OPERATION, MAINTENANCE, AND INSTALLATION MANUAL

EZ-TRAX™ CONVEYORS

Vernon, AL
1-800-633-8974

Marathon Equipment Company

0051-CONVEYORS-0516

⚠ WARNING

IF INCORRECTLY USED, THIS EQUIPMENT CAN CAUSE SEVERE INJURY. THOSE WHO USE AND MAINTAIN THE EQUIPMENT SHOULD BE TRAINED IN ITS PROPER USE, WARNED OF ITS DANGERS, AND SHOULD READ AND FULLY UNDERSTAND THIS ENTIRE MANUAL BEFORE ATTEMPTING TO SET UP, OPERATE, ADJUST OR SERVICE THE EQUIPMENT. KEEP THIS MANUAL FOR FUTURE REFERENCE

IMPORTANT SAFETY NOTICE

Proper service and repair are important to the safe, reliable operation of the Marathon Equipment Company products. Service procedures recommended by Marathon Equipment Company are described in this Operation, Service, and Installation Manual and are effective for performing service operations. Some of these service operations may require the use of tools or blocking devices specially designed for the purpose. Special tools should be used when and as recommended. It is important to note that some warnings against the use of specific methods that can damage the product or render it unsafe are stated in the service manual. It is also important to understand these warnings are not exhaustive. Marathon Equipment Company could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each method. Consequently, Marathon Equipment Company has not undertaken any such broad evaluations. Accordingly, anyone who uses service procedures or tools which are not recommended by Marathon Equipment Company must first satisfy himself thoroughly that neither his safety nor the product safety will be jeopardized by the method he selects.

Table of Contents

1 - OPERATION

Introduction

THANK YOU FOR PURCHASING A MARATHON® CONVEYOR.

This product is designed to give you reliable service and superior performance for years to come. To guarantee top performance and the safest operation of the conveyor, each person involved in the operation, maintenance and installation of the conveyor should read and thoroughly understand the instructions in this manual and follow all warnings.

Employer(s) involved in the operation, maintenance and installation of the conveyor should read and understand the most current version of the following applicable standards:

A copy of this standard may be obtained from:

ENVIRONMENTAL INDUSTRIES ASSOCIATION

4301 CONNECTICUT AVENUE, NW SUITE 300

WASHINGTON, D.C. 20008

OSHA Standards - 29 CFR

Refer to:

- Part 1910.147: “The Control of Hazardous Energy (Lock-Out/Tag-Out)”
- Part 1910.212: "Machinery and Machine Guarding: General Requirements for all Machines"
- All other applicable OSHA Standards

ANY SERVICE OR REPAIRS THAT GO BEYOND THE SCOPE OF THIS MANUAL SHOULD BE PERFORMED BYFACTORY AUTHORIZED PERSONNEL ONLY!

If you should need further assistance, please contact your distributor. You will need to provide the equipment serial number, installation date, and electrical schematic number to your distributor.

If you have any safety concerns with the equipment or need further information, please contact us at:

Marathon Equipment Company

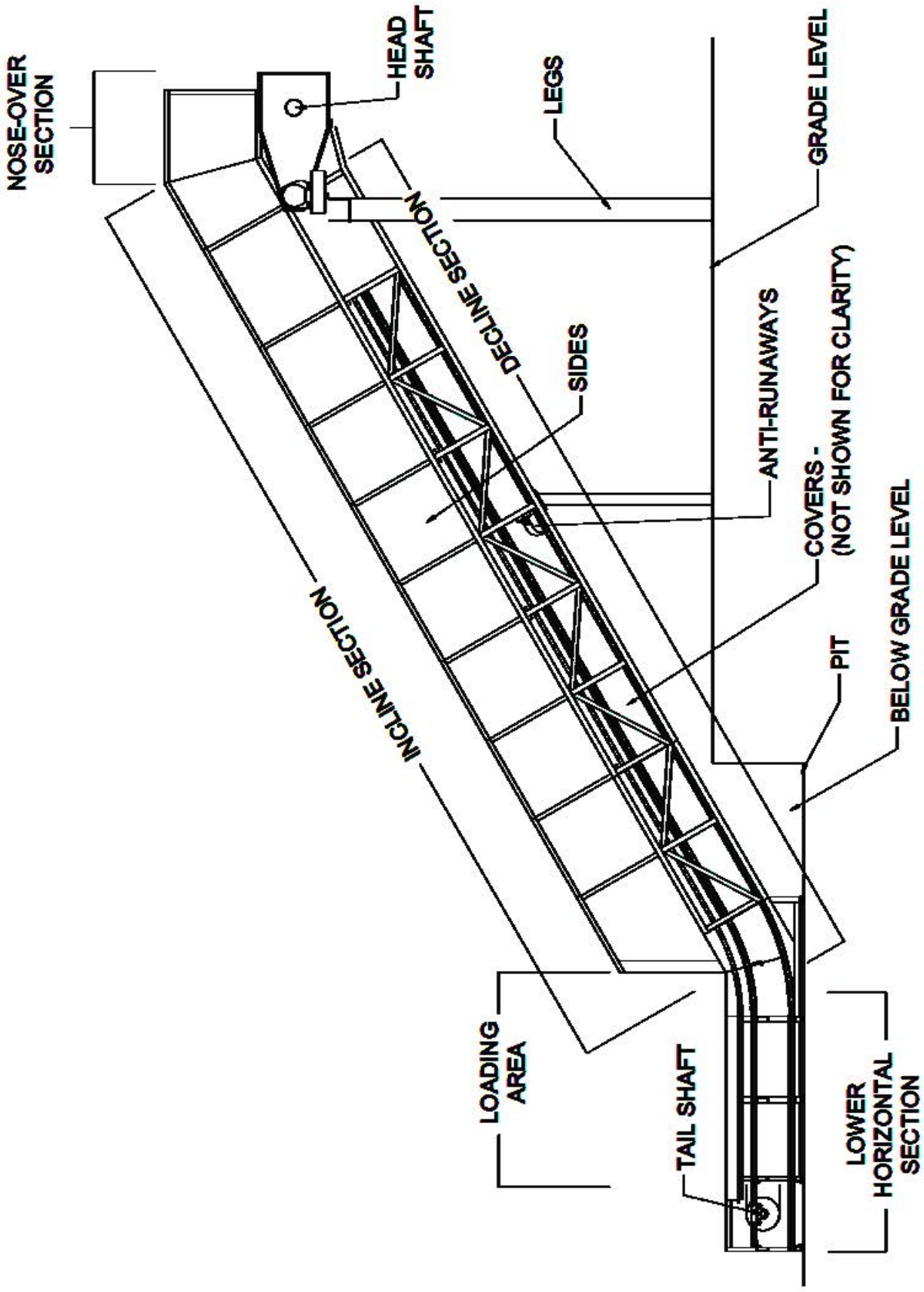
P.O. Box 1798

Vernon, Al 35592-1798

Attn: Field Service Department

1-800-633-8974

Conveyor Terminology



Pre-Operation Instructions

WARNING: DO NOT OPERATE CONVEYOR UNTIL ALL OPERATING INSTRUCTIONS ARE READ AND THOROUGHLY UNDERSTOOD.

NEVER PERFORM MAINTENANCE, ADJUSTMENT, OR OPERATE THE CONVEYOR OR ANY ASSOCIATED EQUIPMENT WTHOUT FIRST FOLLOWING THE REQUIRED SAFETY PROCEDURES.

NEVER ENTER ANY PART OF THE CONVEYOR UNLESS THE DISCONNECT SWITCH HAS BEEN TURNED OFF AND PADLOCKED.

Before starting the conveyor, be sure no one is inside or on the conveyor. Be certain that everyone is clear of all points of operation and pinch point areas before starting. **See Lock-Out & Tag-Out Instructions in the Maintenance section.**

THE EMPLOYER SHOULD ALLOW ONLY AUTHORIZED AND TRAINED PERSONNEL TO OPERATE THIS CONVEYOR.

BE CERTAIN ALL GUARDS AND ACCESS COVERS ARE IN PLACE BEFORE STARTING CONVEYOR.

DANGER: DO NOT RIDE, SIT, WALK, STAND, OR RUN ON THE CONVEYOR AT ANY TIME.

DANGER: CONVEYOR BELT RETAINS STORED ENERGY AT ALL TIMES. SEE PAGE 2-4 FOR INSTRUCTIONS ON Securing Belt.

DANGER: DO NOT ALLOW PERSONNEL BETWEEN THE BELT AND FRAME WORK AT ANY TIME.

WARNING: NEVER LOAD THE CONVEYOR BEYOND THE DESIGNED CAPACITY LIMITS.

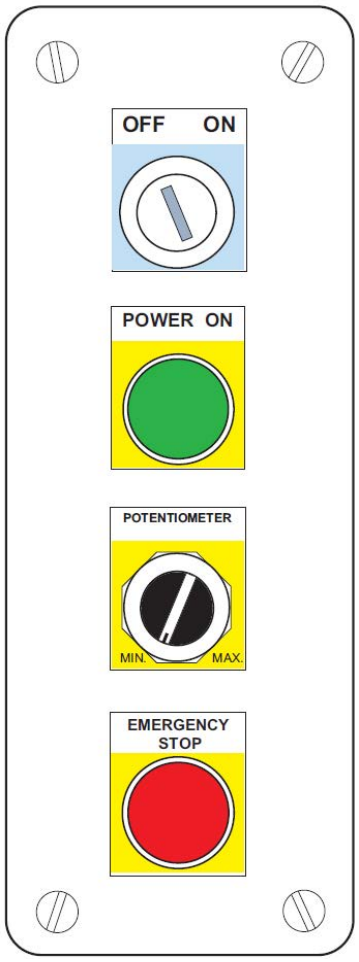
WARNING: KEEP ALL STARTING/STOPPING CONTROLS FOR CONVEYORS FREE OF OBSTRUCTION AT ALL TIMES.

WARNING: STAND CLEAR WHILE CONVEYOR IS IN OPERATION.

WARNING: NEVER ATTEMPT TO REMOVE MATERIAL FROM A CONVEYOR BEFORE PERFORMING THE PROPER LOCK-OUT TAG-OUT PROCEDURES AS DESCRIBED ON PG 2-1.

NOTICE: KEEP ALL LOADING AND UNLOADING AREAS AROUND THE CONVEYOR CLEAR OF OBSTRUCTION AT ALL TIMES.

Typical Controls



CONVEYOR CONTROLS FOR STAND ALONE UNITS.

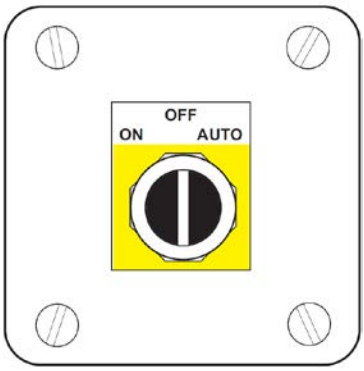
KEYED ON/OFF START SWITCH - Insert the key into the switch and turn to the ON position to engage power to the controls.

POWER ON PUSHBUTTON - (green mushroom head) Press to start the motor and actuate the motion of the conveyor belt.

POTENTIOMETER - (On Units with VFDs) This controls the speed of the conveyor motor and belt. Turn the dial clockwise to increase speed and counterclockwise to decrease speed.

EMERGENCY STOP PUSHBUTTON (red mush-room head) - When pressed, this stops the conveyor motor and stops the motion of the conveyor belt.

NOTE: Controls may be located in the panel box face.



CONVEYOR CONTROLS FOR UNITS CONTROLLED BY OTHER EQUIPMENT.

3 POSITION SELECTOR SWITCH - With the controlling equipment running; ON - turns the conveyor on to operate continually, OFF - turns the conveyor off, AUTO - cycles the conveyor on and off as determined by an external controlling source.

Typical Controls (Continued)

CONVEYOR CONTROLS WITH VFDs FOR UNITS CONTROLLED BY OTHER EQUIPMENT.

POTENTIOMETER - Located on conveyor units with VFDs. Starting and Stopping the conveyor are done through other equipment controls (such as through a baler touchscreen).

EMERGENCY STOP PUSHBUTTONS

Each conveyor built by Marathon Equipment Company ships with two (2) Emergency Stop Buttons. These Emergency Stop Buttons should be installed at the time of installation. They are to be installed one on either side of the loading area. They should be installed in accordance with local, state, and federal regulations. Pressing either of these stop buttons should stop all motion of the conveyor.

Note: See Electrical Installation on page 3-14.

OPERATORS SHOULD BE FAMILIAR WITH THE LOCATIONS OF ALL THE EMERGENCY STOP BUTTONS ON THE CONVEYOR.

Operating Instructions

Starting the Conveyor

1) On conveyors with a KEYED ON/OFF switch, first insert the key and turn to the ON position, and press the POWER ON pushbutton to start the conveyor.

2) On conveyors controlled by other equipment, it may be necessary to start the other equipment before the conveyor can be started.

OPERATORS SHOULD BE TRAINED IN THE SAFE PROCEDURES FOR FEEDING THE CONVEYOR, CLEARING A JAMMED CONVEYOR, AND THE PROPER LOCK-OUT/TAG-OUT PROCEDURES.

IN CASE OF EMERGENCY:
Push the large RED button to STOP

Feeding the Conveyor

1) Feed material moderately, but steady, onto the conveyor belt.

2) Do not overload the conveyor.

3) Material should not exceed the side walls of the lower section of the conveyor.

Clearing a Clogged or Jammed Conveyor

1) Lock-Out and Tag-Out the conveyor as described on page 2-2.

2) Remove the material clogging or jamming the conveyor.

3) When the clog or jam is removed, remove the Lock-Out and Tag-Out provisions and restart the conveyor.

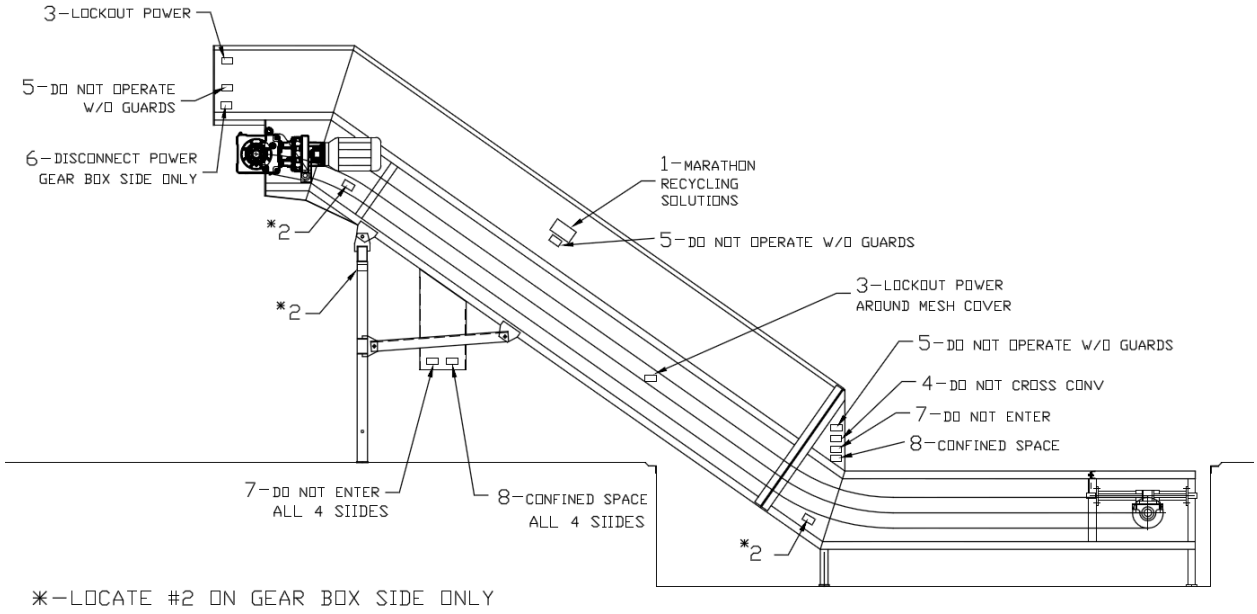
WARNING: NEVER ATTEMPT TO REMOVE MATERIAL FROM A CONVEYOR BEFORE PERFORMING THE PROPER LOCKOUT AND TAG-OUT PROCEDURES.

Decal Placement - Steel Belt and Pit Conveyors

WHEN YOUR CONVEYOR LEAVES THE FACTORY, SEVERAL WARNING DECALS ARE INSTALLED FOR PROTECTION. THESE LABELS ARE SUBJECT TO WEAR AND ABUSE DUE TO THE NATURE OF THE OPERATION. **THESE DECALS MUST BE MAINTAINED**. ADDITIONAL DECALS MAY BE PURCHASED THROUGH YOUR DISTRIBUTOR OR MARATHON EQUIPMENT COMPANY.

REF	QTY	ENGLISH SPANISH	ENGLISH FRENCH	DESCRIPTION
1.	2	06-2751	N/A	MARATHON RECYCLING SOLUTIONS DECAL
2.	3	06-0097	N/A	SERIAL NUMBER PLATE
3.	4	06-0250	06-0703	'LOCK OUT TAG OUT POWER'
4.	2	06-1102	06-3608	'DO NOT CROSS CONVEYOR"
5.	6	06-1103	06-3609	'DO NOT OPERATE W/D GUARDS'
6.	1	06-0120	06-0513	'DISCONNECT POWER BEFORE OPENING PANEL'
7.	6	06-0039	06-0505	'DANGER DO NOT ENTER'
8.	6	06-3123	06-3189	'CONFINED SPACE'

INSTALLATION IS NOT COMPLETE UNTIL ALL DECALS ARE IN PLACE



DECAL DETAIL @ DRIVE SIDE
TYP. BOTH SIDES EXCEPT #2

Decal Placement - Slider Bed Conveyor

WHEN YOUR CONVEYOR LEAVES THE FACTORY, SEVERAL WARNING DECALS ARE INSTALLED FOR PROTECTION. THESE LABELS ARE SUBJECT TO WEAR AND ABUSE DUE TO THE NATURE OF THE OPERATION. **THESE DECALS MUST BE MAINTAINED**. ADDITIONAL DECALS MAY BE PURCHASED THROUGH YOUR DISTRIBUTOR OR MARATHON EQUIPMENT COMPANY.

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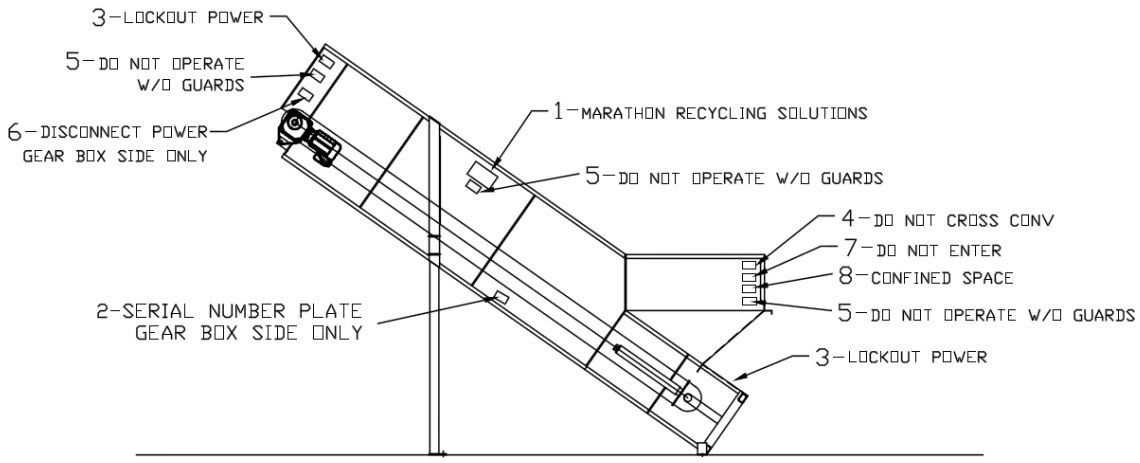

DECAL DETAIL @ DRIVE SIDE
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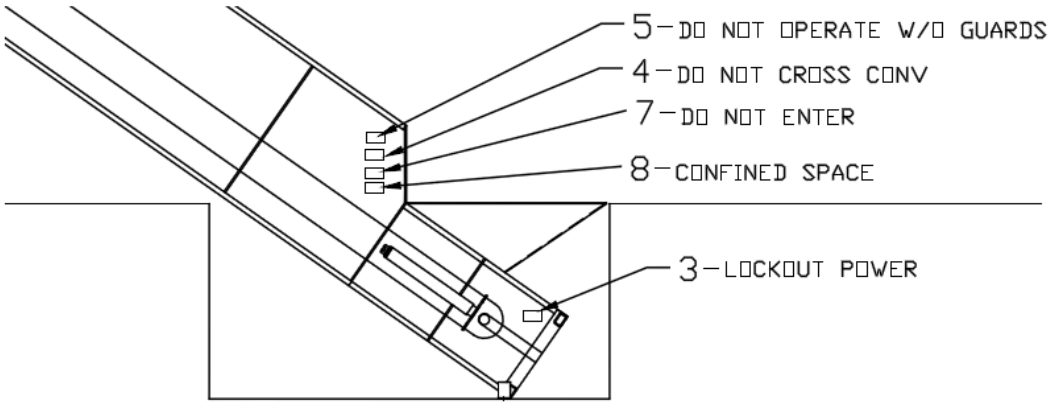
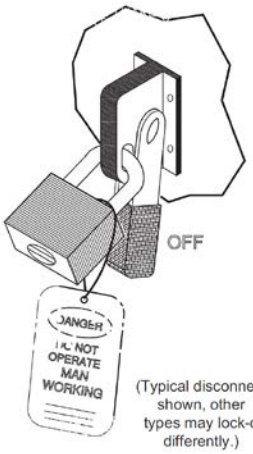


BELOW GRADE DETAIL

2 - MAINTENANCE

Lock-Out & Tag-Out Instructions

FOREWORD: Before entering any part of the conveyor, be sure that all sources of energy have been shut off, all potential hazards have been eliminated, and the conveyor is locked-out and tagged-out in accordance with OSHA and ANSI requirements. The specific lock-out and tag-out instructions may vary from company to company (i.e. multiple locks may be required, or other machinery may need to be locked-out and tagged-out). The following instructions are provided as minimum guidelines.



(Typical disconnect shown, other types may lock-out differently.)

ELECTRICAL: The panel box contains high voltage components. Only authorized service personnel should be allowed inside the box. Authorized service personnel should be allowed inside the box only after the conveyor has been locked-out and tagged-out.

Instructions:

1) **Move the main disconnect lever to the OFF position**. On standalone units, the disconnect switch is located in the disconnect panel on the wall. On conveyors controlled by other equipment, multiple disconnect switches may need to be turned off and locked out.

2) **Padlock the disconnect lever with a keyed padlock and take the key with you.** Insert the lock through the lock tab on the disconnect handle.

3) **Along with the padlock, place an appropriate, highly visible, warning tag on the disconnect lever.** The tag should provide a warning such as:

   "**Danger**: Do not operate equipment. Person working on equipment." Or

   "**Warning**: Do not energize without the permission of _____."

4) **After locking and tagging the conveyor, try to start and operate the conveyor to make sure the lock-out and tag-out is effective. If the lock-out and tag-out is effective, remove the key from the key switch and take it with you.**

CONVEYOR BELT MUST BE RESTRAINED FOR COMPLETE LOCK-OUT AND TAG-OUT. The conveyor belt retains stored energy at all times. Care should be taken when performing maintenance or during installation. Restrain belt by inserting a chain or cable through the rollers on the belt and secure it to the framework of the conveyor.
See page 2-4 for instructions.

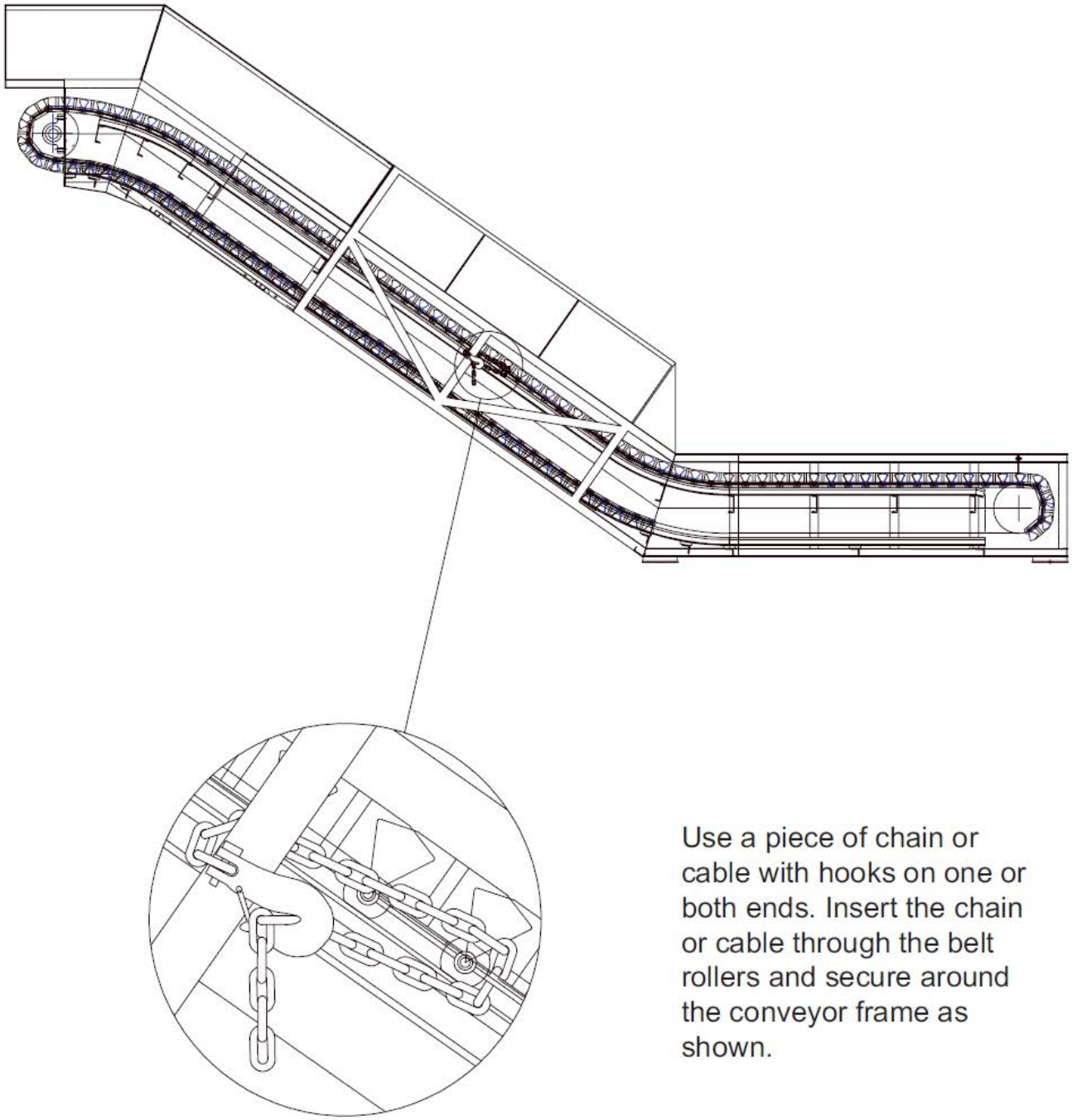
ALL PERSONNEL SHOULD BE FAMILIAR WITH THE LOCK-OUT TAG-OUT PROCEDURES OF THIS EQUIPMENT

Conveyor Belt Safety

DANGER:
DO NOT ALLOW PERSONNEL BETWEEN THE BELT AND FRAMEWORK AT ANY TIME.
SECURE BELTS AND CHAINS AT ALL TIMES DURING INSTALLATION AND MAINTENANCE.
BELT CAN ROLL AND UNROLL FREELY AROUND CONVEYOR AND RETAINS STORED ENERGY AT ALL TIMES. CARE SHOULD BE TAKEN DURING INSTALLATION AND MAINTENANCE.
DO NOT RIDE, SIT, WALK, STAND, OR RUN ON THE CONVEYOR AT ANY TIME.
WARNING:
STAND CLEAR WHILE CONVEYOR IS IN OPERATION.
KEEP ALL STARTING/STOPPING CONTROLS FOR CONVEYORS FREE OF OBSTRUCTION AT ALL TIMES.
NEVER LOAD THE CONVEYOR BEYOND THE DESIGNED CAPACITY LIMITS.
NEVER ATTEMPT TO REMOVE MATERIAL FROM A CONVEYOR BEFORE PERFORMING THE PROPER LOCK-OUT TAG-OUT PROCEDURES AS DESCRIBED ON PAGE 2-2.

Securing Belt

NOTE: After locking and tagging-out the conveyor, chain or cable the conveyor belt to the frame of the conveyor to secure any stored energy retained by the conveyor belt.



Use a piece of chain or cable with hooks on one or both ends. Insert the chain or cable through the belt rollers and secure around the conveyor frame as shown.

Periodic Maintenance

WARNING: BEFORE PERFORMING ANY MAINTENANCE OR SERVICE PROCEDURES ON THE CONVEYOR, MAKE SURE THE CONVEYOR IS LOCKED-OUT AND TAGGED-OUT PER THE INSTRUCTIONS ON PAGE 2-2 AND THE BELT IS SECURED AS DESCRIBED ON PAGE 2-4.

Daily

1) Inspect belts and chains for damage or wear.
2) Inspect belt for proper tensioning. Adjust if necessary.
3) Inspect belt for proper tracking and alignment.
4) Ensure all guards are in place and in good working condition.

Weekly

1) Lubricate the pillow block bearings with an all purpose lithium grease. Grease as necessary.
2) Lubricate belt rollers with light weight oil - SAE 30 weight recommended. Units with automatic oilers should be filled with oil and checked for proper oiling of belt.
3) Inspect areas behind covers for debris. Remove and clean as needed.
4) Check conveyor controls for proper operation.

Monthly

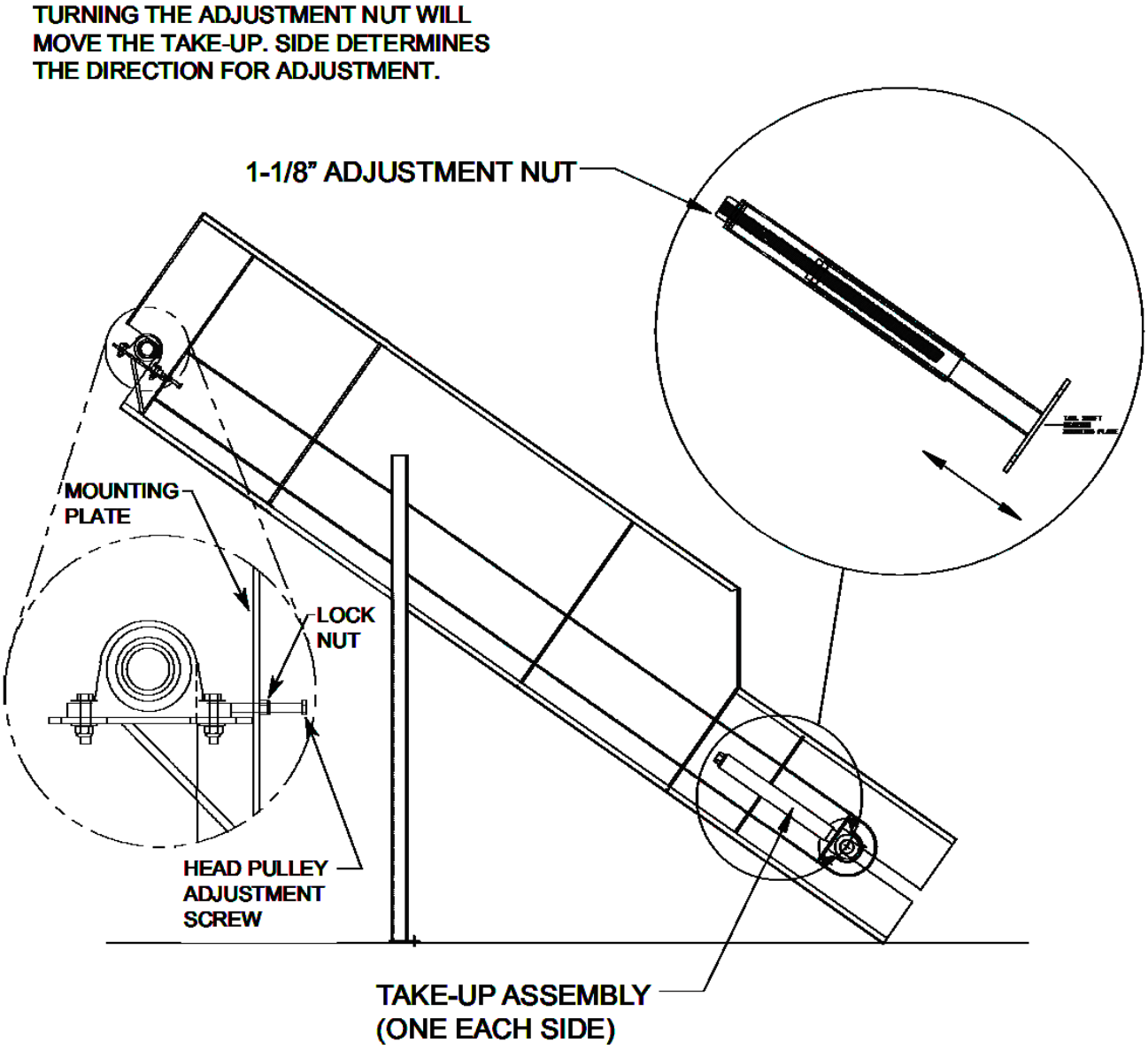
1) Check gear box lubrication.
2) Inspect belt guides for wear.
3) Inspect all warning decals. Replace if necessary.
4) Lubricate motor drive chain with SAE 30 weight oil (if equipped)

Annually

1) Lubricate motor bearings per the manufacturer's specification.

Take-Up Assemblies - Slider Bed Conveyors

TAKE-UP ASSEMBLIES ARE USED TO ENSURE PROPER BELT TRACKING AND TO MAINTAIN PROPER BELT TENSION ON YOUR CONVEYOR SYSTEM. SEE PAGE 2-8 FOR COMPLETE INSTRUCTIONS ON TAKE-UP ADJUSTMENTS.

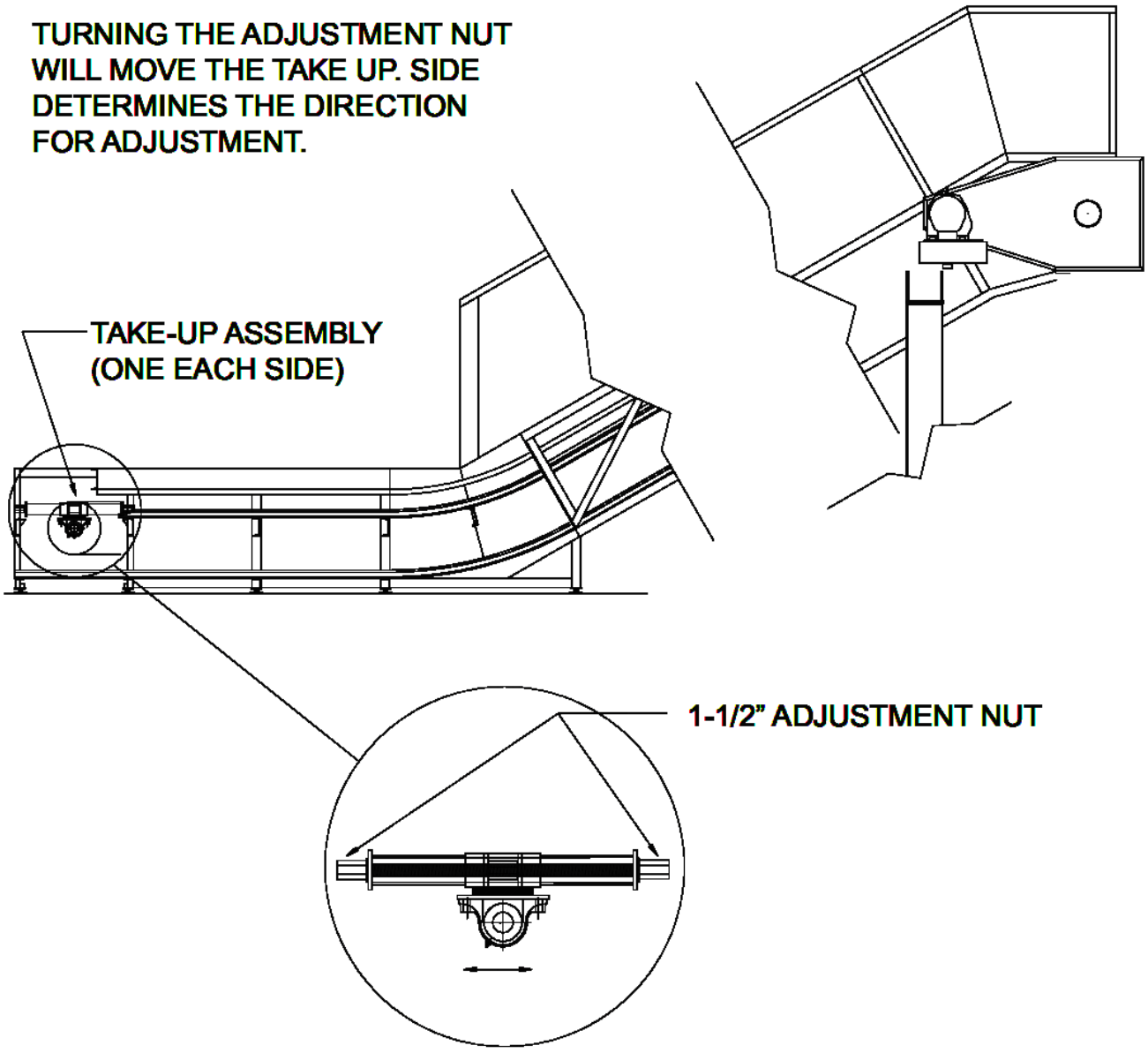


BELT ADJUSTMENT - Belt should be adjusted so there is very little or no slack in the belt. Belt should not slip when conveying a moderate load. Adjust the belt to run in the middle of the track. If belt runs to one side or another, excessive wear to the belt can occur.

Take-Up Assemblies - Steel and Combination Belt Conveyors

TAKE-UP ASSEMBLIES ARE USED TO ENSURE PROPER BELT TRACKING AND TO MAINTAIN PROPER BELT TENSION ON YOUR CONVEYOR SYSTEM. SEE PAGE 2-8 FOR COMPLETE INSTRUCTIONS ON TAKE-UP ADJUSTMENTS.

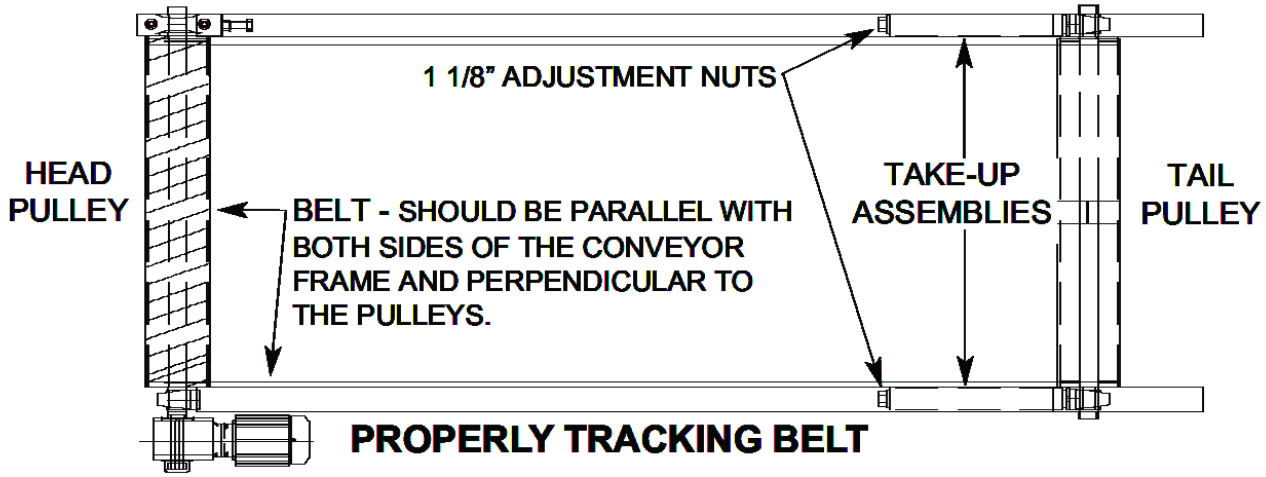
TAKE-UP ASSEMBLY FOR STEEL AND COMBINATION BELT CONVEYORS



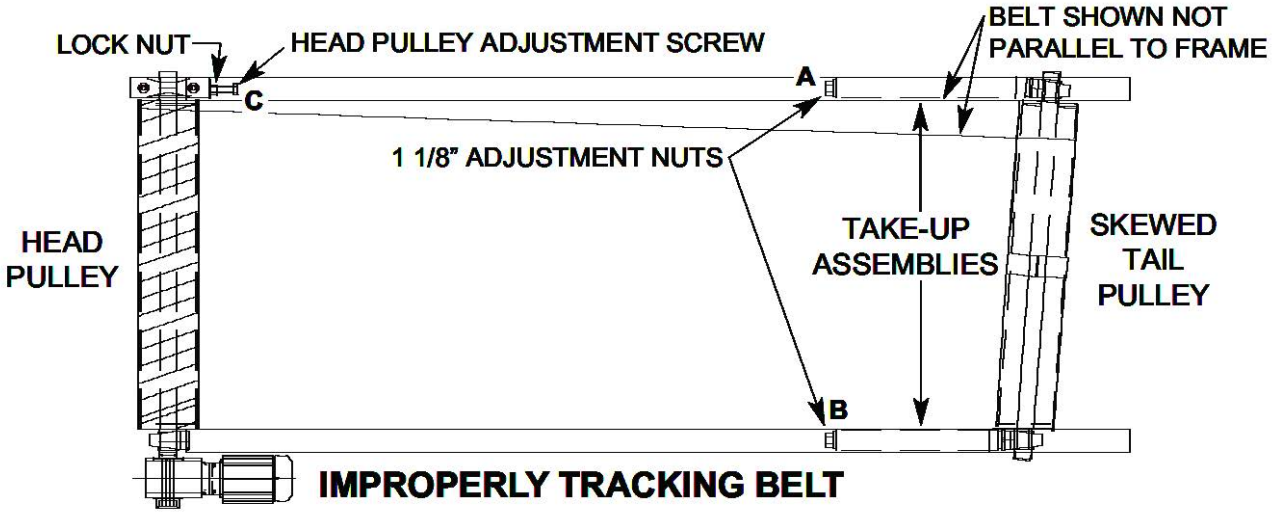
BELT ADJUSTMENT - Belt should be adjusted so as not to have excessive slack. Some slack is necessary to prevent the belt from binding in the tracks and around the sprockets. Adjust belt evenly to prevent excessive wear on the chain links and sprockets.

Adjusting Belt Tension and Tracking

Take-up assemblies are used to ensure proper belt tracking and to maintain proper belt tension. If slippage exists between the **Head Pulley** and **Belt**, then the **1 1/8" Adjustment Nuts** on the take-ups need to be loosened so that the tail pulley moves away from the **Head Pulley** and tightens the **Belt**. If there is too much tension on the **belt**, then the **1 1/8" Adjustment Nuts** need to be tightened so that the **Tail Pulley** moves toward the **Head Pulley** and slackens the **Belt**.



Improper **Belt** tracking is caused by the **Tail Pulley** becoming skewed as shown below. Depending on how tight the **Belt** is, **Adjustment Nut (A)** can be turned to move the **Tail Pulley** toward the **Head Pulley** or **Adjustment Nut (B)** can be turned to move the **Tail Pulley** away from the **Head Pulley**. If the **Tail Pulley** is square to the conveyor frame and the belt is still off track, first loosen the **Lock Nut**, and then turn the **Head Pulley Adjustment Screw (C)** to adjust the alignment of the **Head Pulley** in a similar manner as the take-ups. Retighten the **Lock Nut** once proper adjustment is achieved.



NOTE: THE HEAD PULLEY IS SQUARED PROPERLY BEFORE IT IS SENT FROM THE FACTORY.

Automatic Chain Oiler

For Conveyors with Automatic Oilers:

It is recommended to oil the chain on conveyors every week. On conveyors in heavy duty applications, it may be necessary to oil the chain more frequently.

1) Fill Oil Reservoir with SAE 30 wt. oil.

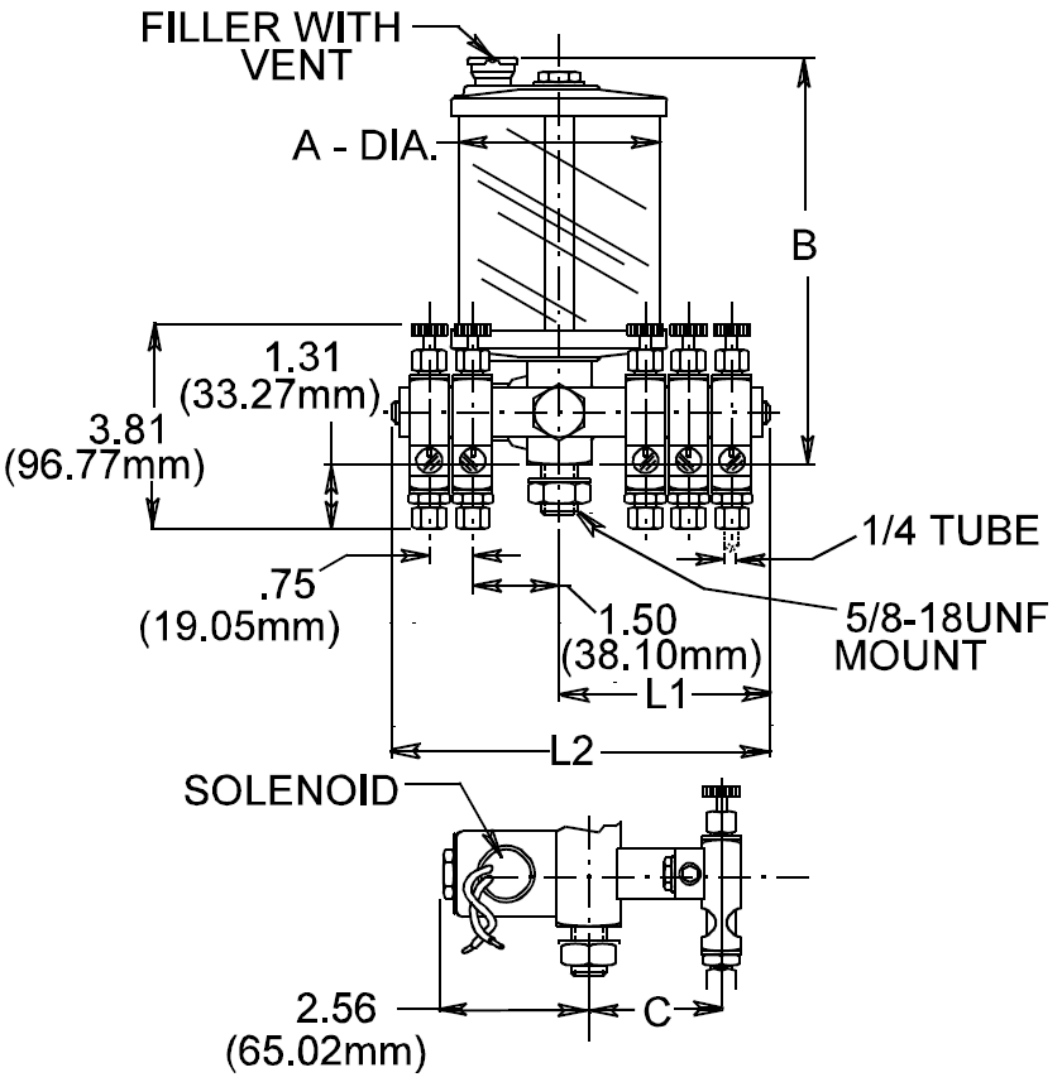
2) Turn the conveyor ON and allow it to cycle continually.

3) Adjust the Oil Drip Adjustment Knobs until there is a steady flow of oil through each sight glass.

4) Allow all the oil to flow through the Oil Supply Tubes to the chain until the Oil Reservoir is empty.

5) Continue to run the conveyor for approximately 45 minutes to allow the oil to penetrate to all necessary areas.

6) After this time period, you may turn the conveyor OFF.



3 - INSTALLATION

General Installation

CAUTION:

Review this manual before beginning the installation. Study the jobsite and installation requirements carefully to be certain all necessary safeguards and/or safety devices are provided to protect all personnel and equipment during the installation and as a completed system.

These instructions are not intended as a substitute for training and experience in proper use, safety procedures, maintenance, or installation of this equipment.

Marathon does not assume responsibility for the installation procedures of this equipment. Conformance to applicable local, state, and federal laws concerning installation rests with the customer.

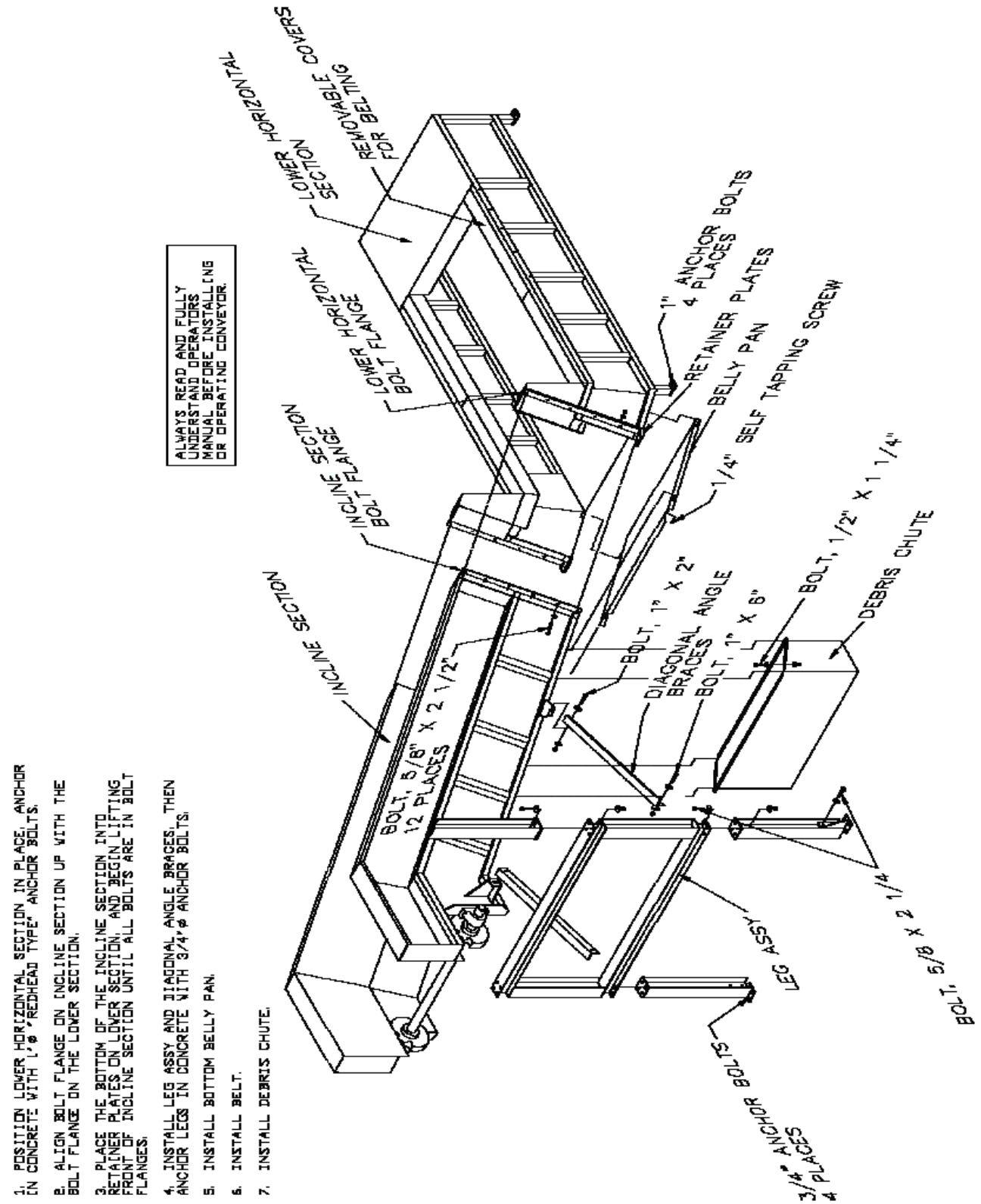
The owner shall install proper shields, or guards, as to protect all persons from all moving parts, and from injury in the event material is ejected, or falls, from the conveyor during operation. The shields or guards should be checked daily to ensure they are secured and provide full protection to all persons in the area.

Decals

Installation of the conveyor is not complete until an inspection of the warning decals has been made. Decals should be clearly visible, legible, securely applied, and in the proper location. For decal description and location, see DECAL PLACEMENT on pages 1-8 and 1-9.

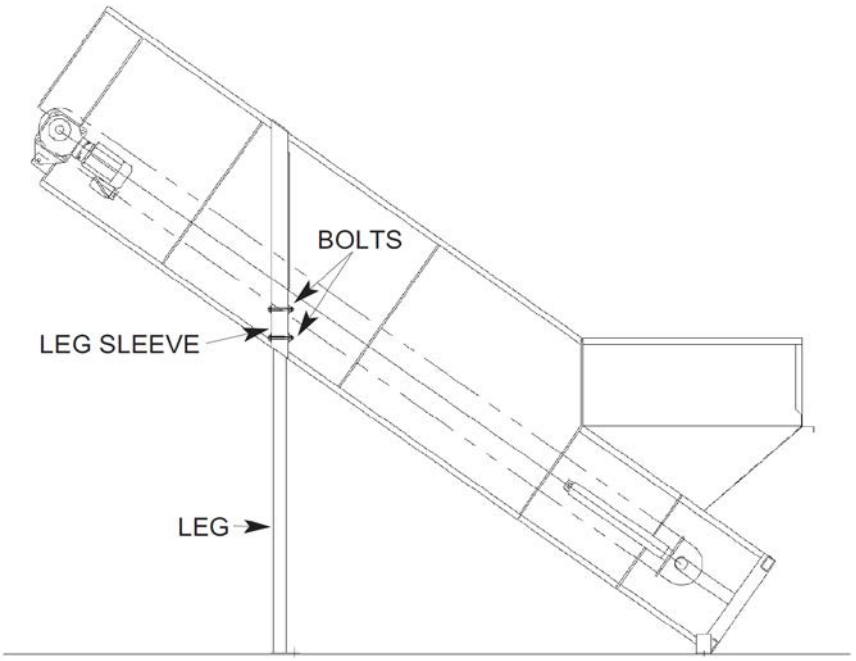
DANGER: DO NOT CLIMB ON SIDES OF CONVEYOR. USE A LADDER OR WORK PLATFORM WHEN WORKING ON TOP OR SIDES OF THE CONVEYOR OR OTHER AREAS OF THE CONVEYOR THAT CANNOT BE REACHED FROM GROUND LEVEL.

Typical Structural Installation - Steel Belt Conveyors

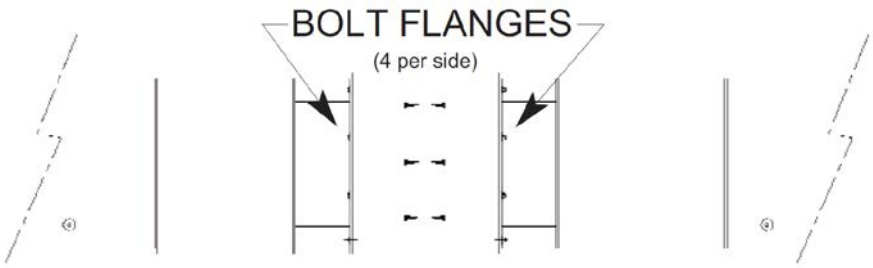


Typical Structural Installation - Slider Bed Conveyors

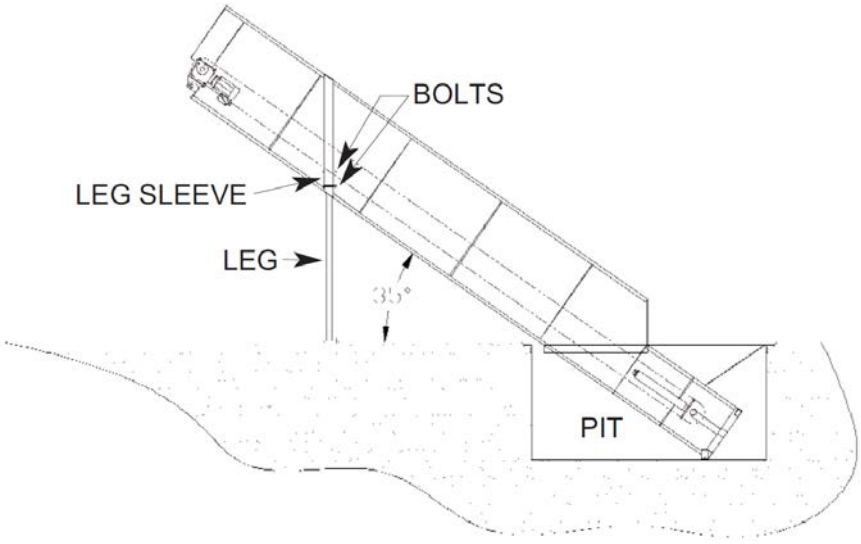
ON A TYPICAL SINGLEPIECE SLIDER BED CONVEYOR, THE LEGS ARE INSERTED INTO THE LEGSLEEVES ON EITHER SIDE OR SECURED WITH TWO (2) BOLTS PER LEG. THEN THE LEGS MUST BE SECURED TO THE FOUNDATION WITH 1" "REDHEAD TYPE" ANCHOR BOLTS.



SOME SLIDER BEDS ARE TOO LONG TO INSTALL IN ONE PIECE. IN THE EVENT OF THIS, THE SECTIONS NEED TO BE ALIGNED AT THE BOLT FLANGES, AND THEN BOLTED TOGETHER.



BELOW-GRADE SLIDER BED CONVEYORS ARE INSTALLED WITH THE TAIL POSITIONED IN A PIT. THE LEG ASSEMBLY IS TYPICAL OF OTHER SLIDER BEDS.



Belt Assembly

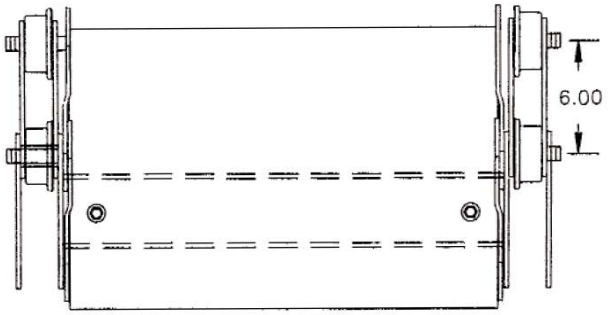
Combination Belt

DANGER: CARE SHOULD BE TAKEN WHEN INSTALLING OR MAINTAINING BELTS AND CHAIN. SEE PAGE 2-4 IN THE MAINTENANCE SECTION.

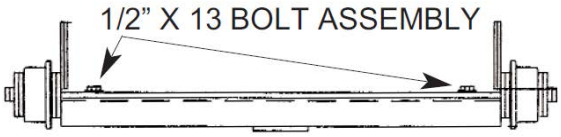
1) Insert the Roller Pin through the chain and Roller.

2) Secure the Roller Pin with the Cotter Pin.

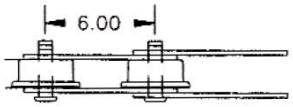
3) Use Take Ups on side of conveyor to tighten belt.



OVERHEAD VIEW

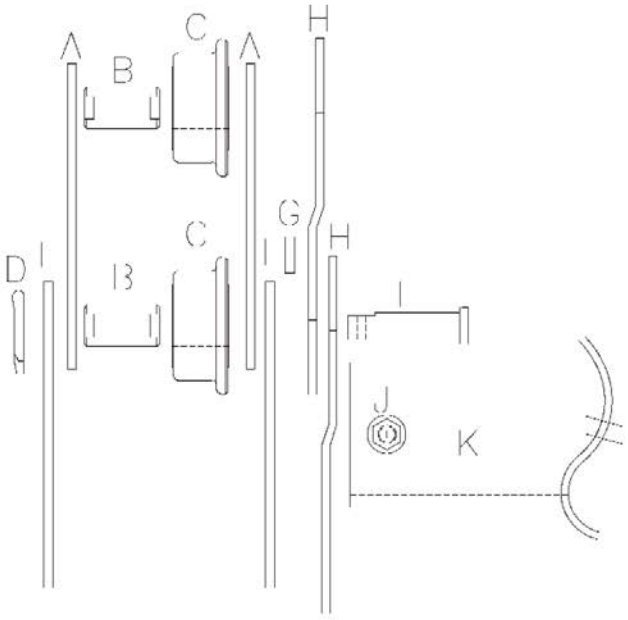


FRONT VIEW



TOP VIEW

Chain and Roller Assembly



A 3SA6LINK
B 3SABUSHING
C 3SAROLLER
D COTTER PIN
E 3SA6LOCK
F 3SA6IDLE
G 3SASPACER
H T25P6W4 LorR (R Shown)
I 3SAPIN
J 1/2-13 B'ASSY
K C4x5.4# CHNL

Belt Assembly (Continued)

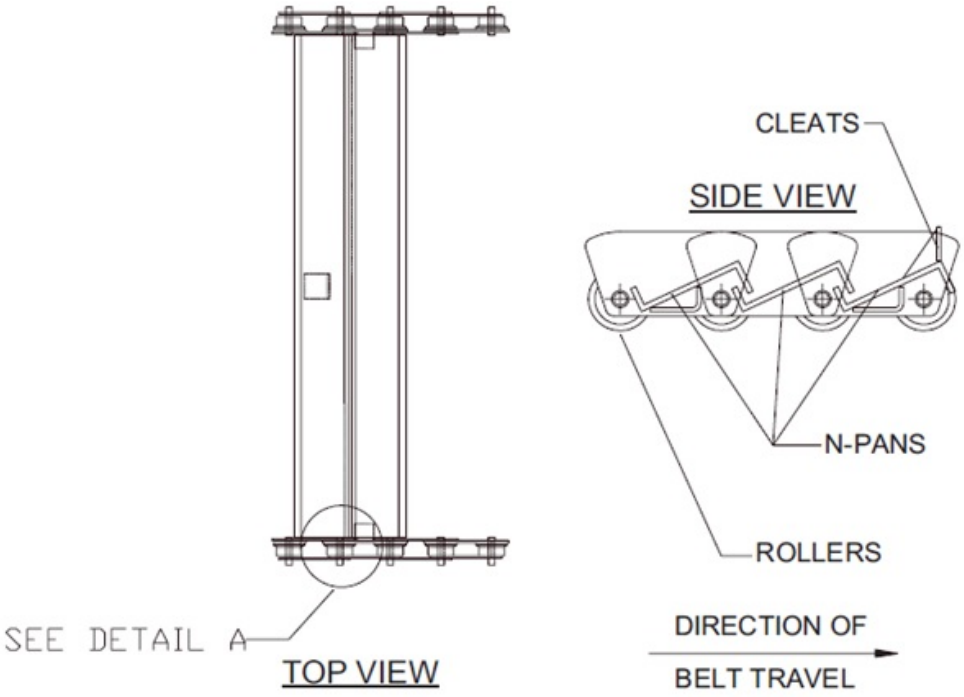
Steel Belt - N-Pan Belt, Chain Driven

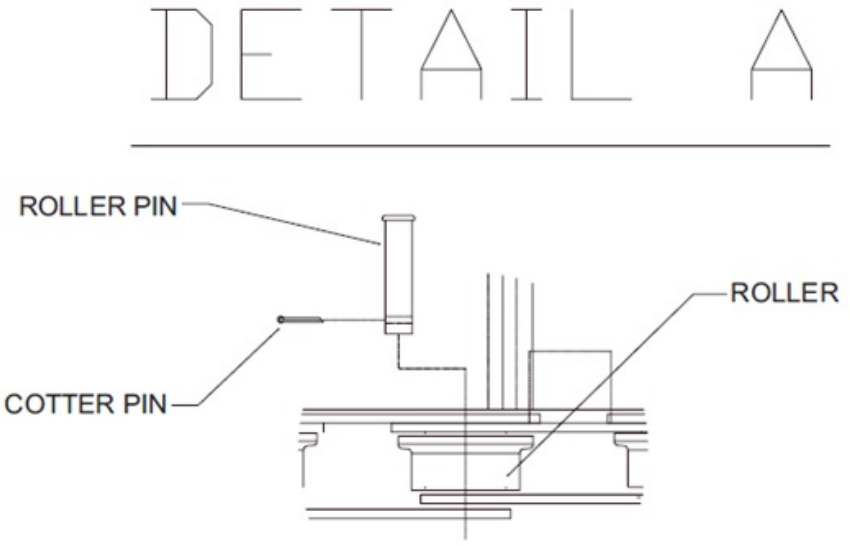
DANGER: CARE SHOULD BE TAKEN WHEN INSTALLING OR MAINTAINING BELTS AND CHAIN. SEE PAGE 2-4 IN THE MAINTENANCE SECTION.

1) Insert the Roller Pin through the chain and Roller.

2) Secure the Roller Pin with the Cotter Pin.

3) Use Take Ups on side of conveyor to tighten belt.





Belt Assembly (Continued)

Steel Belt - Hinge Pan, Chain Driven

DANGER: CARE SHOULD BE TAKEN WHEN INSTALLING OR MAINTAINING BELTS AND CHAIN. SEE PAGE 2-4 IN THE MAINTENANCE SECTION.

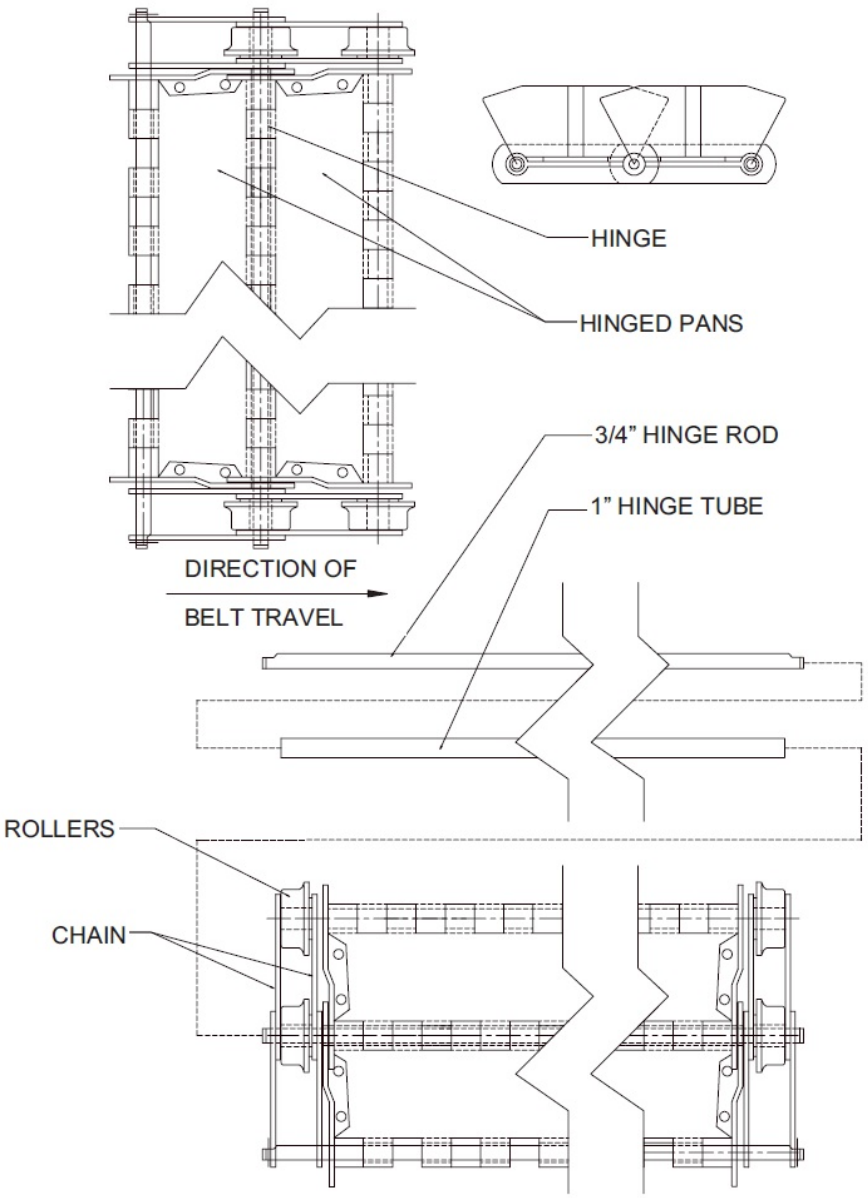
1) Insert the 1" Hinge Tube through the Chain Rollers, and Pan Hinges.

2) Insert the 3/4" Hinge Rod through the Hinge Tube.

3) Place outer links of the chain on the end of the Hinge Rods. Align the flat area of the rod with flat area of the outer portion of the chain link.

4) Secure Hinge Rod with means provided.

5) Use Take Ups on side of conveyor to tighten belt.



NOTE: Manufacturers of steel belts may use different types of fasteners for securing the Hinge Rod. These types may include a screw on nut, cotter pin, or a roll pin type fastener.

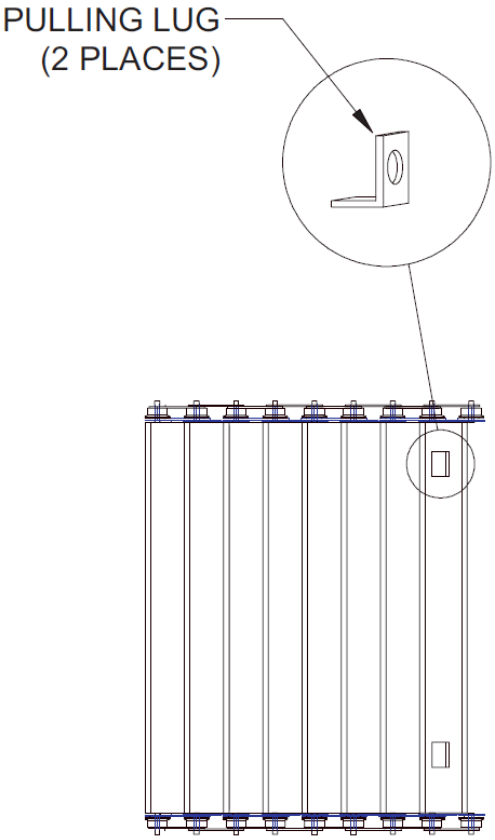
Belt Installation

Steel belts for conveyors will be shipped loose and will need to be put together on site. Steel belt usually comes in lengths of six to ten feet. The following is to assist in the installation of steel belts. See Belt Assembly on pages 3-5 through 3-7.

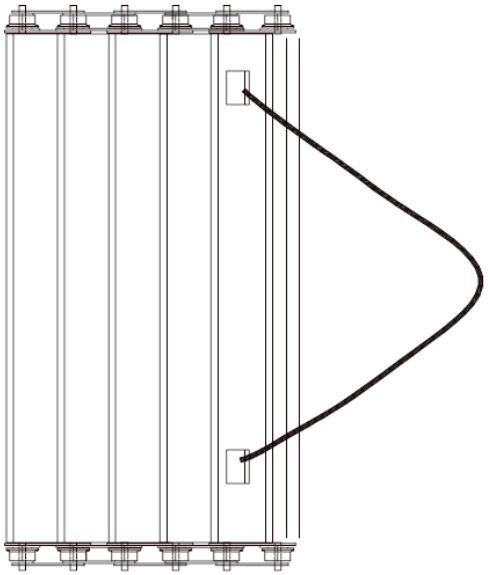
DANGER: BELT CAN ROLL AND UNROLL FREELY AROUND CONVEYOR AND RETAINS STORED ENERGY AT ALL TIMES. CARE SHOULD BE TAKEN DURING INSTALLATION AND MAINTENANCE.

1) Locate the first piece of belt to be installed on the conveyor and weld two pulling lugs on the belt as shown.

   NOTE: Design of lugs may vary with type of belting, but must be rated to withstand full force of pulling mechanism with adequate safety factor.



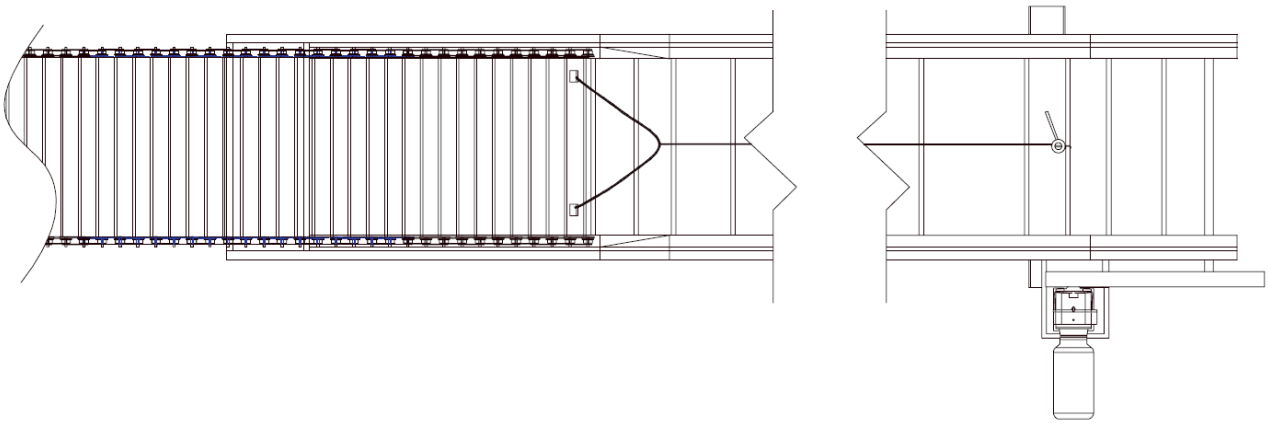
2) Install a chain or cable with hooks between the two pulling lugs.



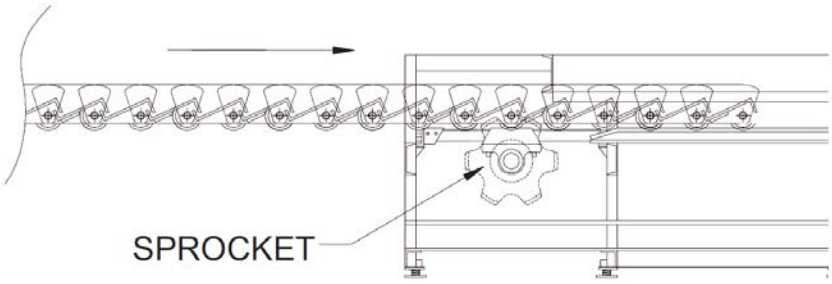
Belt Installation (Continued)

DANGER: DO NOT ALLOW PERSONNEL BETWEEN THE BELT AND FRAMEWORK AT ANY TIME.

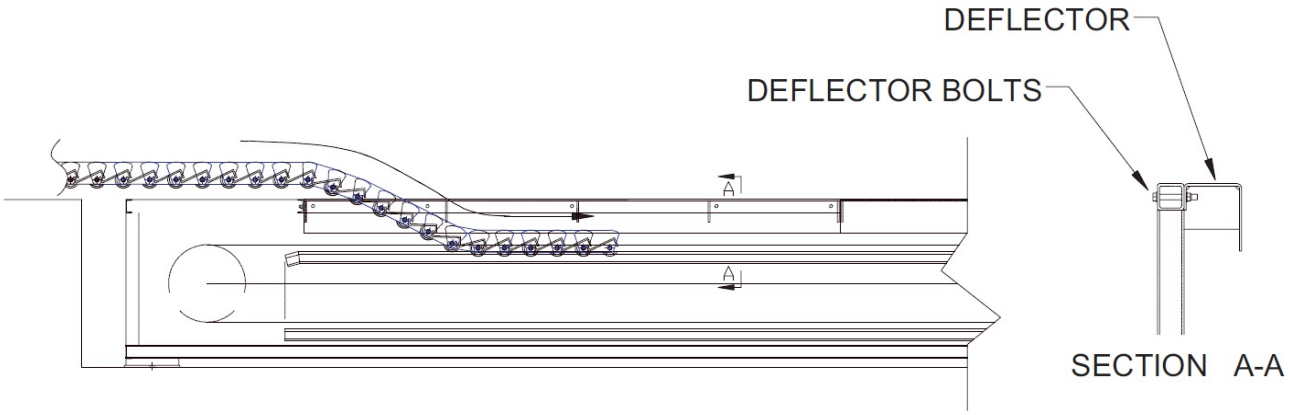
3) Using a come-a-long or chain hoist, pull the belt onto the bed of the conveyor.



4) Ensure the belt rollers and the sprocket teeth are aligned properly.



NOTE: Steel belts on pit conveyors can be installed by removing the deflector from the conveyor. **NEVER OPERATE THE CONVEYOR WITHOUT THE DEFLECTOR IN PLACE**.



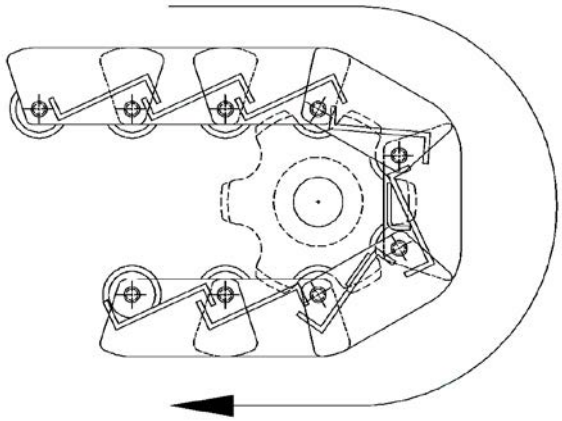
Belt Installation (Continued)

DANGER: SECURE BELTS AND CHAINS AT ALL TIMES DURING INSTALLATION AND MAINTENANCE AS SHOWN ON PAGE 2-4.

5) Continue to pull the belt onto the conveyor. It will become necessary to move the pulling device to the lower side of the conveyor. When this becomes necessary, retain the belt using the instructions Securing Belt on page 2-4.

DANGER: DO NOT RIDE, SIT, WALK, STAND, OR RUN ON THE CONVEYOR AT ANY TIME.

6) Insure the belt rolls over the Nose-Over Shaft Sprocket properly.



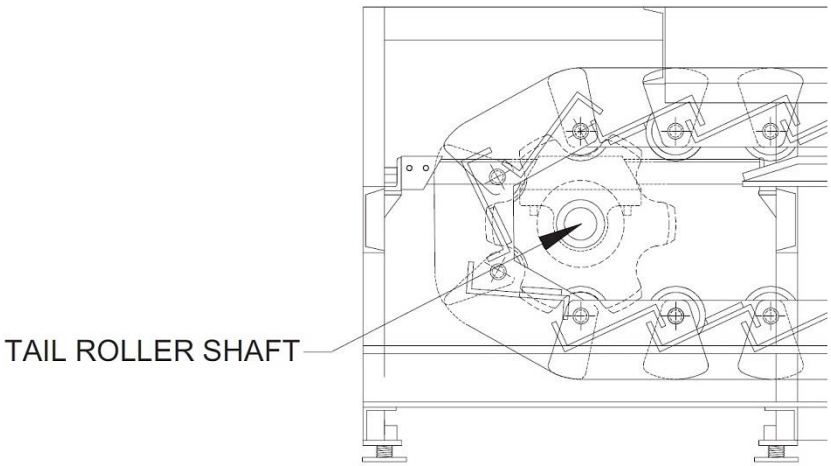
DANGER: SECURE BELTS AND CHAINS AT ALL TIMES DURING INSTALLATION AND MAINTENANCE.

7) Continue to pull belt down the Decline section of the conveyor.

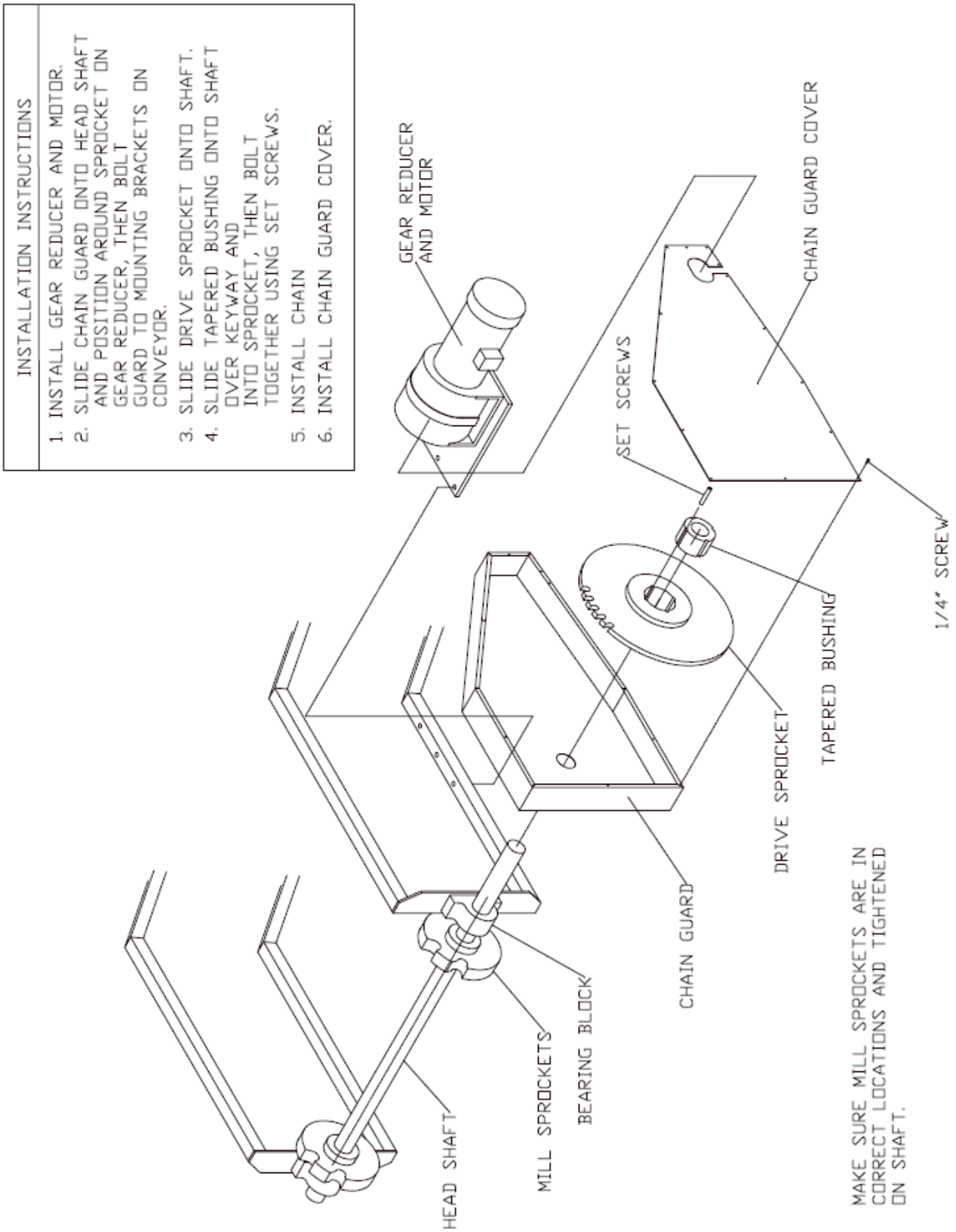
DANGER: DO NOT ALLOW PERSONNEL BETWEEN THE BELT AND FRAMEWORK AT ANY TIME.

8) Assemble the pulling end of the belt to the tail end of the belt. See instructions for Belt Assembly starting on page 3-5

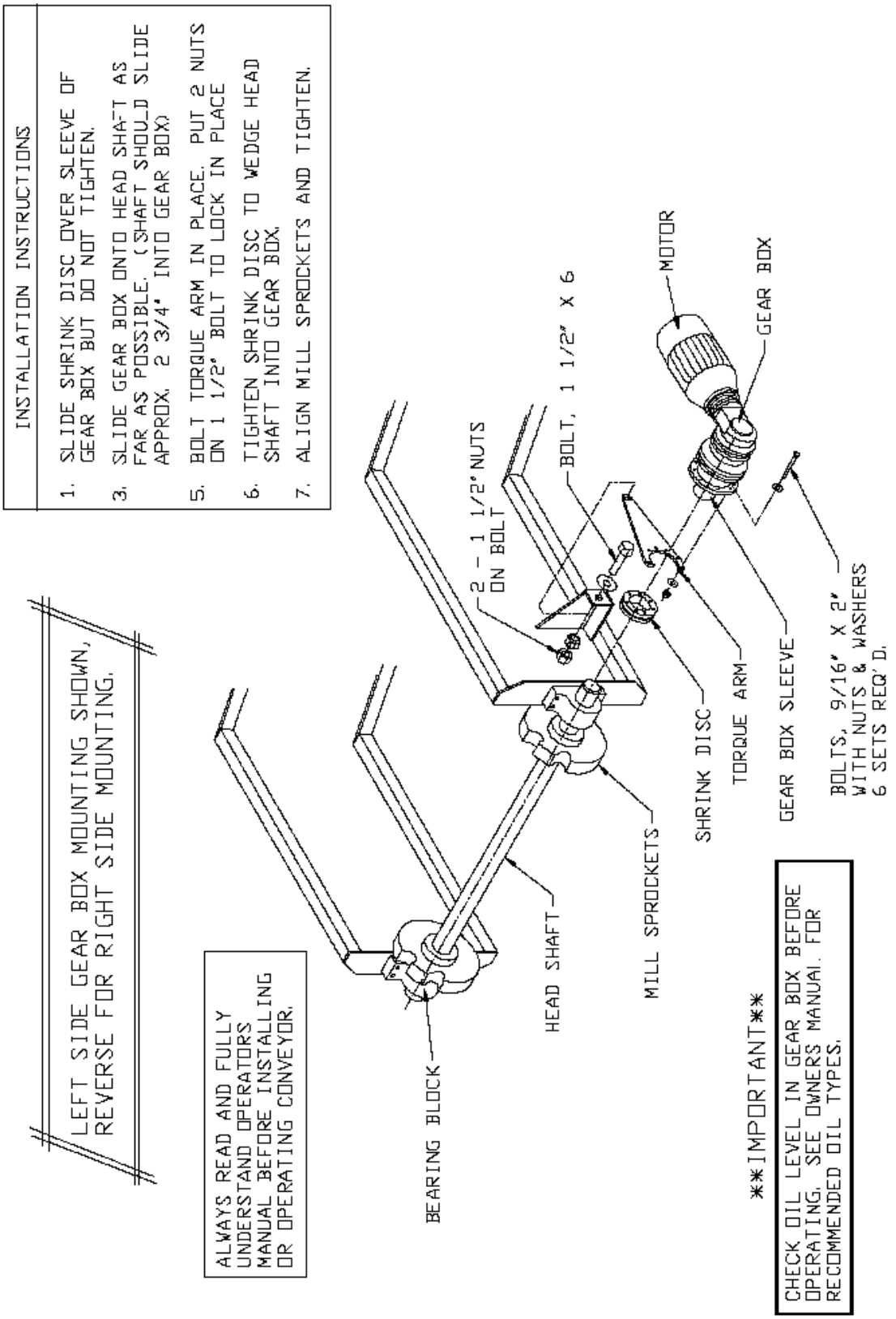
9) After the belt is assembled on the conveyor, ensure the set screws on the nose-over, and tail shaft, sprockets are tightened.



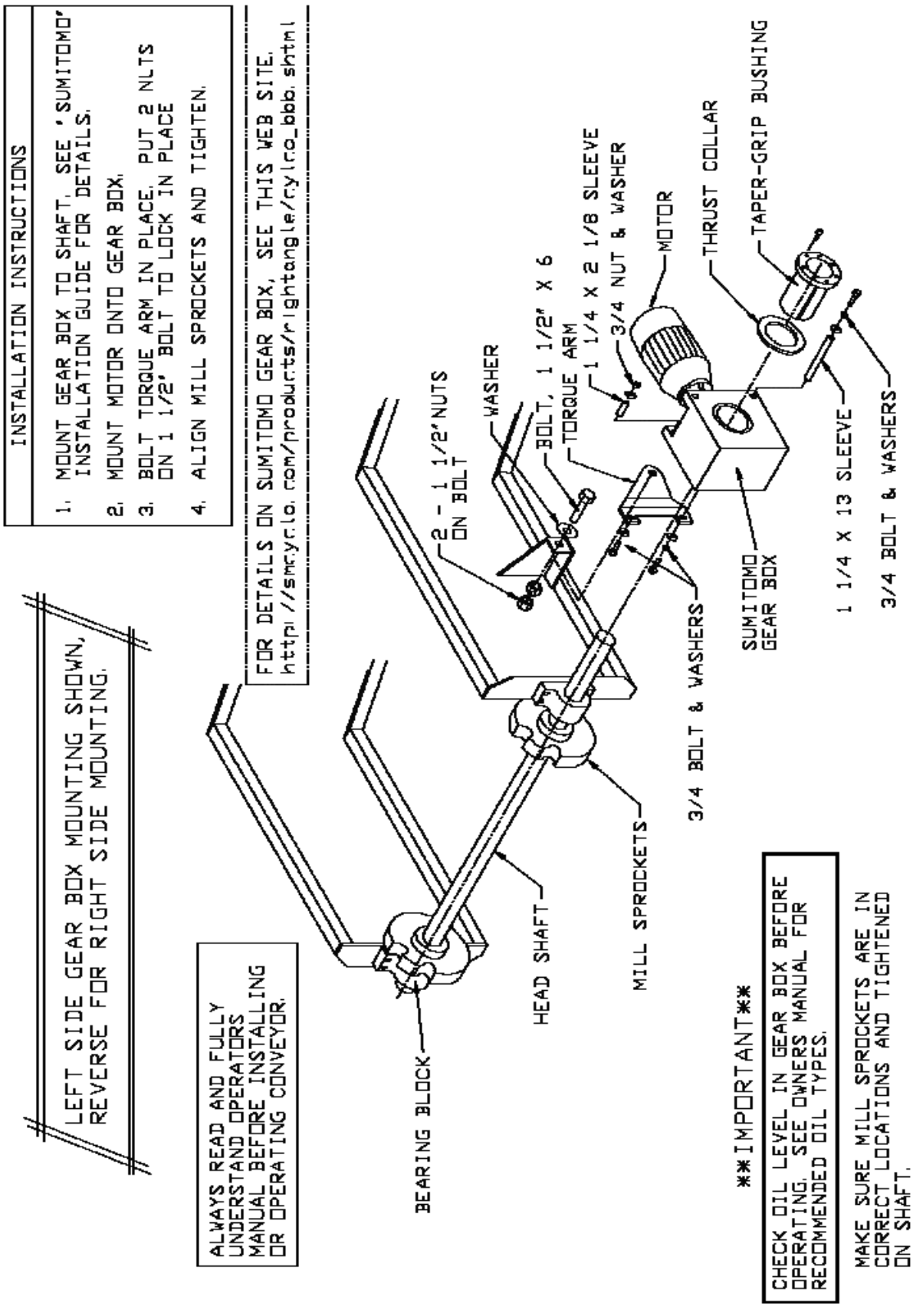
Drive Motor and Chain Guard



Drive Motor and Chain Guard (Continued)



Drive Motor and Chain Guard (Continued)



Electrical Installation

The panel box contains high voltage components. Only authorized service personnel should be allowed inside. See Lock-Out & Tag-Out Instructions in the Maintenance section.

WARNING: BEFORE MAKING ANY ELECTRICAL CONNECTION, BE SURE THAT THE DISCONNECT SWITCH HAS BEEN LOCKED-OUT AND TAGGED-OUT PER THE Lock-Out & Tag-Out Instructions ON PAGE 2-2.

Emergency Stop Buttons are to be installed one on each side of the loading area of the conveyor. On conveyors being integrated with other equipment, the stop buttons should be integrated whereby any stop button on each unit will stop the entire system.

1) **BRANCH CIRCUIT PROTECTION IS NOT PROVIDED WITH THIS UNIT, AND MUST BE PROVIDED BY THE INSTALLER**.

2) Before connecting power to the conveyor, check the incoming line voltage with a voltmeter. Also, check voltage wiring of the conveyor panel box. If the conveyor is not wired to the proper voltage, make necessary corrections before proceeding.

3) A lockable disconnect switch **IS NOT PROVIDED** on this conveyor and must be provided by the installer at the time of installation. This disconnect switch must be fused, lockable, within sight of, and not to exceed 50 feet from the conveyor, per the National Electrical Code. Additional local codes may apply.

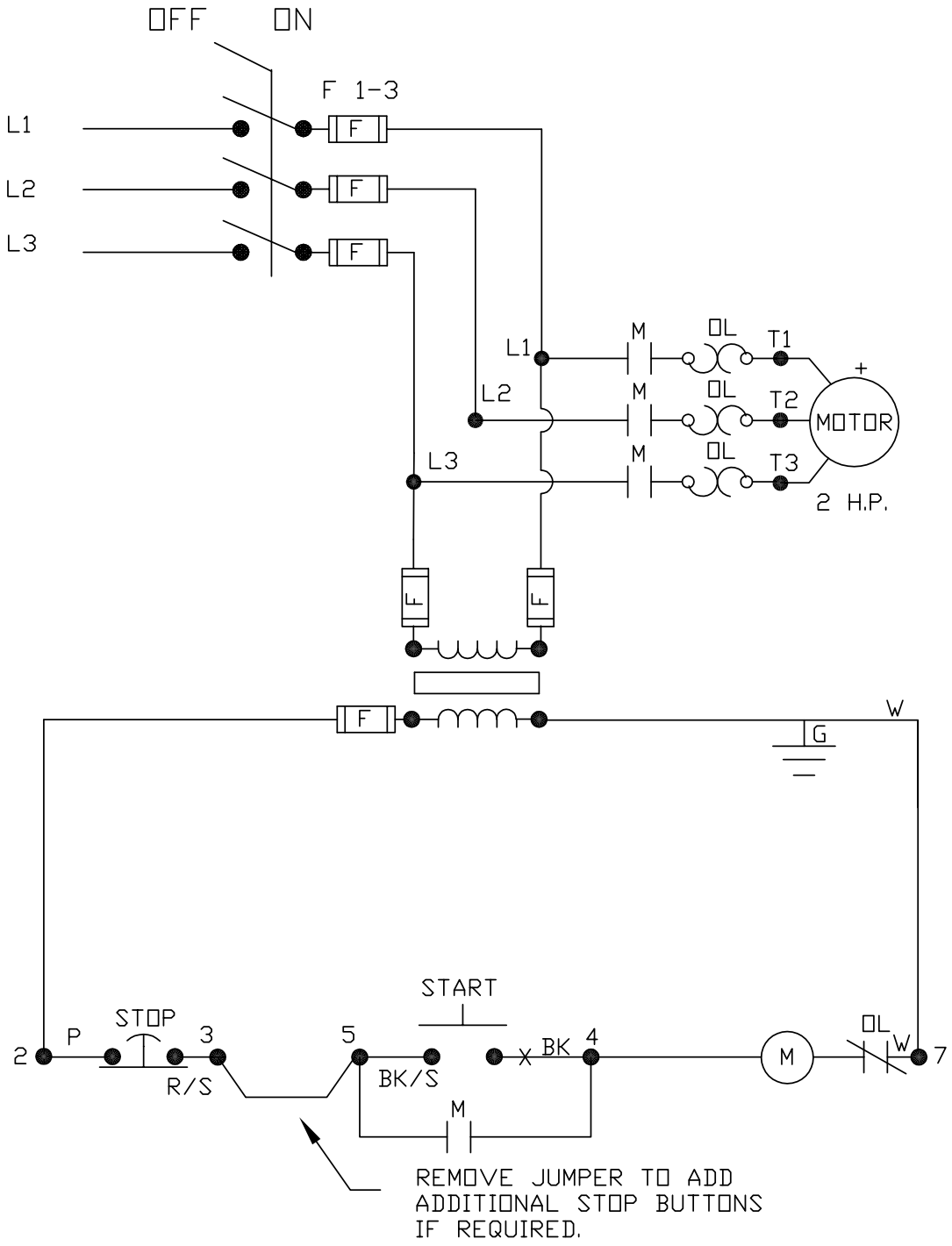
4) Check motor for correct rotation. If motor turns backwards, reversing any two incoming lines will change the rotation.

NOTE: If conveyor electrical connections are being "tied in" to existing, or other controlling equipment, refer to the electrical schematic of that equipment for the proper connecting terminals.

It is the owner's responsibility to install the conveyor in conformance with all local, state, and federal laws.

MAKE SURE THAT THE OPERATORS ARE TRAINED IN THE PROPER USE OF THIS EQUIPMENT.

Electrical Schematic - Typical Fixed Speed

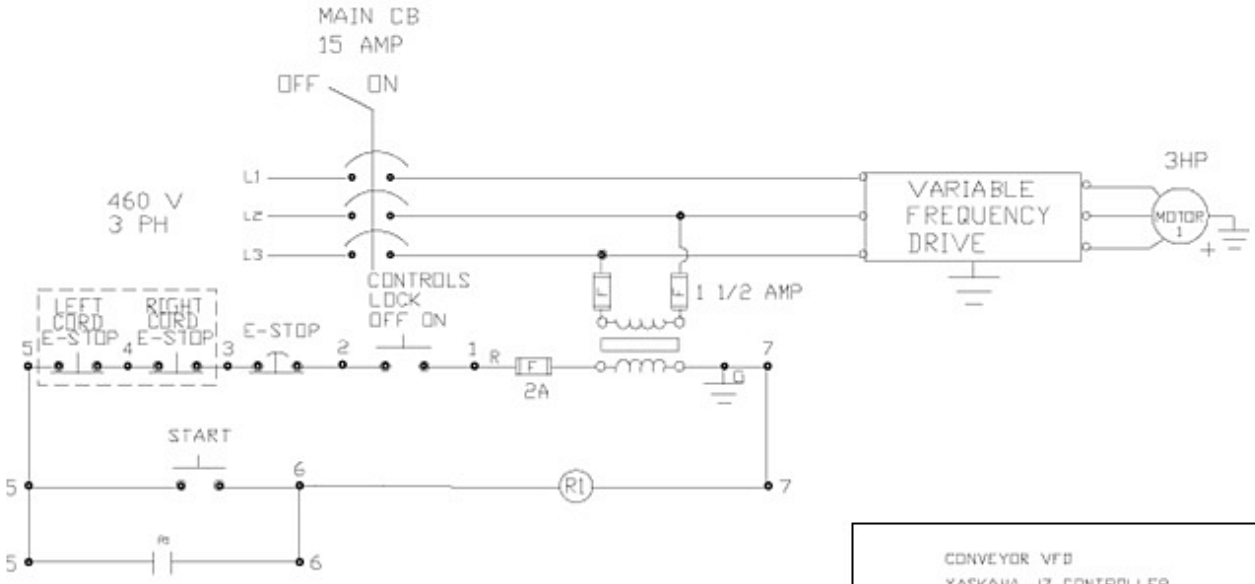


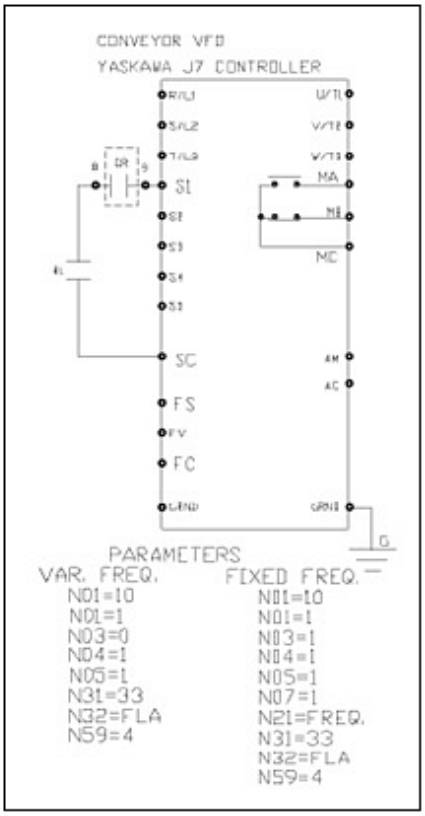
REMOVE JUMPER TO ADD ADDITIONAL STOP BUTTONS IF REQUIRED.

FUSE CHART

VOLT	F1-3	DISCONNECT
230	12	30
460	6	30

Electrical Schematic - Typical VFD





Electrical Requirements - BY Motor Size

Marathon Conveyors can be equipped with several motor options. Refer to the chart below for specific electrical requirements according to motor size. All electrical installation procedures should only be performed by trained, authorized personnel in accordance with all local, state, and federal laws and regulations.

					Wire Size (Min)			
MOTOR	**FLA**	**Disconnect Size (MAX)**	**Time Delay Fuse (Max)**	**ITCB* (Max)**	**60 ft**	**90 ft**	**120 ft**	**270 ft**
1 HP								
208 VAC	4.6	30	6	10	12	12	12	12
230 VAC	4.2	30	6	6	12	12	12	12
460 VAC	2.1	30	3	3	12	12	12	12
2 HP								
208 VAC	7.5	30	10	15	12	12	12	10
230 VAC	6.8	30	10	15	12	12	12	10
460 VAC	3.4	30	3	6	12	12	12	12
3 HP								
208 VAC	10.6	30	15	25	12	12	10	8
230 VAC	9.6	30	15	20	12	12	12	10
460 VAC	4.8	30	6	10	12	12	12	12
5 HP								
208 VAC	16.7	30	25	40	12	12	8	6
230 VAC	15.2	30	25	35	12	12	10	18
460 VAC	7.6	30	10	15	12	12	12	12
7.5 HP								
208 VAC	24.2	60	40	60	10	10	6	6
230 VAC	22	60	35	50	10	10	8	6
460 VAC	11	30	15	25	12	12	12	12
10 HP								
208 VAC	27.5	60	50	70	8	8	6	4
230 VAC	25.6	60	45	70	10	10	6	4
460 VAC	12.8	30	25	35	12	12	12	10
15 HP								
208 VAC	46.2	100	80	110	6	6	4	3
230 VAC	42	100	70	100	6	6	4	4
460 VAC	21	60	35	50	10	10	10	10
25 HP								
208 VAC	74.8	200	125	175	3	3	2	2
230 VAC	68	200	110	150	4	4	3	3
460 VAC	34	60	50	80	8	8	8	8

* Inverse Time Circuit Breaker

Electrical Installation

DANGER: All equipment should be grounded per National Electric Code.

GROUNDING INSTRUCTIONS

This appliance must be connected to a grounded, metal, permanent wiring system; or an equipment grounding conductor must be run with the circuit conductors and connected to the equipment grounding terminal or lead on the appliance.

If there is any doubt whether the equipment is properly grounded, a qualified electrician should be consulted.

www.marathonequipment.com

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