



LINE SHAFT CONVEYOR MAINTENANCE MANUAL



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Section 1: Safety Considerations

*****Users are responsible for safe operation of equipment. Adhere to local health and safety regulations before using any equipment. The responsibility of safety and safe operation of the equipment lies with the user, not Rolmaster. Consulting a professional engineer or safety engineer to review local regulations is advised. Please recognize all warning stickers and do not remove labels. All personnel involved with the operation of conveyor equipment should remain aware of hazards and risks while the conveyor is in use. Use with caution and adhere to safety standards to avoid injury or death*****

WARNING: DO NOT PREFORM MAINTENANCE ON ANY CONVEYOR UNLESS LOCKED OUT

General Safety



To reduce the risk of injury, strict adherence to local health and safety regulations is required. Do not remove safety labels from equipment.



Only trained and experienced personnel should perform inspections and maintenance on the conveyor.



Never conduct maintenance tasks while the conveyor is operating.



Always be vigilant for potential hazards such as sharp edges or protruding parts while operating.



Use the conveyor solely for its intended purpose.



Do not operate the conveyor unless it is properly anchored, stable, and level.



Under no circumstances should personnel ride the conveyor

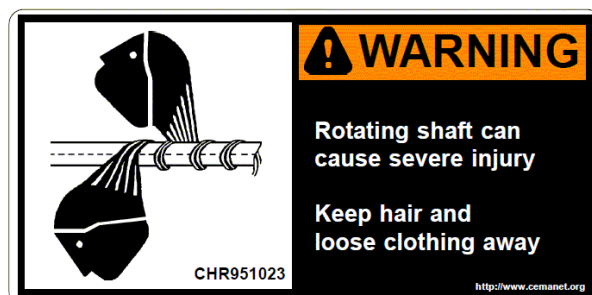
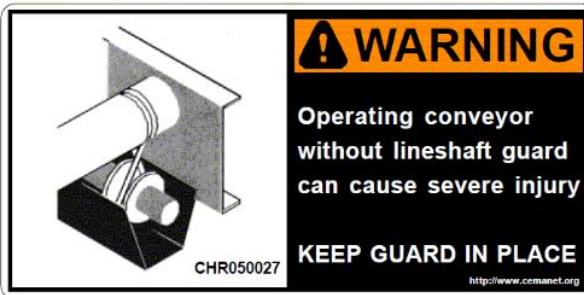
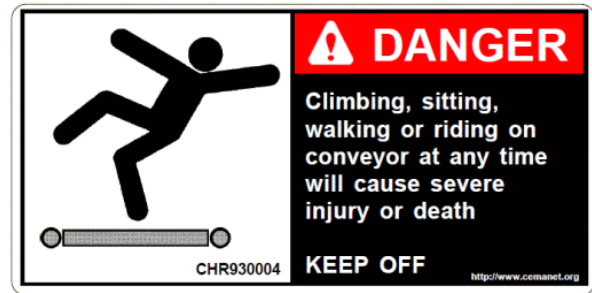


Conduct regular, scheduled perimeter checks to assess its condition. Promptly report abnormal behaviors, sounds or observations detected during observation.

- Refer to Section 2 (Maintenance and Inspection Schedule)

Warnings and Labels

Safety labels remind personnel about the potential hazards and risks in the workplace. It is important to inspect equipment for proper safety labels, and positioning to ensure that all personnel are aware of and obey these warnings. The following section contains various safety labels that may be found on your equipment.



Section 2: Maintenance

Tools Required

Tools required to perform maintenance on line shaft conveyors include:

1. **Wrenches or socket sets**
2. **Straight Edge**
3. **Pliers** (Needle Nose)
4. **Allen Keys**
5. **Cleaning Products**
6. **Lubricant** (refer to page 6)
7. **Personal Protective Equipment** (PPE)

Maintenance Inspection

Line shaft Conveyors require periodic maintenance to ensure the longevity of the conveyor. Regular inspections for performance, damage, lubrication, hardware, and debris are suggested. Routine inspections for preventative maintenance should be conducted to ensure all parts function properly. Replace damaged parts immediately to avoid further wear.

Maintenance and Inspection Schedule

ITEM	INTERVAL	REQUIRED MAINTENANCE
Drive Bands	Weekly	<ul style="list-style-type: none"> • Ensure the band is properly aligned • Inspect for signs of wear or damage • Clean bands from debris, dust, dirt, oil etc.
Drive Chain	Monthly	<ul style="list-style-type: none"> • Check chain tension and alignment • Lubricate chain if needed • Inspect for wear, or damage
Gear Motor	Weekly	<ul style="list-style-type: none"> • Listen for irregular noises • Check for overheating. • Check for signs of wear and damage.
	Monthly	<ul style="list-style-type: none"> • Check mounting bolts are secure. • Check electrical conduit for damage, corrosion, blockage, and loose connection.
Hardware	Monthly and during installation	<ul style="list-style-type: none"> • Check all fasteners are in place.

		<ul style="list-style-type: none"> • Ensure hardware is properly tightened and not missing.
Line Shaft	Monthly	<ul style="list-style-type: none"> • Remove debris built up in line shaft guard • Inspect shaft for wear or damage • Listen for any unusual noises or vibrations • Check alignment • Check that line shaft bearings are turning
Rollers	Weekly	<ul style="list-style-type: none"> • Check for unusual sounds. • Ensure all rollers are intact and rolling freely. • Look for signs of visual wear. i.e. dents, nicks, cuts, lodged or stuck components. • Clean roller surface to remove built up debris.
	Monthly	<ul style="list-style-type: none"> • Examine rollers while in operation. • Check for unusual noises or malformities. • Inspect conveyor and rollers for loose components.
Spool	Quarterly	<ul style="list-style-type: none"> • Inspect for signs of wear • Replace any worn or broken spools
Supports	Monthly	<ul style="list-style-type: none"> • Check hardware, tighten as necessary. • Check for damage.

Suggested lubrication

Only high-quality oil should be used to lubricate the roller chain. Neither heavy oil nor grease is suitable. The viscosity of the oil used will depend on the chain size, chain speed and ambient temperature. For the longevity of chains, a consistent film of oil is recommended.

- Over-lubrication can damage seals and result in premature failure from contamination due the inability of damaged seals to keep foreign material out of the bearing.
- There is no need for lubricating roller bearings, Rolmaster line shaft roller bearings are sealed and not re-greaseable.

	TEMPERATURE			
CHAIN NUMBER	14°– 32° F	32° – 104° F	104° – 122° F	122° – 140° F
RS50 or less	SAE 10	SAE 20	SAE 30	SAE 40
RS60 and RS80	SAE 20	SAE 30	SAE 40	SAE 50
RS100				
RS 120 or more	SAE 30	SAE 40	SAE 50	

* Generic chain lubrication list only – use oil tailored to the conveyors operating range and conditions.

Rolmaster recommended torque

Nominal Size (in) or Basic Screw Dia.	Threads per inch	Recommended Tightening Torque
#8	32	45-50 in-lbs
#10	24	65-70 in-lbs
1/4	20	7.5-8.4 ft-lbs
5/16	18	16.5-17.5 ft-lbs
3/8	16	28-31 ft-lbs
7/16	14	45-49 ft-lbs
1/2	13	70-75 ft-lbs
9/16	12	105-110 ft-lbs
5/8	11	145-150 ft-lbs

* Rolmaster Standard hardware is Grade 5 zinc plated

Maintenance Procedures

Bands (Line shaft Belts)

Drive Band

Rolmaster recommends the purchase of quick-connect bands as a maintenance tool. In the event of an LSB Drive band breaking, we recommend using quick-connect bands as a temporary solution. Please note that these bands are not intended for long-term use.

Installing a Quick Connect Band

- Turn off and lock out power to the conveyor.
- Remove the damaged band. Cutting the band may be necessary to remove.
- Remove the roller (see pg. 10: Removing rollers)
- Wrap the quick-connect band around the desired spool and connect both ends of the band together.
- With the band wrapped around the spool, follow the same procedure as replacing rollers to situate the band on the shaft (see pg. 10: Removing rollers).
 - Ensure the band's orientation matches that of the adjacent rollers. This alignment guarantees that all rollers will rotate in the same direction.

- Ensure the band is properly seated in the grooves of the spools and correctly aligned.
 - If the band needs to be tightened or loosened, twist the band accordingly.
 - The belt should be tight enough to avoid slipping, but not so tight that it causes excessive wear.

Part No.	Description
LSB - 22	Black, High tension quick connect twisted band
LSB - 23	Clear, Regular tension quick connect twisted band

Coupler (Slave) Band

Quick connect bands are not suitable replacements for coupler (slave) bands. For a smoother replacement process, it is advisable to purchase extra coupler bands along with the conveyor. In the event of a coupler band breaking, please contact a sales representative to order new bands.

1. Removing a Coupler Band

- Turn off and lock out power to the conveyor.
- Remove the damaged band. Cutting the band may be necessary to remove.
- Remove the necessary rollers. Begin by applying pressure to the spring-loaded end of the axle, opposite to the drive bands.
- Push the axle through its hex hole while lifting this end of the roller. At the same time, slide the drive band off the other end of the roller.
- With the drive band off, remove the roller out of the frame.

2. Installing a Coupler band

- Slide the Coupler band onto both rollers, and seat it in its groove.
- Re-install rollers. (refer to pg.10: Installing rollers)
- Restore power to the conveyor.

Drive Chain

1. Removing a Chain

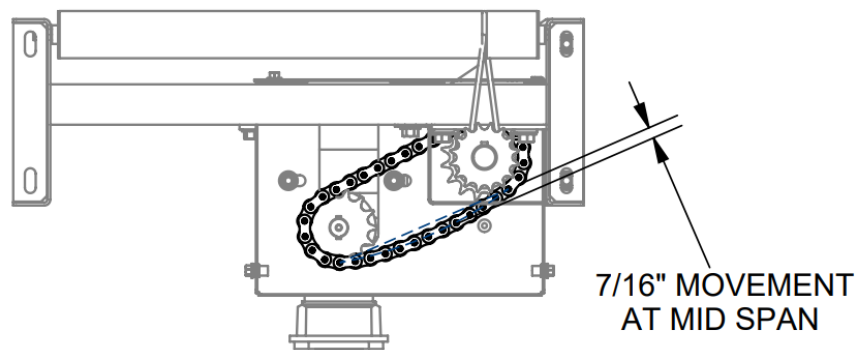
- Turn off and lock out the power supply to the conveyor.
- Remove any protective guards restricting access to the drive chain.

- Loosen the motor mount bolts secured to crossmember. Slide gearmotor towards driveshaft to release tension on the chain.
 - Accurate measurement is crucial when positioning drive sprockets to ensure the drive chain and sprockets are properly aligned and square within the unit.
 - To ensure chain and sprockets are squared, measure each corner of the drive mount plate to the frame. Measurements from each corner should be the same.
- Remove the master link, connecting clip and backing plate. Then remove the chain from the sprockets.
- Remove the chain.

2. Installing a Chain

- Ensure there is no damage to sprockets and other components. Confirm that sprockets are aligned.
- Place the new drive chain onto the sprockets, and connect each end using the master link, backing plate, and connecting clip.
- Adjust the tension. Tension until the slack is roughly 7/16” of movement at the midspan (4% slack).
- Verify the drive chain is correctly aligned.
- Replace the guards.

RECOMMENDED CHAIN TENSION



Line shaft

Replacing a line shaft is an extensive process involving numerous steps and the removal of many conveyor components. If a shaft requires replacing or maintenance, consult a maintenance professional or contact a Rolmaster sales representative for a replacement conveyor section.

Rollers

For extended life, inspect rollers for wear and damage as per the maintenance and inspection schedule. Replace worn or damaged rollers immediately to ensure the longevity of your conveyor. Damaged rollers may cause excessive load on adjacent and other rollers in the unit.

Spring Loaded Rollers

1. Removing a Spring Loaded Roller

- Turn off and lock out power to the conveyor
- Begin by applying pressure to the spring-loaded end of the axle, opposite to the drive bands.
- Push the axle through its hex hole while lifting this end of the roller. At the same time, slide the drive band off the other end of the roller.
- With the drive band off, remove the roller out of the frame.
- Remove the entire roller by pulling the other end out of the frame, and the band.

2. Installing a Spring Loaded Roller

- Begin the installation by fitting the band onto its grooves and inserting the fixed end of the roller into its designated hex hole.
 - To ensure proper operation, make sure the drive band is routed correctly. Twist the band to match the configuration of the others, then slide it onto the roller. If the twist does not match, the roller will turn in the opposite direction.
- Position the fixed end and apply pressure to the spring-loaded end, lowering it into the corresponding hex hole.
- Release tension when the spring-loaded end contacts the frame. If needed, use a flat object to assist in positioning the roller.
- Ensure the roller is properly situated in the frame and the band is routed correctly.
- Restore power to the conveyor.

****Contact our sales department for replacement rollers****

Spools

Rolmaster recommends the purchase of split spools as a maintenance tool. In the event of a spool breaking or becoming faulty, we recommend using split spools as a temporary solution. To install a split spool in place of the broken one, follow these steps:

- Turn off and lock out power to the conveyor.
- Remove bottom line shaft guard to gain access to shaft from below.
- Remove the damaged spool. This may require breaking it off.
- Place both sides of the spool around the drive shaft and snap in place.
- Ensure the spool is properly seated on the drive shaft. Re-position clips against spool to hold position under roller
- Reinstall drive band on to spool
- Replace bottom line shaft guards
- Restore power to the conveyor.

Part No.	Description
LS-02	1" ID Split Line Shaft Spool (red)

Section 3: Troubleshooting

PROBLEM	POSSIBLE CAUSE	RECOMMENDED ACTION
Conveyor does not start up / motor stalls on startup	Physical obstruction	<ul style="list-style-type: none"> • Check for obstructions that may prevent the conveyor from starting
	Emergency stop button engaged	<ul style="list-style-type: none"> • Confirm the cause of the emergency stop. If the issue has been resolved, deactivate the Emergency Stop
	Motor is overloaded	<ul style="list-style-type: none"> • Contact a qualified technician or electrician • Reduce the load
Grinding / Loud noise	Lack of chain lubrication on drive	<ul style="list-style-type: none"> • Add lubricant as needed
	Defective Line shaft bearing	<ul style="list-style-type: none"> • Replace bearing
	Defective Line shaft roller bearing	<ul style="list-style-type: none"> • Replace roller
Motor Overheating	Excessive overload	<ul style="list-style-type: none"> • Reduce the conveyor load • Upgrade to a higher-powered motor
	Inadequate ventilation or cooling	<ul style="list-style-type: none"> • Ensure motor has proper ventilation
Product does not progress on conveyor	Poor product bottom	<ul style="list-style-type: none"> • Improve product structure or convey ability
	Rollers seized or warped	<ul style="list-style-type: none"> • Replace damaged rollers
	Overstretched bands	<ul style="list-style-type: none"> • Replace damaged bands
	Obstruction of bands or rollers	<ul style="list-style-type: none"> • Remove/clean rollers and band from obstructions
	Contaminant on shaft	<ul style="list-style-type: none"> • Clean shaft
	Contaminant on rollers and bands	<ul style="list-style-type: none"> • Clean rollers and bands
	Product too heavy	<ul style="list-style-type: none"> • Reduce load
Product falls/slides off the conveyor	Conveyor is not level	<ul style="list-style-type: none"> • Level the top of the rollers surface using conveyor supports
Product bouncing	Roller c-c (center to center) is too large	<ul style="list-style-type: none"> • Add rollers if possible. • Replace with a new conveyor at appropriate C-C • Consider the use of a slip sheet
Roller does not turn	Overstretched bands	<ul style="list-style-type: none"> • Replace damaged bands

Roller does not turn (Continued)	Roller seized	<ul style="list-style-type: none"> • Replace damaged roller(s)
	Obstruction of band	<ul style="list-style-type: none"> • Ensure bands are not rubbing on crossmembers

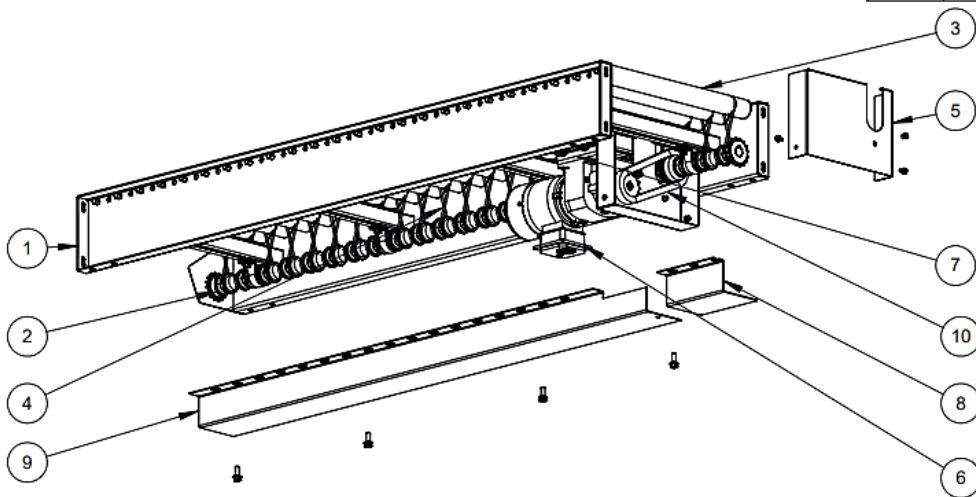
*Some issues may not have a listed solution. For unresolved problems, please consult a maintenance professional or contact a Rolmaster sales representative.

Section 4: Replacement Parts

Replacement Parts

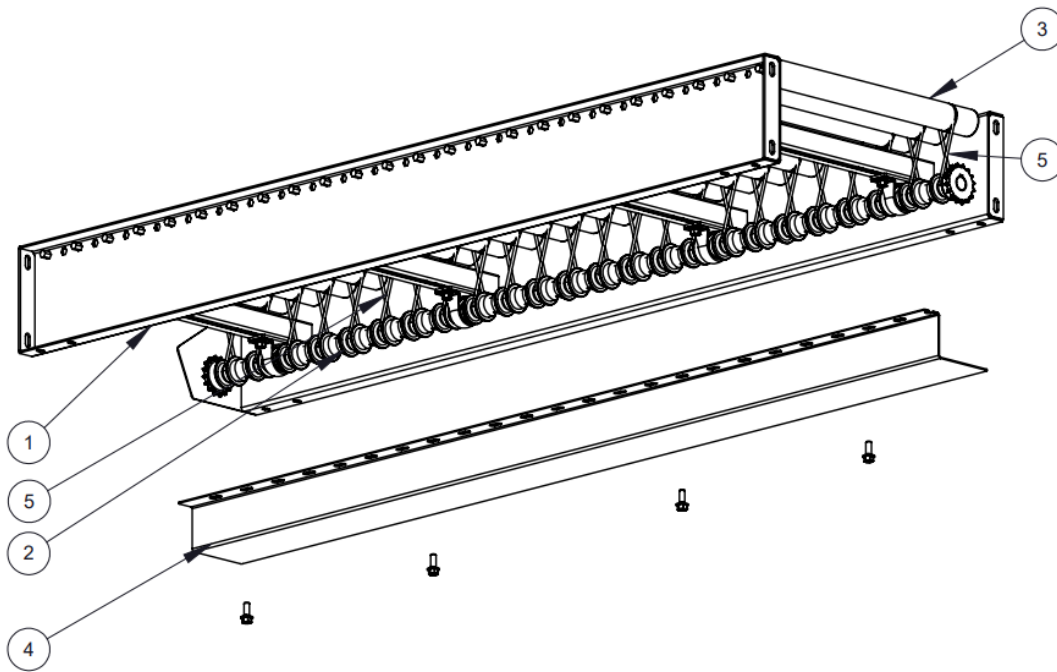
Straight Drive Section

ITEM	DESCRIPTION
1	LINESHAFT FRAME WELDMENT
2	DRESSED 1" LINESHAFT ASSEMBLY
3	LINESHAFT ROLLER
4	DRIVE BAND
5	CHAIN GUARD COVER
6	GEARMOTOR
7	LINESHAFT MOTOR MOUNT
8	SHAFT GUARD 1
9	SHAFT GUARD 2
10	DRIVE CHAIN



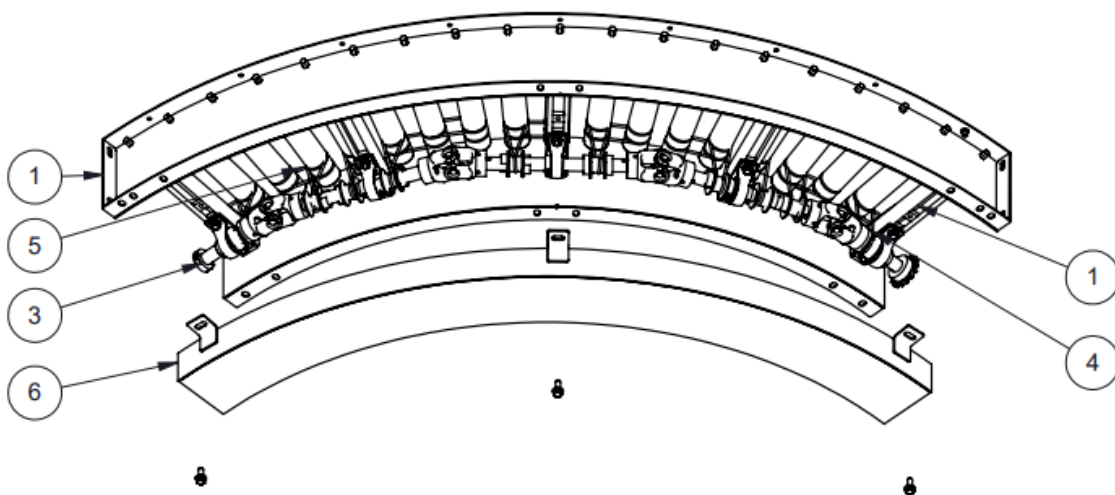
Straight Intermediate Section

ITEM	DESCRIPTION
1	LINESHAFT FRAME WELDMENT
2	DRESSED 1" LINESHAFT ASSEMBLY
3	LINESHAFT ROLLER
4	SHAFT GUARD
5	DRIVE BAND



Curve Intermediate section

ITEM	DESCRIPTION
1	LINESHAFT FRAME WELDMENT
2	LINESHAFT ROLLER
3	DRESSED 1" LINESHAFT ASSEMBLY
4	DRIVE BAND
5	COUPLER BAND
6	SHAFT GUARD



Ordering Replacement Parts

When ordering replacement parts please reach out to our sales team directly. To streamline the ordering process, ensure you have/know the project number. This will allow our sales team to quickly find and identify the required parts.