

## Power Roll Bed Paint Application Preventive Maintenance

# 

- Before attempting any maintenance on this equipment all involved personnel should follow plant internal regulations along with any state, federal, or province regulations.
- The maintenance inspection, checks, and procedures listed in the preventive maintenance tables are assumed with the gated area electrically locked out.
- Before attempting any maintenance or service operation, make sure that:
  - You do not begin any repair procedure until the proper shutdown procedures and the appropriate power lockout procedures have been applied.
  - o The system is de-energized; main electrical switches are open.

# (i) NOTICE (i)

The maintenance inspection, checks, and procedures listed in the preventive maintenance tables and corrective procedures should be performed when the equipment is immobilized and locked out.

This section contains preventive maintenance schedules with recommended lubrication intervals. Assemblies in this section include:

Power Roll Bed PNT

### **Daily Checks**

#### **Observe**

- Obvious signs of damage to the equipment. Listen to the conveyors an unusual sound like screeching, grinding, or whining, are indicators of a problem.
- Damage or noticeable wear on the carrying and guide rollers.
- Signs of oil leaks on the equipment or on the floor below any gearbox.

#### **Evaluate**

• If you notice any of the above issues, evaluate the cause and the risk involved.

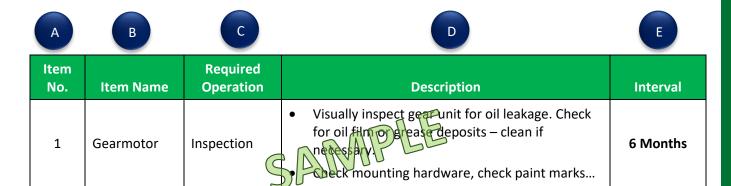
#### Act

Schedule or perform necessary maintenance repairs as appropriate.



## Mechanical Preventive Maintenance - key

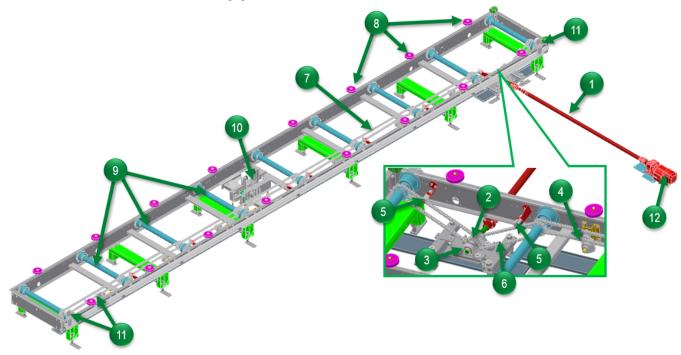
Preventive Maintenance tables consists of:



- A. Indicates the callout number associated on the schematic drawing, image or figure.
- B. Component name within the assembly.
- C. Required preventive maintenance operation i.e., inspection or lubrication.
- D. Detailed description of the operation(s) to be performed.
- E. Recommended frequency of PM task.



## Power Roll Bed Paint Application Preventive Maintenance Items



| Item<br>No. | Item Name               | Required<br>Operation | Description   | Interval |  |
|-------------|-------------------------|-----------------------|---|----------|--|
| 1           | Cardan Shaft            | Inspection            | <ul> <li>Inspect all connections and make sure they are secure, check all paint marks. Retighten as necessary.</li> <li>Inspect shaft and flanges for any cracks or damage, replace if damage is found.</li> </ul>  |          |  |
|             |                         | Lubrication           | <ul> <li>Use a grease gun to apply grease, carefully pump grease into the zerk fitting.</li> <li>Coupling is fully lubricated when you see grease leak from all four seals. Clean off all excess grease.</li> </ul>   | 3 Months |  |
| 2           | Motor Drive<br>Sprocket | Inspection            | Check secure mounting on drive shaft.   |          |  |
| 3           | Pillow Block<br>Bearing | Inspection            | <ul> <li>Check mounting hardware for proper tightness. Look for paint mark alignment on hardware – retighten if necessary.</li> <li>Check for housing damage.</li> <li>Check for binding or sticking in the bearing housing.</li> <li>Check alignment of the shaft between bearings.</li> </ul> | 6 Months |  |



|             |                         |                       |   | AUTOMATION |  |
|-------------|-------------------------|-----------------------|---|------------|--|
| Item<br>No. | Item Name               | Required<br>Operation | Description   | Interval   |  |
| 3           | Pillow Block<br>Bearing | Lubrication           | <ul> <li>Grease directly with grease gun, or manifold if present, carefully pump grease into the zerk fitting.</li> <li>Bearing is fully lubricated when you see grease leak around shaft. Clean off all excess grease.</li> </ul>              | 6 Months   |  |
| 4           | Chain<br>Tensioner      | Inspection            | <ul> <li>Observe for smooth operation.</li> <li>Check for proper alignment with other pulleys and for any broken cogs.</li> </ul>   | 1          |  |
| 5           | Oil Brush               | Inspection            | Check brush heads for damage or wear.     Replace as necessary.   |            |  |
| 6           | Drive Chain             | Inspection            | <ul> <li>Check for sufficient tension, if necessary, adjust the tension.</li> <li>Check for stretched links.</li> </ul>   |            |  |
| 7           | Driven Chain            | Inspection            | <ul> <li>Index the table. Check that chains run freely and without excessive noise.</li> <li>Check for stretched links.</li> </ul>  | 3 Months   |  |
| -           | Drive/Driven<br>Chains  | Lubrication           | <ul> <li>Visually inspect chains for presence of<br/>lubrication. Only apply if appears to be dry.</li> <li>To extend the life of the chain, apply<br/>approved plant lubrication.</li> </ul>   |            |  |
| 8           | Side Guide<br>Rollers   | Inspection            | Check rollers for bearing clearance, damage, and wear. Replace if necessary.  |            |  |
| 9           | Paint Rollers           | Inspection            | <ul> <li>Check rollers for bearing clearance, damage, and wear.</li> <li>Abrasion should not exceed 5 mm on diameter (minimum diameter is 120 mm), unevenness at the surface maximum 3 mm.</li> </ul>   | 6 Months   |  |
| 10          | Positioner              | Inspection            | <ul> <li>Check prox cubes for proper operation and secure mounting.</li> <li>Check clamps for smooth operation.</li> <li>Check cylinder for excessive free play noise or binding.</li> <li>Check that cables are connected securely.</li> </ul> |            |  |



| Item<br>No. | Item Name           | Required<br>Operation | Description   | Interval  |  |
|-------------|---------------------|-----------------------|---|-----------|--|
| 11          | Proximity<br>Switch | Inspection            | Check proximity switches for secure mounting and successful operation.  |           |  |
| 12          | Gearmotor           | Inspection            | Use the oil sight glass or remove the oil level plug to check the level of oil.   | 6 Months  |  |
|             |                     |                       | Check that all electrical connections are secure. If loose, tighten.  |           |  |
|             |                     |                       | Check the electrical connections for evidence of arcing. If evidence of arcing has occurred, replace the damage connection. |           |  |
|             |                     | Lubrication           | Replace the oil in the gearbox after 3 years of use.  | 36 Months |  |



### **Lubrication Requirements - Gearmotor Oil Lubrication**

Gearmotor oil can be determined by reading the attached data plates on each gearmotor. The examples below highlight the location to observe the required oil on the data plates. Do not mix oil grades when adding oil. Refer to the manufacturer's instruction manual for additional service requirements and technical data.

# (i) NOTICE (i)

If you are doing a lubricant drain and refill, gearmotor manufacturers typically recommend that you use the same brand of lubricant originally supplied. If you are refilling the gearbox with a non-compatible lubricant, FATA recommends that you first remove any residual with a petroleum solvent or a hot water wash.

## **△ CAUTION △**

Do not use trichloroethylene as a washing solvent.

Data plates on the gearmotors identify the oil type and quantity that they use.





AGearmotor Data Plate Examples



### **Lubrication Requirements - Grease**

The table below lists the plant approved lubricants to use in conveyor components that need lubrication.

### **Plant Approved Lubrication Chart**

| Lubrication Name                                   | Manufacturer | Conveyor Asset | Application Points |  |  |  |
|--|--------------|----------------|--------------------|--|--|--|
| See complete manual for plant approved lubricants. |              |                |                    |  |  |  |

### **Re-Lubrication Best Practices:**

- Always clean the grease fitting of all dirt before attaching the grease gun. Failure to clean the grease fitting
  before applying grease could result in introducing contaminants into the component resulting in increased
  wear or clogging the grease fitting orifice so as not to allow the entry of grease. Inspect and replace any
  damaged fittings. It is helpful to use grease-fitting caps to keep them clean, but still wipe fittings clean
  before applying grease.
- Always make sure the dispensing nozzle of the grease gun is clean before using. Pump a small amount of
  grease out of the dispensing nozzle, then wipe the nozzle off with a clean rag or lint-free cloth before
  attaching it to the grease fitting.
- Do NOT over lubricate or apply excessive amounts of grease. This could lead to ruptured seals and
  excessive grease outside the fitting, which can attract contaminants and create additional unwanted
  conditions.
- Know that some greases are not compatible with each other. Ensure that the proper grease is used at
  every grease point. Applying the wrong grease can cause an incompatibility problem which can quickly
  cause failures.
- Once relubrication service is complete, clean off old grease and contaminants from the boot, grease/zerk fittings and surrounding components.