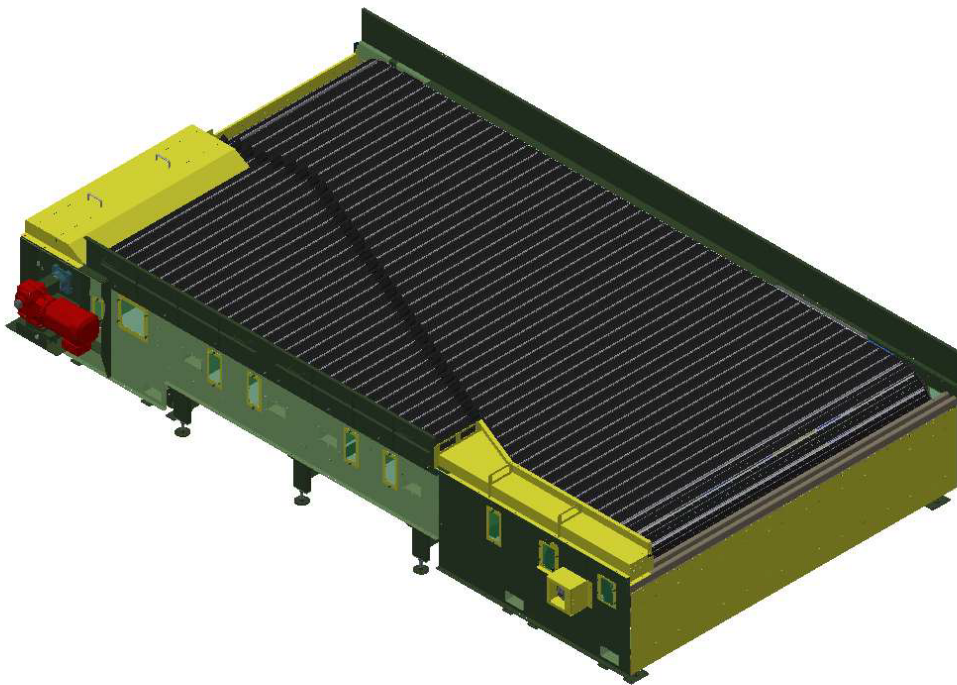




LPM INSTALLATION AND MAINTENANCE MANUAL



MODEL
LPM

BULLETIN
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1 INTRODUCTION

This manual provides guidelines and procedures for installing, operating, and maintaining your conveyor. A complete parts list is provided with recommended spare parts highlighted in gray.

Important safety information is also provided throughout the manual. For safety to personnel and for proper operation of your conveyor, it is recommended that you read and follow the instructions provided in this manual.

1.1 RECEIVING AND UNCRATING

- Check the number of items received against the bill of lading.
- Examine condition of equipment to determine if any damage occurred during shipment.
- Move all crates to area of installation.
- Remove crating and check for optional equipment that may be fastened to the conveyor. Make sure these parts (or any foreign pieces) are removed.

1.2 HOW TO ORDER REPLACEMENT PARTS


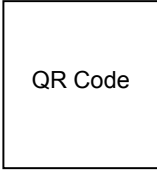
Included in this manual are parts drawings with a complete parts list. Scan the QR Code or serial number on the “**Match-Mark**” labels for replacement parts. Minor fasteners, such as nuts and bolts, are not included.

When ordering replacement parts:

- Contact dealer from whom conveyor was purchased or nearest Hytrol Integration Partner.
- Give Conveyor **Factory Order Number/Serial Number**.
- Give complete description from **Parts List**.
- If you are in a breakdown situation, call our Customer Care team at 1-844-4HYTROL.

NOTE:

If damage has occurred or freight is missing, contact your Hytrol Integration Partner.

 <small>Jonesboro, Arkansas</small>	Model	 YEAR
Serial # 615415		

2 SAFETY INFORMATION

2.1 INSTALLATION

GUARDS AND GUARDING

Interfacing of Equipment: When two or more pieces of equipment are interfaced, special attention shall be given to the interfaced area to ensure the presence of adequate guarding and safety devices.

Guarding Exceptions: Whenever conditions prevail that would require guarding under these standards, but such guarding would render the conveyor unusable, prominent warning means shall be provided in the area or on the equipment in lieu of guarding.

Guarded by Location or Position: Where necessary for the protection of employees from hazards, all exposed moving machinery parts that present a hazard to employees at their work station shall be mechanically or electrically guarded, or guarded by location or position.

- Remoteness from frequent presence of public or employed personnel shall constitute guarding by location.
- When a conveyor passes over a walkway, roadway, or work station, it is considered guarded solely by location or position if all moving parts are at least 8 ft. (2.44 m) above the floor or walking surface or are otherwise located so that the employee cannot inadvertently come in contact with hazardous moving parts.
- Although overhead conveyors may be guarded by location, spill guards, pan guards, or equivalent shall be provided if the product may fall off the conveyor for any reason and if personnel would be endangered.

HEADROOM

- When conveyors are installed above exit passageways, aisles, or corridors, there shall be provided a minimum clearance of 6 ft. 8 in. (2.032 m) measured vertically from the floor or walking surface to the lowest part of the conveyor or guards.
- Where system function will be impaired by providing the minimum clearance of 6 ft. 8 in. (2.032 m) through an emergency clearance, alternate passageways shall be provided.
- It is permissible to allow passage under conveyors with less than 6 ft. 8 in. (2.032 m) clearance from the floor for other than emergency exits if a suitable warning indicates low headroom.

2.2 OPERATION

- A. Only trained employees shall be permitted to operate conveyors. Training shall include instruction in operation under normal conditions and emergency situations.
- B. Where employee safety is dependent upon stopping and/or starting devices, they shall be kept free of obstructions to permit ready access.
- C. The area around loading and unloading points shall be kept clear of obstructions which could endanger personnel.
- D. No person shall ride the load-carrying element of a conveyor under any circumstances unless that person is specifically authorized by the owner or employer to do so. Under those circumstances, such employee shall only ride a conveyor which incorporates within its supporting structure platforms or control stations specifically designed for carrying personnel. Under no circumstances shall any person ride on any element of a vertical conveyor.
- E. Personnel working on or near a conveyor shall be instructed as to the location and operation of pertinent stopping devices.
- F. A conveyor shall be used to transport only material it is capable of handling safely.
- G. Under no circumstances shall the safety characteristics of the conveyor be altered if such alterations would endanger personnel.
- H. Routine inspections and preventive and corrective maintenance programs shall be conducted to ensure that all safety features and devices are retained and function properly.
- I. Personnel should be alerted to the potential hazard of entanglement in conveyors caused by items such as long hair, loose clothing, and jewelry.
- J. Conveyors shall not be maintained or serviced while in operation unless proper maintenance or service requires the conveyor to be in motion. In this case, personnel shall be made aware of the hazards and how the task may be safely accomplished.
- K. Conveyor owners should ensure proper safety labels are affixed to the conveyor, to warn of particular hazards involved in operation of their conveyors.

CAUTION!

Because of the many moving parts on the conveyor, all personnel in the area of the conveyor need to be warned that the conveyor is about to be started.

2.3 MAINTENANCE

Refer to ANSI Z244.1-1982, American National Standard for Personnel Protection – Lockout/Tagout of Energy Sources – Minimum Safety Requirements and OSHA Standard Number 29 CFR 1910.147 “The Control of Hazardous Energy (Lockout/Tagout).”

- All maintenance, including lubrication and adjustments, shall be performed only by qualified and trained personnel.
- It is important that a maintenance program be established to ensure that all conveyor components are maintained in a condition which does not constitute a hazard to personnel.
- When a conveyor is stopped for maintenance purposes, starting devices or powered accessories shall be locked or tagged out in accordance with a formalized procedure designed to protect all persons or groups involved with the conveyor against an unexpected start.
- Replace all safety devices and guards before starting equipment for normal operation.
- Whenever practical, DO NOT lubricate conveyors while they are in motion. Only trained personnel who are aware of the hazard of the conveyor in motion shall be allowed to lubricate.

Safety Guards

Maintain all guards and safety devices IN POSITION and IN SAFE REPAIR.

Safety Labels

In an effort to reduce the possibility of injury to personnel working around Hytrol conveying equipment, safety labels are placed at various points on the equipment to alert them of potential hazards. Please check equipment and note all safety labels. Make certain your personnel are alerted to and obey these warnings. See Safety Manual for examples of warning labels.

REMEMBER

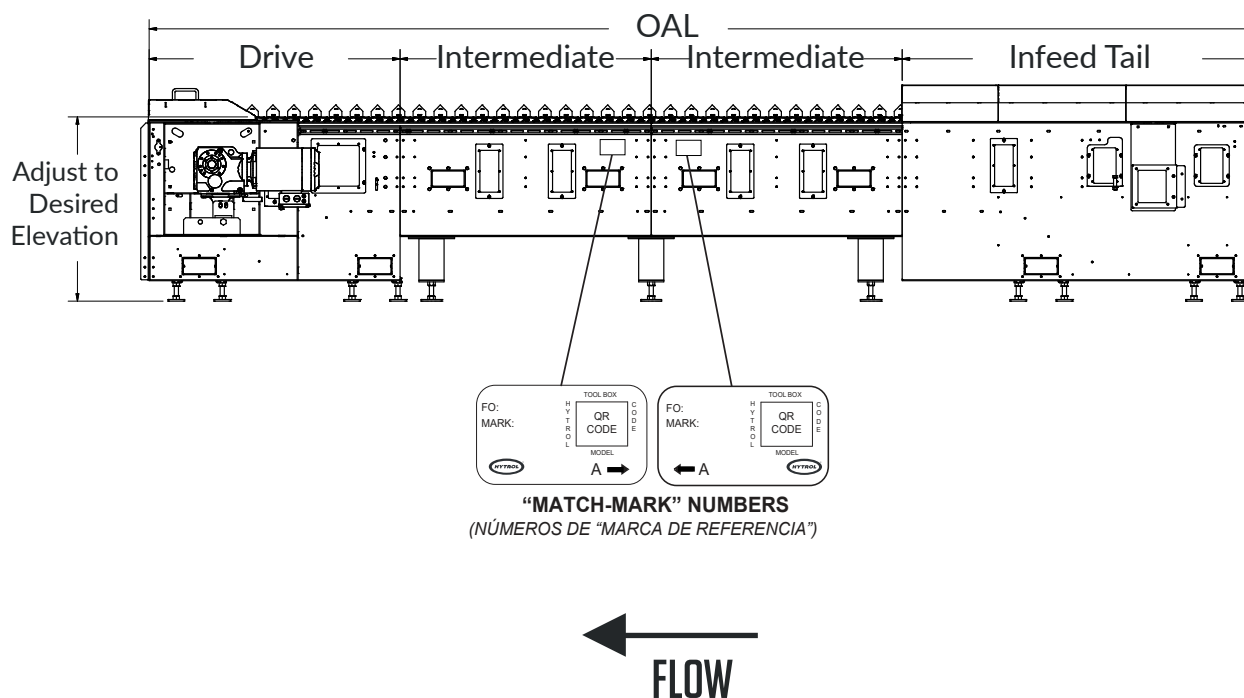
Do not remove, reuse or modify material handling equipment for any purpose other than it's original intended use.

3 INSTALLATION

3.1 LOCATION

1. Determine direction of product flow. Figure 1 indicates the flow.
2. Refer to “Match-Mark” labels on ends of conveyor sections (Figure 1).
Position sections in letter sequence near installation area.

FIGURE 1



3.2 CONVEYOR SET-UP

1. Mark a chalk line on the floor to locate the conveyor center.
2. Attach supports and vibration pads to all conveyor sections (Figure 2). Adjust elevation to required height. Hand tighten bolts only at this time.
3. During installation, check to make sure each bed section is square. Measure the diagonals from corner to corner of the frame. It should be no more than 1/8 inch difference in measurements. If they are not equal, the frame must be squared. Attach a come-along or another suitable pulling device across the longest corners and pull until the section is square.
4. Install remaining sections, placing unsupported end on supports (Figures 2 and 3).
5. Fasten sections together with splice channels and support legs (Figure 2). Hand-tighten bolts only at this time.
6. Check if conveyor is level across width and length of unit. Adjust supports as necessary.
7. After all sections have been squared and leveled, tighten all splice channels and support mounting bolts. Lag supports to the floor.
8. Use the extrusion alignment bar assy at each joint for alignment of extrusion (Figure 4).
9. Check alignment of wearstrip at all section joints. Sand wearstrip as necessary to provide a smooth wear surface (Figure 4).
10. Starting on the infeed end, force bearing profile under the wearstrip until the wearstrip snaps into groove on bearing profile. Use self-tapping screws to attach the bearing profile.
 - **SELF-TAPPING SCREW INSTRUCTIONS:** At the beginning and end of each strip of the bearing profile, and then every 10 feet, drill a pilot hole. Attempt to drill 1/4 inch off the BR side of the UHMW wearstrip, where the grooved portion of the bearing profile is latched underneath (Figure 4). Use a #6-32 X 3/4" long flat-head self-tapping screw to prevent the bearing profile and wearstrip from attempting to move forwards and backwards inside the merge while operating.
11. Install electrical controls and wire motor. Verify correct motor rotation at this time. See section 3.3 Electrical Equipment on page 14.
12. Install carrying chains per section 5.5 Carrying Chain Installation on page 26 and Figures 20 and 21 on page 27.
13. Install chain oiler at discharge and connect to oil lines (Figures 5 and 6). Refer to section 5.1 Lubrication on page 15 for type of oil required. After mounting, the oiler will need to be adjusted for proper oiling of carrying chains. Adjustment may be made using a combination of solenoid activation time and flow adjustment screws (Figure 6). A good rule of thumb for solenoid adjustment is to turn the oiler on for one complete chain revolution for every 80 hours of operation, if chain is excessively wet, oil every 160 hours of operation.

FIGURE 2: INTERMEDIATE INSTALLATION

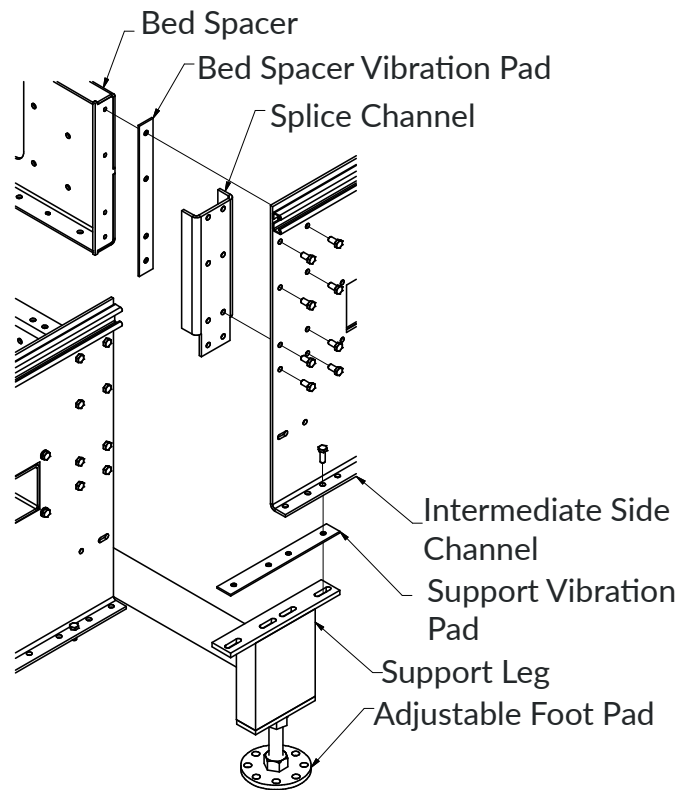


FIGURE 3: INFEED/DRIVE TAIL INSTALLATION

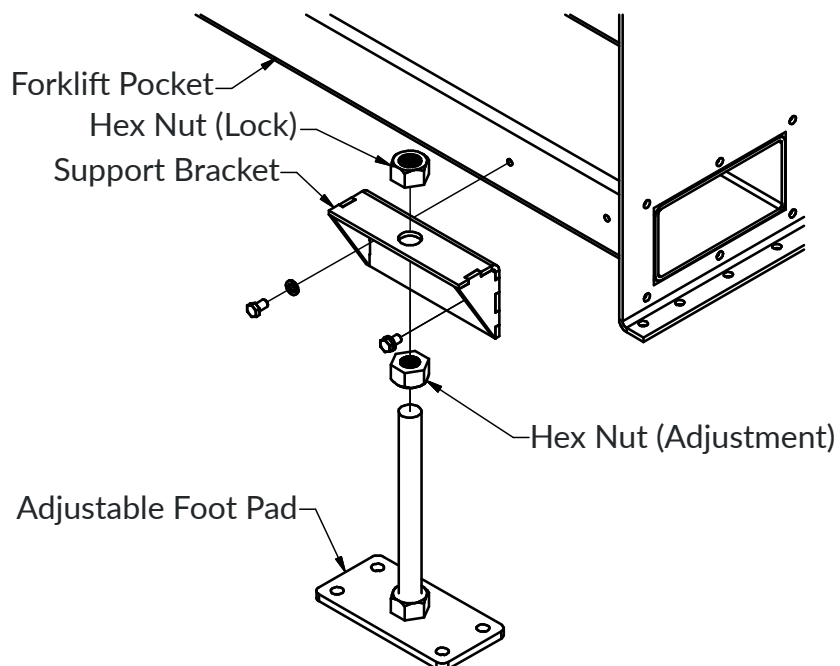


FIGURE 4: EXTRUSION JOINT ALIGNMENT INSTALLATION

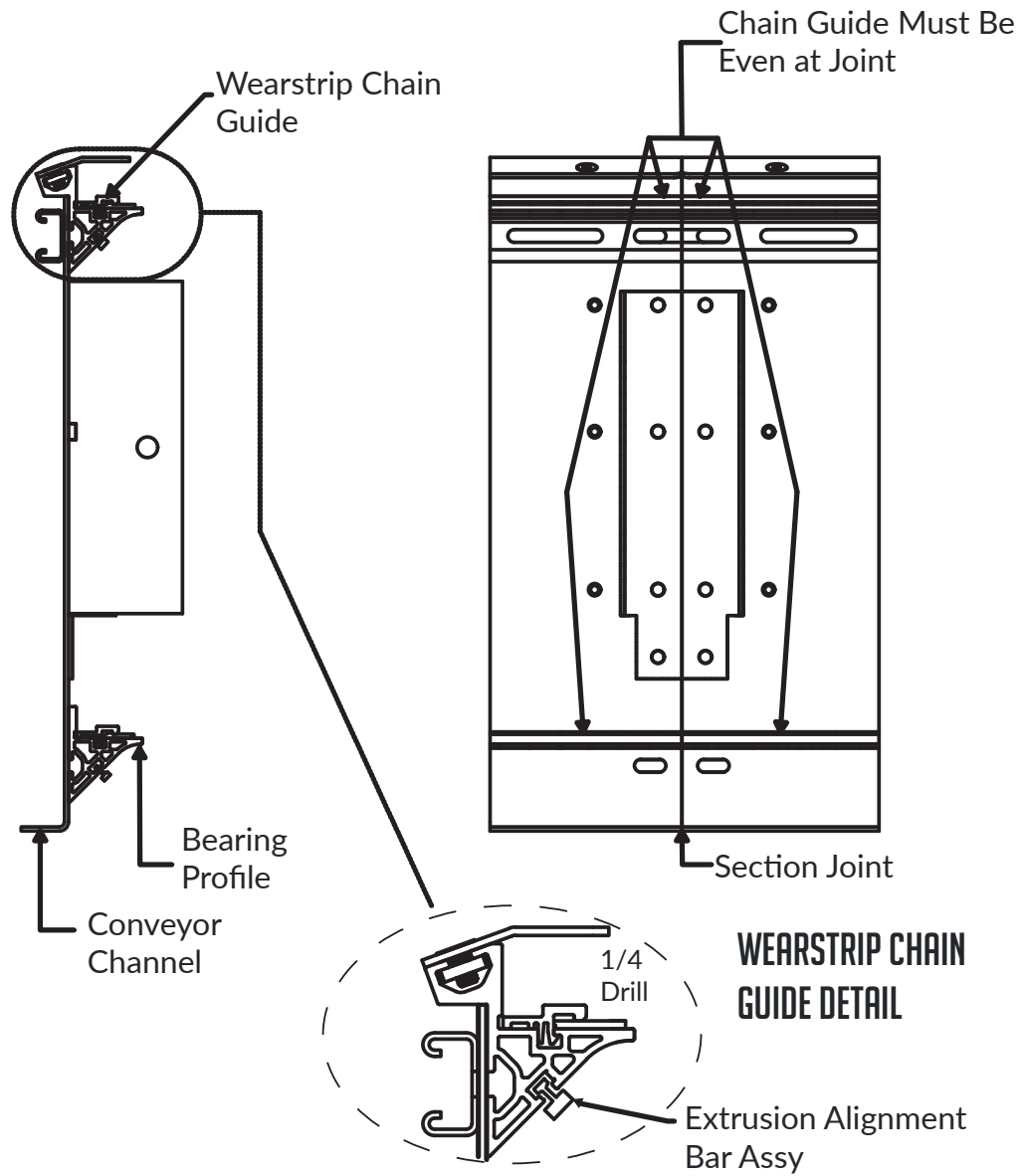


FIGURE 5: ELECTRICAL COMPONENTS/PHOTO-EYE LOCATIONS

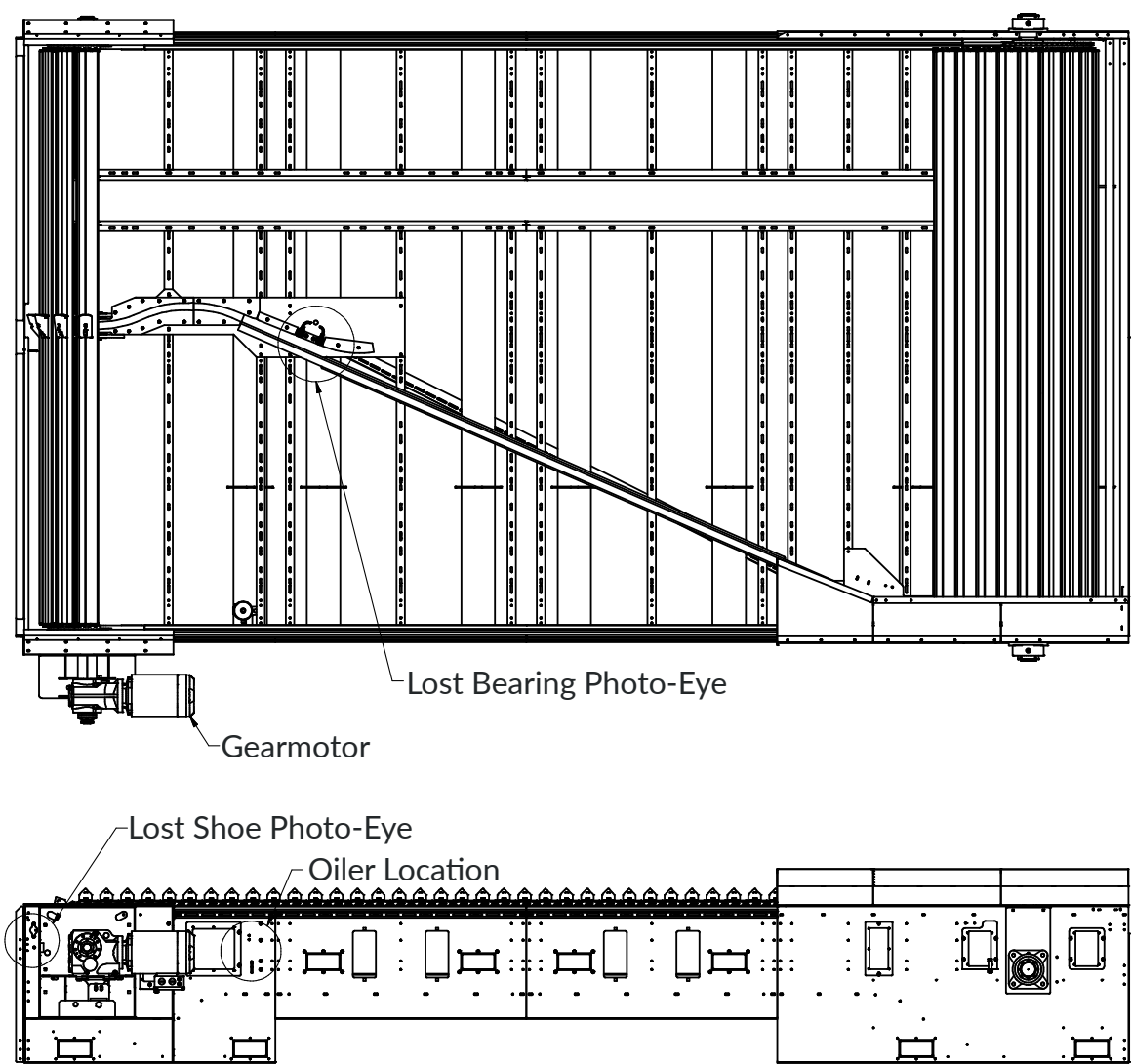
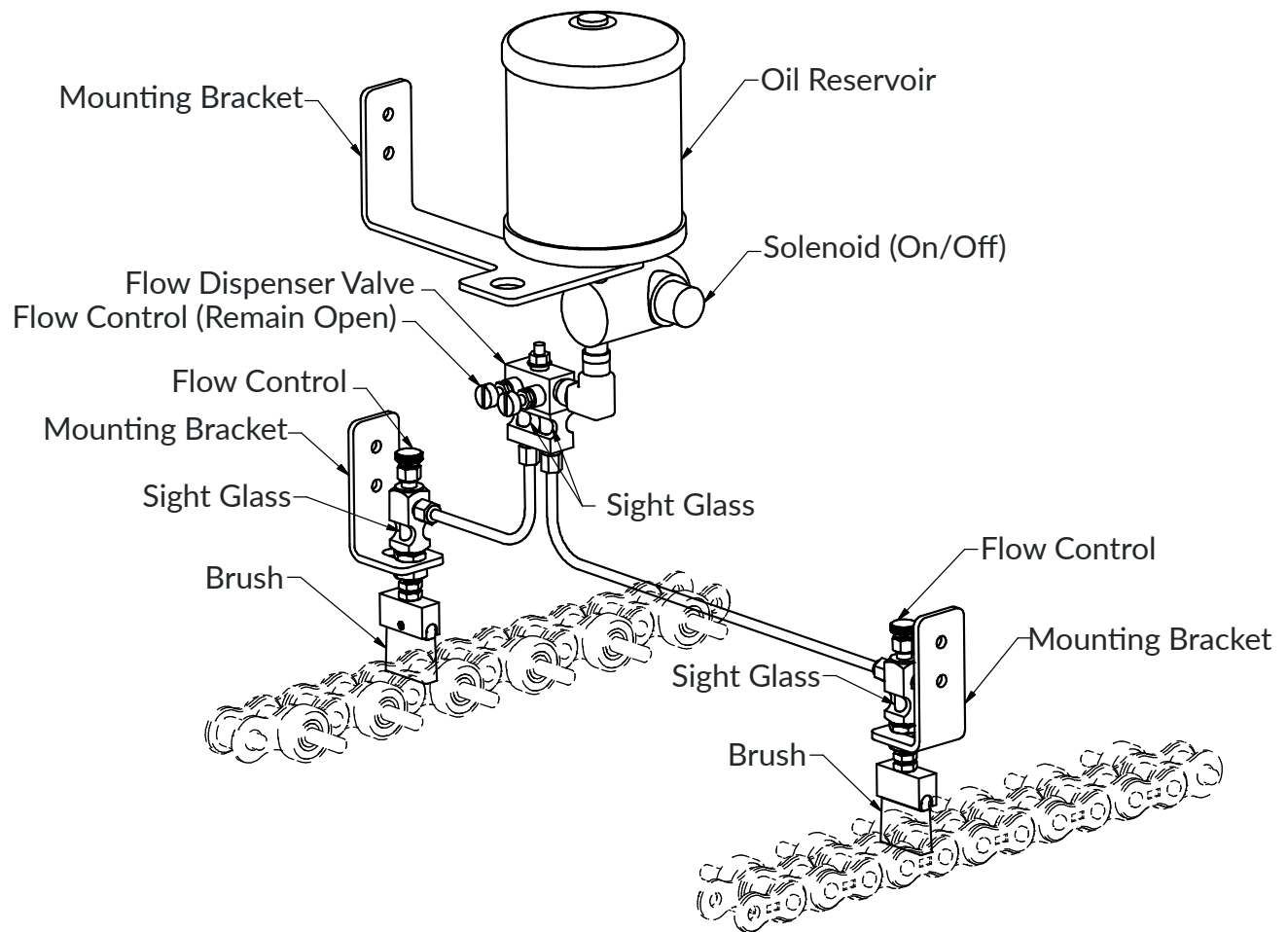


FIGURE 6: OILER INSTALLATION



3.3 ELECTRICAL EQUIPMENT

WARNING!

Electrical controls shall be installed and wired by a qualified electrician. Wiring information for the motor and controls are furnished by the equipment manufacturer.

SAFETY DEVICES

- A. All safety devices, including wiring of electrical safety devices, must be arranged to operate in a “Fail-Safe” manner, that is, if power failure or failure of the device itself would occur, a hazardous condition must not result.
- B. Emergency Stops and Restarts: Conveyor controls must be arranged that, in case of emergency stop, manual reset or start at the location where the emergency stop was initiated, must be required of the conveyor(s) and associated equipment to resume operation.
- C. Before restarting a conveyor which has been stopped because of an emergency, an inspection of the conveyor must be made and the cause of the stoppage determined. The starting device must be locked out before any attempt is made to remove the cause of stoppage, unless operation is necessary to determine the cause or to safely remove the stoppage.

Refer to ANSI Z244.1-1982, American National Standard for Personnel Protection – Lockout/Tagout of Energy Sources – Minimum Safety Requirements and OSHA Standard Number 29 CFR 1910.147 “The Control of Hazardous Energy (Lockout/Tagout).”

4 OPERATION

4.1 CONVEYOR START-UP

Before the conveyor is turned on, check for foreign objects that may have been left inside conveyor during installation. These objects could cause serious damage during start-up.

After the conveyor has been turned on and is operating, check all moving parts to make sure they are working freely.

CAUTION!

Because of the many moving parts on the conveyor, all personnel in the area of the conveyor need to be warned that the conveyor is about to be started.

5 MAINTENANCE

5.1 LUBRICATION

BEARINGS

- A. No grease fitting - Pre-lubricated. No lubrication required.
- B. With grease fitting - Re-lubricate approximately every 10 to 12 weeks with lithium base grease suitable for ball bearing service.

RECOMMENDED CHAIN LUBRICANT

A good grade of clean non-detergent petroleum or synthetic oil is recommended.

AMBIENT TEMPERATURE DEGREES F	SAE	ISO
20-40	20	46 or 68
40-100	30	100

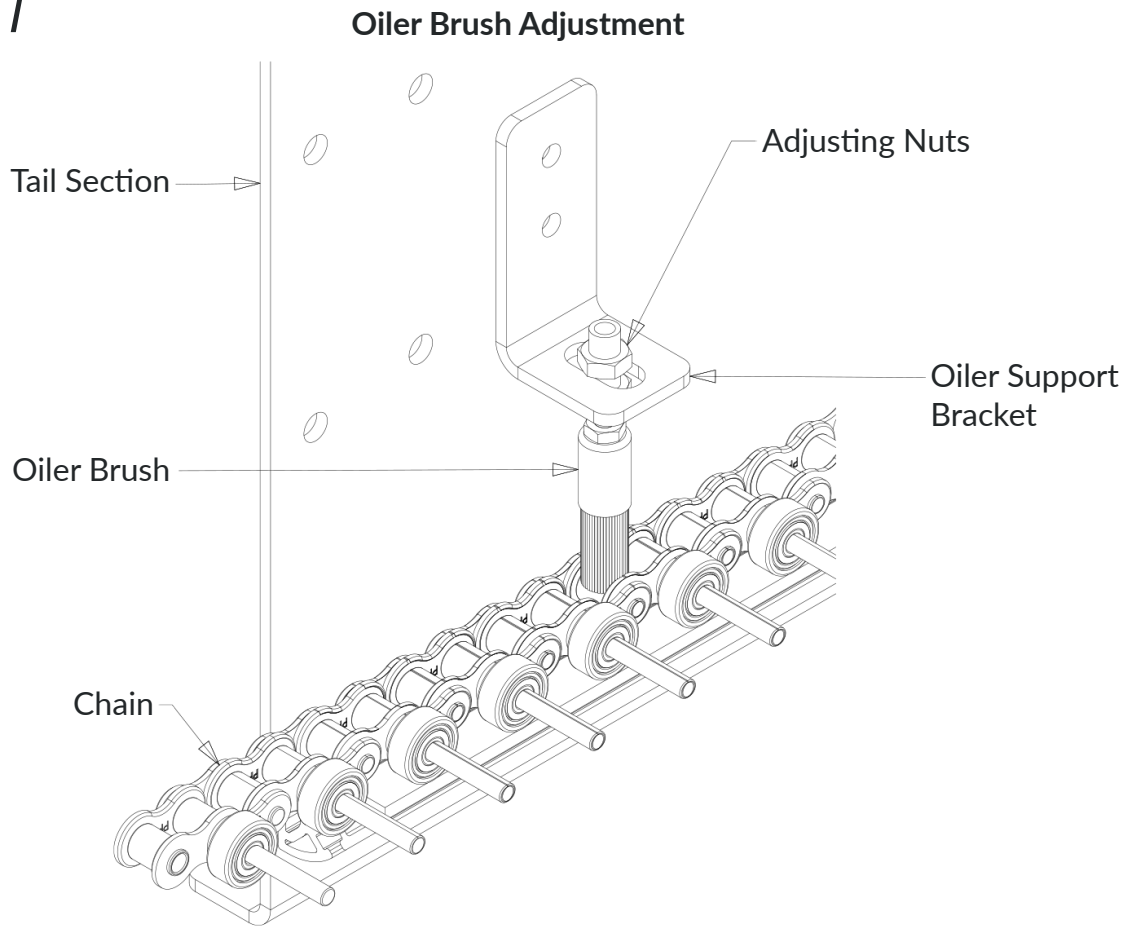
REDUCERS

See recommendations by manufacturer.

OILER BRUSH ADJUSTMENT

It is very important that the oiler brush comes in contact with the chain for proper lubrication and increased chain life. This can be done by using the adjusting nuts and support brackets (Figure 7).

FIGURE 7



5.2 CONTROL COMPONENTS

VARIABLE FREQUENCY DRIVE CONTROLLER

The variable frequency drive (VFD) is a motor controller with three functions:

1. Provide a smooth acceleration of the drive motor, allowing the merge to slowly ramp up to full speed. This protects merge components from the stress of a full-speed start up.
2. Allow merge speed to be adjusted to match system speed requirements. It also allows the merge to operate at a very slow speed during installation debugging and when certain mechanical components are checked after servicing.
3. Allow merge to be operated at a slower speed during off-peak seasons, reducing energy consumption, noise, and wear. Refer to the VFD manufacturer's installation manual provided with the merge for wiring and adjustment instructions.

ENCODER

An encoder is included with the merge to provide a pulse signal to be used for product tracking. The standard encoder provides a square-wave pulse signal of 30 pulses per revolution of the merge infeed shaft. This equates to one pulse for every 1.75 inches of merge travel.

The encoder requires 24VDC power, and provides a 24VDC pulse output.

Refer to the encoder manufacturer's installation manual, provided with the merge, for wiring instructions.

CHAIN OILER SOLENOID

The chain oiler is used to provide automatic lubrication of the carrying chains during merge operation. When the oiler solenoid valve is energized, oil is gravity fed from the oiler reservoir, through metering valves, to brushes located inside the tail assembly above the return chains.

The system controls should be configured to activate the chain oiler solenoid for a duration equal to one complete revolution of the carrying chains about every 80 hours of operation, if chain is excessively wet, oil every 160 hours of operation.

The actual amount of oil applied to the chains is controlled by metering screws. Refer to section 3.2 Conveyor Set-Up on page 9.

The chain oiler solenoid requires 24VDC power to operate.

MISSING BEARING DETECTION

A missing bearing detection block (Figure 8A) is used to detect shoes with a missing bearing. A divert shoe without a bearing can cause damage to the merge. The missing bearing block uses two proximity switches located on the discharge end of the merge in the return section, to detect the presence of shoe bearings. The missing bearing detector has a normally high (24VDC) signal that will stay active while no missing bearings/pins are detected.

If one prox detects a bearing while the other does not, the block signal goes low to indicate a missing bearing was detected. Hytrol recommends stopping the merge if a bearing is missing.

See Figure 8B for wiring set-up of the missing bearing detection box.

The missing bearing box requires 24VDC power to operate. The prox switches are plugged into the left two ports in no particular order. A reset signal of 24VDC is needed to clear the missing bearing error in the box.

Additionally, the missing bearing detection assembly includes a feature to detect if the proximity sensors are functioning properly. While the missing bearing detection box receives a Merge Up to Speed Input, the Broken Prox Output is normally high (24VDC) if the sensors are working properly. As long as the Merge Up to Speed Input is active and the merge is running, the missing bearing detection box will continuously test the proxies for proper function (Figure 8B).

If the Broken Prox Output goes low, then the proximity sensors and all connections to the sensors should be inspected and repaired or replaced. To reset the Broken Prox Error, send a 24VDC Reset Error Input signal to the box.

FIGURE 8A

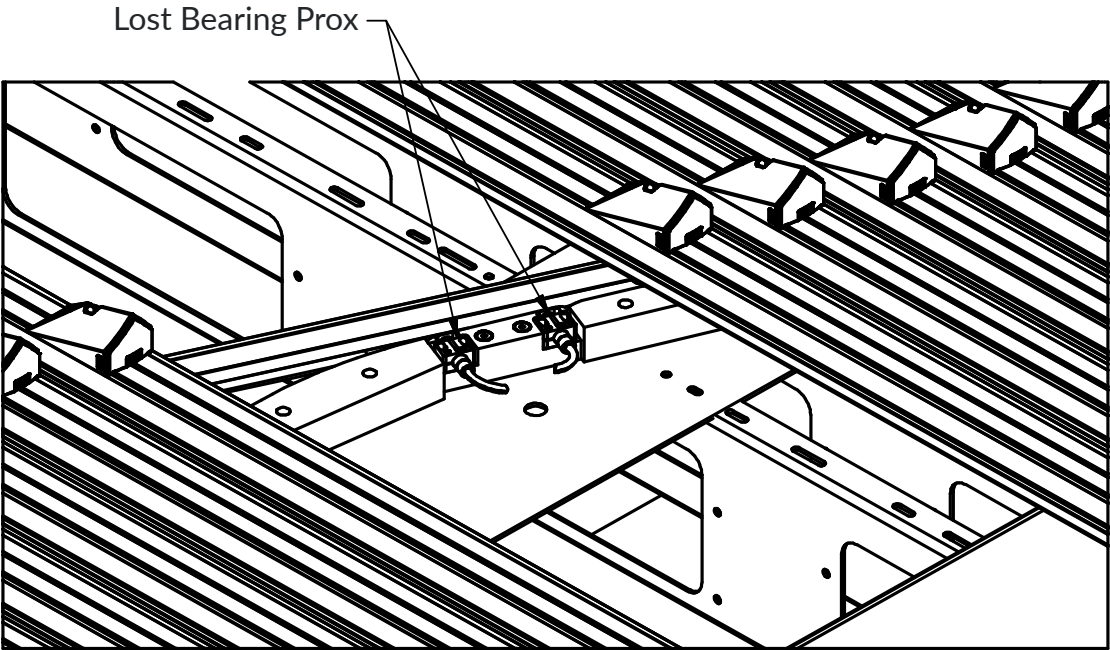
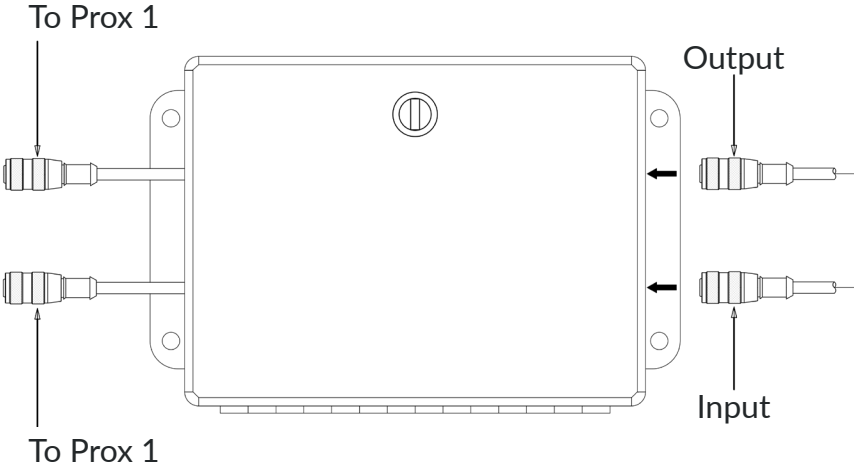


FIGURE 8B

Missing Bearing Detection Box



Outputs
Brown - Not used
White - Broken Prox Output
Blue - Common
Black - Missing Bearing Output (24V=OK, 0V=Fault)

Inputs
Brown - Power (+24VDC)
White - Merge Up to Speed Input
Blue - Common
Black - Reset Error Input

5.3 CONTROL COMPONENTS NOT SUPPLIED WITH THE CONVEYOR

In addition to control components supplied with the LPM, there are several components that must be supplied by the system control provider. Hytrol recommends the following control components be used to protect the merge from damage due to product jams or other problems:

ADJUSTABLE INSTANTANEOUS MOTOR OVERLOADS

Instantaneous overloads provide protection against merge hang-ups by turning off the drive if a sudden increase in motor current is detected.

By adjusting the overload limit to slightly above the power required to operate the merge, any extra load on the motor, such as would be caused by a product jam or switch malfunction, would cause the merge to stop, possibly before significant damage is done to the equipment.

The instantaneous overloads should be installed in the merge control panel and sized for the proper power requirements.

PHOTO-EYES

Photo-eyes are common components in systems controls. Hytrol recommends that photo-eyes be installed accordingly to perform listed functions (See Figure 5 on page 12 for locations). These are in addition to other photo-eyes needed in the system.

JAM/CONFIRMATION PHOTO-EYE

These eyes detect a product jam at the merge exit point. If a package blocks this photo-eye for a longer time than it would take for the package to travel past the photo-eye normally, this indicates the package is jammed. The merge should be stopped and the jam cleared before restarting the merge.

MISSING SHOE TOP PHOTO-EYE

This laser photo-eye is mounted on the discharge end of the drive assembly, used to detect if shoe tops have broken off (Figure 9).

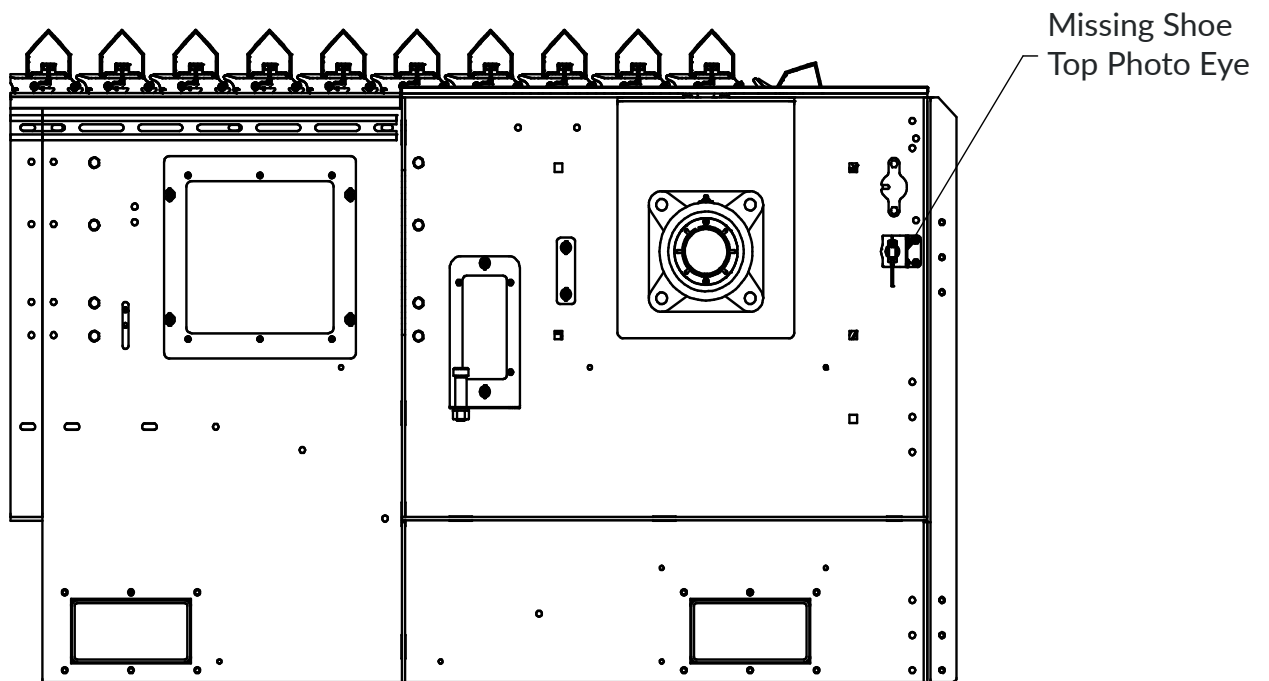
The merge can usually function properly with a missing shoe top. A stop is recommended if multiple shoe tops are missing in a row.

If there are not a significant number of shoe tops broken off, merge maintenance can wait until the merge is shut down to replace the missing shoe tops.

Hytrol recommends displaying a warning if a missing shoe top is detected.

If a missing shoe top is detected and the merge continues running for 8-12 hours, the merge should be stopped and maintenance staff should replace the missing shoe tops. If desired, an error reset can be included to allow the merge to be restarted prior to replacing shoe tops (and delay stopping for another 8 hours).

FIGURE 9



SOME CONTROL DO'S AND DONT'S

The following are recommendations to assist in design and installation of system controls that are interfacing with ProSort merges.

- DO NOT: Place 24VDC control wires in the same wireway with AC power wires, especially if the AC power exceeds 240 volts. "Noise" produced in the control wires by the power wires may produce undesirable effects.
- DO: treat tripping of any safety switch, motor overload, or low air pressure signal as an emergency stop.

Inspect the merge to be sure everything is in good working order before starting or restarting the merge.

5.4 BEARING PROFILE INSTALLATION

The grooved bearing profile will be shipped in a coil similar to Figure 10.

1. Lay the bearing profile in line with the UHMW chain guide wearstrip (Figure 11).
2. Use a hammer to bump the red grooved belt under the UHMW (Figures 12 & 13).
3. Continue inserting the grooved bearing profile underneath the UHMW until it all snaps in (Figures 14 & 15).
4. To help prevent the bearing profile from moving while the merge is running, a #6-32 x 3/4" self-tapping screw is used once the bearing profile is in place (Figures 12-14). There is a groove provided on the UHMW (Figure 16) in which the screw will go in to.
5. Take a marker and put a mark inside the groove 1/2 inch from the end. Using one of the provided #32 bits, drill a hole there. Next, take one of the #6-32 x 3/4" self-tapping screws and insert into the hole (Figures 18 & 19).
6. Repeat Step 5 at the beginning of every new strip, with a maximum of 10 feet between screws, and at both ends of every bearing profile.

FIGURE 10



FIGURE 11

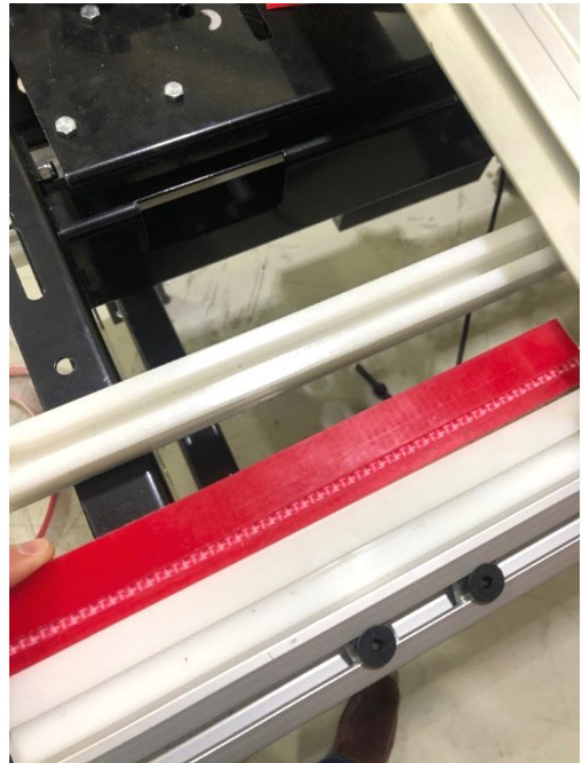


FIGURE 12



FIGURE 13



FIGURE 14

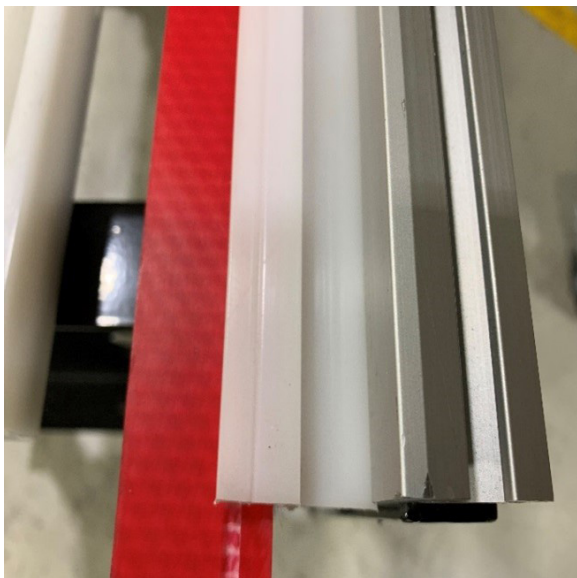


FIGURE 15

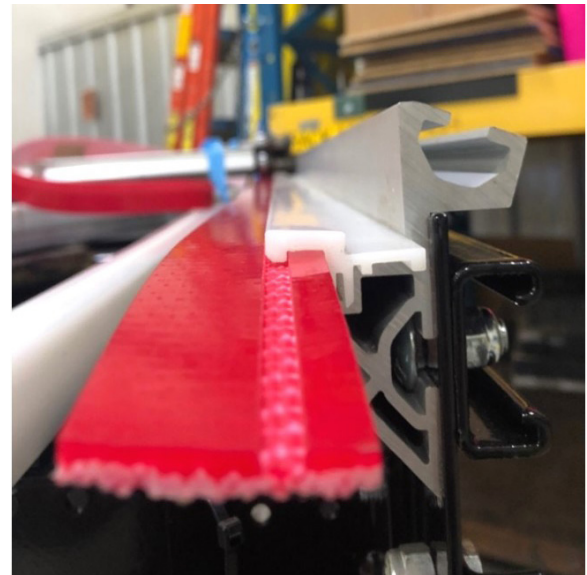


FIGURE 16

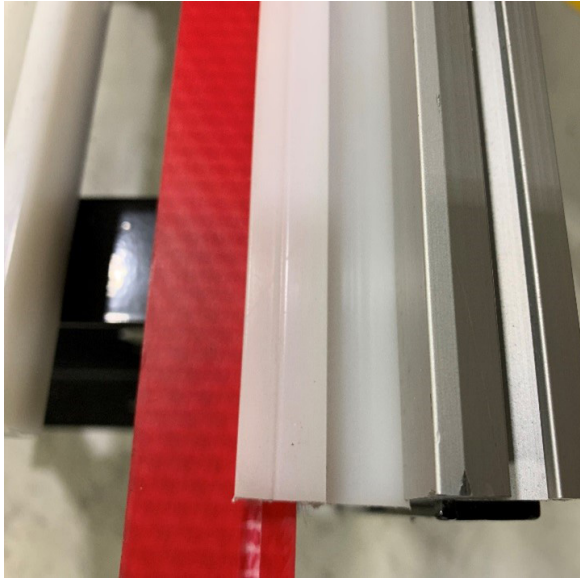


FIGURE 17

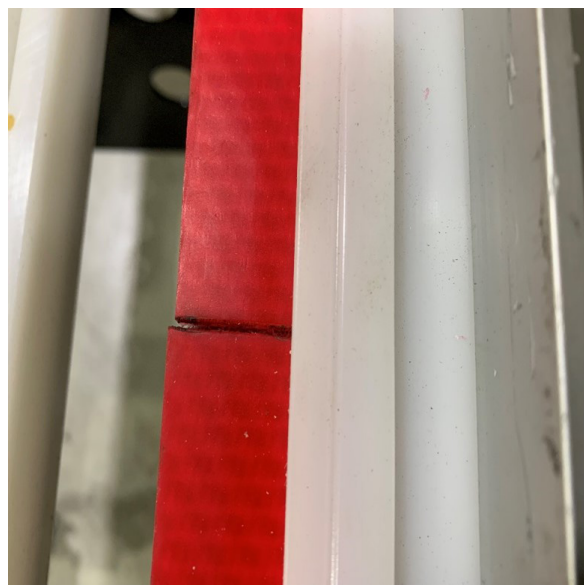


FIGURE 18

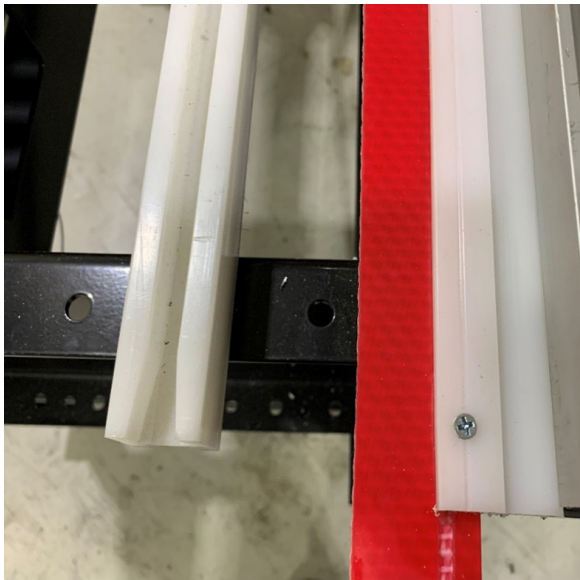
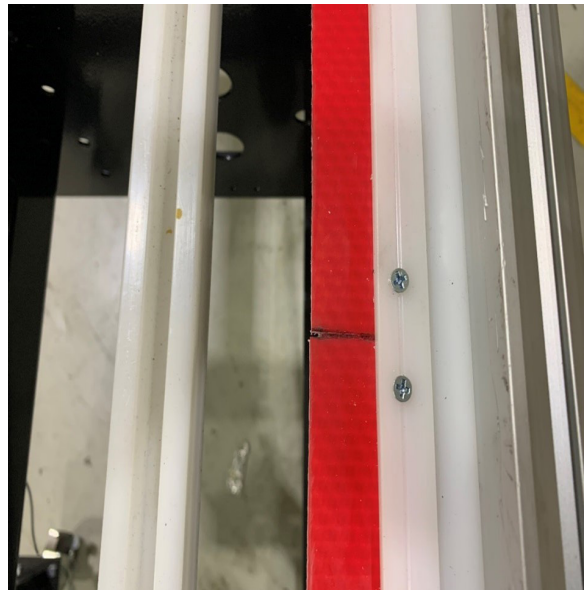


FIGURE 19



5.5 CARRYING CHAIN INSTALLATION

The carrying chains are shipped on marked spools, cut to proper length for each LPM. Steps for installing are as follows:

1. If motor is connected, disconnect electrical power to drive motor to prevent accidental start up.
2. Check alignment of chain guides by using two short pieces of chain with slat/shoe assemblies and bearings assembled to pins. This chain/slat/shoe assembly should slide freely through chain guides in direction of travel for entire length of conveyor.
3. Install carrying chains to both sides of conveyor with pins pointed inward. Make sure the pins of each chain are directly opposite each other. While installing chains, it will be helpful to install one slat/shoe assembly every four feet to hold chain in guides.
4. Fasten ends of both chains with connector links (Figure 20).
 - Use provided packets of grease to fill each cylinder of master link before setting link plate.
5. Install slat/shoe assemblies onto the chain pins on one side of conveyor. Be careful to keep the beveled face of the shoe toward the discharge end.
 - Lift opposite chain out of chain guide (so chains may be spread apart) and insert extended chain pins into the opposite end of slat/shoe assemblies.
6. Reconnect electrical power to drive motor. Use jog function while merge is in maintenance mode to move entire carrying chain assembly through the conveyor to check if it operates freely and if anything has been dropped into the conveyor during installation. Inspect divert shoes to make sure they have all been installed on the correct centers. If chains are shortened, it must be in increments of 5 inches.

FIGURE 20

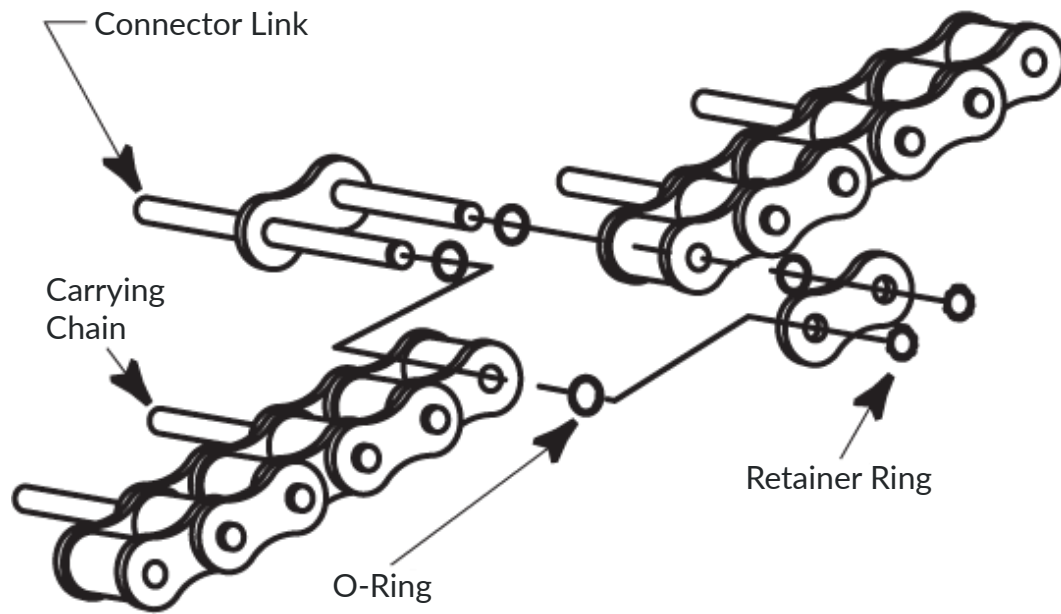
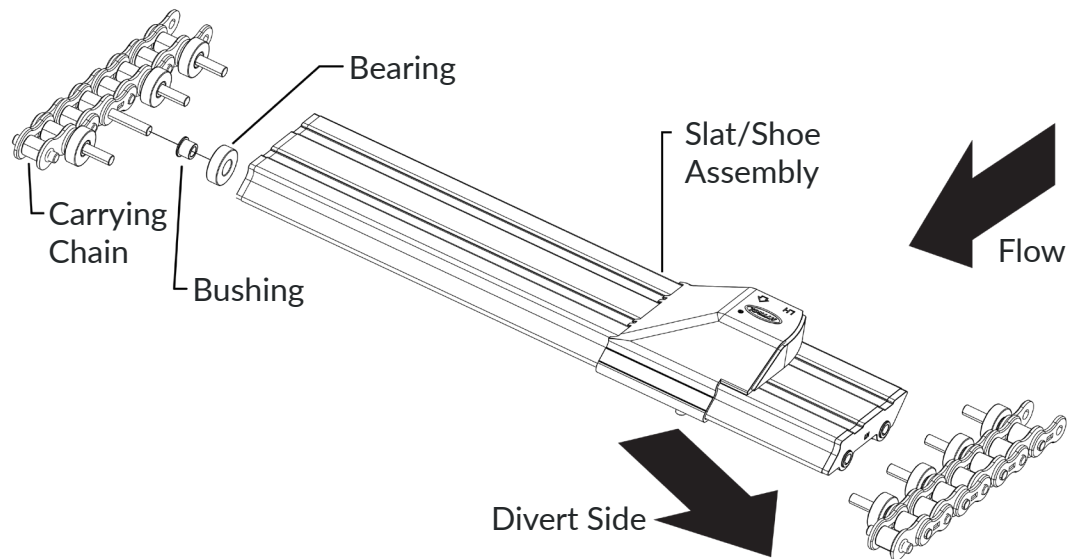


FIGURE 21



5.6 TORQLOC DRIVE GEARMOTOR INSTALLATION

1. Clean the drive shaft and reducer shaft opening with a solvent.
2. Inspect drive shaft for burrs and clean burrs if needed.
3. Insert clamping ring and conical bronze bushing onto the drive shaft.
4. Apply anti-seize compound to the conical steel bushing.
5. Insert reducer onto the shaft.
6. Hand tighten torque arm hardware to the drive assembly and gearmotor.
7. Slide conical steel bushing and clamping ring outward into reducer box.
8. Tighten bolt on the clamping ring to 19 ft*lb (25 N*m).
9. Loosen bolts on the shrink disk, then press onto the shaft on the outside of the reducer.
10. Push the conical steel counter-bushing into the shrink disk.
11. Hit the conical steel counter-bushing with a rubber mallet until fully seated.
12. Hand tighten bolts on the shrink disk.
13. Working in a clockwise bolt pattern, turn shrink disk bolts evenly 60 degrees at a time (1 hex face on bolt) until tightened to 22 ft*lb (30 N*m).
14. Tighten torque-arm mounting bolts.
15. Attach shaft covers.

5.7 SHOE TOP REPLACEMENT

1. Use a small flat head screwdriver to pop out any remaining shear pin pieces remaining inside the shoe base.
 - This can be accomplished by holding the screwdriver parallel to the slat length, positioning it through the opening on the shoe base and giving it a quick push.
2. Slide the new shoe top in place, making sure it is facing correctly for the flow direction of the merge.
3. Align the shoe top hole with the hole in the shoe base.
4. Place a new shear pin in the shoe top.
5. Use the screwdriver to pop the shear pin in.
 - This can be accomplished by holding the screwdriver perpendicular to the slat, aligning it to the shear pin center and giving it a quick push. You can also use the pin insertion tool provided.

The alignment block tool should be used such that the upstream component protrudes further in the flow direction to prevent shoe bearings from colliding into the downstream part and creating excess noise.

The block should contact both components, with the upstream component being in the notched part of the block (Figures 22 and 23).

FIGURE 22

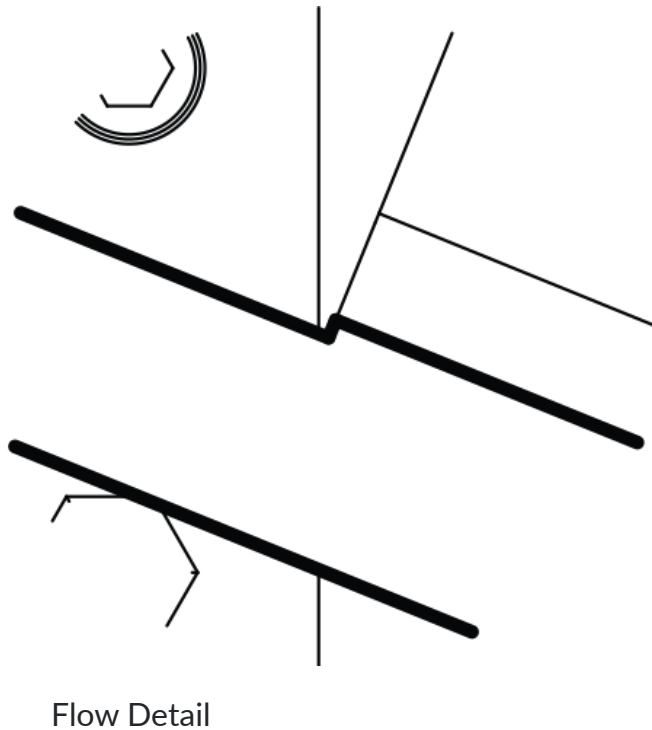
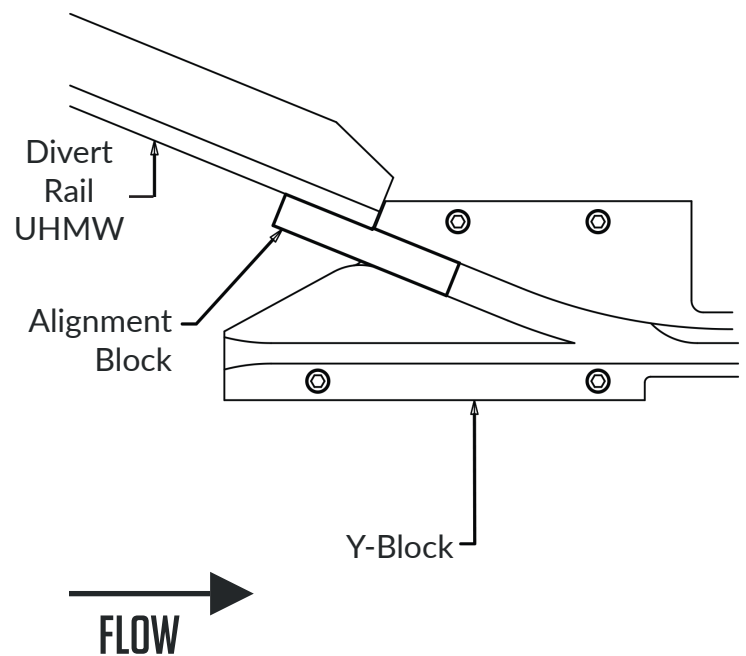


FIGURE 23



5.8 SPROCKET INSTALLATION AND TIMING

1. Before starting, make sure all power has been disconnected by following all lock-out tag-out procedures.
2. Loosen all the locking screws on the sprocket bushings (Figure 24B).
3. Locate all four access panels with timing bolt affixed to it (Figure 24C).
4. Remove the timing bolts and panels. Lay the access panels to the side. DO NOT DISCARD THEM.
5. There are holes provided to mount the timing bolts into (Figure 24E). This will hold the sprockets in place while tightening the locking screws which in turn is what keeps the sprockets timed as well. Mount the shoulder bolts on the inside of the BR inbetween two teeth.
6. As the hubs are being tightened, leave a space of 1 inch between the outside face of the sprocket and the inside of the side channel (Figure 24A).

The following instructions reference a new install, but the tightening portion is relevant:

- A. Make sure all surfaces of contact for bushings, screws and shafts are lean and slightly oiled with machine oil.
- B. After confirming correct hub position, hand-tighten three or four equally spaced locking screws until initial contact with shaft and hub is established.
- C. Set torque wrench approximately 5% higher than specified:
 - Drive end: 60 ft lbs (specified); 63 ft lbs for this step.
 - Tail end: 51 ft lbs (specified); 54 ft lbs for this step.
- D. Tighten locking screws in a clockwise sequence using only 90° turns for several passes until 90° turn can no longer be achieved.
- E. Continue for one to two more passes. This is required to compensate for a relaxation of locking screws since tightening of a given screw will always relax adjacent screws.
- F. Reset torque wrench for to specified ft lbs and check all locking screws. No screw should turn at this point, otherwise repeat steps C and D.
- G. Remove all four shoulder bolts and place them and their access panels to their original locations.

FIGURE 24A

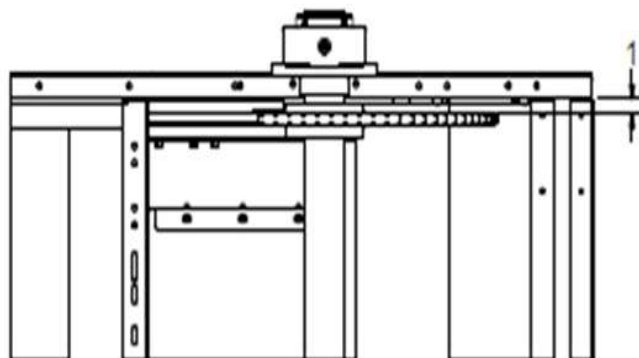


FIGURE 24B

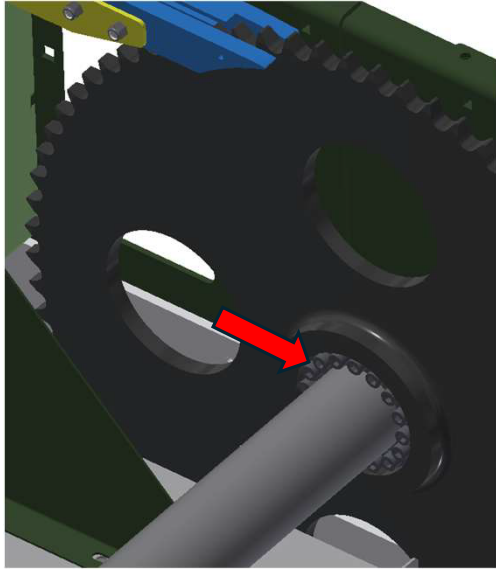


FIGURE 24C

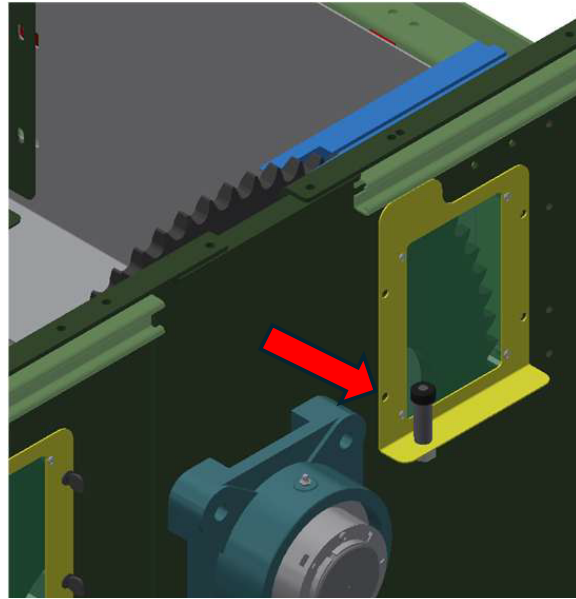


FIGURE 24D

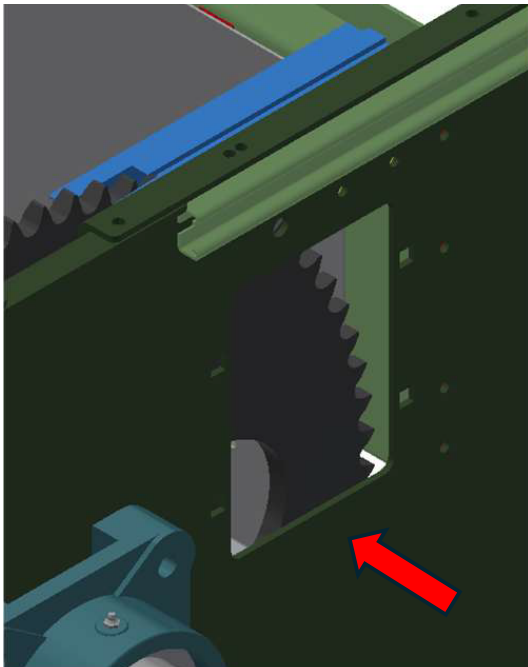


FIGURE 24E

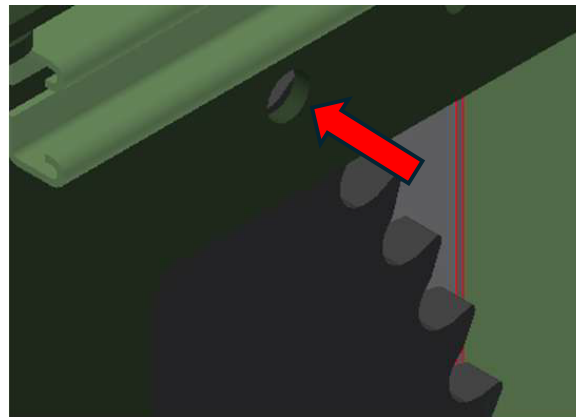
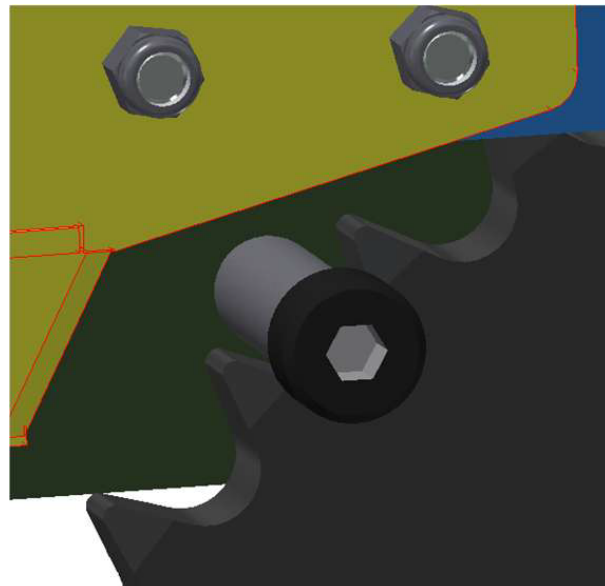
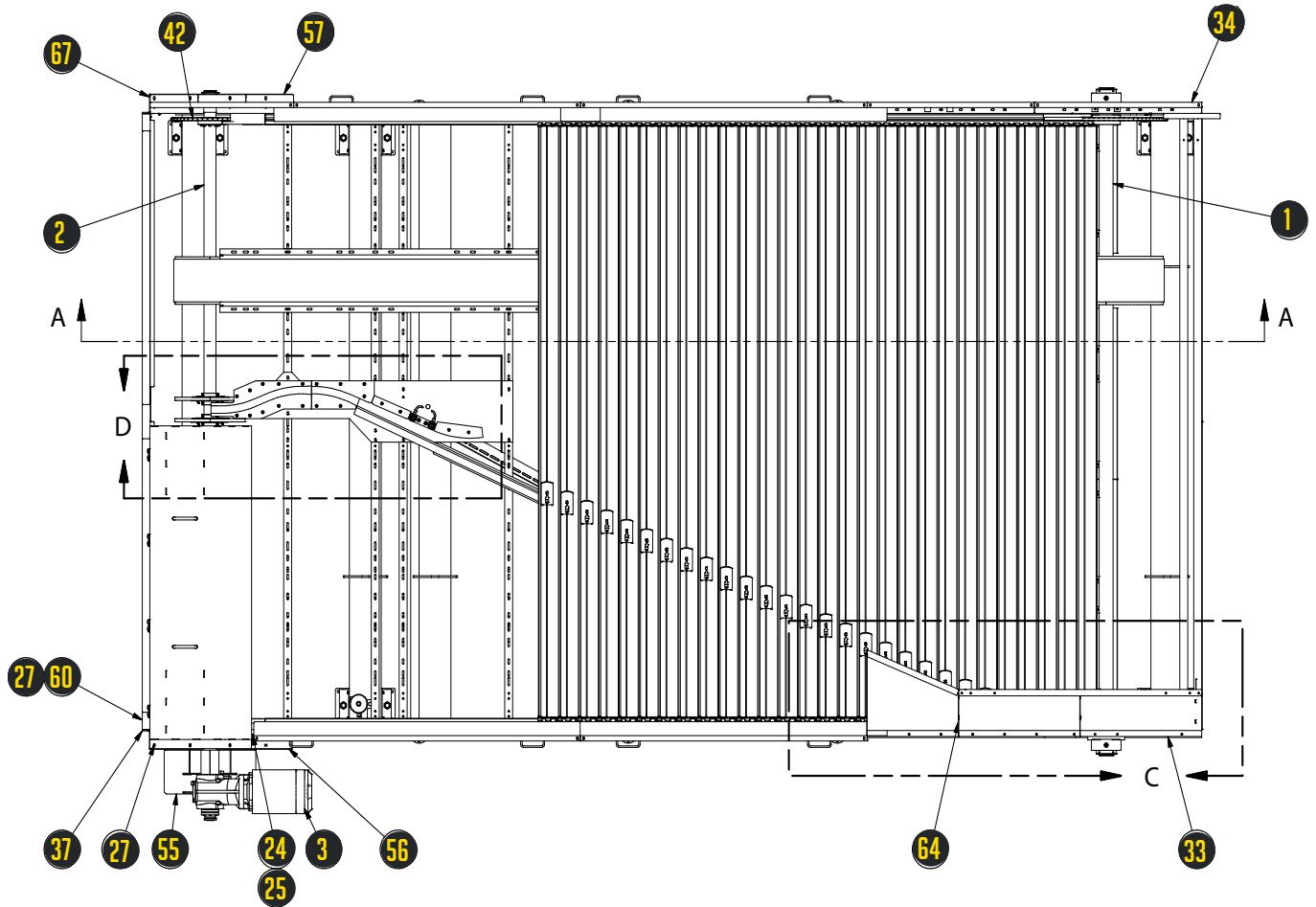


FIGURE 24F

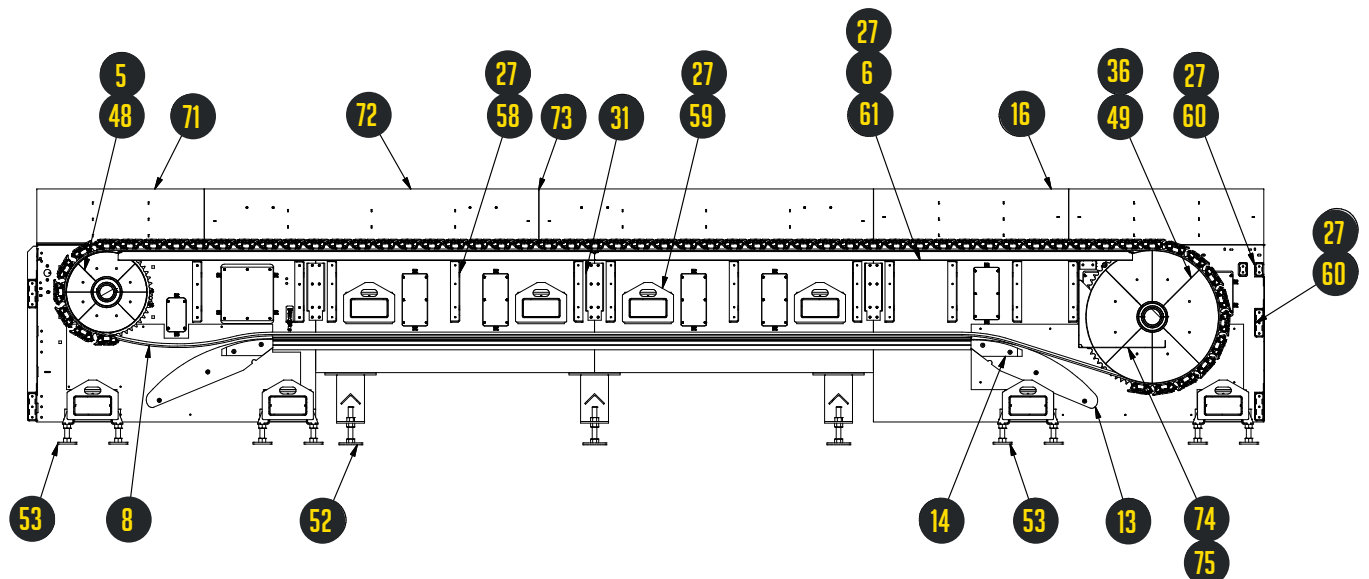


6 PARTS DRAWINGS

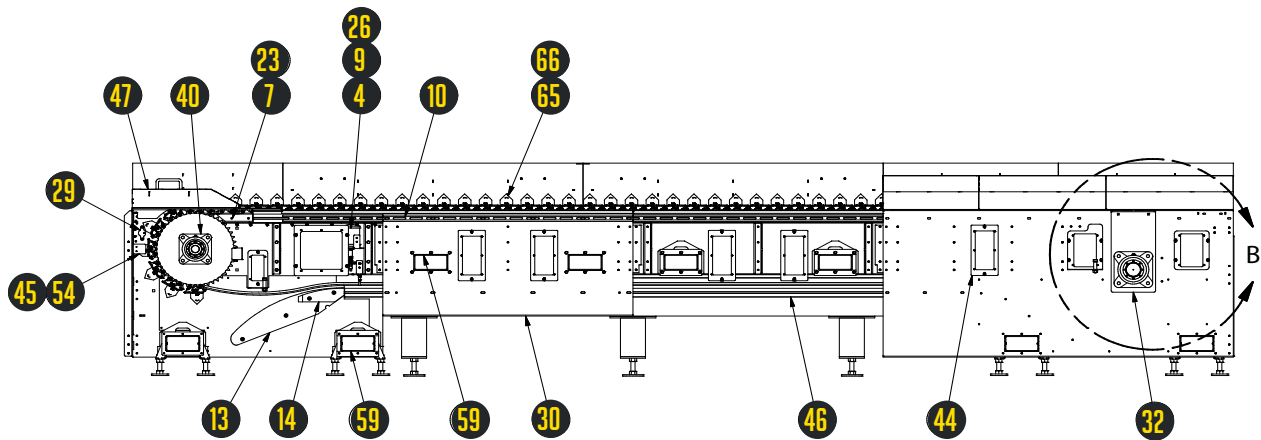
6.1 LPM TOP VIEW



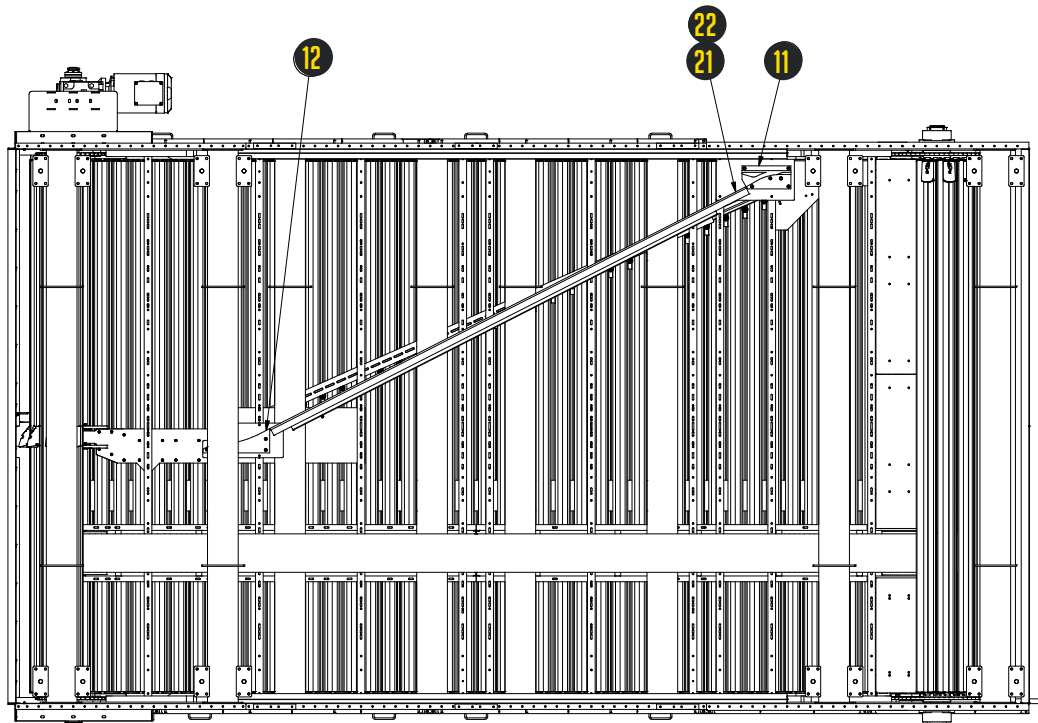
6.2 SECTION A VIEW



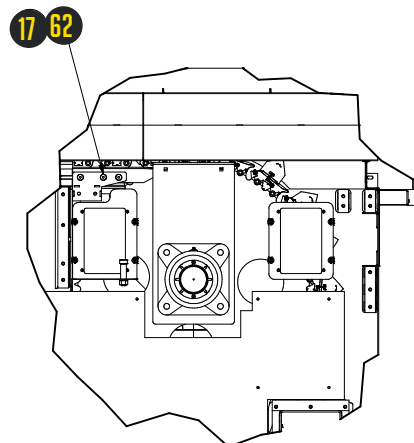
6.3 LPM SIDE VIEW



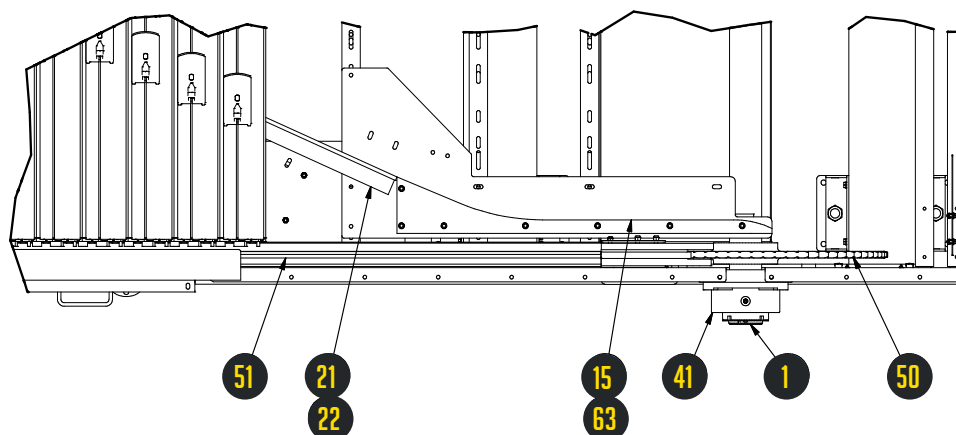
6.4 LPM BOTTOM VIEW



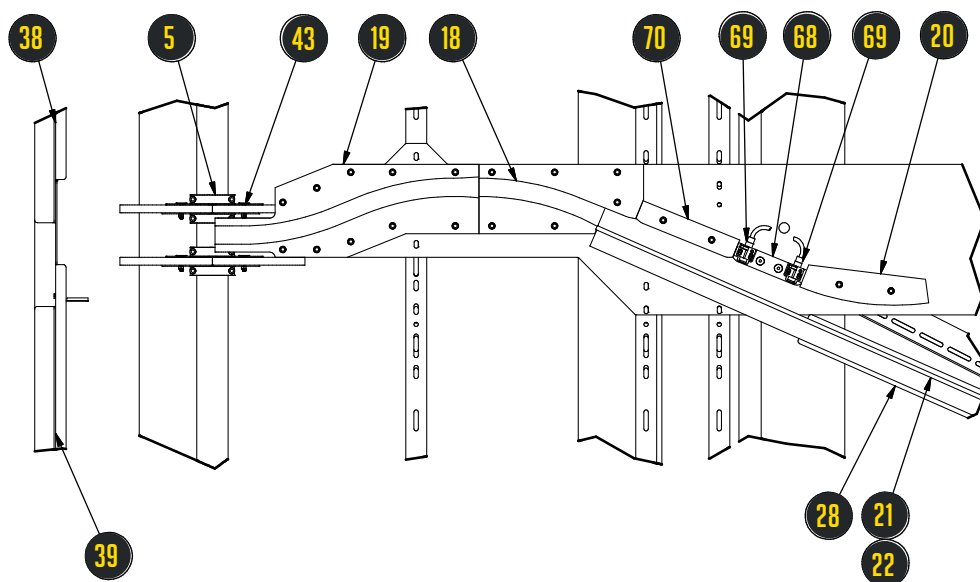
6.5 DETAIL B VIEW



6.6 DETAIL C VIEW



6.7 DETAIL D VIEW



6.8 RECOMMENDED SPARE PARTS

Shoe Pin - PSLP
Shoe Pad - PSLP
Loctite - #401, .70 Oz Bottle
Nylon Shoulder Washer
Bearing - Single Row Radial
Connector Link-#100XLO With 1.75lg D1
#6-32 X 3/4"LG Flat Hd Thrd Cutting Screw
BRG Profile-Novitane Belt,3/16"Thick

6.9 LPM PARTS LIST

ITEM #	DESCRIPTION
1	Tail Shaft
2	Drive Shaft
3	Gearmotor
4	Shank Oil Brush W/Flow-Adjustable Valve Flat
5	Shaft Collar - Drive
6	Wearstrip (Passive Belt)
7	Chain Guide Support Block, Drive
8	Passive Belt
9	Lubricator
10	Spur Mounting Channel
11	Bottom Y-Block
12	Return Sweep Block
13	Catenary Block
14	Catenary Bearing Transition Block
15	Infeed Sweep Block Assembly
16	Chain Guide Support Block, Tail
17	Chain Guide Support Block - Tail Sprocket
18	Kick Feed Block
19	Divert Kick Block
20	Front Kick Feed Block
21	Aluminum Divert Rail
22	UHMW C-Channel
23	Chain Block Reinforcing Strap, Drive
24	Belt Brush
25	Belt Brush Holder
26	Oiler Brush Bracket
27	Vibration Pad
28	Top Stiffener Plate - Brush
29	Prox Access Guard Plate
30	Intermediate Side Channel
31	Splice Channel
32	Bearing Spacer Angle
33	Infeed Tail Side Channel Left Hand
34	Infeed Tail Side Channel Right Hand
35	Induct End Cover
36	Shaft Collar - Infeed
37	C-Brace Mounting Angle, Left Hand
38	Drive End Guard, Divert
39	Drive End Guard, Non-Divert

40	4-Bolt Bearing - Drive
41	4-Bolt Bearing - Tail
42	Sprocket - Drive
43	Cushion Disk Assembly
44	Cover Plate Assembly - Lexan
45	Drive Assembly Photo-Eye Kit
46	Bottom Chain Guide Assembly
47	Discharge Cover
48	Passive Belt V-Groove Pulley Assy - Drive
49	Passive Belt V-Groove Pulley Assy - Tail
50	Sprocket - Tail
51	Top Chain Guide Assembly
52	Support Assembly - Intermediate
53	Support Assembly - Drive/Infeed
54	Reflector Mounting Kit
55	Torque Arm Weldment
56	Drive Side Chnl Weld - Left Hand
57	Drive Side Chnl Weld - Right Hand
58	Bed Spacer Weldment
59	Fork Lift Pocket Weldment
60	Cross Member Weldment - Drive End
61	Passive Belt V-Groove Bed Weldment
62	Chain Guide Mounting Bracket, Tail
63	Sweep Block Brace Weld
64	Tail Shoe Cover Weldment
65	Slat
66	Chain
67	C-Brace Mounting Angle, Right Hand
68	Missing Bearing Prox Block
69	Missing Bearing Prox
70	Kick Guide Bar
71	Guard Rail
72	Guard Rail With Chain Cover
73	Guard Rail Connector Strap
74	Fod Pan
75	Fod Pan Gusset

7 TROUBLESHOOTING

Trouble	Cause	Solution
Conveyor will not start or shuts off automatically during operation.	<ol style="list-style-type: none"> 1. Jam eye blocked. 2. Tripped internal safety switch. 3. Transition rollers pushed out of position. 4. Photo-eye misadjusted or defective. 5. Low air pressure. <ol style="list-style-type: none"> a. Regulator set low. b. Air line restricted or broken. c. Air filter clogged. d. Compressor problem. e. Lockout closed. 6. Electrical circuits. 7. Variable speed drive misadjusted or defective. 8. Drive motor defective. 	<ol style="list-style-type: none"> 1. Unblock jam eye. 2. Determine cause of tripping (foreign debris, mislocated divert shoes, etc.) and correct the problem. 3. Determine reason for rollers shifting, correct problem and set to home position. 4. Adjust or replace photo-eye (Figure 5). 5. Determine reason for low air pressure and correct problem. <ul style="list-style-type: none"> • See Cause 5a through 5e for common causes. 6. Check power and wiring. 7. Refer to variable speed drive manufacturer's manual for troubleshooting. 8. Replace motor.
Conveyor takes long time to reach speed or conveyor jerks when starting.	<ol style="list-style-type: none"> 1. Variable speed drive misadjusted or defective. 	<ol style="list-style-type: none"> 1. Refer to variable speed drive manufacturer's manual for troubleshooting.

8 PREVENTIVE MAINTENANCE

8.1 PREVENTIVE MAINTENANCE CHECKLIST

The following is a general maintenance checklist which covers the major components of your conveyor. This will be helpful in establishing a standard maintenance schedule.

Note: Check set screw for proper torque value after the first 24 hours of operation.

Component	Suggest Action	Schedule		
		Weekly	Monthly	Quarterly
Motor	Check Noise			
	Check Temperature			
	Check Mounting Bolts			
Reducer	Check Noise			
	Check Temperature			
	Check Oil Level			
Carrying Chains	Check Tension			
	Lubricate			
Carrying Chains Sprockets	Check Alignment with Chain Guards			
Slat/Shoe Assemblies	Check Physical Condition			
	Check Operation			
Carrying Chain Guides	Check for Wear			
Chain Oiler	Check Oil Level			
Structural	General Check: Check All Loose Bolts, etc. Tightened			
Divert Blocks	Check Physical Condition			
Divert Angles	Check Physical Condition			

- **Carrying Chains:** Check lubrication. Chains will appear moist when properly lubricated.
- **Slat/Shoe Assemblies:** Check physical condition of slats and shoes. Replace any damaged slat/shoe assemblies. Check operation. Slats should be clean and straight. Shoes should slide freely on slats. Remedy cause of any binding. Slats may be cleaned by wiping with de-greaser type solvent such as a denatured alcohol.
- **Divert Angles:** Check for any bent areas. Check for loose or missing wear strip. Replace as needed.



Need Assistance?
Contact Us

Hytrol Customer Care:

1-844-449-8765

wecare@hytrol.com

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