

EZP-LS Precleaner

Installation, Operation & Maintenance Manual



Pre-installation Checks and Options

Checklist

- Check that the cleaner size is correct for the beltline width
- Check the belt cleaner carton and make sure all the parts are included
- Review the “Tools Needed” list on the top of the installation instructions
- Check the conveyor site:
 - Will the cleaner be installed on a chute
 - Is the install on an open head pulley requiring mounting structure (see 3.3 - Optional Installation Accessories)
 - Are there obstructions that may require cleaner location adjustments (see 3.2 - Cleaner Location Adjustments)

Cleaner Location Adjustments

In certain applications it is necessary to modify the location of the precleaner pole due to permanent obstacles that obstruct the desired location. Relocating the pole location can be done easily and does not hinder the performance of the cleaner as long as the “C” dimension is maintained.

NOTE: In the following example we will be lowering the pole location in the “Y” direction, but the same method could also be applied in the “X” direction.

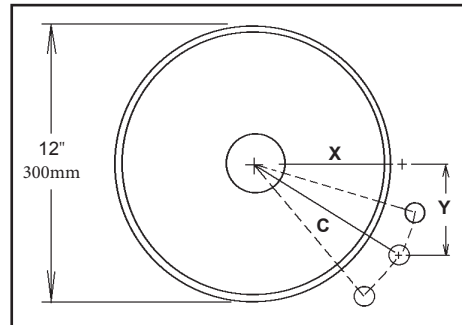
Conveyor situation:

Pulley Diameter: 12" (300mm)

X=6 1/8" (155mm)

Y=5 1/2" (140mm)

C=8 1/4" (210mm)



- Determine the given location dimensions and define the change needed.** After laying out the given X & Y dimensions, determine the distance of the modification required for adequate clearance of the pole and tensioning system. (In the example we decide to lower the pole 2" (50mm) to clear the support structure).
- Write down known dimensions.** We can now determine two of the three required dimensions which will allow us to find the third. We know we cannot alter the “C” dimension, so this will remain the same. Also we are required to lower the unit in the “Y” dimension 2" (50mm), so we add 2" (50mm) to the given “Y” dimension.

$$X = ?$$

$$Y = 5 \frac{1}{2} + 2 = 7 \frac{1}{2} \text{ (140mm + 50mm = 190mm)}$$

$$C = 8 \frac{1}{4} \text{ (210mm)}$$

- Determine final dimension.** On a flat vertical surface, using a level, draw one horizontal line and one vertical line, creating a right triangle (Fig 3a). Measure down from the intersection the determined “Y” dimension and mark (Fig 3b). With the tape measure starting at the modified “Y” mark, swing the tape across the “X” line and mark at the “C” dimension where it crosses the “X” line (Fig 3c). Measure from the intersection to the “C” intersection and this will be your new “X” dimension (Fig 3d).

$$X = 3 \frac{1}{2} \text{ (89mm)}$$

$$Y = 7 \frac{1}{2} \text{ (190mm)}$$

$$C = 8 \frac{1}{4} \text{ (210mm)}$$

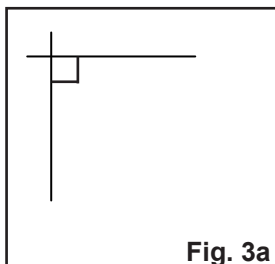


Fig. 3a

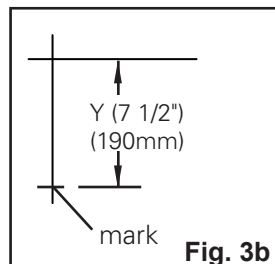


Fig. 3b

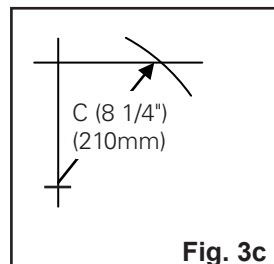


Fig. 3c

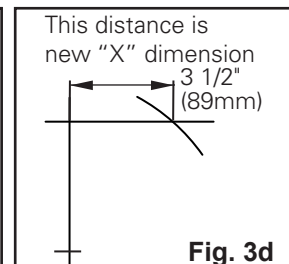


Fig. 3d

Pre-Installation Checks and Options (cont.)

Correct Blade Installation and Tensioning

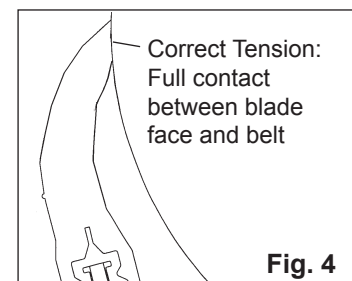
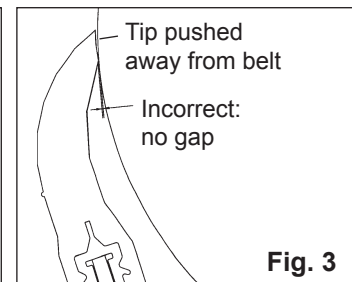
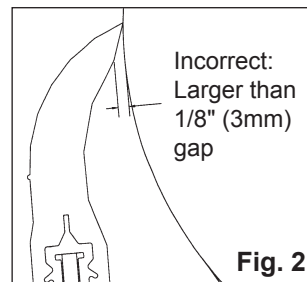
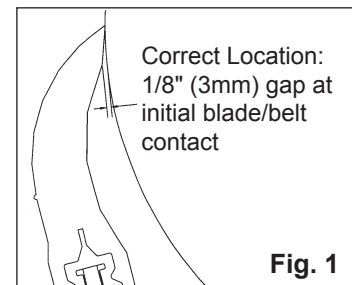
For optimal cleaning efficiency and long wear life, the ConShear™ LS blade must be located and tensioned correctly on the belt head pulley. If the cleaner pole is in the wrong location the performance of the new blade may be adversely affected. See “Possible Problems” below. For tensioning, please follow these instructions.

Correct Location:

When blade contact is made against the head pulley (prior to tensioning) there should be a 1/16" to 1/8" (1.5mm to 3mm) gap at the bottom of the blade face (Fig. 1).

Possible Problems:

- Pole location too far out - The initial blade/belt contact gap will be larger than 1/8" (3mm) (Fig. 2). If the blade is correctly tensioned it may flip through before it is fully worn. If tensioned too lightly, it will develop the “smile effect” quickly and not clean properly.
- Pole location too far in - If there is no gap at the initial blade/belt contact (Fig. 3), the tip of the blade may not be touching the belt. In this case, the blade will push away and lose its shearing (cleaning) effect. The blade may also develop a flap at the tip which may trap material.



Correct Tensioning:

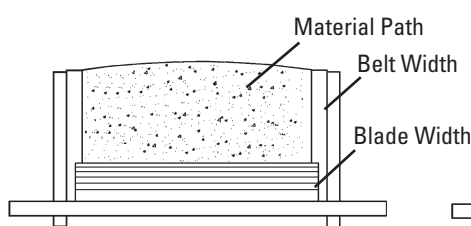
The blade should be tensioned until the gap is gone (Fig. 4).

The Material Path Option™

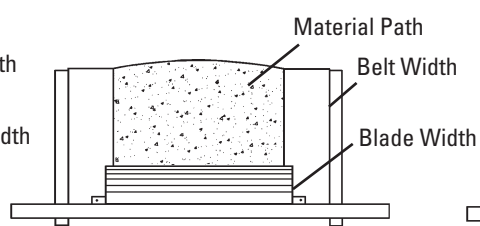
For optimal cleaning and reduced blade retensioning, the cleaner blade width should be sized to fit the material path of the belt. The material path is typically the center 2/3 of the belt width. Choosing a blade only slightly wider than the material path can decrease differential blade wear which reduces blade retensioning maintenance, as well as reducing the frequency of blade replacement.

Match blade width to belt's material path

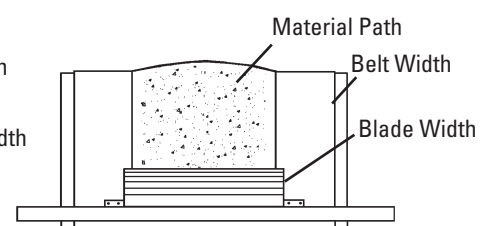
Belt Width Minus 2" (50mm)



Belt Width Minus 8" (200mm)

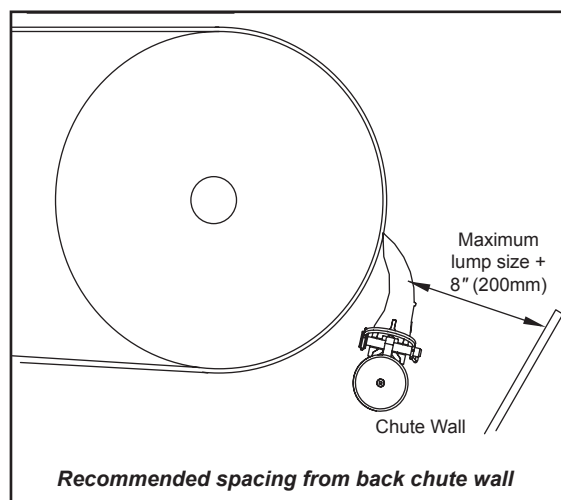
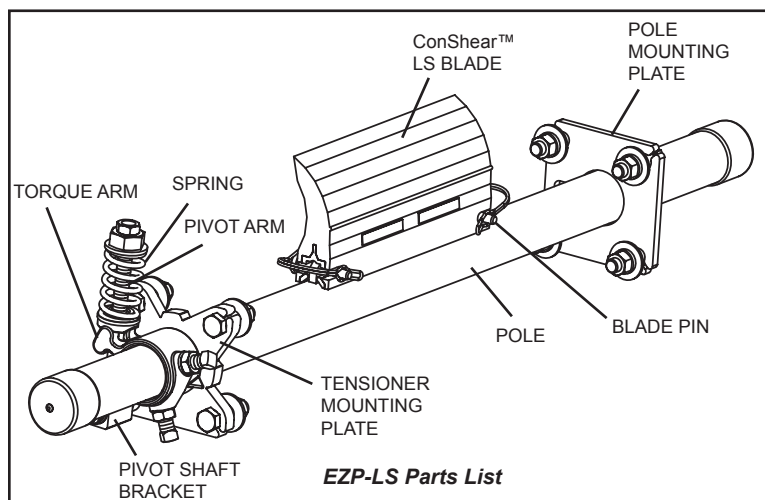


Belt Width Minus 14" (350mm)



Installation Instructions - EZP-LS

Limited Space Precleaner



PHYSICALLY LOCK OUT AND TAG THE CONVEYOR AT THE POWER SOURCE BEFORE YOU BEGIN CLEANER INSTALLATION.

Installation specs and instructions are based on the assumption that the conveyor is in its working position (angle). If the conveyor angle will be different, the cleaner should be installed per the final position.

Tools Needed:

- Tape measure
- Level
- 3/4" (19mm) combination wrench
- Ratchet with 3/4" (19mm) socket
- Marking pen or soapstone
- Adjustable pliers
- Large adjustable wrench (to at least 1-1/8"/28mm)
- Torch or welder

Pole Location Chart Imperial

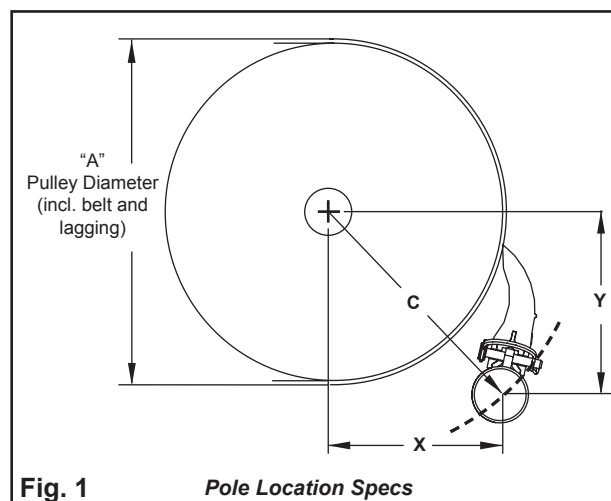
A	X	Y	C
6"	2 5/8"	5 1/2"	6 1/8"
7"	3 1/4"	5 1/2"	6 3/8"
8"	3 7/8"	5 1/2"	6 3/4"
9"	4 3/8"	5 1/2"	7"
10"	5"	5 1/2"	7 3/8"
11"	5 1/2"	5 1/2"	7 3/4"
12"	6 1/8"	5 1/2"	8 1/4"
13"	6 5/8"	5 1/2"	8 5/8"
14"	7 1/8"	5 1/2"	9"
15"	7 5/8"	5 1/2"	9 3/8"
16"	8 1/4"	5 1/2"	9 7/8"
17"	8 3/4"	5 1/2"	10 3/8"
18"	9 1/4"	5 1/2"	10 3/4"
19"	9 3/4"	5 1/2"	11 1/4"
20"	10 1/4"	5 1/2"	11 5/8"
21"	10 3/4"	5 1/2"	12 1/8"
22"	11 1/4"	5 1/2"	12 1/2"

Pole Location Chart Metric

A	X	Y	C
150	65	140	150
175	81	140	155
200	96	140	162
225	109	140	171
250	125	140	179
275	138	140	189
300	153	140	198
325	166	140	209
350	178	140	219
375	191	140	229
400	206	140	239
425	219	140	252
450	231	140	263
475	244	140	273
500	256	140	284
525	269	140	295
550	281	140	307

1. Find the dimensions for the correct pole location.

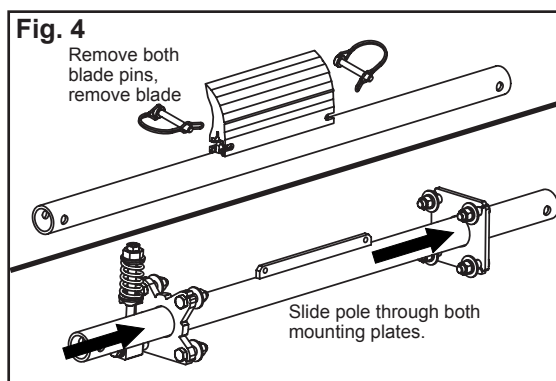
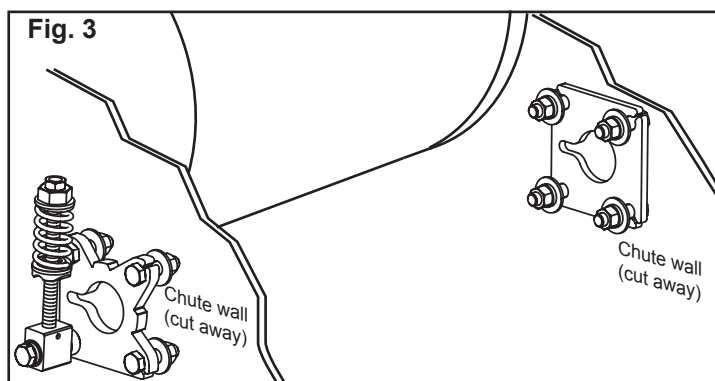
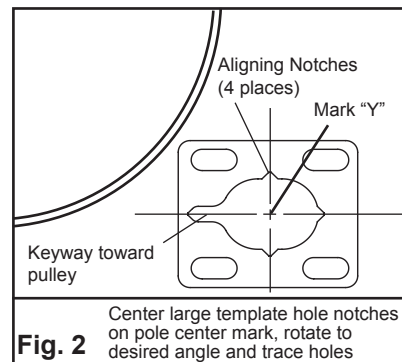
Measure the pulley diameter (see Fig. 1). Find this pulley size (A) on the chart at right and determine the correct X, Y and C dimensions. Measure the X dimension horizontally from the center of the pulley shaft and make a mark. From that mark, draw a long vertical line down, then measure and mark Dim Y. This indicates the location of the center of the pole. Draw an extended horizontal line through this mark. Measure and mark the other side. NOTE: Adjustments can be made to the X and Y coordinates to move away from obstacles as long as the C dimension remains constant. See Section 3.2. For open head installs, first add mounting support materials to the structure.



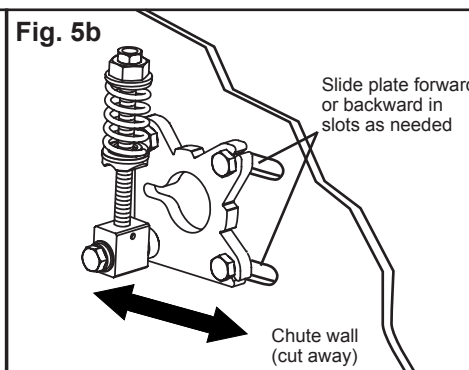
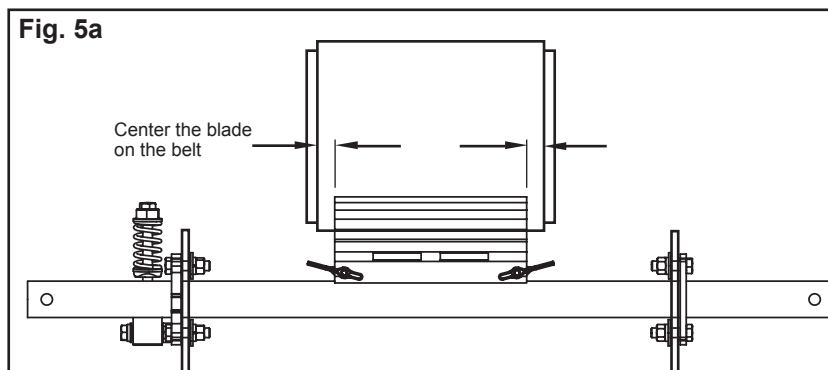
Installation Instructions (cont.)

2. **Mark and cut the mounting plate holes.** Using the template provided in the instruction packet, position the pole access hole on the chute, aligning the hole notches with the layout lines. Position the keyway toward the pulley. Trace the pole cutout and mounting holes (Fig. 2). Cut the holes on both sides of the chute.

NOTE: Hole cutouts are slotted for later adjustment if needed.

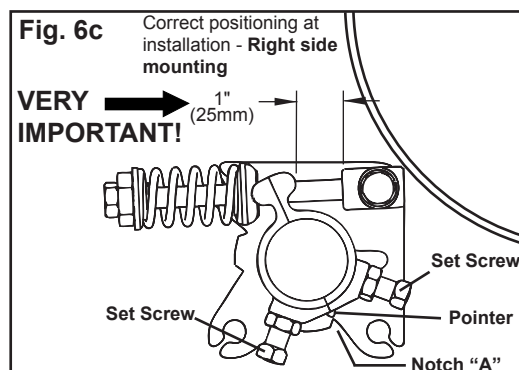
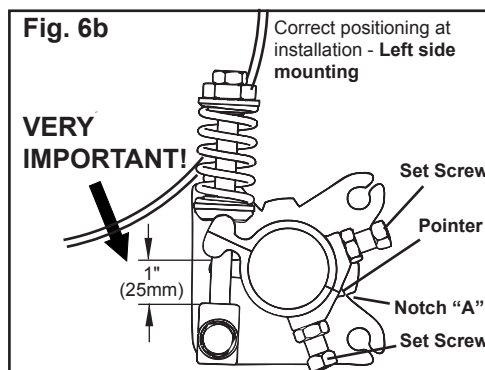
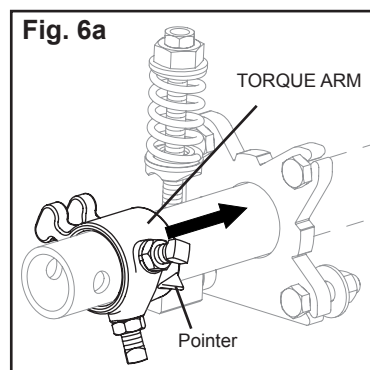


3. **Install the mounting plates.** Bolt the tensioner mounting plate on the side with the tensioner and the pole mounting plate on the opposite side. Center the plates on the slotted holes and tighten the bolts (Fig. 3).
4. **Install the pole.** Remove both blade pins and the blade from the pole, and insert the pole through both mounting plates (Fig. 4).
5. **Center the cleaner on the belt.** Reinstall the blade with both blade pins. Center the blade on the belt (Fig. 5a). Rotate the blade up to the belt and check to insure that the blade is square to the pulley face. If it is not, loosen a mounting plate on one side and adjust the plate forward or backward to square the blade to the pulley, and retighten the bolts (Fig 5b.)

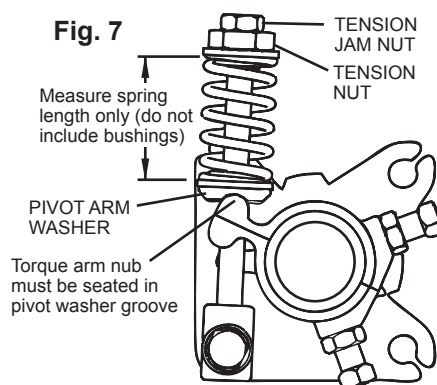


Installation Instructions (cont.)

6. **Install the tensioner.** Slide the torque arm onto the pole (Fig. 6a). **IMPORTANT:** To ensure the torque arm is installed correctly, note that the arm must fit snugly up to the mounting plate and the pointer must be to the inside. To correctly position the torque arm, rotate the pole until the blade contacts the belt. Then align the torque arm pointer to notch "A" (Fig. 6b or 6c). **There will be a 1" (25mm) gap between the pivot block and the torque arm nub if the tensioner is installed correctly.** While holding the blade firmly against the belt, tighten the set screws.



7. **Set the blade tension.** Make sure that the nubs on the torque arm are seated into the groove in the pivot washer (Fig. 7). Turn the tension nut so that enough pressure is applied to keep the pivot washer seated in the torque arm. Now, using a wrench, turn the tension nut until the spring is compressed to the length dimension specified in the spring length chart below. When the proper length is attained, lock in place with the tension jam nut.

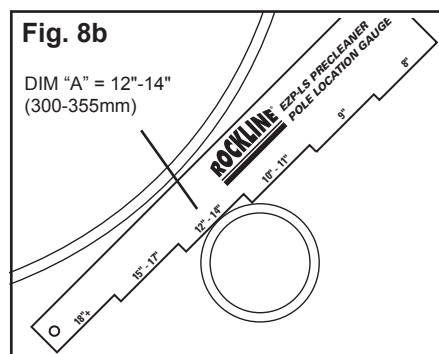
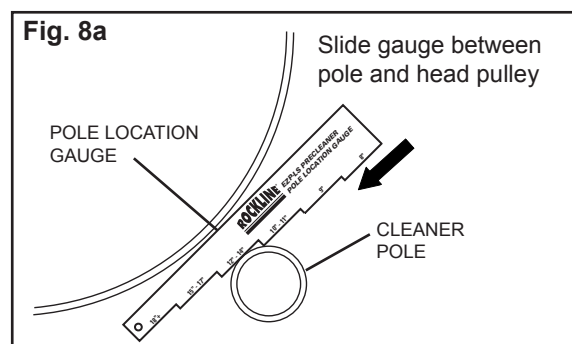


Spring Length Chart

BLADE WIDTH		PURPLE SPRING		WHITE SPRING		SILVER SPRING	
in.	mm	in.	mm	in.	mm	in.	mm
10	250	2	51	N/A	N/A	N/A	N/A
16	400	1 5/8	41	2 1/8	54	N/A	N/A
22	550	N/A	N/A	2	51	N/A	N/A
28	700	N/A	N/A	1 7/8	48	N/A	N/A
34	850	N/A	N/A	1 3/4	44	N/A	N/A
40	1000	N/A	N/A	1 1/2	38	N/A	N/A
46	1150	N/A	N/A	1 3/8	35	2	51
52	1300	N/A	N/A	N/A	N/A	2	51
58	1450	N/A	N/A	N/A	N/A	1 7/8	48

Shading indicates preferred spring option

8. **Confirm the correct pole location.** After the cleaner is installed, slide the Pole Location Gauge (provided in the instruction packet) between the pole and the pulley until it stops at a step (Fig. 8a). Read the flat area where the pole is resting. This diameter reading should be equal to the Dim. A (pulley diameter) used in Step 1. **NOTE:** If the diameter reading on the gauge is not the same as Dim. A in Step 1, check the "C" dimension and correct accordingly.



9. **Add pole caps.** Put a urethane cap on each pole end.
10. **Test run the conveyor and inspect the performance.** If vibration occurs or more cleaning efficiency is desired, make tensioning adjustments. (Also, check the Troubleshooting Guide.)

Pre-Operation Checklist and Testing

Pre-Op Checklist

- Recheck that all fasteners are tightened properly
- Add pole caps
- Apply all supplied labels to the cleaner
- Check the blade location on the belt
- Be sure that all installation materials and tools have been removed from the belt and the conveyor area

Test Run the Conveyor

- Run the conveyor for at least 15 minutes and inspect the cleaning performance
- Check the tensioner spring for recommended length (proper tensioning)
- Make adjustments as necessary

NOTE: Observing the cleaner when it is running and performing properly will help to detect problems or when adjustments are needed later.

Visit our website or contact your local distributor to learn more.

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