D-Lock Lift Table – Maintenance and Service

This section will describe service procedures for major mechanical elements of a D-Lock Lift Table with Power Roll Bed installed.

⚠ WARNING ⚠

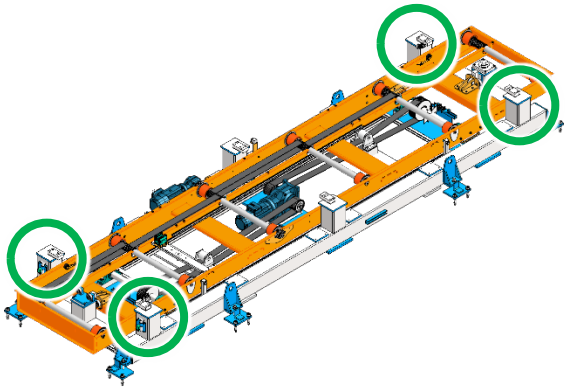
- Only qualified and trained personnel should perform the disassembly and assembly of electrical and mechanical components.
- Before attempting any maintenance on this equipment all involved personnel should follow plant internal regulations along with any state, federal, or province regulations. Do not begin any repair procedure until the proper shutdown procedures and the appropriate power lockout procedures have been applied.

Placing the Lift into the Maintenance Position

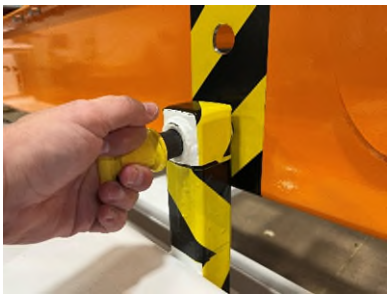
1 Remove any payload from the lift table.

2 Move the lift to the full DOWN or UP position, depending on maintenance requirements.

3 Locate and remove the supplied safety pins (4).



4 Place safety pins in all designated locations to lock lift position.



5 Cut and lock out power to the lift, following plant specific safety procedures.

How to Replace a Lifting Belt

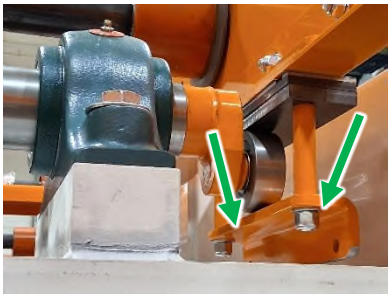
1 Place the lift into the **RAISED** maintenance position per the above section: ***Placing the Lift into the Maintenance Position.***

Lock Out the power to the lift using your plant's safety procedures.

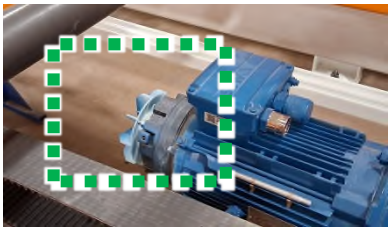
2 Remove safety covers.

3 Remove the bottom nuts and the lower plate of the lifting cam assembly on both sides of the cam shaft.

**Image shown with table in Lowered position*

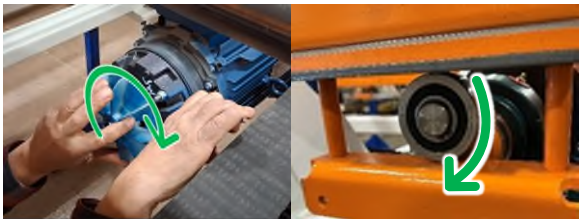


4 Remove the fan cover from the lift motor.



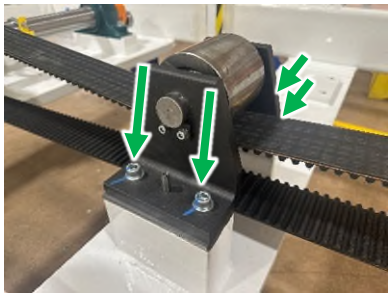
5 Remove the brake pin from the side of the motor and use it to temporarily disengage the brake.

6 Slowly rotate the motor fan to lower the Power Roll Bed onto the Safety Pins and relieve pressure from the cam roller.



7 Re-engage the motor brake and return the pin to its storage location.

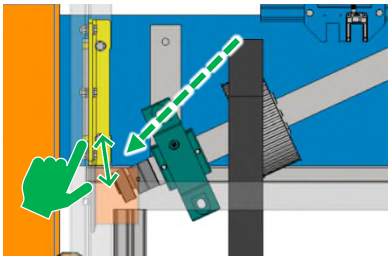
8 Remove belt tensioner by removing the 4 bolts.



9 Remove the lifting belt from the lifting drive pulley.

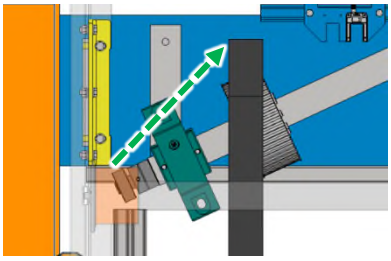
10 Remove the bolts securing both pillow block bearings.

11 Carefully reposition the entire cam shaft assembly until there is enough space to remove the belt. Proceed to remove the belt.



12 Inspect the lift pulley, cam rollers, and the drive pulley for wear and damage. Replace as necessary.

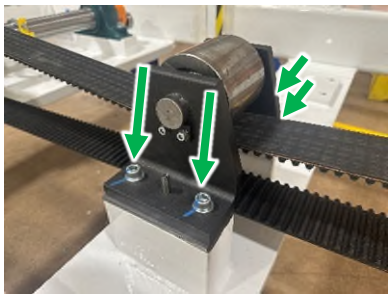
13 Place the new belt into position through the gap.



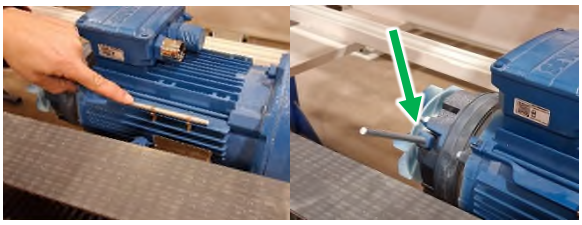
14 Reposition the cam shaft assembly and re-install the bolts on both pillow blocks

15 Place the new lifting belt around lift and drive pulleys.

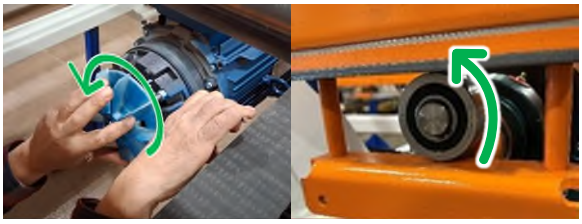
16 Re-install the belt tensioner.



17 Remove the brake pin from the side of the motor and use it to temporarily disengage the brake.



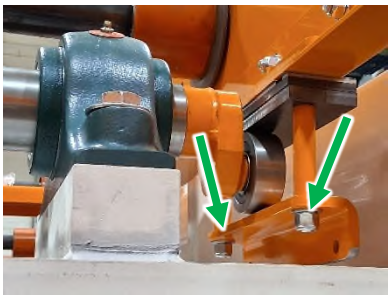
18 Slowly rotate the motor fan to raise the Power Roll Bed back to its highest position, relieving pressure from the Safety Pins.



19 Re-engage the brake, return the pin to its storage location, and replace the motor's fan cover.

20 Re-install the bottom nuts and bottom plate of the lifting cam assembly on both sides of the cam shaft.

**Image shown with table in Lowered position*



21 Restore power to the system and remove the safety pins. Return the safety pins to their designated storage area.

22 Cycle the lift table and observe that the lifting belts are tracking straight and that the table is even all around. Correct if necessary.

23 Lock Out the system again to return safety covers then operate as normal.

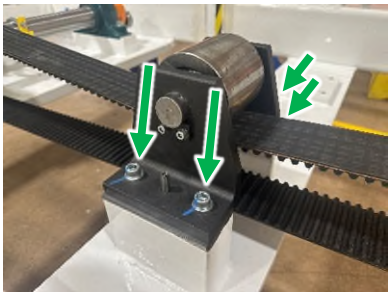
How to Replace a Drive Pulley

1 Place the lift into the **RAISED** maintenance position per the above section: ***Placing the Lift into the Maintenance Position.***

Lock Out the power to the lift using your plant's safety procedures.

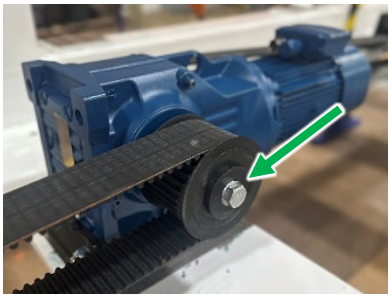
2 Remove safety covers.

3 Remove belt tensioner by removing the 4 bolts.

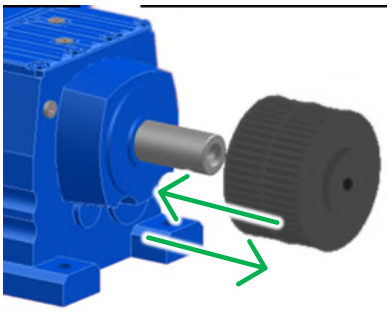


4 Remove the lifting belt from the lifting drive pulley.

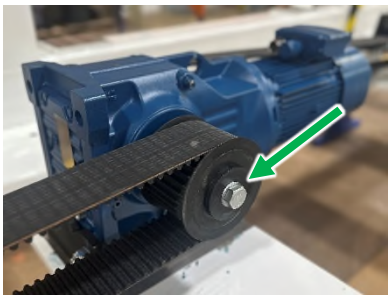
5 Remove the bolt securing the pulley to the drive.



6 Remove and replace the drive pulley on the motor drive shaft.

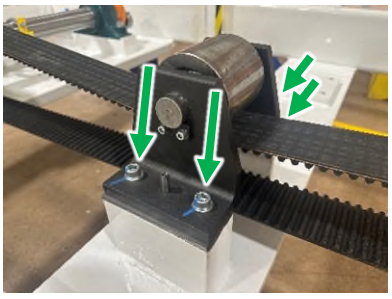


7 Re-install the bolt securing the new pulley to the drive.



8 Place the lifting belt back onto the lifting drive pulley.

9 Re-install the belt tensioner.



10 Repeat steps 3-9 on opposite pulley if replacing both.

11 Restore power to the system and remove the safety pins. Return the safety pins to their designated storage area.

12 Cycle the lift table and observe that the lifting belts are tracking straight and that the table is even all around. Correct if necessary.

13 Lock Out the system again to return safety covers then operate as normal.

How to Replace a Cam Roller

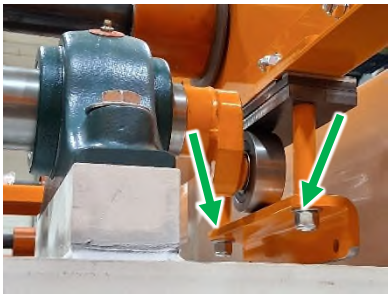
1 Place the lift into the **RAISED** maintenance position per the above section: ***Placing the Lift into the Maintenance Position.***

Lock Out the power to the lift using your plant's safety procedures.

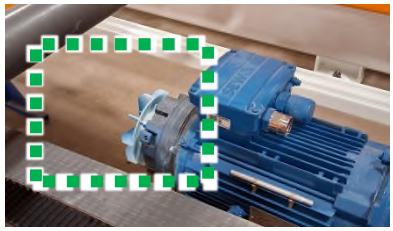
2 Remove safety covers.

3 Remove the bottom nuts and the lower plate of the lifting cam assembly on both sides of the cam shaft.

**Image shown with table in Lowered position*

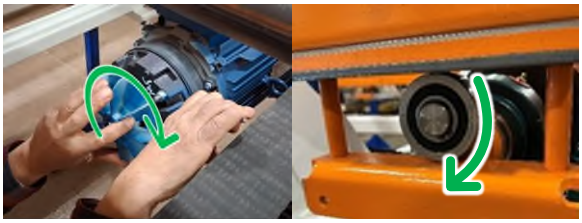


4 Remove the fan cover from the lift motor.

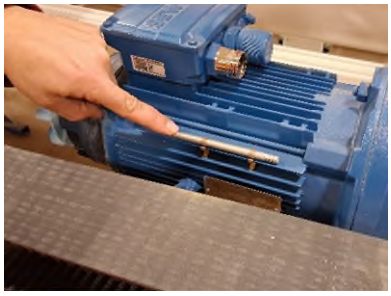


5 Remove the brake pin from the side of the motor and use it to temporarily disengage the brake.

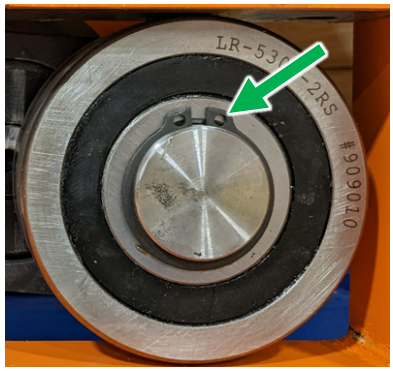
6 Slowly rotate the motor fan to lower the Power Roll Bed onto the Safety Pins and relieve pressure from the cam roller.



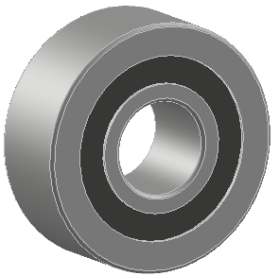
7 Re-engage the motor brake and return the pin to its storage location.



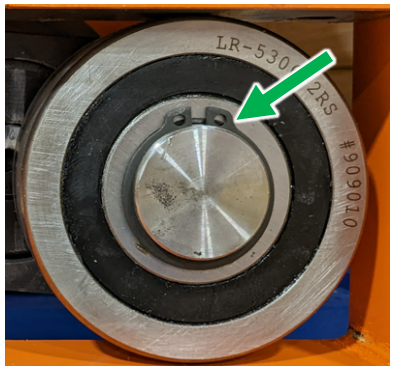
8 Remove the retainer ring from the original cam roller.



9 Remove old cam roller and replace with the new.

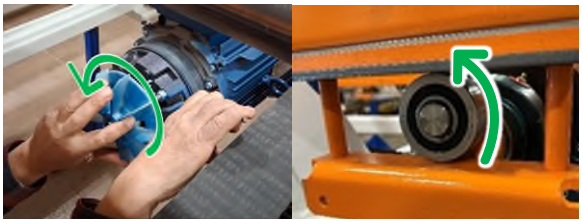


10 Install new retainer ring.



11 Remove the brake pin from the side of the motor and use it to temporarily disengage the brake.

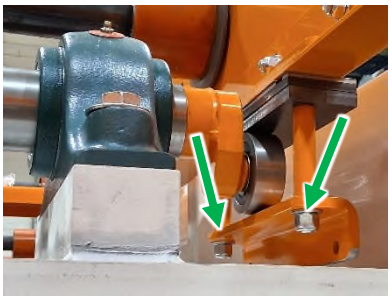
12 Slowly rotate the motor fan to raise the Power Roll Bed back to its highest position, relieving pressure from the Safety Pins.



13 Re-engage the brake, return the pin to its storage location, and replace the motor's fan cover.

14 Re-install the bottom nuts and bottom plate of the lifting cam assembly on both sides of the cam shaft.

**Image shown with table in Lowered position*



15 Restore power to the system and remove the safety pins. Return the safety pins to their designated storage area.

16 Cycle the lift table and observe that the lifting belts are tracking straight and that the table is even all around. Correct if necessary.

17 Lock Out the system again to return safety covers then operate as normal.

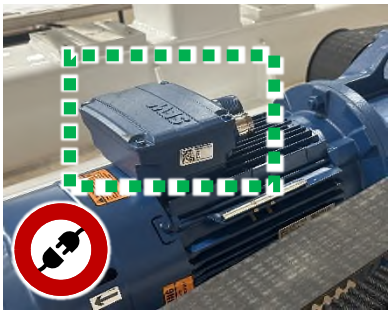
How to Replace the Lift Gearmotor

1. Place the lift into the maintenance position per the above section: ***Placing the Lift into the Maintenance Position.***

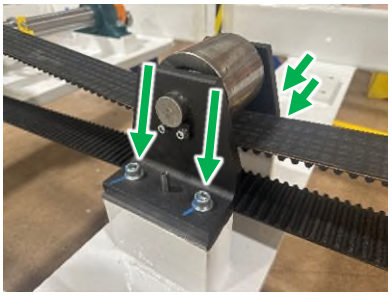
   Lock Out the power to the lift using your plant's safety procedures.

2. Remove safety covers.

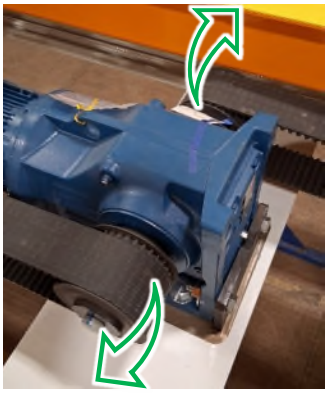
3. Disconnect the cables from the lift motor.



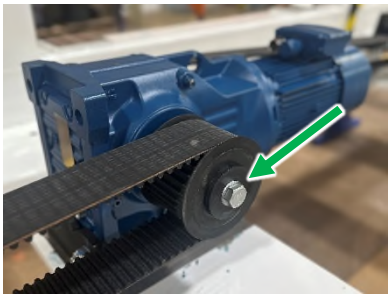
4. Remove both belt tensioners by removing their bolts.



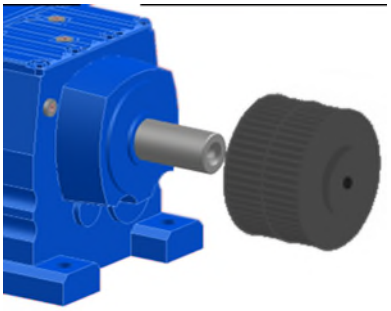
5 Remove both lifting belts from the lifting drive pulleys.



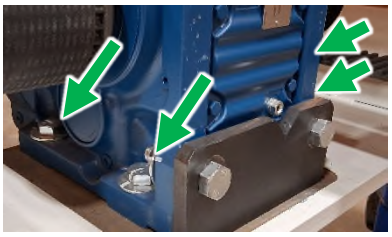
6 Remove the bolts securing both pulleys to the drive.



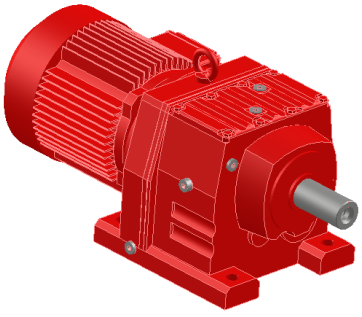
7 Remove both drive pulleys from the motor drive shaft.



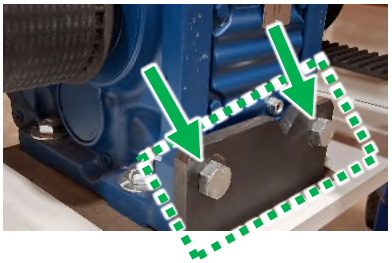
8 Remove the bolts (4) that hold the lift motor to the lift table base.



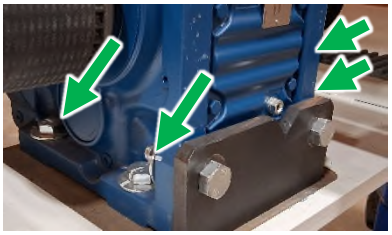
9 Remove the motor from the lift table with jib crane.



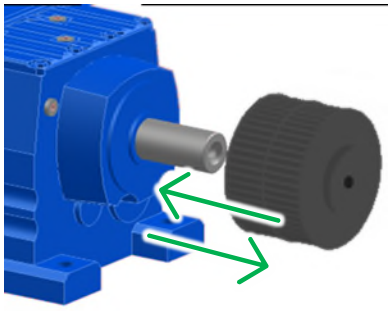
10 Remove the support brace from the old motor and install it on the replacement motor.



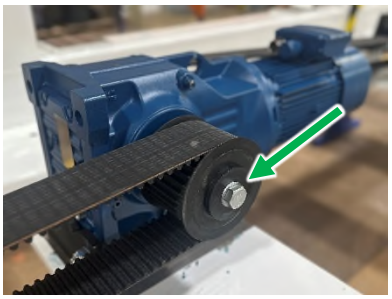
11 Lower in the replacement motor with jib crane. Position and secure the new motor using the 4 bolts.



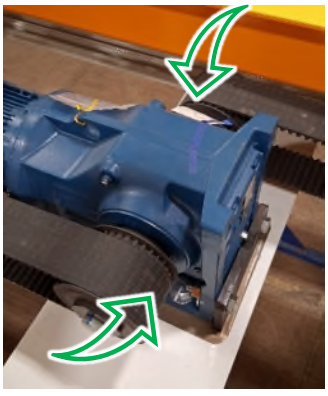
12 Re-install both drive pulleys on the motor drive shaft or replace with new pulleys as needed.



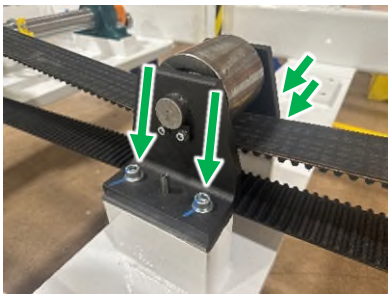
13 Re-install the bolts securing both drive pulleys to the drive.



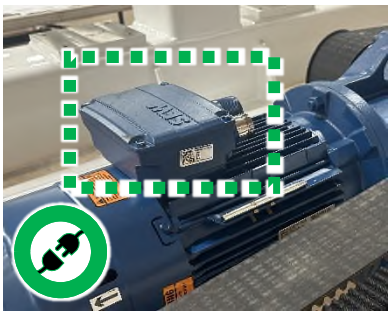
14 Place both lifting belts back onto the lifting drive pulleys.



15 Re-install both belt tensioners.



16 Reconnect the cables to the lift motor.



17 Restore power to the system and remove the safety pins. Return the safety pins to their designated storage area.

18 Cycle the lift table and observe that the lifting belts are tracking straight and that the table is even all around. Correct if necessary.

19 Lock Out the system again to return safety covers then operate as normal.

D-Lock Power Roll Bed Maintenance & Service

This section describes the service procedures for major mechanical elements of a Power Roll Bed Normal Application and apply to the PRB installed on the D-Lock Lift Table.

⚠ WARNING ⚠

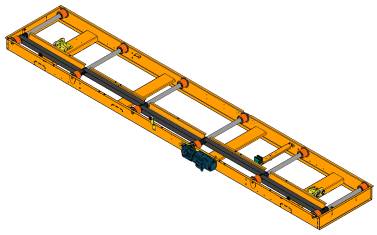
- Only qualified and trained personnel should perform the disassembly and assembly of electrical and mechanical components.
- Before attempting any maintenance on this equipment all involved personnel should follow plant internal regulations along with any state, federal, or province regulations. Do not begin any repair procedure until the proper shutdown procedures and the appropriate power lockout procedures have been applied.

How to Replace a Belt

1 Place the lift into the maintenance position per the above section: ***Placing the Lift into the Maintenance Position.***

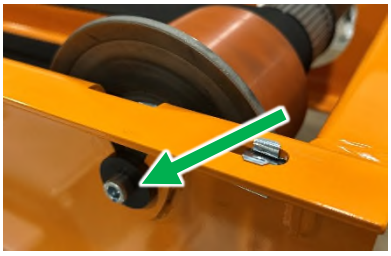
Lock Out the power to the lift using your plant's safety procedures.

2 Remove safety covers.

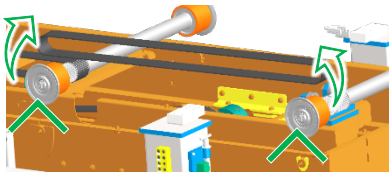


3 Both belt sharing rollers of the damaged belt will need to be loosened from the frame to free up any tension and to replace the belt.

4 Remove the hex head bolts holding the shafts on both sides of the rollers.

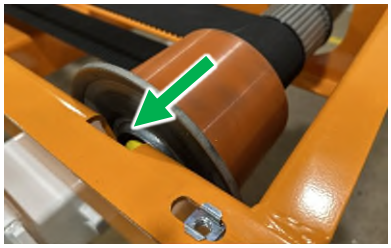


5 Lift roller shaft upward and remove one end of the belt. Perform the same to belt sharing roller shaft.

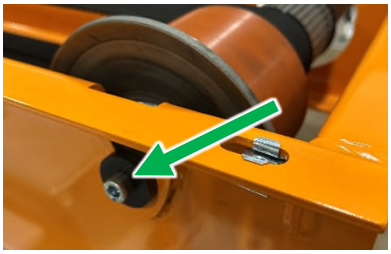


6 Remove damaged belt and replace it with a new belt. Thread each roller through the toothed belt(s) so that they are on the appropriate pulleys and rollers.

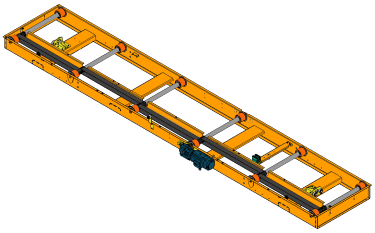
7 Insert rollers into both sides of the frame, turning the roller so that flats on the rod end fit into the slots.



8 Retighten bolts on both sides of rollers on the Power Roll Bed.



9 Place safety covers back on and tighten screws.



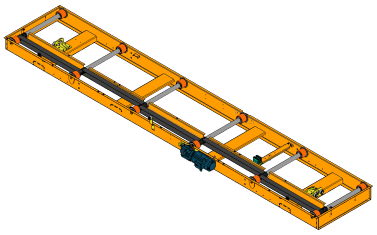
10 Restore power to the system and test for proper operation.

How to Replace a Roller

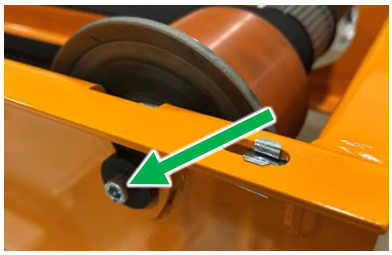
1. Place the lift into the maintenance position per the above section: ***Placing the Lift into the Maintenance Position.***

   Lock Out the power to the lift using your plant's safety procedures.

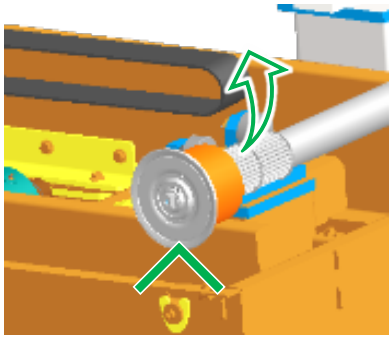
2. Remove safety covers.



3. Remove the hex head bolts holding the shafts on both sides of the roller. To replace an interior roller, the belt sharing rollers may also need to be loosened from the frame to free up tension from the belts.

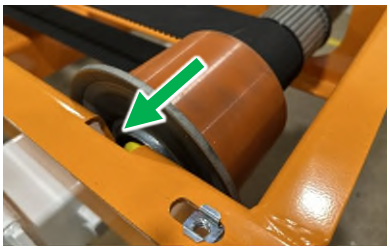


4. Lift roller shaft upward and remove belt(s) off roller shaft.

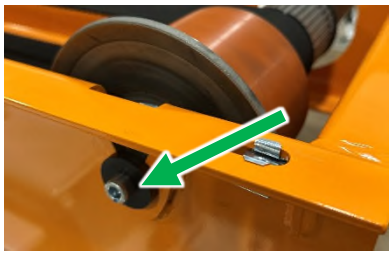


5. Insert new roller through the toothed belt(s) and place on the pulley.

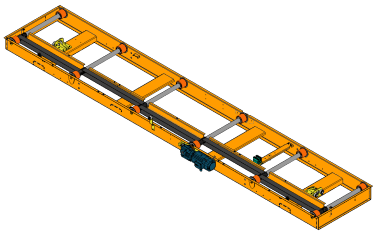
6 Insert rollers into both sides of the frame, turning the roller so that flats on the rod end fit into the slots.



7 Retighten bolts on both sides of rollers on the Power Roll Bed.



8 Place safety covers back on and tighten screws.



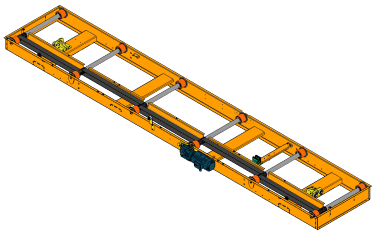
9 Restore power to the system and test for proper operation.

How to Replace a Gearmotor

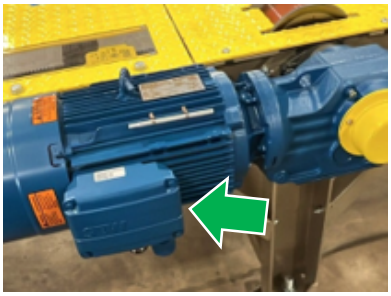
1 Place the lift into the maintenance position per the above section: ***Placing the Lift into the Maintenance Position.***

Lock Out the power to the lift using your plant's safety procedures.

2 Remove safety covers where necessary.

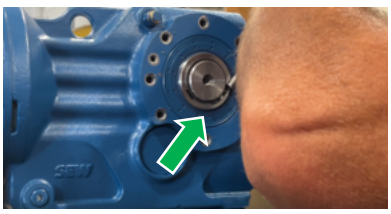


3 Remove all required electrical connections.

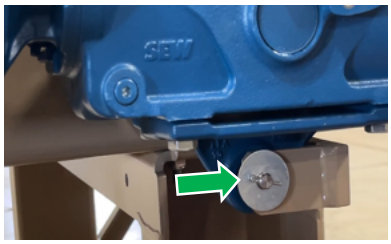


4 Remove all screws to remove the gearmotor cover.

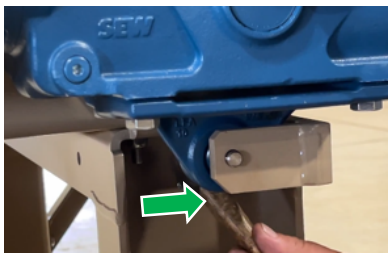
5 Remove the retaining ring from the drive shaft.



6 Remove the cotter pin and washer from the frame mount.

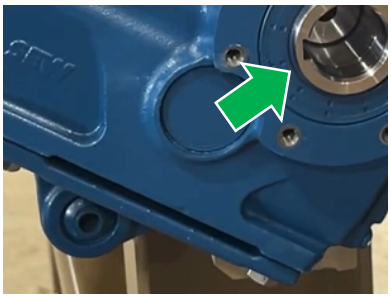


7 Remove the retaining pin from the frame and the gearmotor base.

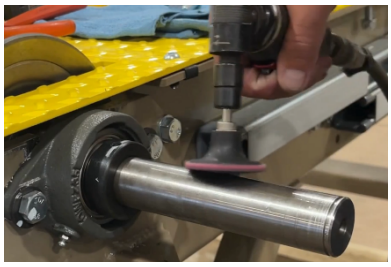


8 Using an overhead crane, carefully hoist the gearmotor off the unit.

9 Remove the gearmotor base from the old gearmotor to install on the new gearmotor.



12 Using a fine-grit sand disk, gently clean the external drive shaft to remove any material buildup.



13 Install a new key by carefully inserting and gently tapping it into the slot on the drive shaft.

14 Gently sand the edges of the new key to eliminate any burrs for easier insertion into the gearmotor.

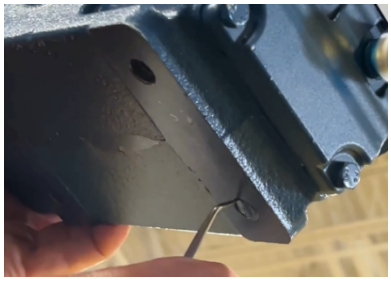
15 Remove the protective shipping caps and the contents of the hollow bore in the SEW gearmotor.

16 Set aside the SEW provided NOCO-Paste corrosion protection and lubricant.

17 Remove the retaining ring from the hollow bore and set it aside.

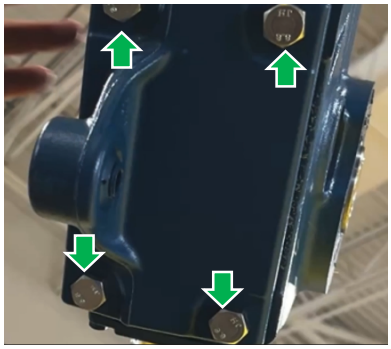
18 Take out the screw plugs located around the perimeter of the hollow bore.

19 Remove the screw plugs from the bottom of the gearmotor as well.



20 Apply Loctite to the bolts intended for securing the gearmotor base to the bottom of the gearmotor.

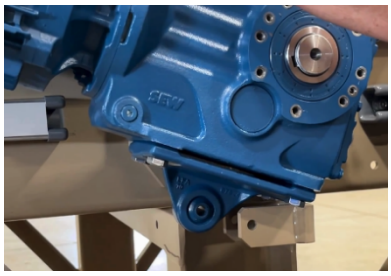
21 Affix the gearmotor base to the underside of the gearmotor.



22 Apply the SEW-supplied NOCO-Paste for corrosion protection and lubrication on the drive shaft.

23 Using an overhead crane, place the new gearmotor on the drive shaft. Remove any excess NOCO-Paste.

24 Align the mounting holes on the new gearmotor base with the holes on the conveyor frame.



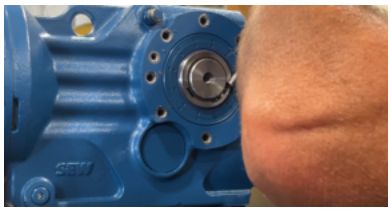
25 Reinsert the retaining pin on the frame and the gearmotor base.

26 Due to restricted space, utilize a C-clamp to aid in maneuvering the pin through the holes.

27 Gently tap the pin the rest of the way through.

28 Reinsert the washer and cotter pin on the frame mount.

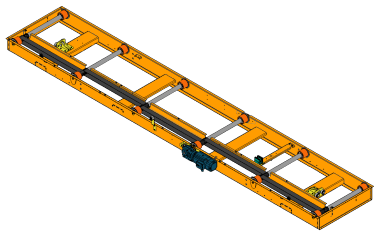
29 Reinsert the retaining ring on the drive shaft.



30 Place the gearmotor safety cover back on the gearmotor.

31 Re-attach all required electrical connections.

32 Place safety covers back on and tighten screws.



33 Restore power to the system and test for proper operation.