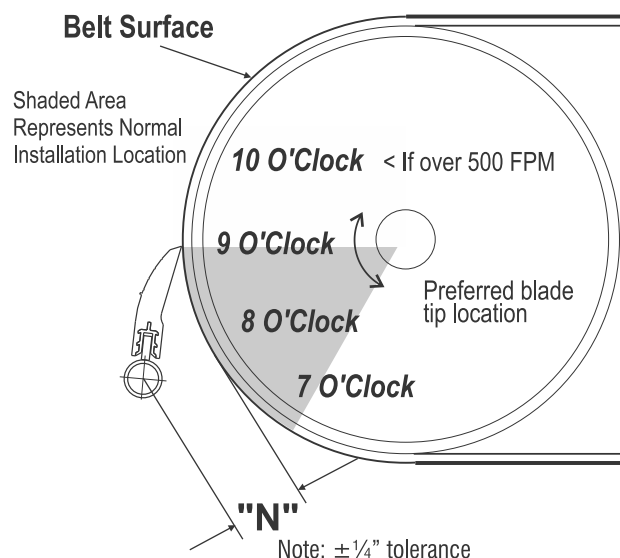
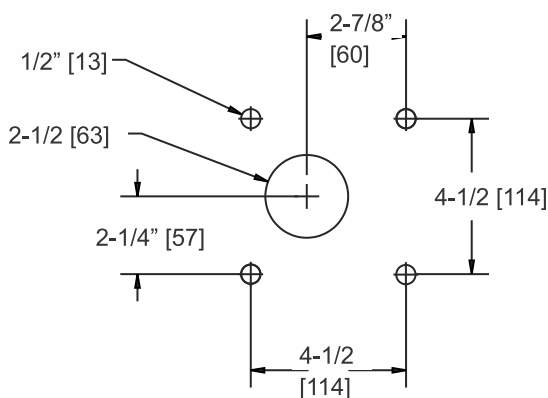


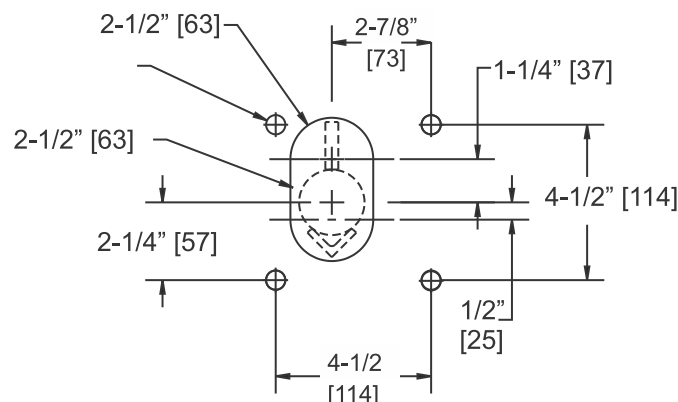
Figure 1: Typical Mounting Position

## 2. Cut Chute Openings

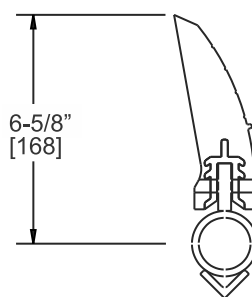
Determine the desired location of the mounting brackets. The required slot sizes/locations are shown for the tensioner side chute cut outs.



**Opposite Side Chute Cut Out**



**Tensioner Side Chute Cut Out**  
Mounting Tube with T-Bar



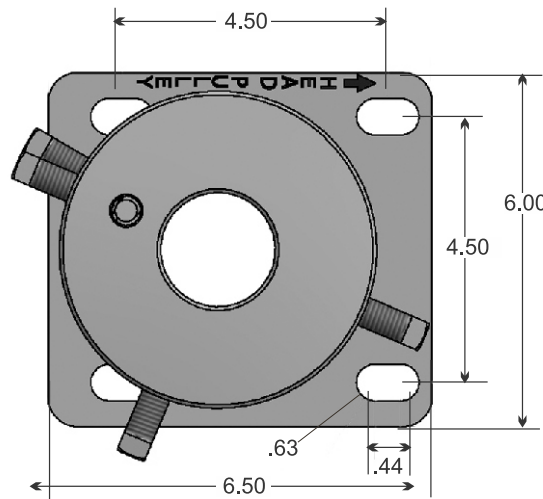
**Blade Height**

### 3. Put Mounting Tube through Cut Outs

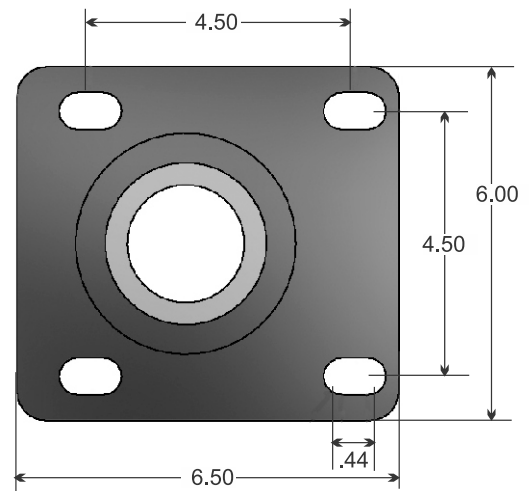
Place the mounting tube through the chute cut outs so that the long tube section is on the tensioner side. Place the blade onto the blade holder. Visually check the blade position and contact with the belt/pulley.

### 4. Mount Brackets

Determine the desired location of the mounting brackets. Attach the mounting brackets to the conveyor frame by welding or bolting. Place offset on bracket away from head pulley. **The arrow on the mounting bracket points towards the head pulley.**



**Tensioner Side**

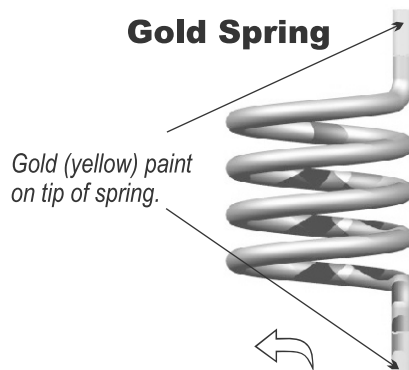


**Opposite Side**

### 5. Select Correct Spring

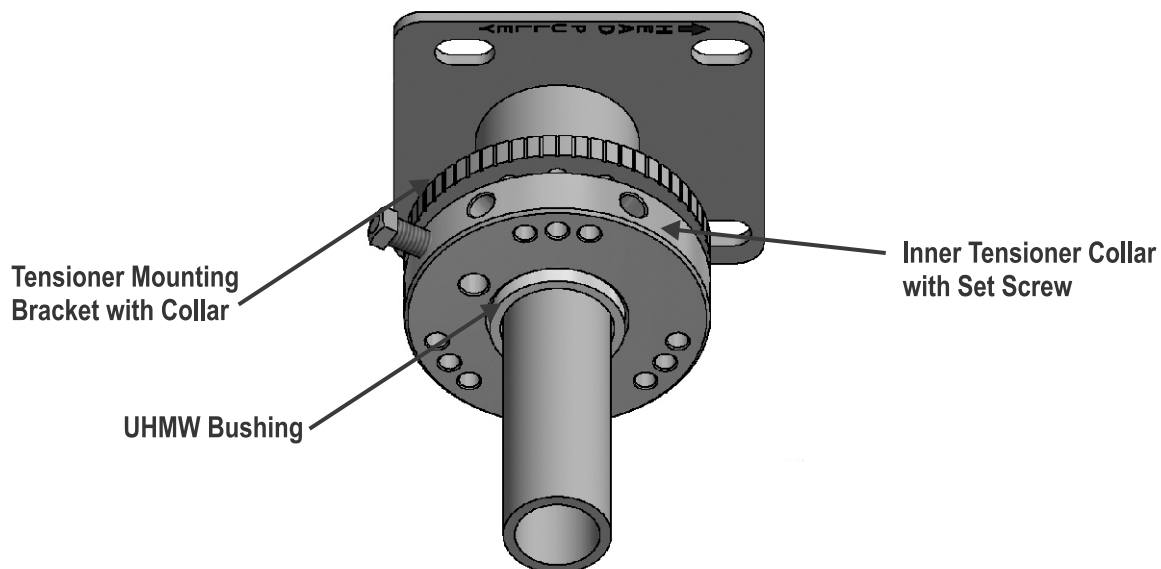
Each Pit-Skalper® System is shipped with two springs of opposite handedness. To determine the proper spring to use:

Face the head pulley as the material would come to you. If the E-Z torque tensioner is on the *right* side, then use the Silver Spring (entire spring is silver-grey). If the tensioner is to your *left*, then use the Gold Spring (yellow tipped spring).

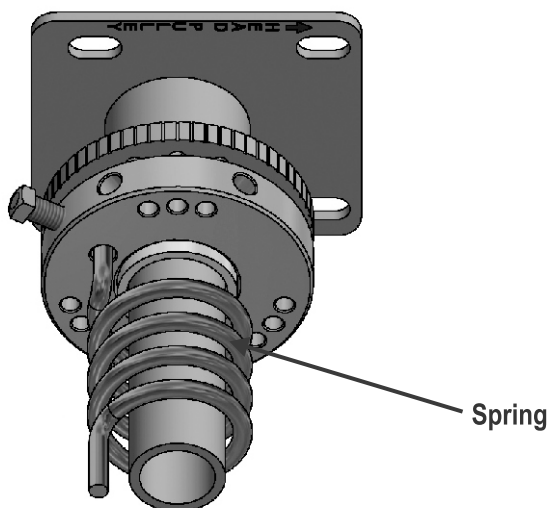


## 6. Assemble E-Z Torque Tensioner:

Assemble the components of the E-Z Torque tensioner. Tighten all set screw to 70 ft./lbs.

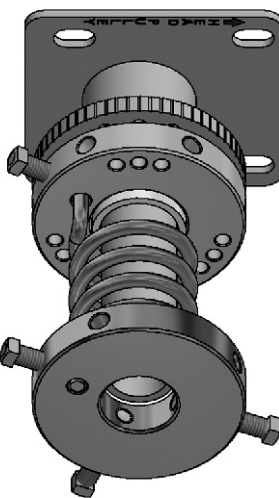


Slide UHMW bushing onto the tensioner mounting bracket. Then slide the inner tensioner collar onto the UHMW bushing.



Insert one end of the spring into the Inner Tension Collar. The end of the spring should be seated all the way through the collar. Ring should be able to move freely though out installation. Do not tighten set screw until both collars are in place.

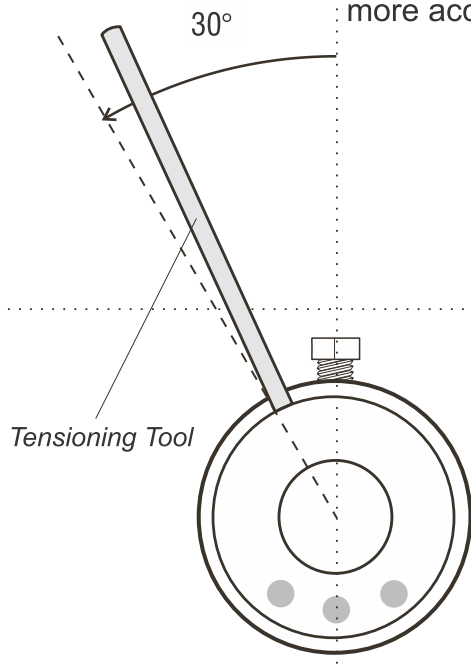
Outer Tension Collar  
with Set Screws



Slide the Outer Tension Collar onto the pipe and spring. With both collars in place, tighten the set screws on both ends of the spring and the set screws on the mounting tube. Assemble the components of the E-Z Torque® tensioner. Tighten all set screws to 70 ft./lbs.

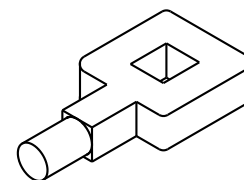
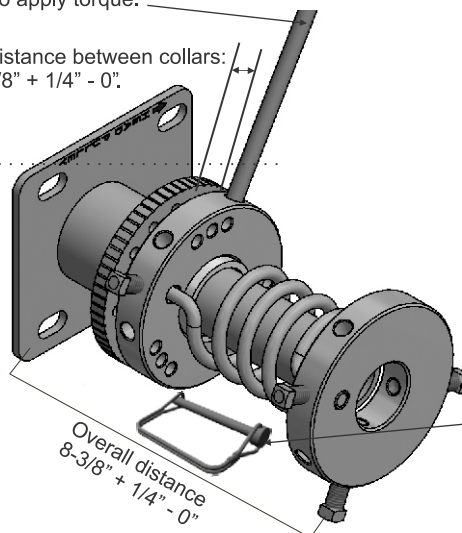
## 7. Tension Assembly

Set torque to approximately one (1) lb. of force per inch of blade width - approximately 30 lbs of force for a 30" blade. For the standard duty spring, 1 degree of collar rotation will apply about 1 ft-lb of torque (1 ft-lb torque will give approximately 1 lb force at the blade tip). For the heavy duty spring, assume approximately 2 ft-lbs of torque per degree of rotation. Decrease or increase the torque as necessary. Using the minimum amount of blade force required to clean the belt will extend blade life. The tensioning rod will enable approximate blade tensioning. Use a torque wrench with adapter to more accurately tension the blade.



Insert rod into collar  
as shown and turn collar  
to apply torque.

Distance between collars:  
 $3/8" + 1/4" - 0"$



Torque Wrench  
Adapter

Overall distance  
 $8-3/8" + 1/4" - 0"$

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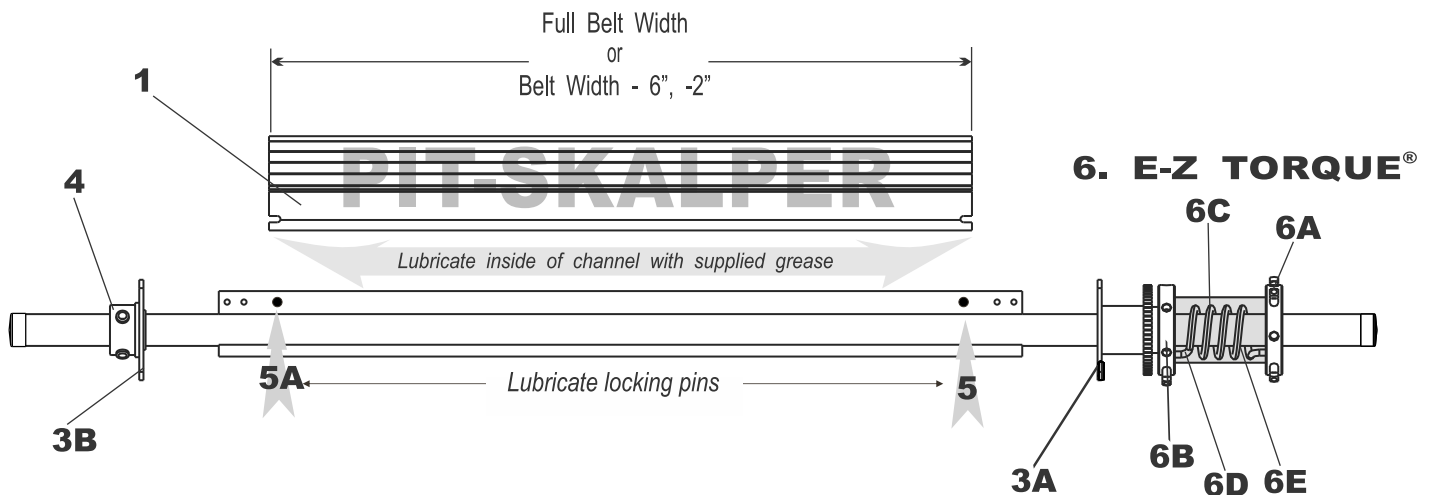
## **8. Maintenance:**

- 1.)** Frequent inspections 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.)** 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. Wash the entire cleaner regularly to prevent excessive build-up. Check the tightness of all fasteners.
- 3.)** Inspect for proper operation. Adjust tension as required.
- 4.)** Replace the Pit-Skalper® scraper blade as required. Use only ASGCO® “Complete Conveyor Solutions” approved replacement scraper blades.

## Information

Key	Description	Part Number
1	Pit-Skalper® Blade Replacement	ASG-PS[X]-[BW]A [X]=Blade Type, [BW]=Blade Width
2	Pit-Skalper® Mounting Tube	ASG-PSMT-[BW]A
3A	Mounting Bracket Tension Side	ASG-EZT-TS-ASM-PS-1 (Includes Bushing)
3B	Mounting Bracket Opposite Side	ASG-F1-MB-OS-PS-1
	Bushing (Off-Side)	ASG-F1-UHMW-BUSHING
4	Locking Collar with Set Screws	ASG-F1-LC-PS-1
5	Locking "D" Pin	ASG-PS-LP-1/4X3-1/8
5A	Offside Spring Pin	ASG-PS-RP-6/16X2-1/2
6	E-Z Torque®	M-ASG-EZT-PS-1
	Bushing (Tension Side)	ASG-UHMW-BUSHING
6A	Outside Collar	ASG-EZT-OCHS-PS-1
6B	Inside Collar	ASG-EZT-ILC-PS-1
6C	Spring	ASG-ROT-[LS or RS]-1242
6D	Locking Pin (Tensioner)	M-ASG-ROT-LPC-HDOP
	Rotary Tensioning Tool	ASG-ROT-TT-SS
6E	Spring Cover	ASG-EZT-SPRING-COVER

*Call your ASGCO Distributor for any questions or replacement parts*





## TROUBLE SHOOTING

PROBLEM	SOLUTION
<i>Excess vibration of the scraper.</i>	<p>Make certain all bolts are tight and the pin is securely engaged on the tensioner.</p> <p>Ensure the cleaners n-dimension is proper (See Table and Figure 1).</p>
<i>Excess carryback.</i>	<p>Check for excess build-up on the scraper.</p> <p>Check for proper Scraper tension. Put additional tension on cleaner.</p> <p>Check for non-uniform scraper wear.</p> <p>Check N-dimension.</p> <p>Clean the back-side of the belt cleaner.</p>
<i>Check for wear on the cleaning tips.</i>	<p>Check thickness of carry-back. If the cleaner must remove more than about 1/8" of material then an additional cleaner may be needed.</p>
<i>Frozen material on scraper.</i>	<p>Place heaters near scraper to melt frozen material. (Use caution not to burn belt or cleaner)</p>
<i>Blade wearing in center</i>	<p>Install a new blade that concentrates cleaning in the center of the flow of the material. (Belt Width - 6" or Belt Width - 12")</p>
<i>Blade wearing more on one side</i>	<p>Check N-dimension.</p>
<i>Breaking Tensioner Pin</i>	<p>Consider the type of splice in the belt. If there is a mechanical fasteners splice, make sure the belt top cover is skived to allow the cleaner to pass over the splice.</p>