



# PPCC Manuals for: Installation, Maintenance, Safety, and Parts List

*Recommended Spare Parts in Highlighted Print*

## Horizontal Conveyor Manual

Serial # \_\_\_\_\_

Model # H \_\_\_\_\_

Computer Code \_\_\_\_\_

# SAFETY FIRST!



Failure to follow all safety stickers, placards and maintenance manual instructions may result in serious injury to operators or maintenance personnel.

## NOTE:

Equipment may start automatically if a sensing device, such as a photo-eye or proximity switch, is accidentally blocked. Equipment may start automatically when a zone is placed in the “automatic” mode. Disable control system outputs before working on any automatic equipment.

## FOLLOW YOUR SAFETY PROCEDURES AND INSTRUCTIONS FOR ALL OPERATOR AND MAINTENANCE PROCEDURES.

### SOME SAFETY DO'S AND DON'TS:

- **DO NOT** enter areas designated “Authorized Personnel Only” or confined spaces without prior authorization and without following (L.O.T.O.) procedures.
- **DO NOT** operate any equipment without all factory-supplied guards securely installed in their proper locations.
- **DO NOT** bypass or defeat any safety device at any time.
- **DO NOT** reset any tripped EMERGENCY STOP button or cable without first determining the cause of the trip.
- **DO NOT** reach over, around, or through any guard or safety barrier without first following proper (L.O.T.O.) procedures.
- **DO NOT** clean or work under any lift table without using proper maintenance stops.
- **DO NOT** walk, sit, ride, or climb on conveyor at any time.
- **DO NOT** remove or alter conveyor guards of safety barriers.
- **DO NOT** load conveyor beyond design limits.
- **DO** follow plant Lock-Out, Tag-out (L.O.T.O.) procedures when working on machinery, including pneumatic devices.
- **DO** disable the control circuit output before working on any conveyor.
- **DO** lock-out the main and any auxiliary control panels before working on any conveyor.
- **DO** be aware that hazardous voltages may still be present in control cabinets even if the disconnect is locked out.
- **DO** lock-out the air supply to all equipment before working on or around any pneumatic device.
- **DO** verify that the energy source to the equipment is off before beginning any work.
- **DO** keep clothing, hair, fingers, and other body parts away from conveyor at all times.
- **DO** use all required personal protective equipment at all times when working on equipment.
- **DO** allow only authorized maintenance personnel to service conveyor.
- **DO** know the location and function of all start/stop controls.
- **DO** keep all start/stop controls free of obstruction.
- **DO** keep all personnel clear of conveyor when starting.
- **DO** operate conveyor with trained personnel only.
- **DO** verify that all personnel are clear of conveyor before switching into automatic mode.

\*\*\*\*\*POWER-PACK CONVEYOR COMPANY\*\*\*\*\*  
\*\*\*\*\*IF IT'S NOT SAFE, DON'T DO IT\*\*\*\*\*

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## Caution Stickers



Located on side of Conveyor



Located on side of Conveyor



Located on Guard

Continuing Engineering Advances may cause changes to information shown.

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# Introduction

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## Receiving Instructions:

A. Check the number of crates, boxes, skids, etc. received against the Bill of Lading, to make sure all items shipped have been received. Check to see if any equipment was damaged in transit. If damages occurred, note damages on freight bill and immediately contact the motor carrier to a file claim for the damages.

## Approval Drawings:

B. PPCC supplies approval drawings and a Bill of Material (BOM) on each conveyor to your engineering department for approval before fabrication. If you have a design or dimension question please refer to these drawings. For any additional assistance contact PPCC at (440) 975-9955 and ask for the Engineering Manager.

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# Installation

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## Match Mark Numbers

All body sections are match marked with letters and numbers as follows: A-1 to A-1 etc. at body splice. See figure 3A.

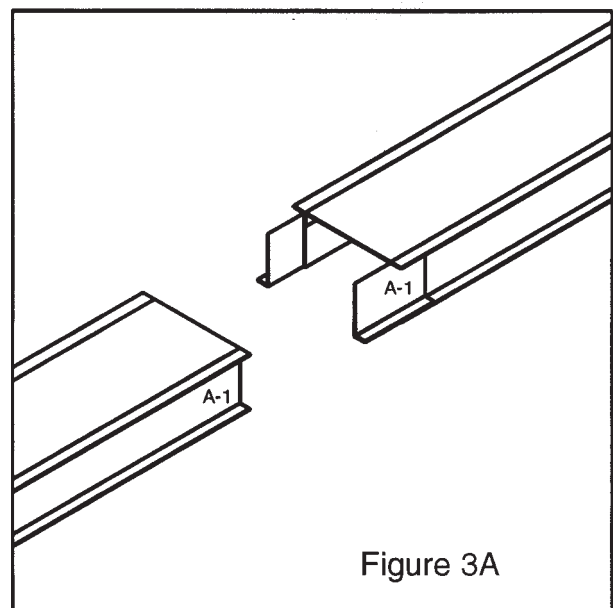


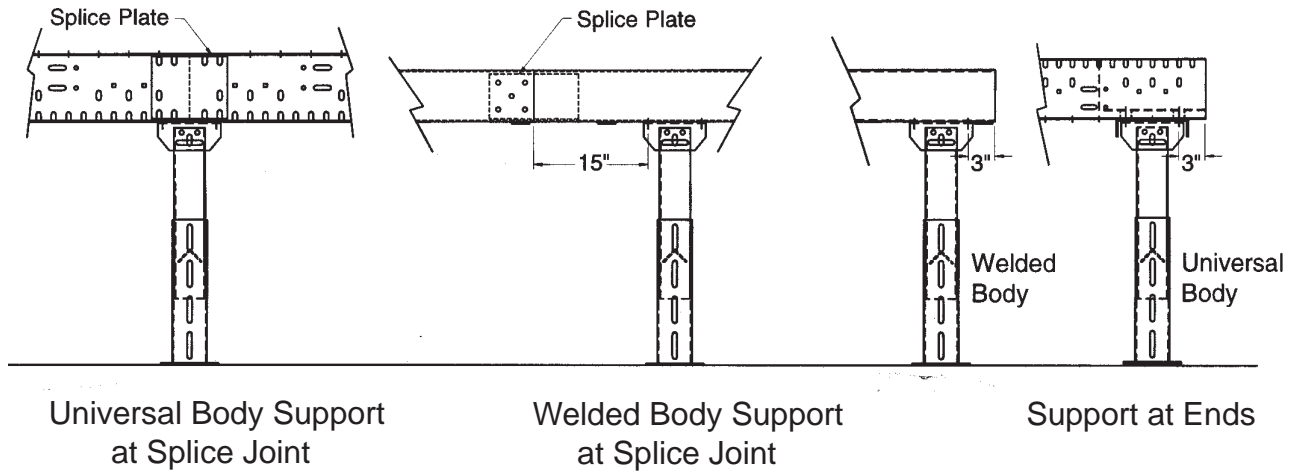
Figure 3A

Continuing Engineering Advances may cause changes to information shown.

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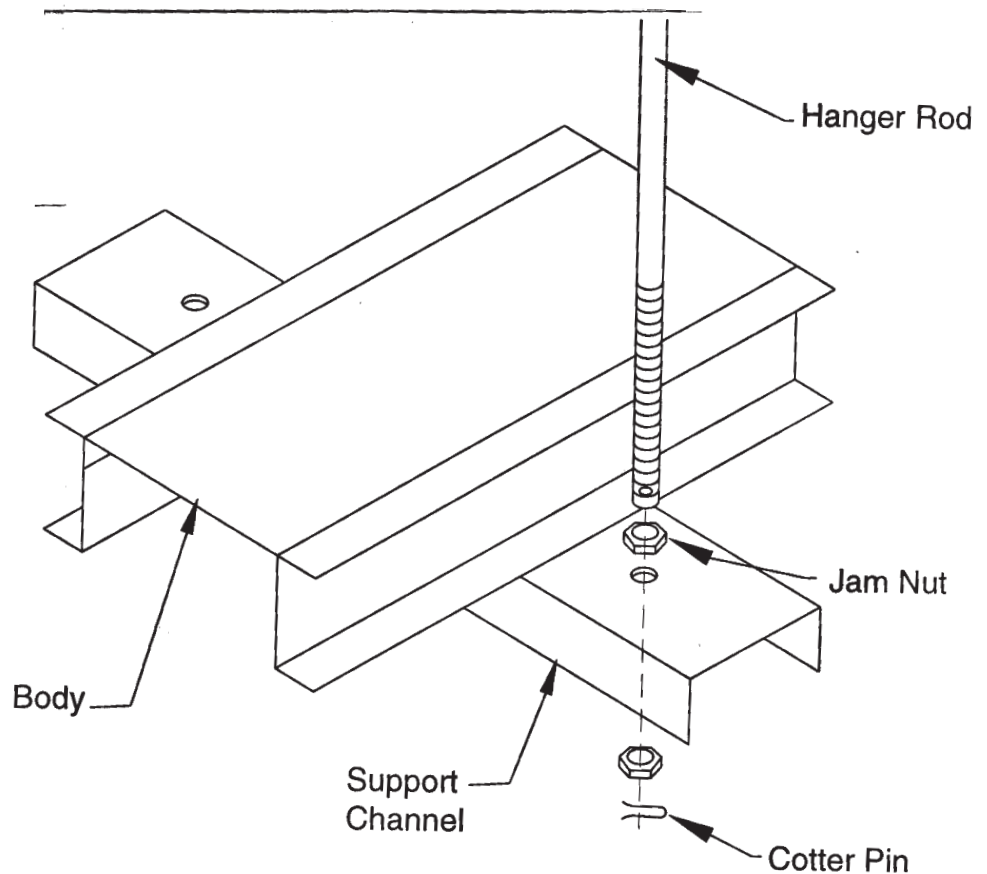
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# Floor Support Installation



# Ceiling Hanger Support Installation

Ceiling hanger support channels are supplied by PPCC. Note: hanger rods with jam nuts and cotter pin are supplied by customer or installer.



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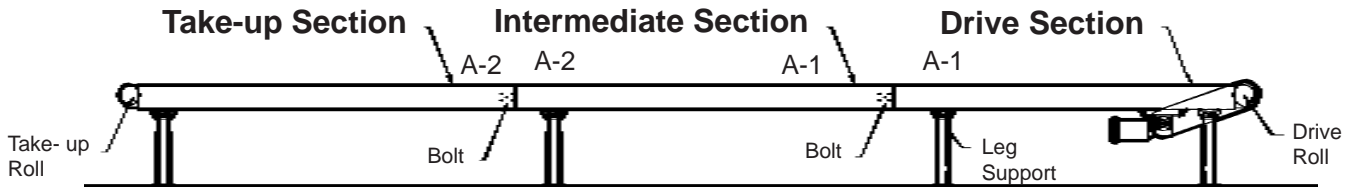
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# Conveyor Setup



Figure 4A

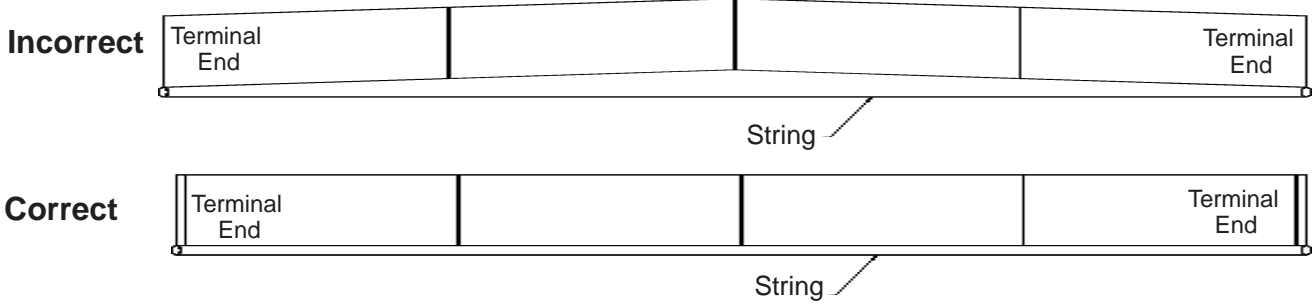


Bolt conveyor section A-1 to matching section A-1 etc. See figure 4A.

# Conveyor Alignment

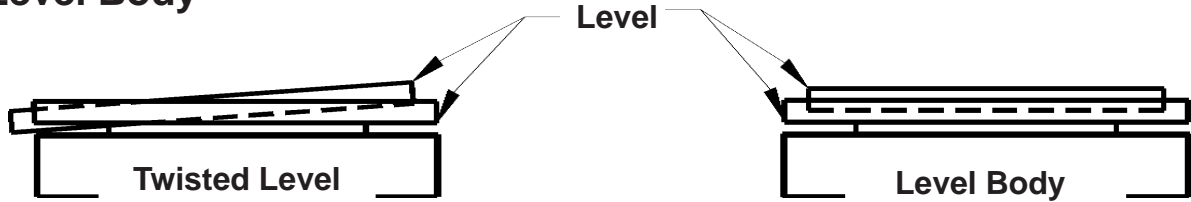
## A. Straight Body

### Top View



Make sure conveyor is not installed with a bow. Place a string from one terminal end to the other and pull tight to determine see if the conveyor is straight or bowed. If the conveyor is bowed, align body section until parallel with string. Then lag conveyor to the floor.

## B. Level Body



Make sure conveyor body is not twisted. Set level across belt at each end of conveyor or over each set of legs. Sight across tops of level for parallel edges. If not parallel adjust or shim legs until conveyor bed is level. Then lag down to floor.

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# Belt Installation



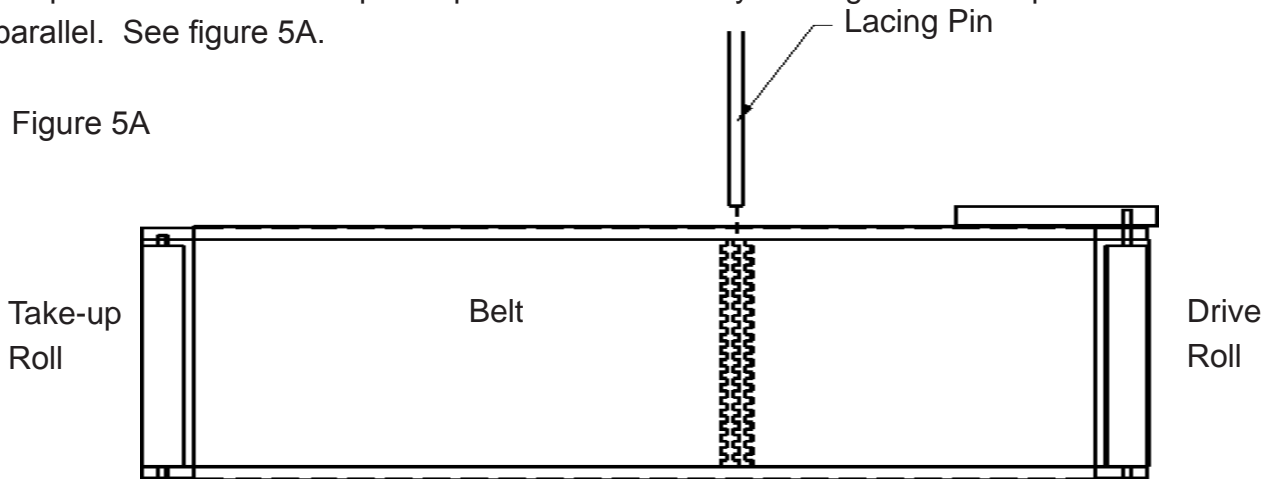
Check to see if your conveyor belt has been pre laced at the factory. If not, install belt with bare back down and the shiny or covered side up.

Pull belt ends together and insert lacing pin. See figure 5A.

Belt tension should be taken up at the take-up end section. See figure 5A. Enough belt tension should be taken so the drive roll does not slip when carrying full loads. **DO NOT OVER TENSION.**

Keep the drive and take-up rolls parallel to the bed by moving both take-up bolts until roll is parallel. See figure 5A.

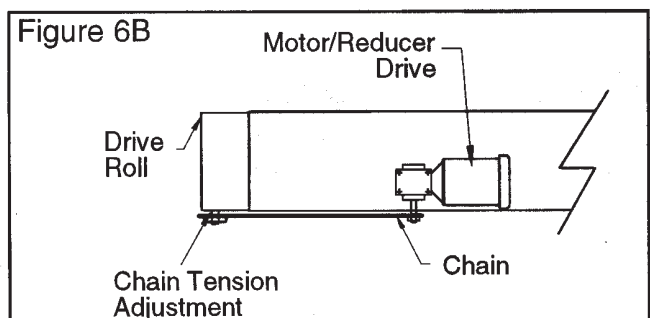
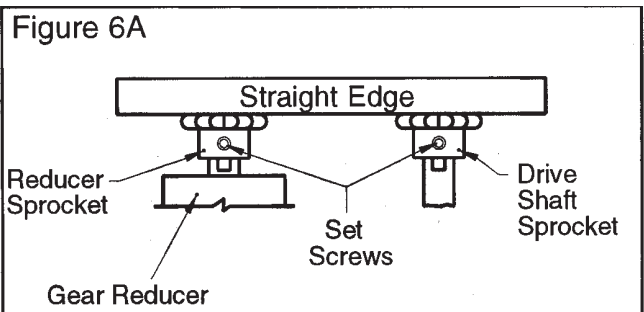
Figure 5A



# Operations

## Drive Chain Alignment & Tension

The drive chain and sprockets should be checked periodically for proper tension and alignment. Improper adjustment will cause premature wear to the drive components. See page 7 for proper chain tension instructions.



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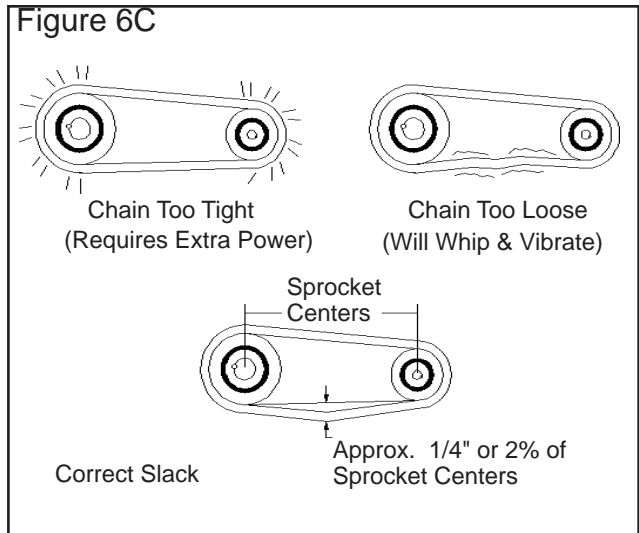
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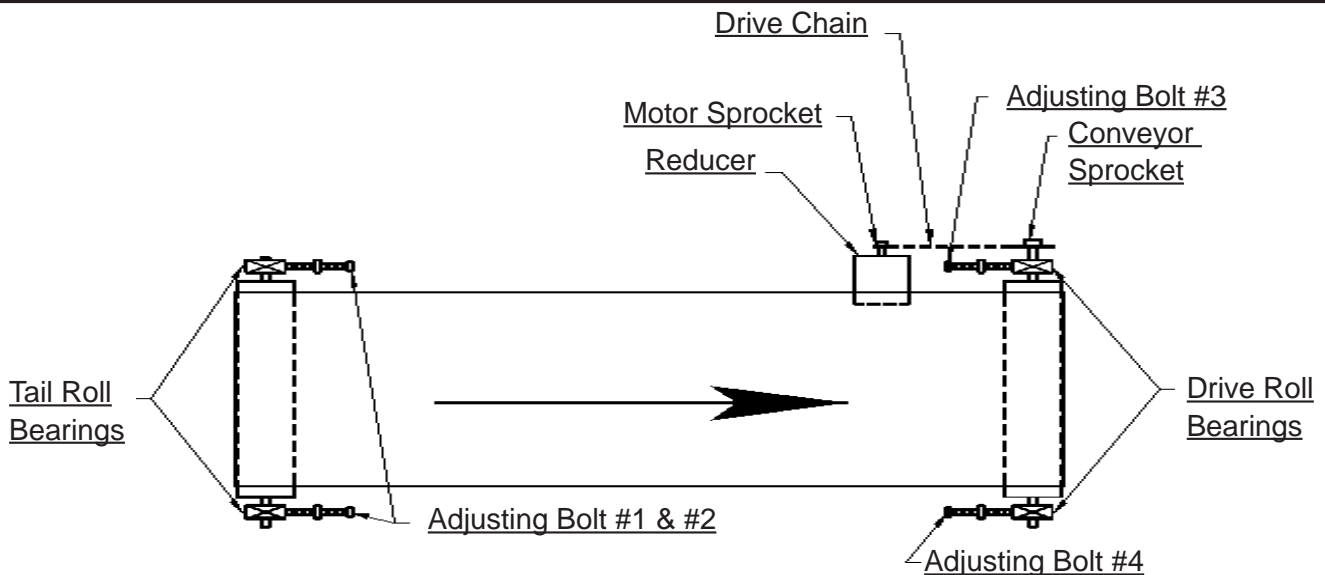
## TO MAKE ADJUSTMENTS

- 1... Remove chain guard.
- 2... Check sprocket alignment by placing a straight edge across the face of both sprockets (Figure 6A). Loosen set screws and adjust as needed. Retighten set screws.
- 3... To adjust chain tension, loosen bolts on motor base. Tighten until desired chain tension is reached (Figure 6C). Retighten mounting belt.
- 4... Lubricate chain per maintenance instructions.
- 5... Replace chain guard so that it does not interfere with drive.



**CAUTION!**  
NEVER REMOVE CHAIN GUARDS WHILE THE CONVEYOR IS OPERATING. ALWAYS REPLACE GUARDS AFTER ADJUSTMENTS ARE MADE.

## Belt Tracking Non-Reversing



**Belt Tension:** Increase belt tension by taking an even number of turns on adjusting bolts #1 & #2 at end opposite drive. If belt tends to run to one side, adjust bolt on that side to re-center belt on roll.

**Chain Tension:** Remove chain guard. Turn adjusting bolt #3 to tighten drive chain. Replace guard. Run conveyor, center belt on roll by adjusting bolt #4. **DANGER- DO NOT RUN CONVEYOR WITH CHAIN GUARD DETACHED. CAUTION: OVERTIGHTEN DRIVE CHAIN WILL CAUSE EXCESSIVE WEAR ON DRIVE COMPONENTS**

**CAUTION: DO NOT RIDE, SIT, STAND OR WALK ON CONVEYOR AT ANYTIME.**

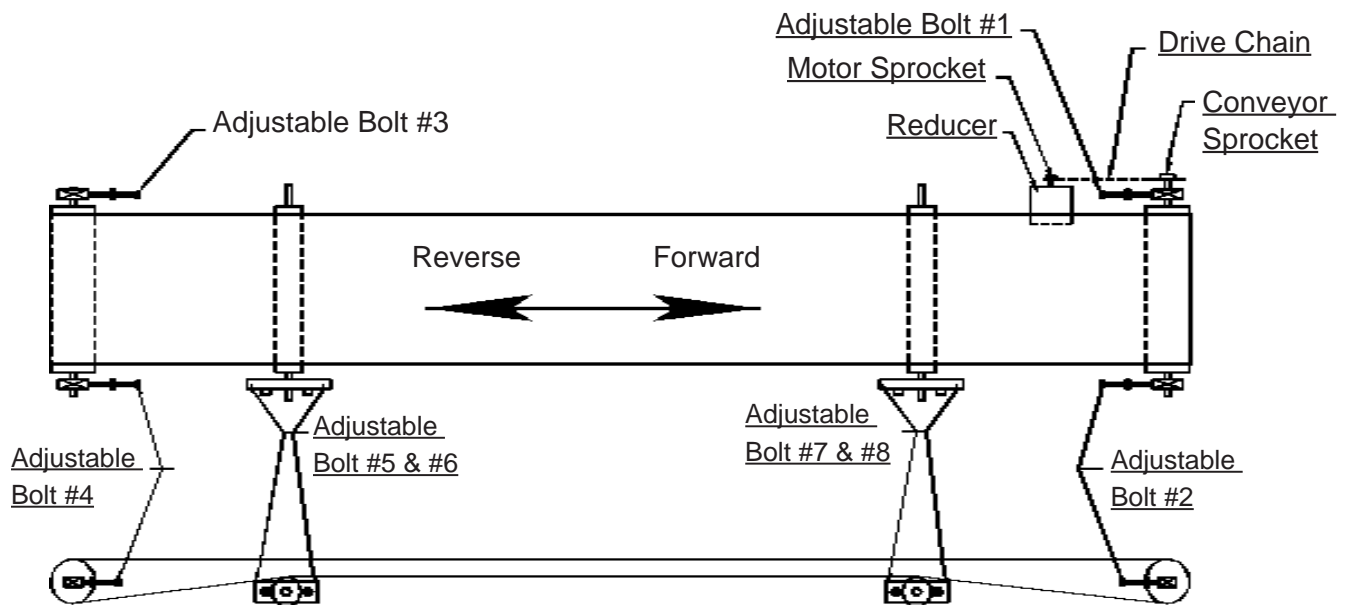
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# Belt Tracking Reversing



**Belt Tension:** Increases belt tension by taking an even number of turns on adjusting bolts #3 & #4 on end opposite drive.

**Belt Alignments:** Forward travel adjust bolt #4 for belt alignment on drive roll. Loosen bolts #5 & #6 and slide plate to adjust belt alignment on tail roll, then reverse direction of travel and adjust bolt #2 for belt alignment on tail roll. Loosen bolts #7 & #8 and slide plate to adjust belt alignment on drive roll. Re-check both directions for alignment.

**Chain Tension:** Remove chain guard. Turn adjusting bolt #3 to tighten drive chain. Turn adjusting bolt #4 same number of turns as adjusting bolt #3. Replace guard. Run conveyor, adjust belt per belt alignment above #4.

## Electrical Controls

If controls are supplied with your equipment, see wiring diagram located in door of control panel.

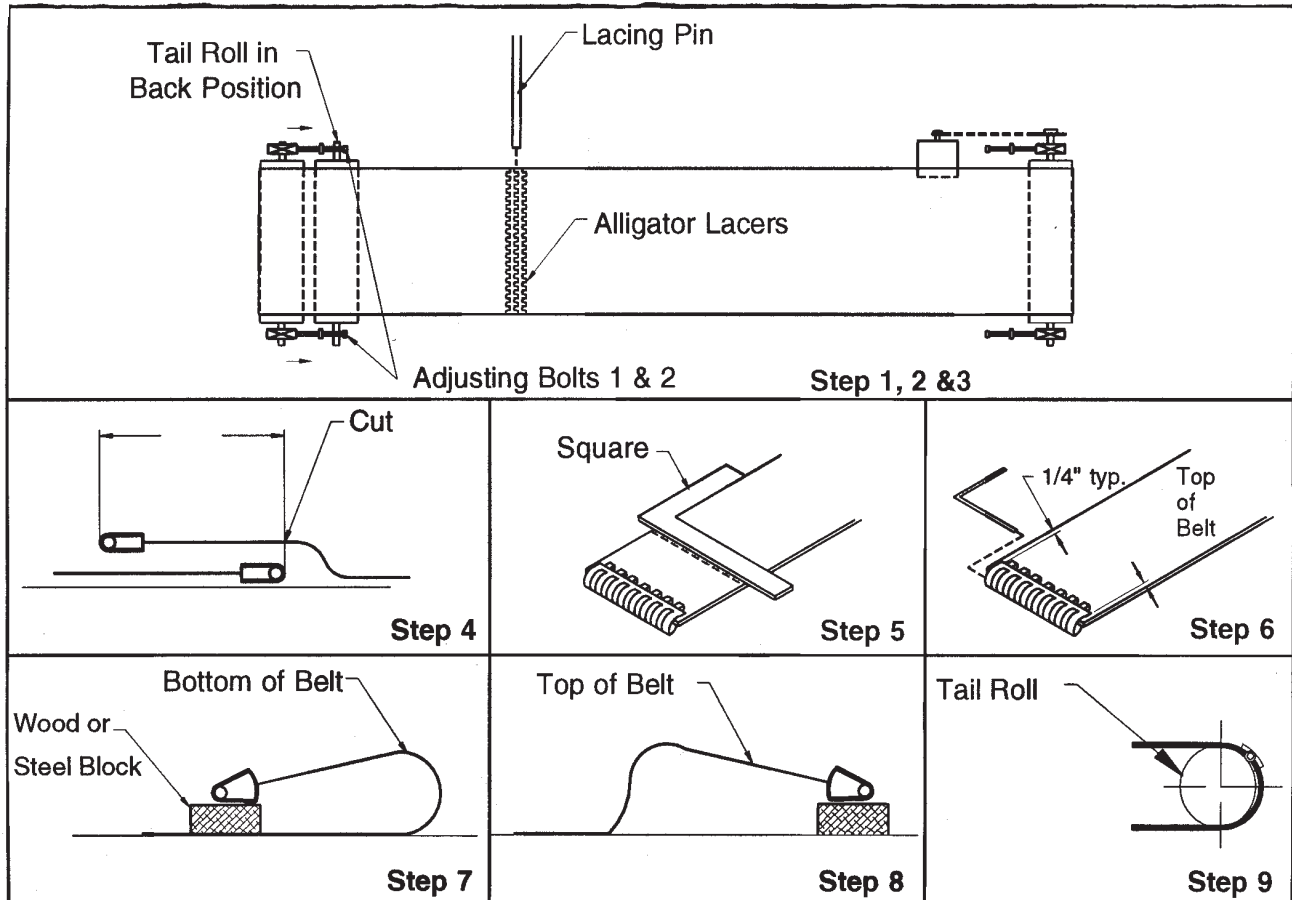
## Start-Up

Before conveyor is turned on, remove any foreign objects on conveyor belt. After conveyor has been turned on, check your plant to conveyor motor amp draws to make sure your plant has sufficient power requirements.

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## Remove, Shorten or Relacing Belt



1. Run conveyor to bring lacers to the top of conveyor. **CAUTION! DISCONNECT POWER BEFORE MAKING REPAIRS ON CONVEYOR.**
2. Loosen adjusting bolts 1 & 2 at end opposite drive to bring tail roll in back position.
3. Pull lacing pin from belt.
4. Over lap belt ends to determine how much belt should be shortened & marked.
5. Lay square on belt and cut. It is important that the belt is cut square for proper tracking. (Note! Excessive belting may be cut off one end or equal amounts off each end. If you cut off one end, it is not necessary to replace lacer on other end of belt unless lacers are worn.)
6. Center Alligator lacing on belt, ribbed side up. Insert gauge pin between belt and lacers. Hammer tooth at each edge enough to hold lacing in place. When attaching second half of lacer, check that both ends mesh, with edges flush.
7. Fold belt back on block of wood. Hold lacing tight against end of belt, hammer teeth halfway into belt.
8. With top of belt up and lacing on block of wood, hammer teeth flush with belt - avoid hitting gauge pin or loops.
9. Attach belt to conveyor at foot roll with ribbed side of lacers up. Hammer lacers on tail roll until flush and lacers conform to curvature of roll.
10. Adjust tail end for proper belt tension and alignment, (see belt installation pg 6).

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# Reducer, Bearing, Chain & Motor



## Reducer:

Check reducer oil level periodically. See reducer manual for type of oil required.

## Bearings:

Return idler bearings are either free running ball bearings and need no lubrication or they are cartridge style bearings pre-lubricated at the factory for the life of the bearing under normal operating conditions.

All pillow block and flanged bearings are pre-lubricated at the factory for operating life of the bearing under normal conditions. Grease fittings are also supplied on these bearings, so under extreme operating conditions bearings can be inspected and greased with a lithium base grease conforming to a NLGI grade 2 consistency, as required.

**CAUTION: OVER GREASING WILL CAUSE GREASE SEAL TO BREAK AND BEARING MAY FREEZE-UP FROM LOSS OF GREASE.**

## Chain:

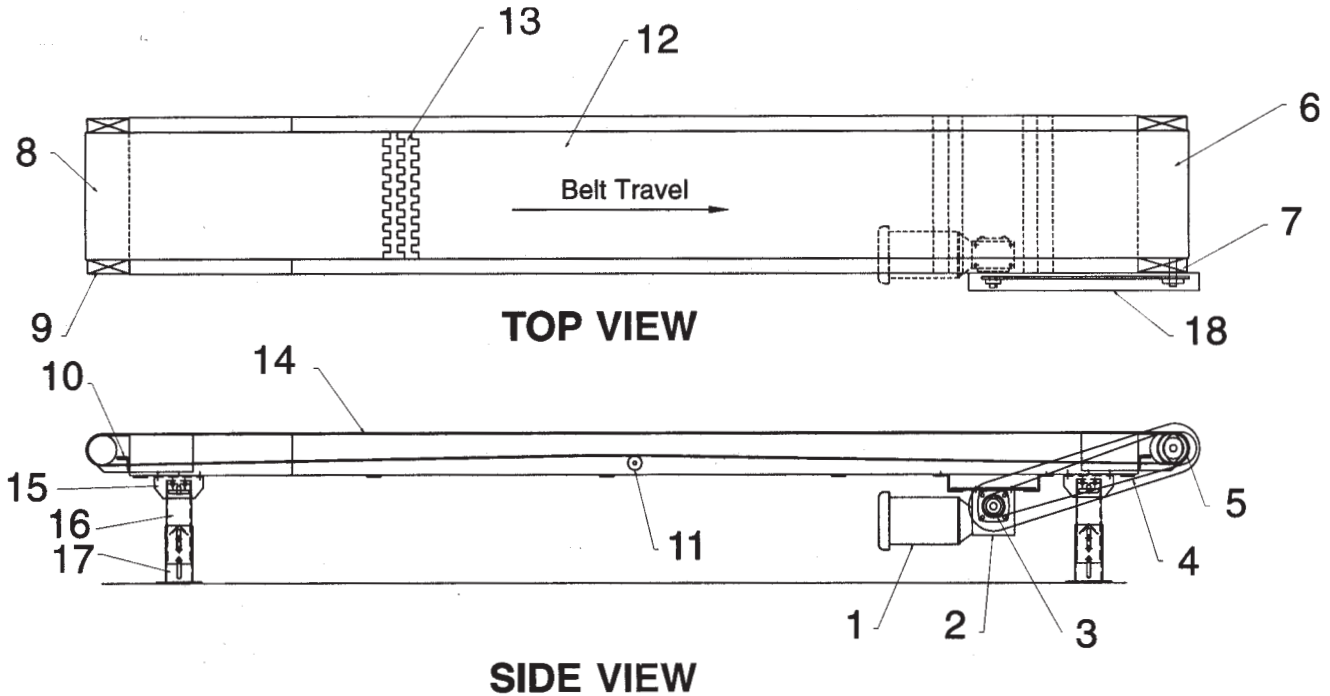
It is recommended that the drive chain be lubricated with SAE-30 oil approximately every 40 hours of operation. Under extreme conditions, more frequent lubrication may be required.

## Motor:

See motor manual.

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## Parts List & Recommended Spare Parts

Reference No.	Quantity	Description
1	1	<b>Motor</b>
2	1	<b>Reducer</b>
3	1	Reducer Sprocket
4	1	Roller Chain
5	1	Conveyor Sprocket
6	1	Drive Roll
7	2	<b>Drive Roll Bearings</b>
8	1	Tail Roll
9	2	<b>Tail Roll Bearings</b>
10	4	Adjusting Set Screws
11	-	Return Idlers
12	1	Belt
13	1	<b>Lacer</b>
14	-	Conveyor Frame Complete (1'-10' sections)
15	-	Swivel Leg Pad
16	-	Fixed Leg Supports
17	-	Adjustable Leg Supports
18	1	Chain Guard

Recommended Spare Parts in Highlighted Print.

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# Ask About These Additional Creative Solutions To Material Handling Problems

Power-Pack offers you a broad range of material handling products, accessories and technologies. Each one is designed to meet specific conveying needs while meeting your company's production requirements and long-term operating costs as well.

## **SlimLine Conveyors**

These low profile units are designed for part, slug or scrap removal from under stamping presses or other applications that require a compact and reliable conveyor. They feature a sleek design, rugged construction and a wide selection to choose from.

## **Universal Conveyors**

The common frame design used in all 12 models of belt and roller Universal conveyors provides economy and durability for today – and quick interchangeability to meet new needs in the future. Each model can be selected for light, standard or heavy duty applications.

## **Welded Construction Conveyors**

When specifications call for "one piece formed body and welded construction throughout," Power-Pack welded construction conveyors are the right choice. They are available in light, standard and heavy duty construction. Stainless steel models are also available.

## **Specific Application And OEM Conveyors**

Power-Pack offers a wide selection of pre-engineered bulk material handling, part handling, manufacturing and processing conveyors. Each one, including bucket, magnetic and steel hinge belt types can be modified to meet your specific application needs.

## **Conveyor Types Available**

Horizontal Slider Bed  
Horizontal Flanged Belt  
Horizontal "V" Tracking  
Incline  
Cleated Incline  
Gravity  
Horizontal Belt Over Roller  
Belt Driven Live Roller  
Zero Pressure  
Chain Driven Live Roller  
Skewed Chain Driven Live Roller  
Wire Mesh Horizontal  
Wire Mesh Incline  
Wire Mesh Cleated Incline  
Wire Mesh "L" Style  
Wire Mesh "Z" Style  
Floor To Floor  
Cleated Incline With Nose Over  
Table Top Horizontal  
Table Top Curve  
Die  
SlimLine Horizontal  
SlimLine Incline  
SlimLine Cleated Incline  
Steel Hinge Belt Conveyor  
Steel Hinge Belt Incline  
Steel Hinge Cleated Incline  
Steel Hinge "L" Style  
Steel Hinge "Z" Style  
Self-Cleaning Horizontal  
Self-Cleaning Incline  
Self-Cleaning Cleated Incline  
Flanged Trough Horizontal  
Flanged Trough Cleated Incline  
Corrugated Horizontal  
Corrugated Incline  
Corrugated Cleated Incline  
Corrugated "L" Style  
Corrugated "S" Style  
Troughing Idler Horizontal  
Troughing Idler Incline  
Troughing Cleated Incline  
Magnetic Horizontal  
Magnetic Incline  
Magnetic Cleated Incline  
Magnetic Incline W/Nose Over  
Magnetic Vertical  
Drag Chain Horizontal  
Drag Chain Incline  
Drag Chain "L" Style  
Roller Chain Horizontal  
Slat Horizontal  
Bucket Elevator  
Belt Curves  
Wash Conveyor  
Roller Flight

## **Conveyor Components**

If your company is looking to build its own conveyors – these pre-engineered modules can help reduce engineering and assembly time. Included are: Power-Pack's patented drive and take-up pulley assemblies, motor packages, leg supports, frames, belts, rollers and more.

## **Trailer Mounted Sequencing Conveyors**

These unique mobile conveyors are specially designed to provide fast plant-to-plant loading of components for just-in-time delivery to line set.

## **Custom Conveyors**

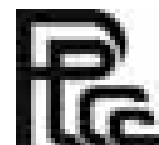
Need a special conveyor design for an in-plant or OEM application? Power-Pack's 60-plus years of material handling, manufacturing and processing experience is at your disposal to design and manufacture a cost-effective solution.

## **Systems – Synchronized, High Throughput and Storage & Retrieval**

Power-Pack systems engineers specialize in creating advanced systems to reduce manufacturing and inventory costs. Innovative systems which can help your company rapidly meet new market demands or competitive pressures.

## **Preview The Newest Innovations**

To keep your engineering staff abreast of the latest material handling technology, ask for our latest video tape titled: "Advanced Handling Systems."



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Quality Service,  
Innovative Design:**

**The Power-Pack Difference**