Turn/Pivot Table – Maintenance & Service

This section will describe service procedures for major mechanical elements of a Turn/Pivot Table.

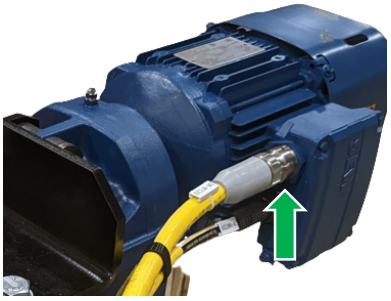
⚠ WARNING ⚠

- 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.

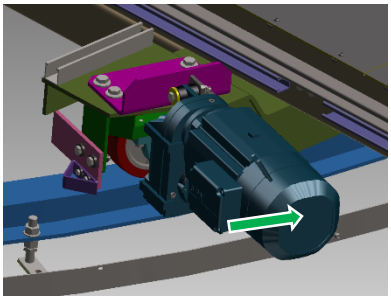
How to Replace a Gearmotor on a Turn/Pivot Table

1 Remove and lock out power to the Turn/Pivot Table using your plant's procedures.

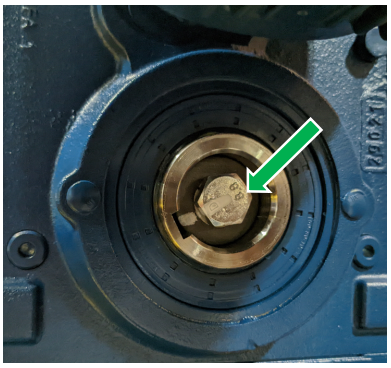
2 Disconnect the cables from the gearmotor.



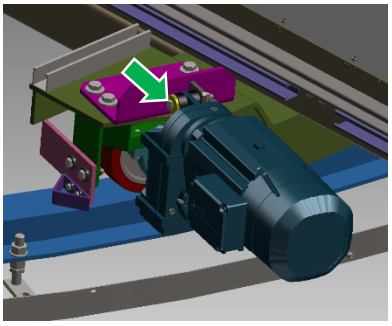
3 Remove the drive shaft cover on the gearmotor.



4 Loosen and remove the bolt that connects the gearmotor to the drive shaft.

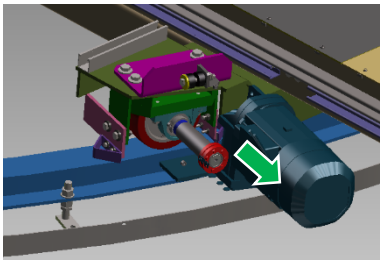


5 Remove the bolt that holds the gearmotor to the trolley.



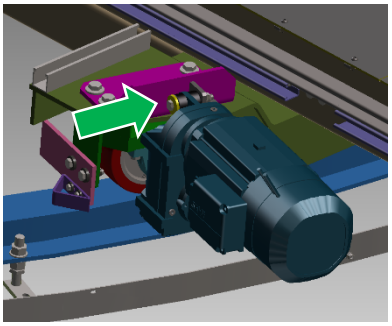
6 Remove the gearmotor from drive shaft.

Note: *Remove gearmotor exactly in axial direction using an appropriate handling device if necessary.*

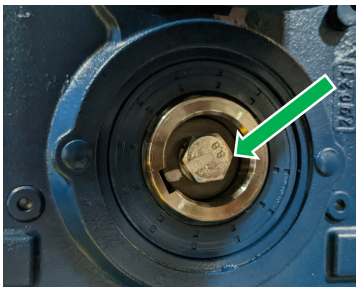


7 Install the new gearmotor on the drive shaft, after checking parallel key for integrity.

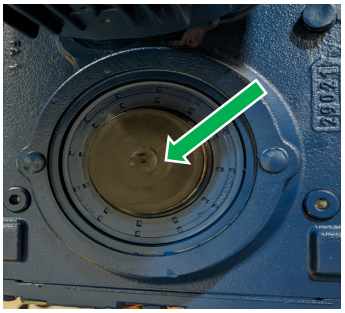
8 Insert and tighten the nut and bolt to 20 Nm that holds the gearmotor to the trolley.



9 Insert and tighten the bolt to 88 Nm that connects the gearmotor to the drive shaft.



10 Install the drive shaft cover.



11 Reconnect the cables to the new gearmotor.

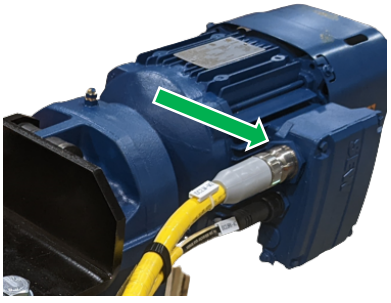
12 Complete restore power procedure and verify proper function.

Replacing the Drive Wheel

1 Remove any payload from the Turn/Pivot Table.

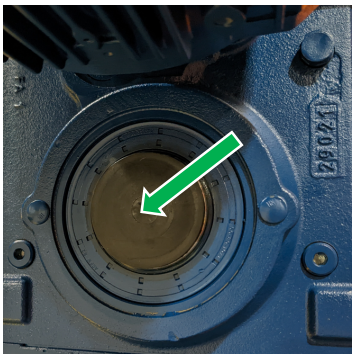
2 Remove and lockout all power sources to the area.

3 Raise the end of the drive wheel assembly slightly using a hoisting device (chain hoist or jack), until the drive wheel is just off the rail. Do not lift further than to this point.

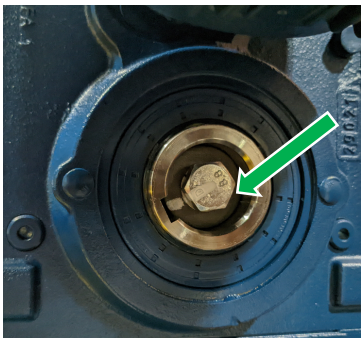


4 Disconnect the cables from the gearmotor.

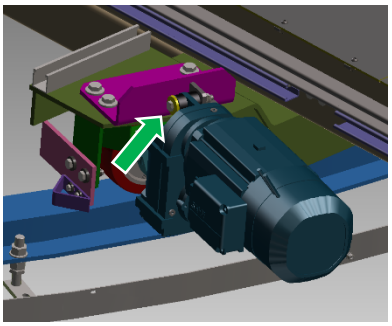
5 Remove the drive shaft cover on the gearmotor.



6 Loosen and remove the bolt that connects the gearmotor to the drive shaft.

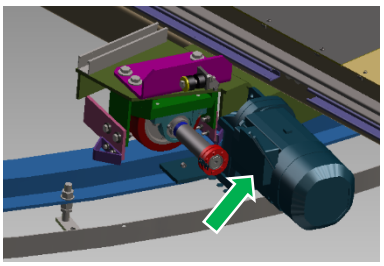


7 Loosen the nut and bolt that holds the gearmotor to the trolley.

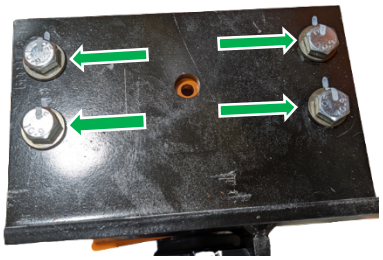


8 Remove the gearmotor from drive shaft.

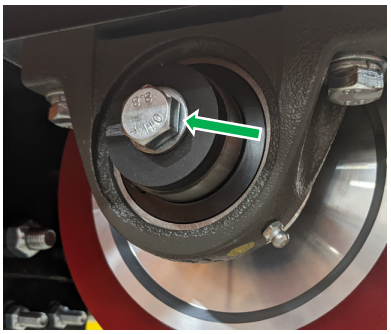
Note: *Remove the gearmotor exactly in axial direction using an appropriate handling device if necessary.*



9 Loosen and remove the four bolts holding the drive wheel block to the trolley and transfer the drive wheel block to a workbench.

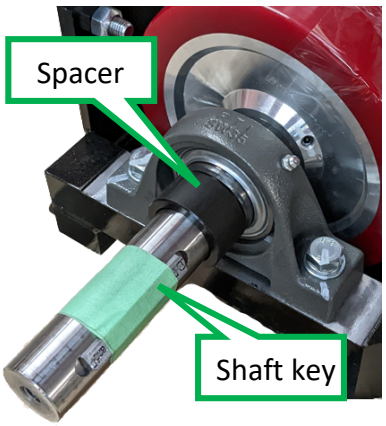


10 Remove the bolt and end cap opposite the drive shaft.



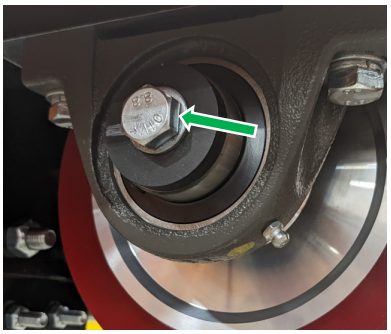
11 Pull the drive shaft through the pillow block bearings and drive wheel until you can lower the drive wheel out of the drive wheel block.

Note: *Keep the spacers and drive shaft key to use with new drive wheel.*

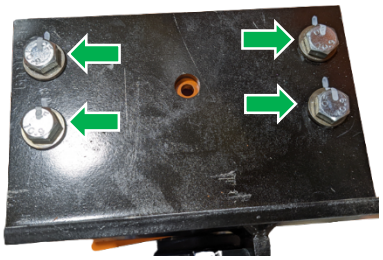


12 Place the new drive wheel into the drive wheel block and insert the drive shaft through the spacers and block.

13 Apply removable Loctite to the bolt mentioned in step 10, insert and bolt in with washer and shaft end cap into drive shaft. Tighten to 360 Nm.

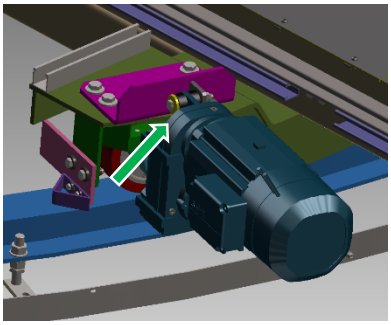


14 Install and secure the drive wheel block onto the pivot table with the four bolts and washers from step 9. Apply removable Loctite onto the bolts before inserting and tighten these bolts to 330 Nm.

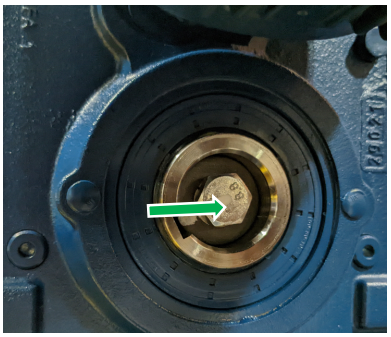


15 Install the new gearmotor on the drive shaft, after checking the integrity of the parallel key.

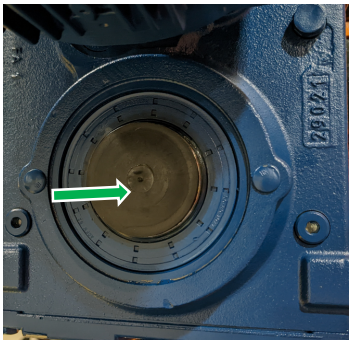
16 Insert and tighten the nut and bolt that holds the gearmotor to the trolley.



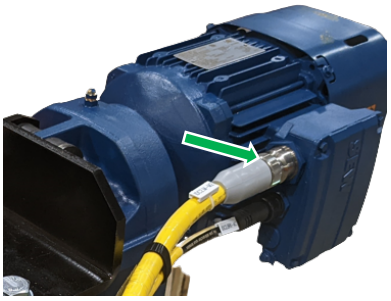
17 Insert and tighten the bolt to 88 Nm that connects the gearmotor to the drive shaft.



18 Install the drive shaft cover.



19 Reconnect the cables to the new gearmotor.



20 Lower the trolley back onto the rail.

21 Complete restore power procedure and verify proper function.

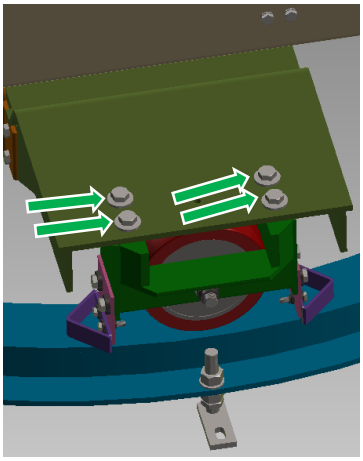
Replacing the Idle Wheel

1 Remove any payload from the Turn/Pivot Table.

2 Remove and lockout all power sources to the area.

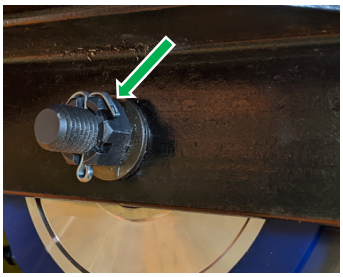
3 Raise the end of the trolley slightly using a hoisting device (chain hoist or jack), until the idle wheel is just off the rail. Do not lift further than to this point.

4 Loosen and remove the four bolts holding the idle wheel block to the trolley, transferring the idle wheel block to a work bench.

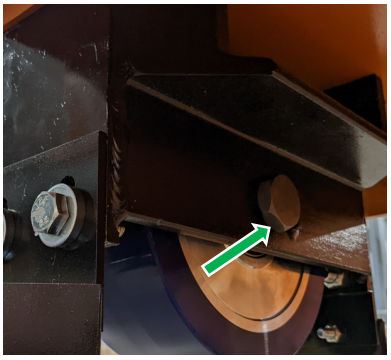


5 Remove the cotter pin holding the slotted nut in place.

Loosen and remove the nut.

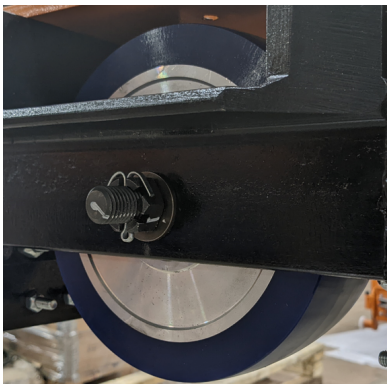


6 Remove the M25 shoulder bolt that serves as the axle for the idle wheel.

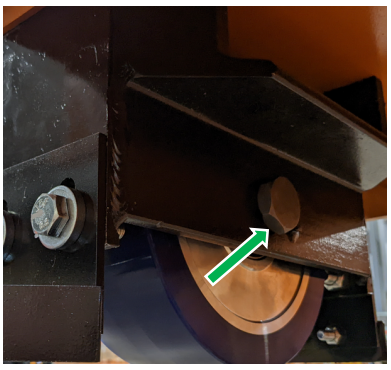


Replace the idle wheel.

7 ***Note:*** *Be aware that there are two spacers – not shown in the figure – that fit in between the wheel and the block that you will need to re-use.*

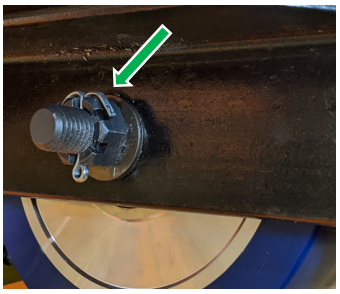


8 Insert the M25 shoulder bolt. Bolt on and snug up the hex nut.

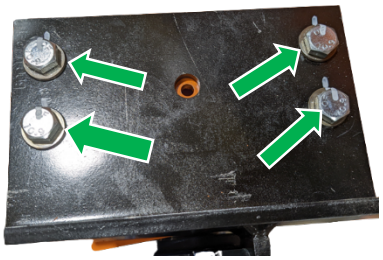


9 Insert the cotter pin to lock the hex nut in place.

Note: *If you are using a new M25 shoulder bolt, bore new hole for the cotter pin.*



10 Install and secure the idle wheel block onto the trolley with the four bolts and washers from step 4. Apply removable Loctite onto the bolts before inserting and tighten these bolts to 330 Nm.



11 Lower the trolley back onto the rail.

12 Complete restore power procedure and verify proper function.

Power Roll Bed Normal Application Maintenance & Service

(Mounted on Turn/Pivot Table)

This section will describe service procedures for major mechanical elements of a Power Roll Bed NA.

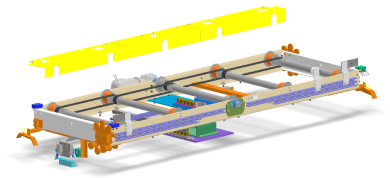
⚠ WARNING ⚠

- 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.

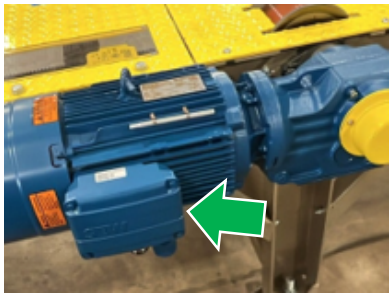
How to Replace a Gearmotor

1 Remove and lock out power to the Turn/Pivot Table using your plant's procedures.

2 Remove covers where necessary.

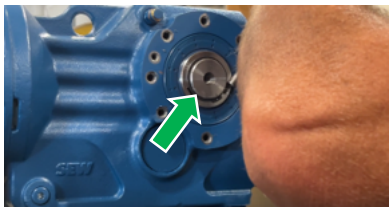


3 Remove all required electrical connections.

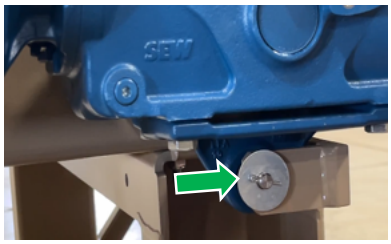


4 Remove all screws to remove the gearmotor cover.

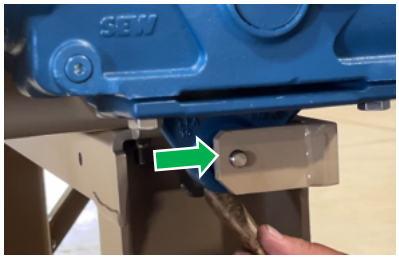
5 Remove the retaining ring from the drive shaft.



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

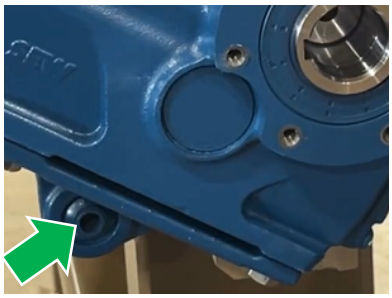


7 Remove the retaining pin from the frame and the gearmotor base.

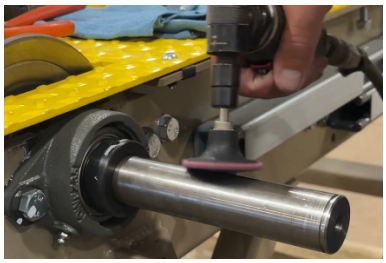


8 Using an overhead crane, carefully hoist the gearmotor off the unit.

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.

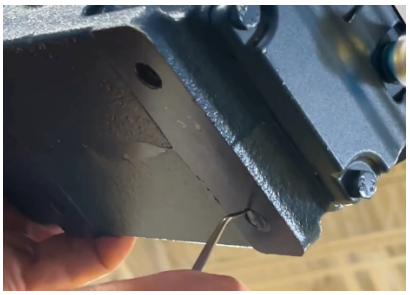
15 Remove the protective shipping caps and the contents of the hollow bore in the SEW gearmotor.

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.

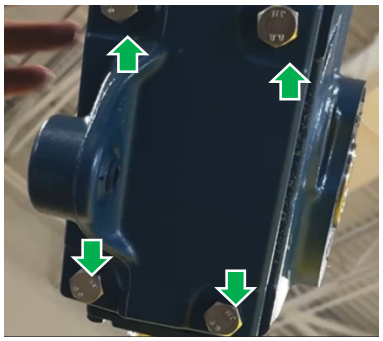
18 Take out the screw plugs located around the perimeter of the hollow bore.

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

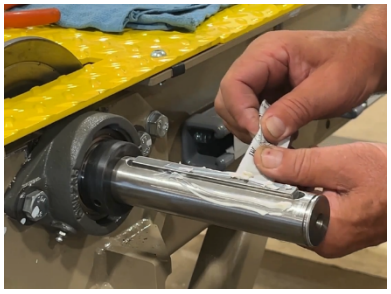


20 Apply Loctite to the bolts intended for securing the gearmotor base to the bottom of the gearmotor.

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

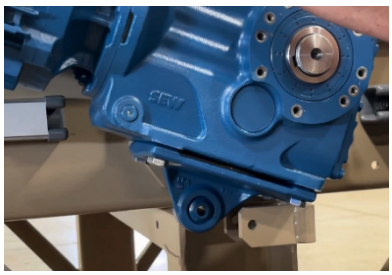


22 Apply the SEW-supplied NOCO-Paste for corrosion protection and lubrication on the drive shaft.



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.



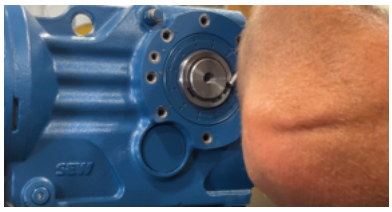
25 Reinsert the retaining pin on the frame and the gearmotor base.

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.

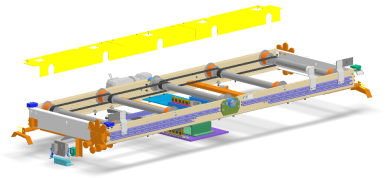
29 Reinsert the retaining ring on the drive shaft.



30 Place the gearmotor safety cover back on the gearmotor.

31 Re-attach all required electrical connections.

32 Place cover(s) back on Power Roll Bed and tighten bolts.

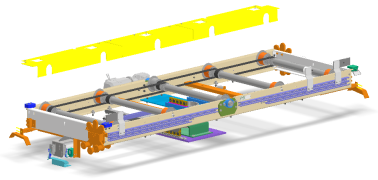


33 Restore power to the system and test for proper operation.

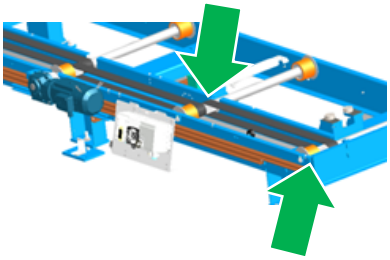
How to Replace a Driven Belt

1 Remove and lock out power to the Turn/Pivot Table using your plant's procedures.

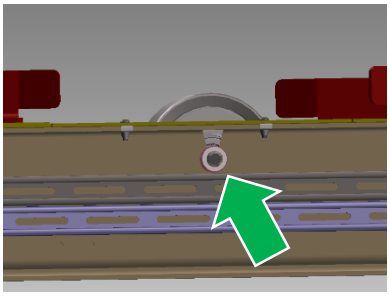
2 Remove covers.



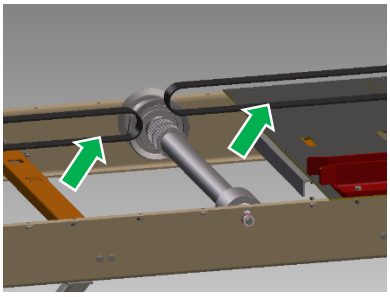
3 Both belt sharing rollers of the damaged belt will need to be loosened from the frame to free up any tension and to replace the belt.



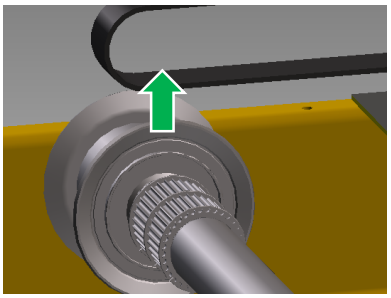
4 Remove the hex head bolts holding the shafts on both sides of the rollers.



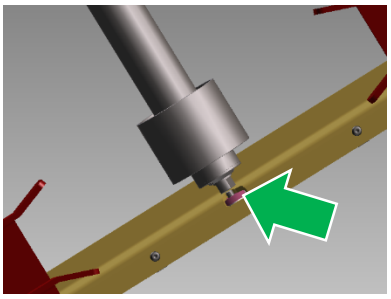
5 Lift roller shaft upward and remove one end of the belt. Perform the same to belt sharing roller shaft.



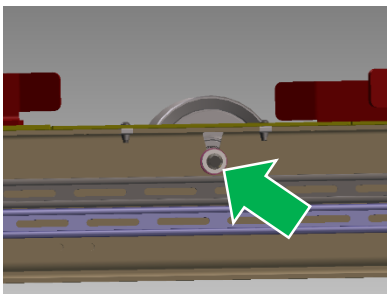
6 Remove damaged belt and replace it with a new belt. Thread each roller through the toothed belt(s) so that they are on the appropriate pulleys and rollers.



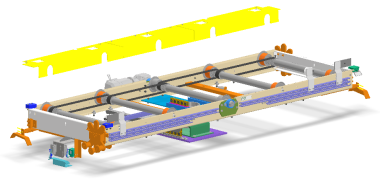
7 Insert rollers into both sides of the frame, turning the roller so that flats on the rod end fit into the slots.



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



9 Place cover back on Power Roll Bed and tighten screws.

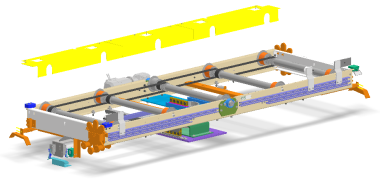


10 Restore power to the system and test for proper operation.

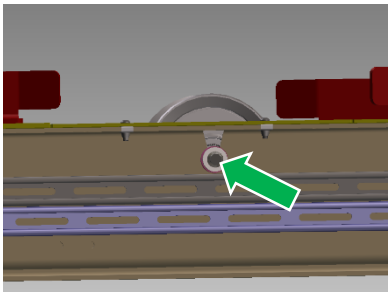
How to Replace a Driven Roller

1 Remove and lock out power to the Turn/Pivot Table using your plant's procedures.

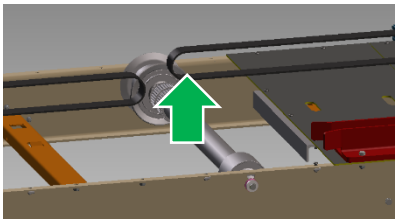
2 Remove covers.



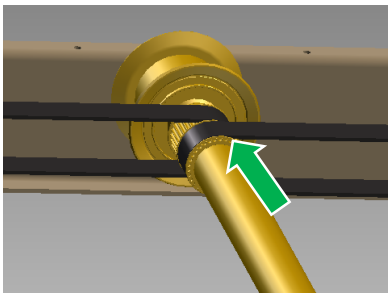
3 Remove the hex head bolts holding the shafts on both sides of the roller. To replace an interior roller, the belt sharing rollers may also need to be loosened from the frame to free up tension from the belts.



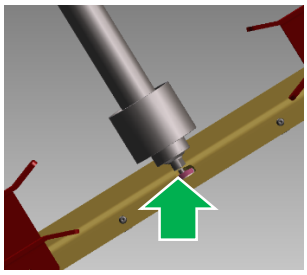
4 Lift roller shaft upward and remove belt(s) off roller shaft.



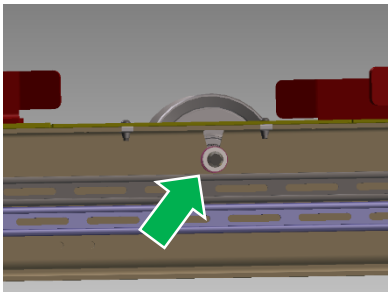
5 Insert new roller through the toothed belt(s) and place on the pulley.



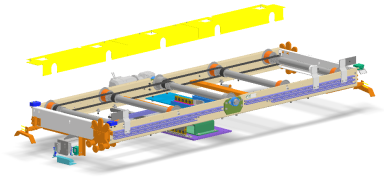
6 Turn the roller so that the flats on the rod end fit into the slots on both sides of the frame.



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



8 Place cover back on Power Roll Bed and tighten screws.

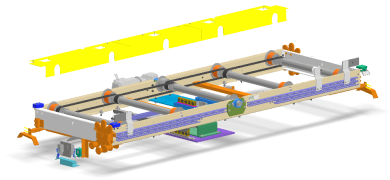


9 Restore power to the system and test for proper operation.

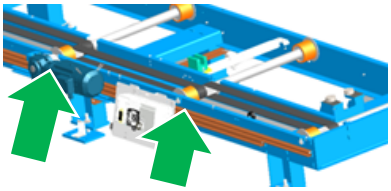
How to Replace a Drive Belt

1 Remove and lock out power to the Turn/Pivot Table using your plant's procedures.

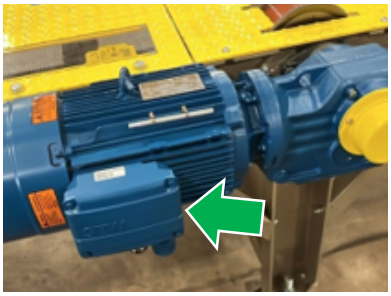
2 Remove safety covers.



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.

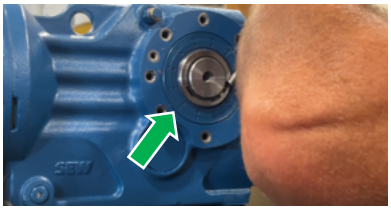


4 Remove all required electrical connections from the gearmotor.

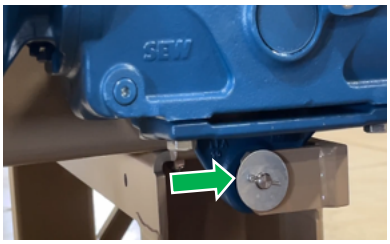


5 Remove all screws to remove the gearmotor cover.

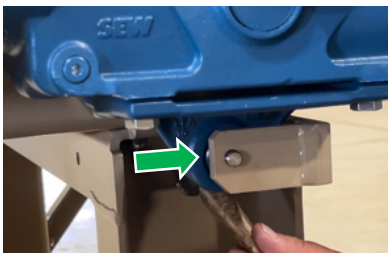
6 Remove the retaining ring from the drive shaft.



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

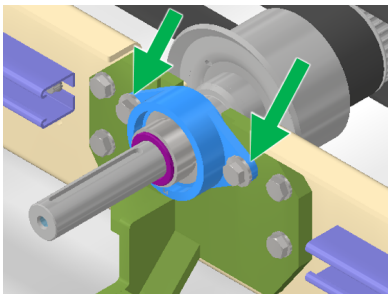


8 Remove the retaining pin from the frame and the gearmotor base.

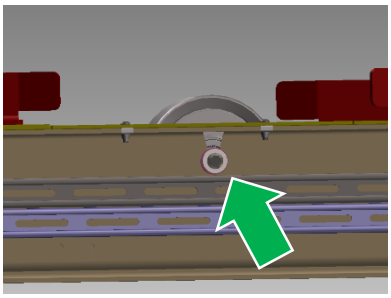


9 Using an overhead crane, carefully hoist the gearmotor off the unit.

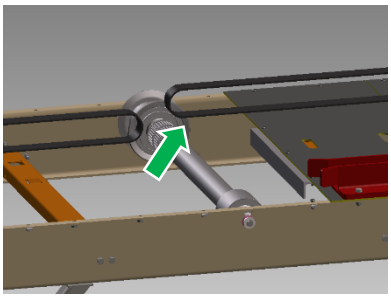
10 Remove the bolts securing the bearings to the frame on both ends of the drive roller.



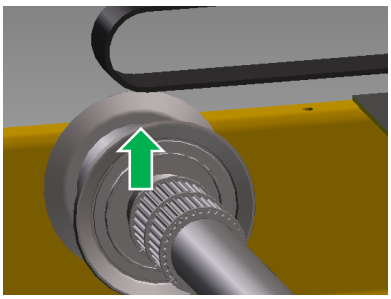
11 Remove the hex head bolts holding the shafts on both sides of the driven roller.



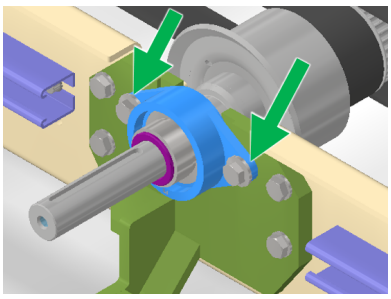
12 Lift roller shaft upward and remove one end of the belt. Perform the same to belt sharing roller shaft.



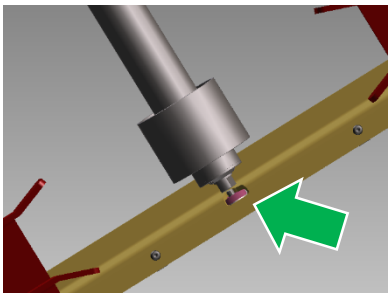
13 Remove damaged belt and replace it with a new belt. Thread each roller through the toothed belt(s) so that they are on the appropriate pulleys and rollers.



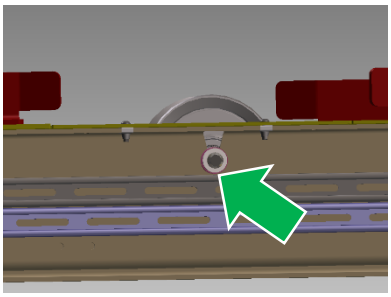
14 Place the drive roller back into position and tighten the bolts securing the bearings to the frame on both ends of the roller.



15 Place the partner driven roller back into the frame, turning the roller so that flats on the rod end fit into the slots.

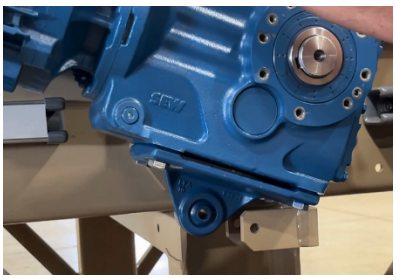


16 Retighten bolts on both sides of the driven roller on the Power Roll Bed.



17 Using an overhead crane, place the gearmotor back on the drive shaft.

18 Align the mounting holes on the gearmotor base with the holes on the conveyor frame.



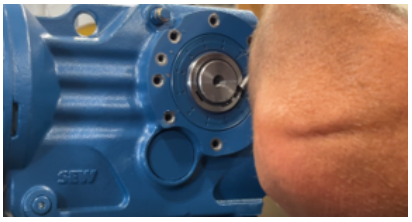
19 Reinsert the retaining pin on the frame and the gearmotor base.

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

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

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

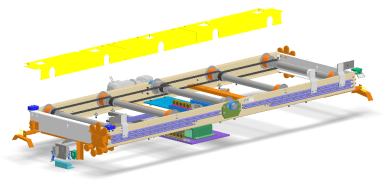
23 Reinsert the retaining ring on the drive shaft.



24 Place the gearmotor safety cover back on the gearmotor.

25 Re-attach all required electrical connections.

26 Place cover back on Power Roll Bed and tighten screws.

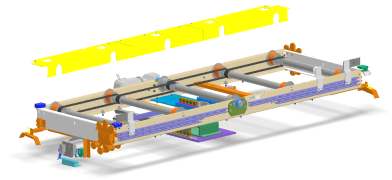


27 Restore power to the system and test for proper operation.

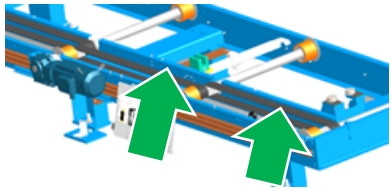
How to Replace a Drive Roller

1 Remove and lock out power to the Turn/Pivot Table using your plant's procedures.

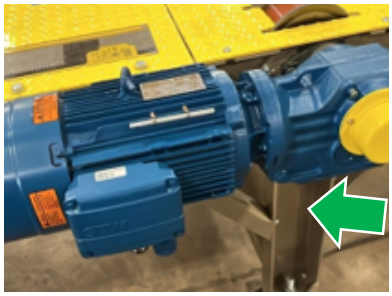
2 Remove safety covers.



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

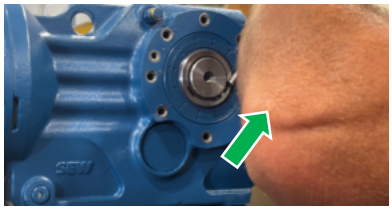


4 Remove all required electrical connections from the gearmotor.

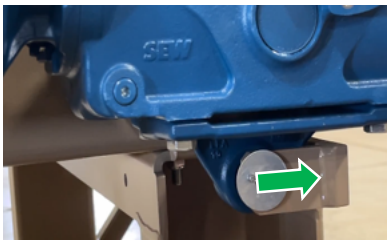


5 Remove all screws to remove the gearmotor cover.

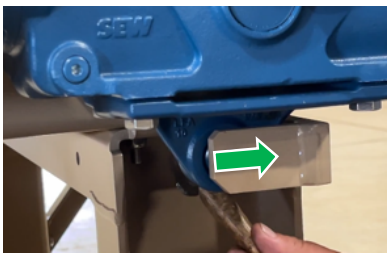
6 Remove the retaining ring from the drive shaft.



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

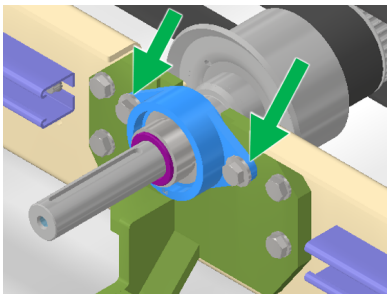


8 Remove the retaining pin from the frame and the gearmotor base.

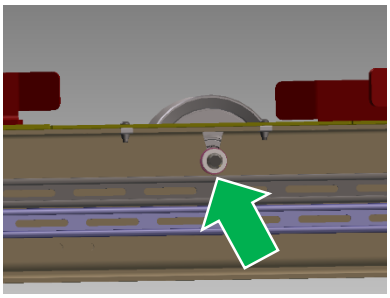


9 Using an overhead crane, carefully hoist the gearmotor off the unit.

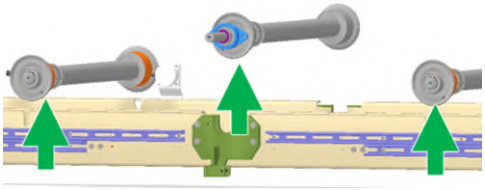
10 Remove the bolts securing the bearings to the frame on both ends of the drive roller.



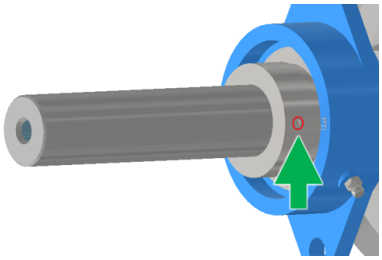
11 Remove the hex head bolts holding the shafts on both sides of the driven rollers.



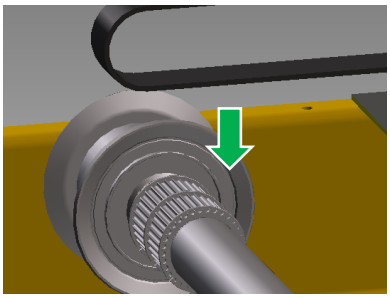
12 Lift the rollers out of the frame until you are able to remove the belts from the drive roller.



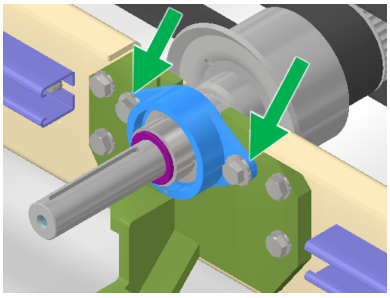
13 Loosen the set screws on both bearings on the drive roller to remove them. Place the bearings onto the new drive roller to be inserted.



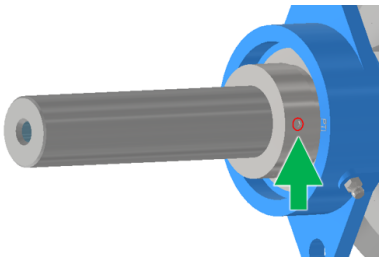
14 Place belts back on the removed rollers. Thread each roller through the toothed belt(s) so that they are on the appropriate pulleys and rollers.



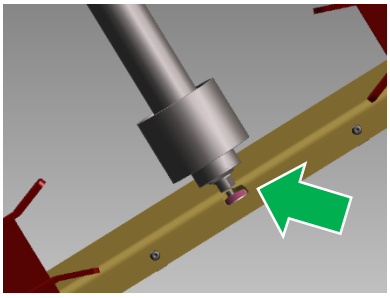
15 Place the drive roller back into position and tighten the bolts securing the bearings to the frame on both ends of the roller.



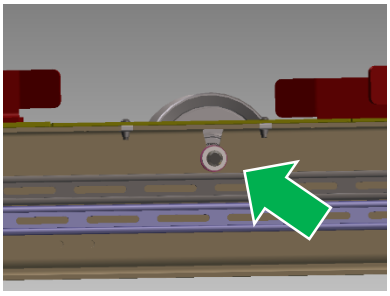
16 Retighten the set screws on both bearings on the drive roller.



17 Place the partner driven roller back into the frame, turning the roller so that flats on the rod end fit into the slots.

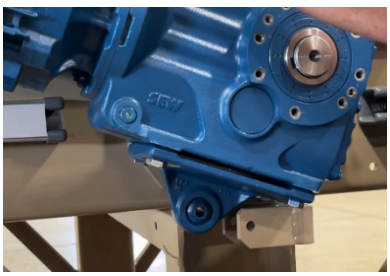


18 Retighten bolts on both sides of the driven roller on the Power Roll Bed.



19 Using an overhead crane, place the gearmotor back on the drive shaft.

20 Align the mounting holes on the gearmotor base with the holes on the conveyor frame.



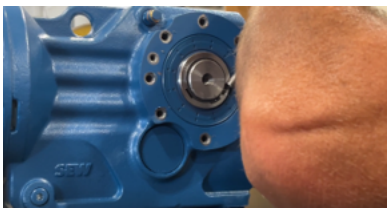
21 Reinsert the retaining pin on the frame and the gearmotor base.

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

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

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

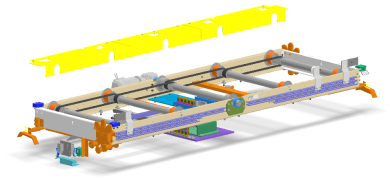
25 Reinsert the retaining ring on the drive shaft.



26 Place the gearmotor safety cover back on the gearmotor.

27 Re-attach all required electrical connections.

28 Place cover back on Power Roll Bed and tighten screws.



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