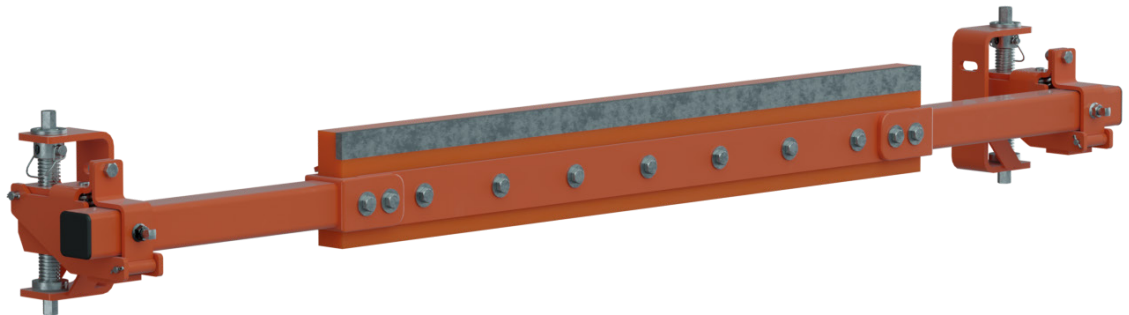




Martin[®] **UBX Secondary Cleaner**

[Go to Martin[®] UBX Secondary Cleaner web page](#)



Operator's Manual
M4207

Important

MARTIN ENGINEERING HEREBY DISCLAIMS ANY LIABILITY FOR: DAMAGE DUE TO CONTAMINATION OF THE MATERIAL; USER'S FAILURE TO INSPECT, MAINTAIN AND TAKE REASONABLE CARE OF THE EQUIPMENT; INJURIES OR DAMAGE RESULTING FROM USE OR APPLICATION OF THIS PRODUCT CONTRARY TO INSTRUCTIONS AND SPECIFICATIONS CONTAINED HEREIN. MARTIN ENGINEERING'S LIABILITY SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF EQUIPMENT SHOWN TO BE DEFECTIVE.

Observe all safety rules given herein along with owner and Government standards and regulations. Know and understand lockout/tagout procedures as defined by American National Standards Institute (ANSI) z244.1-1982, *American National Standard for Personnel Protection - Lockout/Tagout of Energy Sources - Minimum Safety Requirements* and Occupational Safety and Health Administration (OSHA) Federal Register, Part IV, 29 CFR Part 1910, *Control of Hazardous Energy Source (Lockout/Tagout); Final Rule*.

The following symbols may be used in this manual:



Danger: Immediate hazards that will result in severe personal injury or death.



Warning: Hazards or unsafe practices that could result in personal injury.



Caution: Hazards or unsafe practices that could result in product or property damages.



Important: Instructions that must be followed to ensure proper installation/operation of equipment.



Note: General statements to assist the reader.

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Introduction

General

To introduce product back into the product flow, a Pre-Cleaner is installed on the face of the head pulley. On a dual cleaner system, the Secondary Cleaner is installed immediately following the Pre-Cleaner to remove stubborn material left on the conveyor belt. If a Pre-Cleaner cannot be used because of space limitations, the Secondary Cleaner is installed alone. If the material handling process or product could be affected by contamination from the use of these belt cleaners, the user is responsible for taking the necessary steps to prevent contamination. Consult Martin Engineering or a representative for alternate belt cleaners or belt cleaner locations to use where contamination may be an issue.

Installations without chutework

These procedures were written for equipment that is being installed on enclosed pulley chutework. If the pulley is not enclosed, the equipment should be installed using the best available field resources and methods to ensure that the critical dimensions are followed for proper installation.

Belt cleaner inspection access

If the belt cleaner is installed on enclosed pulley chutework, a Martin® Inspection Door should be installed. Martin® Inspection Doors are available from Martin Engineering or a representative.

References

The following documents are referenced in this manual:

- American National Standards Institute (ANSI) z244.1-1982, *American National Standard for Personnel Protection - Lockout/Tagout of Energy Sources - Minimum Safety Requirements*, American National Standards Institute Inc., 1430 Broadway, New York, NY 10018.
- Federal Register, Volume 54, Number 169, Part IV, 29 CFR Part 1910, *Control of Hazardous Energy Source (Lockout/Tagout); Final Rule*, Department of Labor, Occupational Safety and Health Administration (OSHA), 32nd Floor, Room 3244, 230 South Dearborn Street, Chicago, IL 60604.

Safety

All safety rules defined in the above documents and all owner/employer safety rules must be strictly followed when working on the belt cleaner.



⚠ DANGER

Do not touch or go near the conveyor belt or conveyor accessories when the belt is running. Your body or clothing can get caught and you can be pulled into the conveyor, resulting in severe injury or death.



⚠ DANGER

Before installing, servicing, or adjusting the belt cleaner, turn off and lock out/tag out all energy sources to the conveyor and conveyor accessories according to ANSI standards. Failure to do so could result in serious injury or death.



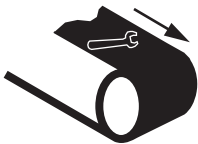
⚠ DANGER

If this equipment will be installed in an enclosed area, test the gas level or dust content before using a cutting torch or welding. Using a torch or welding in an area with gas or dust may cause an explosion resulting in serious injury or death. Follow local confined space procedures.



⚠ WARNING

Before using a cutting torch or welding the chute wall, cover the conveyor belt with a fire retardant cover. Failure to do so can allow the belt to catch fire. Follow local fire watch procedures.



⚠ WARNING

Remove all tools from the installation area and conveyor belt before turning on the conveyor. Failure to do so can cause serious injury to personnel or damage to the belt and conveyor.

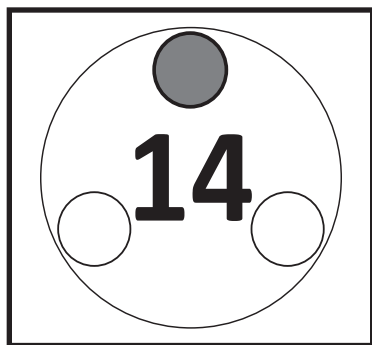


⚠ WARNING

Mainframe with blade can be heavy and may require two people to lift. Attempting to lift the belt cleaner without assistance could result in injury.

IMPORTANT*Urethane shelf life*

Urethane put in service after exceeding its shelf life may wear differently and deteriorate quicker than normal urethane.

NOTE

Code Date is written near bottom of blade as mm/dd/yy-x. In addition to or in place of this date, you may see an imprinted date medallion similar to the example shown. In this example, “22” stands for the year 2022. The small circles represent the quarter of the year. If three circles are “punched” the blade was produced in the first quarter. If none of the circles are “punched” the blade was produced in the fourth quarter. If code date on your blade(s) is not legible or is missing, contact Martin Engineering or a representative.

Table I. Urethane Shelf Life

Blade Color	Shelf Life
Blue	1 Year from Code Date
Brown	2 Years from Code Date
Clear	1 Year from Code Date
Green	2 Years from Code Date
Orange	1 Year from Code Date

Before Installing Belt Cleaner

IMPORTANT

The delivery service is responsible for damage occurring in transit. Martin Engineering CANNOT enter claims for damages. Contact your transportation agent for more information.

1. Inspect shipping container for damage. Report damage to delivery service immediately and fill out delivery service's claim form. Keep any damaged goods subject to examination.
2. Remove belt cleaner assembly from shipping container.
3. If anything is missing contact Martin Engineering or a representative.



WARNING

Before installing equipment, turn off and lock out/ tag out all energy sources to the conveyor and conveyor accessories according to ANSI standards. Failure to do so could result in serious injury or death.

4. Turn off and lock out/tag out energy source according to ANSI standards (see "References").

DANGER

If this equipment will be installed in an enclosed area, test the gas level or dust content before using a cutting torch or welding. Using a torch or welding in an area with gas or dust may cause an explosion resulting in serious injury or death.



5. If using a cutting torch or welding, test atmosphere for gas level or dust content. Cover conveyor belt with fire retardant cover.

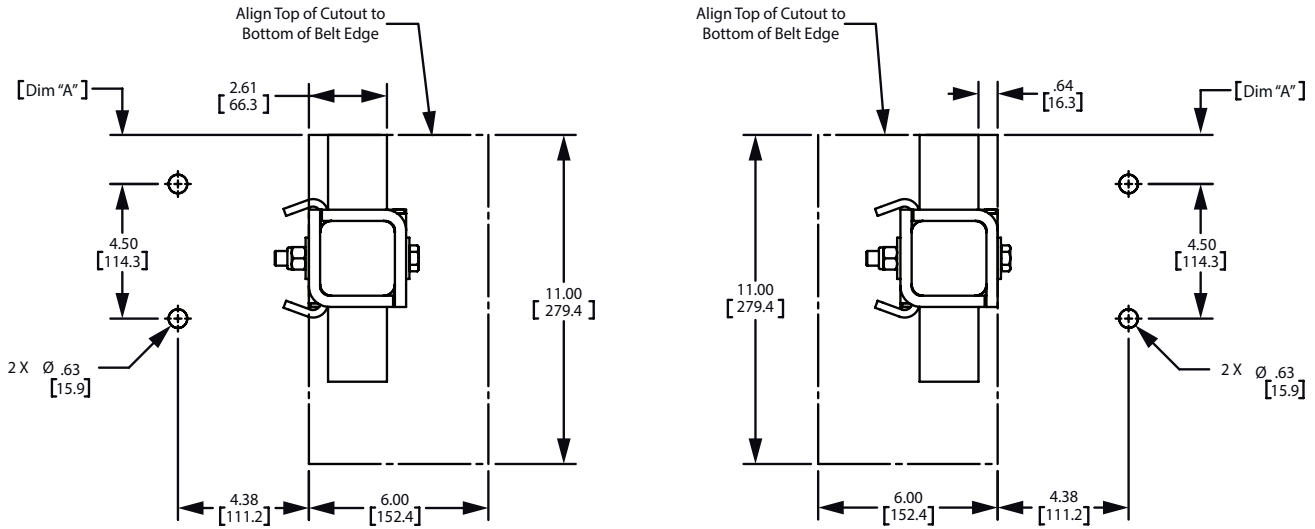
IMPORTANT

Center the belt cleaner blades to clean an area narrower than the conveyor belt width. This allows for side-to-side movement of the belt and prevents damage to the belt edge.

Installing Belt Cleaner and Tensioner

Martin® UBX Secondary Cleaner Chutewall Cutout Detail Location

MARTIN® UBX CLEANER OPTIONS	Dim "A" - in. [mm]
UBUSXXSXXXXXX	1.64 [41.7]
UBMSXXSXXXXXX	1.52 [38.5]

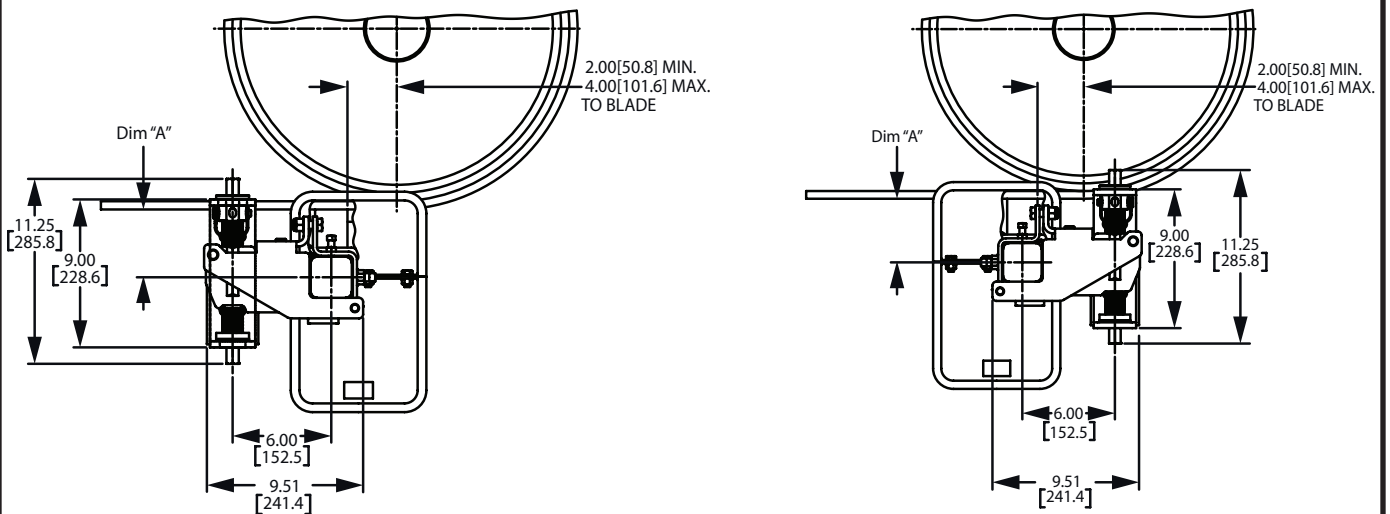


Left Side Mounting

Right Side Mounting

Martin® UBX Secondary Cleaner Tensioner Details

MARTIN® UBX CLEANER OPTIONS	Dim "A" - in. [mm]
UBUSXXSXXXXXX	4.13 [104.8]
UBMSXXSXXXXXX	4.00 [101.6]



Left Side Mounting

Right Side Mounting

Figure 1. Mounting Locations

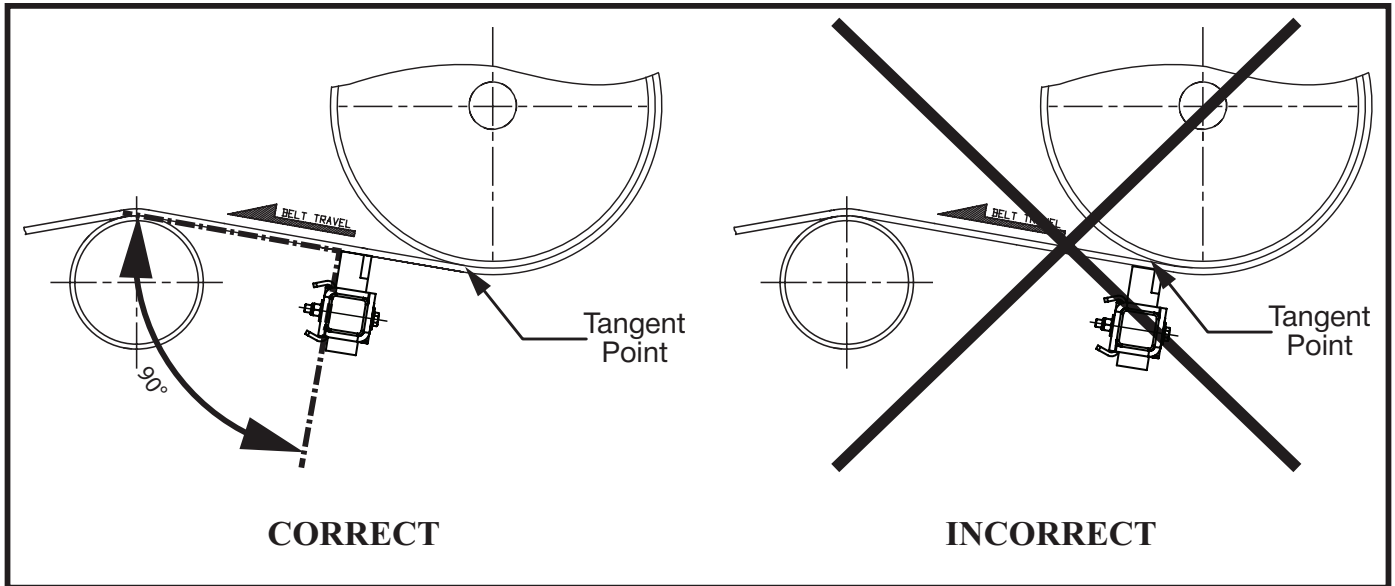


Figure 2. Tangent Point (UBMSXXSXXXXXX Shown)

IMPORTANT

Belt cleaner mounting location must be marked using a line perpendicular to the belt line at the tangent point (point where the belt leaves the head pulley), see Figure 2. **DO NOT** use the vertical centerline of the head pulley. Ensure leading edge of blade is located 2-4” behind tangent point.

NOTE

Solid backing of the blade is essential to ensure proper operation and efficient cleaning. Install the cleaner adjacent to the head pulley or a flat pressure roller to obtain best cleaning results.

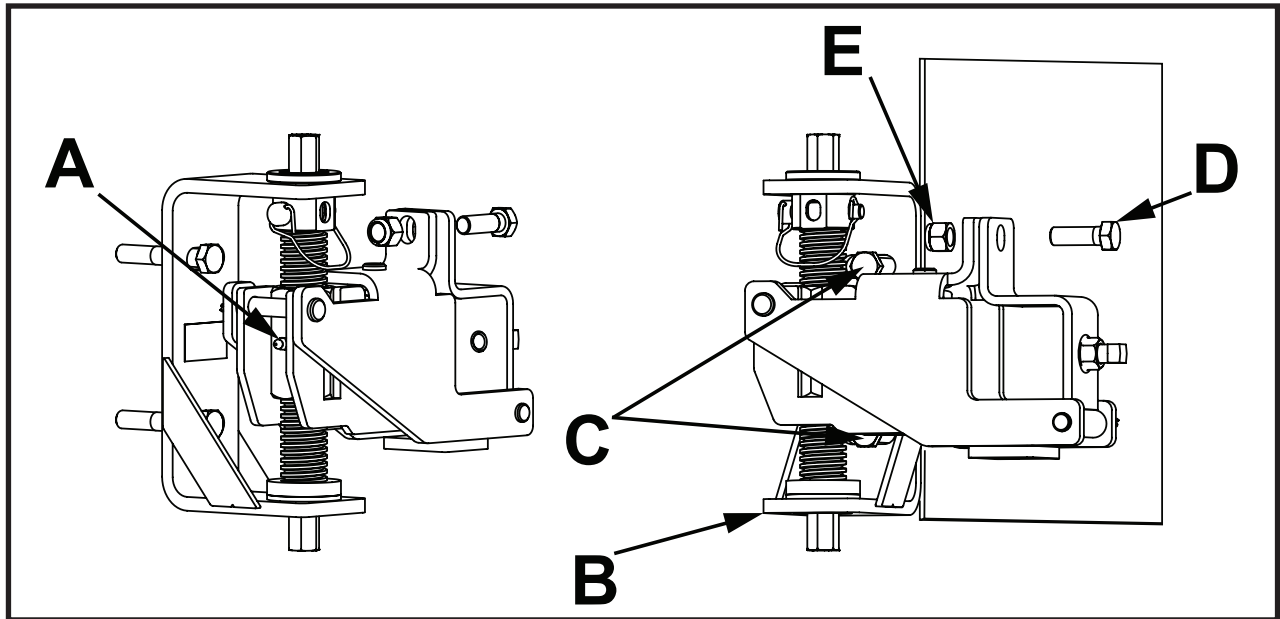
NOTE

For installation on enclosed head pulley chutework, draw all dimension lines on chute wall. In applications where head pulley is not enclosed, use the best available field resources and/or methods to ensure that these critical dimensions are followed for a proper installation.

Marking chute cutouts

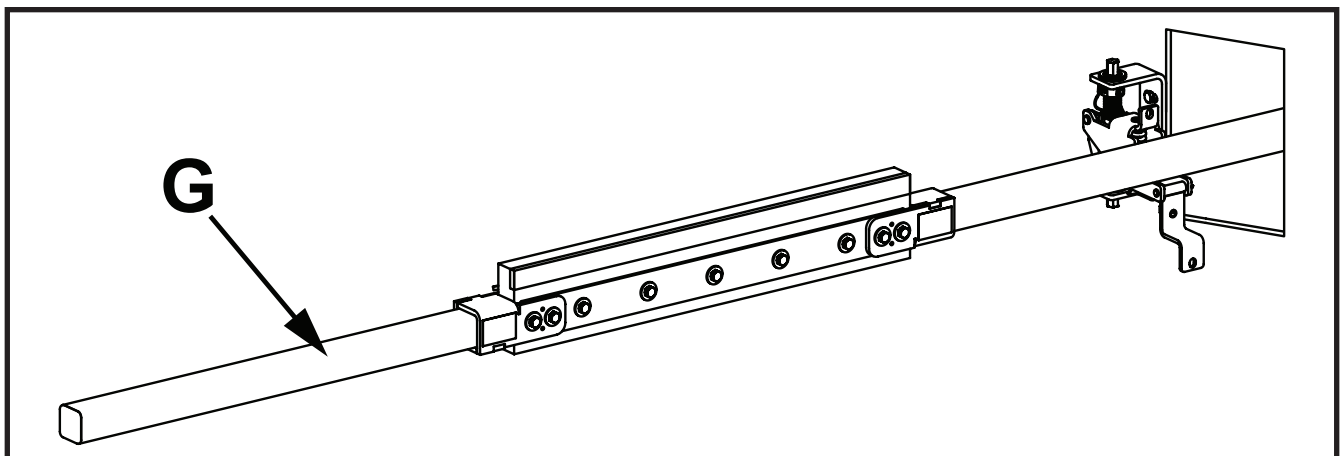
1. Mark the chute cutout and mount hole locations as shown in Figure 1. Repeat on both sides of chute, ensuring cutouts are accurately aligned with each other.
2. At the selected mounting position, cut the cleaner access slots and drill the mount holes in each side of the chute. Dress and de-burr the holes and cutouts.

***Tensioner
Installation***



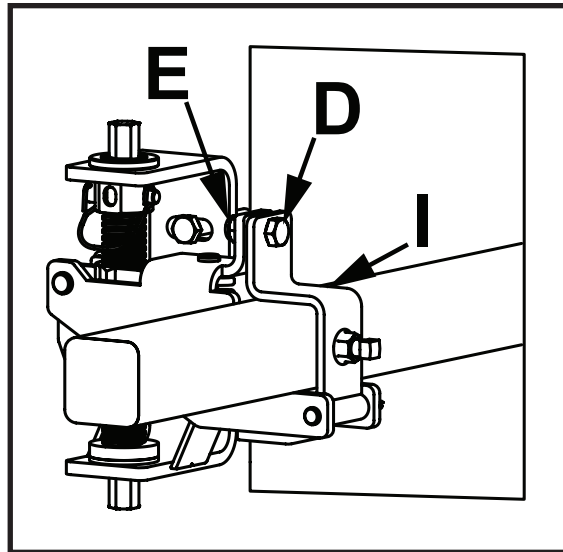
1. Insert grease gun onto each grease fitting (A) and add grease to both tensioners until grease comes out around threaded rod.
2. Locate, mark, and cut cleaner access slots and mount holes according to Figure 1.
3. Mount bracket (B) to the chute wall using caps screws, washers, and nuts (C).
4. Remove cap screw (D) and nut (E) from tensioner.
5. Repeat steps 2-4 for tensioner bracket on opposite chute wall.

***Belt Cleaner
Installation***

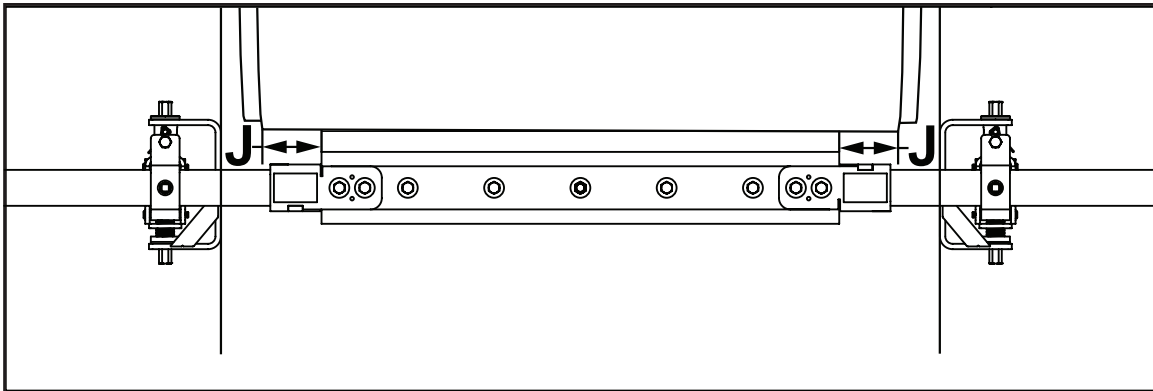


1. Slide mainframe (G) through chute wall cutouts and into position on tensioners.

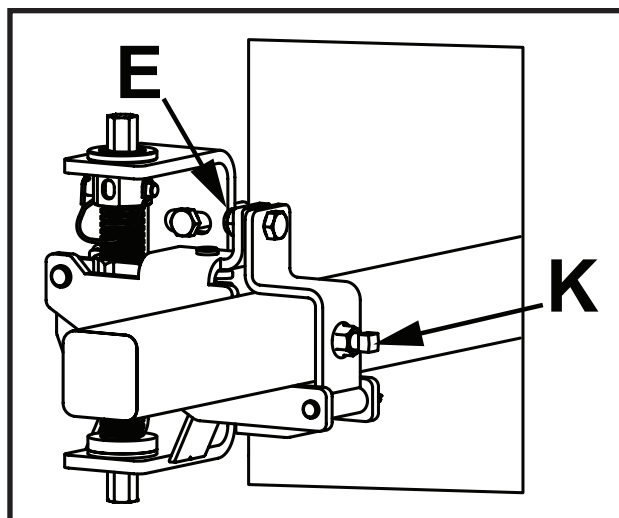
Installation



2. Rotate hinge clamp (I) into position and install cap screw (D) and nut (E). Hand tighten nut.
3. Repeat step 3 on farside tensioner.



4. Center blade on belt

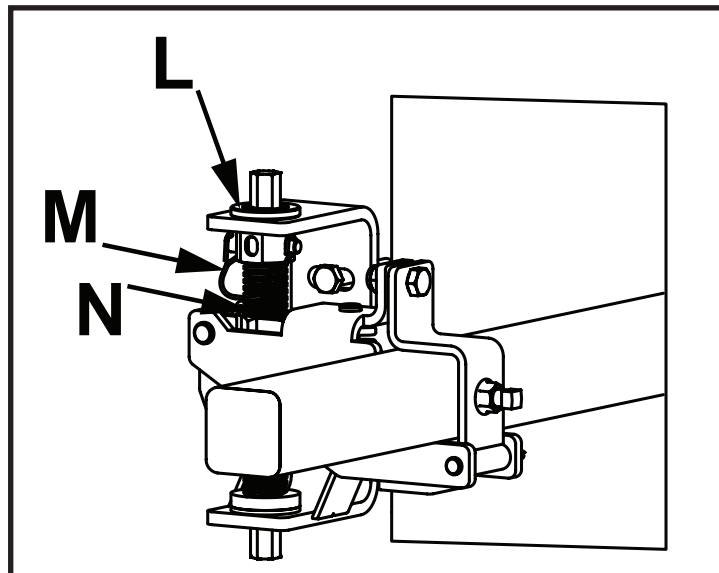


5. Tighten nut (E) and set screw (K).

***Tensioning
Belt Cleaner***

1. Tension belt cleaner by turning hex nut on threaded rod until blade makes contact evenly across belt. Make additional turns according to chart below.

Belt Width -in [mm]	Number of turns on rod
24 [609.6]	1.5
30 [762]	2
36 [914.4]	2.25
42 [1066.8]	2.5
48 [1219.2]	3
54 [1371.6]	3.25
60 [1524]	3.5
66 [1676.4]	4
70 [1778]	4.25



2. Align holes on threaded rod (N) with holes in top bushing (L) and insert pin (M).

After Installing Belt Cleaner



1. Thoroughly wipe chute wall clean above tensioner.
2. Place Conveyor Products Warning Label (P/N 23395) on outside chute wall visible to belt cleaner operator.



Failure to remove tools from installation area and conveyor belt before turning on energy source can cause serious injury to personnel and damage to belt.



Do not touch or go near conveyor belt or conveyor accessories when conveyor belt is running. Body or clothing can get caught and pull body into conveyor belt, causing severe injury or death.

3. Turn on conveyor belt for 1 hour, then turn off.



Before installing, servicing, or adjusting the belt cleaner/tensioner, turn off and lock out/tag out all energy sources to the conveyor and conveyor accessories according to ANSI standards. Failure to do so could result in serious injury or death.

4. Make sure all fasteners are tight. Tighten if necessary.
5. Make sure cleaner is not changing belt line. If it is, install belt support ahead of blade-to-belt contact point (Secondary Cleaner).
6. Inspect belt cleaner for the following:
 - Wear. (A small amount of “break-in” wear may be found. This will stop once blades wear to conveyor belt contour.)
 - Material buildup. (No material between blades and return side of conveyor belt should be found.)
7. If wear, material buildup, or some other problem exists, see “Troubleshooting.”

Weekly Maintenance

IMPORTANT

Read entire section before beginning work.

NOTE

Maintenance inspection should be performed no less than weekly. Some applications may require more frequent maintenance inspections.

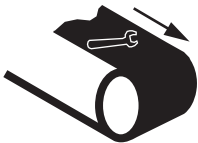
⚠ DANGER



Before installing, servicing, or adjusting the belt cleaner/tensioner, turn off and lock out/tag out all energy sources to the conveyor and conveyor accessories according to ANSI standards. Failure to do so could result in serious injury or death.

1. Remove any material from belt cleaner.
2. Make sure all fasteners are tight. Tighten if necessary.
3. Check tension on cleaner. Re-tension if necessary.
4. Wipe all labels clean. If labels are not readable, contact Martin Engineering or a representative for replacements.
5. Check blades for excessive wear. Replace if necessary.
6. Remove equipment from service if there is any indication it is not functioning properly. Call Martin Engineering or a representative for assistance. Do NOT return equipment to operation until the cause of the problem has been identified and corrected.

⚠ WARNING



Failure to remove tools from installation area and conveyor belt before turning on energy source can cause serious injury to personnel and damage to belt.

7. Remove all tools from maintenance area.

⚠ DANGER



Do not touch or go near conveyor belt or conveyor accessories when conveyor belt is running. Body or clothing can get caught and pull body into conveyor belt, causing severe injury or death.

8. Start conveyor belt.

Troubleshooting

Symptom	Corrective Action
Insufficient cleaning and carryback.	<ul style="list-style-type: none"> • Tension of cleaner on belt is set too low or too high. Increase or decrease tensioner setting. • Blades are worn. Check blades and replace if necessary.
Noise or vibration.	Tension is not sufficient or is set too high. Correct tension as necessary. If this does not correct problem, blade urethane may not match application. Contact Martin Engineering or representative.
High blade wear rate.	Tension of cleaner on belt is set too high. Reduce tensioner setting.
Unusual wear or damage to blades.	Check belt splice(s) and repair as necessary.
Bent or broken mainframe or support frame due to blade slipping through.	If blades are worn to or past the wear line, replace blades. If blades are not worn, check mainframe location.
Corrosion or chemical degradation.	Blade urethane may not match application. Contact Martin Engineering or representative.

NOTE

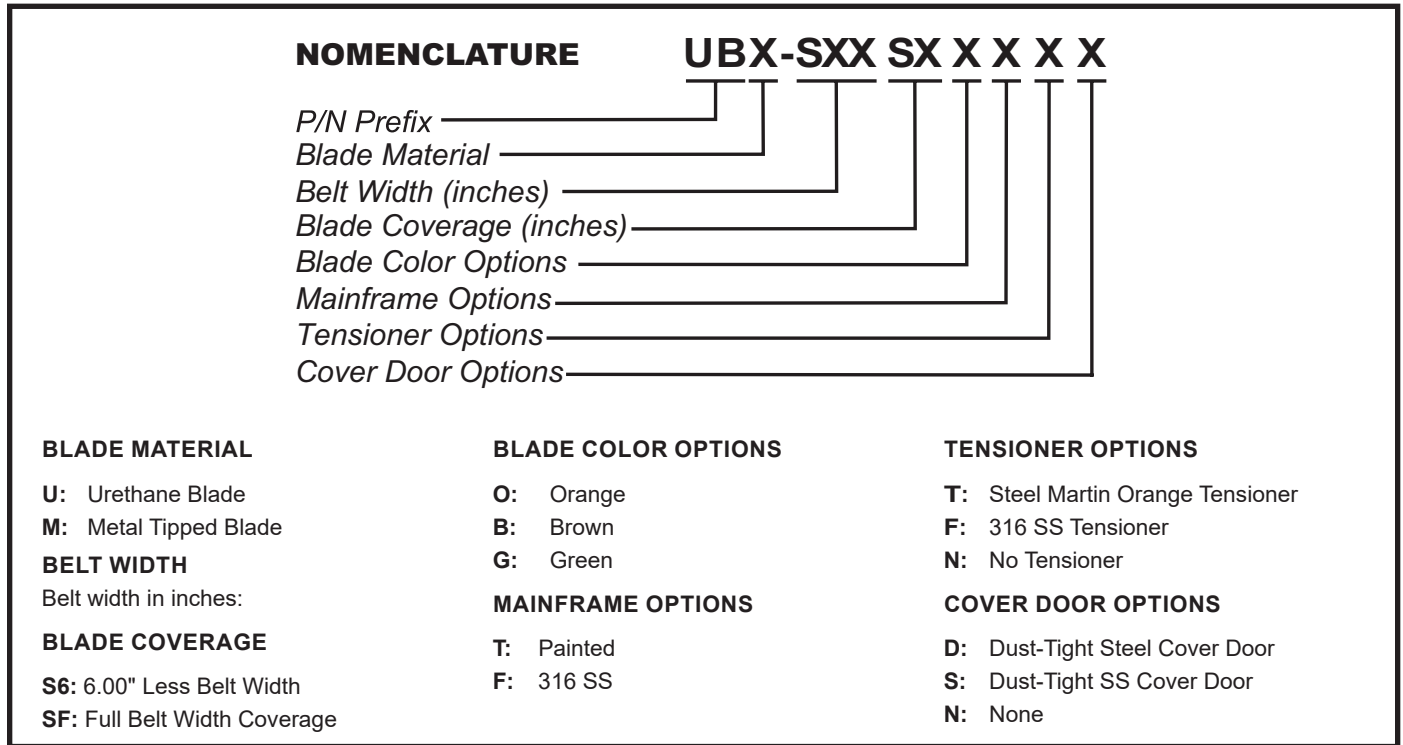
Conveyor equipment such as conveyor belt cleaners are subject to a wide variety of bulk materials characteristics and often have to perform under extreme operating or environmental conditions. It is not possible to predict all circumstances that may require troubleshooting. Contact Martin Engineering or a representative if you are experiencing problems other than those listed in the “Troubleshooting” chart above. Do not return the equipment to operation until the problem has been identified and corrected.

Installation checklist

If after taking the corrective actions suggested under “Troubleshooting” you are still experiencing problems, check for the following:

Installation Checklist
Pre-Cleaner mainframe is proper distance from belt surface on both ends of mainframe.
Pre-Cleaner blade tip is at or below horizontal center line of pulley and does not lie in path of material flow.
Secondary Cleaner blade tip is 2 in. (51 mm) past vertical center line of pulley.
Secondary Cleaner is not changing belt line.
Blades are centered on belt.

Part Numbers



Martin® UBX Urethane Blade Assembly

P/N UBUSXXSXXXXXX. See Figure 4. Includes blade , mainframe and tensioners.

Martin® UBX Metal Tipped Blade Assembly

P/N UBMSXXSXXXXXX. See Figure 5. Includes blade , mainframe and tensioners.

Martin® UBX Tensioners

Martin® UBX Square Mainframe Tensioners Steel: **P/N UBTT.**
 Martin® UBX Square Mainframe Tensioners Stainless Steel: **P/N UBTF.**

Martin® UBX Urethane Blade Replacement

P/N UBUSXXSXOKX. (Orange) Includes replacement blades.
P/N UBUSXXSXBKX. (Brown) Includes replacement blades.
P/N UBUSXXSXGKX. (Green) Includes replacement blades.

Martin® UBX Metal Tipped Blade Replacement

P/N UBMSXXSXOKX. (Orange) Includes replacement blades.
P/N UBMSXXSXBKX. (Brown) Includes replacement blades.
P/N UBMSXXSXGKX. (Green) Includes replacement blades.

Martin® UBX Door Options

P/N UBDT. Used to keep debris out while also allowing for inspection and maintenance.
P/N UBDF. Used to keep debris out while also allowing for inspection and maintenance with a corrosion resistant material.

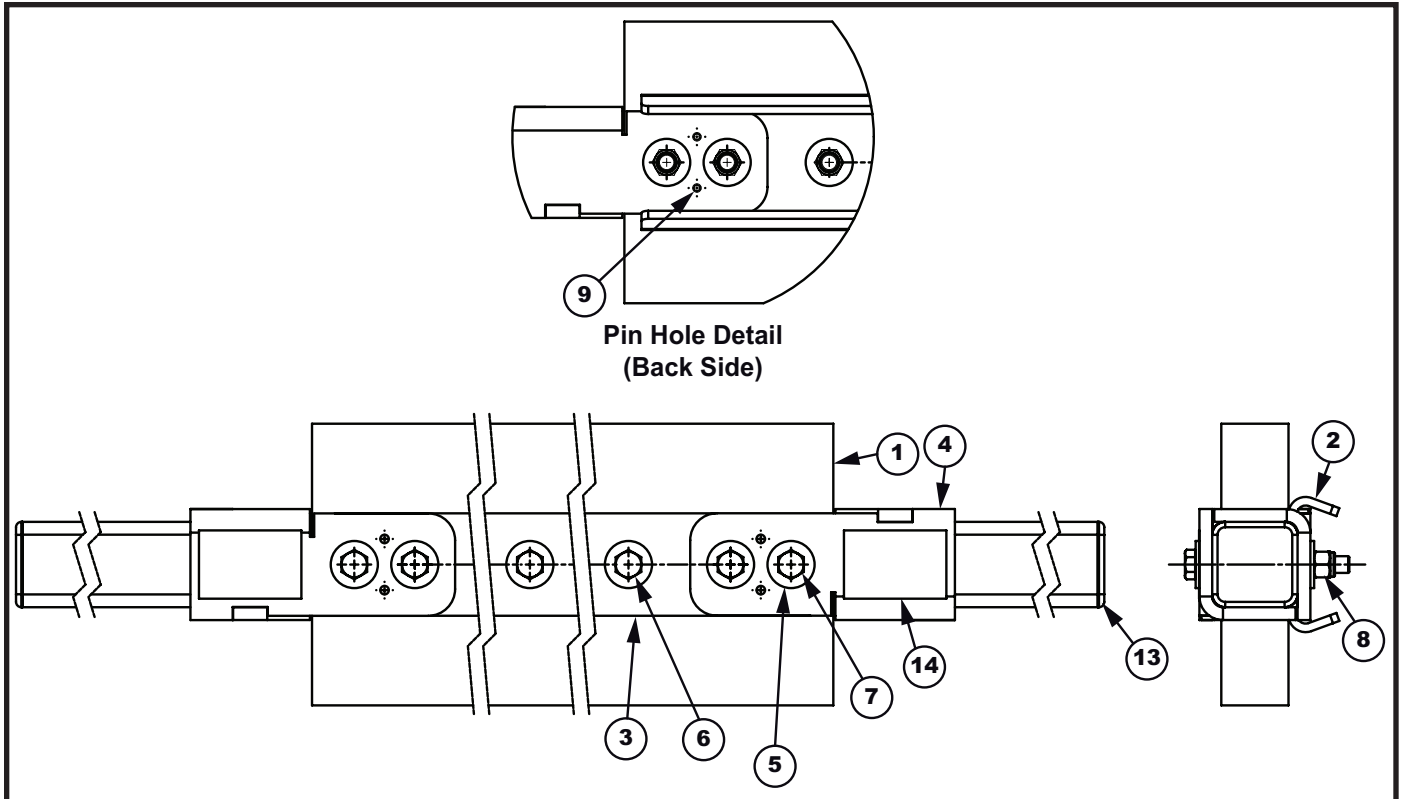


Figure 4. Martin® UBX Secondary Cleaner Assembly, P/N UBUSXXSXXXXX

Item	Description	Part Number	Qty
1	Urethane Blade	Table II	1
2	Back Plate	Table III	1
3	Front Plate	Table III	1
4	Frame End Weldment	Table IV	2
5	Screw HHC 1/2-13NC X 4-1/2	Table IV	4
6	Screw HHC 1/2-13NC X 3-1/2	Table IV	Table III
7	Washer Flat 1/2 Wide	Table IV	Table III
8	Nut Hex Elastic Lock 1/2-13NC	Table IV	Table III
9	Pin Slotted Spring 1/4 X 5/8	Table IV	4
(NS) 10	Tensioner Assembly	Table V	1
(NS) 11	Cover Door Assembly	Table VI	1
(NS) 12	Manual Operators	M4207	1
13	Plug for 2.50 SQ Tube	34896-02	2
14	Label Martin Product	38048	2

Table II. Martin® UBX Secondary Cleaner Urethane Blade Color & Part Numbers

Part Number	P/N Item 1	Color
UBUSXXSXOKX	UBUSXXSXO	ORANGE
UBUSXXSXBKX	UBUSXXSXB	BROWN
UBUSXXSXGKX	UBUSXXSXG	GREEN

Table III. Martin® UBX Secondary Cleaner Urethane Blade Assembly Part Numbers & Quantity

Part Number	P/N Item 1	P/N Item 2	P/N Item 3	Qty. Item 6	Qty. Item 7	Qty. Item 8
UBUS24SFXXXX	UBUS24SFX	UBBPS24X	UBFPS24X	3	14	7
UBUS30S6XXXX	UBUS30S6X	UBBPS24X	UBFPS24X	3	14	7
UBUS30SFXXXX	UBUS30SFX	UBBPS30X	UBFPS30X	3	14	7
UBUS36S6XXXX	UBUS36S6X	UBBPS30X	UBFPS30X	3	14	7
UBUS36SFXXXX	UBUS36SFX	UBBPS36X	UBFPS36X	5	18	9
UBUS42S6XXXX	UBUS42S6X	UBBPS36X	UBFPS36X	5	18	9
UBUS42SFXXXX	UBUS42SFX	UBBPS42X	UBFPS42X	5	18	9
UBUS48S6XXXX	UBUS48S6X	UBBPS42X	UBFPS42X	5	18	9
UBUS48SFXXXX	UBUS48SFX	UBBPS48X	UBFPS48X	7	22	11
UBUS54S6XXXX	UBUS54S6X	UBBPS48X	UBFPS48X	7	22	11
UBUS54SFXXXX	UBUS54SFX	UBBPS54X	UBFPS54X	7	22	11
UBUS60S6XXXX	UBUS60S6X	UBBPS54X	UBFPS54X	7	22	11
UBUS60SFXXXX	UBUS60SFX	UBBPS60X	UBFPS60X	9	26	13
UBUS66S6XXXX	UBUS66S6X	UBBPS60X	UBFPS60X	9	26	13
UBUS72SFXXXX	UBUS72SFX	UBBPS72X	UBFPS72X	11	30	15

Table IV. Martin® UBX Secondary Cleaner Mainframe Part Numbers*

Part Number	P/N Item 2	P/N Item 3	P/N Item 4	P/N Item 5	P/N Item 6	P/N Item 7	P/N Item 8	P/N Item 9
UBSXXSXSTXX	UBBPSXXT	UBFPSXXT	UBFEWT	35170	M921	17328	18577	SUS10206
UBSXXSXFXX	UBBPSXXF	UBFPSXXF	UBFEWF	36101	18291	31295	24307	SUS10206S

*The First X in “Part Number” Indicates the Blade Material (U = Urethane/M = Metal Tipped Blade)

Table V. Martin® UBX Secondary Cleaner Tensioner Part Numbers*

Part Number	P/N Item 10
UBXSXXSXXTX	UBTT
UBXSXXSXXFX	UBTF

*The First X in “Part Number” Indicates the Blade Material (U = Urethane/M = Metal Tipped Blade)

Table VI. Martin® UBX Secondary Cleaner Cover Door Part Numbers*

Part Number	P/N Item 11
UBXSXXSXXXXD	UBDT
UBXSXXSXXXXXS	UBDF

*The First X in “Part Number” Indicates the Blade Material (U = Urethane/M = Metal Tipped Blade)

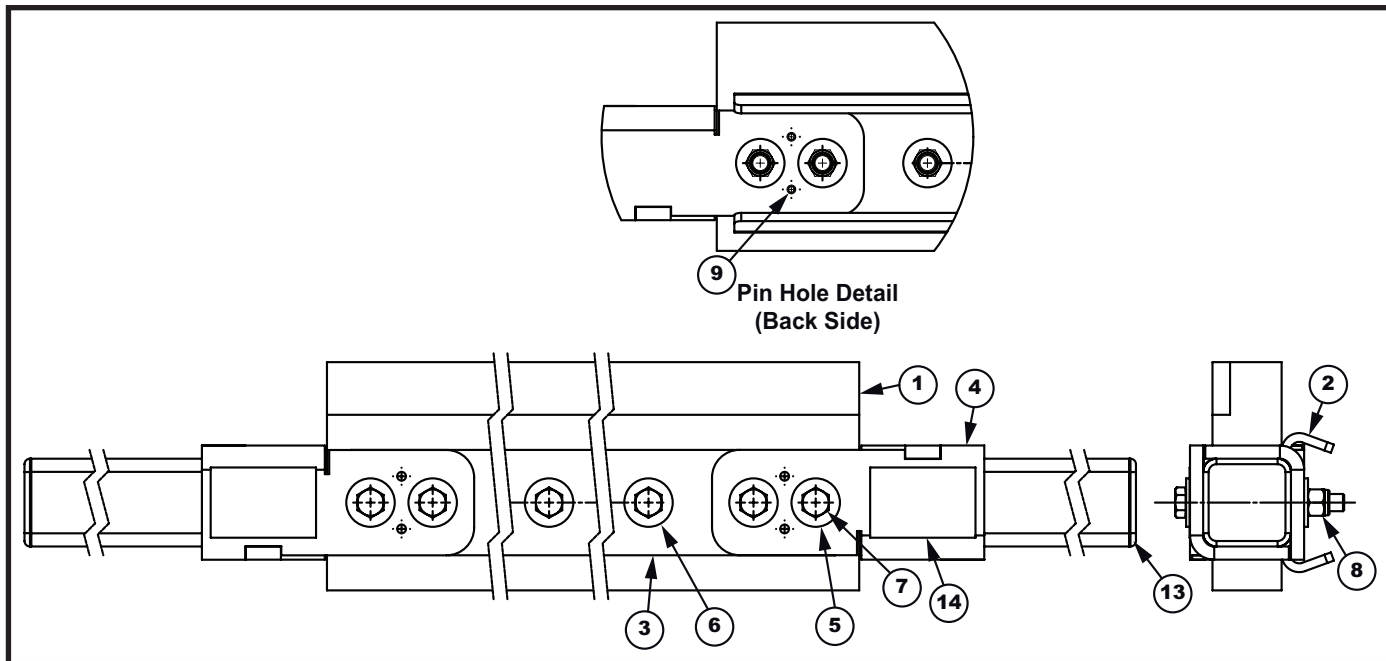


Figure 5. Martin® UBX Secondary Cleaner Assembly, P/N UBMSXXXSXXXXX

Item	Description	Part Number	Qty
1	Blade with Steel Insert	Table VII	1
2	Back Plate	Table IV	1
3	Front Plate	Table IV	1
4	Frame End Weldment	Table IV	2
5	Screw HHC 1/2-13NC X 4-1/2	Table IV	4
6	Screw HHC 1/2-13NC X 3-1/2	Table IV	Table VIII
7	Washer Flat 1/2 Wide	Table IV	Table VIII
8	Nut Hex Elastic Lock 1/2-13NC	Table IV	Table VIII
9	Pin Slotted Spring 1/4 X 5/8	Table IV	4
(NS) 10	Tensioner Assembly	Table V	1
(NS) 11	Cover Door Assembly	Table VI	1
(NS) 12	Manual Operators	M4207	1
13	Plug for 2.50 SQ Tube	34896-02	2
14	Label Martin Product	38048	2

Table VII. Martin® UBX Secondary Cleaner Metal Tipped Blade Color & Part Numbers

Part Number	P/N Item 1	Color
UBMSXXXSOKX	UBMSXXXSO	ORANGE
UBMSXXXSBKX	UBMSXXXSB	BROWN
UBMSXXXSGKX	UBMSXXXSG	GREEN

**Table VIII. Martin® UBX Secondary Cleaner Metal Tipped Blade
Assembly Part Numbers & Quantity**

Part Number	P/N Item 1	P/N Item 2	P/N Item 3	Qty. Item 6	Qty. Item 7	Qty. Item 8
UBMS24SFXXXX	UBMS24SFX	UBBPS24X	UBFPS24X	3	14	7
UBMS30S6XXXX	UBMS30S6X	UBBPS24X	UBFPS24X	3	14	7
UBMS30SFXXXX	UBMS30SFX	UBBPS30X	UBFPS30X	3	14	7
UBMS36S6XXXX	UBMS36S6X	UBBPS30X	UBFPS30X	3	14	7
UBMS36SFXXXX	UBMS36SFX	UBBPS36X	UBFPS36X	5	18	9
UBMS42S6XXXX	UBMS42S6X	UBBPS36X	UBFPS36X	5	18	9
UBMS42SFXXXX	UBMS42SFX	UBBPS42X	UBFPS42X	5	18	9
UBMS48S6XXXX	UBMS48S6X	UBBPS42X	UBFPS42X	5	18	9
UBMS48SFXXXX	UBMS48SFX	UBBPS48X	UBFPS48X	7	22	11
UBMS54S6XXXX	UBMS54S6X	UBBPS48X	UBFPS48X	7	22	11
UBMS54SFXXXX	UBMS54SFX	UBBPS54X	UBFPS54X	7	22	11
UBMS60S6XXXX	UBMS60S6X	UBBPS54X	UBFPS54X	7	22	11
UBMS60SFXXXX	UBMS60SFX	UBBPS60X	UBFPS60X	9	26	13
UBMS66S6XXXX	UBMS66S6X	UBBPS60X	UBFPS60X	9	26	13
UBMS72SFXXXX	UBMS72SFX	UBBPS72X	UBFPS72X	11	30	15



Figure 6. Martin® Product Label, P/N 38048

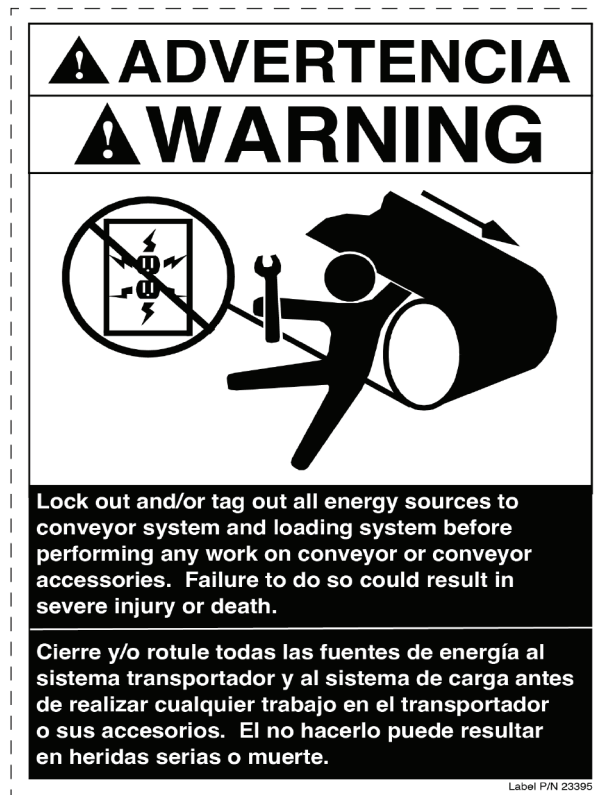
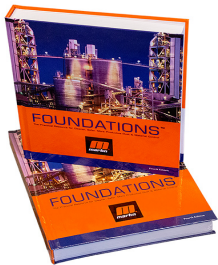


Figure 7. Conveyor Products Warning Label, P/N 23395

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