SFL Mine Duty Belt Scraper

Read and understand equipment operators manual before operating or performing maintenance. Failure to do so could result in serious injury or death.

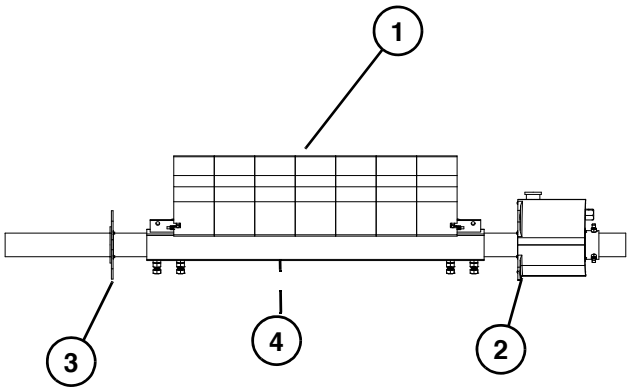
⚠ WARNING

Heed to the following warnings. Failure to do so could result in death or serious injury.

- Lockout/Tagout/Blockout before performing maintenance or installation.
- Attempting to further tension unit may result in damage.

Overview

Figure 14

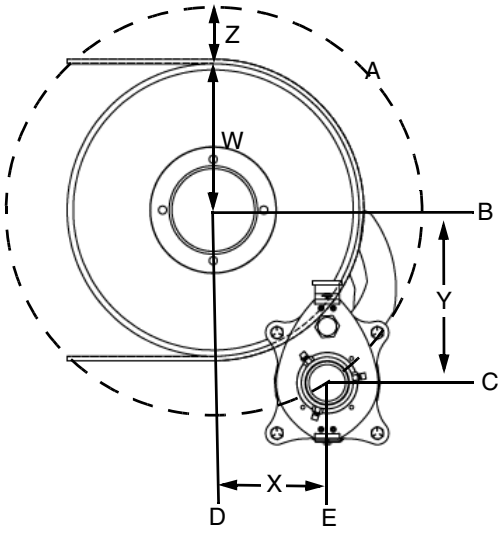


Refer to figure above and description below for SFL Mine Duty Scraper *(Figure 14)* components:

1. Primary Blade
2. Shaft Tension Assembly
3. Shaft Mounting Bracket
4. Blade Mounting Tube

Installing Belt Scraper

Figure 15



Refer to *(Figure 15)*

1. Measure distance from center of pulley shaft to outside belt surface “W”.
2. Add “Z” value from chart *(Figure 15)* to “W” measurement draw an arc (Label Line “A”).

Note: If no structure is available for hole locating, add additional mounting plate.

3. Draw a horizontal line from center of pulley shaft outward parallel to belt travel (Label Line “B”).
4. Measure down from Line “B” value “Y” from chart *(Figure 15)* and draw a horizontal line parallel to Line “B” (Label Line “C”).
5. Draw a vertical line from center of pulley shaft downward perpendicular to belt travel (Label Line “D”).
6. Measure across from Line “D” value “X” from chart *(Figure 15)* and draw a vertical line parallel to Line “D” (Label Line “E”).
7. Where Line “A”, Line “C” and Line “E” intersect is the center point for shaft mounting bracket.

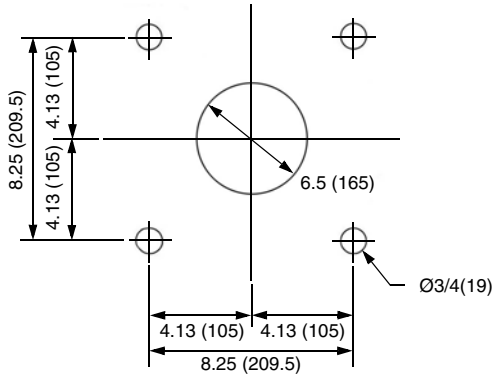
NOTICE

- Measurements should always be parallel and perpendicular to belt travel. Proper placement insures proper tension.

Pulley Diameter 24in (559mm)-30in (762mm)

Pulley Radius ("W") in (mm)*	*("Y") in (mm)*	*("X") in (mm)*	*("Z") in (mm)*
12 (305)	15 (381)	8 (203.2)	4.625 (117.475)
13 (330)	16 (406.4)	8.25 (209.55)	4.625 (117.475)
14 (356)	17 (431.8)	8.5 (215.9)	4.625 (117.475)
15 (381)	17 (431.8)	10.5 (266.7)	4.625 (117.475)
*includes lagging and belt			

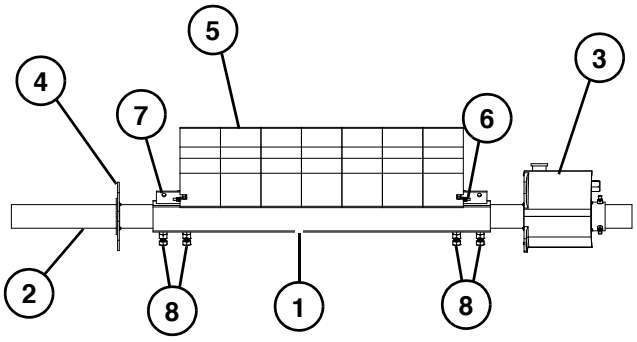
Figure 16



8. Drill holes for shaft mounting bracket. Template is also provided with SFL Mine Duty Scraper. *(Figure 16)*

9. Repeat steps 1-9 on opposite side of conveyor.

Figure 17



10. Place blade mounting tube (1) *(Figure 17)* into desired position and slide ends of telescoping tube with angles (2) *(Figure 17)* into mounting tube.

Note: Ensure angle on telescoping tube is fully inserted into mounting tube.

11. Slide tensioner assembly (3) and opposite mounting bracket (4) onto telescoping tube and bolt *(Figure 17)*.

Note: Tensioner needs to be installed in the correct direction to operate. When looking from tail toward head on conveyor a tensioner should be mounted on either the left or right of conveyor. Tensioner may be rotated to any convenient position on telescoping tube.

12. If blades (5) were removed during installation, Position groove of blades on blade mounting tube and secure blades together with threaded rod (6) on each side of tube. *(Figure 17)*

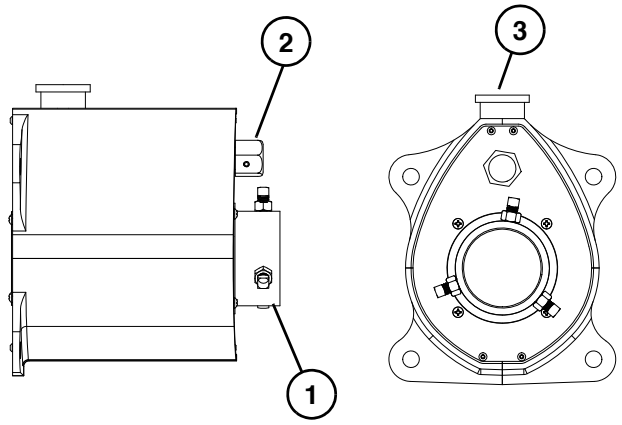
Note: Curve of blade faces belt.

13. Secure blades with pins (7) *(Figure 17)*.

14. Position blade to rest on center of belt.

15. Onces in desired location tighten bottom bolts (8) *(Figure 17)* to secure telescoping tube.

Figure 18



16. Turn tensioner sleeve (1) *(Figure 18)* away from pulley to take up any spring slack and tighten set screws.

Note: While blade stays in contact with belt turn left side tensioner counter-clockwise and right side tensioner clockwise.

17. Rotate tensioning nut (2) *(Figure 18)* to tension scraper.

Note: Ratchet pawl (3) *(Figure 18)* will move up and down to prevent spring from violently unwinding.

Note: Be sure to rotate nut opposite rotation of scraper tube, away from pulley.

18. Rotate tensioning nut until ratchet pawl clicks 7 times. Scraper is now fully tensioned.

Note: Attempting to further tension unit may result in damage.

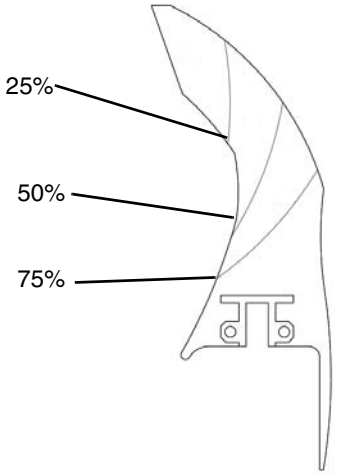
Maintenance

Weekly

- Check primary and secondary blades for excessive wear.

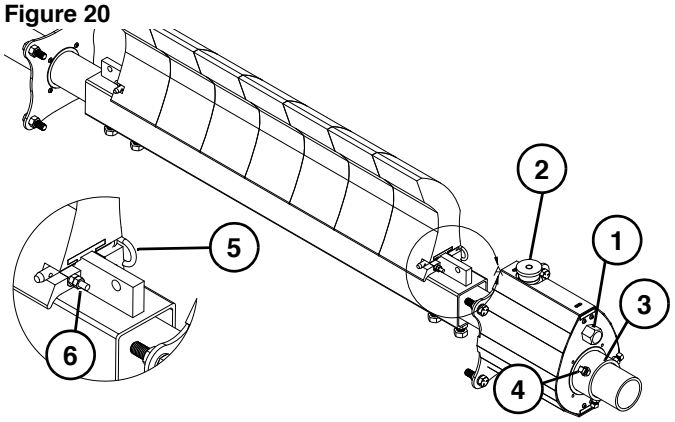
Blade Replacement

Figure 19



Average for the primary blade (1) *(Figure 19)* is to replace blade between 50%-75% worn. Material being conveyed determines how often replacement is needed.

Figure 20



1. Use wrench to apply slight pressure in tension direction on tensioning nut (1) *(Figure 20)*.
2. Pull and hold ratcheting pawl (2) *(Figure 20)*.

Note: Spring will unwind once ratcheting pawl has been lifted. Use wrench to gently relieve tension.

Note: Be sure to keep control of tensioning nut as it will rotate with spring.

3. Once untensioned, loosen set screws (3) on tensioner sleeve (4) so blade can freely rotate *(Figure 20)*.
4. Remove pins (5) *(Figure 20)* from blade edges and pull out blade section.
5. Remove threaded rods (6) *(Figure 20)* from blade inserts and swap out necessary blades.
6. Complete steps in reverse to re-install.

Specifications

Blade Width 12in-78in (304.8mm-1981mm)
Primary Blade Material .....87A Urethane
Fits Belt Widths..... 18in-84in (457mm-2134mm)

Troubleshooting

If the problem you are experiencing is not listed or the solution does not solve the problem call Superior Industries for help.

Problem	Cause
Excessive blade wear.	1
Blade wears in center more than ends.	2
Insufficient belt cleaning and carry back.	1

1. Check mounting location for proper placement.
2. Pulley may be crowned. Use 6in or 12in (152mm or 304mm) minus belt width for blade length.