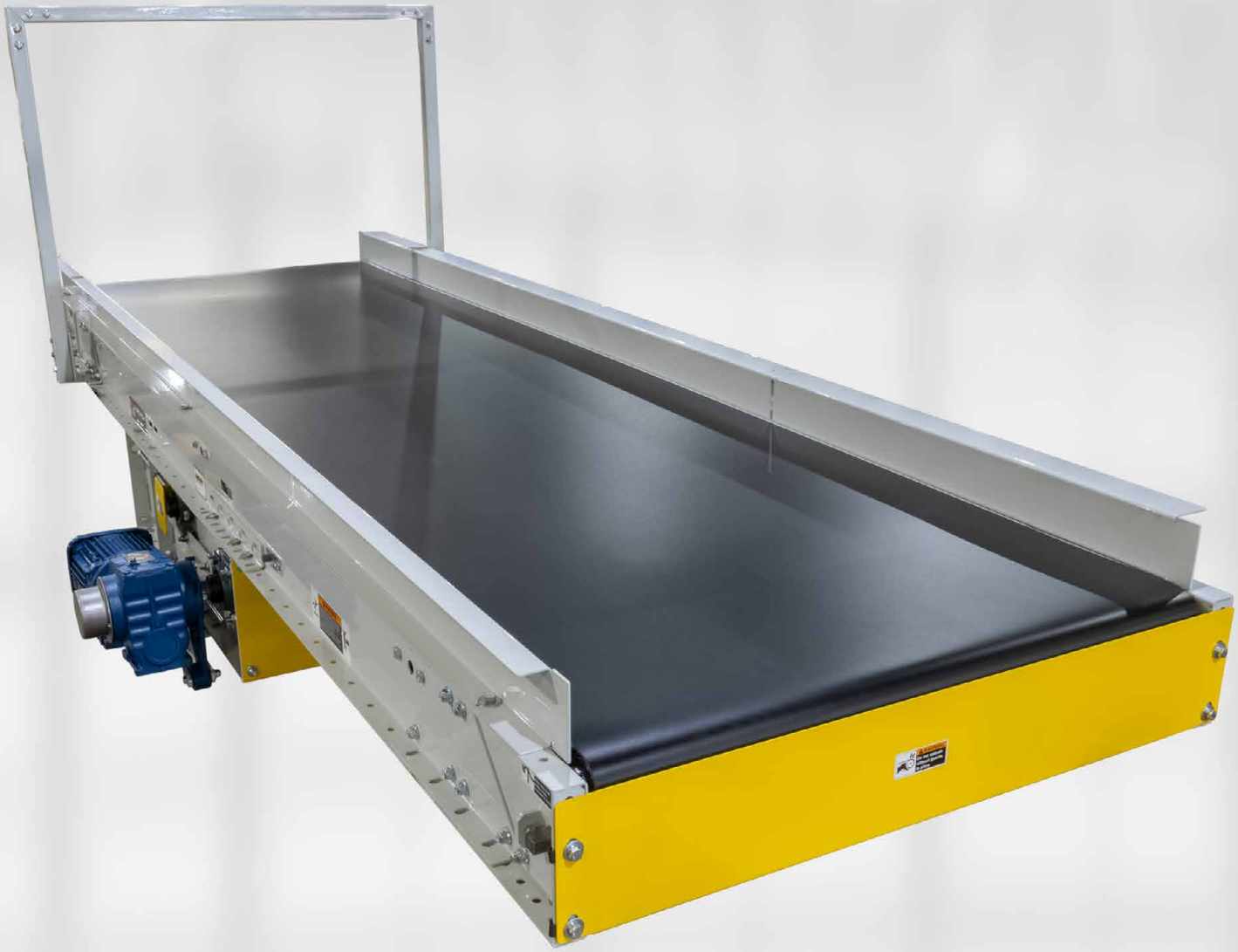
ROACH CONVEYORS®

American Made Conveyor Solutions

OWNER'S MANUAL



Scan Belt Conveyor

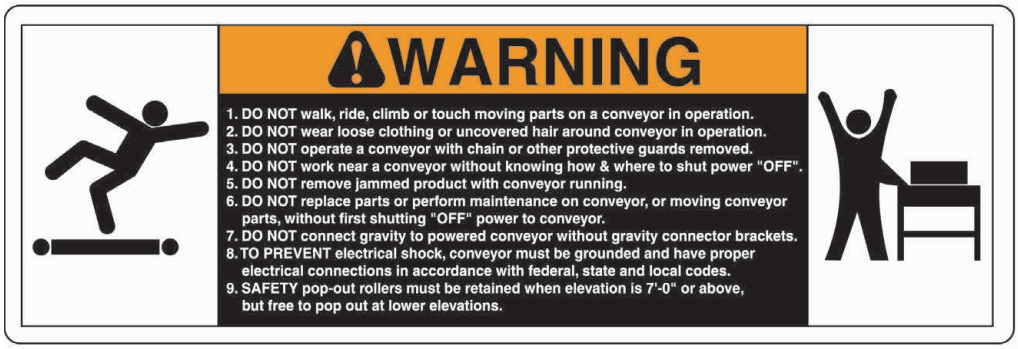
DO NOT OPERATE BEFORE READING THIS HANDBOOK

--All specifications are subject to change without notice--
--Drawings are intended for illustration ONLY and are not to scale--

WARNING LABELS

ABOVE: Label attached to all protective guards (drives, roller guards, etc.)

ABOVE: Label placed near all pulleys (center drives, end drives, tail pulleys)



ABOVE: Label placed near all drive assemblies and at 30' intervals

WARNING

DO NOT OPERATE BEFORE READING THIS MANUAL!
KEEP IN SAFE PLACE--DO NOT DISCARD!

This manual was prepared as a "how-to-guide" for installers, end-users and maintenance personnel. It is also intended to educate both owner (purchaser) and all individuals working around the unit, of potential hazards.

Conveyors contain many moving parts--pulleys, belting, chains, sprockets, shafts, rollers, etc. Therefore, it is imperative to become familiar with basic unit operation and know all points of potential hazards.

This manual must be read by all new users before operating or working near this unit.

CAUTIONS, WARNINGS AND HAZARDS

NEVER connect belt conveyors directly to gravity conveyors, machinery or fixtures without using connector brackets & pop out roller.

ALWAYS anchor permanent supports to floor (or mounting surface). Use 3/8" x 2-1/2" (or longer) wedge anchors for permanent installation in concrete flooring.

It is the responsibility of the customer and installation personnel to supply and install net or mesh guarding on overhead mounted conveyors to prevent product and/or debris from falling to floor in areas where required.

If belt conveyor pulleys are adjusted during installation or maintenance, nip point guard (at drive end on end drive unit) must be readjusted. Nip point guard (take-up end) is automatically adjusted when take-up pulley is adjusted. Nip point guards at both ends of conveyor (center drive) must be readjusted. Center drive guards MUST be replaced after installation or maintenance.

Before unit is ready for operation, snub roller guard (cover) must be adjusted to ensure safe unit operation.

Belt lacing must be kept in good condition for safe work environment.

To check drive sprocket alignment, shut "OFF" and lock out power source before attempting any adjustments.

Electrical controls must be designed by a qualified electrical engineer to ensure that appropriate safety features (emergency stops, pull cords, switches, etc.) are installed on unit for safe operation. Before conveyor start-up, all operators and other personnel coming in contact with unit must be properly trained and must have read accompanying Tech Handbook.

Upon start-up, if belt tracks to one side, turn unit "OFF", lock out power source and confirm that conveyor is square and that all prime tracking components are square with bed. Belt tracking adjustments should be performed by trained personnel ONLY. Read section on "Belt Tracking" completely before attempting belt tracking adjustments.

Only trained personnel shall perform maintenance functions. Before maintenance operations are performed, shut conveyor "OFF" and lock out power source to prevent unauthorized start-up. When maintenance is completed, only authorized personnel shall be permitted to start conveyor following maintenance or other emergency shut-off.

IMPORTANT SAFETY GUIDELINES

Warning: All personnel coming in contact with this conveyor should be aware of the following safety guidelines BEFORE USING OR WORKING AROUND CONVEYOR. Note: always notify Roach Manufacturing® whenever any conveyor is used in an application or condition other than was originally intended. Failure to notify Roach® may allow conveyor to be operated in a hazardous operating condition. Injuries resulting from negligence or violation of safety instructions hereby removes responsibility of product liability claims from Roach®.

Do not operate conveyor with protective guards removed. This includes chain guards, belt guards, snub roller guards, center drive guards and any other safety guard.

Do not walk, ride, climb, or touch moving parts on a conveyor in operation.

Do not wear loose clothing or uncovered hair around conveyor.

Do not work near conveyor without knowing how & where to shut power "OFF" and lock out power source.

Do not remove jammed product with conveyor running.

Do not replace parts or perform maintenance on conveyor, or moving conveyor parts, without first shutting "OFF" power to conveyor and locking out power source.

Do not connect gravity to powered conveyor without safety gravity connector brackets.

To prevent electrical shock, conveyor must be grounded, and have proper electrical connections in accordance with federal, state, and local codes.

Safety pop out rollers in conveyors installed above 7'-0" elevation must be retained by guard rail, clips, etc. Safety pop out rollers must be allowed to pop out when conveyors are installed at or below 7'-0" elevation.

It is the responsibility of conveyor end-user to comply with all safety standards including OSHA and other federal, state, and local codes or regulations. Install protective guarding and other related safety precautionary equipment to eliminate hazardous operating conditions which may exist when two or more vendors supply machinery for related use.

Any violation of above safety instructions hereby removes all product liability claims from Roach Manufacturing Corporation®.

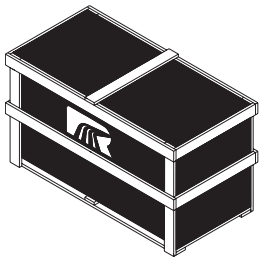
SHORTAGES, DAMAGES & RETURN AUTHORIZATIONS

• **Before uncrating, check the quantity of items received against bill of lading** to confirm that all material has been received. Examine the condition of the equipment to determine if any damage has occurred.

• **It is possible that some items may become separated from the original shipment.** Therefore, when receiving goods, it is imperative that the bill of lading (or, accompanying freight documentation) be checked to ensure receipt of ALL units ordered including ALL accessories.

• **Damage and/or shortage in shipment should be reported immediately to both vendor and carrier.** Obtain a signed damage report from carrier agent and send copy to vendor.

Do not repair any damage before obtaining this report.



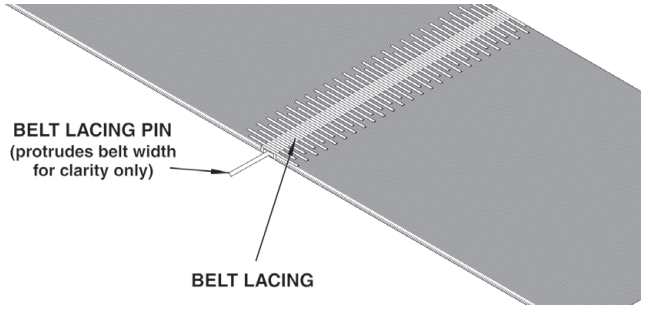
• **For damaged shipments, consult factory** to determine if entire shipment must be returned to factory for repair **or** if an immediate order should enter production to produce a new, replacement shipment.

Note: Do not return goods to factory without prior, written return authorization. Unauthorized returns are subject to refusal at factory.

BELT CONNECTIONS

- **Conveyor belting is cut to proper length, laced and assembled on conveyor at the factory.** It is test run and inspected before it is shipped to its final destination.
- **Before field installation of belting, it is critical to determine the correct side to be placed down.** One of the most common problems associated with belt installation involves placing the incorrect side down.
- **PVC belting is most commonly supplied as "COS" (cover one side).** The opposite side, or side to be placed down, is a friction surface for decreased friction and improved conveyability. The friction side appears dull and grainy. ALWAYS place this side down against the conveyor bed. The cover side is darker and shiny.
- **If unit is shipped "knocked down," belt must be re-threaded on unit during installation.** (See page 13-14 for proper belt paths.)
- **Join ends of belt as shown with lacing pin.** Loosen threaded take-up rods (if necessary) at take-up pulley equal amount on both sides and re-adjust when belt is installed keeping pulley square with conveyor bed. A belt puller can also be used to join belting.

Belt lacing must be kept in good condition for safe work environment.



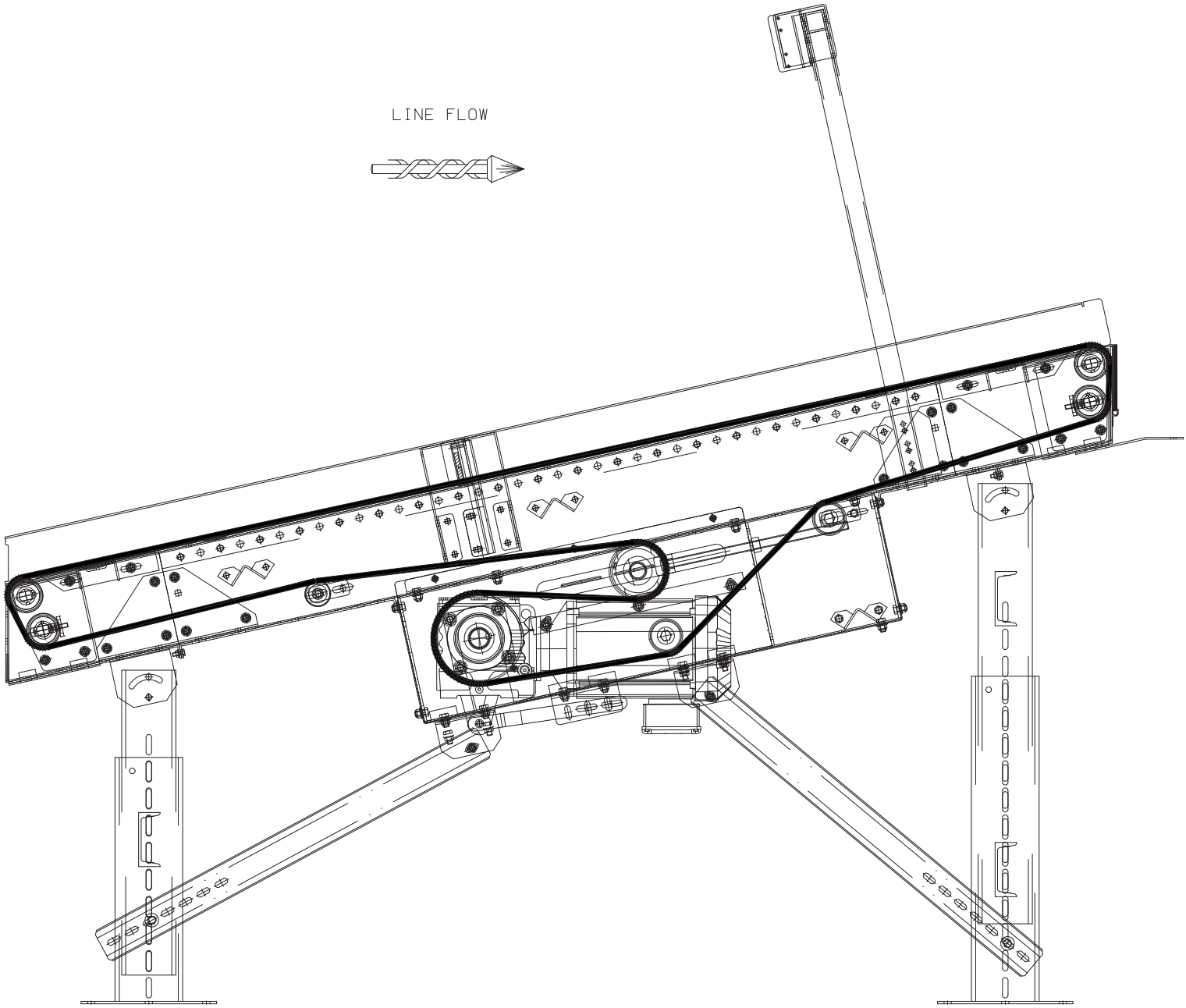
PREPARING FOR INITIAL START UP

Provisions must be in order to instruct all personnel coming in contact with conveyor on the location of emergency stops, pull cords, etc.

A routine maintenance program should be implemented before unit is placed into operation so that fundamental unit components are attended to. This maintenance program should include an inspection to ensure that any dangerous or hazardous operating conditions are noted and IMMEDIATELY corrected, as well as including electrical and mechanical unit inspections and corrections.

Finally, when conveyor is initially started, an immediate visual inspection should include motor, gear reducer, belt tracking (discussed in following section under "Belt Tracking") and related adjustments noted in handbook for unit/component corrections.

ILLUSTRATION FOR UNIT WITH CENTER DRIVE



⚠ WARNING

If pulleys are adjusted during installation or maintenance, it is crucial that nip point guards (at both ends of conveyor) are readjusted. See detail "B" above. Center drive guards MUST be replaced after installation or maintenance.

TROUBLE SHOOTING / SERIAL PLATE

TROUBLE SHOOTING		
TROUBLE	**PROBABLE CAUSE**	**REMEDY**
Motor & gear reducer running excessively hot, or hard to start	A. Drag on conveyor B. Lack of lubricant C. Frozen sprocket D. Frozen roller E. Overload F. Electrical	A. Inspect entire conveyor for obstruction causing drag on chain. B. Check for leaks. C. Check and inspect all sprockets and bearings. Replace sprockets failing to rotate or that are difficult to rotate. D. Check all rollers for rotation. E. Reduce cause and/or increase motor horsepower. F. Check wiring and circuits, take ampere reading, replace motor if necessary.
Motor & gear reducer makes excessive noise	A. Lack of lubrication B. Damaged Gears C. Faulty Bearing	A. Check for leaks. B. Replace unit. C. Replace bearing.

ORDERING REPLACEMENT PARTS

To order any replacement parts or when calling for assistance with any powered conveyor, **ALWAYS** provide the unit serial number. Shown at actual size, this aluminum plate is placed on the conveyor frame near the location of the drive assembly.

To order replacement parts or add-on components, contact the Roach distributor who originally furnished the unit if possible. If this is not possible, contact the National Sales Office at 870-483-7631 for the name of the authorized Roach distributor in your area.

Have unit model number and serial number **BEFORE** calling. Refer to unit drawings on the Roach Conveyors website (http://roachconveyors.com/belt-conveyor.htm) for part numbers if ordering replacement parts.

TAKE-UP PULLEY REPLACEMENT

1.

Loosen the take-up tension on both sides.

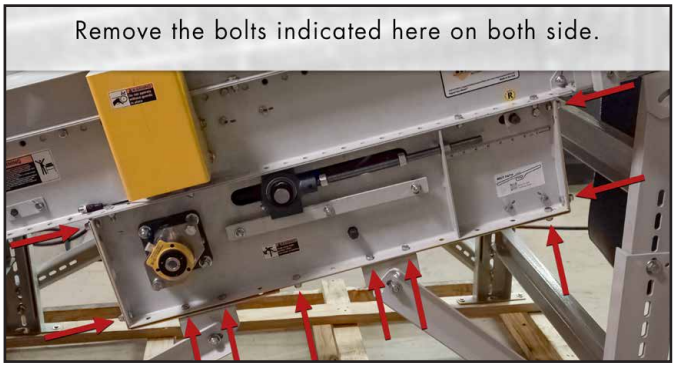
2.

Slide the belt lacing down to the infeed end & pull the lacing wire.

3.

Move the belt lacing to the center position & let the belt hand from both sides.

4.



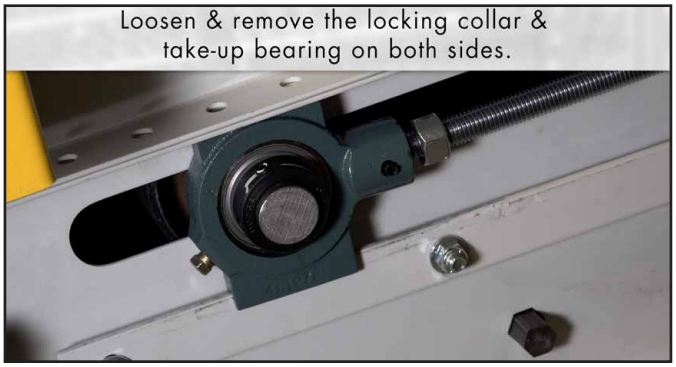
Remove the bolts indicated here on both sides.

TAKE-UP PULLEY REPLACEMENT CONTINUED

5.

Remove the center drive belt guard.

6.

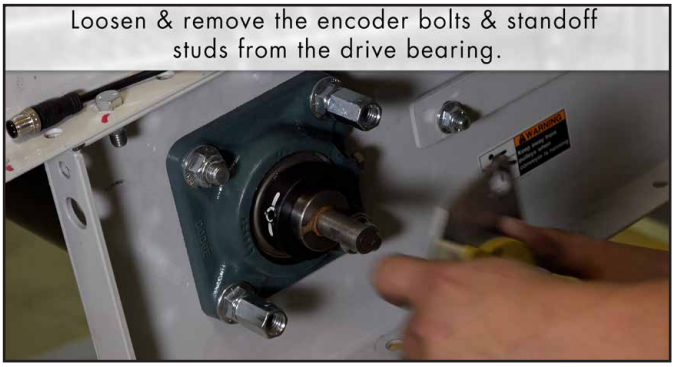


Loosen & remove the locking collar and take-up bearing on both sides.

7.

Loosen & remove the encoder collar.

8.

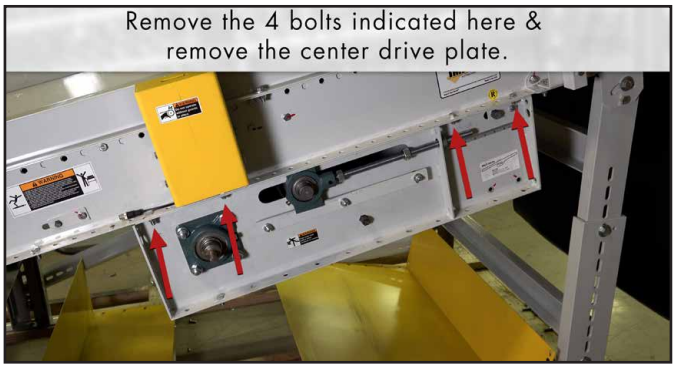


Loosen & remove the encoder bolts and standoff studs from the drive bearing.

9.

Remove the center drive across brace bolts.

10.



Remove thr 4 bolts indicated here & remove the center drive plate.

TAKE-UP PULLEY REPLACEMENT CONTINUED

11.

Pull the belt down to create slack if needed & remove the take-up pulley.

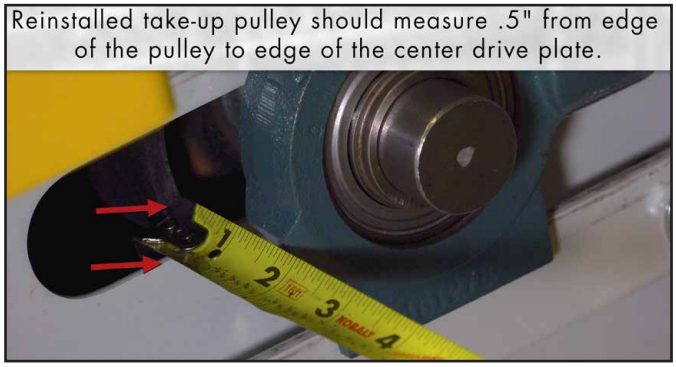
12.

Insert the replacement take-up pulley.

13.

Reinstall the center drive plate & balls.

14.



Reinstalled take-up pulley should measure .5” from edge of the pulley to ede of the center drive plate.

15.

Reinstall the take-up bearing locking collar on both sides.

16.

Reinstall encoder, standoff studs, & locking collar.

TAKE-UP PULLEY REPLACEMENT CONTINUED

17.

Pull the belt lacing back towards the infeed end & relace the belt.

18.

Reinstall the center drive belt guard.

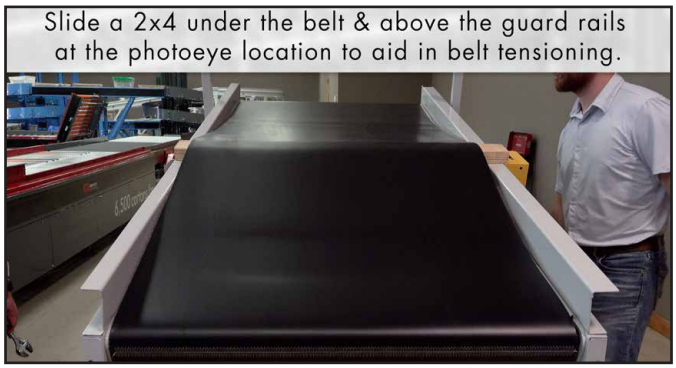
BELT TENSION

Belt Tensioning should only occur during initial setup, belt replacement, or when belt slipping occurs.

Otherwise, DO NOT TENSION BELT!

Over tensioning WILL cause damage to pulleys, bearings, and the belt!

1.



Slide a 2x4 under the belt & above the guard rails at the photoeye location to aid in belt tensioning.

2.

Slide a take-up pulley towards the discharge & until belt is tightened by hand over the 2x4.

3.

Repeat the process for both sides.

4.

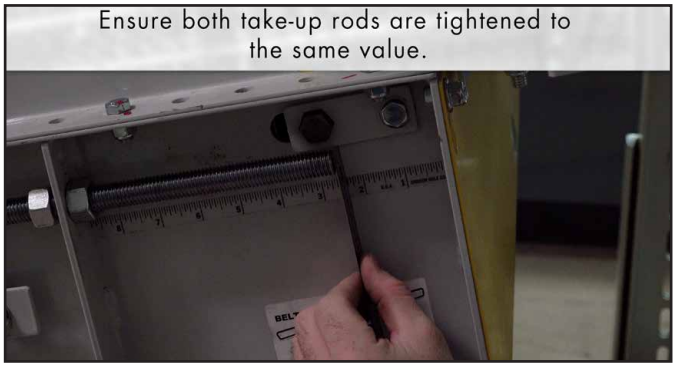
Tighten the take-up pulley unitl significant resistance is felt.

BELT TENSION CONTINUED

5.

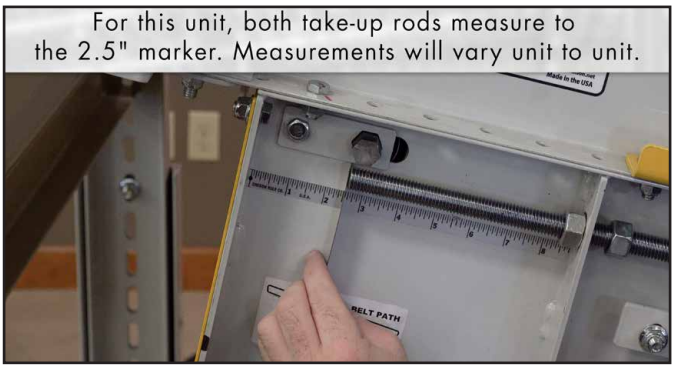
Repeat the process for both sides.

6.



Ensure both take-up rods are tightened to the same value.

7.



For this unit, both take-up rods measure to the 2.5” marker. Measurements will vary unit to unit.

8.

Do NOT tension over 40lbs of pull on either side.

9.

Tighten the jam nut on both sides.

10.

The 2x4 should be removed easily.

BELT TRACKING

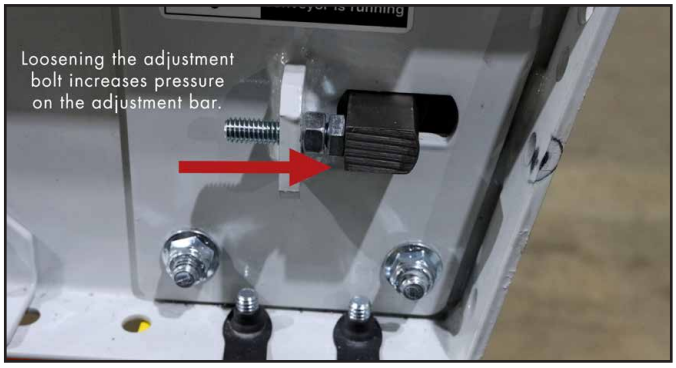
1.

When out of center, always begin belt adjustments from the discharge end of the conveyor.

2.

Ajustment bars can be found on each corner of the conveyor.

3.



Loosening the adjustment bolt increases pressure on the adjustment bar.

4.

Tightening adjustment bars on the discharge end pulls the belt towards the adjustment bar.

5.

Tightening adjustment bars on the infeed end pushes the belt away from the adjustment bar.

6.

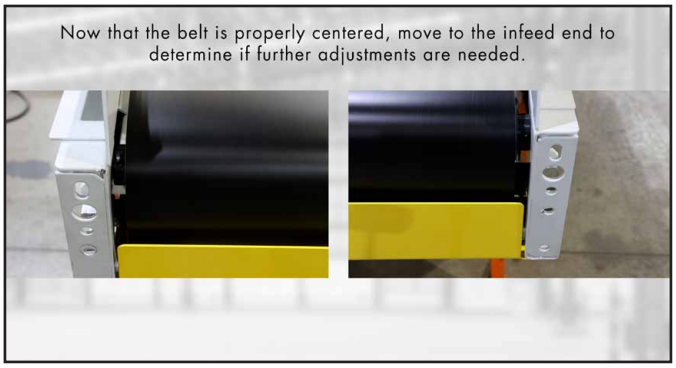
Adjustments should be made in halfturn increments.

BELT TRACKING CONTINUED

7.

Allow 2-3 belt passes after each adjustment before determining if further adjustments are needed.

8.



Now that the belt is properly centered, move to the infeed end to determine if further adjustments are needed.

9.

Lock in the tension setting by tightening the nut located on each tension bolt.

10.

Check the belt to ensure it is not too tight.

11.

Slide the 2x4 back into place to re-test tension.

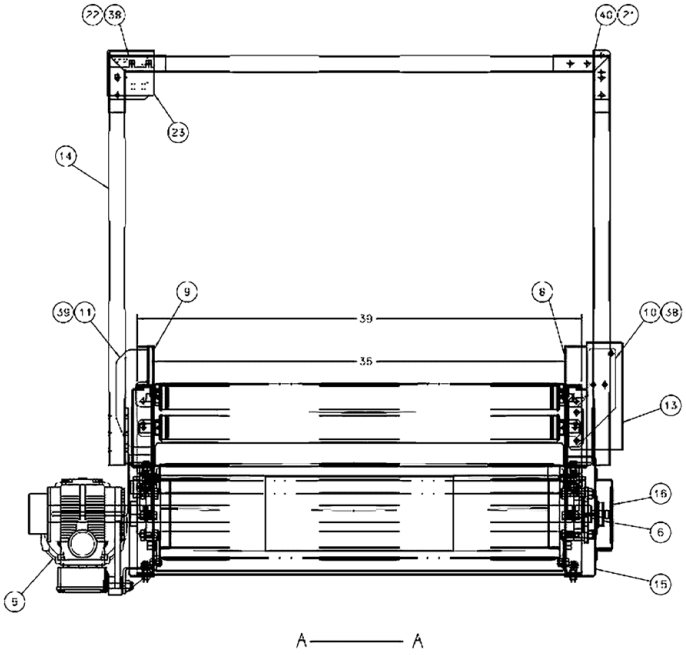
12.

A loose tension belt can move 150lbs with ease & without slipping.

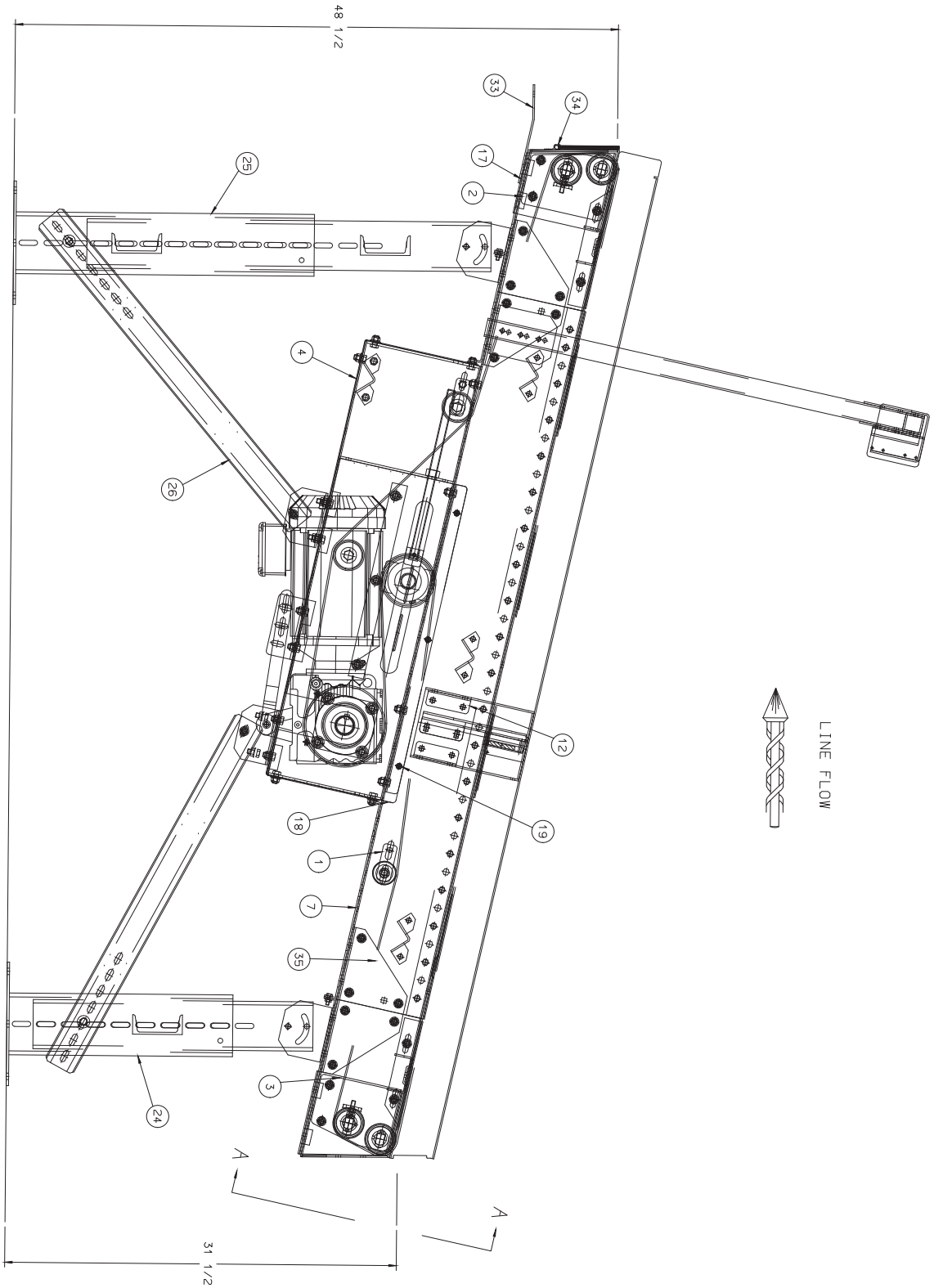
PARTS LIST

ITEM	QTY	DESCRIPTION	DWG.#	PART#
1	1	7" SIDE CHANNEL 58-11/16"LG.	676973-4	676973-4L
	1	7" SIDE CHANNEL 58-11/16"LG.	676973-4	676973-4R
	1	BED PAN 36"BF 58-11/16"LG.	676973-35	676973-35
	2	BED PAN BRACE	FB-015	M502448-35
	1	1966 ROLLER ASSEMBLY	PC-053	1966-36-E
	2	1.9 ROLLER KEEPER	PA-160	M01169H
	3	FRAME CROSS BRACE 36"DF	GC-1000	M00119-36
2	1	DISCHARGE NOSEBAR FIXED END ASSY.	676973-FE	676973-FE
3	1	INFEED NOSEBAR FIXED END ASSEMBLY	676973-IFE	676973-IFE
4	1	6" CENTER DRIVE ASSEMBLY	676973-CD6	676973-CD6
5	1	EURODRIVE MSA57DRN90L4 2HP	P.P.	SRDW658574-01
	1	TORQUE ARM BRACKET ASSEMBLY	370601-3	370601-3
	1	TORQUE ARM MOUNTING ANGLE	640309-93	640309-93
	1	DRIVE SHAFT CLAMP ASSEMBLY	676972-28	676972-28
6	1	PLATE MOUNT ENCODER	658574-3	658574-3
	1	5/8" ENCODER SHAFT 1-1/2"LG.	658574-16	658574-16
	1	1"LG. THREADED STUD (1/4"-20)	658574-17	658574-17
	2	ENCODER PLATE SPACER 1-1/8"LG.	658574-18	658574-18
7	1	RETURN BELT PAN 16-5/16"LG.	676973-19	676973-19
8	1	SENSOR RAIL SCAN BELT	676973-21	676973-21R
9	1	REFLECTOR RAIL SCAN BELT	676973-22	676973-22L
10	1	SENSOR BRACKET	676973-24	676973-24R
11	1	REFLECTOR BRACKET	676973-27	676973-27L
12	2	MOUNTING ANGLE WELD ASSEMBLY	676973-28	676973-28
13	1	PHOTO-EYE GUARD	688735-2	688735-2
14	1	OVER-HEIGHT BAR ASSEMBLY	676973-36	676973-36
15	1	CD SIDE COVER ASSY (OPPOSITE MOTOR)	676973-45	676973-45R
16	1	ENCODER COVER WELD ASSEMBLY	676973-46	676973-46
	1	TAIL FRAME WINDOW	640309-38	640309-38
17	1	DISCHARGE END COVER 39"LG	676973-17	676973-17
18	1	DRIVE SHAFT COVER WELD ASSEMBLY	676973-55	676973-55L
	1	SLOT COVER	676973-60	676973-60
19	1	CENTER DRIVE GUARD MOUNT ANGLE	676973-58	676973-58
20	4	NOSEBAR GAP FILLER	676973-99	676973-99
21	1	REFLECTOR MOUNTING ANGLE	681361-10	681361-10
22	1	PHOTOEYE Z-BRACKET	681361-11	681361-11
23	1	OVERHEAD SENSOR GUARD	681361-12	681361-12L
24	1	STRUCTURAL SUPPORT 36"BF	GC-262	SS-6-36
25	1	STRUCTURAL SUPPORT 36"BF	GC-262	SS-7-36
26	4	HEAVY DUTY KNEE BRACE	GB-174	M02285-6
	4	HEAVY DUTY ONE HOLE PIVOT PLATE	676973-54	67973-54
27	4	DCOSE 1/8 HX HD ST PIPE PLUG	P.P.	BBWC4425
28	6'	E1X2WH6 1X 2 WIREWAY	P.P.	ELWC8827
29	6	C1WH6 1X 2 COVER	P.P.	ELWC8827-01
30	8	5/16"-18 X 2-1/2" HHCS GRADE 2	P.P.	FSWC0262
31	4	1/4"-20 X 3/4"LG HHCS	P.P.	FSWC0155
32	4	1/4"-20 CAGE NUT 53160	P.P.	FSWC9096
33	1	SCANBELT TIE BRACKET	676973-65	676973-65
34	1	STRIP BELT ASSEMBLY	676973-66	676973-66

ITEM	QTY	DESCRIPTION	DWG#	PART#
35	1	35"W BS#107ASB-FR 18'1"LG.	P.P.	SBLW676973-0150181
36	1	ENCODER HOLLOW SHAFT 1593030	P.P.	SCSW658589-01
37	1	ENCODER POSITIONING ELEMENT	P.P.	SCSW658589-02
38	2	PHOTOELECTRONIC RETRO SENSOR	P.P.	SCSW658589-03
39	1	REFLECTOR FINE TRIPLE	P.P.	SCSW658589-04
40	1	REFLECTOR PL80A #1003865	P.P.	SCSW678525-01
41	1	ALLEN BRADLEY #284-M29W-M03	P.P.	SELW676045-01
42	3	8-32 X 1" S.H.C.S.	P.P.	SFSW658574-01
43	1	ADHESIVE RULER L/R 1910A52	P.P.	SMCW678613-05
44	1	ADHESIVE RULER R/L 1910A62	P.P.	SMCW678613-06



DRAWINGS (700 SCAN BELT)



REPORT ON MISCELLANEOUS MAINTENANCE PERFORMED

REPORT ON MAINTENANCE			
CONVEYOR MARK NO.	REPAIRED BY	INSPECTION DATE	DETAIL OF MAINTENANCE COMPLETED (OR INSPECTION) LIST PARTS REPLACED OR REPAIRS

ROACH CONVEYORS

WARRANTY

- Materials used by Roach Conveyors are of good quality.
- Any part proving to be defective in materials or workmanship upon Roach inspection, will be replaced at NO cost, FOB, Trumann, Arkansas, for one year. Installation expense will be paid by others.
- Roach liability includes furnishing said part or parts; Roach is not liable for consequential damages, such as loss of profit, delays or expenses incurred by failure of said part or parts.
- Failure due to abuse, incorrect adjustments, exposure to corrosive or abrasive environment or operation under damp conditions does not constitute failure due to defects in workmanship or materials.
- Component parts not manufactured by Roach (motors, gear reducers, etc.) will be repaired or replaced at the option of their manufacturer. Contact nearest authorized service center for all warranty claims.

NOTE: Motors or gear reducers tampered with before inspection shall be considered free of ALL Warranty Claims.

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--Drawings are intended for illustration ONLY and are not to scale--

Roach Conveyors
808 Highway 463 North
Trumann, AR 72472-1310