

Field Manual
T/C Chain Powered Roller Conveyor
Installation Procedures, Maintenance, and
Spare Parts



To contact Intelligrated:
For service: Customer Service and Support (CSS)
Hotline 1-877-315-3400
On the World Wide Web: www.intelligrated.com

By mail:

Intelligrated
7901 Innovation Way
Mason, OH 45040

(513) 701-7300

Read these documents thoroughly before attempting to perform maintenance or repairs to the applicable Intelligrated conveyor system components or devices. Exercise extreme caution when working around moving and rotating conveyor equipment. Wear the proper clothing and safety equipment. DO NOT attempt to perform any maintenance until the equipment is de-energized, locked out and tagged out in accordance with established company procedures.

The information presented in these documents are correct at the time of publication. Intelligrated has made every effort to ensure that the information presented is correct and free from error. However, some errors or misprints may occur. Please contact Intelligrated with any corrections.

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Direct questions and comments concerning the information contained in this manual to:

Documentation Department
Intelligrated
7901 Innovation Way
Mason, OH 45040

Ph (513) 701-7300

Fax (513)701-7349

customerservice@intelligrated.com

Package Conveyor Safety Signs

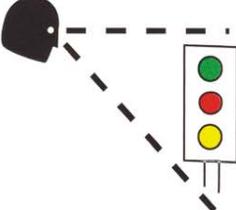
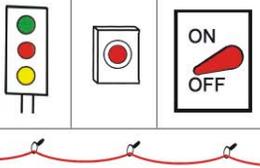


Package Conveyors

SAFETY

IS IN
YOUR
HANDS



 <p style="font-size: 0.8em; margin: 5px 0;">Do Not Climb, Sit, Stand, Walk, Ride, or Touch the Conveyor at Any Time</p>	 <p style="font-size: 0.8em; margin: 5px 0;">Do Not Perform Maintenance on Conveyor Until Electrical, Air, Hydraulic and Gravity Energy Sources Have Been Locked Out or Blocked</p>	 <p style="font-size: 0.8em; margin: 5px 0;">Operate Equipment Only With All Approved Covers and Guards in Place</p>
 <p style="font-size: 0.8em; margin: 5px 0;">Do Not Load a Stopped Conveyor or Overload a Running Conveyor</p>	 <p style="font-size: 0.8em; margin: 5px 0;">Ensure That All Personnel Are Clear of Equipment Before Starting</p>	 <p style="font-size: 0.8em; margin: 5px 0;">Allow Only Authorized Personnel To Operate or Maintain Material Handling Equipment</p>
 <p style="font-size: 0.8em; margin: 5px 0;">Do Not Modify or Misuse Conveyor Controls</p>	 <p style="font-size: 0.8em; margin: 5px 0;">Keep Clothing, BodyParts, and Hair Away from Conveyors</p>	 <p style="font-size: 0.8em; margin: 5px 0;">Remove Trash, Paperwork, and Other Debris Only When Power is Locked Out and Tagged Out</p>
 <p style="font-size: 0.8em; margin: 5px 0;">Ensure That ALL Controls and Pull Cords are Visible and Accessible</p>	 <p style="font-size: 0.8em; margin: 5px 0;">Know the Location and Function of All Stop and Start Controls</p>	 <p style="font-size: 0.8em; margin: 5px 0;">Report All Unsafe Conditions Jams should be cleared ONLY BY Authorized, Trained, Personnel</p>

POST IN PROMINENT AREA

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SECTION G: INSTALLATION PROCEDURES

Introduction

Accepting Shipment

Immediately upon delivery, check that all equipment received agrees with the bill of lading or carrier's freight bill. Any shipping discrepancy or equipment damage should be clearly noted on the freight bill before signing.

Shortages or Errors

Report any shortages or errors to the Customer Service in writing within ten (10) days after receipt of shipment.

Note: It is very important that you compare the Order Acknowledgment against the actual material received when you receive the shipment so you have enough lead time to order any missing parts. If you find that a part is missing during assembly, you may have to discontinue assembly while you wait for the part to arrive.

Lost or Damaged Shipment

Report lost shipments to our Shipping Department.

If shipping damage is evident upon receipt of the conveyor, note the extent of the damage on the freight bill and immediately contact the transportation carrier to request an inspection. Do not destroy the equipment crating and packing materials until the carrier's agent has examined them. Unless otherwise agreed by the seller, the Purchaser (user) shall be responsible for filing claims with the transportation carrier. A copy of the inspection report along with a copy of the freight bill should be sent to our Traffic Department.

Claims and Returns

All equipment furnished in accordance with the Manufacturer's Agreement is not returnable for any reason except when authorized in writing by the Seller. Notification of return must be made to the Customer Service Department, and if approved, a "Return Authorization Tag" will be sent to the Purchaser (user). The return tag, sealed in the "Return Authorization Envelope" should be securely affixed to the exterior surface on any side of the shipping carton (not Top or Bottom), or affixed to any smooth flat surface on the equipment, if not boxed.

Send authorized return shipment(s) transportation charges prepaid to the address indicated on the Return Authorization Tag. If initial shipment is refused, the Purchaser (User) shall be liable for all freight charges, extra cost of handling, and other incidental expenses.

Codes and Standards

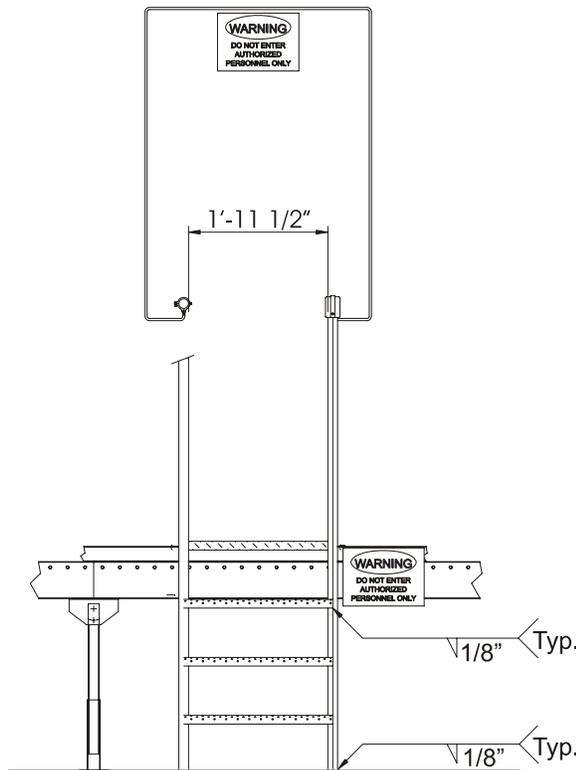
The conveyor equipment is designed and manufactured to comply with the American National Standard Institute's "SAFETY STANDARDS FOR CONVEYORS AND RELATED EQUIPMENT" (ANSI B20.1) and with the National Electrical Code (ANSI/NFPA70).

The Purchaser/User shall be familiar with, and responsible for, compliance with all codes and regulations having jurisdiction regarding the installation, use, and maintenance of this equipment.

Warning Signs

Warning signs and labels posted on or near the conveyor equipment shall not be removed, painted over, or altered at any time. All safety devices, warning lights, and alarms associated with the conveyor system should be regularly tested for proper operation and serviced as needed. If the original safety item(s) become defective or damaged, refer to the conveyor parts list or bills-of-materials for replacement part numbers.

WARNING: For conveyors installed at floor level in an **“Authorized Personnel Access Area Only”**, fixed rollers (3” centers) may be used in conjunction with an emergency pull cord. The area must be apart from normal working areas and access must be marked with a sign, **“Warning - Do Not Enter - Authorized Personnel Only”**. Part Number for ordering Warning Sign is 957305. The illustration below shows the location for installation of the sign.



TO ORDER LADDER SUPPORTS PER CROSSOVER:		
QNTY:	PART DESCRIPTION:	PART DESCRIPTION:
1	957173	X-OVER SIGN FRAME
2	957174	3/8" DIA NYLON LOOP CLAMP (TO ATTACH SIGN TO FRAME)
4	957175	1 1/4" DIA PIPE RING W/BOLT (TO ATTACH SIGN TO LADDERS)
4	957305	SIGN_WARN BY-WS10 SETON M2540

Safety Precautions

Accidents causing personal injury can usually be traced to unsafe work practices by either operating or maintenance personnel. Many accidents occur because the personnel concerned do not realize the danger of improper practices; or the proper practice is known, but ignored because the employee is in a hurry or is careless.

Safety Precautions for Personnel Operating the Conveyor

- Make sure only authorized, trained personnel operate the conveyor.
- Stop the conveyor before clearing jams or removing foreign objects.
- Make sure all personnel are clear of moving parts before starting the conveyor.
- Avoid distractions when operating the conveyor.
- The conveyor is designed and manufactured to comply with the American National Standard Institute's "Safety Standards for Conveyors and Related Equipment" (ANSI B20.1).
- Keep conveyor fully-retracted (and belt turned off) when not in use.

Maintenance personnel can contribute greatly to the success of a safety program. They are familiar with the equipment and know the dangers inherent in such equipment. In addition, they realize the hazards resulting from incorrect use of the equipment.

Maintenance personnel should be trained to recognize and to promptly report unsafe practices in the operation of this conveyor, as well as any dangerous condition in the conveyor itself.

Safety Precautions for Maintenance Personnel

The following precautions must be observed:

- Do Not perform maintenance while the conveyor is operating. Lock-out the circuit breaker disconnect switch with padlocks before performing maintenance.

Note: Single-key locks must be used by qualified electricians or maintenance mechanics. When possible, an additional power lock-out at the power source is recommended.

- Before restarting the conveyor, make sure all personnel are clear of moving parts.
- Maintain good housekeeping in the vicinity of the conveyor at all time. Clean up spilled materials or lubricants promptly.
- Always replace the protective devices before putting the conveyor back into service.
- Maintenance personnel should be alert for hazardous conditions at all times. Remove sharp edges and protruding objects, and replace broken or worn parts promptly.
- Use the proper tool for each job. Carry tools in a pouch or a tool box. never carry tools in a pocket.
- Report all accidents resulting in personal injury or damage to equipment, and all irregularities in equipment operation promptly to the proper authority.

Parts Replacement

To minimize production downtime, selected conveyor spare parts should be stocked for replacement of defective components when required. If quantity requirements or code numbers are not indicated on the conveyor parts list, refer to the equipment bill(s)-of-materials. For added convenience, a list of selected spare parts is included in this manual (see Section I).

Factory Assistance

Contact Field Service for installation, operation, or maintenance assistance, or Customer Service and Support for replacement parts.

Assembling the Conveyor

The following instructions provide general installation procedures for the T/C Chain Powered Roller conveyor.

Style 1 Conveyor Assembly

The Style 1, T/C Straight Conveyor has a “discharge-end” drive unit (DISDU). If equipped with an optional “infeed-end” drive unit (INDU), a “P” is added to the style number (Style 1P).

Conveyors up to 15’ in length are shipped from the factory as fully-assembled conveyor units.

For conveyors over 15’ in length, the end drive and take-up sections, intermediate section(s), supports, etc. are pre-assembled and shipped as individual components.

Note: If it becomes necessary to “shorten” a standard intermediate section to provide a specific conveyor length, refer to “Cutting Special Length” subsection for specific cutting instructions.

When installing, use the following steps to ensure that all necessary steps are taken.

Note: Check drive-type and required location before installing.

Step 1. Mount the floor supports (or ceiling hangers) to the drive and take-up sections. For additional information, see Figure G.2 and Figure G.3.

Step 2. Working from one end of the conveyor, progressively position, align, splice (see Figure G.4, Figure G.5 and Figure G.20), anchor, etc., all of the required components. See the “Style 1 Assembly/Support Location Requirements” section.

Step 3. Connect the drive chains. For additional information, see the “Chain Connection/Splicing” subsection.

Step 4. Install accessory items.

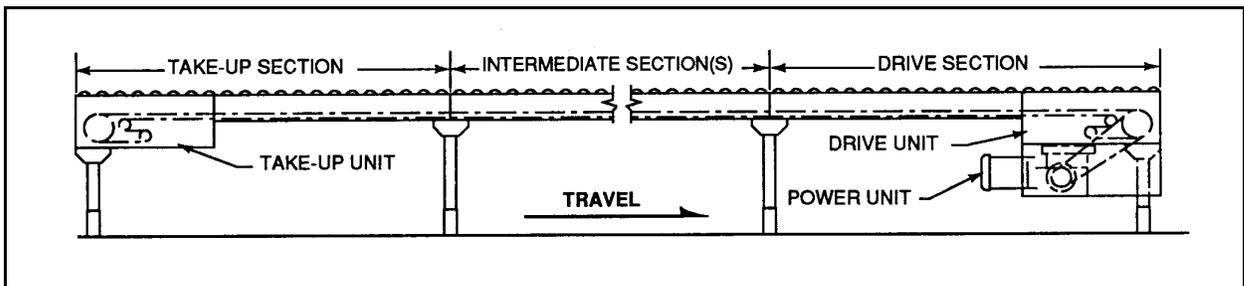


Figure G.1 – Style 1, T/C Conveyor with Discharge End Drive Unit

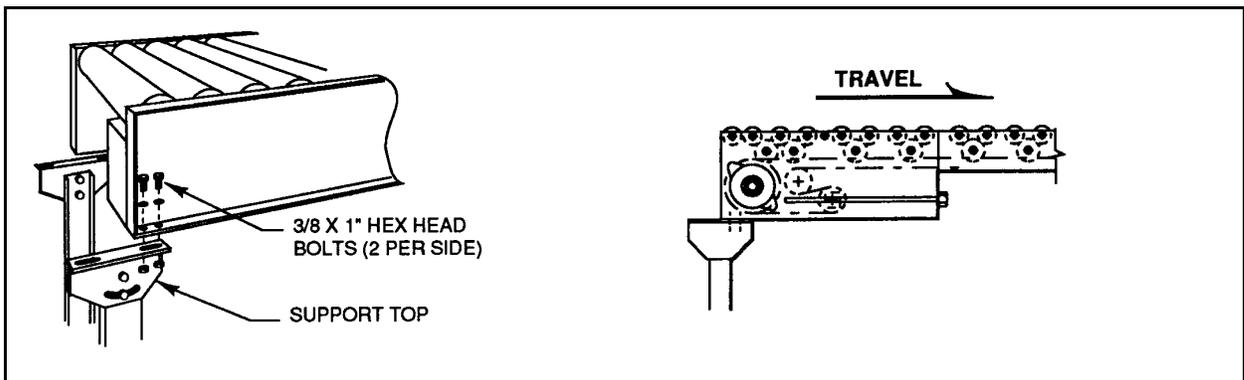


Figure G.2 – Installing Supports

Figure G.3 – Style 1P (Optional) Infeed-End Drive Unit

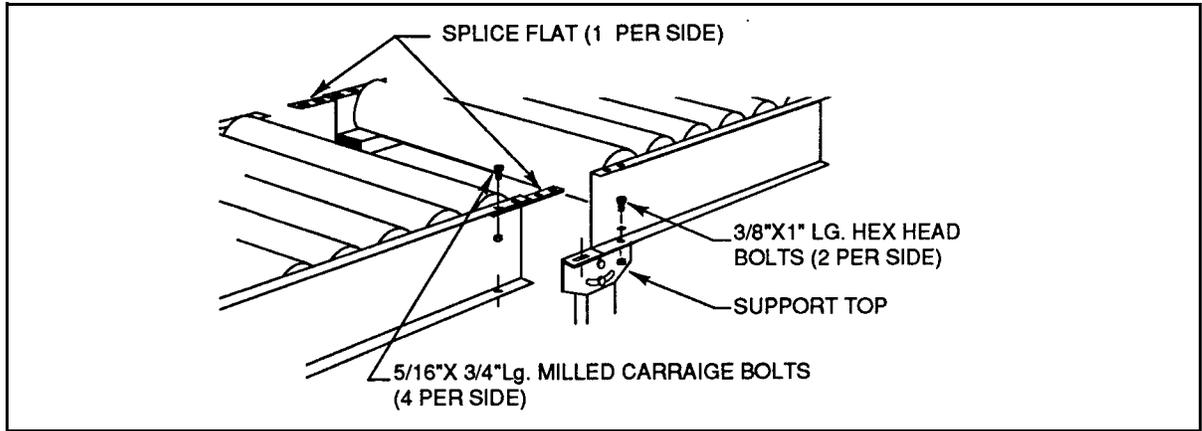


Figure G.4 – Splice Intermediate Sections Together

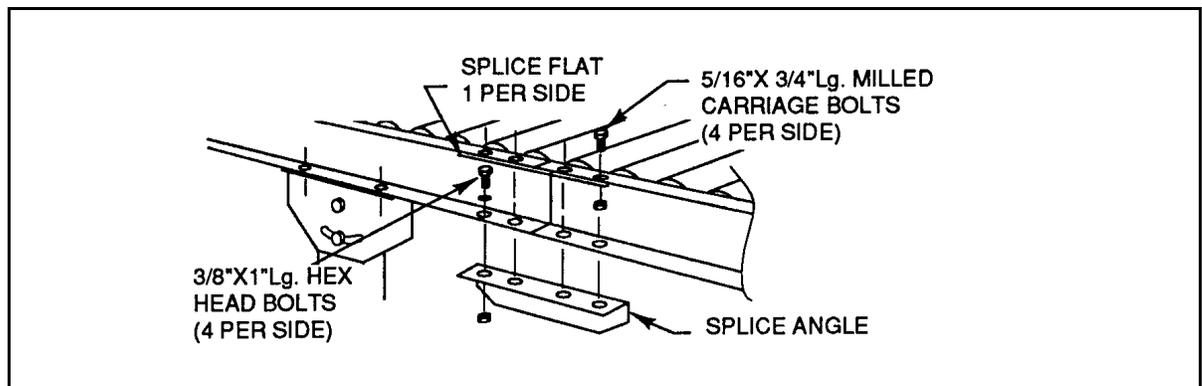


Figure G.5 – Use Splice Angle Assembly at Splice Point When Floor Support or Ceiling Hanger Must Be Offset

Style 1 Assembly/Support Location Requirements

The following illustrations show the required support/ceiling hanger assembly locations for Style 1 T/C Conveyor.

Standard Style 1 T/C Conveyor, up to 15'-0" OAL, are shipped as a fully-assembled conveyor unit, see Figure G.6, Figure G.7, and Figure G.8.

For conveyors 16'-0" OAL and longer, the end-drive, and end take-up sections (6'-0" long), intermediate section(s), etc., are shipped as separate components and assembled together at installation, see Figure G.9, Figure G.10, Figure G.11 and Figure G.12.

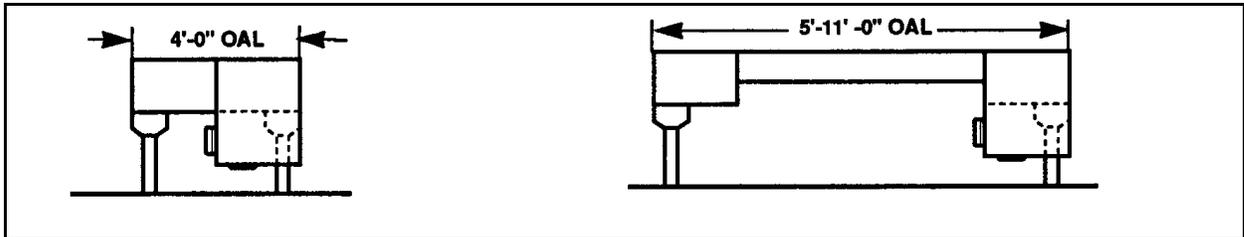


Figure G.6 – 4'-0" OAL Shipped Fully-Assembled Attach Two Supports

Figure G.7 – 5'-11'-0" OAL Shipped Fully-Assembled Attach Two Supports

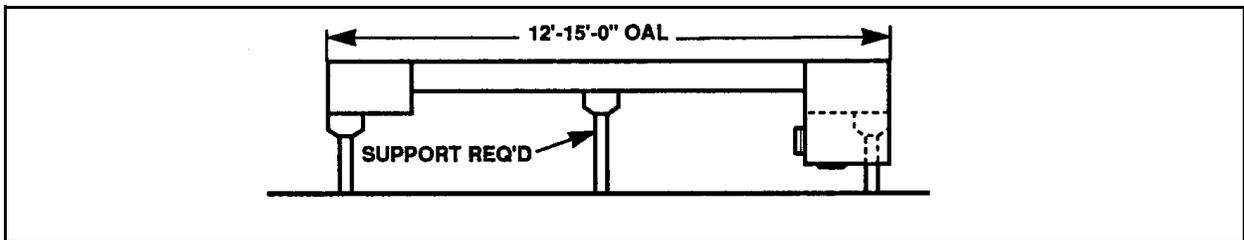


Figure G.8 – 12'-15'-0" OAL Shipped Fully-Assembled Attach Three Supports

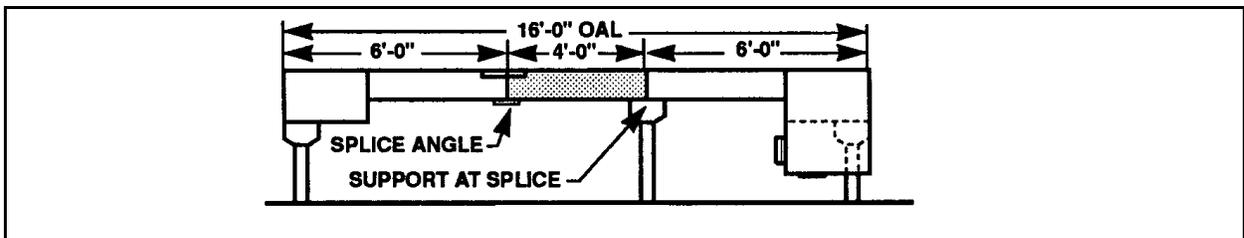


Figure G.9 – 16'-0" OAL Shipped as Components Attach Three Supports and One Splice Angle

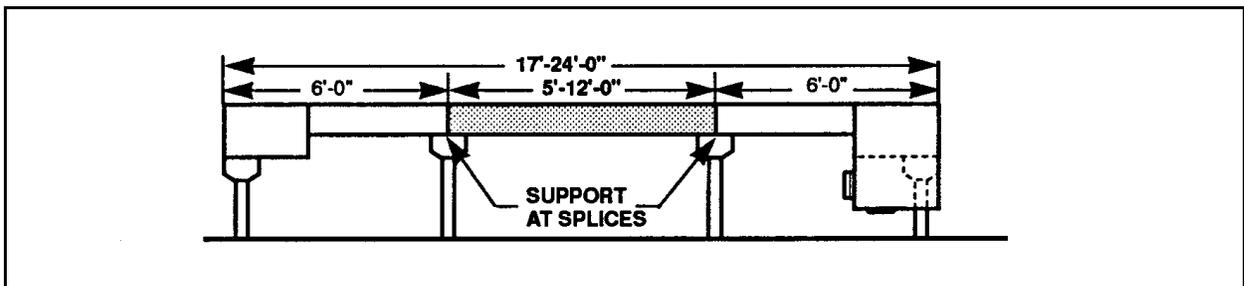


Figure G.10 – 17' - 24'-0" OAL (see Note below)

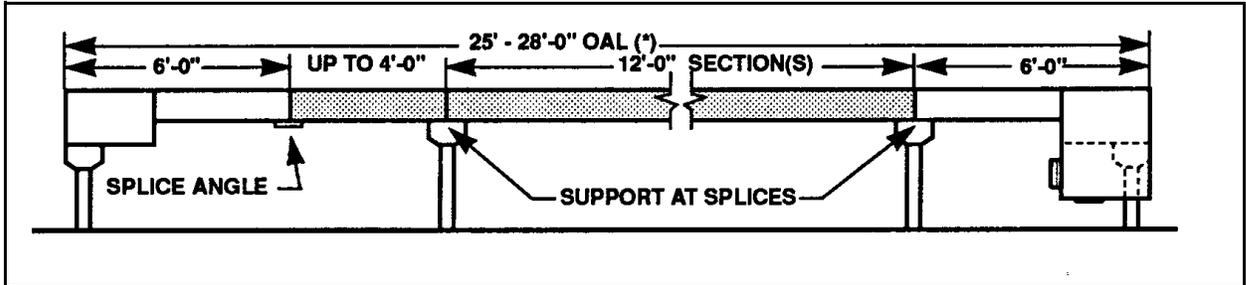


Figure G.11 – 25' - 28'-0" OAL (see Note below)

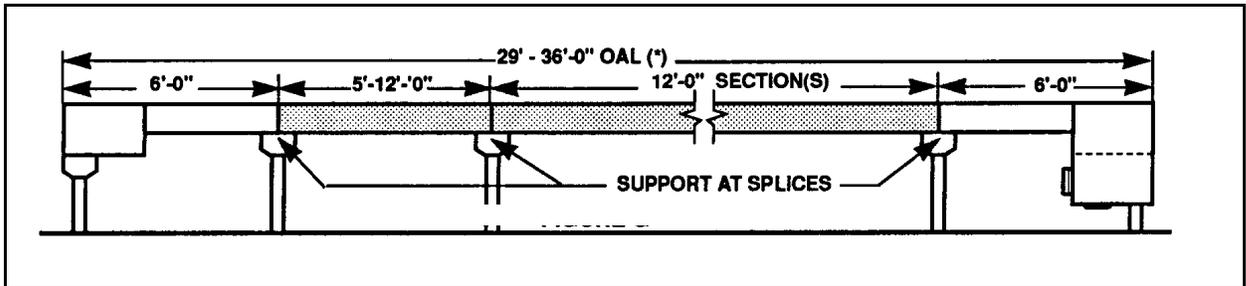


Figure G.12 – 29' - 36'-0" OAL (see Note below)

Note: (*) The Overall Lengths (OAL) shown are based on one 12'-0" long intermediate section and one "short" section. These lengths increase in multiple of 12' for each additional section.

Styles 5-8 - 90°, 60°, 45°, and 30° T/C Curve

Styles 5-8 - 90°, 60°, 45°, and 30° T/C Curves have a “discharge-end” drive unit (DISDU). If equipped with an optional “infeed-end” drive unit (INDU), a “P” is added to the style number (Style 5P-8P).

Curve Assembly

The drive and take-up units are fully-assembled to the curve section and the complete conveyor is shipped from the factory ready to install.

Note: If optional straight extension section(s) are required, see subsection “Adding Straight Extension Sections” before installing.

When installing, use the following steps:

Note: Check drive-type and required location before installing.

Step 1. Mount the floor supports (or ceiling hangers) to the terminal ends and curve section. For ceiling hangers, see Figure G.19 and Figure G.20.

Step 2. Position, connect with adjoining conveyor(s), and anchor the conveyor.

Step 3. Install accessory items.

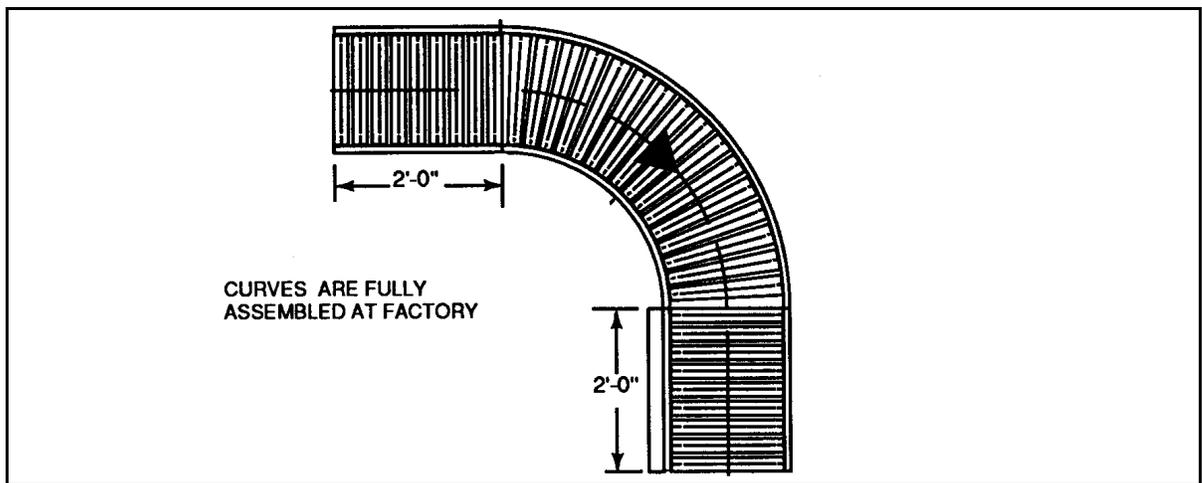


Figure G.13 – Style 5 - 90° Curve

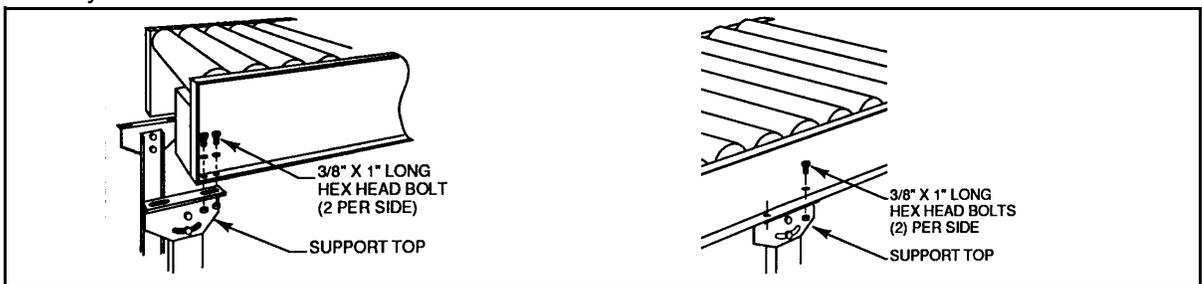


Figure G.14 – Installing Floor Supports

Figure G.15 –

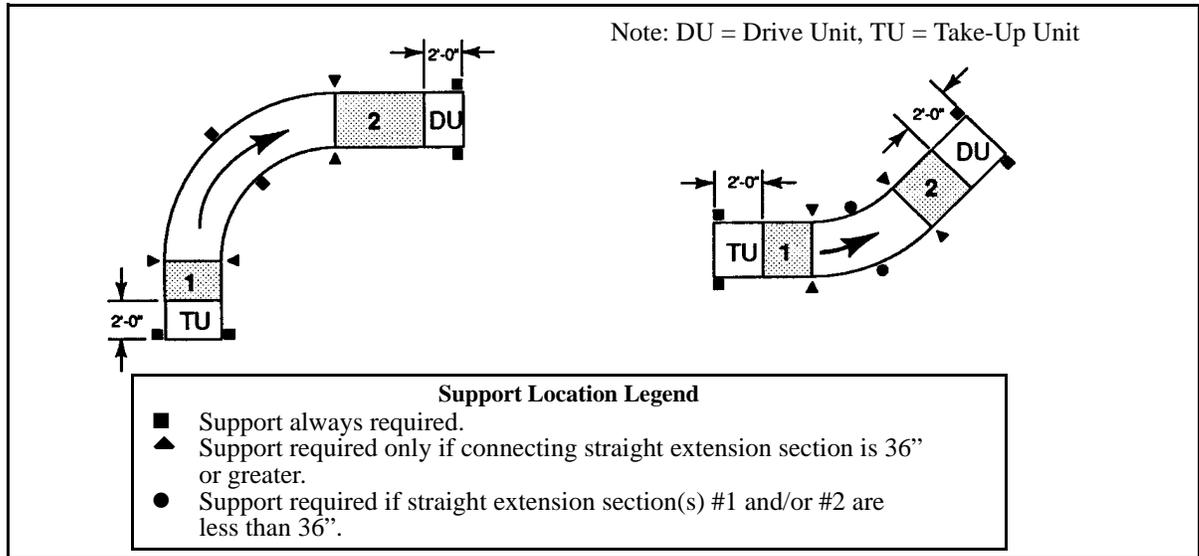


Figure G.16 – Style 5, 90° Curve

Figure G.17 – Style 6, 60° Curve, Style 7, 45° Curve, and Style 8, 30° Curve

Style 9 - 180° T/C Curve

Style 9 - 180° T/C Curve has a “discharge-end drive unit (DISDU). If equipped with an optional “infeed-end” drive unit (INDU), a “P” is added to the style number (Style 9P).

Curve Assembly

The end drive and end take-up units are pre-assembled to separate 90° curve sections and shipped from the factory as separate drive/take-up curve sections. They are ready to be field assembled into a complete conveyor unit. When installing use the following steps.

Note: If optional straight extension section(s) are required, see subsection “Adding Straight Extension Sections” before installing.

- Step 1. Assemble the drive/curve section to the take-up/curve section, see Figure G.4, and make the chain connections, Figure G.43, Figure G.44, and Figure G.46.
- Step 2. Mount the ceiling hangers (or floor supports) to the two terminal ends, curve sections and splice joint connection(s). See Figure G.14 and Figure G.16 for Floor Supports.
- Step 3. Position, connect with adjoining conveyor(s), and anchor the conveyor.
- Step 4. Install accessory items.

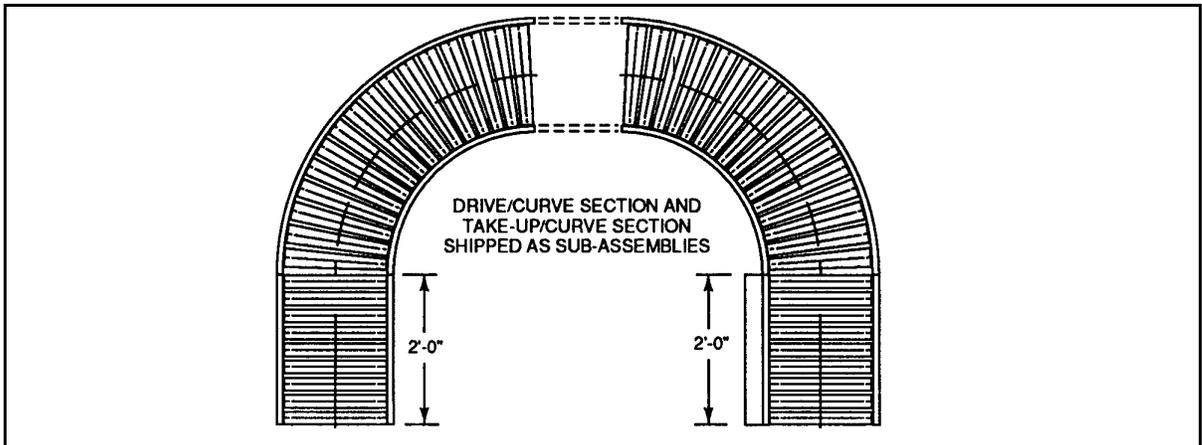


Figure G.18 – Style 9 - 180° Curve

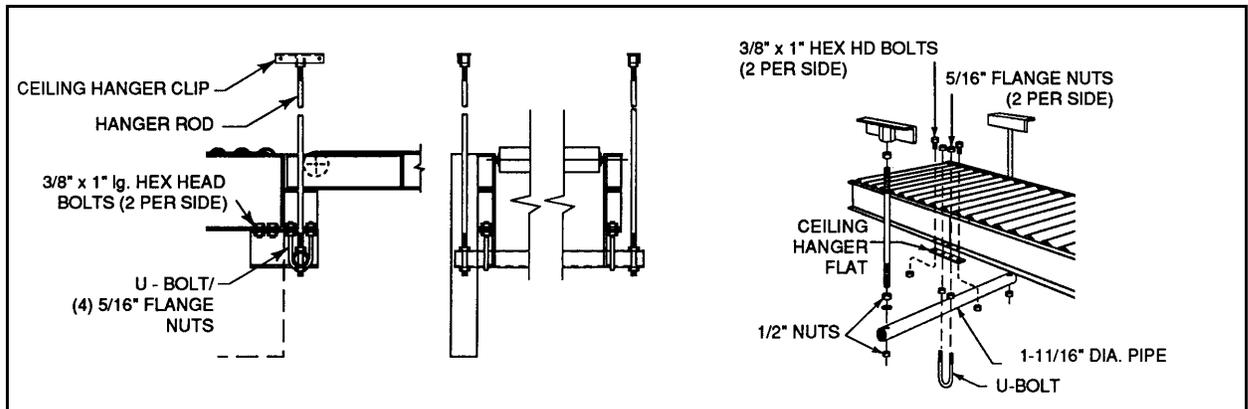


Figure G.19 – End Drive/Ceiling Hanger w/Offset Cross Pipe Figure G.20

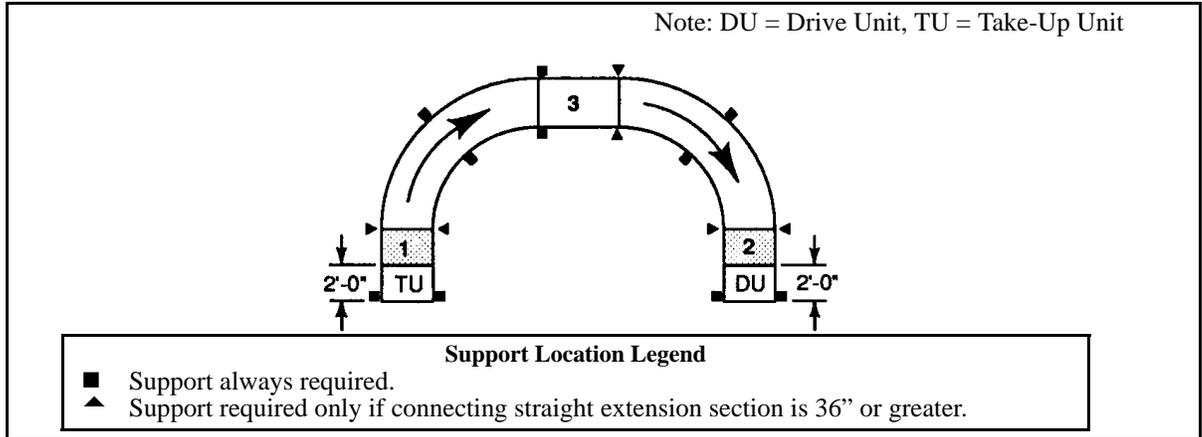


Figure G.21 – Style 9, 180° Curve

Style 10-13 - 90°, 60°, 45° and 30° T/C S-Curves

Styles 10-13 S-Curves have a “discharge-end” drive unit (ISDU). If equipped with an optional “infeed-end” drive unit (INDU), a “P” is added to the style number (Style 10P, 11P, 12P and 13P).

Curve Assembly

The end drive and end take-up units are pre-assembled to separate curve sections and shipped from the factory as separate drive/take-up curve section components. They are ready to be field-assembled into a complete conveyor unit. When installing use the following steps.

Note: If optional straight extension section(s) are required, see subsection “Adding Straight Extension Sections” before installing.

Before installing, check drive-type and required locations.

- Step 1. Assemble the drive/curve sub-assembly to the take-up/curve sub-assembly, Figure G.23, and make the chain connections, see Figure G.42, Figure G.43, and Figure G.44.
- Step 2. Mount the floor supports (or ceiling hangers) to the terminal ends, curve sections and power transfer unit. For additional information on ceiling hangers, see Figure G.14, Figure G.15, Figure G.19 and Figure G.20.
- Step 3. Position, connect with adjoining conveyor(s), and anchor the conveyor.
- Step 4. Install accessory items.

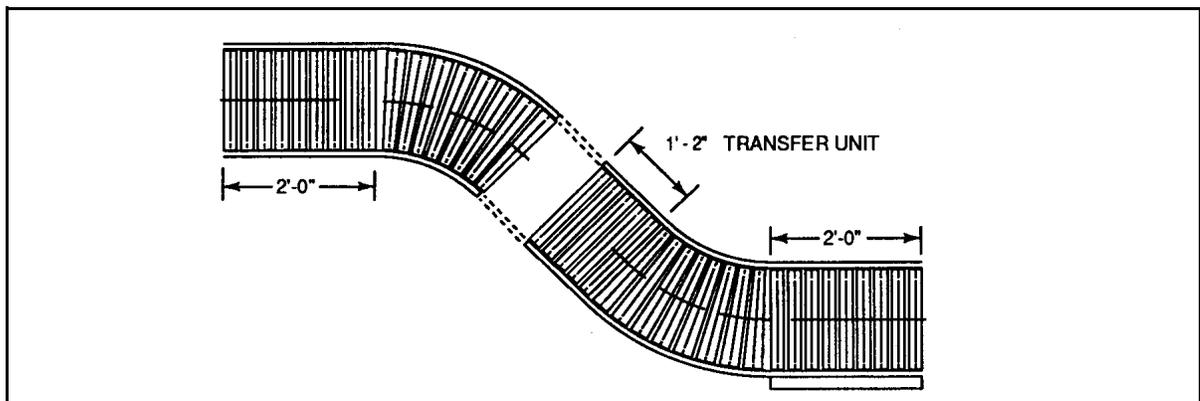


Figure G.22 – Style 12 - 45° S-Curve (Shown)

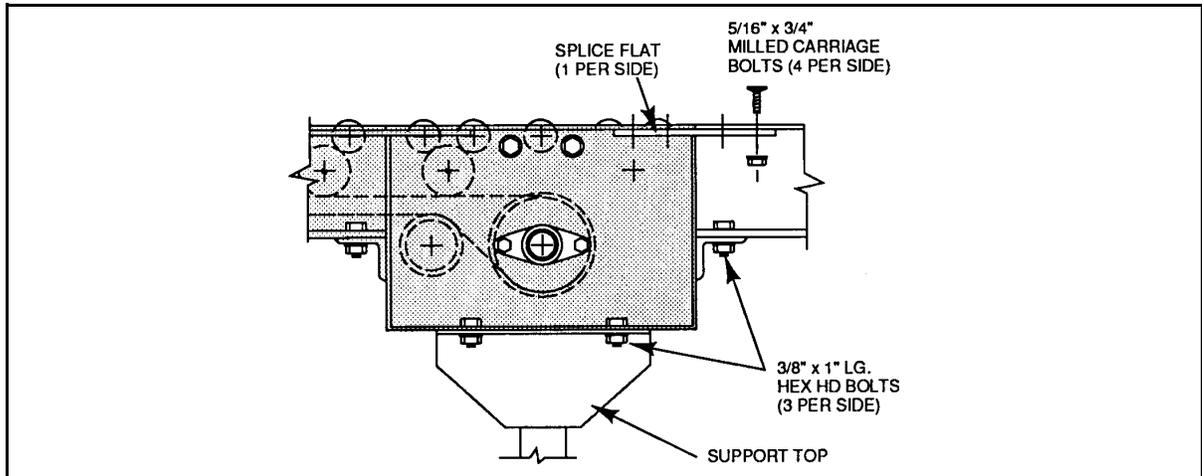


Figure G.23 – Power Transfer Unit Connection

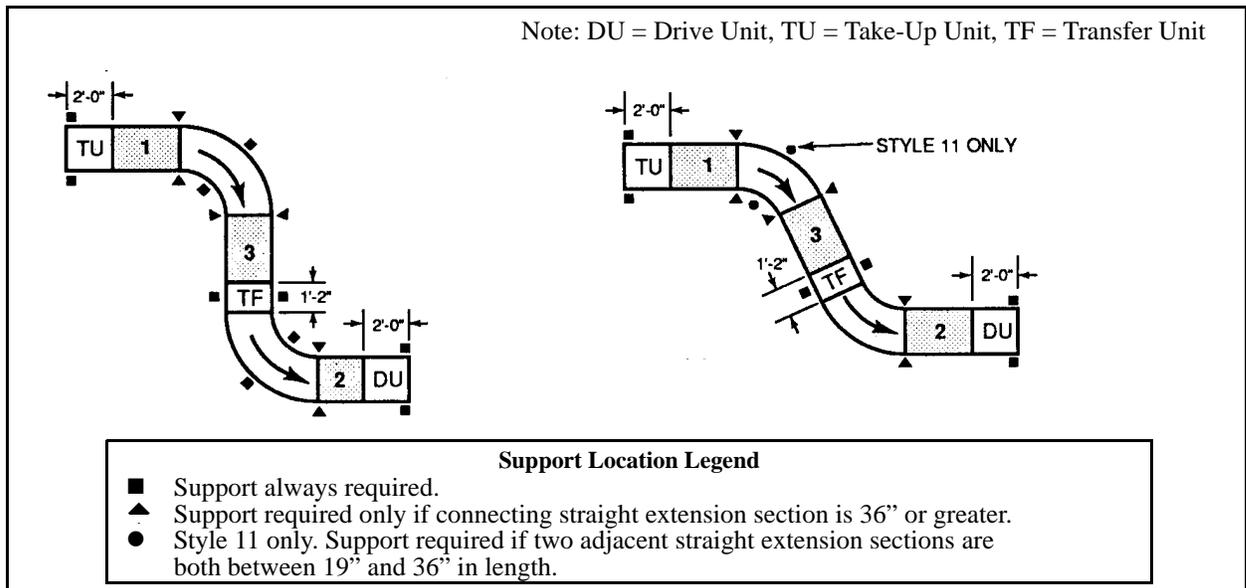


Figure G.24 – Style 10 - 90° S-Curve

Figure G.25 – Style 11, 60°, (shown) Style 12, 45°, and Style 13, 30° S-Curves

Style 14-21 - T/C Junctions

Styles 14 - 21 T/C Junctions have either a “discharge-end” (DISDU) or “infeed-end” drive unit (INDU). If equipped with an INDU, a “P” is added to the style number (Style 18P, 19P and 20P). (Exception - Style 21, merging-type curve junctions do not have the “P” suffix.) When installing use the following steps.

Junction Assembly

The drive unit, curve and/or junction sections are fully-assembled and shipped from the factory as a complete conveyor unit.

Note: If optional straight extension section(s) are required, see subsection “Adding Straight Extension Sections” before installing.

- Step 1. Mount a floor support (or ceiling hanger) to the end drive unit and junction/curve section(s) (see Figure G.28, Figure G.32, Figure G.33, and Figure G.34).
- Step 2. Position, attach tapered-end to the main-line, Figure G.27, and anchor the conveyor unit.
- Step 3. Install accessory items.

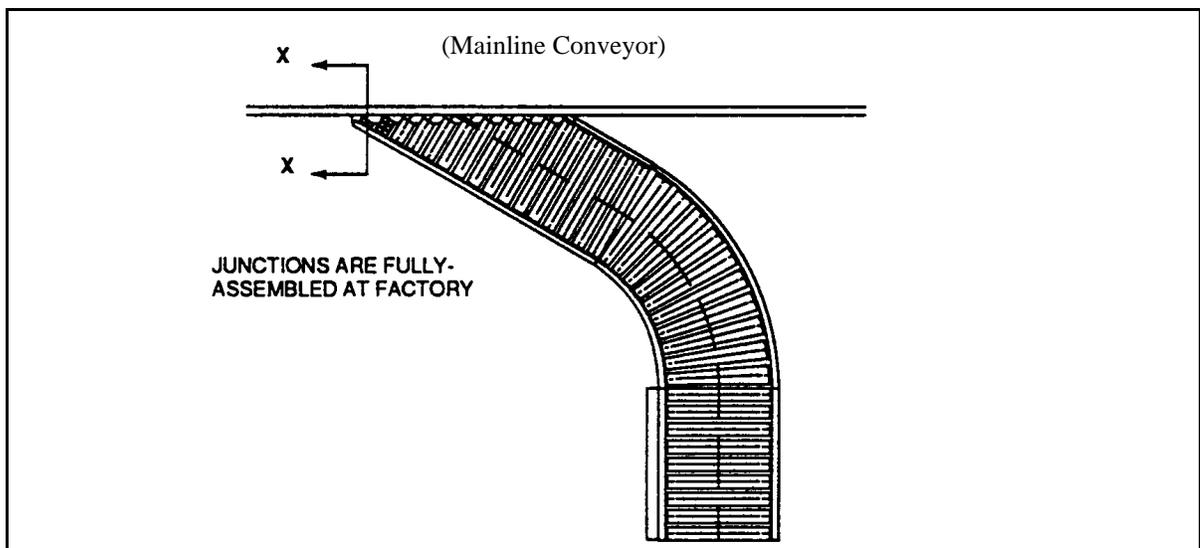


Figure G.26 – Style 15 - Combination Junction (shown)

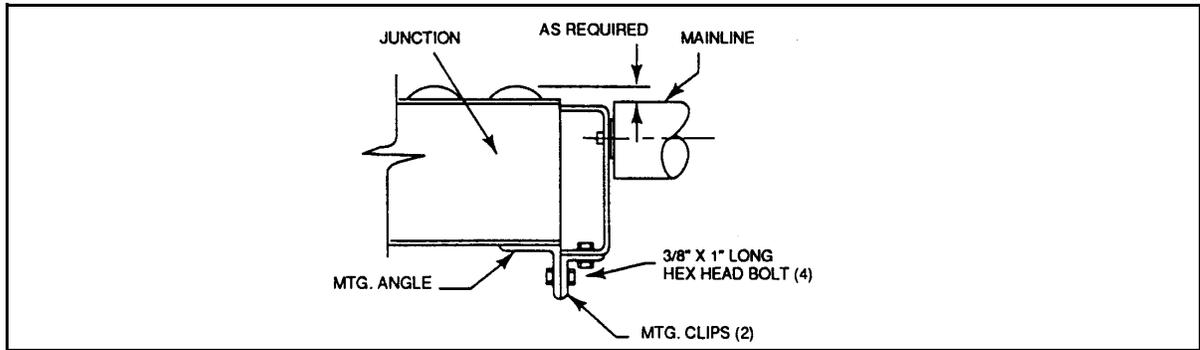
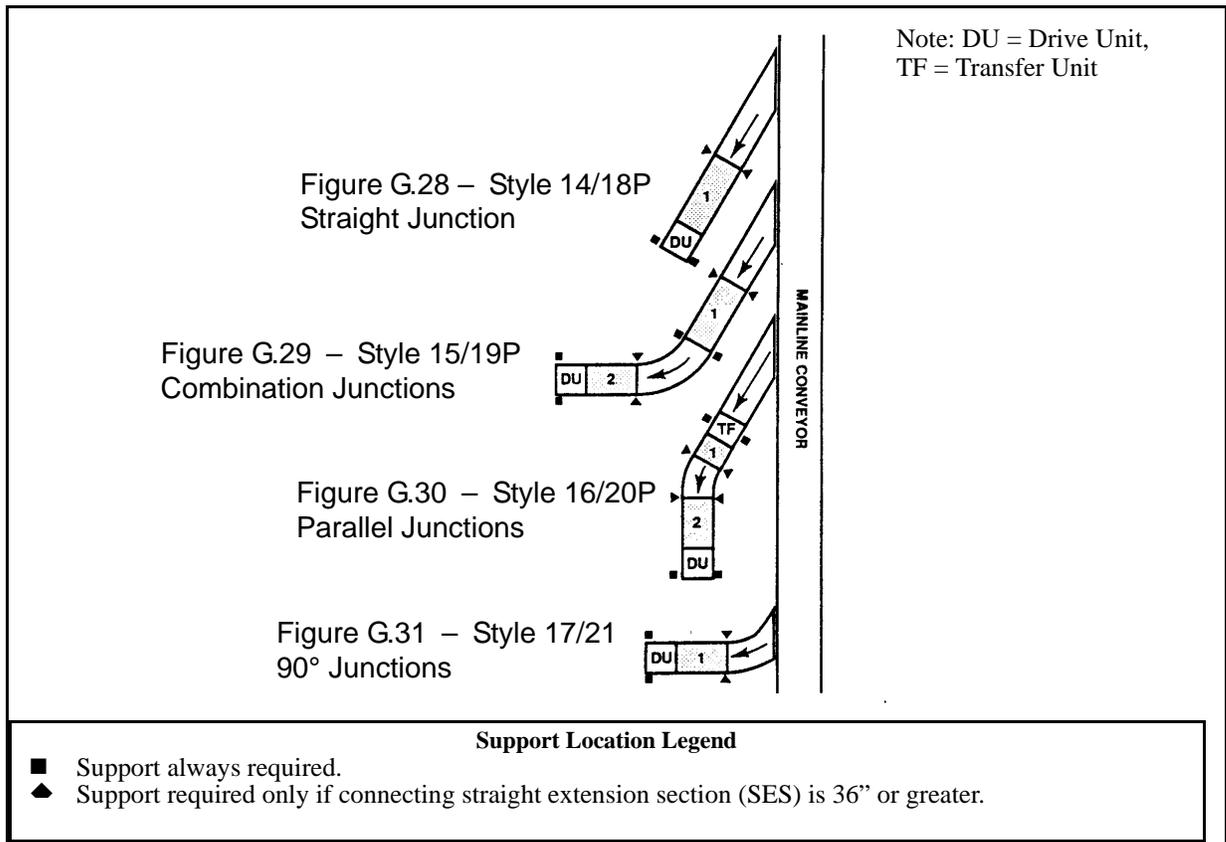


Figure G.27 – Section XX



Model PRS - Powered Roller Skew

The Model PRS - Powered Roller Skew conveyor is only available with a “discharge-end” drive unit (DISDU).

The 10'-0" and 15'-0" long PRS conveyor is shipped from the factory as fully-assembled conveyor units. For the 20'-0" long PRS conveyors, the drive, take-up, and intermediate sections are pre-assembled and shipped as individual components.

When installing, use the following steps.

Step 1. For the 10'-0" and 15'-0" long units, mount floor supports, (or ceiling hangers) to the terminal ends (see Figure G.33 and Figure G.34).

For the 20'-0" long units; mount supports, assemble drive, intermediate and take-up sections (see Figure G.35). Also, see “Chain Connection/ Splicing” section.

Step 2. Position, connect with adjoining conveyor(s), and anchor the conveyor.

Step 3. Attach the side guide to the conveyor on side that products are to be skewed to Figure G.36 and Figure G.37.

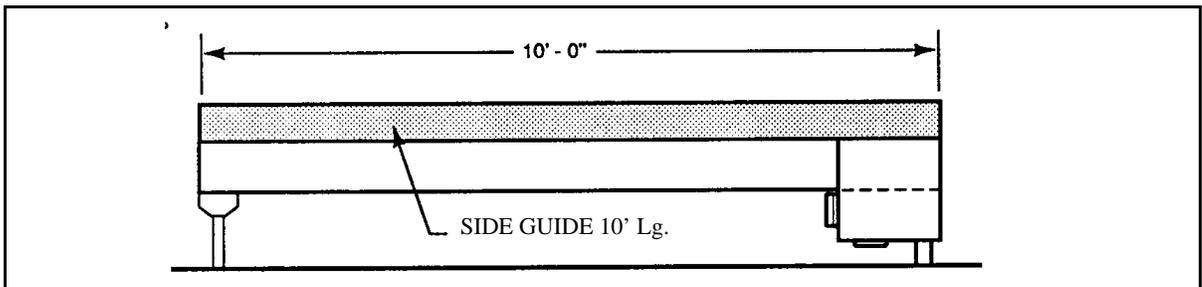


Figure G.32 – Model PRS Conveyor 10'-0" Long (shipped from the factory as complete unit)

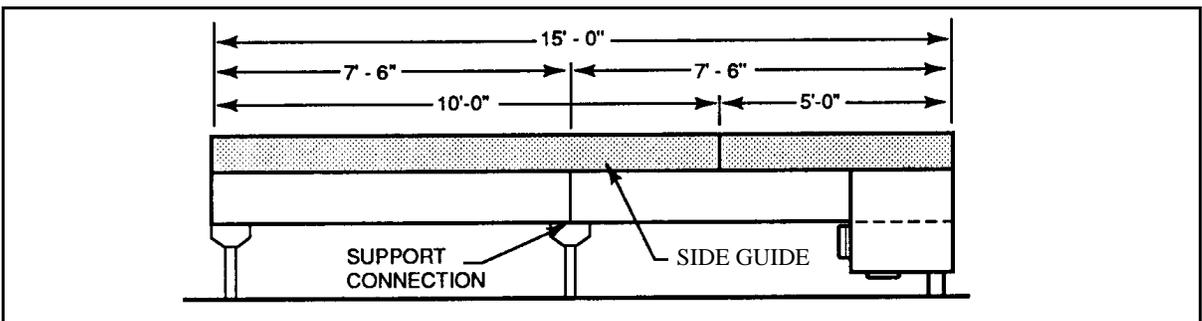


Figure G.33 – Model PRS Conveyor 15'-0" Long (shipped from the factory as complete unit)

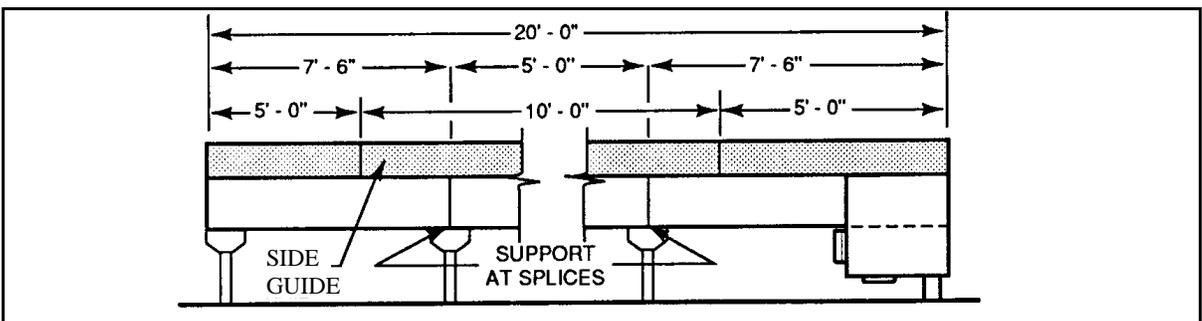


Figure G.34 – Model PRS Conveyor 20'-0" Long (shipped from the factory in three sections, assemble in field w/supports)

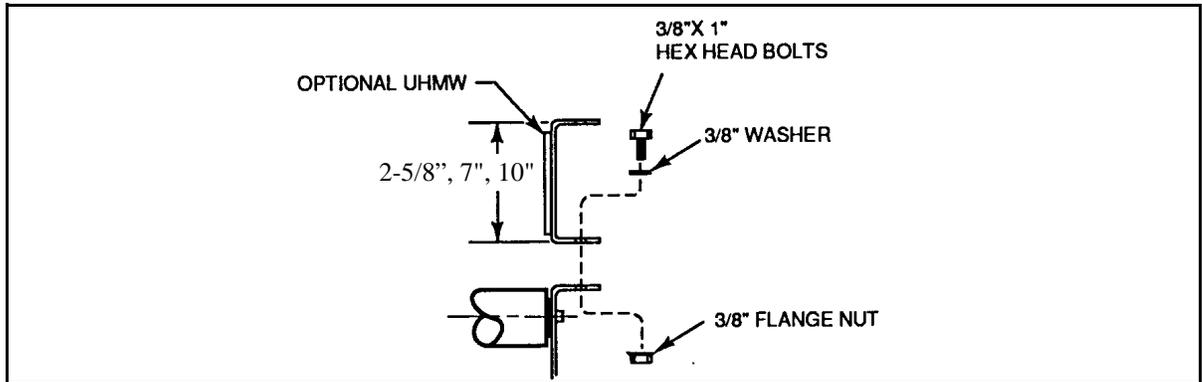


Figure G.35 – Mounting Plain/UHMW Face Side Guide

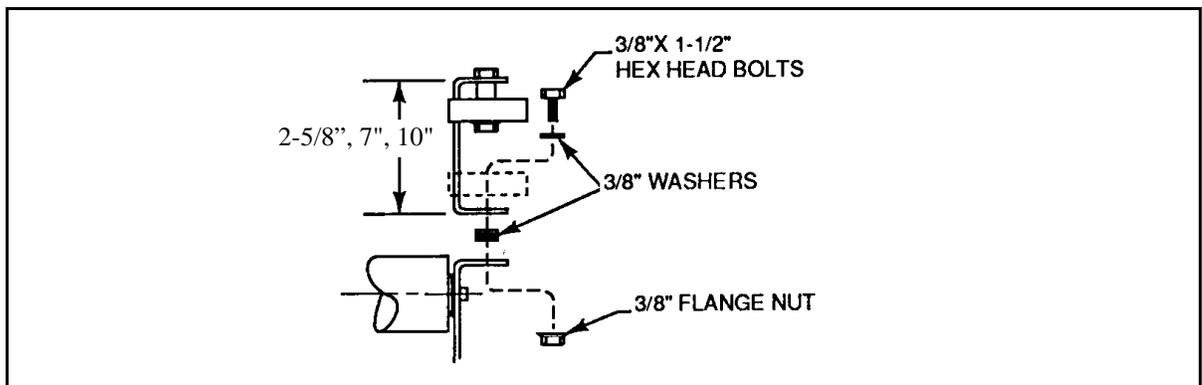


Figure G.36 – Mounting Wheel Face Side Guide

Chain Connection/Splicing

Style 1 Straight Conveyor and Style 9 180° Curve

Once all of the conveyor components have been positioned, aligned, connected, and anchored the next step is to make ALL of the chain connections (see Figure G.37). For assembly instruction, see subsection, “Style 1 Conveyor Assembly” and subsection “Model PRS - Powered Roller Skew”.

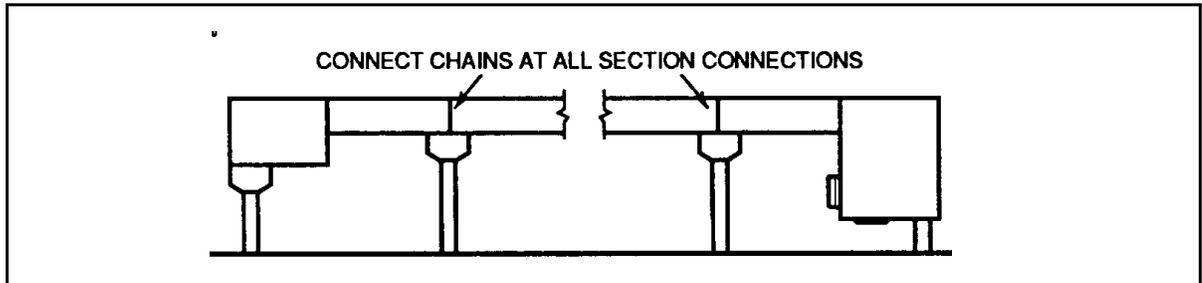


Figure G.37 – Style 1 - T/C Straight Conveyor

The bed sections and curve components are shipped from the factory with the “power” and “return” runs of RC-40 roller chain fully-assembled to the drive rail.

A Connector Link Assembly (connector link, link plates, and spring-clip) is assembled to each chain at both ends of the section. The two chains (plus a roller link) are secured by an Instruction Tag at each end. When installing the Connector Link Assembly, remove the Instruction Tags and disassemble the four connector link assemblies (see Figure G.38 and Figure G.39).

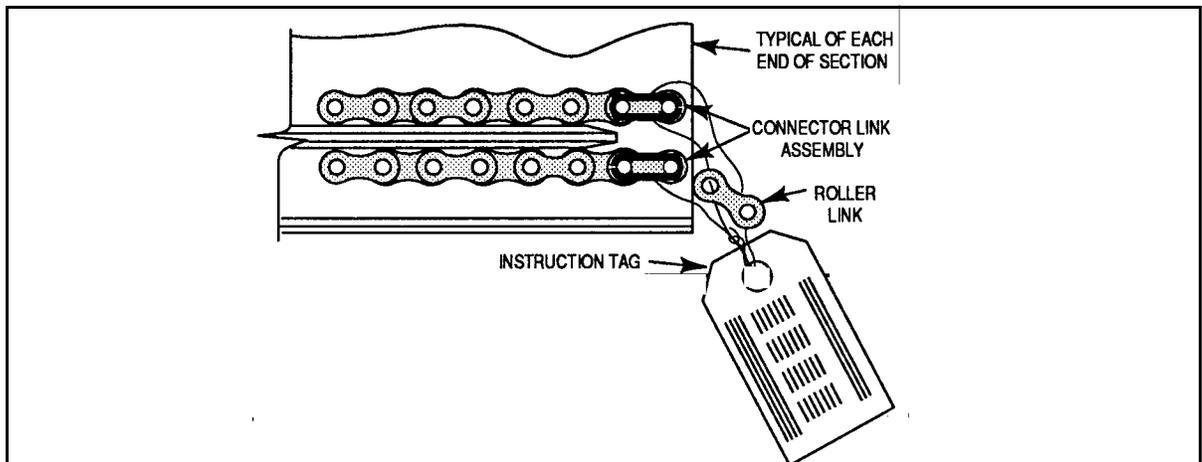


Figure G.38 – Instruction Tags on Connector Link Assembly

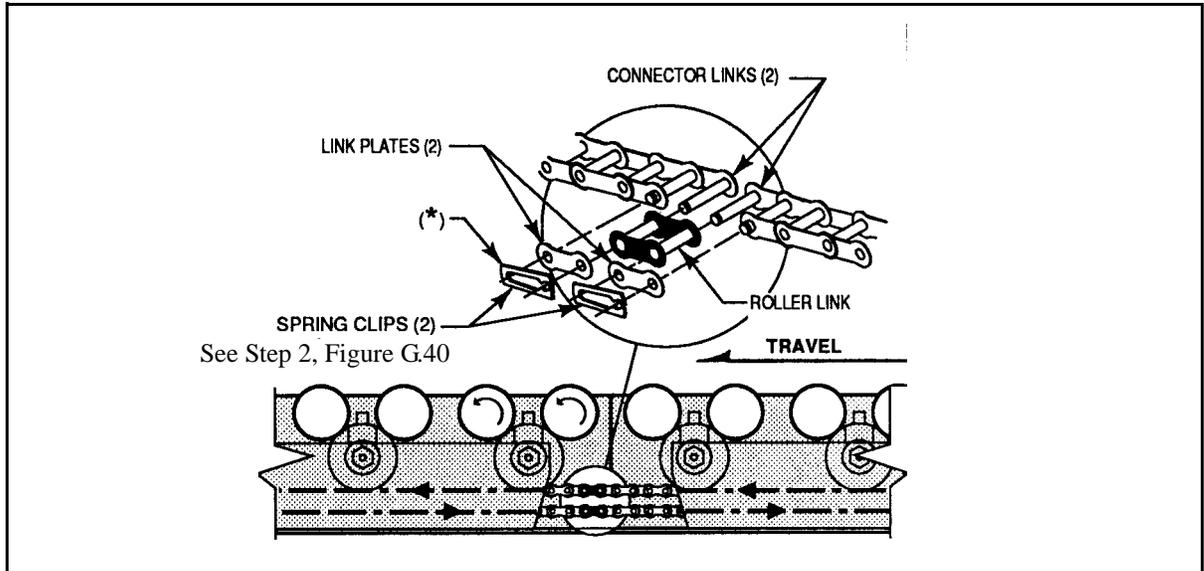


Figure G.39

Use the following steps to connect the chain(s).

Step 1. Couple chains of adjoining sections. When assembling, the spring clips must be fully-seated in the grooves of the connector link pins.

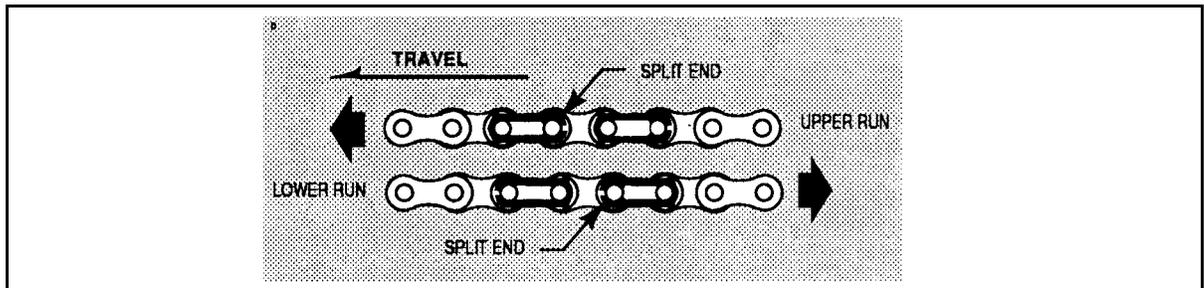


Figure G.40

Step 2. Orient each spring clip so that the “split end” is positioned as shown in Figure G.40 with the “closed end” towards the direction of chain travel.

Styles 10-13 - 90°, 60°, 45°, and 30° S-Curves

With the S-curves two sub-assemblies installed, the next step is to connect the chains of the curve and the transfer unit (see Figure G.41).

For installing instructions, see subsection “Styles 10-13 T/C S-Curves.”

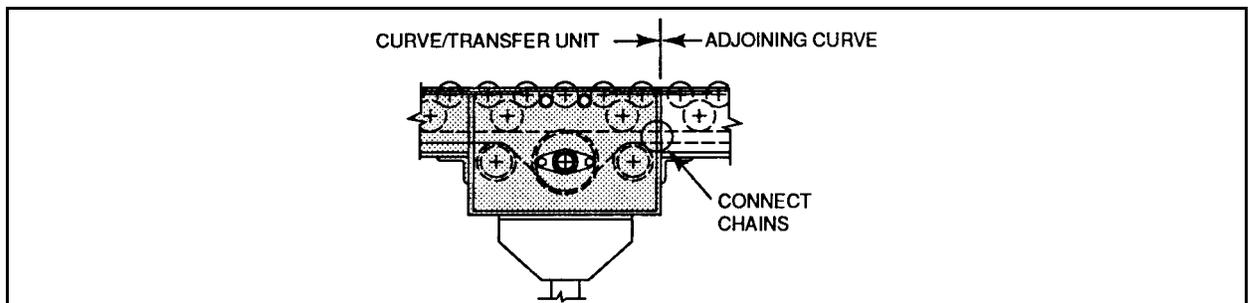


Figure G.41 – Connect Curve and Transfer Unit Chains

Adding Straight Extension Sections

The standard 2'-0" long straight terminal end(s) of a Curve/Junction may be extended to meet the layout requirements of a conveyor system. Straight extension sections are added to a curve/junction when installing.

To add a straight extension section, the following steps should be taken to ensure proper assembly and operation.

Disconnect Drive/Take-Up Unit

Step 1. Check that two screws secure the chain guide at the connection of the drive or take-up side plate and the frame rail (see Figure G.42).

If the chain guide is not secured, drill holes and screw guide to frame (see Figure G.43 and Figure G.44).

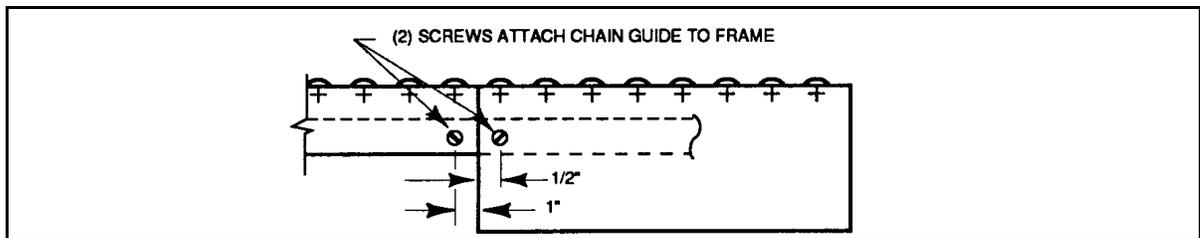


Figure G.42 – Secure Chain Guide

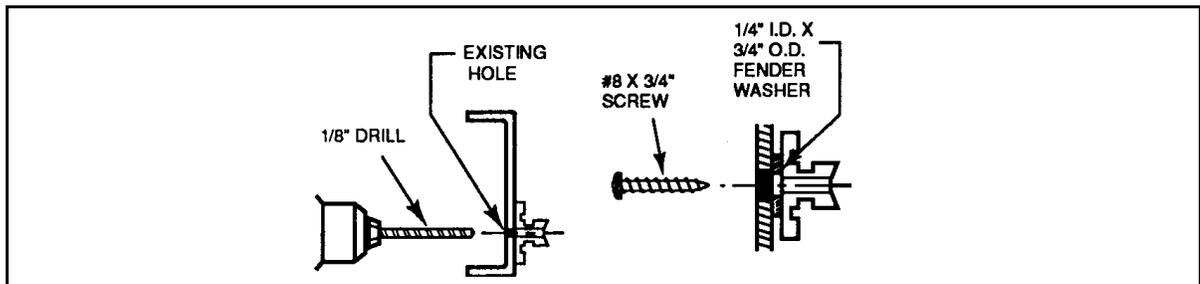


Figure G.43

Figure G.44

Before proceeding, adjust the conveyor's take-up and tensioner sprockets to release the chain tension, and remove the internal chain guard(s) as required (see Figure G.46).

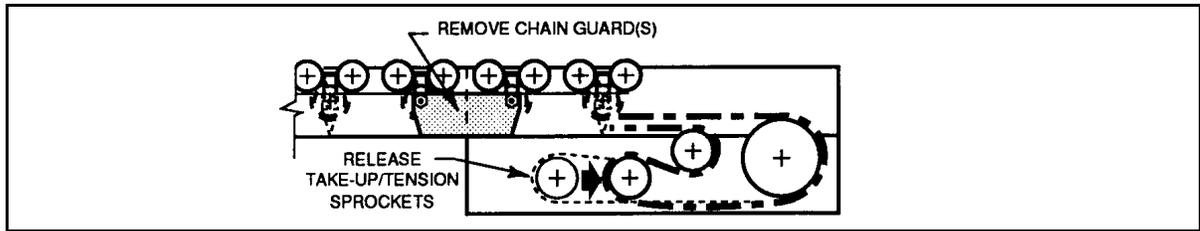


Figure G.46

Step 2. Separate the chain in the drive unit (or take-up unit) either by disconnecting the connector links or using a chain breaker.

Step 3. Check the chain guide at the joint (see Figure G.47). If it is continuous, cut the bevel ends as shown in Figure G.48.

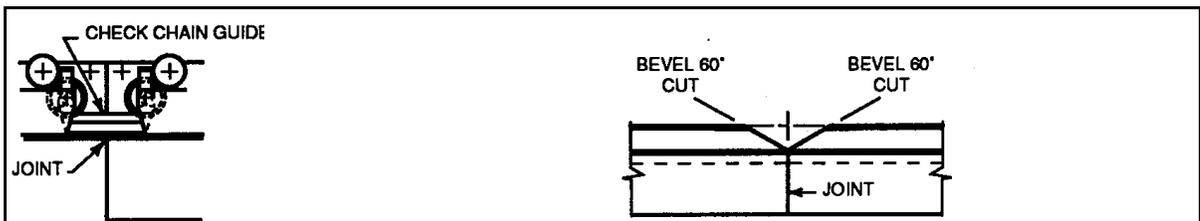


Figure G.47

Figure G.48

Step 4. Disconnect the drive unit (or take-up unit) from the curve or junction section by removing bolts and pulling the units apart (see Figure G.49).

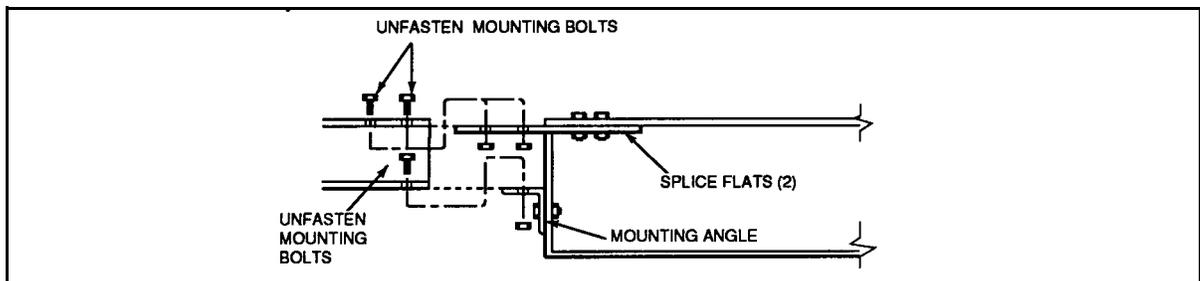


Figure G.49

Connect Straight Extension Section

Step 1. Assemble the Straight Extension Section to the drive unit (or take-up unit) and the curve or junction section.

Step 2. Make chain connection(s), see Steps 1 and 2 in the subsection “Chain Connection/Splicing”.

Step 3. Install ALL chain guards and covers.

CAUTION: The chain tension must be adjusted before starting the conveyor. See the subsection “Pre-Start-up Preparation” for chain-tensioning instructions.

Cutting Special Lengths

If the length of a standard intermediate/extension section has to be shortened, use the following steps and illustrations as a guide for making special length cuts.

Step 1. Layout the cut and flange holes (both rails).

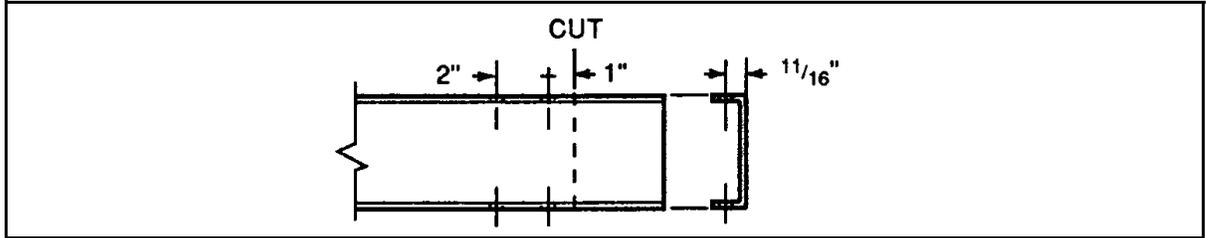


Figure G.50

Step 2. Drill (1) 1/8" diameter hole through the chain guide and side rail (see Figure G.42). Attach the chain guide to the rail, and drill or punch (8) 13/32" diameter holes in flanges. See Figure G.44 for attaching chain guide to the rail.

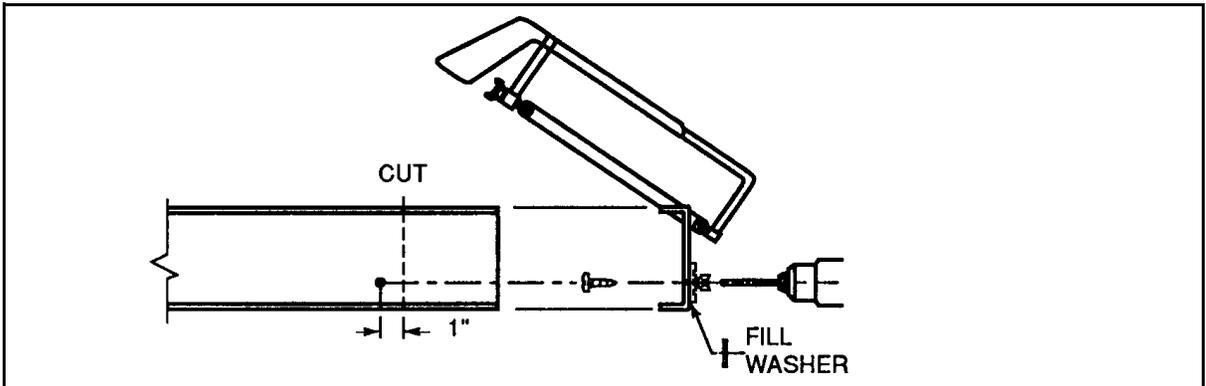


Figure G.51

Figure G.52

Step 3. Cut frame rails and chain guide using hack saw or portable band saw. Do not use a cutting torch.

Step 4. Bevel the "cut" end of the chain guide 60° (see Figure G.53).

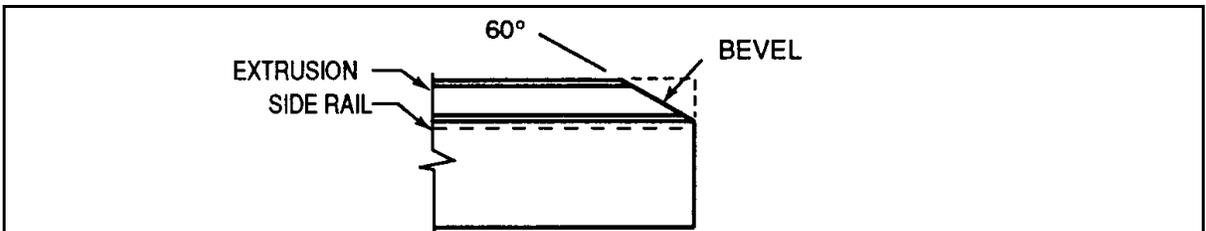


Figure G.53

Step 5. Attach the “special length” section to the adjoining components following the steps previously given.

Step 6. **WARNING** - Remove the drive wheel assembly if the sprocket is exposed and unguarded (see Figure G.54).

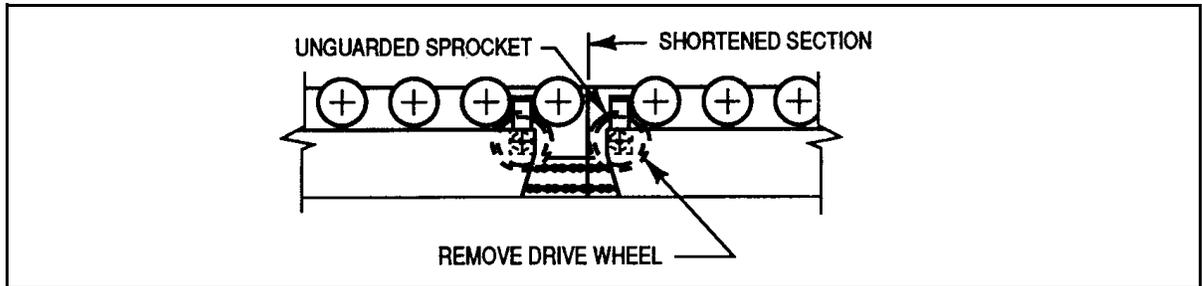


Figure G.54 – Removal of Unguarded Drive Wheel/sprocket

Step 7. Shorten/lengthen guard segments to guard chain and sprockets at the splice of the two sections (see Figure G.55 and Figure G.56).

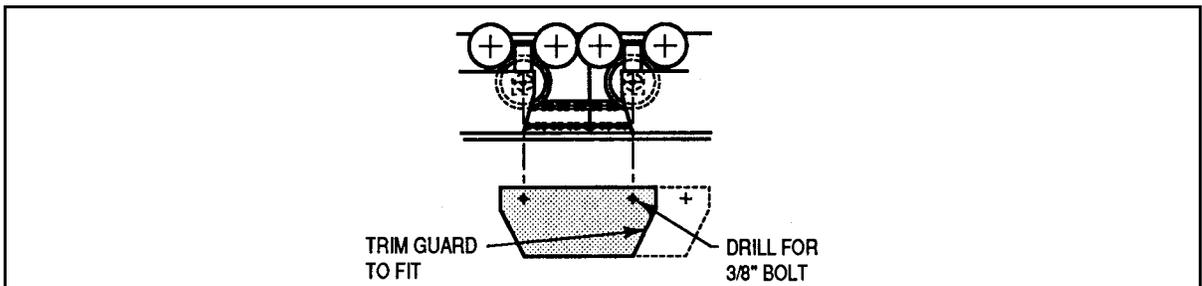


Figure G.55 – Shortened Guard Segment

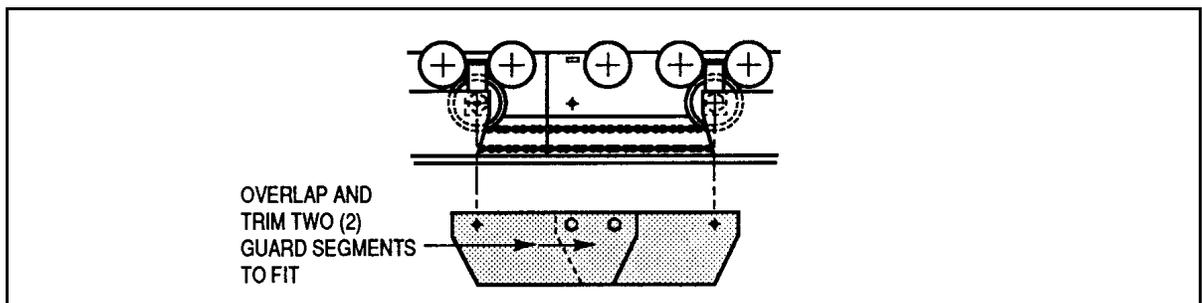


Figure G.56 – Lengthened Guard Segment

Note: Because the manufacturer has no control over special length cuts (which are a field modification), the customer/installer/end user is responsible for seeing that the drive components (chain and drive wheels/sprockets) are adequately guarded to assure personnel safety (see the “Safety Features” section.)

Step 8.(If required) Slave-drive non-powered roller from a “pair” of power rollers (as shown).

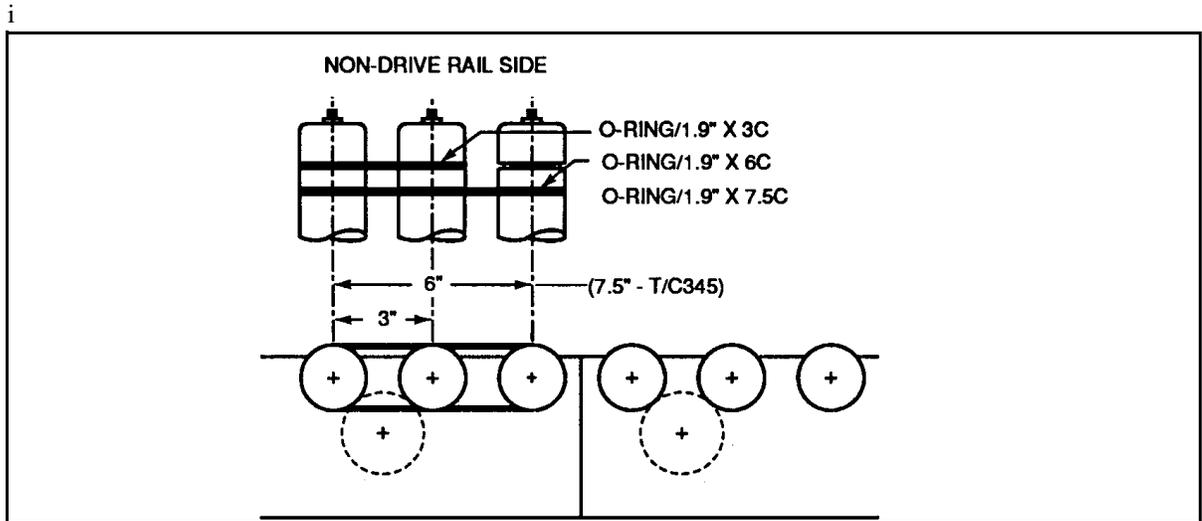


Figure G.57 – Order O-Rings/Grooved Rollers as Required for Conveyor With (“W”) and T/C Series

Power Unit/PTO Assembly

The Power Unit is shipped from the factory fully-assembled to the drive section. When installing, check the following before starting.

Lubricant

Check that the reducer lubricant is up to the "Oil Level Plug." Before adding nay lubricant, refer to the manufacturer's tags attached to the reducer.

Reducer Plugs/Fittings

Check that the oil level and drain plugs are properly installed and sufficiently tightened. (Hub City reducers only) Check that the breather plug is properly installed and functioning.

CAUTION: Before working on a power unit or PTO unit, make certain the conveyor's power disconnect is locked in open position and tagged to prevent accidental or unexpected application of power.

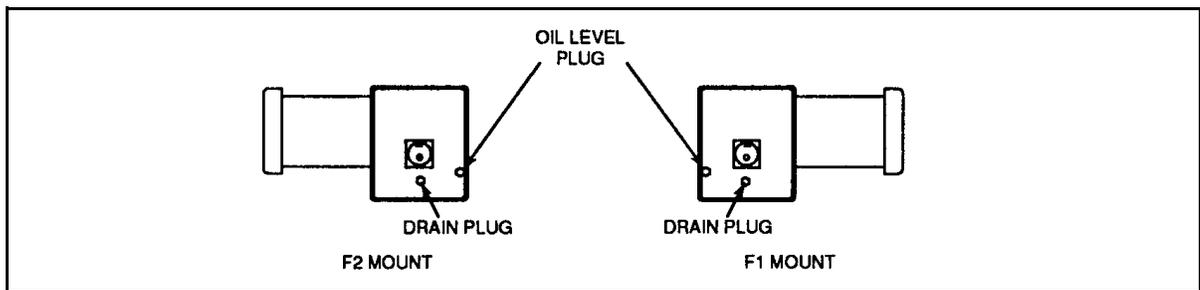


Figure G.58

Figure G.59

Check Sprocket Alignment / Set Screws / Chain Tension

Check sprocket alignment; check tightness of set screws, (internal drive sprocket), and/or taper lock hub, (power unit sprockets), fasteners (see Figure G.60 and Figure G.62). Check chain tension, adjust if necessary (see Figure G.61).

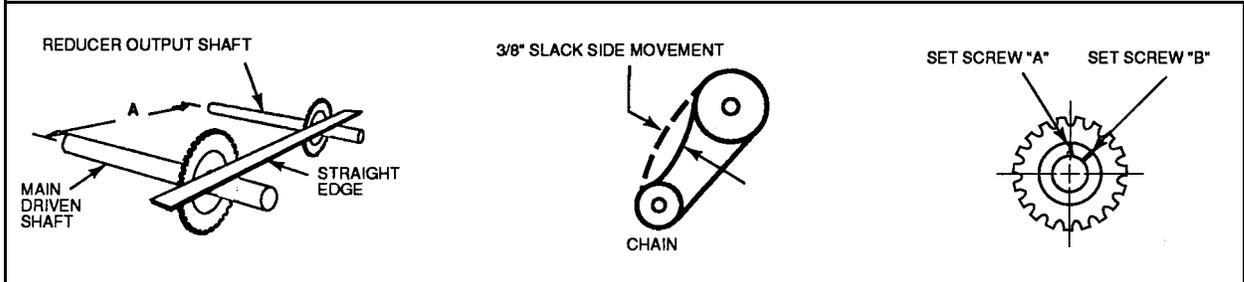


Figure G.60 – Sprockets must be Aligned. Adjustment

Figure G.61 – Chain Tension Shaft Must Be Parallel

Figure G.62 – Type B Sprocket/Hub

Set Screw Tightening Procedure

Use the following steps to tighten the set screws:

Step 1. "Snug-up" both set screws.

Step 2. Tighten (in sequence) set screw "A" 25%, "B" 50%, "A" 75%, "B" 100% and finally "A" 100% of recommended torque rating.

Table G.1 – Recommended Set Screw Torque

1/4"-20	5/16"-18	3/8"-16
70 inch-lbs.	130 inch-lbs.	230 inch-lbs.

PTO Unit Connection

Connect the end components of the two adjoining conveyors using a common floor support (see Figure G.63 and Figure G.64).

Note: BEFORE installing the drive chain as described below, check that the "driver" conveyor is wired to provide the desired "travel". See subsection "Electrical Wiring" in this section.

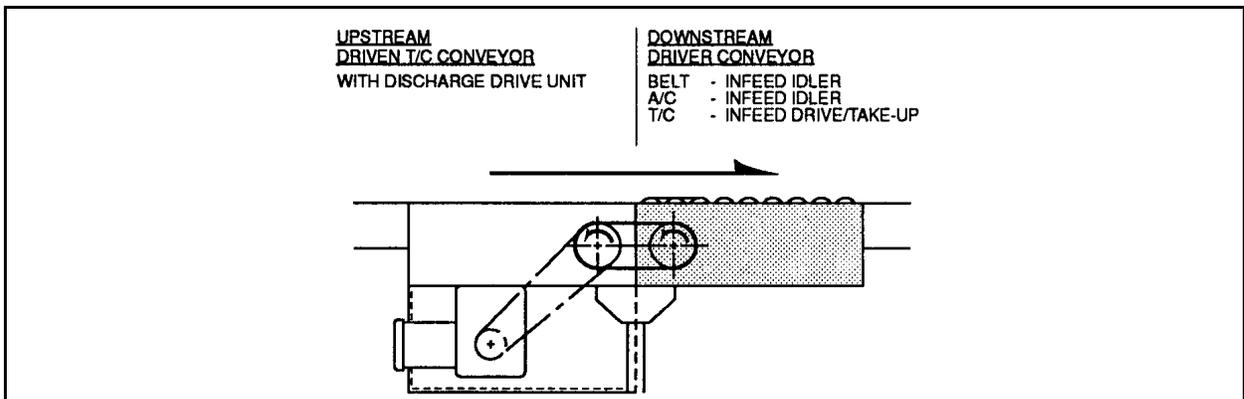


Figure G.63 – Discharge Drive Unit, Direct-Rotation PTO Infeed Drive Unit, Direct-Rotation PTO - (not shown)

PTO Unit Assembly

Drive Chain Connection

Based upon the end drive type of the “driven” (T/C) conveyor and the “driver” conveyor type (belt, A/C, T/C), route and connect the chain as described.

Direct-Rotation PTO Unit

Install the chain around the Driver Sprocket and Driven Sprocket as shown in Figure G.65.

Clutch-Equipped PTO Units

Both direct-rotation and counter-rotation type PTO units may be supplied with a solenoid-actuated, wrap-spring clutch assembly. Check sprocket alignment, install chain as described above, and wire 115V control solenoid.

Chain Guard Installation

When mechanical and electrical installation is complete, install the chain guard (see Figure G.64).

Note: The width of the chain guard is 3” or 5-1/4” (for clutch-equipped units).

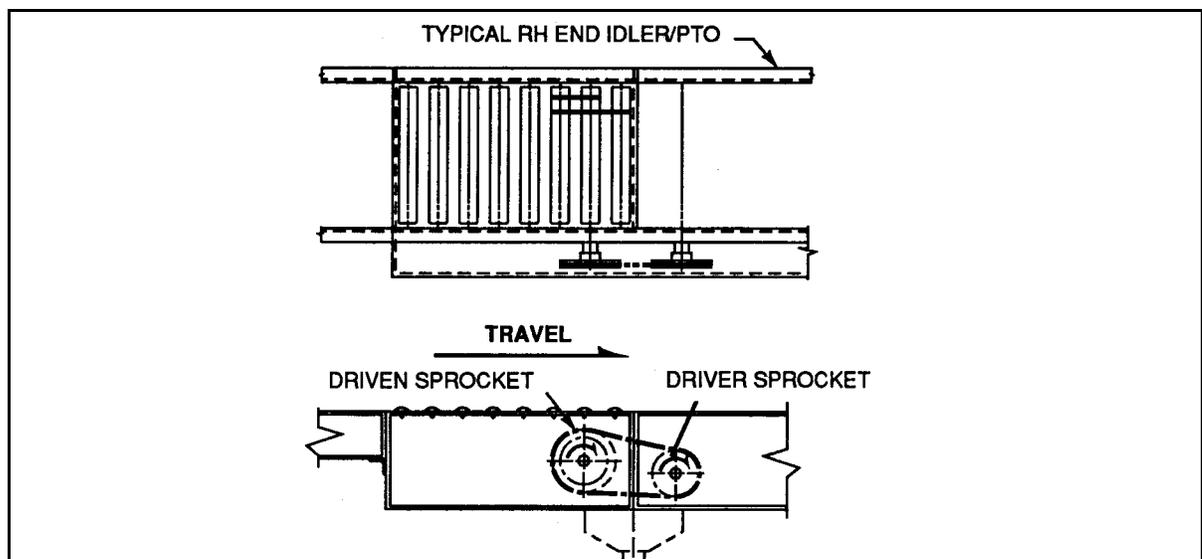


Figure G.64 – Direct-Rotation Type PTO Shown With Discharge Drive Unit (Without Optional Clutch).

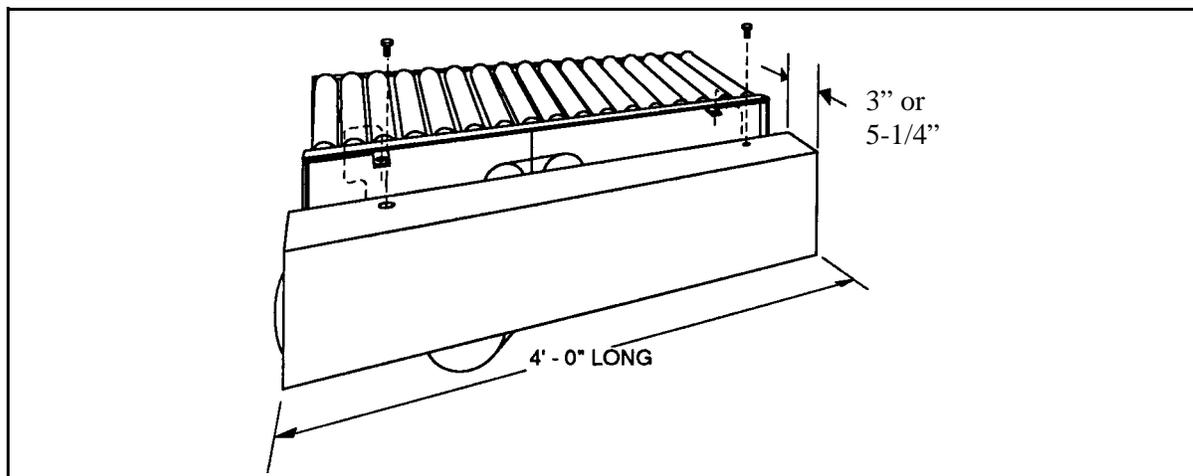


Figure G.65 – PTO Chain Guard

Pre-Start-up Preparation

To ensure the proper operation of a T/C conveyor, the following steps should be performed **BEFORE** the conveyor is first turned on.

Electrical Wiring

Step 1. Wire motor/starter, PTO clutch and/or other required electrical devices in accordance with the National Electrical Code. Wiring information is supplied by the manufacturers.

Step 2. Check “driver” sprocket rotation. See Figure G.66 and Figure G.67.

- Remove chain guard and disconnect the drive chain.
- Apply electrical power momentarily to determine that motor wiring provides required rotation of reducer output shaft. Change wiring leads if rotation is not correct.

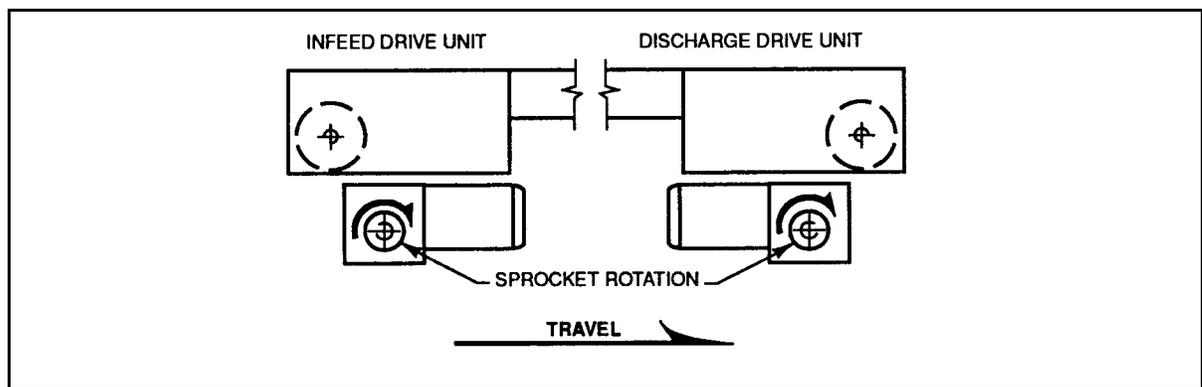


Figure G.66

Figure G.67

Power Unit/PTO Assembly

Step 1. Check the power unit (or PTO Unit) is properly assembled and ready to be put into operation. See subsection “Power Unit/PTO Assembly” in this section.

Chain Tension Adjustment - Discharge Drive Unit (DISDU)

- Step 1. Adjust take-up sprocket until the tensioner spring is compressed to 3-1/2" (see Figure G.68 and Figure G.69).
- Step 2. If adjusting the take-up does not cause the tensioner spring to compress, check that all chain link connections have been properly made. See subsection "Chain Connection/Splicing" in this section.
- Step 3. If the amount of take-up adjustment is not sufficient to compress the spring to the 3-1/2" length, remove several inches of chain and re-adjust.

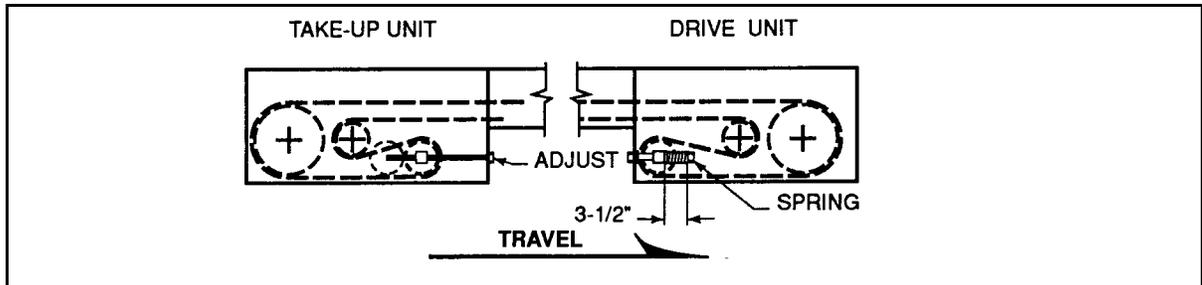


Figure G.68

Figure G.69

Chain Tension Adjustment - Infeed Drive Unit (INDU)

- Step 1. Adjust take-up sprocket until the tensioner spring is completely compressed; then back off (loosen) take-up screw one (1) turn (see Figure G.70).

CAUTION: Do not over tighten the chain.

- Step 2. If adjusting the take-up does not cause the chain to tighten, check that all chain link connections have been properly made. See subsection "Chain Connection/Splicing" in this section.

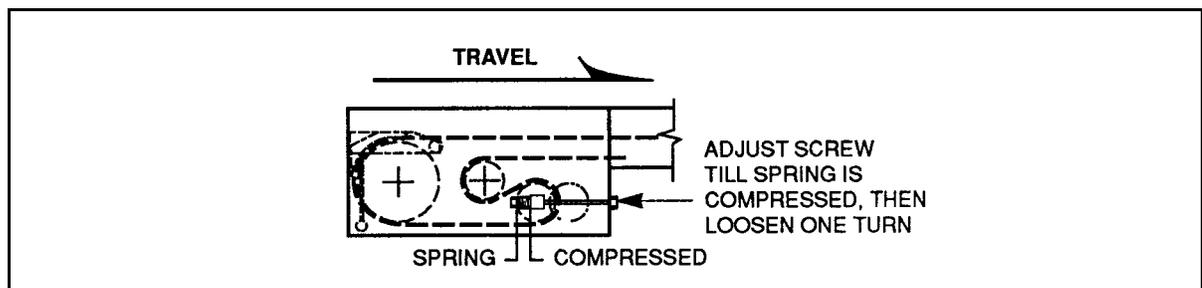


Figure G.70 – Infeed Drive Unit

Chain Tension Adjustment - S-Curves and Parallel Junctions

Both S-curves and parallel-type junctions have two internal drive chains. A separate chain take-up or tensioner is used to tension each chain.

The take-up location for each conveyor type is shown in Figure G.71. Follow the appropriate principles (given above) for “Discharge Drive Unit” or “Infeed Drive Unit”.

CAUTION: Do not over tighten the chain.

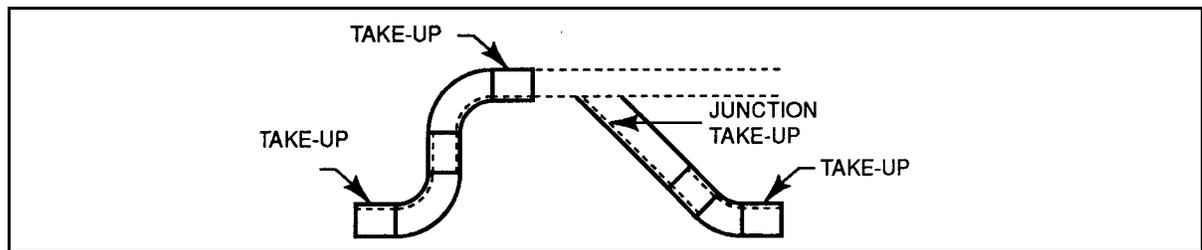


Figure G.71 – Take-up Tensioner Locations

Make Conveyor Safe/Ready For Test Run

Step 1. Install all protective guards and rollers except those in drive unit (to allow viewing of chain and drive sprocket during initial test run).

Step 2. Remove all tools and/or foreign objects from the conveyor.

Jog the Conveyor

Step 1. Run the conveyor momentarily and:

- Check that the conveyor is running in the right direction. If not, change the wiring leads to reverse the motor rotation.
- Check that both runs of chain are moving. If not, check for missing chain link connections.

Step 2. Remove all tools and/or foreign objects from the conveyor.

Conveyor Start-Up - Test Run

To check that each T/C conveyor has been assembled and installed correctly and is operating properly, the conveyor should be turned on and tested using the following steps.

Note: If a curve/junction is powered by an adjoining conveyor:

- first disconnect the PTO drive chain and test run the “driver” conveyor; then
- attach the drive chain and test the “driven” conveyor.

Step 1.Alert workers in area (see Caution Note)

CAUTION: Alert all personnel in the area that the conveyor is about to be started. Instruct them to stand clear of all moving parts.

Step 2.Start the conveyor and check the following:

- All “driven rollers” are powered.
- Conveyor runs smoothly and quietly with no unusual noises (reducer, bearings, etc.).

Step 3.Make any corrections required.

Step 4.Install chain guards and rollers not installed for the test run.

The conveyor is now ready to be put into operation as part of the total conveyor system.

Step 5.Personnel Training

The conveyors should be operated only by trained personnel. They must be knowledgeable about each conveyor and its intended use as well as the operation of the total system. They must know what steps are to be taken in an emergency situation.

SECTION H: MAINTENANCE

Recommended service checks and equipment maintenance are outlined below for typical, intermittent-duty conveyor applications. Additional maintenance and servicing schedule adjustments may be required for continuous-duty operation or extreme environmental conditions.

All newly installed equipment should be frequently inspected and serviced as needed during the first 40 hours of operation; thereafter, an appropriate maintenance program should be established and followed (see Table H-1).

Maintaining separate service log sheets on each type of conveyor is recommended for plants operating more than one shift. Each log sheet should show dates, detailed inspection service information, and name or initials of person(s) performing the equipment inspection or service for future reference.

CAUTION: Before performing maintenance on a conveyor, make certain that the conveyor's power disconnect is locked in the OPEN position and tagged to prevent accidental or unexpected application of power.

Do not perform maintenance while the conveyor is running unless specifically instructed to do so in this manual. Note: Other than belt tracking and checking of chain tension, it is NOT necessary to have the conveyor turned ON in order to perform any of the work described in this section.

Maintenance must be performed only by qualified personnel who are trained in normal and emergency operations of the conveyor and who are knowledgeable of all safety devices, their locations, and functions.

Before restarting a conveyor:

- Remove all foreign objects from the conveyor.
- Be sure that all guards and safety devices are properly installed and working.
- Make sure that all persons are clear of the conveyor and are aware that the conveyor is about to be restarted.

Table H-1 – Scheduled Maintenance

	Components	Item Check									
		Lubrication	Oil Level	Tension	Wear	Alignment	Fasteners	Set Screws	Proper Position	Physical Condition	Operation
Weekly	Carrier Rollers									X	X
	Drive Chain - Internal	X		X						X	
	Electrical Devices							X	X	X	X
	General Structure						X			X	
	Power Unit - Reducer		X								
	Safety Guards/Devices							X	X	X	X
Monthly	Bearings - External						X	X		X	
	Power Unit Chains and Sprockets	X		X	X	X	X	X		X	
	Power Unit - Motor						X			X	
	Power Unit - Reducer						X			X	
	Supports and Hangers						X			X	
Semi Annually 1040 Hrs.	Bearings - External	X									
	Power Unit - Motor	X									
	Power Unit - Reducer	X	X								

Scheduled Maintenance

Intervals indicated for performing maintenance should be considered for an 8 hour per day operation. An application may subject the equipment to conditions that would necessitate more frequent maintenance. This may best be determined by performing maintenance more frequently when the conveyor is first put into operation, and then lengthening the intervals based on experience.

Initial Startup & Run-in Period

Chain and Sprockets

Check the drive chain tension daily for the first week of operation, then monthly. Refer to the “Chain Maintenance” label on the inside of chain guard.

CAUTION: Chain tension must be checked while the conveyor is running with the chain guard removed. When checking, be careful to stay clear of the chain and drive components.

Power Unit Reducer

Reliance RELIALUBE®

This unit is supplied with “lifetime” synthetic lubricants (Reliance = Mobile SHC-634) that do not need to be changed after the unit is put into service.

Note: All reducers tend to run hot when first put into operation until the maximum break-in efficiency is reached (approximately 120 hours).

Hub City

After the first 100 hours of operation, drain and flush out the gear case with an approved non-flammable, non-toxic solvent. Refill with fresh lubricant. These units are supplied with Hub City’s “All Temperature Synthetic Gear Lubricant” (Mobile SHC-634). Consult Hub City if replacing the Hub City synthetic lubricant with another brand of premium gear lubricant.

To prevent oil leakage, apply Teflon tape or Permatex to the threads of the fill plug and oil level plug before reinstalling. Properly install and tighten plugs before putting the unit back into operation.

Daily Inspections

General walk-through inspections of the conveyor equipment during daily plant operation is recommended. Listen for unusual noises and carefully observing the system. For continuous duty applications, conduct conveyor inspections once each shift.

Frequently check equipment safety guards, warning signs, lights, and alarms associated with the operation of the conveyor system and keep them in good condition to ensure the safety of all plant personnel. Any unusual conveyor noise, oil leaks, and operational problems should be immediately reported and promptly corrected.

Weekly Inspections

Carrier Rollers

Check that all rollers are in place and turning freely. Remove any buildup of dirt and/or product spillage. Take care in keeping cleaning materials from coming in contact with the ball bearings.

Electrical Devices

Photocells, proximity sensors, limit switches, etc. should be periodically inspected and adjusted as needed. Lenses and reflectors on photoelectric devices should be wiped clean on a daily basis. For additional maintenance provisions, refer to the appropriate vendors instructions provided.

General Structure/Operation

Check the conveyor's physical condition, looking for loose fasteners, damaged or wearing components, build-up of dust and product spillage. Listen for unusual noises such as squeaking bearings, chains jumping sprockets, etc.

Check that the conveyed product travels along the length of the conveyor without obstruction of hesitation.

Power Unit Reducer

Check for signs of oil leakage on the floor and/or in the drip pan. If leakage persists or the amount of leakage is significant, repair or replace the unit. Until corrections are made, closely monitor the unit's oil level.

Drive Chain - Internal

Check/adjust tension of internal drive chain. Inspect the chain for need of lubrication. If required, lubricate the chain (lightly) with SAE30 oil. Do not use grease.

Safety Guards/Devices

Check that the safety guards, warning signs, light, and alarms are in place and in proper working condition. Check that all emergency-stop pull-cords and/or push buttons are functioning properly.

Monthly Maintenance

External Bearings

Check that all mounting bolts, set screws, etc., are securely tightened, and that no lubricant is coming out of the seals. Listen for any unusual noises.

Power Unit Chain and Sprockets

Check tension per instructions given in “chain Maintenance” label located on the inside of the chain guard. Remove dirt or dried oil with a kerosene soaked rag.

Inspect the chain for need of lubrication. If required, lubricate the chain (lightly) with SAE30 oil; do not use grease.

Check sprocket alignment by placing a straight-edge across the face of both sprockets simultaneously. Also, check for wear on the sprocket teeth (and side bars of the chain). If loose, tighten the sprocket fasteners.

Power Unit Motor

Remove any build-up of dirt/dust around the motor vent openings. Check that all mounting bolts are securely tightened and that the motor lead wires are securely connected.

Unless specified, wick-oil sleeve bearings should be lubricated every 2000 to 4000 hours. After the first 4000 hours of operation lubricate with 3 or 4 drops of light grade mineral oil or SAE10W motor oil. Refer to the motor lubrication plate or vendors instruction tag(s).

Power Unit Reducer

Check the oil level while the unit is warm, but not running. If required, add oil through the “fill” hole until the oil begins to run out of the “oil level” hole. All standard reducers are filled by the manufacturer with a synthetic gear lubricant. When replenishing the oil, be sure to use the same brand and type. Do not mix lubricants. For further information, refer to the instruction tag attached to the unit.

To prevent oil leakage, apply Teflon tape or Permatex to the threads of the fill plug and oil level plug before reinstalling. Properly install and tighten the plugs before putting the unit back into operation.

Hub City ONLY - Wipe off any dirt on the breather plug which could clog the unit and interfere with its operation.

CAUTION: Chain tension must be checked while the conveyor is running with and/or guards removed. When checking, be careful to stay clear of the chain and drive components.

Supports and Hangers

Check that all floor supports and/or ceiling hangers are in good physical condition and have not been damaged. Check that all fasteners are securely tightened and that none are missing.

Semi Annual Maintenance

External Pulley Bearings

All external bearings have lubed-for-life bearing cartridges, and do not require periodic lubrication.

If desired, the bearings may be re-lubricated using the grease-fitting that is provided the all bearing housing. Once grease is added, the bearing must be re-lubricated every 6 months with a lithium based ball bearing grease or compatible grease conforming to NLG1 Grade 2 consistency.

Add the grease slowly and sparingly while the pulley is rotating until a slight showing of grease forms around the seals. Do not over lubricate. Too much grease may damage the seals. If a bearing is over greased; remove the fitting to allow the excess grease to escape. Replace the fitting and wipe clean before putting the conveyor back into operation.

Power Unit Motor

Units up to 5 HP are lubricated for life. For 7.5 HP and 10 HP motors, refer to the manufacturer's motor lubrication plate or operating instruction tag wired to the motor.

Power Unit Reducer (Hub City ONLY)

Drain and refill with fresh gear lubricant. These units are filled with "All Temperature Synthetic Gear Lubricant", supplied by Hub City. Consult Hub City if replacing the Hub City Synthetic lubricant with another brand of premium gear lubricant.

Troubleshooting

Basic troubleshooting provisions are outlined below. For troubleshooting for the specific conveyor system installed, always check the maintenance information. Basic troubleshooting is outlined in Table H-2.

CAUTION: Do not clear jams or reach into any unit before first turning off the equipment power source(s) and making certain that all moving parts are fully stopped. To avoid personal injury or equipment damage, lockout and tagout the conveyor operation control(s) before attempting to correct any malfunction.

Table H-2 – Basic Troubleshooting Problems and Solutions

<i>Problem</i>	<i>Cause</i>	<i>Solution</i>
Conveyor does not start.	Electrical power shut off or control circuit NOT energized. System control devices (photo-cells, limit switches, etc.) out of adjustment or defective. Motor overload block open.	Check that system control panel(s) are energized. Be certain emergency stop devices are not activated. Adjust or replace. Check conveyor drive system and overload sizing before resetting.
Conveyor shuts off.	Accumulation photocell or other control device(s) actuated or defective. Emergency stop activated. Power or component failure at system control center. Motor overload.	Check conveyor accumulation or obstruction of control device; replace control device if defective. Correct condition and reset according to control logic. Refer to vendor manuals. Check conveyor drive system and overload sizing before re-starting.
Conveyor roller(s) not turning	Roller obstruction. Roller bearing failure. Dirty rollers.	Remove obstruction and inspect roller for damage. Replace roller bearings. Clean rollers and/or driver thoroughly. See Installation of Driver.
Gearmotor unusually noisy	Mounting bolts are loose. Unit misaligned or defective. Insufficient lubrication.	Retighten mounting bolts. Realign or replace. Lubricate gear motor. Refer to vendor tags on gear motor.

Table H-2 – Basic Troubleshooting Problems and Solutions

<i>Problem</i>	<i>Cause</i>	<i>Solution</i>
Gearmotor runs hot or overheats	Overload.	Check air pressure to take-up cylinder, check intermediate air pressure (15 psi). Lubricate the chain. Check sprocket bearings and proper engagement of chain with sprockets. Reduce load.
	High or low power voltage.	Refer to the motor nameplate for proper voltage and test with voltmeter.
	Inadequate ventilation or insufficient lubrications.	Service the unit.
Chain chatters or jumps off sprocket	Take-up is not functioning properly.	Check for free travel of take-up sled.
	Alignment between drive sprocket and chain is incorrect.	Check and, if necessary, adjust alignment.
	Chain worn out.	Check chain elongation and replace if required.
Excessive sprocket wear	Chain worn out (wears chain tooth profile).	Check chain elongation and replace if required.
	Alignment between sprocket and chain is incorrect (wears sprocket face).	Adjust sprocket alignment.
Excessive chain wear	Misalignment of sprocket (wears inner side of bushing link plates).	Check and, if necessary, adjust alignment.
	Inadequate chain lubrication (causes chain to elongate).	Lubricate chain.

SECTION I: SPARE PARTS

Introduction

The purpose of this section is to identify the critical replacement parts required for a solid preventative maintenance program and to minimize the chances for extended down time.

The following pages illustrate the location of these recommended spare parts as they apply to each particular unit. Keep in mind that these illustrations apply to the standard product line only.

End Drive Units

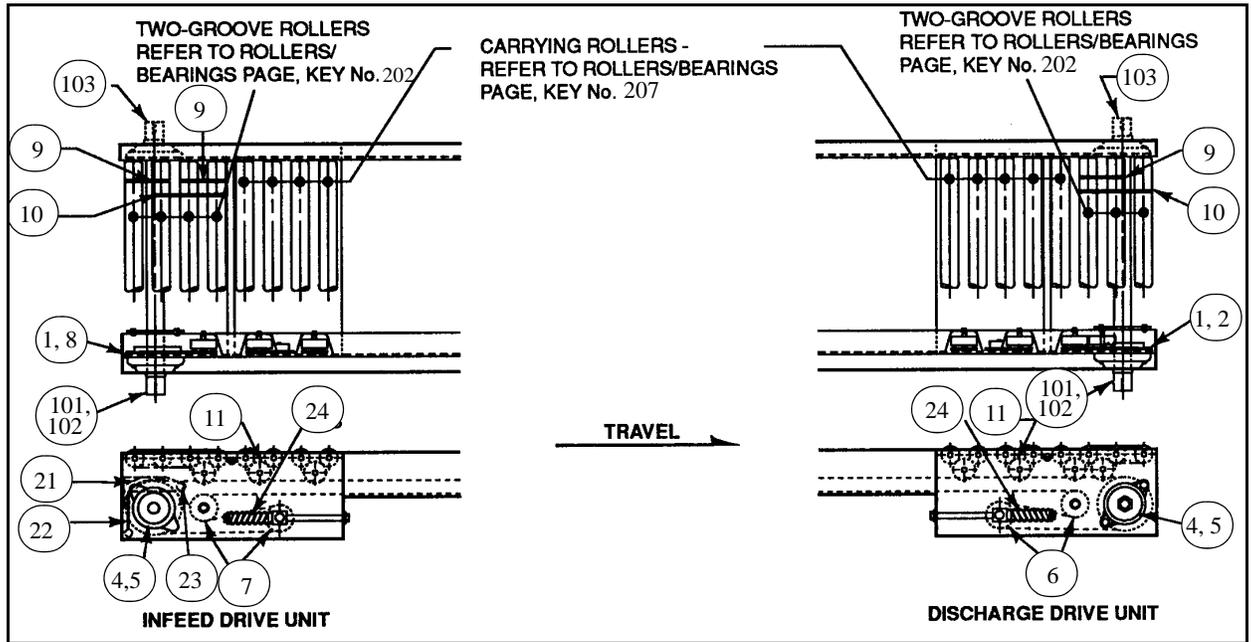


Figure I - 1 – Infeed Drive Units and Discharge Drive Unit

Bed Sections and Power Transfer Unit

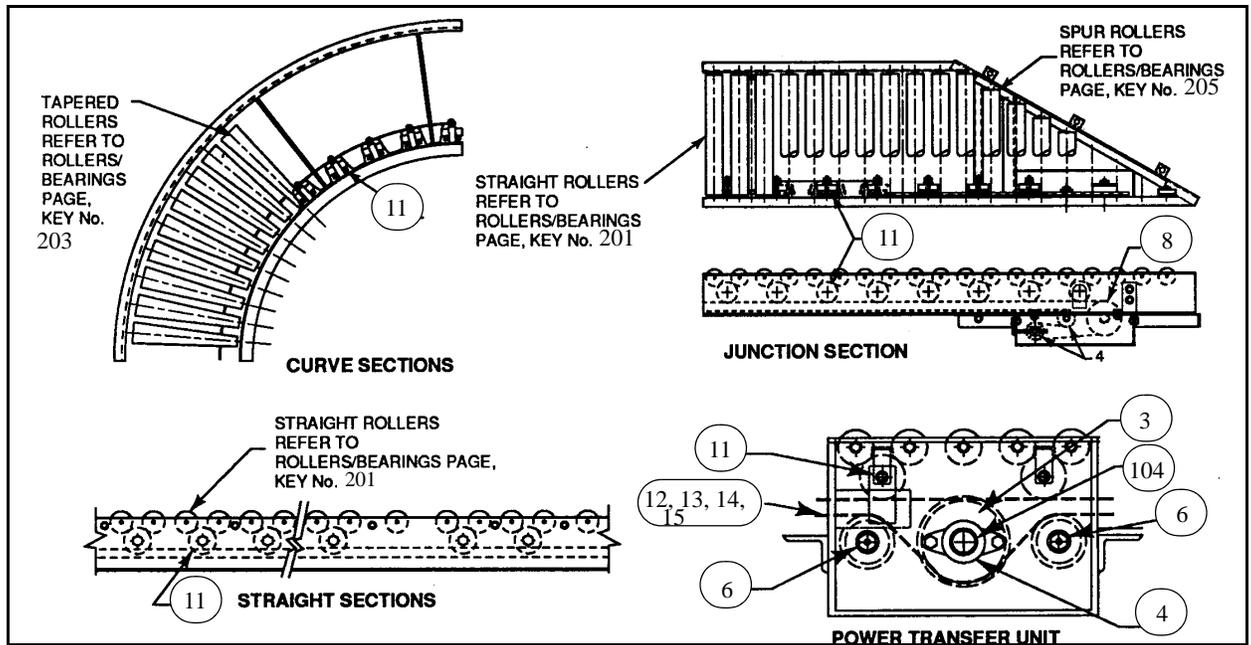


Figure I - 2 – Curve Sections, Straight Sections, Junction Section and Power Transfer Unit

End Take-Up Units

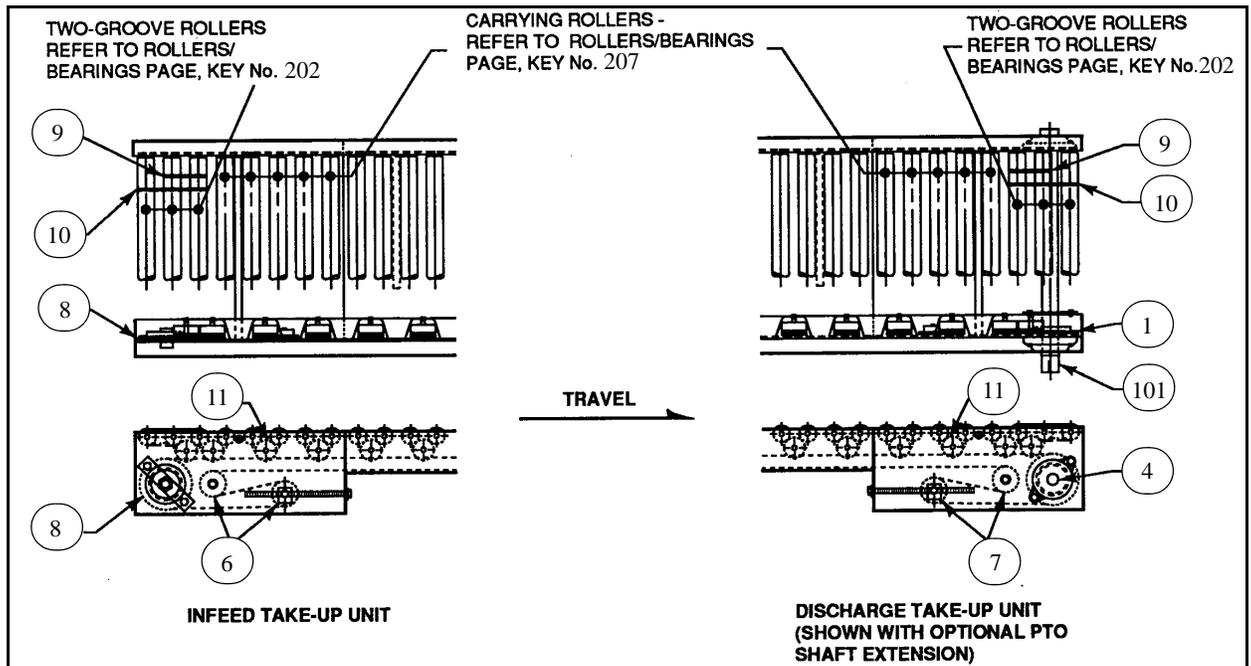


Figure I - 3 – Infeed Take-Up Unit and Discharge Take-Up Units

PRS Powered Roller Skew Conveyor

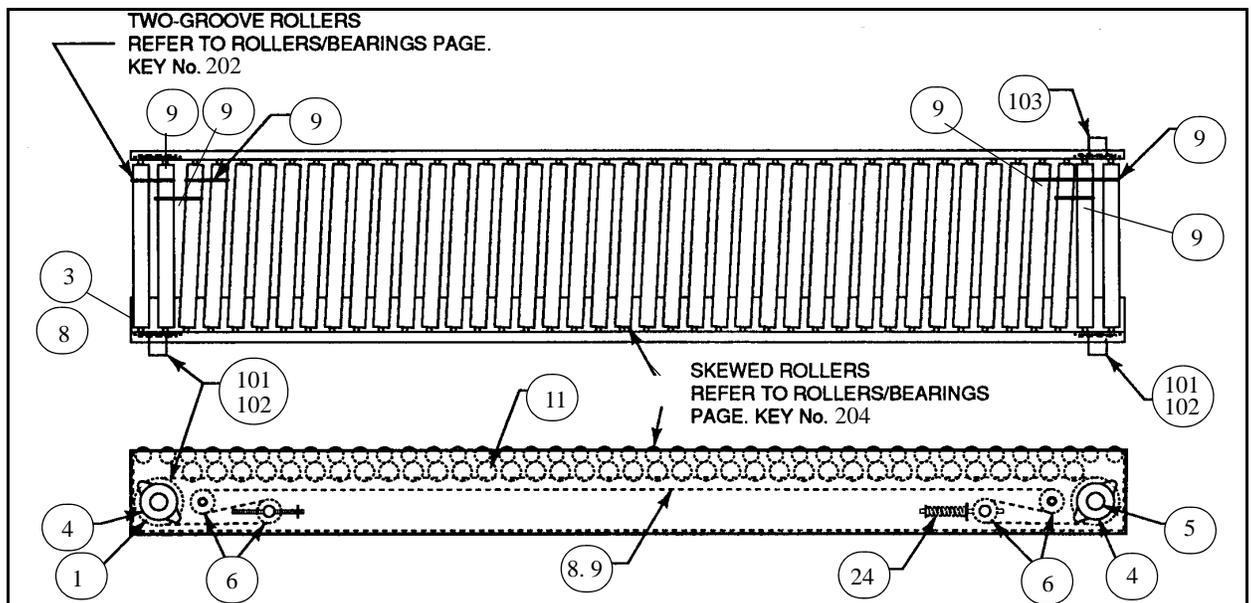


Figure I - 4

Power Units

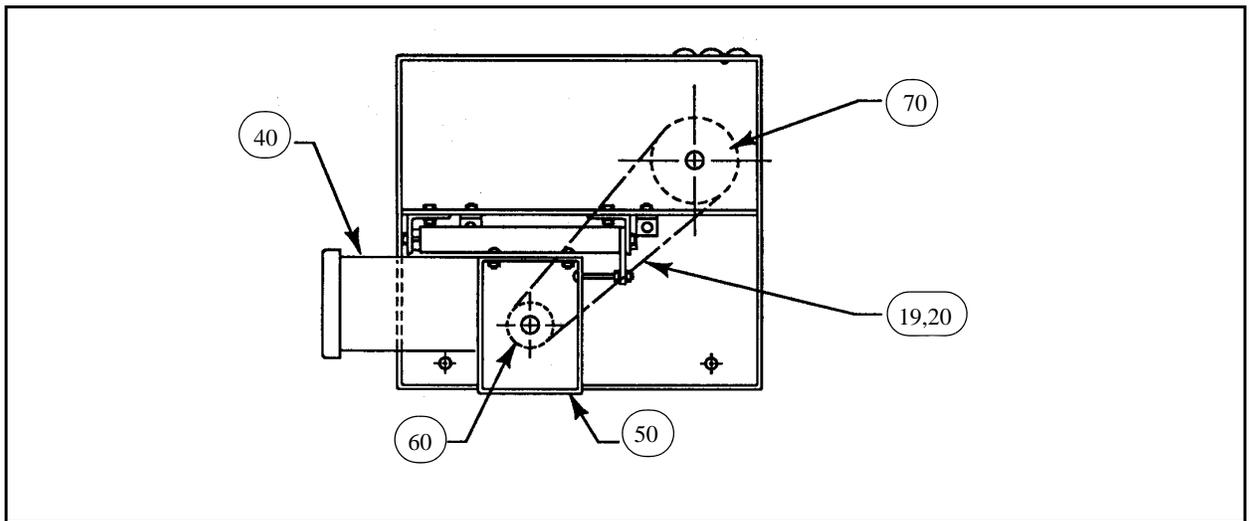


Figure I - 5 – Power Unit - Underhung Mount

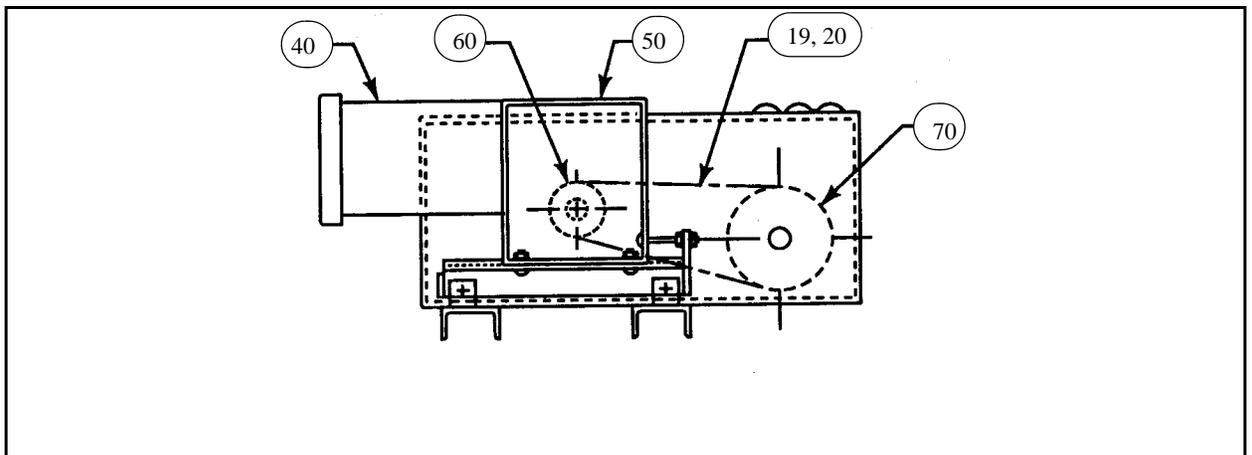


Figure I - 6 – Power Unit - Side Mounted

Power Take-Off Units

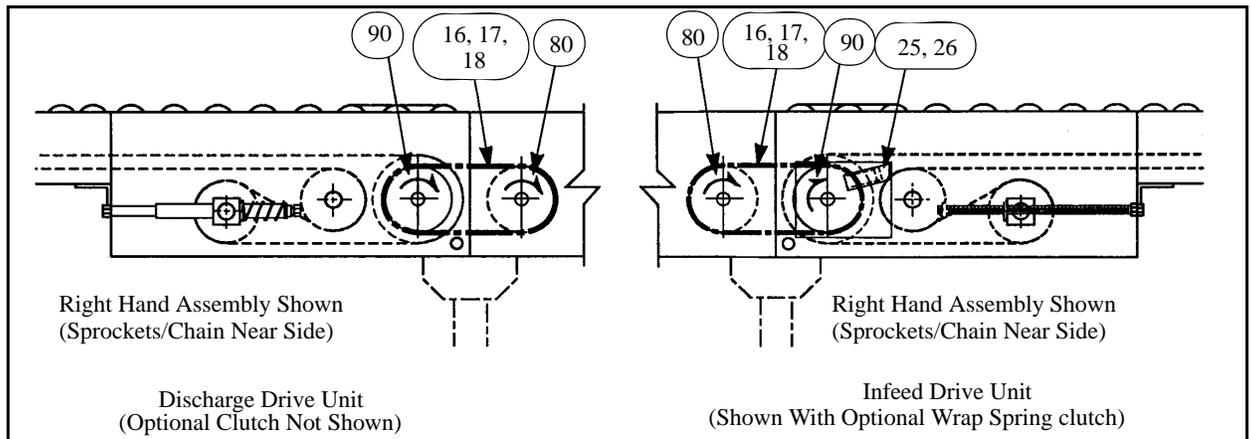


Figure I - 7 – Discharge Drive Unit (Left) and Infeed Drive Unit (Right) with Power Take-Off Units

Table I.1 – Wrap Spring Clutch Designation

PTO Unit Assembly	Drive Unit Type	
	Infeed	Discharge
RH	CCW	CCW
LH	CW	CW

CW = Clockwise Clutch Rotation
 CCW = Counterclockwise Clutch Rotation

Non-Width Related Parts

Key No.	Part Description	Part Number
COMMON PARTS (NON-WIDTH RELATED)		
1	Drive Sprocket - H40B35, 1-7/16" BR, KW, SS	74-3191
2	Drive Sprocket - H40B35, 1" BR, DW, SS	74-3180
3	Drive Sprocket - H40B30, 1-7/16" BR, DW, SS	74-3166
4	Flange Bearing - 2-Bolt, 1-7/16" BR, Grease-Packed	40-0987
5	Flange Bearing - 2-Bolt, 1" BR, Grease-Packed	40-0980
6	Idler Sprocket - HB40A17, 5/8" BR, Grease-Packed	74-2932
7	Idler Sprocket - HBB40A25, 5/8" BR, Grease-Packed	74-2931
8	Idler Sprocket - HB40A35, 5/8" BR, Grease-Packed	74-2934
9	O-Ring/1.9" x 3C - 10-1/4" (3" Roller Center)	00-0002
10	O-Ring/1.9" x 6C - 15-5/8" (6" Roller Center)	00-0004
11	Drive Wheel - No. DW1 (0° to 150°F)	37-1095
	Drive Wheel - No. DW3 (-20° to 0°F)	37-0933
12	Chain - Side Bow RC40 (Style 5-21 Curves/Junctions)	20-0561
	Chain (High Speed/Cold Room/Freezer)	20-0581
13	Chain Coupler - RC40 (Side Bow)	20-0566
14	Chain - RC40 (Style 1/1P/PRS Conveyors)	20-0551
	Chain - (High Speed/Cold Room/Freezer)	20-0571
15	Chain Coupler - RC40	20-0020
16	Chain RC-50 (PTO Unit)	20-0983
17	Chain Coupler - RC-50	20-0984
18	Chain Offset Link - RC-50	20-0260
19	Chain - RC-60 (Power Unit)	20-0985
20	Chain Coupler - RC-60	20-0986
21	Chain Guide - UHMW	64-8862
22	Extension Spring - #310	31-0461
23	Tensioner Slide - UHMW	64-8863
24	Compression Spring - #55	31-0259
26	Wrap Spring Clutch CW	30-0072
26	Wrap Spring clutch CCW	30-0074
27	Grease, Lubriplate 110, 10 oz. Tube*	00-0035
28	Drive Wheel Axle	69-2603
29	Drive Wheel Shingle Guard	67-5108
30	Chain Track Extrusion - UHMW	67-5100
31	Chain Track Extrusion Mounting Bracket	67-5102
32	Finger Guard Clip	67-5104
33	Paint - Medium Gray, 5 Gal.	00-0008
34	Paint, Medium Gray, Spray Can	00-0009

Key No.	Part Description	Part Number						
		Standard Motor		Brake Motor (Kit)	Horton Clutch/ Brake			
40	Power Unit - C-Face Motor	Reliance		Reliance		(33-0903)	4870723	
		33-0601						
		33-0774						
		33-0775						
		33-0607				(33-0906)	4870724	
		33-0613						
		33-0617		33-0619				
		33-0621		33-0623		NA		
50	Power Unit - C-Face Reducer	Frame		Reliance		Hub City		
		Ratio	Red.	Motor	K1	L1	B	C
		5:1	175ES	56C	81-0751	81-0752		
			175ES	140TC	81-0753	81-0754		
			17	56C				
			17	145TC				
		10:1	175ES	56C	81-0755	81-0756		
			17	56C				
			200ES	140TC	81-0169	81-0770		
			262	140TC	81-0893	81-0894		
			26	145TC				
			350	180TC	81-0952	81-0953		
			37	182TC				
			454	182TC			81-1278	81-1279
		15:1	175ES	56C	81-0757	81-0758		
			17	56C				
			262	140TC	81-0919	81-0939		
			26	140TC				
			350	140TC	81-0871	81-0872		
			350	180TC	81-0920	81-0940		
			37	140TC				
			37	180TC				

Key No.	Part Description		Part Number				
50	Power Unit - C-Face Reducer						
	Ratio	Frame		Reliance		Hub City	
		Red.	Motor	K1	L1	B	C
	20:1	175ES	56C	81-0759	81-0760		
		17	56C				
		262	56C	81-0906	81-0926		
		26	56C				
		350	140TC	81-0910	81-0930		
		37	145TC				
	25:1	262	56C	81-0879	81-0880		
		26	56C				
	30:1	175ES	56C	81-0763	81-0764		
		17	56C				
		262	56C	81-0907	81-0927		
		26	56C				
		350	140TC	81-0911	81-0931		
		37	145TC				
	40:1	350	56C	81-0863	81-0864		
		37	56C				

Key No.	Sprockets - Hardened Teeth w/Taper Lock Hubs - Part Numbers							
	60	Power Unit - Driver Sprocket			Sprocket Bore / Part Number			
Sprocket		TL Hub No.	7/8"	1"	1-1/8"	1-1/2"	1-5/8"	
RC-60		11T	No. 1008	74-5631				
RC-60		12T	No. 1008	74-5632				
RC-60		13T	No.1210	74-5633	74-5633	74-5633		
RC-60		15T	No. 1610				74-5635	74-5635
RC-60		16T	No. 1610	74-5636	74-5636	74-5636	74-5636	74-5636
RC-60		17T	No. 1610				74-5637	74-5637
RC-60		18T	No. 1610	74-5638	74-5638	74-5638	74-5638	74-5638
RC-60		19T	No. 1610				74-5639	74-5639
RC-60		21T	No. 2012			74-5641	74-5641	74-5641
"TL" Hub		No. 1008	23-0701					
		No. 1210	23-0716	23-0717	23-0718			
		No. 1610	23-0746	23-0597	23-0578	23-0753	23-0751	
		No. 2012			23-0778	23-0785	23-0787	
70	Power Unit - Driven Sprocket			Sprocket Bore / Part Number				
	Sprocket		TL Hub No.	1-7/16"				
	RC-60	24T	No. 2012	74-5644				
	"TL" Hub		No. 2012	23-0781				
80	PTO Unit - Driver Sprocket/Hub			Sprocket Hub Bore / Part Number*				
	Sprocket/Hub		DR Conveyor	1-7/16"	1-11/16"			
	RC-50 17T		A/CQ	74-5819				
			BCR/S Ser. 600	74-5819				
			BCR/S EIU All	74-5819				
BCR/S Ser. 800				74-5820				
90	PTO Unit - Driven Sprocket/Hub			Sprocket Hub Bore / Part Number*				
	Sprocket/Hub		T/C Conveyor	1-7/16"	1-3/4"			
	RC-50 17T		without Clutch	74-5819				
with Clutch**				74-5823				

* Includes Taper Loc Hub

** Type A Plate Sprocket (Bolts to Wrap-Spring clutch)

Width Related Parts

Key No.	Part Description	Part Number				
		16" W	22" W	28" W	34" W	40" W
PARTS - WIDTH RELATED						
DRIVE SHAFT - END DRIVE UNITS AND END TAKE-UP UNITS W/PTO						
101	Single Extension - P.U.; PTO (1-7/16" dia.)	69-3155	69-3156	69-3157	69-3158	49-3159
	Plated (For Cold-Room Applications)	69-3160	69-3161	69-3162	NA	NA
102	Single Extension - PTO/Clutch (1" dia.)	69-2684	69-2685	69-2686	69-2687	69-2688
	Plated (For Cold-Room Applications)	69-0175	69-0176	69-0177	NA	NA
103	Double Extension - P.U./PTO (1-7/16" dia.)	69-3184	69-3185	69-3186	69-3187	69-3188
	Plated (For Cold-Room Applications)	69-3189	69-3190	69-3191	NA	NA
SHAFT - POWER TRANSFER UNIT						
104	No Extension (Power Transfer Units)	69-3201	69-3203	69-3205	69-3207	69-3216
	Plated (For Cold-Room Applications)	69-3202	69-3204	69-3206	NA	NA

Key No.	Roller Width "W"	Part Description and Number						
		Roller Number - Suffix						
		G	G-CR	HS	HS-CR	FZ	AB	GT
PARTS - WIDTH RELATED - BEARINGS/ROLLERS								
BEARINGS ONLY (Bearing No. & Part No.)								
No. G196 Roller		35-0253		35-0255		35-0256	NA*	35-0254
No. G254 Roller		NA		0999100		35-0296	35-0824	NA
No. G196 - Straight Carrier Rollers (Full Width "W")								
201	16"	50-5306	50-6906	50-5331	50-7106	50-5606	6114316	50-5326
	22"	50-5320	50-5342	50-5332	50-5345	50-5336	6114322	50-5327
	28"	50-5315	50-6915	50-5333	50-7115	50-5615	6114328	50-5328
	34"	50-5325	NA	50-5334	NA	NA	6114334	50-5329
	40"	50-5335	NA	50-5337	NA	NA	6114340	50-5330
No. G196 - Straight Grooved Rollers (Full Width "W")								
202	16"	50-3276	50-3450	50-3286	50-3453	50-3447	50-3291	50-3281
	22"	50-3277	50-3451	50-3287	50-3454	50-3448	50-3292	50-3282
	28"	50-3278	50-3452	50-3288	50-3455	50-3449	50-3293	50-3283
	34"	50-3279	NA	50-3289	NA	NA	50-3294	50-3284
	40"	50-3280	NA	50-3290	NA	NA	50-3295	50-3285
No. G254 - Tapered Rollers (Full Width "W")								
203	16"	Use HS / HS-CR		50-2050	50-2055	50-2065	50-2060	NA
	22"	Use HS / HS-CR		50-2051	50-2056	50-2066	50-2061	NA
	28"	Use HS / HS-CR		50-2052	50-2057	50-2067	50-2062	NA
	34"	Use HS		50-2053	NA	NA	50-2063	NA
	40"	Use HS		50-2054	NA	NA	50-2064	NA
No. G196 - PRS Skewed Rollers								
204	16-1/8"	50-3394	50-6894	50-4694	50-7094	50-5594	50-2268	50-2267
	22-1/8"	50-2269	50-2274	50-2271	50-2275	50-2272	50-2273	50-2270
	28-3/16"	50-2276	50-2281	50-2278	50-2282	50-2279	50-2280	50-2277
	34-1/4"	50-5340	NA	50-2284	NA	NA	50-2285	50-2283
	40-5/16"	50-2286	NA	50-2288	NA	NA	50-2289	50-2287

(*) All No. G196AB rollers have "crimped" ends. Therefore, the bearings are non-replaceable. Order complete roller.

LEGEND:

- | | | | | | |
|------|-----------------|-------|-------------------------|----|-----------------|
| G | = Grease-Packed | AB | = Precision ABEC-1 Brg. | GT | = Teflon-Sealed |
| G-CR | = Cold Room | HS | = High-Speed | | |
| FZ | = Freezer | HS-CR | = High-Speed Cold Room | | |

Key No.	Roller Width "W"	Part Description and Number						
		Roller Number - Suffix						
		G	G-CR	HS	HS-CR	FZ	AB	GT
PARTS - WIDTH RELATED - BEARINGS/ROLLERS (CONTINUED)								
No. G196 - Junction Rollers								
205	3-7/8"	50-2133	50-7171	50-2243	50-7270	50-4279	50-6928	49-1758
	4"	50-5321	50-6921	50-4690	50-7121	50-5598	50-6975	50-9923
	5-5/8"	50-2134	50-7172	50-2244	50-7271	50-6570	50-6929	49-1759
	7"	50-3308	50-5808	50-4608	50-7008	55-5508	50-6976	50-9905
	7-5/16"	50-2135	50-7173	50-2245	50-7272	50-6571	50-2100	49-1760
	9-1/16"	50-2136	50-7174	50-2246	50-7273	50-6572	50-6977	49-1761
	10"	50-3313	50-6813	50-4613	50-7013	50-5513	50-6977	50-9929
	10-5/8"	50-2224	50-7175	50-2247	50-7274	50-4082	50-2201	49-1762
	10-3/4"	50-2225	50-7176	50-2248	50-7275	50-4281	50-6969	49-1763
	10-13/16"	50-3300	50-6800	50-4600	50-7000	55-5500	49-1797	50-9947
	10-7/8"	50-2226	50-7177	6105405	50-7276	50-4282	50-2202	49-1764
	12-1/2"	50-5304	50-6904	50-4686	50-7104	50-4604	50-6970	50-9931
	12-7/8"	50-2227	50-7178	50-2249	50-7277	50-4283	50-2203	59-1765
	13"	50-3317	50-6817	50-4617	50-7017	50-5517	50-6978	50-9896
	13-1/4"	50-4772	50-7179	6105407	50-7278	50-4284	50-4789	49-1766
	13-5/16"	50-2228	50-7180	50-2250	50-7279	50-4285	50-2204	49-1767
	13-5/8"	50-2229	50-7181	50-2251	50-7280	50-4286	50-2205	49-1768
	14-1/4"	50-2137	50-7182	50-2120	50-7281	50-6573	50-2101	49-1769
	14-3/4"	50-2230	50-7183	50-2252	50-7282	50-4287	50-2206	49-1770
	15-7/16"	50-2231	50-7184	50-2253	50-7283	50-4288	50-2207	40-1771
	15-1/2"	50-5305	50-3332	50-2254	50-7105	50-5605	50-4905	49-1772
	16-3/8"	50-2232	50-7185	50-2255	50-7284	50-4289	50-2208	49-1773
	17-5/8"	50-2233	50-7186	50-2256	50-7285	50-4290	50-2209	49-1774
	17-3/4"	50-6964	50-6967	50-6965	50-6968	50-6574	50-6966	49-1775
	18-11/16"	50-2234	50-7187	50-2258	50-7286	50-4291	50-2211	49-1776
	19"	50-3358	50-6858	50-6971	50-7058	50-5558	50-6971	49-1777
	19-7/16"	50-2138	50-7188	50-2121	50-7287	50-6575	50-2102	49-1778
	20-1/16"	50-2235	50-7189	50-2259	50-7288	50-4292	50-2212	49-1779
	21-1/8"	50-3331	50-6831	50-4631	50-7031	50-5531	50-6884	50-9821
	21-3/16"	50-2139	50-7190	50-2122	50-7289	50-6576	50-2103	49-1798
	21-5/8"	50-2236	50-7191	50-2260	50-7290	50-4293	50-2213	49-1780
22-15/16"	50-2140	50-7192	50-2123	50-7291	50-6577	50-2104	49-1781	
23-3/4"	50-2237	50-7193	50-2261	50-7292	50-4294	50-2214	49-1782	
24-5/8"	50-2141	50-7194	50-2124	50-7293	50-6578	50-2105	49-1783	
25"	50-3359	50-6859	50-2113	50-7059	50-5559	50-6979	49-1784	
25-7/8"	50-2238	49-1711	50-2262	49-1737	49-1743	50-2215	49-1717	
26-3/16"	50-2239	50-7195	50-2263	50-7294	50-4295	50-2216	49-1785	
26-3/8"	50-2142	50-7196	50-2125	59-7295	50-6579	50-2106	49-1786	
26-15/16"	50-2240	NA	50-2264	NA	NA	50-2217	49-1787	
28-1/8"	50-4780	NA	6105446	NA	NA	50-4797	49-1788	
29-13/16"	50-2143	NA	50-2126	NA	NA	50-2107	49-1789	
31"	50-3345	NA	50-4645	NA	NA	50-6973	50-9833	

Key No.	Roller Width "W"	Part Description and Number						
		Roller Number - Suffix						
		G	G-CR	HS	HS-CR	FZ	AB	GT
PARTS - WIDTH RELATED - BEARINGS/ROLLERS (CONTINUED)								
No. G196 - Junction Rollers								
205	31-9/16"	50-2144	NA	50-2127	NA	NA	50-2108	49-1790
	31-3/4"	50-2241	NA	50-2265	NA	NA	50-2218	49-1791
	33-5/16"	50-2145	NA	50-2128	NA	NA	50-2109	49-1792
	34-3/8"	50-3351	NA	50-4651	NA	NA	50-6885	50-9839
	35-1/16"	50-2146	NA	50-2129	NA	NA	50-2110	49-1793
	35-15/16"	50-2242	NA	50-2266	NA	NA	50-2219	49-1794
	36-3/4"	50-2147	NA	50-2130	NA	NA	50-2111	49-1795
	37"	50-3360	NA	50-2114	NA	NA	50-6974	49-1799
	38-1/2"	50-2148	NA	50-2131	NA	NA	50-2112	49-1796

