



INSTRUCTION MANUAL FOR MODEL

## **PIN CONVEYOR**



## **TABLE OF CONTENTS**

<b>1. OPERATION</b>	<b>3</b>
1. START AND STOP INSTRUCTIONS	3
<b>2. PREVENTIVE MAINTENANCE</b>	<b>4-6</b>
2. PREVENTIVE MAINTENANCE	4
2.1 DRIVE CHAIN	5
2.2 GEAR BOX	6
2.3 MOTOR	7

# INSTRUCTION MANUAL FOR MODEL PIN CONVEYOR SYSTEMS

## 1. OPERATION

### 1.1. START AND STOP INSTRUCTIONS

1. Make sure no obstructions to the chains on the pin conveyor.



2. Check the load ends of the pin conveyor to make sure there are no trays in the path of the flights
3. Push the green start button. (Wait about 5 seconds before pressing this button after you turn the main disconnect on).
4. To shut down the system press and hold the start button until it starts to flash. This engages the "10 min Shut down Cycle". The controls will run all conveyors except the tray drop pin conveyors to ensure the system is empty of trays.

## 2. PREVENTIVE MAINTENANCE

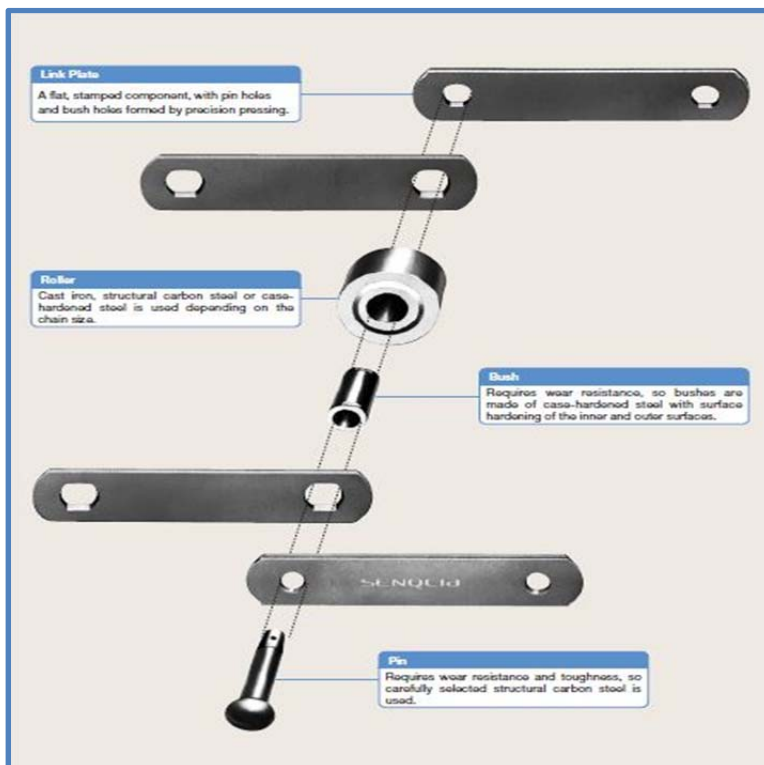
Conveyor chain may break when an excessive load is placed on them. Be sure to use conveyor only within its proper load capacity. Moreover use of pin conveyors in alkaline or acidic surroundings can cause brittle fracture.

Every month the conveyor should be inspected and the damaged pins should be replaced immediately. To perform an inspection, run the conveyor slowly for one complete revolution and observe it for any damage or misalignment. An ideal way is putting a tape mark on the pin to recognize the starting position. Remove the chains which are damaged.

1. Make sure the main power supply is switched off before starting maintenance and inspection work, and take precautions to prevent anyone from switching it on.
2. The lifespan of a conveyor chains may vary enormously depending on whether they receive proper maintenance and lubrication. Wear extension can cause the chain to ride off the sprocket, or to break, so practice appropriate maintenance and lubrication.
3. Chains and sprockets are consumable parts. As such, they require proper periodic maintenance and replacement. Avoid replacing only part of a chain. Replace the chain as a whole.

### **Conveyor Chain Structure**

Conveyor chains comprise components such as link plates, pin, bushes and rollers. The image below is a standard conveyor chain.



## **HANDLING CONVEYORS CHAINS AND SPROCKETS**

- **ATTACHMENT**

Incorrect sprocket attachment can have major impact on the smooth operation of conveyor, and can use eccentric load on the chains, greatly shortening their service life. The general attachment and alignment and alignment procedure is mentioned below:

1. Shaft Horizontally:

Adjust the horizontality of the shaft to  $\pm 0.2^\circ$ , using a level.

2. Shaft Parallelism:

Use a scale, piano wire etc. to adjust the parallelism of the shaft to within  $\pm 1\text{mm}$ .

3. Sprocket alignment:

Use a straight edge to adjust the toothed sides of the pair of sprocket, so that distance between two chains is within the allowable value.

### **2.1 DRIVE CHAIN**

The gearbox coupled to the motor transmits power to the drive sprocket through a stainless steel chain. This chain also stretches and becomes loose over a period of prolonged conveyor operation.

- To adjust the chain slack, loosen the bolt that secures the chain take-up bracket.
- Reposition the bracket and tighten the bolt.
- When this is done make sure that the chain should allow about  $\frac{3}{4}$ " lateral movement.





## 2.2 GEAR BOX

Change oil after first year of operation. Then every year of normal service, Use a turbine type of oil or sae 50 grade oil. The oil viscosity for the particular unit is specified on the metal plate fixed on the gearbox.

- Remove the oil breather located on top of the gearbox and fill with new oil until the specified level is reached.
- Take out the socket headed screw located at the bottom to drain the oil from the gearbox.
- When the oil is drained completely, replace the screw. Replace the oil breather.



### REPLACING GEARBOX

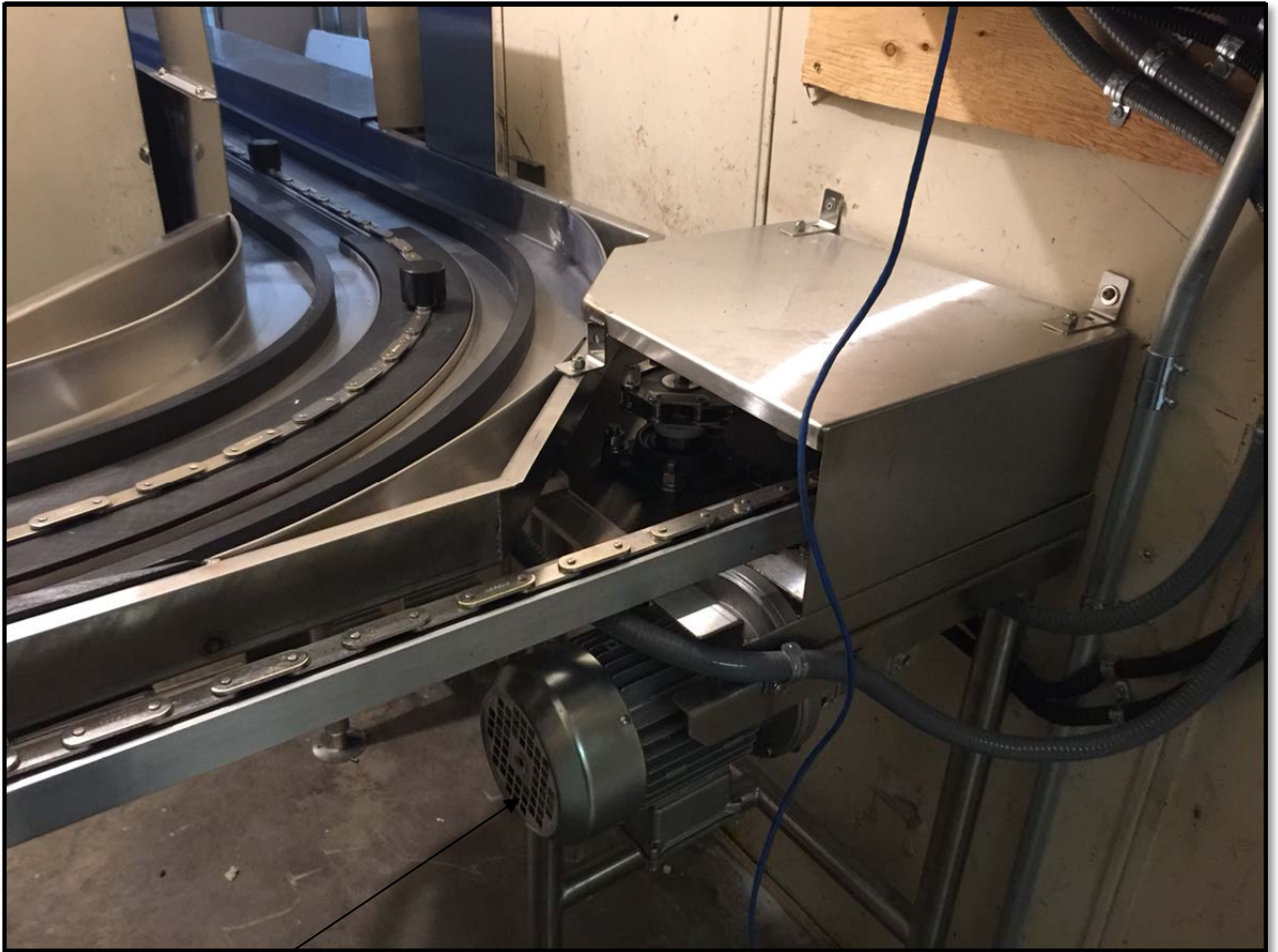
- The first step is to turn off the main power breaker to the system.
- Loosen the bolt that secures the chain take up bracket, to release the tension on the drive chain. When chain becomes loose remove it from the sprocket mounted on the gearbox.
- Remove all the bolts connecting the gearbox to the motor.
- Finally remove the bolts which secure the gearbox to the drive unit frame.
- When re-assembling the gear box, go through the same steps but in the reverse order.

## 2.3 MOTOR

The motor has been lubricated for life and hence no lubrication is required. It is located in the drive unit.

### REPLACING DRIVE MOTOR

- Turn off the main power breaker to cut off the supply.
- Remove the cables connecting the motor.
- Remove the bolts that fasten the motor to the gearbox.
- An electrician should do this job.



Motor