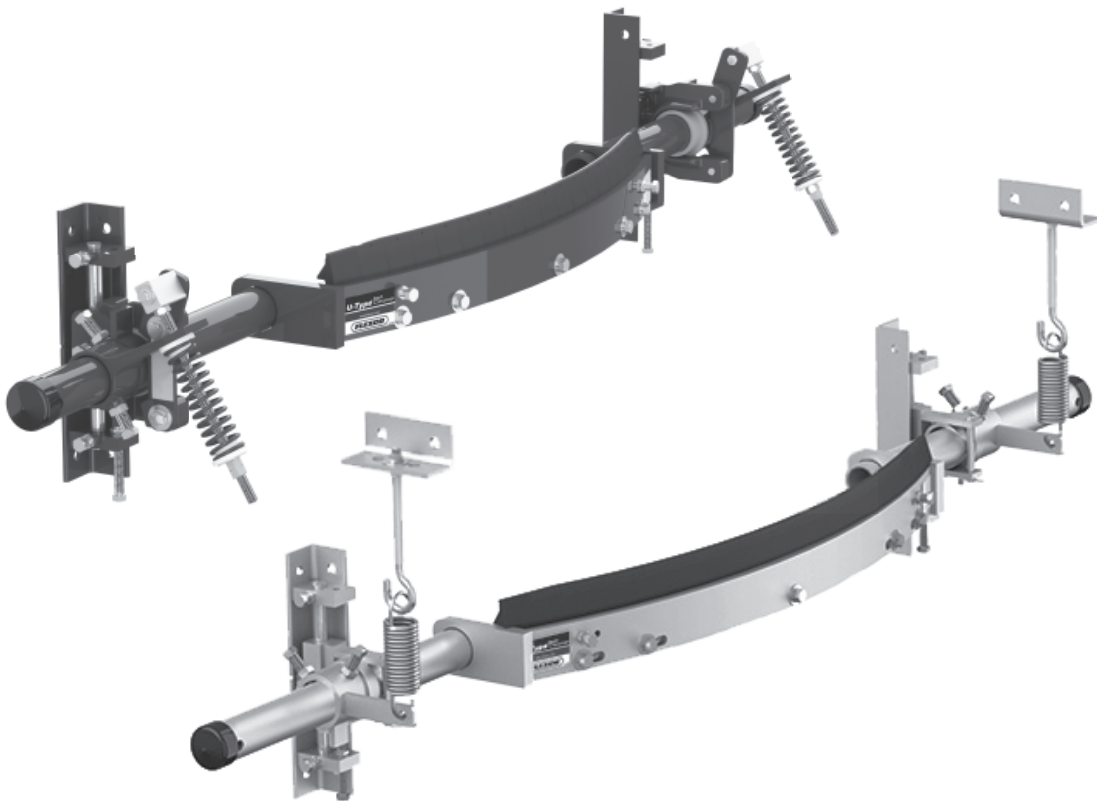


U-Type[®] Secondary Belt Cleaner

Installation, Operation and 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

Pre-Installation Checks and Options

Correct Blade Installation and Tensioning

For optimal cleaning efficiency and long wear life, the U-Type® blade must be located and tensioned correctly on the belt. 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 Pole Location:

When the blade contacts the belt (before tensioning) there should be blade-to-belt contact across the entire blade (Fig. 1). If contact is more in the center with a gap on the outer edges, the pole will need to be raised until full contact is achieved (Fig. 2). If contact is more on the outer edges with a gap in the center, the pole will need to be lowered until full contact is achieved (Fig. 3).

Possible Problems:

- Pole location too low - The initial cleaning will be concentrated in the center of the belt, failing to clean the outer edges efficiently.
- Pole location too high - The initial cleaning will be concentrated to the outer edges of the belt, failing to efficiently clean the center of the belt.
- Tension too low - Without the optimal tension, the cleaning efficiency is reduced and chatter or bouncing of the blade can occur.
- Tension too high - Although the cleaning may appear efficient, accelerated blade wear may occur; and in some cases less efficiency on the outer edges of the belt, which could result in increased belt wear.

Correct Tensioning:

Correct tension is determined and set by blade width. Check the information provided with the tensioner being used or consult the installation instructions.

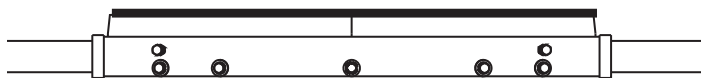


Fig. 1



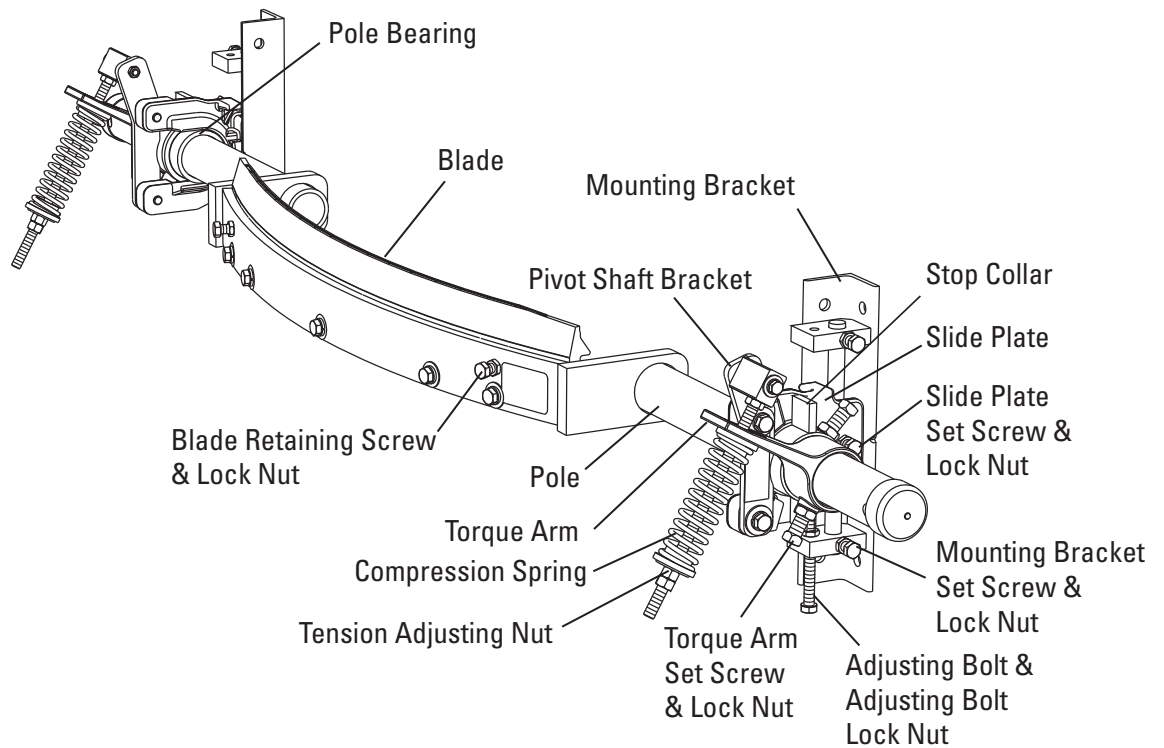
Fig. 2



Fig. 3

Installation Instructions

U-Type® Secondary Cleaner

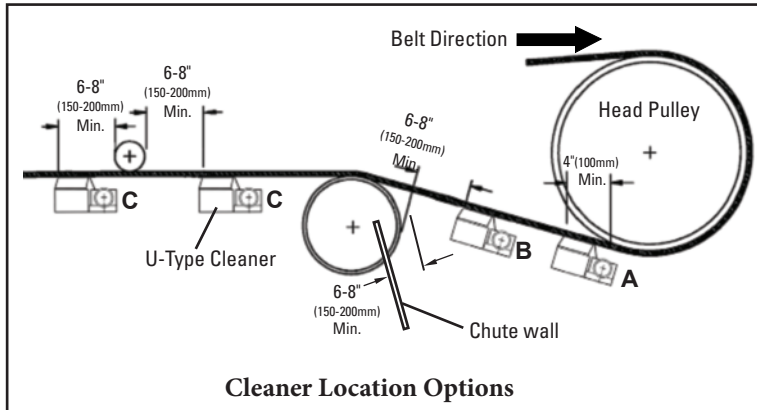


U-Type with UST Tensioner Parts List

Installation Instructions

U-Type® Secondary Cleaner

Physically lock out and tag the conveyor at the power source before you begin cleaner installation.



Tools Needed:

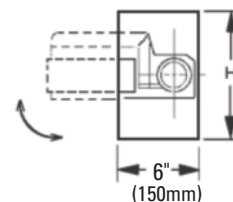
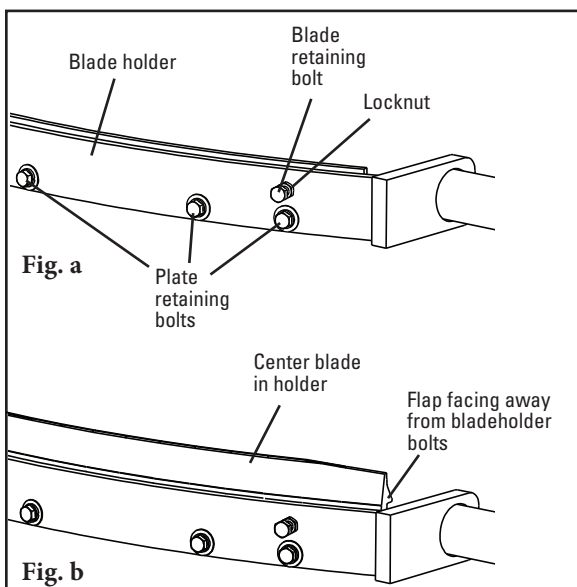
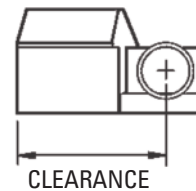
- Tape measure
- 3/4" (19mm) wrench
- Ratchet with 3/4" (19mm) socket
- Screwdriver
- (2) 6" C-clamps (optional for locating mounting brackets)
- Level (optional for locating belt height)
- Permanent marker
- Cutting torch and/or welder
- Square (for setting blade parallel to belt)

Before You Begin:

- Double-check the blade type needed for your application:
F-Blade - for mechanically spliced belts.
C-Blade - for Flexco Solid Plate mechanically spliced and vulcanized belts.
- For chute mounting it is necessary to cut an access hole. See access hole dimensions at right.
- Follow all safety precautions when using a cutting torch.
- If welding, protect all fastener threads from weld spatter.
- For cleaner clearance requirements see chart at right.

Cleaner Clearance Requirements

U Cleaner Size		Clearance	
in.	mm	in.	mm
18"	450	6	155
24"	600	7	180
30"	750	8	205
36"	900	8	205
42"	1050	9 1/4	235
48"	1200	10 1/2	270
54"	1350	10 3/4	275
60"	1500	10 3/4	275
72"	1800	10 3/4	275
84"	2100	10 3/4	275
96"	2400	10 3/4	275



Chute Mounting Access Hole Dimensions

Belt Width	H Dimension
18" - 42" (450-1050mm)	8" (200mm)
48" - 96" (1200-2400mm)	10" (250mm)

Install the blade in the pole:

- Loosen both locknuts on the blade retaining bolts. Turn blade retaining bolts out 8 turns (Fig. a).
- Loosen (but do not remove) all plate retaining bolts (Fig. b).
- Install the new blade as shown in Fig. b. The flap on the blade should face away from bladeholder screws.
- Center the blade in the holder.
- Tighten all plate retaining screws.
- Tighten blade retaining screws 8 turns and tighten the blade retaining screw locknuts.

Installation Instructions

U-Type® Secondary Cleaner

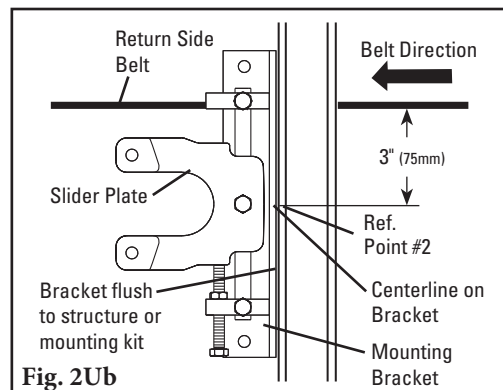
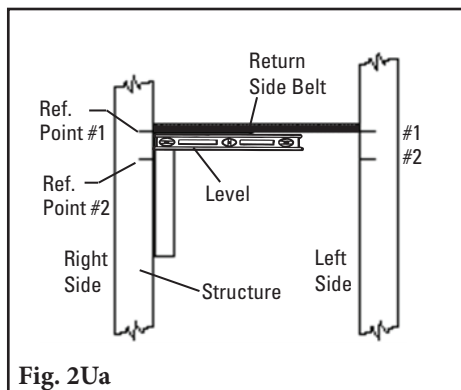
1. Choose conveyor location where cleaner will be installed.

The U-Type may be positioned at any spot from where belt leaves head pulley on down the conveyor line (see positions A to B). If a chute area is too small due to a snub pulley, it may be necessary to mount cleaner behind chute (see position C). In chute applications a minimum of 6"-8" (150-200mm) is required between cleaner and chute wall to prevent clogging of material.

UST Tensioner Instructions

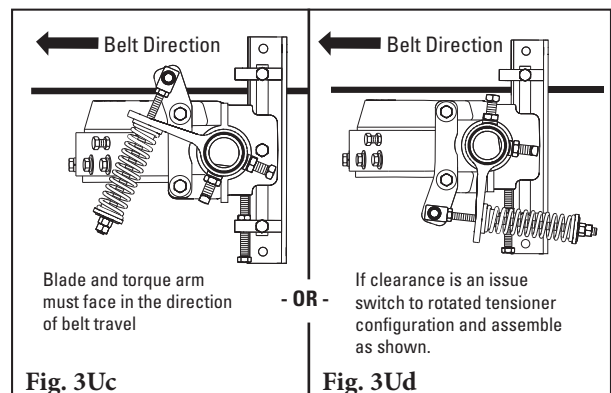
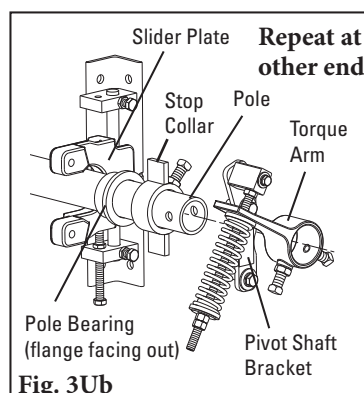
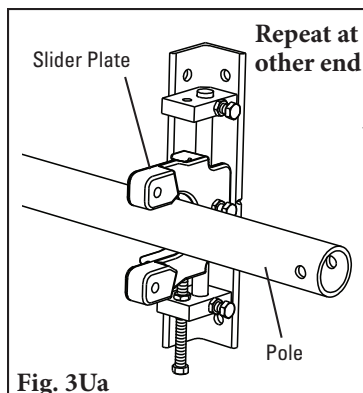
2U. Install mounting brackets.

- Using a level, lightly raise return side belt (take out cupping or sagging on edges) to find belt's true parallel path to the structure; and mark reference point #1 on structure. Measure down 3" (75mm) from reference point #1 and mark reference point #2 (Fig. 2Ua). Make sure brackets are the same distance away from head pulley or a reference point on both sides of the structure. If there is no structure to mount to, install mounting bracket kit first.
- Position mounting brackets so centerline marks on brackets are in line with reference points #2 on the structure (Fig. 2Ub).
- Clamp or weld into position.



3U. Install the cleaner pole into the slider plates.

- Set pole ends into slider plate on both sides (Fig. 3Ua).
- Slide pole bearings onto both ends of the pole with flange facing away from the belt (Fig. 3Ub).
- Slide stop collar onto both ends of the pole (Fig. 3Ub). Do not tighten at this time.
- Slide torque arms onto both ends of pole and attach both pivot shaft brackets to slider plates (Fig. 3Ub). Blade and torque arm must face either in the direction of belt travel (Fig. 3Uc), or if clearance is an issue, switch to rotated tensioner configuration and assemble as shown (Fig. 3Ud).
- Move slider plate to bottom of bracket to allow blade to rotate up into position in the next steps.



Installation Instructions

U-Type® Secondary Cleaner with UST Tensioner (cont.)

4U. Tighten torque arm set screws.

- Spring tension nuts should be moved near the end of the threaded rod. Insert a screwdriver or small rod through holes on end of cleaner pole. Pushing on screwdriver or rod, rotate cleaner blade into a position with pole parallel to belt (Fig. 4Ua). Blade should not be touching belt at this time. The gap between the torque arm and pivot block should be approximately 2".
- Center the blade to the belt and make sure torque arm, stop collar, bearing and slide plate are tight together on both sides. Then tighten stop collar set screw and lock nut with stop collar touching top of bearing mount stop to hold blade parallel to belt, and remove screwdriver or rod.
- Push torque arm down to contact the spring and tighten the torque arm set screws and lock nuts on both sides of the cleaner (Fig. 4Ub).

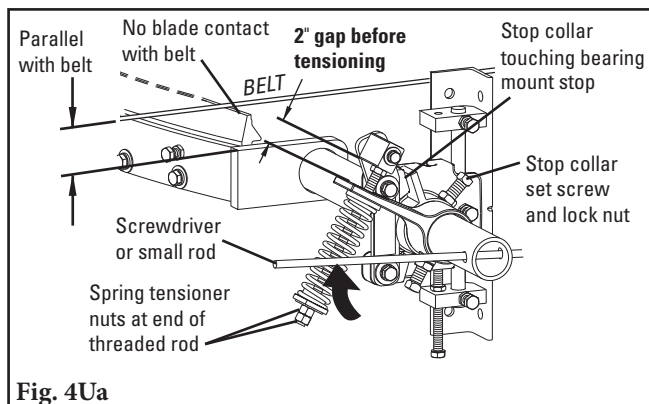


Fig. 4Ua

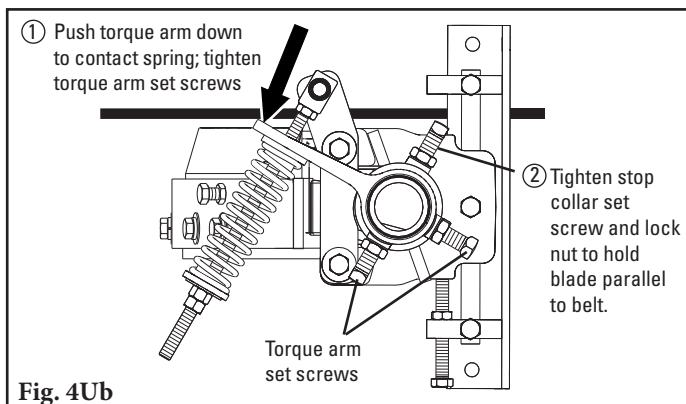


Fig. 4Ub

5U. Adjust the blade to the belt.

- Loosen slide plate set screws and lock nuts. Adjust by turning adjusting bolts either up or down (Fig. 5U).
- Adjust blade either up or down until both blade ends and the center make full contact with belt. If possible, adjust both sides of the cleaner up to the belt at the same time for even blade contact across belt (reduces chance of overtensioning on one side).

IMPORTANT: In some cases, due to irregular belt wear or cupping, it may be necessary to make final adjustments independently on both sides.

- Tighten lock nuts on adjusting bolts to secure blade in correct position. Also tighten slide plate set screws and lock nuts.

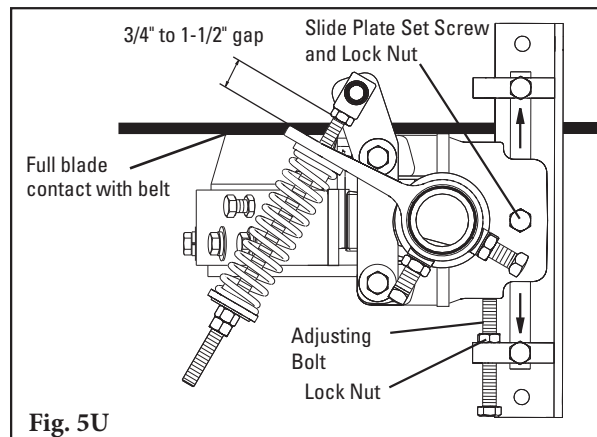
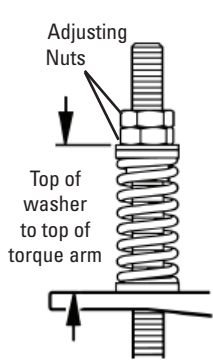


Fig. 5U



Blade Width		Purple Spring		Silver Spring		White Spring	
in.	mm	in.	mm	in.	mm	in.	mm
18	450	6 1/8	154	6 3/8	160	6 3/8	162
24	600	5 7/8	148	6 1/4	148	6 1/4	160
30	750	5 1/2	140	6 1/8	156	6 1/4	158
36	900	5 3/8	136	6	152	6 1/8	156
42	1050	5	128	5 7/8	150	6 1/8	154
48	1200	N/A	N/A	5 3/4	146	6	152
54	1350	N/A	N/A	5 5/8	142	5 7/8	150
60	1500	N/A	N/A	5 1/2	140	5 7/8	150
72	1800	N/A	N/A	N/A	N/A	5 1/2	140
84	2100	N/A	N/A	N/A	N/A	5 3/8	136
96	2400	N/A	N/A	N/A	N/A	5 1/4	132

Fig. 6U

6U. Set the blade tension.

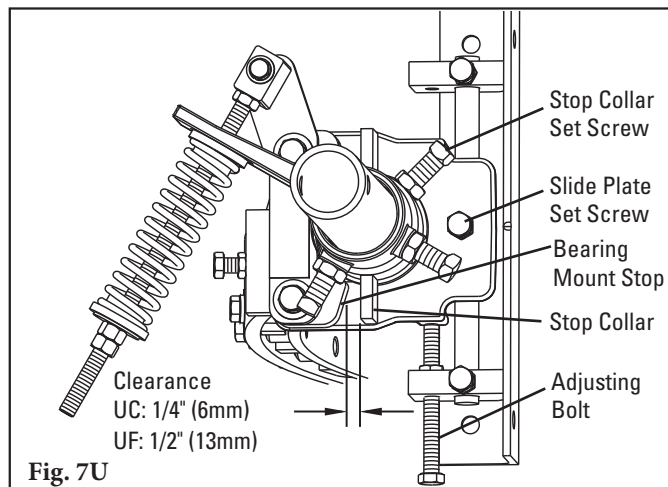
- Set spring length to determined length (Fig. 6U). Tighten spring tension nuts on threaded rod.
IMPORTANT: Always be sure there is uniform contact between blade and belt.
- If blade is not in full contact with belt at edges and center, either raise or lower pole position of cleaner and reapply tension.
- Please note, when fully tensioned there should be approximately 3/4" to 1-1/2" of space between the torque arm and pivot block (Fig. 5U).

Installation Instructions

U-Type® Secondary Cleaner with UST Tensioner (cont.)

7U. Set the blade travel stop.

Set both stop collars to a clearance of 1/4" (6mm) between stop collar and bottom bearing mount stop for UC cleaners, or 1/2" (13mm) for UF cleaners (Fig. 7U). This is to prevent blade from moving into belt. Tighten set screws and lock nuts.



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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